TITLE

A REDEVELOPMENT OF WIKKI CAMP

(YANKARI GAME RESERVE, BAUCHI STATE)

Submitted By

M.R.O. Garber (JNR)

In Fartial fulfillment of the

Degree of Master of Science

in Architecture (M.Sc. Arch.)

1982

D E D I C A T I O N

To my loving mother and father who inspired me to undertake the study of Architecture. God bless them

DIGITIZED

TABLE OF CONTENTS

		PAGE
	CHAPTER 1	
1.01	History of the problem	1
1.02	Planning objectives and planning principles	4
1.03	History of Wikki	8
1.04	Present status of Wikki	11
1.05	Site Analysis	14
	CHAPTER 2	
2.01	Development versus environmental Conservation	17
2.02	Basic facilities for Tourist Resorts	22
2.03	From traditional to recent resorts	36
2.04	Post war developments	42
2.05	The new integrated resorts	44
	CHAPTER 3 - Data Analysis	
3.01	Location	50
3.02	Topography	50
3.03	Geology, soil and Climate	51
3.04	Vegetation	55
	CHAPTER 3	
3.05	Economic Survey	57
3.06	Financing Tourist Facilities	60

PAGE

CHAPTER 4 - DESIGN BRIEF

4.01 Goals and Objectives 89

4.02 The visitor's centre 93

4.03 The Gateway and camping grounds 98

4.04 The Games Area 99

4.05 The Balloon Area 99

4.06 The Wikki Spring

4.07 The Chalets

CHAPTER 5 DESIGN REPORT

5.01 Design Strategy 103

5.02 Site Planning .....

5.03 The Building Design and Structure 104

5.04 Stores and centralised services 109

5.05 The non-Tourist Population 110

5.06 Sanitation and other Engineering services 111

CONCLUSION & RECOMMENDATIONS 112

P R E F A C E

This topic is concerned with the analysis of man and his natural environment. There is much talk these days of our natural environment fast disappearing due to man's search for a better world. Technology is fast destroying Gods creation. This has brought about the need for the application of constraints on our much needed technology. As a result developed countries have seen the need to embark on conservation programmes to help save the situation.

One of the most important and cherished features of out environment is the wild-life. Africa has one of the largest abundance of wild-life and ironically it is here in Africa that the destruction of game is highest. Game is being slaughtered for food and for various commercial purposes. In East Africa the tusks of elephants is very expensive commodity. Developed countries have therefore instituted such areas in which animals would be left free to wander instead of being hunted down facing the risk of extinction. The Dodo is a good example. Such areas

are assigned the name GAME RESERVES OR NATIONAL PARKS. These conservative programs need to be implemented widely in Africa. The economic and social benefits of Game Reserves has been realised in many African countries; and these nature sanctuaries are being instituted. Such schemes have brought a new dimension to tourism and recreation. These areas experience the minimum of permanent human interference. The animals have the dominant role and man becomes the passive observer deriving fulfillment in being united with nature. This thesis is to subtly introduce man-made structures that are not in competition with the natural environment but rather totally harmonized with it.

ACKNOWLEDGEMENT

My special thanks go to my Mentor Mr. Gnaidzilk, who gave me his devoted attention. Also, special thanks to Arch. Shim Adesina, of the department of Architecture, Gus' Ezealor of the department of Biological Sciences also Dr. Kapu of the same department, Dr. and Mrs Tagi and to my numerous friends Polycarp, Malgwi, Kola, Tunji and all who in some way contributed to the success of this Thesis.

CHAPTER 1

INTRODUCTION

HISTORY OF THE PROBLEM 101

Tourism has been one of the most important by-products of game reserves. East Africa gives a very good example of this. Tourism which is based on wildlife attractions is worth nearly one hundred million dollars in East Africa. Every year, thousands of tourists leave Europe and America and flock to Kenya Tanzania, Zambia, Malawi and South Africa. These tourists go to these places just to see the magnificient lions, elephants Rhinoceroses, monkeys etc. to be found in the game reserves of these countries. The leading country without doubt in Kanya. She has long been known to have her economy heavily dependent on her wild animals, because these natural resources bring in foreign exchange by the millions. This yearly income from tourism is what has made tourism a major industry in Kenya.

In both game reserves and national parks, human activities such as farming, fishing, tree-cutting as well as hunting

are completely forbidden within the reserves or parks. Human settlements may not be erected within these areas and any settlements which may have been there are usually transferred elsewhere with adequate compensation to the inhabitants involved. With wildlife, natural vegetation and scenery protected in this way, it can be enjoyed by the people, both natives and foreigners alike. Visitors are welcomed in the parks and reserves and from the safety of vehicles and observation buildings they can view the wonderful spectacle of all varieties of wildlife in away they never would be seen elsewhere. It is a thrilling and unforgetable experience. However what is the effect of tourism on the natural environment? Tourism often exerts both detrimental and beneficial influences on its environment, affecting resources in contradictory ways:

1. It degrades irreversibly the very attractions which justified and attracted it, eroding natural resources, breaking up the unity and scale of traditional landscapes and their characteristic buildings, polluting

beaches, damaging forests, and rendering banal under the inundation, alien facilities of often mediocre uniform design, a formerly unique landscape. However not all the negative effects can be avoided. In relatively poor agricultural regions where the introduction of employment in new tourist services may induce the local population to abandon their traditional activities there may be serious consequences.

2. It safeguards the environment in so far as it stimulate the interest of local people and authorities to appreciate the value of the environment and to introduce comprehensive measures for its protection; mangement and enhancement, financed by the revenue of tourism.

Furthermore, tourism is less likely to damage the environment than many other competitive activities such as mineral extraction, industrial processing or industrialized agriculture, and may, infact, secure the resources against this type of development. Most outstanding natural sites can accomodate a limited number of visitors

without detriment and the provision of a few well designed facilities will invariably add to convinience and enjoyment without loss of the benefits of the surroundings. But the situation changes, often dramatically, when the numbers of visitors or facilities increase beyound a certain threshold:-

- The quality of the experience progressively decreases
- The facilities invade the site and lose the 'primitive' contact with the surrounding scenery.
- The excessive number of visitors physically damages the sit itself.

102 PLANNING OBJECTIVES AND PLANNING PRINCIPLES

The economic and social benefits of tourism viz-a-viz the need for environmental protection is the key point in planning for game reserves. A balance must be struck between the following contradictory objectives:-

(i) to maximise the quality of the experience and and at the same time ensure environmental protection.

(ii) to provide the opportunity of access to the experience for the maximum number of people.

In planning tourists resorts in nature sensitive areas, tourist activities should not be put at the expense of the environment. The converse is more acceptable in such cases. However the tourist is an important ingredient to their upkeep. Hence efforts should be made at satisfying the visitors.

Main objectives in planning tourist resorts are:-

- To meet individual requirements. - Tourists often seek parodoxically tranquility and rest but also facilities for entertainment and sport.
- Anonymity but also the opportunity to meet other people and participate in social activities.
- Contact with nature but with standards of home comfort.
- Seclusion and privacy but with the benefits of security and close proximity to a variety of leisure and recreational facilities.

To provide a different experience

Most tourists are city and town dwellers, for whom holidays essentially mean and escapt from urban conditions, high densities and organised routine lives. To provide a refreshing experience of contrasts, tourist resorts should be planned as 'anti towns" offering such features as quietness, change of pace and opportunities for relaxation. Contact with nature, a human scale, a change in activity provided by sport and recreation.

To create and attractive 'tourist image'

A tourist image should be as original as possible, to give a personality to the resort. This can be achieved by making the best use of the particular resources and pecularities of the site.

Adapting the development plan and the scale and design of the buildings to reflect the character of the surroundings and climate, using local materials and techniqueis where possible. Giving an imaginative treatment to the facilities favoured by the site and climate. Introducing specific features to create 'atmosphere' and identity.

Contact with Nature

Contact with nature may be visual, such as panoramic view from a balcony, or physical, providing opportunities to become surrounded by, and possibly to touch, the flowers, trees, rocks and other features of the natural lanscape. Physical contact is more important than visual and this may be achieved by having small duster constructions particularly where the site configurations and infrastructure allow flexibility of layout. (See fig. 1.1.)

Environmental Integration

There is a need to establish a good relationship between the resort as a whole and its natural environment, two main principle are usually involved where the environment is attractive with high scenic value the scale and character of buildings developments should be subdued. In an insignificant setting the personality of the resort may be deliberately created by building of character and man-made features of striking interest (See fig. 1.2)

Segregation of recreational activities into isolated pockets should be avoided where possible. Facilities must be assembled in a way shich allows some degree of contact between related zones of recreation! a spill-over of excitement and interest from one zone to the next and from these zones to the residential areas.

1.0.3 HISTORY OF WIKKI TOURIST CAMP

The possibility of establishing a properly warded game reserve or national park in Nigeria was considered as far back as 1931 following the visit of a special mission to West Africa to inquire into the preservation of wildlife. Even at that time the possibility of using the 'duguri Bush' (now Yankari Game Reserve) was contemplated. It was in 1954 as a result of recommendations made by the Northern Regional Game Preservation Committee that the executive council approved in principle the establishment of a pilot game reserve in the then Bauchi Emirate. This approval coupled with favourable impressions gained by the first minister for natural resources in Northern Nigeria, following a visit to game reserves in

the Sudan led to the establishment of a game preservation unit within the forestry division in January 1956.
In the meantime forestry staff were already surveying the Yankari area with a view to creating a forest reserve.
The demarcation of the boundaries of this reserve were carried out 1955 - 1956; so that by January 1957 Yankari was legally constituted as a Bauchi Native Authority Forest Reserve, with approval from the Native authority it was henceforth to be managed as a game reserve wirh staff and funds provided by government.
Following the creation of a game unit Mr. Robert Coulthard a retired Veterinary Surgeon became the first game warden and later regional game warden.
With the untimely death, whilst on duty of Mr. Coulthard in May 1961, Malam Jibrin Jia continued the maintenance and development of the system of motor tracles and established a visitor's camp at Wikki, so that finally on 1st December 1961 -

- Yankari Game Reserve was declared open to the general public.

As the visitor number increased, so also did the demand for accommodation units. By 1976, after the formation of Bauchi State, radical measures were made to develop the Yankari Game Reserve. Government felt a need to expand the then existing facilities in a two stage development plan. The first stage was to extend the capacity of the Kitchen and Restaurant, to upgrade the beaches along the spring, to improve the services of laundry and water supply, and to build fifty new rondavels. At that time Wikki had one hundred and twenty-nine bed capacity. The second stage of the development, which as of date is still to be implemented, was the building of a large lodge as a holiday retreat with all the facilities and services common to a holiday and conference centre. The total number of beds for the second stage was to be anything in the region of five hundred to one thousand beds.

104 PRESENT STATUS OF WIKKI

The Wikki camp at present occupies a land area of about 28 hectares. The present visitor rate is about seventy eight persons daily (See table 1.)

Table 1

Year	Months	Number of Visitors	No who paid fees	Amount Collected
1981	Jan - Jul	14,645	13,353	₦52,469
1980	Apr - Dec	15,455	12,753	₦46,502
1979-1980	Apr - Mar	11,708	-	₦63,050.60

The camp offers hotel type accommodation in the form of chalets the hotel consists of 99 chalets. These consist of 11, singles 10 suites and 78 doubles. This gives approximately 180 beds accommodation. The restaurant provides seating for 60 persons at a time. There is a small bar at the hotel area also a small museum and snack bar. For recreation visitors may

bath in the warm spring which is warm throughout the year or go game viewing. Game viewing occurs in the early morning and late afternoons. The Game Reserve opens up in November/December when the dry season starts and closes to game viewing in May/June when the rainy season starts. This is understandable as during the rainy season the numerous tracks in the bush are impassable. Also it is difficult to see game at such times as they would have withdrawn into the forest. The wildlife to be seen include elephants, water buck, bufallo duiker, warthog and baboon.

Other facilities in Wikki include a conference room, a sovenir shop, provision store, clinic, and tennis courts. The visitor area is less than two-thirds of the camp total area. The rest is occupied by the staff with their families and friend. Infact as of date there are over two thousand inhabitants staying on the site. Only about one-quarter of this are staff employed either by the Game preservation unit or the hotel. Most of the non-staff are squatters. They live of the proceeds of the camp.

Many of them can be seen engaged in petty trading, and garden farming. They have become the biggest problem of Game Reserve. They pose, management, health and social problems. Because of their number it has become increasingly difficult to fully take care of the camp. The. Baboons and Warthogs can be seen lingering around refuse heaps. These animals have become domesticated as a result of human activity. They now constitute a problem to both visitors and inhabitants.

The population size has created the need for a primary school to be built in the game reserve. There is also a small church and mosque on site.

The source of water supply is the warm spring. The spring water has been certified clinically pure. Its source is underground and has a temperature of 31^{o}C throughout the year. Both tourists and inhabitants alike bath in the warm springs. However the management have thought it fit to demarcate the spring. The upper level towards the source, to be used by visitors whereas the

lower level, would be occupied by the inhabitants. An electric generator supplies electricity to the visitor area and to some staff chalets. The site of the Wikki Camp is naturally beautiful, but the physical presence of such a large number of people may cause irreparable damage to the site. The situation needs to be arrested immediately and positive steps taken to restore its image.

105 SITE ANALYSIS

The Wikki Camp occupies an area of about 28-30 HA. It is bounded on all sides by a thicket of forest south of the site is found the warm springs which emerges from underneath a sand stone cliff. (See fig. 1.3).
The site slopes rapidly towards the warm spring at a gradient which varies from 8% over 50% south of the camp. The surrounding vegetation along the spring is of the tropical rain forest type. It is completely in accessible. Immediately north of the spring is the visitors area, which is occupied by warm spring restaurant, the museum, bar and hotel reception and the chalets. The

chalets are ninety-nine in number and are divided into 78 doubles, 10 suites, and 11 singles. One quarter of these chalets are in a bad condition. Infact some of them have been abandoned. The maintenance of these chalets is a perrenial problem. The chalets are built of local material - stone, mud and thatch. As a result the roofs have to be constantly repaeired. The new chalets have aluminium roofs covered with thatch to give them uniformity with the old chalets. The land around the chalets has been reaped of its ground vegetation due to vehicular and human traffic. As a result the surroundings are glarey. Extensive landscaping is essential. Generally there is an abundance of widely spaced trees around the accommodation areas. The forest vegetation fall into the leguminosae and combratac'ae families. The land adjacent to the visitors area is occupied by the workers and other squatters. These people occupy the greater part of the camp area. The main access to the Wakki tourist area passes through the workers village. This is the line of egress and ingress. The workers area

over flow into the visitors area and the character of the buildings are similar.

Workers houses are fenced of with straw in a compound system. The visitors chalets are free-standing. The prevailing winds, that is the north-east trade wind and the south-west trade winds affect the site from October to March and from April to September respectively. The site topography produces a cool environment towards the spring area and very warm surrounds at the settlement area. Temperaturesare a bit higher at Yankari than Bauchit township. This is due to the relatively elevations. Yankari is at a lower elevation than Bauchi town.

The main access road is the only tarred road, all other roads on site and in the reserve are unpaved.

The site is a very unique one and its beauty is unparalleled. The conservation and maintenance of it is a bounding duty.

Other attractions within the reserve are some historical sites. Such as the wells at Duke and the caves to be found deep within the forest. There might be other finds, yet to be discovered.

CHAPTER 2

ARCHITECTURAL PRECEDENCE

2.01 Development versus environmental conservation

A major consideration affecting all aspects of tourism and recreation planning, including fundamental decisions on attitude and policy, is the extent to which either development or conservation is to be given precedence.

When a resource with a finite capacity for visitors is overcrowded or exposed to incompatible uses the quality of the experience reduces. As such every resource has its optimum capacity. This has been given the pseudonym 'carrying capacity' (M - Raud Bovy). This he defines as "the number of user-unit use-periods that a recreation site can provide (each year) without permanent Biological and physical deterioration of the site's ability to support recreation and without appreciably impairing the quality of the recreation experience".

There is a basic and permanent conflict between the

preservationists, for whom the preservation of the natural inheritance is an obsolute priority, and the utilitarians who want people to benefit from the activities the resources could provide. This can be readily seen in the Bauchi state government's intention to build at International conference centre and a thousand bed hotel at the Wikki Camp. The planning problem is to weigh conservative values against development. Suitability and against the recreational needs of the visitors. A number of points must be adhered to, these are highlighted by M. Baud Bovy.

- "The irreversible degradation of unique resources must be avoided.
- As far as possible, the policies adopted and facilities provided must be sufficiently flexible to allow the re-introduction of restrictions where necessary
- Facilities and activities which are not necessarily linked to sensitive environment areas should be located some distance away."

The density and location of facilities in national or regional parks are largely dictated by circumstances and policies. As a general rule in sparcely populated countries, the main facilities may be conviniently located in the core of extended parks. This situation is common to African Wildlife reserves. In densely inhabited countries they have to be located at the periphery of small parks. In planning terms this may be represented by the principle of concentric zoning. (See figure 2.1).

1. Peripheral zone - numerous and mass facilities (with strick control over quality) which include all types of permanent buildings associated with recreation and tourism and dense recreational and sports facilities comparable to those in suburban nature park. A suburban nature park intermediate between city parks of a high density and national or regional nature parks with a low density of visitors and a high priority to environmental conservation.

2. Natural environment - accommodation facilities of a non-permanent nature (camping and caravans), catering and light sport facilities (for swimming, sailing, boating, fishing where warranted by the quality of the resources and the attendance, a park information centre should be provided at the entrace zone, giving a complete briefing on the parks significance and resources and information on activities and excursion, including nature interpretation trails (centre-guided or self guided trails). Museum of natural history and for crafts and customs may be provided. The information centre may serve as an excursion base where individual cars are parked and visitors transfer to public transport.
3. Special natural reserve, - no roads. If they are essential, then roads must be restricted to public transport, organised circuits of nature interpretation, trails for cycling walking horse riding etc.

There are no facilities other than rudimentary camping sites and shelters for mountaineering.

4. Natural sanctuaries no access, no facilities

The planning of a park requires a thorough stage by stage examination of resources and demands, applying many of the elements of resort planning, surveys and evaluation, programme, tourist and recreational images and products means of implementation and managerial organisation. The products for consideration may be numerous -

- Transit sight seeing by private cars or various forms of public transport.
- Practice of sports in natural surrounding for individuals or groups, over one or a few days.
- Experience of wilderness for individuals or groups
- Discovery of nature
- Holiday sojourns: in peripheral zone, with excursions to other parts etc.

Each type of activity will require suitable facilities access or trails and circuits. The master plan will define the boundaries of the various zones identify the development sites,locate infrastructural and visitor facilities, regulate the relation between the park and the local population

Basic facilities for Tourist Resorts 2.02

Planning for tourism and recreation requires a foreknowledge of the potential uses and capacities of resources; the types of facilities required and appropriate standards of provision.

Facilities provided for tourists fall into two main categories.

1. Those which are common to all types of resorts, wherever they may be located, providing for general tourist needs such as accommodation, catering, entertainment, leisure and relaxation and providing the basic technical infrastructure for resort operation.

2. Those which are identified with particular localities, utilising the resources of the site and surrounding for specific pursuits in recreation, which characterise the nature of the resort e.g. seaside, mountain etc.

Where a resort is within a reasonable distance of an existing market town (say 5 - 10km away) most of the municipal and commercial services, including the housing many people working in the resort, will be adequately catered for, although some resort facilties, such as beach facilties may need to be increased to serve the local community.

Accommodation and Catering

In terms of investment, accommodation represents the most expensive facility in holiday resorts: a 10 percent saving in the cost of hotel accommodation may for example be equal to the total investment needed for recreation, sport and cultural facilities. A detailed survey of accommodation requirements is therefore essential in the initial stages of resort planning as well as in

determining the design features of individual premises. The methodology for development of new resorts also applies to redevelopment of existing ones. The implementation of planning principles will however be subject to many constraints resulting from the previous development.

The character and composition of tourist accommodation has changed considerably over the years, as new types of accommodation have evolved to meet market demands for greater economy and informality, such as self catering family units, hostels and camping sites - and for individual investment and self ownership of holiday homes. At the same time, requirements for traditional hotels have undergone change. In many locations, hotel accommodation has become more specifically adapted to particular needs of travelling (motels, airport hotels) or recreation (sport hotels, boatels, marina-hotels) and of business (convention hotels) In other cases, hotels have become part of a large complex of commercial or residential

development. Resort hotels may include alternative accommodation (apartments, vitlas, lanais) for families and long stay guests, and condominiums within the same curtilage.

Changes are also reflected in the extent, nature and costing of hotel services. Many resort hotels provide alternatives of restaurant, cafeteria or coffee shop, open to both residents and the public with the option of an inclusive charge or individual payment for meals. Depending on the relative value of the site, the public areas may be within or adjacent to the main hotel building, in the latter case, allowing simplicity and economy in structural design.

Types of accommodation and range of services they offer are continuously changing to reflect market needs, and definitions of different categories cannot be specific. Resort accommodation may include the following categories

Hotels - provide accomodation, meals and refreshments for irregular periods of time and not necessarily by

development. Resort hotels may include alternative accommodation (apartments, vitlas, lanais) for families and long stay guests, and condominiums within the same curtilage.

Changes are also reflected in the extent, nature and costing of hotel services. Many resort hotels provide alternatives of restaurant, cafeteria or coffee shop, open to both residents and the public with the option of an inclusive charge or individual payment for meals. Depending on the relative value of the site, the public areas may be within or adjacent to the main hotel building, in the latter case, allowing simplicity and economy in structural design.

Types of accommodation and range of services they offer are continuously changing to reflect market needs, and definitions of different categories cannot be specific. Resort accommodation may include the following categories

Hotels - provide accomodation, meals and refreshments for irregular periods of time and not necessarily by

pre-arrangement. In practice resort hotels may be under contract to accommodate specific groups; may restict catering to residents and may remain open during the holiday season.

Boarding houses, guest houses - are generally smaller units offering inclusive accommodation and meals for residents for longer, regular, period of time.

Hotel Garnis, and similar establishments provide bed and breadfast or accommodation without meals. In the latter case arrangements are often made for the use of associated restaurants.

Hostel accomodation is gerally provided for specific groups of users and facilities are invariably shared. Camping sites, caravan sites are equipped with sanitary services; drainage and site works and may include restaurants or cafeteria, vehicle service stations, shops indoor and outdoor recreation facilities and other features. Most resort sites are restricted to holiday season use although permanent parking of caravans may be allowed under

stringent licensing conditions.

Condominiums are grouping of flats which are individually owned but share common facilities and communal areas Responsibility for maintenance and security are also collective and these and other services - including leasing to vacationers -may be carried out by management associations or agencies.

Holiday Villages are essentially multiple units of accommodation individually grouped around central catering and recreational facilites. (The Wikki Camp may be regarded as a holiday village). The accommodation units may provide self catering as an alternative to inclusive meals and be designed mainly for family or individual use. These definitions could apply as well to pavillion hotels. The real originality of holiday villages lies in the fact that they are conceived as self-sufficient entities, offering under one management all facilities of a planned resort.

The high proportion of capital tied up in fixed assets

for long periods. (Up to 20 - 25 years in the case of the building) means there is little scope for flexibility to meet changes in market or operating conditions. In the case of hotels only a relatively small proportion of the operating costs equivalent to about 15 - 25 per cent of total sales are viable in the short term. The break-even point is often finely balanced, relying on very high occupancy figures during a relatively short season of use and often on some form of government financial aid. Feasibility analyses of hotels and similar types of accommodation need to take into account projected figures for sales, costs and profitabilities for different rates of occupancy and periods of use.

It is for this reason that, in most developed market economy countries, much of the rapid expansion in tourist areas have stemmed from the individual private investments in holiday accommodation. The new trend these days is for at least 50 percent, and a lot more if possible, of the accommodation of a resort should be made available

for rental-

Accommodation type for a tourist resort in a game preserve or national park may be hotel type in which case the hotel is integrated with other tourist facilities or the holiday village type. This type of accommodation is termed social accomodation - in which any category of accommodation may be used.

Most forms of social accommodation provide fully integrated facilities:-

1. Hostels of various categories are often converted from old building, suitably transformed to accomodate groups, families or individuals. Youth hostels may vary widely in their provision from individual rooms to domitories, and from full meal service to self catering in communal kitchens.
2. Holiday villages of social character are of two categories -
   (a) Collective catering. The accommodation is generally but not necessarily) provided in pavillions, each of which houses a few units.

Collective facilities, such as communal lounges and dinning rooms, are relatively numerous.

(b) With individual catering. Each unit has a small Kitchen and dining area. Collective facilities are less developed and limited to social and recreational uses.

Tent villages differ from camping sits by the fact that their clients are accommodated on an all - inclusive basis (generally with full board), so that the tents and camping materials are put at their disposal and collective facilities are as numerous as in holiday villages. (See figure 2.2) Current research is directed towards the design of units which fall between traditional buildings (like bungalows) and tents, offering more comfort than tents but at a price appreciably lower in conventional accommodation, while also taking into account the short season of use. Among the solutions proposed are -

modular units of light weight construction.

- mobile industrially assembled structures.
- temporary seasonal lightweight structures of treated hardboard, wood, sheet metal etc.

- locally constructed truts; chalets and shelters.

In planning the village layout, zones of different types of activity should be distinguished and as far as possible, kept reasonably separate for efficient management, and to minimise disturbance.

Zone	Activities
Access	Reception, administration, parking baggage handling, security
Centre	Information, restaurant, shops, snack bars
Recreation	Sports grounds; swimming pools, beaches out door games area, spectator provisions
Children	Supervised play areas, separate, but adjacent to above

Zone	Activities
Grounds	General landscaped suroundings with paths and viewing areas, benches etc.
Social Entertainment	Discotheque, dance hall, night club, bans theatre and evening entertainment.
Residential	Quiet area, screened from noise, arrange to provide attractive individual look
Maintenance	Stores, machinery, equipment, and service facilities including staff rooms

Catering - Changing habits and preferences of tourists have a considerable influence on the design of food service facilities in an integrated resort. As a role the trend is away from formal set meals taken in hotel

dinning rooms. Opportunities should be provided for greater variety and individual choice such as by - designing a large hotel restaurant as a number of smaller dining areas, each having a distinctive character and identity with the users.

providing a range of resaurants, coffee shops, grill or buttery bars, cafes, snack bars, to cater fro occupants of bungalows, condominuims etc. These may be grouped around (or supplied from) a central food production unit. Including a number of speciality restaurants and bars sewing meals which may be associated with hotels or independently.

Most existing resorts provide one extra restaurant place for each groups of 5 to 20 tourist beds in the resort depending on the proportion of beds in traditional hotels as compared with hotel garnis, apartments and other forms of accommodation. The same number of seats are provided in cafes, bars and similar informal eating places.

The range of facilities which are common to all tourist

resorts includes provisions for recreation, social and cultural activities, entertainment and sports, shopping administrative, technical and other ancillary services.

Two main aspects of planning are to be considered.

1. The types offacilities which are usually included and their main characteristics (space, man power requirements special features) and
2. Their relationship with the overall size of a resort, based on the number of beds, and number of facilities which should be provided.

The second set of standards in difficult to establish since

. The numbers of people in the resort vary with the types of accommodation maily provided, with the proportion of beds available for rental and different occupancy rates.

. The needs will vary with different interests, motivations and circumstances, with the climate and image of the resort.

. Some of these facilities may already be provided in hotels and holiday villages may be virtrally self-

sufficient.

Recreation, social and cultural activities, and sports

Collective facilities should be deliberately arranged to extend their animation along axes throughout the resorts, to generate interest and invite participation, to enable one activity to lead to others and to be attracted to casual on lookers. It is equally important to ensure that activities are screened and separated in such a way that conflicting interests (the noisy exitement of team games and the quiet concentration for individual skills and pursuits etc) do not mar their enjoyment.

Tourists are often less demanding in activities than planners imagine seaside vacationers want the sea and sun morethan actual activities, in some situations, night clubs, dancing and similar urban provisions may be considered as drawbacks rather than advantages.
According to a survey carried out in relation to the development of the Cote Aquitane, of the total population in a resort 25 percent were interested in Cinema, theatre

and concerts, 15 percent in folklore and demonstrations, and only 10 percent in playing organised games, attenging sport events or variety shows, in dancing, or in specific creative activities. Among existing resort users, analysis of interests tend to show a cause and effect relationship. The types of activities preferred will depend on the market structure (age, socio-economic, and educational groupings etc) which will in turn have been attracted by the particular range and quality of facilities offered.

2.03

FROM TRADITIONAL TO RECENT RESORTS

Tourist Resorts - Tourist facilities are not only found in resorts; many individual facilities are located in and around the places where there are attractive resources. They may be isolated, particularly along tourist circuits, or grouped together to create a base for several related interests and activities and to make better use of the services and infrastructure. Most

facilities, however, are concentrated into various types of resort, a pattern of development which will tend to increase with the need to serve valuable natural resources. The same can be said of recreation. Many new recreational centres encompass a wide variety of both active and passive leisure pursuits in addition to catering for other needs.

A resort is essentially developed for the sojourn of tourists; providing multiple facilities for their accommodation, leisure and other needs. Through the concentration of facilities the resort acquires an identity and character, it becomes a specific place to go and to enjoy i its own right in addition to serving as a gateway to other resources. Tourist resorts enable best use to be made of infrastructure and land and of operational services.

Cities of character and culture such as Paris , Vienna and lorence, and centres of administration and commerce.

Such as London, Brussels, Tokyo, Washington, all have an important, even dominant, place in tourism.

Many of the premises and much of the infrastructure and enjoyment in these cities, especially in the central areas, are concerned with providing accomodation and services for foreign and domestic visitors, day visitors and sight sees. The term resort in this case will apply only to those localities where tourism plays a major economic role. As a rule the number of tourists accommodated in a resort comprise half the permanent population - in Cannes or Deaville for example; compared with towns like Nice in which tourists constitute only about 20 percent of the total population.

RATIO OF TOURIST BEDS PER INHABITANT

RESORT	TOURIST BED	INHABITANT	RATION
Zematt (Switzerland)	14000	2800	5.0
Verbier (Switzerland)	18500	1000	18.5
Chamonix (France)	6100	300	22.8
See feld (Austria)	7130	2270	3.1

RESORT	TOURIST BEDS	INHABITANT	RATION
Kitzbutel (Austria)	7000	8020	0.9
Diana Resort (KENYA)	6500	28100	0.23
Yankari (Nigeria)	300	2000	0.15

HISTORIC DEVELOPMENT

Up to the end of the eighteenth century, tourist facilities were mostly limited to the inns, taverns, anberges and hospices along the highways and in the main destinations.

- pilgrim shines market towns and ports. Most travellers were accommodated at their destinations by friends or in rented houses. But in the nineteenth century there was major development in these four categories.

1. Spas for health and entertainment (Baden-Baden Mareinbad, Vichy, Bath, Saint Moritz.
2. Climatic resorts for treatment of tuberculosis, etc. (Menton, and later St. Vallier, Teysin, in the Alps)

3. Alpine Resorts (Chamonix, Zermatt, Garmischand other traditional villager.
4. Sea side resorts for cures and leisure (Deaville, San Remo, Brighton etc)

In the twentieth century - Ski-Resorts were created - in 1920 for the olympic games in Chamonix, from 1930 through the growth of Val d'Isere, etc.

Characteristics The traditional resorts developed from existing villages and towns, either changing the town itself or growing in its immediate vicinity. The location was largely determined by the means of access, and limitations on travel tended to restrict. Mountain resorts to low or medium altitudes, and to concentrate other facilities into relatively few, but often large, seaside and lakeside town resorts. Accessible to the main conurbations of population. Accommodation in such resorts was almost entirely provided in hotels, boarding houses or rented rooms, the entertainment or other facilities being mainly provided by the hoteliers.

Development was largely a matter of private promotion on an individual basis by local businesses and land owners, and was rarely subject to control or comprehensive planning.

The fourtures of many traditional resorts have declined as a result of changes in fashion and styles of living, in the structures of markets and in the choice of re-creation and accommodation. Mostly changes have been brought about by developments in air transport; bringing the individual the opportunity to reach hitherto in-accessible areas which are able to offer better and more guaranteed climates, new and exciting surroundings and frequently, more modern and better equipped facilities.

The effects of change and competition have tended to leave the traditional resorts behind, often in a state of increasing neglect and with an ageing population.

It is, however, possible to introduce new vitality and income by careful planned rehabilitation and orientation towards new market opportunities (weekend recreation,

self-catering holidays, sophisticated recreation and entertainment etc.).

In many situations the resort itself may be adapted by constructing new focal points of interests and activity (the new Brighton Marina and recreation complex in Fort Regent; New Jersey, are examples); in other cases the existing resort may serve as an infrastructure base for extension to new areas. Redevelopment project, perhaps even morethan new developed areas, require survey and appraisal of the resources to identify those which can and should be retained and others which are best removed or modified. Many of the principles which apply to new developments are equally applicable to existing resors.

Post War Developments

The growth in opportunities since the fifties for holidays and recreation (paid holidays, longer and move flexible holidays, shorter working week, increasing affluence and

education, etc) created an apparently in satiable demand for facilities in which to enjoy the sun and sea. For expediency, much of the development was speculative and unrelated to the broader and long term needs of the area or of the community involved. Much of the rapid and often large scale urbanisation project of this period presented the following patterns.

- Utilitarian buildings, often condominium owned, occupying the maximum area of the site and allowing little or no community benefit.
- Large dominating structures, out of scale and character with their traditional surroundings
- Vast resorts such as on the Italian Adriatic and in Spain, developed without effective planning restraint often sprawling out along the coast to take material advantage of less expensive building land (notwithstanding its value as a natural setting and recreational resources)
- Ribbon development, along coastal and scenic roads of poor quality and often short lived prefabricated motels, holiday homes and chalets left unoccupied and neglected

for most of the year.

- Development of caravan and camping sites with the minimum of facilities, often on the most prominent headlands and plateau, with rarely any attempt to screen or landscape for the benefit of other views.
- Concentrated resort developments in the vicitity of international airports, (such as Baleares) with high density, high rise buildings, lacking in space and adequate provision for traffic and services.
- Overloading or inadequacy of infrastructure with resulting failure in supply, hazards and pollution.

The New Integrate Resorts - 2.05

In the 1930s, long before the boom in post-war tourism the first planned resorts were beginning to make and appearance. The new integrated resorts were constructed on new sites free from restraints of previous development; they were comprehensively planned and programmed to ensure all the necessary facilities were provided in appropriate places, at the right times, and in the correct scale

and character. The objectives were to achieve in a few years what a century of costly trial and error had achieved in the best traditional resorts. While the principle of fully planned resorts dates back to many of the early Spa towns developed under the autocratic authority of one land-owner (for example Buxton, in Derbysture), modern integrated resorts are planned to meet both market and development needs. Among the first examples (about 1935) were Ceivinia and Sestriere in Italy and Alpe d'tluez in France. (Ski resorts) and S'Agaro, one of the first developments on the Costa Brava (Spain) and now one of the most exclusive.

Some of the planned integrated resorts have been developed by the state or regional or local authorities, to attract foreign currencies, to serve as a model for further investment, to develop local or regional economic activities and/or to offer relatively cheap holiday accommodation for domestic tourism. The resorts may be widely different in character, size and in types of

facilities offered. They may include various categories of accommodation provided by trade unions, by public or semi public corporations and/or by private enterprise. In all cases, however, the development is fully planned and regulated to ensure it meets the desired objectives of the authority concerned. Resort developments by privated promoters have tended to be mainly speculative, but there is an increasing awareness of the operational attractions and long term financial benefits to be gained by comprehensive planning. Development may be co-ordinated through the following agencies.

(i) Turr operators, (ii) property developers
(iii) joint participation.

Many of the recently developed resorts have not measured up to expectations, in spite of some degree of planning and control. The grounds for criticism are numerous but, generally, can be identified with the following failings:

- The resort has become overdeveloped, giving all the disadvantages of a town-traffic congestion, high density, high rise buildings, noise and pollution, inflated costs and prices.
- In taking advantage of the best location, the resort has dominated, changed and eroded the valuable natural resources of the area.
- Development has been not so much for the benefit of tourism as for speculation, including individual speculation in second homes and holiday villas or flats.
- The resort is mainly deserted most of the year, few of any community activities and services are viable outside the holiday season.
- Very little benefit has been gained from the development by the local inhabitants, seasonal workers and commodities being imported and financial administration controlled elsewhere.
- The resort is isolated from contact with the local communities and ever prohibited to local people in spite of having taken over much of the surrounding resources.

- The original approved concept has been insidiously changed to increase short term gains and profitability.
- Lack of effective control has resulted in exploitation and pollution of the environment.

An appraisal of the best features and failings of existing resourts is an important part of planning. Feed-back of information through official sources tends to give more emphasis to the credits, an insight into the problems can best be gained by first hand experience and surveys. Most of the difficulties arise from inadequate organisation from deficiencies in planning - particularly in understanding the real motivations underlying development and their socio-economic consequences and from maladministration. An element of speculation is almost unavoidable in private enterprise and commercial investment, and this must be directed towards the long term objectives of a well planned integrated resort which gains in appreciation and value from its attractiveness. To achieve such ends strict almost dictatorial standards and

controls must be enforced.

In terms of tourism development, future resorts will need to be considered not only for their internal feasibility but also in relation to their regional and national objectives to a reasonable use of resources and to the needs of the local tourists and those of the local population. Comprehensive regional development plans for tourism will invariably lay down the roles to be undertaken by future resorts in order to ensure the best use is made of the resources in the region, taking into account different market needs and financial constraints.

CHAPTER 3

DATA ANALYSIS

3.01 Location - The Yankari game Reserve is located in the former north-Eastern state, in what is now Bauchi state. It covers a land area of approximately 207,800/ Ha, of uninhabited wood land. The game reserve itself is situated 200 kilometres south-East of Bauchi capital. Driving distances are more than those visitors would find acceptable for a weekend tour. In road hours these are approximately.

From Bauchi - 2 hours
From Gombe - 2½ hours
From Jos - 4 hours
From Kano - 5 hours
From Zaria - 6 hours
From Kaduna - 6½ hours
From Maiduguri - 7 hours.

Topography 3.02 The river Yashi which is crossed by the access road just before Mainamaji enters the reserve

from the north and joins the river Gaji. There are quite a few streams with seasonal flow but only the River Gaji is perrenial. This has an important bearing on the distribution of fauna during the later part of t the dry season. The animals move to the river during this period to drink. Visitors can easily see the animals at this time.

Generally the landslopes gently from the western boundary of reserve to the Gaji valley and rises again towards the eastern boundary. There is also a slight general decrease in elevation from north to south. There are few isolated hills occuring here and there and slopes relatively steep.

Geology and Soil 3.03

The reserve is located on sedimentary rocks and outcrops are rare. West of the Gaji River are tertiary sandstones, while to the east are the old cretaceous deposits of shales and sandstones. It is probable that the escarpments on the Western fringe of the Gaji valley, clearly defined at Wikki and at the Sir Gawain falls

mark the eastern limit of the tertiary rocks.
Three warm springs (Wikki, Gwana, Dimil) have been discovered in the Gaji valley at a short distance from the main river and associated with the sandstone escarpment. The most spectacular of these is at Wikki, where a fresh clear stream about 10m wide and 0.9m - 1.20 deep emerges strongly from the base of a sandstone cliff. A uniform flow is maintained throughout the year and the temperature remains constant day and night at about 31.1°C.
It seems likely that the springs emerge at the juction between tertiary sandstones and underlying impervious shales of cretaceous age and that sub-surface water running into the sediments from the basement complex rocks some distance to the west of the sub-surface water running into the sediments from the basement complex rocks some distance to the west of the reserve exerts a head on the water in the sandstone, thus causing the swift current in the springs.

Chemical and bacteriological analyses of water samples from Wikki and Dimil springs have been conducted by a government chemist, and showed a high degree of purity for both samples. Apart from the grey impervious loams of the manshlands bordering the central river system, soils in general are deep, freely draining, light textured and reddish-brown in colour.

CLIMATE 3.03 - Annual rainfall in the reserve is about 1016mm with peak occuring in July and August. The months from November and March inclusive are virually rainless. There are no temperature records available from the Reserve itself, but approximate mean monthly temperatures recorded at Bauchiare as follows:

Month	Maximum	Minimum
January	29.4°C	11.1°C
February	32.8	15
March	36.7°	21.7
April	36.1°	21.1
May	35°	22.8
June	31.1°	21.1
July	29.4°	20.6
August	28.3	20
Setember	30	20
October	32.8	17.8
November	32.8	13.3
December	30	10.6

The range of absolute temperature is 6.1 - 40.6°C. As the elevation of Yankari Reserve at 213-365 metres is less than that of Bauchi which is 609 metres above sea level, maximum temperatures are likely to be

slightly higher than those of Bauchi throughout the year. The same applies to minimum temperature during the humid months of March - October, but from November to February, when atmospheric humidity is low, minimum temperatures are governed more by local physiography than by general elevation above sea level. Reduced to the simplest terms, the seasons are October to February - warm by day (less so. in December and January), cool at night (less so in October) dry atmosphere and virtually no rain. March to June - hot by day, warm at night and a humid atmosphere but little rain. July to September cool and wet, high atmospheric humidity and abundant rainfall.

Vegetation 3.04

With the exception of specialised sites of higher than average moistore status, along the central river system, the Reserve supports rather open savannah woodland with grass dominant in the field layer, the discontinuous canopy of the trees is 3 - 9 metres in height with

occasional stems of up to 12 metres and there are scattered shrubs, Two families predominate, combratacaae and leguminosae.

Annual fires sweep through the woodland. If such fires occur late in the dry season, when there is a great deal of inflammable material, degradation of the woodland is liable to be excessive and may destroy the habitat of certain species of wildlife; it is therefore the practice now to deliberately burn the area (at least partially) during the darly dry season before all the grasses have dried out, to minimise the damage. Unfortunately the bleakness of some of the burnt-over wood land may give the visitor a mistaken first impression of the attractiveness of the reserve when he enters, by the approach road to Wikki.

On eroded slopes, and on the verges of gulleys and escarpments bordering seasonal water courses, are very characteristic and pleasing belts of wood land dominated by Pteleopsis (Hausa: Lallen Giwa) a tree

species recorded only in Yankari Reserve.

The marshlands themselves which are a prominent feature of the central river system are partly treeless, with a dense ground vegetation of grasses and sedges and occasional low thickets of thorny shrub. Else where, the riverian swamps support closed evergreen forest.

ECONOMIC SURVEY 3.05

Estimated Expenditure (from maintenance, wages and Salaries)

Period	No. Employed	Wages Salaries	Mainte-nance	total
1970/71	52	₦13,00.60	₦15,000	₦28,000.60
1971/72	95	₦23,765.20	₦2135,000	₦458,765.00
1972/73	99	₦24,775.75	₦20,000	₦44,715.75
1973/74	112	₦53,764.50	₦40,000	₦93,764.50
1974/75	115	₦103,704	₦60,000	₦163,704.00

FIGURES FOR 1975 - 1981 could not be obtained.

From these figures it was concluded that maintenance costs increased with increased facilities.
Money received from wildlife for a three year period were as follows.

Year	Month	Number of Visitors	Number who paid fees	Total amount collected
1981	Jan. - Jul	14,645	13,353	₦52,469
1980	Apr - Dec	15,455	12,753	₦46,502
1979-1980	Apr - Mar	11,708	-	₦63,059

If the assumption is made that every year there is an increase in maintenance cost of five-ten thousand Naira, then cost of maintenance by 1980/81 should be between ₦70,000 and ₦100,000. This estimate would not be too far wrong since there has been a development of social services offered at the Game Reserve. For example increase in accommodation.

In 1965 - number of chalets totalled 30

1975 - " " " " 52

1981 - " " " " 99

In 1976, a firm of Architects and management consultants were commissioned to make a feasibility study as to the viability of a hotel at the Reserve on behalf of the Bauch state government.

Their results were as follows:-

"After the formation of a Tourist Board by the state government, it was decided to develop Yankari in two stages.

(a) an immediate so called 'crash programme'

(b) a long term development plan

For stage 1 it was decided to build about fifty new rondavels, to improve and extend the kitchen and restaurant, to upgrade the beaches along the spring, and to improve the services of laundry water supply etc.

For stage 2. was envisaged the building of a large lodge as a holiday retreat with all facilities and services common to a holiday and conference centre. The total number of beds for the second stage could be anything in the region of five hundred to one thosand beds".
As of date the hotel has in its possession 99 chalets most of which are in a poor condition. Some of the chalets have dilapilated and have been abandoned. Government intention of implementing stage 2, have been redirected to the proposed building of an international conference centre and a hotel.

Development of wildlife services has been regulated to the background; since this does not apparently yield a short term benefit.

3.06 Financing Tourist Facilities

In market economy such as Nigeria, state assistance to the private sector in developing revenue-earning facilities may be two fold.

1. Financial aid (direct or indirect) through:
   - Subventions (usually up to 30 percent as a maximum)
   - Long term low interest rate loans (usually with a specified redemption period)
   - Participation in capital stock (joint public and private companies)
   - Securing loans obtained from other sources
   - preferential interest rates
   - Physical aid (mostly through the offer of state land)
   - Special guarantees to foreign investors.
2. Fiscal aid through
   - an exemption from direct taxes for a limited period
   - relief from sepcific indirect taxes (such as duties on selling real estate, creating companies, importing goods)

   or agreements giving a determined fixed rate of taxation.

In centrally planned coutries state financing, in diverse forms plays a very dominant role in tourism development. For example -

- Direct capital investment by the state financing, in diverse forms, plays a very dominant role in tourism development.. For example - Direct capital investment by the state, to implement revenue-earning facilities (though extra-budgetary funds).
- Other direct public investments, through municipal or regional funds.
- State subsidies for capital investments by municipalities, trade unions, factories etc.
- Endowment of funds to regional tourist enterprises (groups of hotels etc) aimed to provide public services on a more or less autonomous base (even with financial autonomy)
- State capital investment shared with foreign tourist firms bringing appreciable managerial expertise and experience particularly in operating facilities.

- Grants to the private sector for providing boarding houses, rooms to let etc.
- Direct subsidies to tourism and holiday expenses of social groups (young people, lowly paid workers in particular)

Main Sources of Finance

The institutions likely to provide capital for tourism development (either independdntly or in a supporting role), and the private sources of finance involved may be categorised as follows.

1. Public institutions financing domestic projects: development banks, companies or fund reponsible for redistributing the state's financial assistance to various economic sectors, generally by way of loans with low interest; public instutions investing public saving or their own resources (according to government guidelines) in the form of mortgage loans or financial interests in companies. Beneficiaries

are usually regional or local public bodies, joint public and private companies. These institutions tend to finance infrastructure and non-profit making sports activities. They may sometimes participate in the construction of a tourist resort.

2. Semi-public bodies financing domestic projects: Joint public and private companies are most common in countries with regional development plans for realisation of large tourist resorts. Their activities may be specifically limited to building or extend to both building and operating facilities.

3. Commercial domestic undertakings; commercial banks issuing loans (rarely more than 50 percent) or making 'lease-back' agreements with the operators or tourist facilities, isurance companies (mortgage loans) and non-tourist commercial companies (with miscellaneous primary interests) obtaining mortagage loans and investing from the company's own resources.

4. National governmental sources financing international projects public or semi-public institutions entrusted

by the government of a relatively rich country with the task of granting credits to the governments (more rarely companies of other, usually developing countries. Loans, although at favourable interests, are often 'tied' to conditions (such as the use of specific goods and technical services)

5. Large hotel chains which usually span many countries, rarely owning the hotels bearing their name but having a minority interest in a joint stock company or benefiting from a management contract.
6. Multi-national companies concerned with tourism (such as airlines) and large banks setting up, in respect of and individual project, a joint stock company in which they acquire a majority interest.
7. Inter-governmental organisations particularly in the world Bank (usually long term loans to governments) or its affiliate including International Finance Corporation (minority interest in joint public and private stock companies, as a cataiyest for further investment)

Socio-Economic Survey 3.07

It was necessary to find out the socio-economic groups that visit the game reserve. Socio-economic groups are defined as 'people whose social, cultural and recreational standards are similar' (M. Baud Bovy)
In Yankari this falls into roughly two groups, they are

- those who visit the reserve for the experience of wilderness (this group have a definite purpose for visiting the reserve)
- those who out of curiosity stumble into the reserve to derive pleasure (fun seekers - their intentions are not specific).

The awareness for tourism among the local populace is still yet to be developed. At a glance one would notice that the majority of visitors to Yankari and who leave a substancial economic impact are foreigners. It only this category of people who come and stay in the reserve for any appreciable length of time.
The determination of the tourist impact in Nigeria is difficult to assess because of two basic reasons -

1. the tourism industry does not constitute an independent economic grouping. It is infact linked to and direct dependent on numerous economic sectors - such as products, external trade, education etc.
2. Tourism has not developed into an export industry and so one cannot talk of a foreign tourism balance. After evaluation of the cost of living in other areas of similar tourist developments the conclusion is that foreign tourism cannot thrive in Nigeria as of new. One can only identify a special type of foreign tourism resulting from expartrates who come to seek employment in the country and who spend their holidays in visiting local tourists attractions such as Yankari. However the socio-economic effect of tourism can be seen at the Wikki Camp, Yankari Game Reserve. The existence of over two thousand inhabitants (most of whom are not gainfully employed) is a clear indication.

Tourism also produces what may be termed the MULTIPLIER EFFECT. The tourist expenditure on goods and services generates new incomes in other economic

sectors. Also direct and indirect employment is a by product of creating new markets for local businesses. The state benefits from direct taxation on tourist manpower, tourism and transport enterprises. Also from indirect taxation mainly on goods consumed by tourists and from state ownership or in participation in tourist enterprises.

Yankari has definitely created a lot of economic activities in the region; as evidenced by the setting up of new hotels such as the Awala Hotel and the new Bauchi International Hotel.

All these activities it must be stressed have their base from the natural resource, that is the Wildlife.

Socio-Economic Impact

Evaluation of proposals for the development of tourism and recreation may be at different levels of involvement and may be judged against differing criteria. At unit level, conseration may rest on the decisions of private persons or single. Purpose authorities or local

authorities, and take into account only those input and outputs of a project which have a price on the market, their relative internal costs and values and the degree of risk uncertainty involved. At national and regional level the decisions will be more complex, requiring consideration of the environmental implications and the broader and longer term effects on the socio-economic development of the country. The latter will include the regional income-generating effects of tourism and comparisons with alternative developments in other economic sectors.

- Investment analysis for Resort Development

A developer usually compares the profitability of alternative proposals by applying the normal commercial criteria of cost and revenue (internal costs and benefits) and return on capital. This revenue (internal cost and benefits) and return on capital. This financial appraisal allows the feasibility of the alternative plans to be determined. For each investment project a cash flow forecast will have to be prepared, giving a break down on the

expenditure and receipts - including taxes and subsidies - related to the periods of time when they are expected to occur, hence determining the timing needs for both fixed and working capital.

Similar methods of analysis may be applied globally to a mixed development such as a tourist resort or recreational complex. However, the operation of a resort will only be successful if all the necessary facilities and ancilliary services can be implemented.

Evaluation of a resort project, including the apportionment of external and joint costs, must take into account the conditions under which the individual facilities are feasible. Often this will involve questions of appropriate phasing as well as investment costs, since not all the operating units will be planned or executed at the same time.

Therefore at this global scale, individual feasibility studies must be applied to determine the requirements (financial, locational, spatial etc.) which the developer

will have to satisfy in order to resell or lease plots for various facilites such as hotels, commercial properties and housing, and the overall costs he will incur in implementing others (infrastructure, parks, playgrounds etc) Investment criteria which ensure the best return on capital to the private developer are not necessarily the best for the community. Social cost and benefits (monetary and non-monetary) must be taken into consideration, such as the costs of health services, training and environmental control as well as the employment and benefits from regional development, the employment and out lets for produce and services which will be generated by the resort.

Cost benefit analysis provides a frame work for long term evaluation and for a wider view (in the sense of allowing for side effects of many kinds on many persons, industries, regions etc.)

It enables values to be attached to the various external costs and benefits which stem from the development. In

comparing alternatives, particular consideration can be given to the community's interest, which is usually assumed to be best served by mamimising the socio-economic benefits. Planning regulation of tourism development may positively contribute towards this end by transfering to the developer many of the external costs which would otherwise have to be borne by the community. A community, however, is not homogeneous and various groups may have different, and sometimes opposite points of view; costs and benefits are not necessarily the same, for example for local people taking part in tourist development and those pursuing traditional activities. The planning BALANCE SHEET allows these various interests to be considered in detail. According to various interests to be considered in detail. According to Litchfied, the balance sheet should enumerate 'for each project or group of projects the parties who will be concerned with producing and operating them (both public and private), and also the parties

who will consume the services provided, whether they buy them in the market or collectively through rates and taxes. For each party is then fore cast the costs and benefits which will accrue.

Compared with separate evaluation of each cost and each benefit, the planning balance sheet provides a more comprehensive analysis of alternative plans; it enables social cost to be off set by other benefits and both costs and benefits to be more equitably distributed by adjustments in the plan. From the view point of the private, a planning balance sheet may be used to demonstrate the benefits which will accrue to the community if permission for a proposed development is given.

Recommended approaches for evaluation

Feasibility analysis, although the most common approach at present, is inadequate for planning new resorts. Even in the case of purely private profit aimed developments it ignores the interests of many parties (local inhabitants, owners of neighbouring land

recreationalists etc.) who will be affected during its implementation and may demonstrate their opposition sometimes with serious consequences on this issue summary cost benefit accounting, which attaches differential weightings to a subjective and arbitrary series of socio-economic criteria in order to determine scores for the alternative plans is also liable to serious error. Comparative analyses should always be extended to determine the impact of each of the alternatives on various groups of the community using a kind of balance sheet. In the case of large scale public developments or developments which are difficult to compare, or liable to have a strong impact on the sites or in the local community, the approach will be based on a throughly detailed survey and analysis of the various costs and benefits. This may include computer analysis of sensitivity tests to evaluate the importance of subjective assumptions.

Usually however, in planning new resorts, the use

of a fully quantified econometric approach is not practicable. In most cases, a simpler approach is adopted, based on; a quantified analysis of tangible criteria: a descriptive expresseion of the foreseeable social and environmental effects on each of the main groups involved; and a comparison of the inherent risk of each alternative. However, where this disinction between quantified and important but non-quantified criteria could lead to serious underestimation of the latter all the criteria may be expressed without figures. The goals - achievement Matrix assumes more significance in regional or national tourism planning but may be adapted to monitor the effects of developments in relation to the planning strategies and long term objectives.

Socio-economic impact at Regional and National Level 3.08

- Collection of economic data

Accurate determination of the impact of tourism development in a destination country is difficult. Evaluations should however, be applied, at least in the two main

fields of tourism which can be readily isolated as follows:

1. The accommodational facilities, which usually represent more than half the country's tourist investments of the employment and in broader terms of the economic activity generated by tourism.
2. The transportation between the generating countries and the country of destination, when involving long distance travel and high cost access.

Evaluation of the tourism investment - As indicated, for many of the basic infra tructures such as airports, roads and public services the part of capital investment to be attributed to tourism is often difficult to determine. Correct attribution of these costs is critical for realistics cost benefit analysis of the socio-economic impact of tourism.

The capital cost purely tourist facilities is easier to calculate.

As an average approximation, accommodation and catering often represent about half of the total investment in

developing tourism, and proportionate capital costs fall as follow.

CAPTIAL COST IN TOURISM	AVERAGE PROPORTIONS
Accommodation and Catering	50 - 60%
Other tourist facilities	10 - 15%
Technical and service infrastructures	15 - 20%
Vocational training, promotion, publicity	5 - 10%
Protection and entrancement of resources	5 - 10%
	100%

This investment creates temporary employment in the building sector, demands for land, goods and services and other multiplier effects which stem from the increase in economic activity. Investment in local as opposed to foreign currencies is particularly significant.

National income and tourism - Tourism, as an export industry, may play a major and determing role in the balance of payments and in the economic development of

the country. The foreign tourism balance id defined as the difference between foreign exchange spent in the country by foreign tourists and money spent by nationals abroad. Competitive development of domestic tourism also contributes positively to this balance.

A part of the foreign exchange spent by foreign tourists does not stay in the country, owing to leakages; expenditure made abroad by state or private firms in buying foreign goods or services necessitated by the influx of tourists. Main leakages arise from purchases of foreign building materials and furnishings for tourist facilities, foreign drinks, imported food commodities, cigarettes etc. from repayments and interest on loans of invested foreign capital and expenditures on promotion and publicity. The net tourist income in foreign exchange is obtained by deducting all direct and indirect leakages of the tourist industry from the foreign exchange brought by foreign tourists. It is usually necessary to adopt 'shadow pricing' for foreign

exchange, for cost of labour and cost of land.
The gross national or regional tourism product is calculated by assessing the tourist consumption expenditure at current prices for both domestic and foreign tourism (or only for foreign tourism if the foreign tourism product is considered); then subtracting the proportion of imported goods and services purchased by the tourism sector. After deducting indirect taxes, this gives the gross tourism product at factor costs, which constis of the wages and ancillary payments of employees in the sector owners' and operators' profits, rent, interest and amortisation payments, and a part includes payments abroad (wealth created by public and private undertakings such as wages, rents and interest.
Multiplier effect of tourist - Tourist expenditure on goods and services generates new incomes and out puts which in turn, produce further expenditure and incomes in other sectors. The impact of this initial expenditure on the economic system of the country or region can be evaluated by the use of the 'multiplier' technique

or by a more detailed input - output analysis of the various economic sectors affected.

The multiplier coefficient is the ration of direct and secondary changes within the economy to the direct initial change itself. This coefficient will vary from country to country depending mainly on the share of imported goods and services consumed by tourists and on the marginal tendencies of nationals to save or to spend income abroad. There is also a time delay for money to circulate which will be affected by the seasonality of tourism, behavioural patterns and the general economic conditions of the country. The nature of tourist spending (in second homes, in hotel services in travel and consumption of goods) will also have a significant effect as will the availability of suitable local products and services. Multiplier coefficients of tourist expenditure are said to range from 1.2 to 4.3. As a measure of economic benefit from tourism; the multiplier technique is increasingly subject to question

It can be argued that other forms of economic activity produce similar effects and the tourism multiplier may not be significantly different from those generated in other economic sectors.

Employment - Two main categories may be sistinguished:

1. Direct Employment in services directly and mainly related to the tourists themselves: accommodation, food, and drink establishments, travel agents and guides, entertainment and transport souvenir shops and other miscellaneous services (postal, telephone, banking, car hire and parking etc.) not all these are exclusively for tourism and a narrower range of criteria may be adopted.
2. Indirect Employment extends to the sectors indirectly influenced by tourism, in building and maintaining tourist facilities, supplying consimables (food drink etc.) and durables (furniture equipment) the asscciated retail, catering, agricultural and transportation employment, supporting public utility services and local services.

At regional or national scale the ratio of indirect employment to direct employment exclusively in tourism services in generally between 0.5:1 and 1.0:1 Tourism employment has the considerable disadvantage of being seasonal, although it may sometimes be combined with complementary employment in other economic sectors during the low tourist season (often in agriculture and handicraft). The local impact of a tourist project may be increased if the local authorities obtain an undertaking from the developer that local people will have priority in employment, that they will be informed in advance of types and categories of new employment, and of corresponding educational and training requirements, and that preference will be given to local commercial services etc.

The capital/employment ration is particularly important and may be calculated for the whole direct employment, or for employment designated by categories (such as categories of tourist facilities, or categories

of accommodation).

State Revenues and Regional Benefits

State benefits may arise from direct taxation, mainly on tourist man power, tourism and trasport services; from indirect taxation, mainly on goods consumed by tourists and custom duties; and from state ownership of, or participation in tourist enterprises.

The lattter may take the form of state financing (through development grants) of infrastructure, environmental improvements, and municipal projects, designed to generate further investment in regional plans. Regions with limited or poor assets for agricultural or industrial development often possess the most attractive unspoilt landscapes. Tourism may contribute to the balanced development of the country and is usually the preferred, if not the only, way of creating economic activities in the regions, either through foreign tourism or through domestic tourism, which may drain a part of the buying power of the main cities and industrial areas towards

the economically underdeveloped regions (creation of a beneficial centre-periphery relationship)

The 'gross regional product', leakages and all other economic indices may be used in assessing the regional impact of the tourist development considered. Economic drawbacks - In addition to the difficulties of seasonality consideration must be given to

- the extreme vulnerability of the tourist industry, when facing economic or political uncertainties, either in generating or receiving contries. The vulnerability is increased when the tourist dientele comes mainly from one generating country.

The inflationary impact, which is due mostly to the high demand for land for tourist facilities (increase in land values), to the rapid rate of creating tourist facilities (increase in building costs), to the seasonal influx of a high-spending population (increase in food and beverage) consumption.

The inflationary impact depends on the relative size of the local market compared to the tourist demand,

and on the economic structure of the country (linked to market economy systems) Inflation is often greatest during the initial impact of tourism on the economy.

Unquantifiable Impacts

To often neglected owing to the possibility of assessing figures, the intangible effects of developing tourism may be very significant and even of over-riding importance. It is said at Dubronvik

> "...traditional investment analysis is not a sufficient instrument for taking account of the external effects associated with tourism and recreation. Even in the frame work of social cost benefit analysis the proper evaluation of environmental externalities presents difficulties; they can certainly not be handled by the discounted present value method....."

Among these effects are:

- Social welfare of the country's inhabitants enabling them to take holidays in adequate facilities, public health, modification of behaviour patterns (positively or negatively) as a result of tourist influences.

- Regional services, social and recreation facilities provided for tourists may be used by a local population who could not otherwise justify their implementation. In a more general way tourist and recreational facilities may help in attracting to the country foreign industrialists or commercial developers interested creating new industries.
- Social problems such as rapid degradation of the natural and social environments of a fragile population, the revelation of wide economic and educational gaps between inhabitants of economically under-developed tourist destinations and foreign or rich national tourists; the degradation of traditional, familiar structures; development of begging and prostitution etc.
- Knowledge of the country or region visited by tourists, of the inhabitants and of their economic resources. Giving foreigners an opportunity to be favourably impressed by an insufficiently known country/region is often one of the main motivations of a government in

developing tourism. The building of a few hotels of good standard is a prerequisite for the development of large scale business relations with other countries.

Regional and National appraisal of tourism development

In formulating a national or regional plan for tourism development it is necessary to analyse the potential flows of tourists and their possible effects, both in flows and collectively, on the socio-economic structure of the country.

The feasibility of projects which form important components of the plan should be checked first to ascertain whether tourist investments are likely to be profitable. A negative answer does not necessarily mean that tourist development will be rejected. For instance, in the case of a developing country with very limited export capacity for goods, and where tourism is one of the few ways of acquiring foreign exchange (as Tunisia), the government may be induced to take in charge (generally

by subsidising the creation of facilities) a part of the cost in order to make tourism operation profitable. This policy corresponds to a sectoral monetary devaluation. Similarly, inducements may be made (often in the form of infrastructure provisions and selective regional grants) to encourage the diversification of tourism into favoured regions.

In other cases, investment projects may be analysed to assess the proportion of external cost which can be passed on through regulation and charges to the developer.

At regional or national level cost benefit analysis provides a more comprehensive picture of the true impact of tourism and allows the definition of important ratios such as gains in foreign exchange by unit of investment, capital cost per employment created, and state revenue by unit os investment.

The comparison of these ratios for tourism with the ratios for other competing economic sectors (agriculture, industry, handicraft etc.), if viable should determine the preferential sectors for development.

CHAPTER 4

DESIGN BRIEF

DESIGN GOALS AND OBJECTIVES 4.07

The redevelopment proposal of the Wikki Tourist camp is viewed in its entirety as a problems of environmental rehabilitation.

NOTE. A constant analysis of the existing situation is intentional so as to help in justifying the reasons for its redevelopment. Also this would give a better understanding of salient points considered for the proposal.

As alrady identified, the biggest problem with the Wikki camp is the existence of a large amount of people on site. Their very size negates the very institution of a game reserve. They pose problems of health and sanitation. Most of the workers and squathers houses have pit laterines as toilets. Cooking is done with fire wood and a lot of domestic animals abound. The chicken and ducks are a favourite prey of the babons. The refuse produced by the settlement is heaped around

the site and wart hogs make a feast of it. Social problems like begging and prostitution have recently been on the increase. The environmental degradation is going unchecked.

The sensitive nature of the site seemed to have been ignored for sometime and not until recently, did, wildlife officials and governemtn functionaries realise the embarassment this 'crowd' was causing to the Game Reserve. As a result government has made proposals for the removal of the workers from their present location to the base camp at Mainamaji.

It is now viewed that the location of the visitor's camp at Wikki was a mistake initially. But then the deed has been done, a new equilibrium now exist between the numerous eco-systems and the camp. What would happen when the workers are removed from site is anybody's guess. What would happen to the baboons and wart hogs? This is just a small example of man's interference with nature.

A careful understanding of the site and its extensional environment would be necessary to determine what projects or uses would be unsuitable not only on the site be also on the surrounding landscape area. Also it is necessary to ensure that the proposed project comprises a complex of function which are ideally related to the best features of the site.

The state Government has already earmarked some projects for execution on the site. (These have already been mentioned in earlier chapters). The purpose of this project is to provide an alternative to the governments desired project. The project would aim at propounding the following objectives:-

1. to highlight the economic impetus that could be gained by concentrating development on wildlife services.
2. to highlight the dangerous trend of tranforming the reserve into a commercial institution without regard for its far reaching ecological implications which will tantamount to "environmental suicide".

- to introduce those facilities in the reserve which would serve to promote and educate the public on the importance and significance of Game Reserves.

4. to suggest a new direction in the scale and character of development with a view to creating a nature sympathetic Architecture.
5. to develop a unique tourist image that would be attractive to both domestic and international tourists.

What are the facilities to be provided? Already at Wikki there exists a small bar, museum and shop. These are grossly inadequate. Also exist is a restaurant and a conference room which is situated at the New Federal Villa. The inherent attractions, are ofcourse the game, the warm springs, and the historical sites. However the sympathetic planning is necessary to 'unearth' the tourist potential at Yankari.

The New facilities and attractions

A careful synthens of the site needs and potential was carried out and it became evident that Yankari could

be a modern 'Garden of Eden'.

1. The introduction of the 'visitors centre'. This would be the focal point of the design. It would be the nerve of the reserve, a place where all visitors will converge to have information, education, relaxation and other social services.

The Visitor Centre. 4.02

It comprises essentially of the Nature-Interpretation centre and the Hotel Reception and Warm spring Restaurant. The nature interpretation centre is a place where the visitor is helped in developing a keener awareness, appreciation and understanding of the game Reserve and its natural attributes.

Its objectives are -

- to educate the public in the purpose of national parks and how to use, know and enjoy them
- to assist the public in understanding, appreciating and enjoying all forms of nature which are preserved in these sanctuaries.

Benefits of Interpretation -

1. It contributes directly to the enrichment of the visitor experience
2. Makes the visitors aware of their place in the total environment and gives them a better understanding of the complexities of co-existing with that environment.
3. Interpretation may reduce unnecessary destruction of park property, resulting in lower maintenance and replacement costs.
4. Interpretation may assist in successful promotion of parks where tourism is essential an area's or country's economy.
5. It is effective in preserving a significant historic site or natural area, by arousing citizen concern -
6. Interpretation may motivate the public to take action and protect environment in a sensible and logical way.

The nature interpretation centre consist of a lobby area, a small library, a research unit, an amphi-theatre a wildlife sensing equipment area, a botanical and rock garden and an aquarium. (See fig. 4.1 for functional inter-relationship).

Lobby - Large enough to accommodate the average maximum visitation, which is a hundred persons per day, The lobby area is to be flexible, expanding and contracting as visitation chages with seasons. Lounge furniture can be rearranged and the space will contain temporary and movable exhibits.

Such exhibits would be large photographs and literature in panels. Also slot-in video machines and other audio-visual equipment would be present.

An optimum area of $1m^2$ per person is considered ideal.

Natural history Museum. - This would comprise of the inside 'cane' museum and the outdoor display area. The 'cave' would be full air condition and humidity condition kept to less than 60%. This area would contain weather

prone exhibits, such as exhibits as stuffed animals in glass partitions or exposed, historic and archeological finds; some interesting flora and local hunting equipment and crafts. The out-dorr display area would be used as a 'stage' to create jungle sceneries etc. A space requirement of 1.9m^2/person minimal. The taxidermist would have a workshop in the museum.

Multi-purpose hall -

This is required to hold talks and to feature fulm shows on wildlife. It could be used for numerous other functions such as conferences during 'off-season' period.

Library-

This would be provided to furnish information on ecology and wildlife aspects for the academically orientated visitor.

Research Unit -

This would 'house' the ecologists and wildlife experts who monitor the ecological friends in the Game Reserve.

Amphitheature -

To provide entertainment, and to hold 'talk' during the dry season period.

The wildlife sensing equipment area - this consists essentially of T.V. scanners, that are constantly focused on catchment areas in the reserve. Here visitors will be given the opportunity of seeing the actual rumblings of the reserve without going into the forest.

Botanical and Rock Garden -

This is with a view of introducting the landscape into the building. A cross section of interesting plant species and rock formations would found here.

Aquarium -

This would exhibit aquatic life which is not readily seen in the reserve.

The Hotel Reception and Warm spring Resturant

The hotel reception would consist of a reception lobby where visitors awake their bookings for accomodation, a small group of shops, to provide souvenir; photographic equipment and to sell miscellaneious articles.

- Swimming pool to help decongest the warm spring area. The water from the warm spring would be pumped to the pool.

The warm spring Restaurant would provide a formal eating area by the swimming pool and an area for informal eating on the viewing platform. Snack bars would also be provided at various areas of the camp.

The Gateway and Camping Grounds 4.03

The Gateway - at the entrance point of the Wikki camp would be the gateway, stradling the access road - Here, tickets bought at the Mainamaji, base camp would be checked. Also camping equipment would be wired from here for those who are that way inclined.

An information boothe would be provided to help direct visitors.

The camp security service is also located here.

The camping grounds - this would cover an area of about 3 hectares with cleared spaces for pitching of tents. Camping spaces would be screened off from each other

by strubery. Also provided would be a kitchen and other sanitary facilities to be used by all camping units. This area is intended to bring the visitor close to nature and to give variety in the range of accommodation.

4.04 The Games Area - this will consist of both active and passive play areas. Provision of tennis courts, volley ball courts, a miniature golf course, childrens play area, adult relaxation area, and pony riding centre. Both camping grounds and games area would be well landscaped using resilient grasses and shady trees. The areas would be fenced of by sturdy planting, in this case cactus.

4.05 The Ballon Pavillion - this area is intended to create a feeling of fantasy and adventure. Helium balloons anchored to a motorised mechanical system would be used to convey visitors to high attitudes for game viewing and for enjoying the spectacular aerial views. Flelium or coal gas would be pumped into the balloons. This gas would be stored in underground tanks. The

balloon pavillion would have a demountable structure (membrane) that could be kept when not in use and so increase its loguvity. From the ballon platform, which shall be located at the peak of the sandstone diff (20m high), it would be possible to watch activities on the stream by a contilevered deck wedged into the side of the cliff. This is to add to the panoramic views.

4.06 The Wikki Spring - Landscape development will take place at the spring to increase its extent of use. The deep end which is about two metres, would be dredged to provide and adults swimming area. The shallow end, mid stream, would provide the children an opportunity to toboggan fronx giant slides. Floats and other children's aquatic recreation gear would be introduce into the children's area. Further on donwn stream, the stream would be cleared and dredged to provide a boating course. Canoes would be used to ply the full length of the spring up to its junction with the main river Gaji. Changing Kiosks for male and female, and a boat line office would be introduce. Landscape furnishings, would

be used to provide seats and walkways. Also introduced would be timber 'hump' bridges to provide access to both sides of spring.

4.07 The Chalets - provided would be new 'organically' contrived chalets. They would provide a 250 - bed accommodation in doubles and suites. The intention is to provide a low density accommodation area to enhance privacy and the feeling of being one with nature.
The doubles would be placed under the category of airconditioned and non-airconditioned. The suites will be fully aircondition and will contain a small kitchenette and a living/dining area. Access would be provided to the chalets by both vehicle and pedestrian. The accomodation zones would be also 'fenced off' from other activity areas. Other ancillary facilities to be provided would be a maintenance depot, where vehicles used for Game viewing and for making tracks are kept. Also to be provided is a small fire unit.
Laundry services would also be provided for washing

hotel linen. The old clinic is to be maintained sewage disposal would be through a new introduced sewage system. The will be opportunity for vehicular access to the sewage works.

A nursery for the growing of plants is to be introduced, for the effective maintenance of generous planting throughout the camp.

CHAPTER 5

DESIGN REPORT

5.01 Design Strategy

The main problem in tackling the design was define a strategy of approach. Without this the scale of the job would seem exaggerated.

The reasons are that,

1. the land area of the camp is extensive. The site covers an area of 28 hectares.
2. Any development on the camp would have a direct bearing on the extensional environment. The site cannot be design in isolation of the surroundings; yet only Wikki must be designed to limit the scope.
3. The design had to be ecologically biased which would mean environmental planning:

All thise points considered, it was decided that the site would be regarded in "isolation" of its surrounds, but with due regard for the impace such a development would be on its surroundings.

The approach would be that of landscape Architecture rather than "hard core" architecture. Having defined the method

of approach, it was now a matter of evolving a concept. The approach was "aturalistic" therefore nature would be best source of information. Nature's architecture is everywhere and the solution was found in a natural phenomenon. The inselbergs - In that part of the country where Yankari is foundinselbergs abound. The peculiar thing about them is that some of them are covered with vegetation. Thus both work together as an entity. The roack suupporting the vegetation and the vegetation screening the rock from direct rays on the sun. This unit in function and texture, prompted the building concept.

The building shell would be regarded as the inselberg and ornamental creepers would provide the screening material. In this case the creepers would be planted on top of the building and then it would grow down to the terrain.

5.02 Site Planning

The site planning was may be the most difficult problem; because the site plan would inturn give the site image.

It was decided because of the importance of the site and as a result of its environmental indination, the site should be considered as if it were a building. In which case, spaces and their relationship are very important. The functional relationship, would be the first problem. As already mentioned in the brief their are different activity areas - these are the visitor centre, the chalets area, the games area, the gateway and camping grounds, the ballon area, and the Wikki springs. These areas were divided into zones and each was then handled in detail. The space required was based on the activity demands and circulation requirements. Zones of concentrated activity were grouped tother and those of relatively less activity, the same thing.

With the site structured in this way, the means of access to the activity was next considered. It was necessary to bring vehicular access as close to the activity as possible without sacrificing the vegetation. Great pains were taken to weave roads around surrounding vegetation. Gravel stone, and concrete paving rather than asphalt were

used as paving material; Grasses were used as ground cover and shrubs were used to demarcate successive areas and to prevent vehicular access. New shady trees were used to bring in the required atmosphere to the whole site.

5.03 Building Design and structure

The building material was primarily of stone, derived from the formerly demolished chalets and workers quarters. Concrete decking was used as the roofing and earth and vegetation the insulating material.

The buildings occured in different activity zones, but they were mainly the chalets and the visitors centre. The space requirements for activities was calculated mainly on the bed space requirement.

Accommodation. Typical two-bed unit	Gross area
twin bed room average comfort	$18m^2$
guest bathroom	$4m^2$
room circulation and services	$8m^2$
total	$30m^2$

- showers in average accommodation units
- baths in V.I.P accommodation units.

Major Decision - 50% of chalets will be made available for rental.

Policies which may be suggested or imposed by the authorities.

1. Providing incentives for the private owner of an existing unit to put it at the disposal of a renting organisation.
2. Increasing, in new development, the number of private units which would be made available, obligatory in the absence of their owners.
3. mobilising private individual savings for the financing of hotels.
   - by selling shares corresponding to one or more hotel rooms and giving the right to stay free of charge for a given period in the year, with reductions in tarrif.
   - by selling shares, giving the right to a specified number of hotel nights yearly, for instance, a firm may buy 24 nights and organise a meeting for four people for six days.

It is essential that half of the beds should be available for rental in order to maintain life and activity in the resort.

Camp Site - minimum area per unit = 100-150m^2

Facilities for 100 people (25 units) the facilities provided are

- sanitary facilities (four WC's, four to five hand basins two showers, two double sinks, three refuse bins) no more than 100m (maximum 150m) from any unit.
- provisions for site administration, and site gardening and maintenance,
- spaces for recreation (volleyball, children's play grounds, tennis, mimature gold course etc.
- roads (3-3.5m width) with car parking near the entrance to avoid traffic in the camp during the night; lighted pedestrian alleys (1-1.5m width)
- water supply (40-60 litres person per day) drainage and sewage treatment and disposal of wastes from sewage holding tanks.

Visitor Centre -

Facility	m^2
Reception administration plus exhibition hall	500
multi-purpose hall	200 - 500
Research unit and library	200
Catering including services	500 - 700
Others museum - 1	150 - 500
Amphitheatre	500
Play grounds	2000
Mini golf course	5000

shops - typical net allowance = 0.6-0.7m^2 per tourist bed

5.04 Stores and centralised services

A number of support services (in particular laundry, maintenance and part of the catering) where located at specific points. The central food production area included food and beverage, purchasing bulk storage, pre-preparation

and refrigeration. The production kitchens should employ about 0.02 employees per tourist bed.

Service	m^2
Central laundry(for hotel)	50
central food production	150
maintenance depots	100

5.05 Non-tourist population

The workers under a new management would employ two categories of workers; They are the seasonal and permanent workers. The seasonal workers would be those who may be employed to maintain the gardens and surroundings. Permanent workers would be those fully engaged either in wildlife services or in the hotel and restaurant operations. The senior staff of both hotel and wildlife units would stay at Wikki. Others to be accomodated on site would be very essential staff like those in the infirmary. Other staff would be housed at the mainamaji base camp. They would commite to and from the tourist camp. It is hoped a shift system would be introduced to keep essential staff on site throughout the day.

506 Sanitation and other Engineering Services

Water supply - required in the camp for the purposes of hotel and restaurant food services and laundries, for fire fighting, swimming pool, and other recreational uses. Also water is required for the irrigation of ground and maintaining vegetation on building. The source of water is the warm spring. The water has been certified clincally pure. Down pipes will take water from the source, to overhead tanks placed at stategic points of the camp.

Minimum average daily consumption would vary from 50 - 100 litres. Over head tank capacities would be calculated from the tourist bed capacity. In this case tourist be capacity is 250 beds.

Water used in the swimming ppol would be recirculated.

Waste waters would be recycled and used in gardens.

Sewerage- Foul water from chalets camp grounds, and visitor centre will be treated and disinfected before being pumped into the lower courses of the river.

The natural slope of the land would be a great advantage, as swerage does not need to be pumped to sewage works.

Refuse and Garbage disposal As this would be a hoven for warthogs, adequate provision is to be made to for refuse disposal. The use of disposal sacks will be encouraged. Each chalet would be provided with disposal bin, which shall periodically be collected. Method of disposal would be either by land fills on badly eroded areas or by the use of a central incineration plant.

Electricity supply - average electrical consumption is assumed as 0.5 - 1 k.w for non-air conditoned units and 2-3 k.w for airconditioned units. Use of underground cables would be encouraged, along walk ways, verges and under paraments. This would minimize damage and danger. Also it would make surroundings more attractive.

CONCLUSION

RECOMMENDATIONS - In this project I have simply provided an alternative approach to the proposed Government projects at the Wikki camp, Yankari. In all modesty I do not think it is "the solution" as there is no such thing in Architecture. However it can be considered as a method of approach, if however the Bauchit State Government feels this project could be of some benefit to the growth of

tourism, I would propose the following recommendations which are:

1. that the state government take prompt action to develop Mainamaji as the Workers Village and move the workers from the Wikki camp to Mainamaji.
1. that trained staff who are skilled in wildlife management be employed immediately to manage the affairs of the Game Reserve.
3. That private investors be allowed to participate in the proposed redevelopment scheme.
4. That park Rangers be sent to other developed game reserves in Africa to train, so that the will acquire skills in park ranging.
5. That Helicopters located at Mainamaji be used to in antipoaching patrol and also in trainsporting visitors from Bauchi to the base camp.
6. That the management of the hotel be given to a private reputable company like Arewa Hotels.
7. That about 50% of the chalets be made available for rental, but with provision for the chalets to be hired out.

This it is hoped would increase the season of use of the chalets.

In this design I have tried to make the project as workable as possible. I feel it can be implemented, at a moderate cost but with very detailing.

In my search for a Utopian solution I have perhaps sacrified the cultural image that most reserves try to potray. I believe that culture cannot be copied very successfully in modern architectural terms. The cultural form is a function of the level of technology and social needs of the people. In most cases modern Architecture tends to ape the form.

My approach has been purely to integrate my structures with their surrounding handscape. I have tried to the best of my Architectural ability to save a natural environment from being destroyed. I sincerely hope that, this project would inspire other who are environmentally oriented to embark on similar projects to save the limited natural resources in this polluted world.

Bibliography

- The Architect's journal 'Tourism and conservation, Issue of 1 May 1974. London, The Architectural Press 1974.
- Armstrong J.M. The structures of Management and planning for coastal zone. Ann Arbor University of Michigan, 1972.
- Baud-Bovy, M. Tourism and recreation development & Frid Lawson A handbook of physical planning, The Architectural Press Ltd. 1971
- Beaudouin E, Baud-Bovy, M. and Tzanos, A, Cyprus, study of tourist development, Cyprus Ministry of Commerce and Industry, SCET Co-operation, 1972.
- Burkart and Medlik (Eds) The Management of tourism, London, Heinemann - 1975
- Canadian Government Office of Tourism
- Planning Canadian camp grounds. Industry Development Branch, Canadian Govenment office of Tourism Ottewa, 1970
- Davern J.M. Places for people - Architectural Record, 1976.
- Dyer A.A. Recreation site selection - a conceptual approach. Logan, Institute for the study of outdoor Recreation and Tourism, Utah state University, 1969.

IVCTO International Union of Official Travel Organisation
- Systems of state aid to the hotel and tourist industries and sources and contions of financing for tourist development projects. Geneva, IVOTO, (WTO), 1972.

IVCTO - World travel number 118 (April/May 1974)
Two paperson national parks and wildlife areas. Geneva, IVCTO (WTO) 1974.

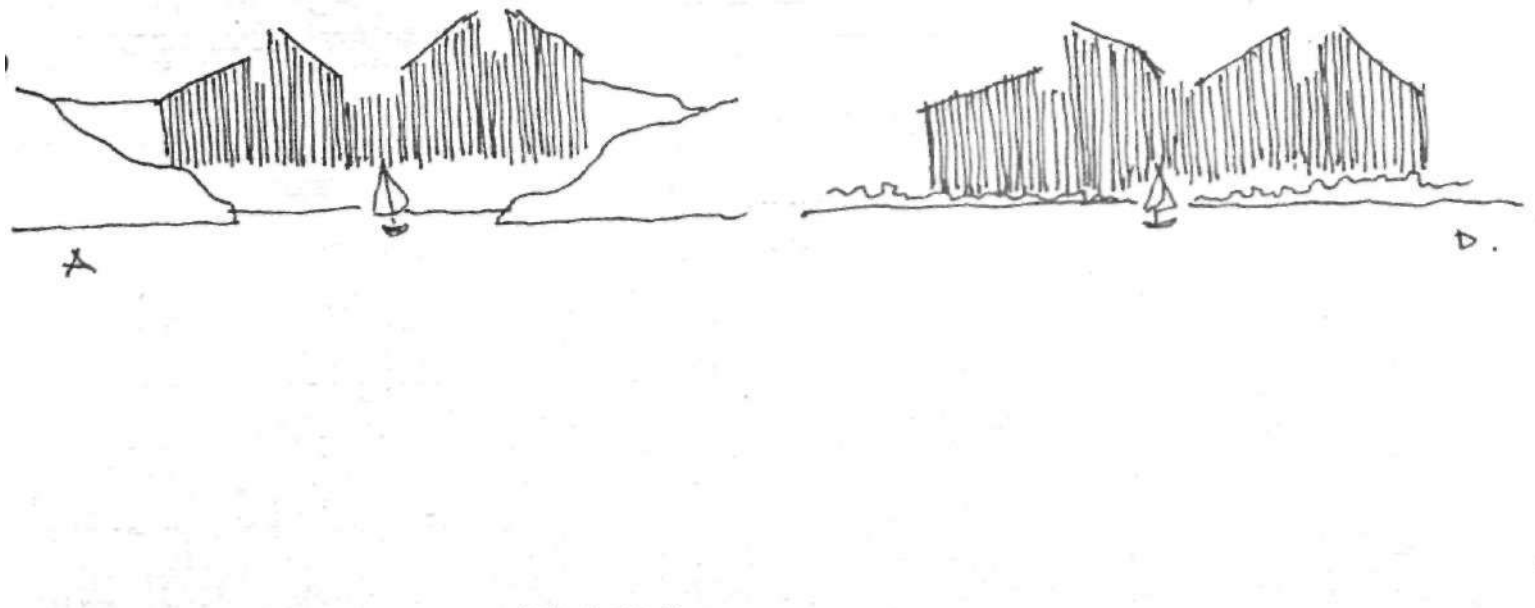
Laurie I.C. Nature in cities - The natural environment in the Design and development of urban green space, John Wiley and sons, 1979.

Lawson, F.R, - Hotels, Motels and condominiums -
- planning and design, Architectural Press 1973.

National park service Planning process, U.S. department of the interior - National park service, 1976

Sharpe W.G. - Interpreting the Environment, John Wiley and sons, 1976.

FIG. 1.2



1 WHERE THE ENVIRONMENT IS ATTRACTIVE WITH HIGH SCENIC VALUE THE SCALE AND CHARACTER OF BUILDING DEVELOPMENTS SHOULD BE SUBDUED. (B) STRONGLY PROFILED BUILDINGS TEND TO CONTRADICT THEIR SURROUNDINGS (A)

2. IN AN INSIGNIFICANT SETTING, THE BUILDINGS OF EQUALLY NEUTRAL DESIGN AND ARRANGEMENT GENERALLY PRODUCE A POOR IMAGE (C) THE PERSONALITY OF THE RESORT MAY BE DELIBRATELY CREATED BY BUILDINGS OF CHARACTER AND MAN MADE FEATURES OF STRIKING INTEREST. (D).

FIG 1:3 YANKARI GAME RESERVE (2244.10 SQKM.).

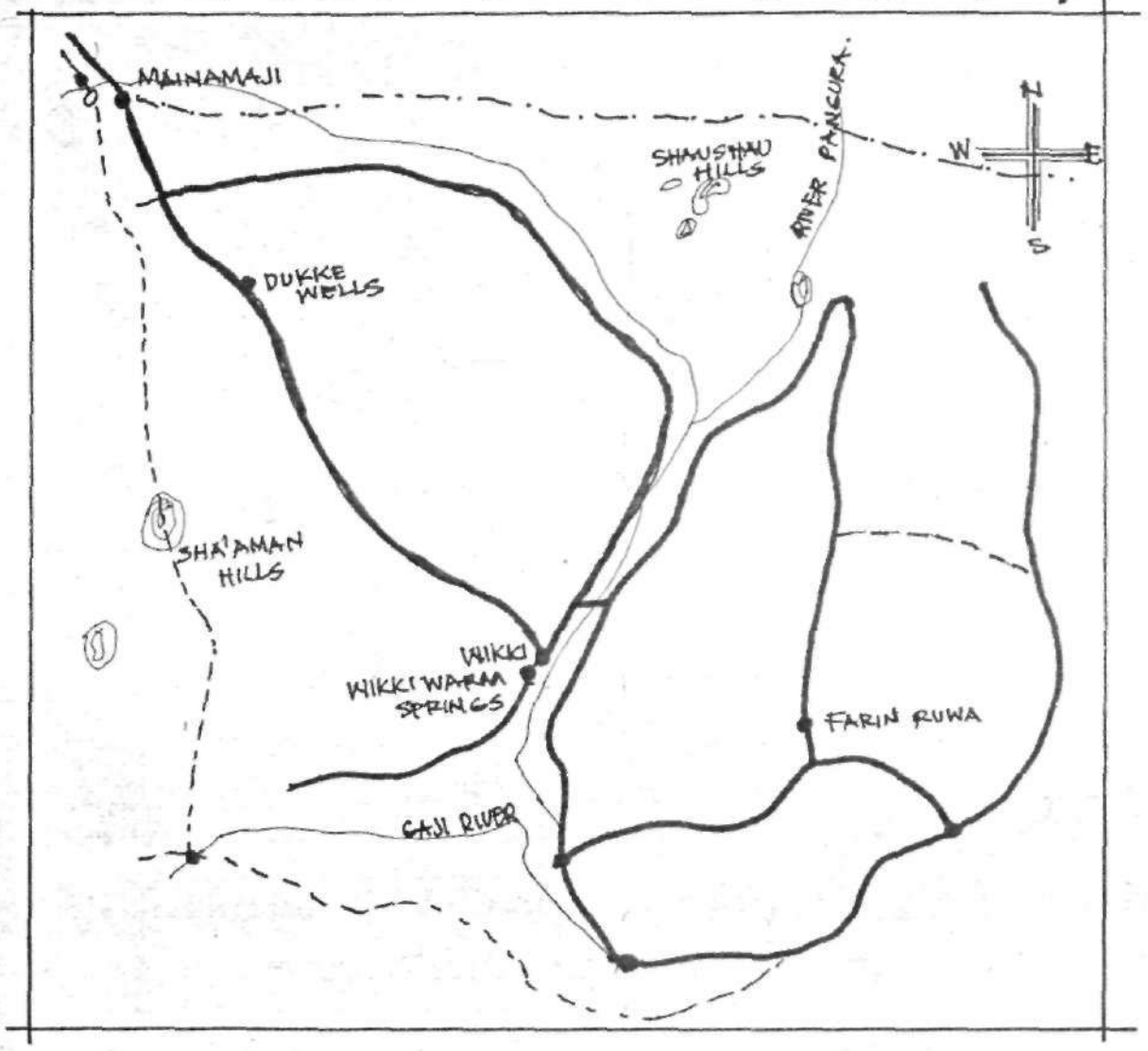


FIG 2.1 PRINCIPLE OF CONCENTRIC ZONING.

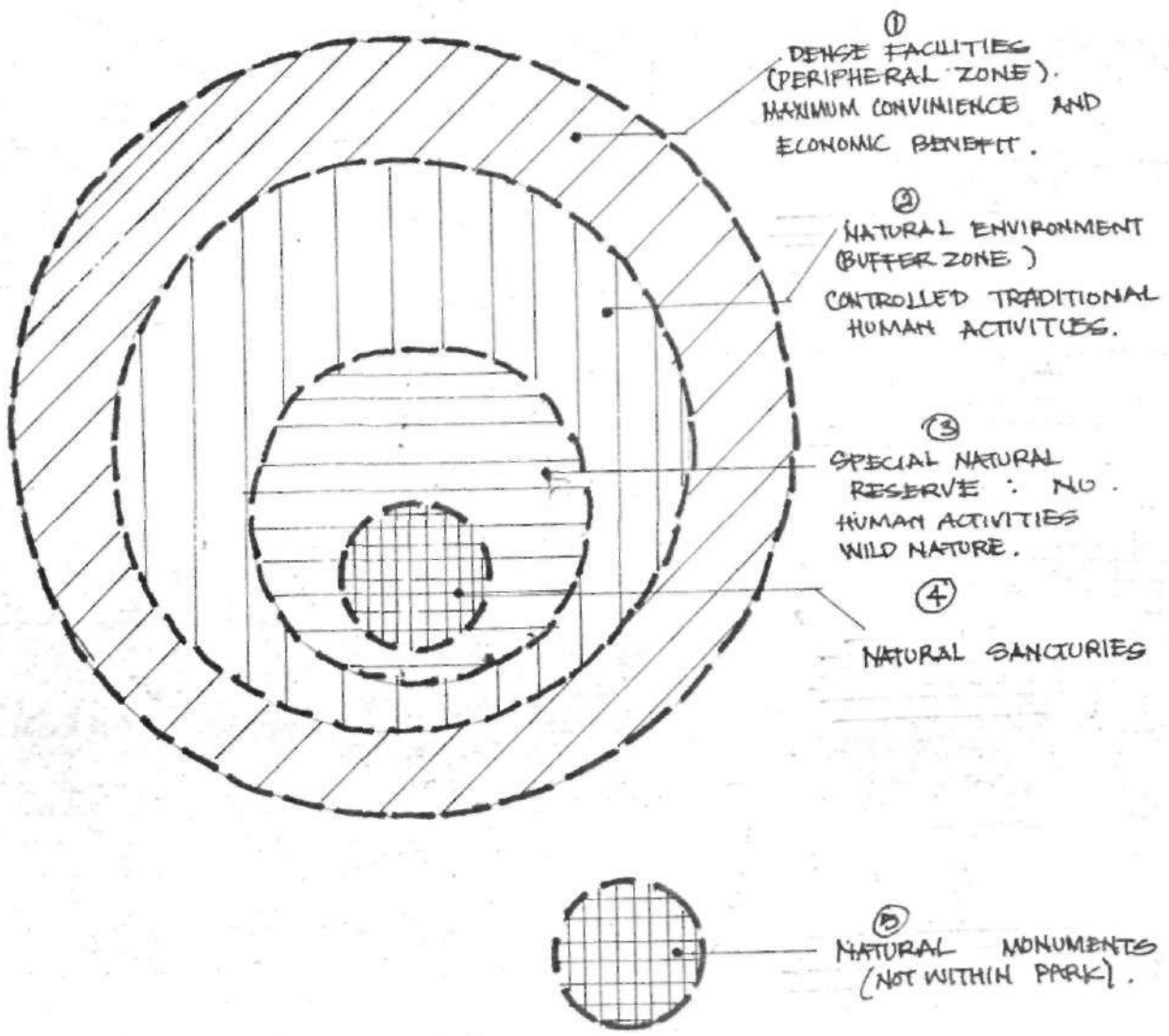
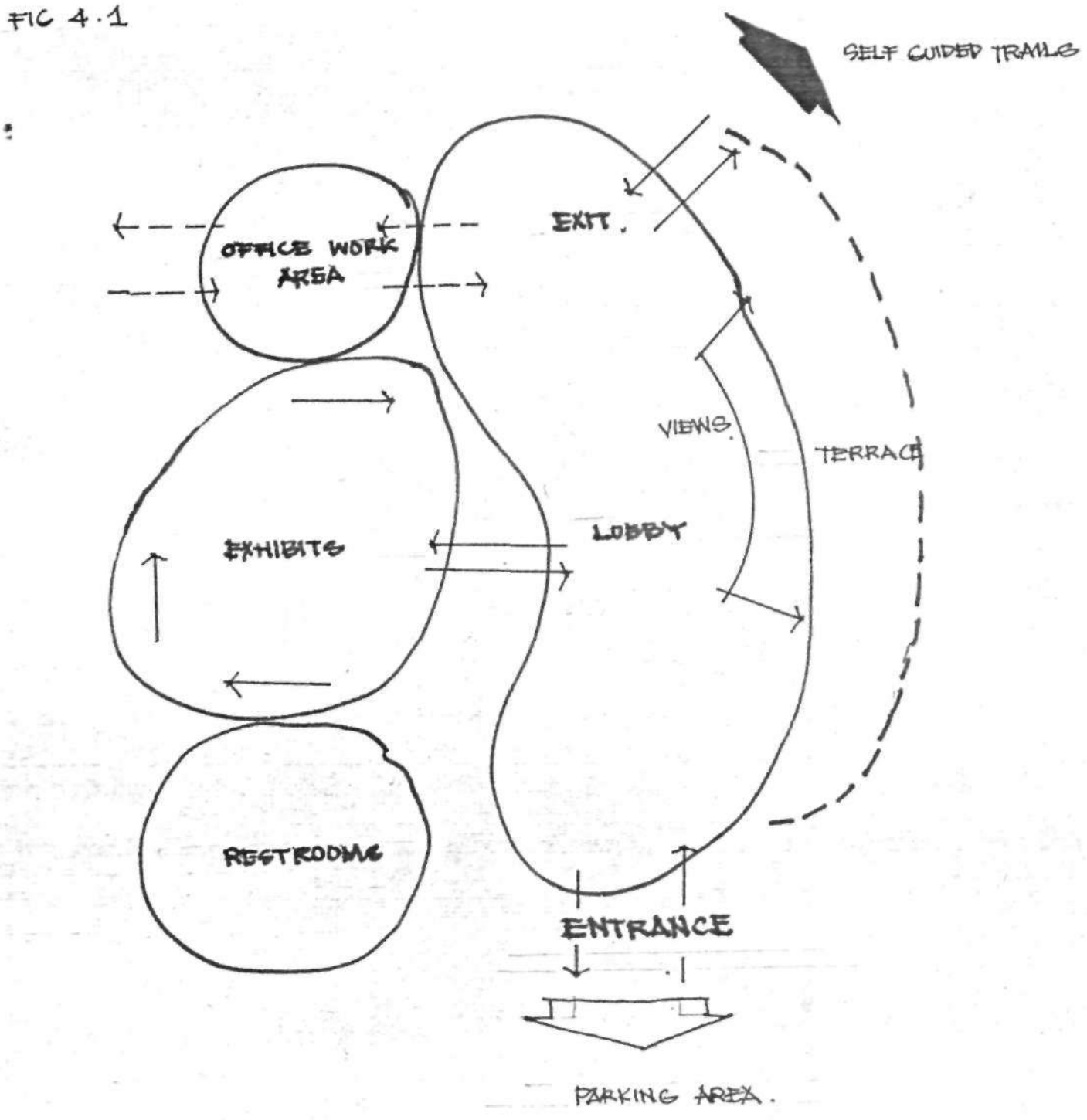


FIG 4.1


SELF GUIDED TRAILS
OFFICE WORK AREA
EXIT
VIEWS
TERRACE
EXHIBITS
LOBBY
RESTROOMS
ENTRANCE
PARKING AREA.

Social holiday village Port Barcares, France

The accommodation includes 1800 beds in family bungalows, usually with one small children's room (total gross area for 4 beds: 23 m²) and 600 beds in family bungalows with a small kitchen and patio or terrace.

All bungalows are located on two levels, the units on the upper floor being linked together by foot-bridges.

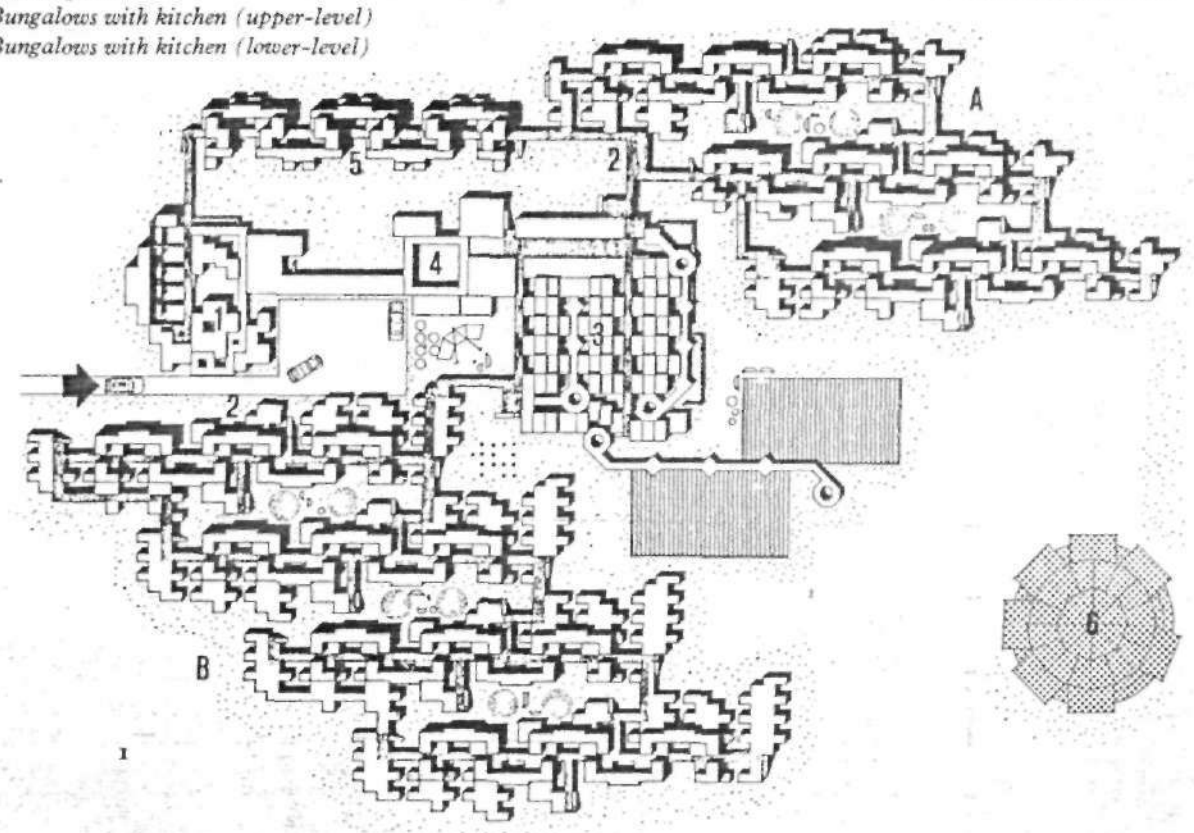
Total gross area per bed, including public areas, services and staff-quarters amounts to only 10 m². The very dense layout plan (illustrated) is aimed towards economic operation.

This development is particularly interesting in that it is the result of several groups and associations collectively creating an integrated village, with common services.

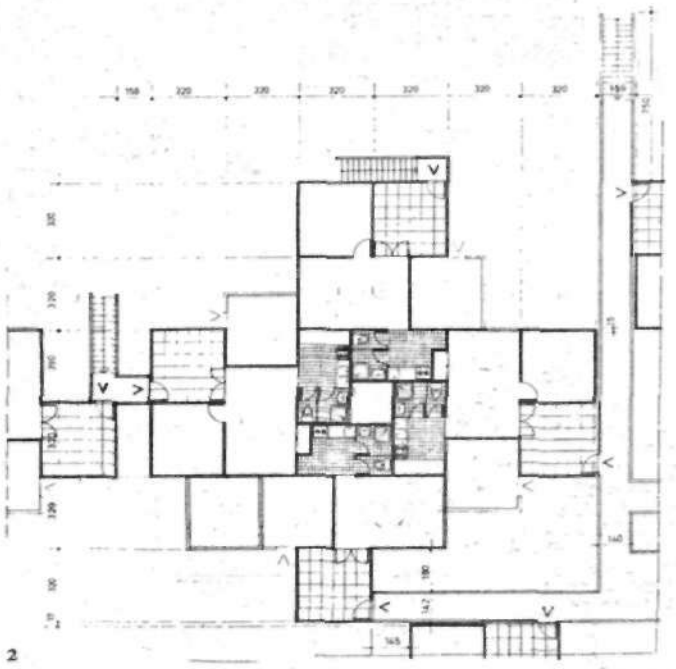
ARCHITECT: G. CANDILIS

Key
1 Administration
2 Reception
3 Restaurant bar and information
4 Services
5 Staff village
6 Cultural centre
A Family units with kitchen
B Units without kitchens

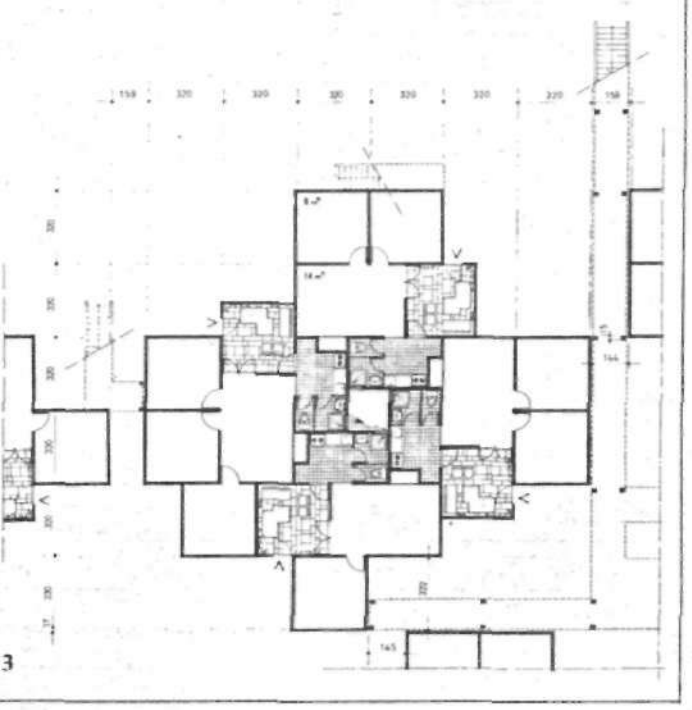
1 *Layout plan*
2 *Bungalows with kitchen (upper-level)*
3 *Bungalows with kitchen (lower-level)*



1



2



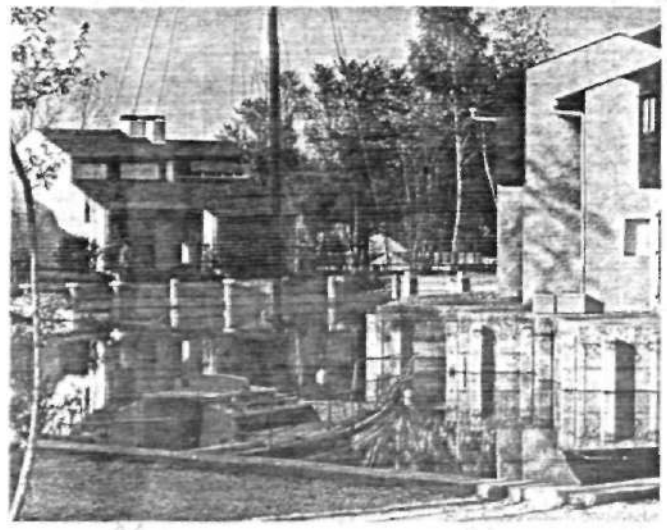
3

1



2

LAKE CANAL HARBOUR







3

Port Ripaille, Lake Geneva

Constructed on the Dranse river delta on the French shore of Lake Geneva, much of the built area of Port Ripaille village (500 houses) has been raised by dredged material from the canals and harbours which also give most of the houses direct boat access to the lake. The master plan was dictated by the need to retain existing trees on the site, with additional plantations of similar species to ensure screening from the lake.

Main facilities: two harbours, each for 300 boats, a club house, commercial centre, boat repair yard, riding centre, swimming pools, tennis courts and other recreation space.

ARCHITECTS: ACAU AND ATHUA

ARCHITECT-PLANNER RESPONSIBLE: M. BAUD-BOVY

PHOTOS: FRANCOISE RAPIN/M. BAUD-BOVY

1 *Comprehensive Master Plan*
2 *Section*
3 *Master plan of Stage 1*



Mountain Lodge, Kenya
An example of a safari lodge, constructed in local materials and located near a water hole in a National Park. For close animal observation, there is an underground bunker (foreground)
ARCHITECTS: TRZEBINSKI GAAL AND ASSOCIATES



Lobo Wildlife Lodge, Tanzania
Constructed in a natural cleft in the rocks, and using mainly local materials the wildlife lodge (150 beds) blends into the surroundings.
ARCHITECTS: DALGLIESH LINDSAY GROUP, HALLWAY HOTELS (TANZANIA) LTD