TITLE

BEACHFRONT PLAZA - TARQUA BAY

Exploiting the unifying landscape elements of water

BY

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A thesis submitted to the Postgraduate School, Ahmadu Bello University, Zaria, Nigeria in partial fulfilment of the requirements for the degree of Master of Science (M.Sc.) in Architecture.

October, 1992.

DECLARATION

I hereby declare that this thesis has been composed by me and that it is a record of personal research under supervision. It has not been accepted in any previous application for a higher degree and has not been put foreward for publication in any medium.

All quotations are distinquished by quotation marks and all sources of information are acknowledged by means of references.



Ashley - Dejo Olumide

October, 1992.

CERTIFICATION

This thesis titled "Beachfront Plaza - Tarqua Bay" meets up with the requlations governing the award of the degree; Master of Science (M.Sc.) in Architecture of the Ahmadu Bello University, Zaria, Nigeria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

To God Almighty

The Father

The Son

The Holy Spirit

To the cause of Architecture.

Olumide Ashley-Dejo.

ACKNOWLEDGEMENT

Dear Lord - With all my heart I thank you for the blessings, strength and determination that has helped me realise so many dreams. I'm eternally grateful, holding you close to me.

Mum and Dad, - Words cannot express my gratitude to you. You have been here with me every step of the way helping to guide and support me so enormously in my career. I thank you for sharing the benefits of your brilliance - All my love - Olumide.

Lots of love to my brother and sisters. Thanks for all your love and support and for being there with me always. Most of all, thank you for shring my vision - love always - Olumide.

Arc. S.S. Tulpule - Extra special thanks to you for helping me so incredibly, I owe so much to you for all your time, effort, insight and ideas. There could not have been a better person. Working with you was an honour as well as an incredible learning experience for me. You are truly an inspirational individual.

Many thanks to all staff of the Department of Architecture, Ahmadu Bello University, Zaria. Most specially Dr. O. Solanke for believing in me and Ms. H.M. Gabriel for her time and efforts.

Serah Komolafe - Thank you for your patience, trust and understanding and especially for caring about me. You are a very special person - Love Olumide.

Jide Thompson, Ehiozoje Asein, Yomi Omotosho and Ene Mkpang - I appreciate your time and hard work. Thank you for so many ideas and the grooves - I would always be there for you.

Dele Adetunji, and Catherine Ugi - Thanks for being true friends through the good times and the bad and for always making me smile - Youre the best!

Thanks to my friends, classmates and colleagues. It was worthwhile.

Peace!.

BEACHFRONT PLAZA - TARQUA BAY

ABSTRACT

The increase in the pursuit of leisure in Nigeria over the past few years has been dramatic and like most trends, this upsurge has drawn its driving force from the convergence of other strongly marked factors of which the most significant are income, population, education and mobility. These have all increased. Growth in science based industry and increasing automation will also result in a significant increase in leisure time for the majority of people. This increase in time and affluence brings about an upsurge in the new desire for leisure, recreation and entertainment.

Entry into the Nigerian common market is adding a momentum to the patterns already apparent in leisure trends. Already, thousands of skilled Nigerians are working for more income and security, shorter working hours and better holidays. Employers will therefore gradually concede to common market standards and the consequential increase in both leisure and affluence is certain to have considerable repercussions on recreational services. It is essential to realize therefore that a failure to plan now for recreational needs will not only create a chaotic situation in the leisure field itself but could do irreparable damage to the countryside and coast by the panic adoption of ill considered facilities on unsuitable sites.

Except for occasional man-made additions, the total stock of water available for leisure purposes is constant all over the world and should be regarded as a natural gift needing to be preserved or allocated with great care and skill. During the

colonial periods and before, more than half of the Nigerian population lived in rural towns and now a new emotional need for recreation is growing as urbanization and industrialization are on the increase. Now that an increasing proportion of the population live in urban areas, the demand for leisure activities in and around the cities is growing tremendously. The average man now has the chance for long weekends plus two major holidays per year. In his search for recreation, the urban dweller has an inborn need to refresh his memory of those elements basic to life and here water is an instinctive attraction which could be seen as an opportunity for a more sophisticated recreational use both coastal and inland.

Given this situation where demand is rapidly rising and supply remains virtually static, the duty of the architect is to so plan the water resources that a balance is maintained between conservation on one hand and satisfaction of the growing demand on the other. To this end therefore, this thesis proposes a "Beachfront Plaza" on the lighthouse coastline of Tarqua-Bay" based on the exploitation of water as a unifying element of architecture as the genesis of the development of beachfront hotels, motels, holiday villas, theme parks and entertainment centers.

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Beachfront Plaza
Tarqua Bay

CHAPTER. 1
INTRODUCTION



CHAPTER ONE

INTRODUCTION

1.1 OUTLINE OF SCHEME

Short break holidays could mean sitting back in comfort and enjoying fine food and wine. For others perhaps it could mean luxuriating in a spa bath after a leisurely swim, and for the more energetic, a game of tennis or a work out in the fitness studio might be the preference. The choice does not end here. Weather its dining in stylish restaurants or the more informal atmosphere of grills and bars, the choice is limitless and varies from person to person.

The existence of a coastal recreation area should be regarded as a natural gift needing to be preserved or treated with great care and skill. The appreciation of the landscape potentials of water either in its utilitarian, symbolize, therapeutic, metaphysical or leisure context is the basis and forms the genesis of the design of a "Beachfront Plaza" in the context of leisure, recreation and entertainment. The direction of this scheme is a product of existing conditions; social, cultural and economic initiated by state of the art functions which are dominated by contemporary concepts indicative at a proof of innovation in the creation of leisure, recreation and entertainment outlets.

1.2 PROBLEM DEFINITION

A coastal recreational area could be recognized as 'intensive'. This, refers to areas where investments will be required for recreation aids, the aim being to absorb the maximum amount of recreational use within a limited area with an emphasis

separation, congenial cool atmosphere and opportunities for leisure activities is quite inspiring for an architecture that expresses the human response to the seaside. Architecture is normally conceived and realized in response to an existing set of conditions. These conditions may be purely functional in nature or they may reflect in various forms - social, economic, political or symbolic. In any case, it is in the authors opinion that the existing set of conditions - the problem - is less than satisfactory and that a new set of conditions - a solution - would be desirable. This is then where the act of creating architecture as a problem solving process realized through exploration study and application comes into play.

1.4 AIMS AND OBJECTIVES

The relationship of a structure to its surroundings is fundamental to its architectural requirements and a value system is also conveyed by both structure and surroundings. In addition, the compound materials used convey visual and tactile meaning. Today, respect for water and mans appreciation of water elements in various contexts confirms the dedication to fundamental ecological and environmental values. The principal task for water available recreation areas therefore is to ensure both the expansion and supply of existing water areas and better use of existing water resources. It aims at generating an impetus to boost the tourism potentials of the coast serving a growing public which has leisure time and providing an escape from an everyday uncongenial environment by providing facilities useful in a number of activities.

The objectives therefore include:-

1. The development of a design ensuring an expose and interaction between age, cultural, social and economic groups.
2. A provision for the maximum range of leisure, recreation and entertainment opportunities, meeting up with the wide range of choice of different lifestyles, expressions and tastes.
3. An improvement of the physical environment making it more functional,beautiful,safe,exciting and efficient.
4. A preservation, conservation and expansion of natural features, resources, amenities and similar assets to enhance the unique character of the coastal area.
5. The adaptability of facilities to future requirements.
6. An exploitation of the water element in its utilitarian, symbolic, therapeutic, leisure or visual context for mans appreciation.

1.5 SCOPE OF STUDY

The designation of this thesis as a development of a nerve center in the context of leisure, recreation and entertainment complemented by non-conflicting support facilities calls for a breakdown of its microscope and microscope of design.

The microscope of design is made up of an all encompassing scheme which boarders on the provision for:-

1. Social activities
2. Shops
3. Services and information
4. General Services
5. Allied sporting activities

6. Allied accommodation
7. Transportation areas and services
8. Safety equipment
9. Miscellaneous

The microscope of design comprises of a detailed layout and intricate design requirements of all that make up the microscope of design.

1.6 SIGNIFICANCE OF STUDY

Architecture in combining form and space, thus defining an essence not only facilities purpose but also communicates meaning. "The art of architecture makes our existence not only visible but meaningful" - Frank Ching 1943.

The impact of a total architectural design can be elucidated from different viewpoints. Its importance is characterized by its impact on various interfaces of society through diversified formats. As a language, architecture has connotative meanings, associative values and symbolic content that are subject to personal and cultural interpretation and can change with time.

This study would culminate in a design proposal indicative of the possibility of a multivalent architecture in the context of a terrestrial/aquatic medium. It would be servile to the cultural flavors and heritage of visual and tactile values of architecture. It could be used as an experimental model in the evolution of concepts for contemporary tropical architecture of water environs. The design would exemplify an architecture of leisure, recreation and entertainment based on an indigenous theme.

The design proposal could serve as grounds for an expose of Nigerians cultural heritage being the focus of seasonal events such as festivals and regattas which would in turn boost Nigerian's cultural traditions and international image and also generate revenue from users. Its economic and revenue generating potential make it a viable project in the light of the uniqueness of design and environment.

1.7 RESEARCH METHODOLOGY

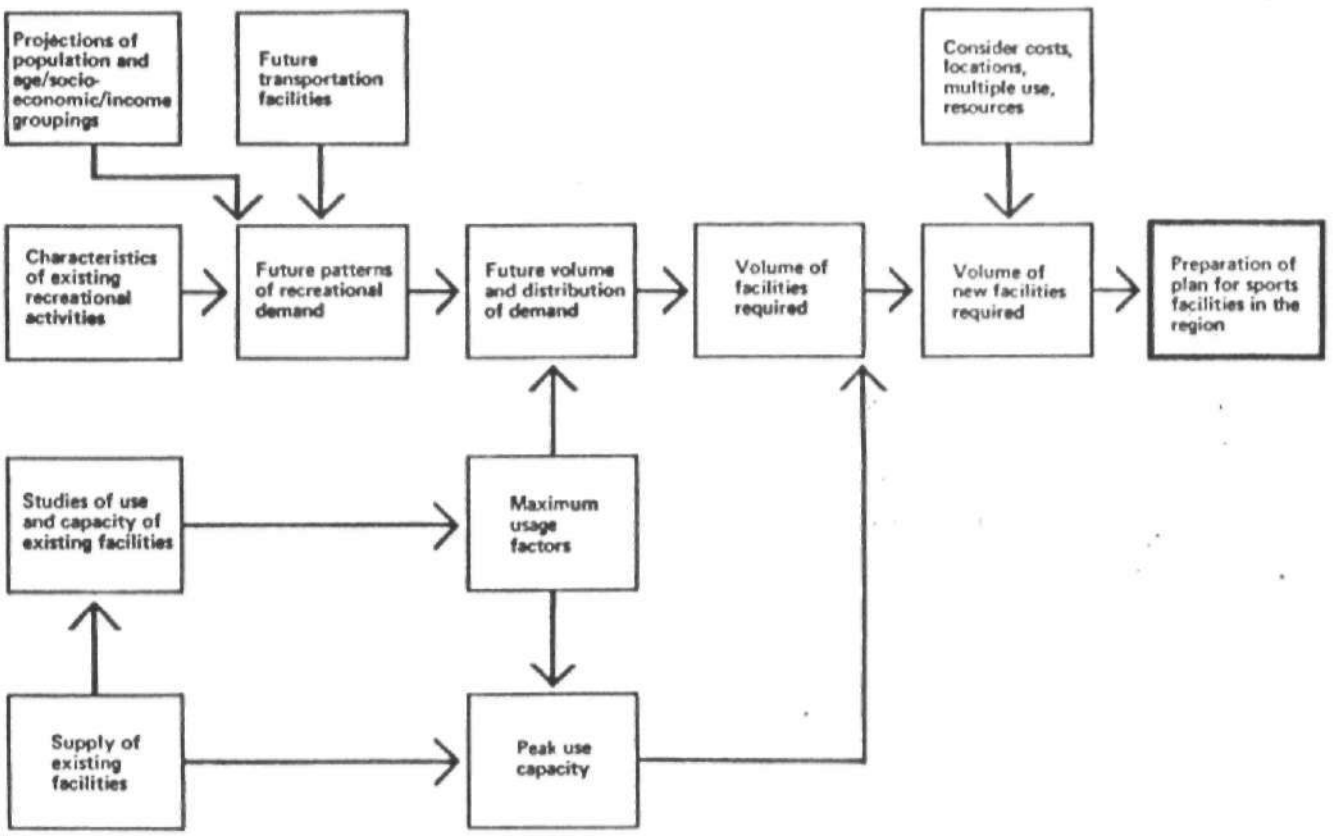
A Five stage research process shall be embarked upon for the purpose.

1. A review and analysis of background data and literature on various requirements and concepts related to the design proposal.
2. A review and appraisal of related designs and existing facilities providing for leisure, recreation and entertainment.
3. An in depth examination of the site outlining the criteria for choice.
4. The unravelling of design concepts and philosophy.
5. The integration of all information and unravelled concepts and philosophies to evolve the final design proposal.

The five stage research process (Fig-1.1) is based on the following concepts which represent a comprehensive synthesis.

1. Classification of recreation participants into user groups that require specific environmental characteristics.
2. Division of planning area into resource types based on

Fig. 1:1 Research Proleff

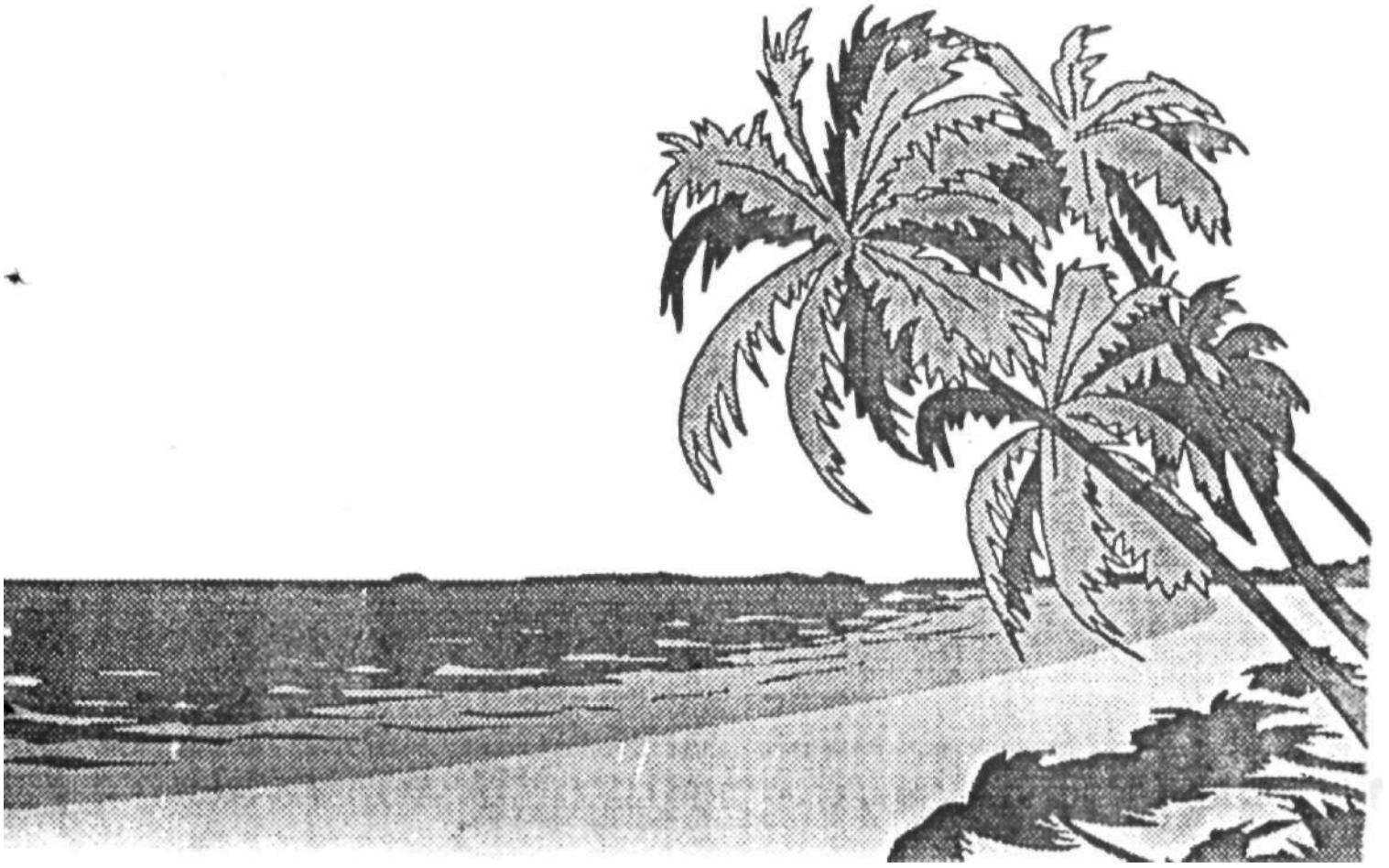


This chart presents a logical approach in assessing the requirements for recreational facilities. Although the programme was designed for a regions total recreation requirements, it could be used almost without alteration as a model, as a valuable part of the site selection process and a guide towards establishing a projects overall viability.

Source - Adie D.W. Marinas: a working guide to their development and design.

Beachfront Plaza
Targua Bay

CHAPTER.2
LEISURE AND RECREATION



its environmental characteristics.

3. Relation of desired recreation experiences into resource types.
4. Development of design planning and management guidelines based on an analysis of user and resource requirements.

1.8 PHILOSOPHY OF ARCHITECTURE INVOLVED

As an art, architecture is more than satisfying purely functional requirements of a building program. Fundamentally, the physical manifestations of architecture accommodate human activity. However, the arrangement and organization of the elements of form and space will determine how architecture might promote human endeavors, elicit responses and communicate meaning. Elements of form and space are therefore presented as a means to solve a problem in response to function, purpose and context.

The philosophy behind this piece of work is rooted in the organic architecture of space, structure and enclosure, experienced through movement in space and time, achieved by means of technology, accommodating a program and compatible with its context. Thus, creating a Nigerian tropical paradise - exotic, strong, broad, amiable, romantic, and filled with spaces color light and spirit. A unique piece of architecture in harmony with the exuberance and scale of the tropics, seemingly growing out of the landscape with voids that make way for the utilitarian, symbolic, therapeutic leisure and visual elements of landscape.

CHAPTER TWO

LEISURE AND RECREATION

2.1 AN OVERVIEW

Leisure time is that which an individual has free from work and other duties and which may be utilized for the purposes of relaxation,diversion, social achievement or personal development. It could also be defined as a time indulged in a number of occupations in which the individual may indulged at his or her own free will either to rest, to amuse ones senses, to add to knowledge or improve skills or increase voluntary participation in the community after discharging professional, family and social obligations. The prospect of leisure is an end in itself for many people engaged in dull or meaningless work. Leisure provides the time and means for human development in a technological work-oriented society. A major problem for growing number of people is how and where to utilize increasing leisure time.

Recreation on the other hand is the leisure time activity which is pursued for a purpose. Recreation is what is engaged in by individuals in terms of self-image achievement or satisfaction and can occur at any time and in many locations. By this, the aspect of a city where an individual can experience freedom, diversity, self expression, challenge or enrichment of the body and mind are termed as recreation grounds.

2.2 LEISURE IN THE LIFE CYCLE OF MAN

There are basically three stages in the life cycle of man.

1) Childhood

2) Adolescence

3) Adulthood

Leisure and recreation patterns tend to change as one matures from childhood to adulthood. A leisure/recreation analysis is therefore important for these three stages in the life of man (Fig-2.1).

2.2.1 CHILDHOOD AND RECREATION

Childhood recreation which could be termed play involves three main theories; Physiological, Biological, and Psychological.

Physiological theories

Physiological theories are mainly in terms of the expenditure of energy.

Biological theories

Biological theories are mainly concepts of the practice of instincts necessary for survival in the adolescent and adult stages of life. At each stage of development the child re-enacts the experiences of certain points in the past.

Psychological theories

Psychological theories deal with the re-enactment of pleasant events in order to master them. In other words, a repetition compulsion. It has to do with the modification of past events to fulfil a wish. There are a number of variables which bring about differences and culture. In most societies a greater emphasis is placed on the upbringing of the male child. The male child plays more games of physical skill while the female child on the other hand is more involved in games of strategy.

At different ages children tend to metamorphosize and diversify in play patterns. Diversification of play modes could

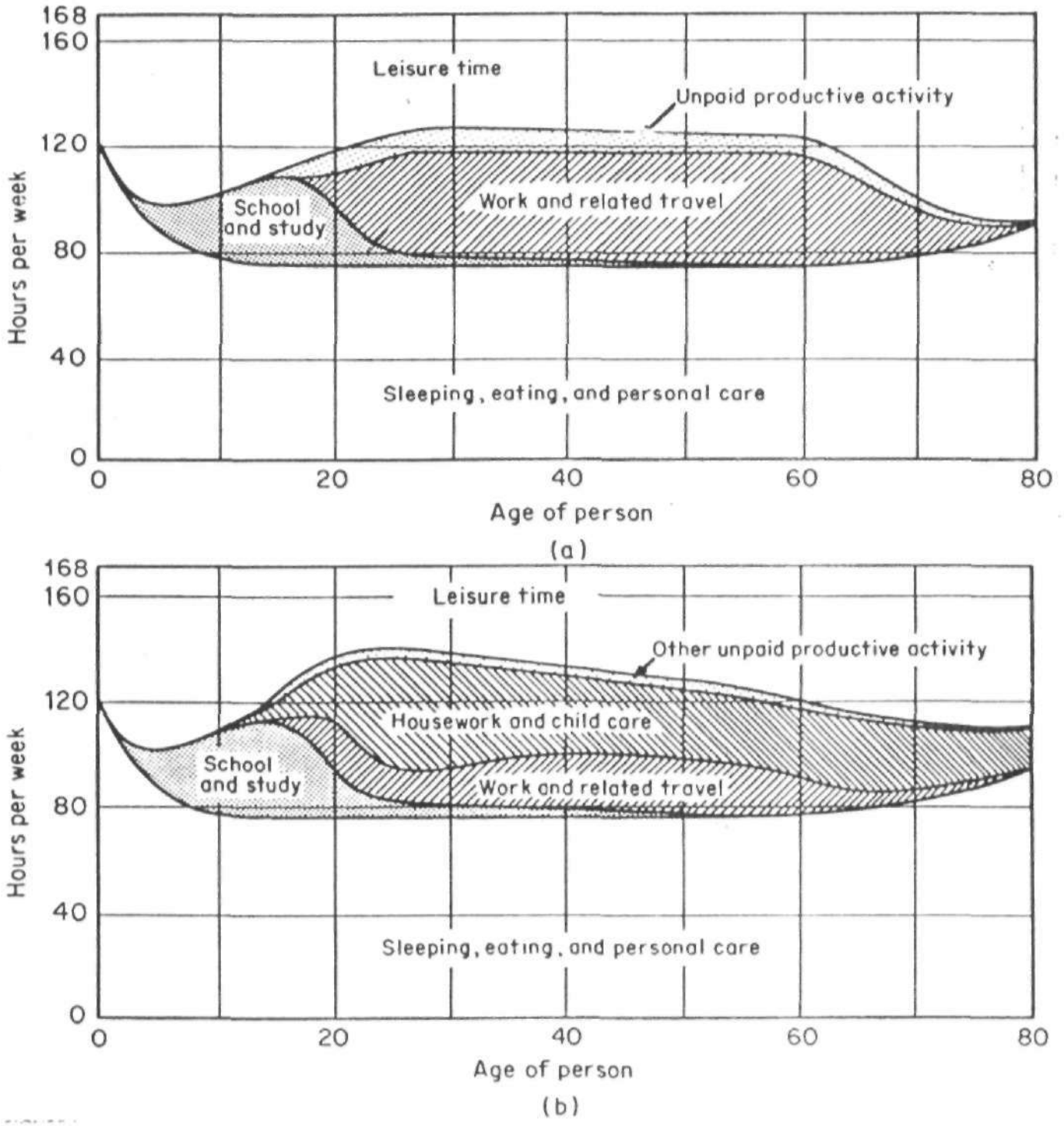


Fig 2:1 Profile of Leisure Time for Different Age Groups

How (a) An average man and
(b) An average woman
spends time at various ages

Goodale - Gold 5.A1. - Recreation Planning and Design.

be grouped into physical, creative and imaginative. The sequence of play as the child metamorphosizes tend to evolve from physical through creative to imaginative.

Social environment has a significant effect on type of play. The two main factors are availability of play space and style of upbringing. The rural class child compared to the urban class child generally has less play space and poorer facilities. The rural child therefore spends more time in the streets. With style of upbringing, the rural parent is more likely to encourage the child to fight his own battles and thus would exhibit a more avert aggression in play. By contrast, the urban child is more likely to have disputes arbitrated by the parent and play with less apparent aggression.

2.2.2 ADOLESCENCE AND LEISURE

Adolescence is the period of growing into maturity from childhood. During the period of adolescence the individual is socialized into leisure habits and attitudes through two main agencies - the family and other institutions with which he or she comes into contact, such as schools, clubs, fraternities, etc. The agencies subject the individual to a considerable limitation of his or her leisure depending on the status of the individual. At first the adolescent is under constant supervision. There is a command over resources and freedom of movement. Successive improvements in status give the individual a greater command over resources and a greater freedom of movement. The individual therefore begins to enjoy a wider range of leisure activities as he or she becomes relatively free from supervision.

A different perspective to adolescent leisure is that of

culture. In decisions affected by spare time, youths in contemporary society are much more strongly influenced by views of their peers than those of their parents. They look forward to developing new tastes and are always experimenting with the result that their leisure is extremely colorful and different from the more stabilized and conventional pursuits of adults.

2.2.3 ADULTHOOD AND LEISURE

The experience of leisure by individuals of different adult ages differ with varying responsibilities. Researches have found the concept of "domestic age" which includes four dimensions of[1] age, sex, marital status and parenthood useful in interpreting results of surveys of leisure behaviors. A school of thought has it that young people within the age group 15 - 25 engage in more physical recreation and a much wider variety of activities than older married people. It is when they are single that there exists the greatest degree of similarity and equality in leisure practices and preferences of the sexes.

Social status also affects adult recreation patterns. People with a high social status tend to participate in the more formal clubs, groups and organization than those of a much lower social status.

2.3 THE SOCIOLOGY OF LEISURE

2.3.1 LEISURE AND WORK

Leisure is bound with work in many ways. Creative leisure is said to be an answer to some of the problems of uncreative work. Living could involve an integration of leisure and work in such a way that one is continuous with the other rather than separate from it. The lifestyle of the artist and craftsman is

one in which there is no continuity between work and pastime.

In contemporary societies there are three approaches to leisure and work.

1) Priority of work

This is the religious tradition in which work is serious business and leisure is subsidiary or even non existent. This trend is however fast declining.

2) Priority of leisure

This is that in which leisure is seen as the aim of life and work as merely a means to that end.

3) Equality of work and leisure

This is a more integrated approach to both leisure and work, appreciating them as reconcilable parts of a whole each able to enrich the other.

Studies have shown that individuals will identify with priority to work or priority to leisure or equality of work and leisure depending on how fulfilling work and leisure are. Attitudes to work influence leisure in three broad ways.

1) The scheduling of work will determine how much time is available for leisure.
2) The content of work will affect the amount of energy left over for leisure.
3) Cultural differences enable the same kind of work to affect leisure differently from place to place.

2.3.2 LEISURE AND THE FAMILY

Family recreation has not really made a strong impact in the history of mankind until recently. The home has become an important element in the socialization of individuals. It is where most individuals indulge in pastimes and general

relaxation. Today, the context of home has become a more inviting place in which to spend leisure time.

Higher standards of living have changed the outlook of most families. Many homes now own a television and a car which are two influences on leisure behavior. These two items are however on opposing poles in that one keeps people indoors while the other keeps them out of doors.

The family itself also serves as a source of leisure. Attitudes and family cohesiveness are influenced by outdoor recreation which could be engaged in either collectively or individually.

2.3.3 LEISURE AND EDUCATION

The increasing educational levels have so far influenced the way people spend their leisure time and the range of leisure activities. The impact of education seems to lie not so much in increasing opportunities to participate in leisure activities as an increasing awareness and desire.

One of the functions of leisure is to develop the personality and in this sense the aims of education come together. As Reynold Carlson (1964) puts it; "The goals of recreation and education are not less apart since both work towards the enrichment of life for individuals". Apart from sports, pupils can be introduced to literature, art, music, craftwork and various other potentially satisfying activities through recreation. Today recreation is recognized as being desirable and most schools employ specialist staff to deal with this aspect.

Education has a role to play in preparing the individual to make the best use of leisure time. One could learn about the

range of choices available and experiment with as many particular activities as pleasurable and sociable activities. Education also offers mental stimulation to introduce individuals to the extent and appropriate range of leisure opportunities, some of which may be taken up after a careful analysis.

2.3.4 LEISURE AND RELIGION

Leisure has an affinity with religion in a number of ways; both express the desire for personal well being, afford opportunities to exercise free will, are integrative and inclusive and attach special significance to recreation.

Leisure is the occasion for broader and deeper perspectives and for renewing the body, mind and spirit. It also provides the environment for learning and freedom for growth and expression for rest and restoration and for rediscovering life in its entirety. This concept of leisure brings it close to the concept of religion in both active and contemplative moods.

A second theme is that leisure and religion are both spheres which afford opportunities to exercise free will and expressions of inner desires. The kind of spiritual leisurely life which we experience within ourselves is to a large extent the product of the particular social influence to which one has been subjected to. Gordon Dahl writes; "The leisure that people need today is not free time but a free spirit, not mere hobbies or amusements but a sense of grace and peace which will lift us beyond our busy schedules.

A third theme between leisure and religion is in understanding what is meant by "recreation". Literally, it is the apparent purpose of leisure activity; therapeutic process of repairing the wear and fear resulting from work and other

stresses. By recreation one means to restore, to re-establish, to return to an original or ideal state, which is a spiritual unity with divine will, inseparable from a certain kind of conduct. It sees leisure and the creative recreational involvement of young people as having a great potential for their total growth individually.

This brings us to a conclusion that religion will successfully cope with collective forms only where it meets the same needs - for meaning and a sense of identity (Fig-2.2).

2.4 USER PREFERENCES AND SATISFACTION

A thought of user preference and satisfaction is fundamental to the provision of urban recreation space, service or facility (Fig-2.3). It should be based on,

1) Concepts of quality
2) Recreation desires
3) A recreation activity classification system
4) A recreation space classification system
5) Recreation source inventories.

2.4.1 CONCEPT OF QUALITY

Two concepts are fundamental to urban recreation experience and all measures of user preference and satisfaction associated with this experience. Both concepts are based on the premise that people,

1) Expect a pleasurable experience in an urban recreation space.
2) Appreciate a range of choice in how and where they utilize their leisure time.
3) Have social/psychological needs that can be

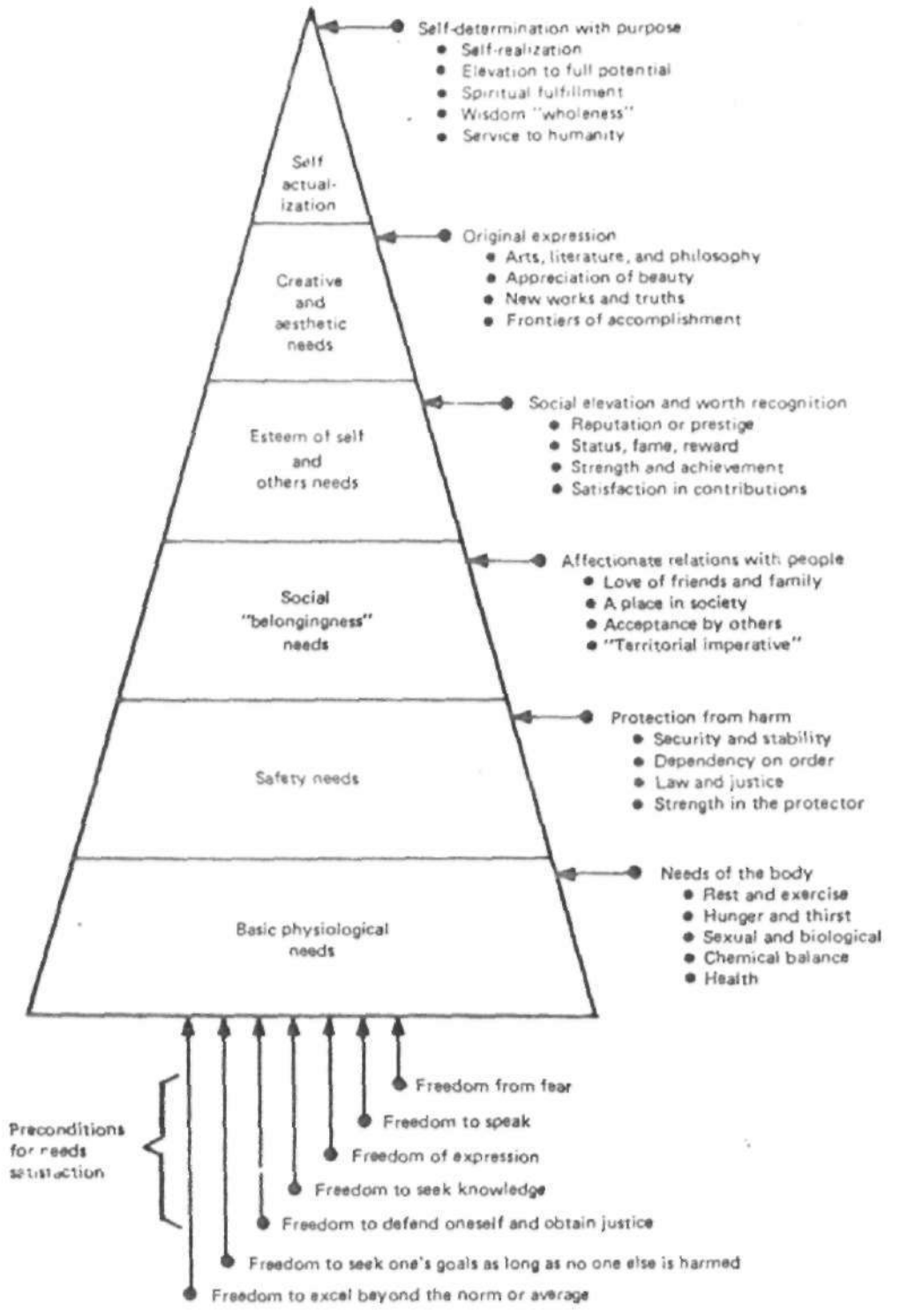


Fig. 2:2 Hierachy of Human Needs

Source - Gold p.21 - Recreation Planning and Design.

	Conceptualizations of recreation need	Definitions of recreation	Value assumptions	Research implications
Expressed need	Individuals need for leisure is determined by individual's current leisure activity patterns.	The expression of individual values through participation in freely chosen activities.	Government should be a culturally relative provider. There is a relatively just distribution of recreation resources. Individuals have a relatively easy and equal access to recreation resources. Individuals do not have a similar need for publicly sponsored recreation services. Variation in need is expressed through differences in participation rate.	Determining what people do during leisure: activities participated in, duration, frequency, sequencing, and scheduling.
Comparative need	Need for leisure services of government as systematically related to both supply of leisure resources available to an individual and his or her socio-economic characteristics.	High autonomy in non-work activity which is the prerogative of an elite; a right to pursue happiness which is systematically unequitably distributed.	Government should not be a culturally relative provider. People do not have similar need for public recreation resources. Those with low socio-economic statuses have higher need. There may not be a relatively just distribution of recreation resources. Individuals may have relatively difficult and unequal access to public recreation services.	Studies of participation and nonparticipation and relationship to socioeconomic variables. Studies of relationship of supply of recreation resources to socio-economic status. Case studies examining reasons for participation among various subcultures.
Created need	Leisure need is determined by individual choosing to participate in activity after being taught to value it.	Any activity in which, after sufficient introduction, an individual will freely and pleasurably participate.	Government should not be a culturally relative provider. Individuals often don't know what they want to do during leisure and are happier if given guidance. Leisure activities are substitutable since the individual seeks certain environmental conditions, not specific activities.	Pretesting and posttesting of behavior and attitudes as a result of participation in public recreation services.

Fig. 2:3 : CATEGORIES OF RECREATION NEED
SOURCE - Godley G - Recreation Park Planning:
The Exercise of Values.

	Conceptualizations of recreation need	Definitions of recreation	Value assumptions	Research implications
			It is legitimate to use recreation to promote the desired goals of the State.	
Normative need	Experts can establish precise, objective standards to establish desirable minimum supply in quantitative terms. Implies physiological need for leisure.	A set of physiologically necessary yet pleasurable activities undertaken during nonwork time which restore and refresh the individual and prepare him or her for work again and otherwise contribute to his or her well-being.	Government should not be a culturally relative provider. Individuals have similar need for public recreation. Certain well-established kinds of recreation resources are inherently in the public interest. Recreation resources should be equally distributed through space.	Testing of assumptions of standards; e.g., accuracy of service radii. Testing relationship between perceived satisfaction, social quality indicators, e.g., crime rate, and having met standards.
Felt need	Individuals need for leisure activity as a function of individual belief, perception, and attitude.	What an individual would choose to do given a minimum of constraints or high autonomy. It is a set of personally ideal activities in the mind of the individual which, given the opportunity, he will undertake.	Government should be a culturally relative provider. Many individuals desire to participate in activities which they currently do not. There may not be a relatively just distribution of recreation resources. Individuals often have legitimate reasons for not using public recreation resources. Individuals may not have relatively easy or equal access to public recreation resources. Individuals will be happier, participating in what they "perceive" they want to do than in what they are currently doing.	Attitudinal research concerning people's desire for recreation experiences and environments and intensity of desire.

Fig. 2:3 Categories of Recreation Need

Source - Godbey G. - Recreation Park & Planning: The Exercise of Values

accommodated as part of a recreation experience.

These basic concepts are expressed as:

1) Resource quality

Objective measures of factors or conditions an individual views as part of the permanent natural and man made physical elements or facilities of an area such as visual impact areas, water, vegetation, building forms and space, etc.

2) Use quality

Objective measures of factors or conditions individuals view as negative or positive to their expectations and satisfaction, during a visit to a recreation place such as congestion, waiting time, noise, conflict, fear, embarrassment, law enforcement, etc.

2.3.2 RECREATION DESIRES

The concept of quality is based on a behavioral approach to the recreation experience which translates basic human needs into three desires that influence user preference and satisfaction for a given recreation space or activity.

Resource directed

Contact with a natural source such as the soil, surf water, wild life, etc. The degree of satisfaction depends on the quality and access to the source.

Image directed

The fulfillment of a desirable image such as with the athlete, the tennis player or the golfer. The degree of satisfaction depends not on the source but on the way others may view the source, activity or performer.

Leisure directed

A pleasurable way to use ones time without necessarily

subjecting ones self to energy dissipation such as boat cruising, the theater, sauna, etc. The degree of satisfaction does not depend on the resource of others but on how effectively the place or activity consumes leisure time.

2.4.3 RECREATION CHOICE

A model developed by the National Academy of Sciences (1975) suggests three factors that affect the individuals decision to participate in a recreation activity (Fig-2.4).

1) Individual characteristics - personal, situational and past experiences.
2) Social relationships and social structure.
3) Availability of recreational opportunities which are a derivative of access, cost and information.

Choice is governed by the factors:

1) User satisfaction
2) Recreation experience
3) Recreation activity classification
4) Recreation space classification.

User satisfaction

User satisfaction which is a prerequisite to choice is the fulfillment of a desire and a preference which is normally conditioned by the users preconceived ideas about the space, available activities, natural setting, man-made facilities and management of the space.

Recreation experience

Recreation experience has five phases which can be used to measure user preferences and satisfaction for recreation centers. These phases are commonly labelled anticipation, travel to, on site, travel back and recollection. User satisfaction is

affected by all phases of this experience (Fig-2.5).

Recreation activity classification

The wide range of leisure activities in cities can be classified in such a way that acknowledges the concepts of quality and is useful for the planning and management of urban recreation spaces. Most activities can be classified into four categories of recreation experience:-

1) Physical recreation which requires exertion or physical effort as the major experience of activity.
2) Social recreation which involves interaction as the major experience of activity.
3) Cognitive recreation which includes cultural, educational or creative activities.
4) Environment related recreation which requires use of a natural source such as water, vegetation, wildlife, etc. to provide the setting or focus for an activity.

Within each of these experience categories, there are activity clusters which represent similar types of activities. These activities generally require the same types of resources to allow for greater flexibility in the application of standards.

Recreation space classification

The range of existing or potential recreation space in a city can be classified in ways that:

1) Acknowledge different scales and service spaces
2) Relate to travel time distance or access criteria
3) Provide for different levels of design and management
4) Relate to the natural or human capacity and design load of the spaces.

The classification of a space should also match the

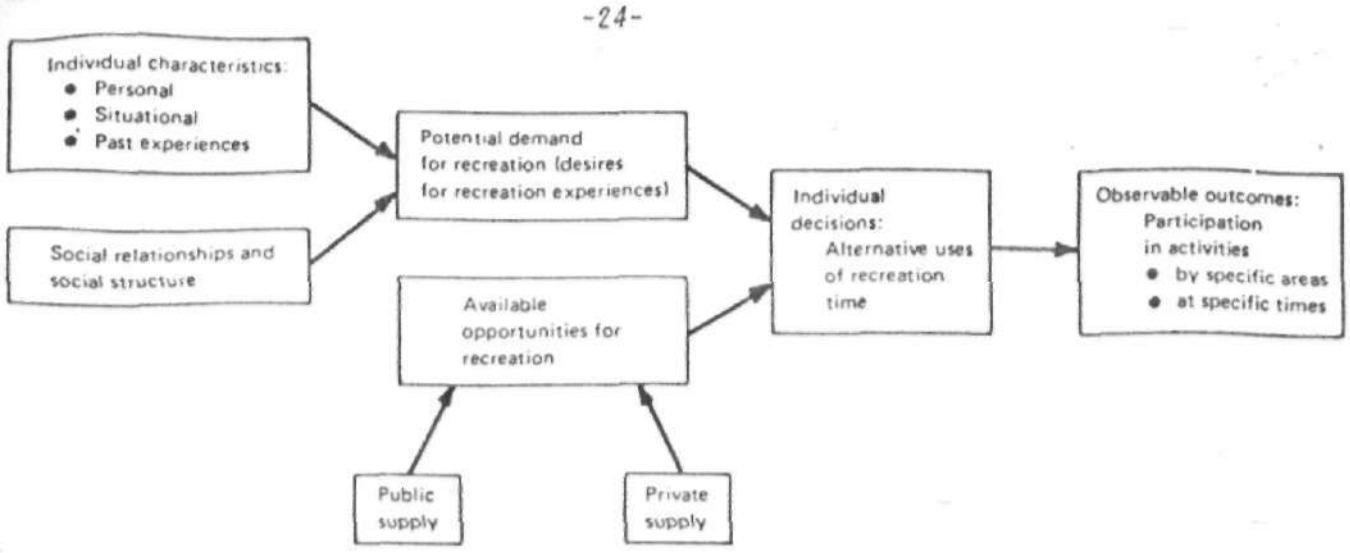


Fig. 2:4 Model of Recreation Choice
Source - National Academy of Science - Annual Bulletin.

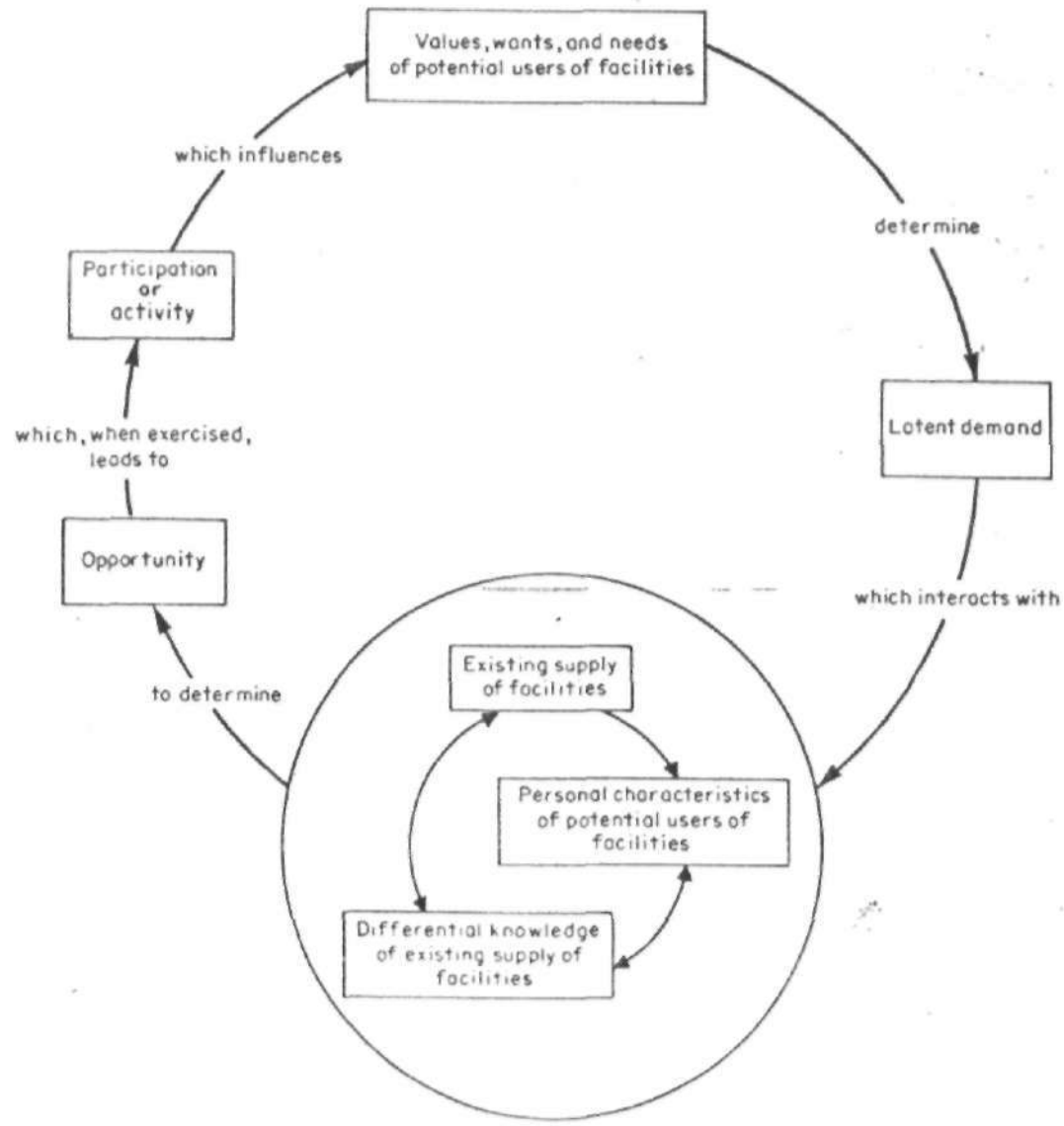


Fig. 2:5 Supply and Demand Profile
Source - Gold S.M. - Recreation Planning and

Recreation experience	Activity cluster	Examples of activities
Physical Recreation		
Outdoor	Free play and self-generated activities	Jumping, climbing, swinging, sliding, skateboarding, jogging
	Organized turf and hard-surface court games	Volleyball, [illegible]ball, basketball, tennis, hopscotch
	Turf games	Croquet, badminton, golf, lawn bowling
	Field sports	Baseball, rugby, soccer, football, field hockey
	Organized sports	League baseball, football, soccer
Indoor	Self-generated	Basketball, volleyball, handball, squash
	Organized sports	Basketball, bowling, tennis, wrestling, gymnastics, squash
Social Recreation		
Outdoor	Participants	Picnicking, dances, fairs, restaurants, flea markets
	Spectators	Watching sports, drama, listening to music
Indoor	Participants	Meetings, crafts, bazaars, dances, table games
	Spectators	Watching sports, movies, drama, television

Fig. 2:6 Recreation Activity Categories
Source - Christiansen H. - Concept for a Comprehensive Recreation Planning

Factors Relating to the Potential Recreation Users	Availability of alternative sites
Total population in the service area	Carrying capacity and design load of area
Geographic distribution/density of population	Microclimate of the area
Demographic characteristics of population	Natural and physical characteristics of area
Time budgets of population	**Factors Relating Potential Users to the Recreation Area**
Leisure customs or habits of population	Travel time and distance
Experience levels of population for specific activities	Travel mode, cost, and convenience
Awareness levels of recreation opportunities	Cost of supplies or equipment to use area
Awareness levels of crime or deviant behavior	Cost of fees and charges to use area
Factors Relating to the Recreation Area	Information about area
Attractiveness as judged by the user	Status or image of area
Management levels and practices	Regulations to control behavior

Fig. 2:7 Demand Factors for a Recreation Area.
Source - Gold S.M. - Recreation Planning and Design.

functional use and design potentials of a given space. A space designated a play ground for example but without the space being designed or managed to accommodate the behavioral needs of children is absurd.

Recreation spaces can be classified by:

1) Function or dominant use.

2) Ownership

3) Degree of use or development

4) Planning unit orientation

The planning unit orientation is most appreciate at the community or metropolitan scale because it best relates to use patterns of public and private recreation opportunities (Figs-2.6. and 2.7).

2.5 LEISURE BEHAVIOR SURVEY

To study actual leisure behaviors and patterns, a continuing program of research is initiated to measure.

1) User preference and satisfaction for recreation activities and spaces.

2) Levels of participation or non-use.

3) Latent demand.

(Figs-2.8 and 2.9).

Fig.2.8 LEISURE BEHAVIOR SURVEY PROBABILITY SAMPLE

A probability sample of beach enthusiasts at Tarqua-Bay was taken for this purpose

1.

Age	Relative Frequency (%)
Under 18	5.4
18 - 24	40.9
25 - 34	33.3
35 - 50	16.1
Over 50	4.3

2. Sex	Relative Frequency %
Male	51.5
Female	48.5

3. Marital Status	Relative Frequency %
Single	71.2
Married	26.6
Divorced	1.1
Widowed	1.1

4. Purpose of visit to beach	Relative Frequency %
Leisure	98.9
Others	1.1

5 Possible length of stay	Relative Frequency %
Less than 1 day	63.4
1 - 2 days	17.2
3 - 5 days	15.0
6 - 7 days	2.2
Over a week	2.2

6 Frequency of visit to beach	Relative Frequency %
Once a week	13.9
Every Fortnight	10.8
Once a month	31.2
Less than once a month	44.1

7 Classification of user	Relative Frequency %
Day Trip	43.3
Weekend or Short Trip	43.0
Long Term/Vacation	13.7

8 Educational Level	Relative Frequency %
Nil	2.2
Primary	3.2
Post Primary	11.8
Post Secondary	76.3
Others	6.5

9 Income Level per annum	Relative Frequency %
No Salary	26.9
1200 - 1800	3.2
1800 - 2400	7.5
2900 - 7200	34.4
7200 - Above	28

10	Working hours/week	Relative Frequency %
	Less than 40 hours	25
	40 hours	60
	More than 40 hours	15

11	Leisure/Free time	Relative Frequency %
	Weekends	77.4
	Holidays	14.0
	Others	8.6

12	Social Grouping	Relative Frequency %
	Single	4.3
	With Friends	69.9
	With Family	25.8
	Children alone	0.0

13	Attraction to beach	Relative Frequency %
	Facilities	0.0
	Nearness	6.5
	Beauty	52.6
	Geography and Climate	6.5
	Water body	25.8
	Others	8.6

14	Peak hours at beach	Relative Frequency %
	Morning	2.2
	Afternoon	61.3
	Evening	19.4
	All day	19.1

15	Peak Season of beach	Relative Frequency %
	Rainy Season	3.2
	Day Season	93.5
	Harmattan	1.1
	All Season	2.2

16	Time - Distance Travel	Relative Frequency %
	10 Minutes	5.4
	20 Minutes	11.7
	30 Minutes	28.0
	30 Minutes - 1 hour	40.9
	Over 1 hour	14.0

17	Other leisure activities engaged in	Relative Frequency %
	Idling at Home	5.4
	Partying	15.1
	Reading	9.7
	Television watching	30.1
	Sight seeing	16.1
	Sports	23.7

18	Opinion of Users about Project	Relative Frequency %
	Good idea	87.1
	Bad idea	1.1
	Find another site	2.1
	No opinion	7.5
	Others	2.2

(Source: Ashley Dejo.O.)

FIG.2.9 FACILITY PREFERENCE

Facility	Relative Frequency %
RESOURCE DIRECTED	14.3
Picnic	11.3
Horseback ride	3.0
IMAGE DIRECTED	53.8
Swimming	11.6
Boating	7.6
Indoor organized sports	12.9
Music/Dance	4.3
Restaurants	10.8
Fishing	2.2
Playgrounds	2.2
Golf	2.2
LEISURE DIRECTED	31.9
Aquatic Museum	3.8
Health Farm	12.9
Children amusement	3.3
Shops	7.5
Cinemas	2.2
Libraries	2.2

From the above survey, definite observations about the socio-economic characteristics of beach enthusiasts were made.

1) Visitors are mostly students within the age group 18 - 24.

2) Workers that visit the beach are mostly high income and middle income earners.
3) Beach enthusiasts mostly have leisure free time at weekends with peak hours at the beach in the afternoon.
4) Beach enthusiasts are mostly short term or weekend trippers.
5) Beach enthusiasts are mostly single/adolescents and they visit the beach in the company of friends.
6) Beach enthusiasts are mostly highly educated individuals.
7) Time-distance is mostly within 30 minutes - 1 hour giving a catchment of an area of radius within 48.3 km.
8) Most beach enthusiasts are attracted to the beach because of its aesthetic value.
9) Beach enthusiasts recreation desires are mostly image directed - i.e. the fulfillment of a desirable image.
10) Individuals prefer activities within the categories of social recreation and physical recreation.

Beachfront Plaza

Tarqua Bay

CHAPTER.3
COASTAL RECREATION,WATER ENVIRONMENTS AND RESORTS



CHAPTER THREE

COASTAL RECREATION, WATER ENVIRONMENTS AND RESORTS

3.1 AN OVERVIEW

A resort aims to serve public with leisure time. Like clubs, they tend to be identified with particular activities.

Resorts provide an escape from an everyday or uncongenial environment and provide an environment conducive to relaxation and leisure.

Traditionally, the sea had been regarded with mistrust. Most small seaside communities faced away from the sea. In the early eighteenth century the unsophisticated character of the quiet fishing communities appealed to the growing vogue for pastoral simplicity. For health reasons however with the initial interest in sea bathing, the significance of the sea as an expression of nature and the later interest in natural history changed attitudes towards the sea and seashore.

Wealthy Romans escaped from the oppressive heat of Rome to the cool sea area of the Companion coastline. In the 1760's, rich Americans from the Southern States and West Indies escaped from the hot season to the cool breezes and exclusive society of Newport, Rhode Island. English Georgian aristocrat escaped to the spa towns to enjoy the health cures and social life. The Regency and Victorian seaside resorts were an escape from an oppressive industrial, urban environment, and from its social restrictions. Today, people escape dull, uninteresting, commonplace surroundings to holiday where the sea atmosphere and sunshine can be equally enjoyed. In each era, the needs for relaxation and the pursuit of leisure activities resulted in

distinct planning forms and architectural solutions; architecture that expresses the human response to the coast.

Not only are seaside promenades created as attractive settings for parading and leisure, the hotels, amusement buildings, pavilions, gardens and the pleasure piers combine to create a total architectural context for the pleasure seeking public of the day. Similarly contemporary marina developments and holiday resorts aim to achieve a comprehensive architectural character to justify the confidence invested by guests and residents. The wide distribution of wealth and leisure time has resulted in massive resort developments with water - oriented environments.

3.2 AMERICAN RESORTS

American theme parks and resorts provide lavish display and family entertainment resulting in a carnival spirit. They often fast moving elaborated child play in exotic but respectable surroundings. Mechanical amusements provide an important element in resort parks. Cooney Island attracts visitors by an architecture of fantasy and escape with garish mechanical amusements, inter spread with lagoons and lakes. These parks provide an artificial distraction from an artificial life, pushing the mechanical qualities of everyday life to a more exciting context. The family amusement park has maintained an important role in American Resort and leisure life, in particular the transformation of traditional swimming pools to the non competitive run oriented water park.

In America, the exclusiveness of private beaches could be rigidly enforced. The summer private clubs and private beaches,

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In America, the exclusiveness of private beaches could be rigidly enforced. The summer private clubs and private beaches,

seashore municipal baths and the terraced pools of resort hotels. The sailing activity at one time the preoccupation of the wealthy, has been popularized with marina communities providing accommodation, moorings and a distinctive leisure ambience.

Many resorts have maintained a double function as holiday town and working port or fishing harbor. The contact of the working port and leisure resort is also reflected in the juxtaposition of Flamboyant or imposing holiday buildings with the artisan touch and vernacular architecture. The seaside vernacular consisting of modest but individualistic terraced houses with traditional weather boarding and rendering has provided an architectural vocabulary for the new marina, communities. In many small harbors, the fishing activities are supplemented by pleasure boating and competitive sailing.

The architecture of the English resorts includes exemplary buildings of each decade as the competitive leisure world has responded to imaginative design and the avant-garde. The Victorian period provided the most comprehensive range of seaside structures that cater for all the needs of the holidaying public. The design of grand hotels and adventurous engineering was adopted in fun-fair and promenade structures paving way for the competition between old styles and the modern movement architecture that could rationalize the new needs for expansive views and balconies and the use of new materials.

3.4 EUROPEAN SEASIDE

The English custom of plunging into cold seawater reached the continent as far a field as Russia. The Russians became particularly enthusiastic for rigorous sea bathing as a remedy

for maladies. The English resort style therefore developed in Southern France with holiday villas. With time new French resorts were developed into an urban context with monumental hotels dictating the scale of promenade structures. These resorts accommodate contemporary holiday activities, sun and sea-bathing, sailing and leisure amenities, accommodation, provision for motor traffic and access to airports. The European resorts adopted beach tents for visitors to change for swimming in place of cumbersome English bathing machines.

The diversity in architectural expression of new resorts and waterside structures is evident. The development of modest, regional, domestic architecture for new marina communities, particularly the Fragmented roof line of the Mediterranean communities conveys an architectural environment that is evocative, familiar and congenial to the average family Bath historic and traditional images have provided inspiration for many resorts.

The rationalist tradition expressed in simple lines of modern architecture has also given form to holiday buildings and resort planning. The commercial style, dependent on economic analysis, standard components and structural order has provided an uncompromising scale, severity and lines that are often in conflict with existing infrastructure.

The trend in resort accommodation is for the enterprise to handle in contrast to the community-oriented open promenade thus providing access to a variety of alternative amenities. The popular holiday changed in emphasis from an experience of grandeur to economic accommodation and family amusement; from opulence to the appreciation of locations, climate or a simulated

exotic ambience. The "holiday package" provides an "all-in" holiday which has become stereotyped, based on comfortable hotel accommodation, reasonable food, seaside activities and aiming to create its own exclusive identity with the beach, sea or exotic surroundings.

3.5 NIGERIA

The forceful growing prosperity of Nigeria has resulted in an increased demand for leisure products. Whilst fishing and commercial harbors have been a feature of the area characterized by creeks rivers, lakes, lagoons and long beach stretches, water sports have rarely been a traditional activity Arugungu festival. This situation is however gradually changing even without the proper provision of adequate facilities and amenities such as the Argungu Fishing Festival. The areas demonstrating most potential in terms of water environments are Lagos, Delta, Rivers, Ondo and Akwa Ibom.

Tourism development in Nigeria has been rather slow due to mere neglect. To speed up the pace of tourism growth the Federal Government promulgated "The Nigerian Tourist Board Decree - Number 54 in 1976 to provide a clear-cut approach to tourism development. A tourist board was also inaugurated in 1978. The basic functions of the board are:-

1. To carry out any undertaking which appears to be necessary for the promotion and development of a tourist industry.
2. To assist in the development of
   a) Beaches
   b) Holiday resorts

c) Parks

d) Game reserves

e) Naturally endowed spots

3. To publicize Nigerian tourism

The last few years in Nigeria have provided evidence that with the good climatic and coastal all year round conditions, Nigeria will inevitably provide opportunities for resort development during the next decade, with the back up of the government, which is reflect in the increased budget allocation for the tourism.

There seems little doubt that those providing consultancy services, resort developments, marina construction and services generally will be busy in the region during the next decade. With an area so large, it is not possible to generalize about coastal conditions but as with seaboards, each site must be surveyed and evaluated individually.

Resort developments are a direct response to a specific demand for recreation, rather than an incidental use of land which happens to be available for no defined purpose. Over the last decade the hours in the Nigerian working week have fallen. At the same time, paid holidays have increased and most of the private sector have at least a two to three week minimum while the public sector is moving to a three to four week minimum. Tourism is becoming big business in Nigeria and has brought a new source of foreign exchange as shown by the pattern of tourist movement to Nigeria.

FIG-3.1 TOTAL ARRIVAL OF TOURISTS

Country	1970	1980	1990
U.S.A.	5,107	9,676	18,336
United Kingdom	6,258	14,932	35,624
Europe	15,475	26,697	46,055
Africa	15,629	20,927	28,020
Others	105,704	85,704	34,774
Total	148,173	157,963	162,809

(Source: National Tourist Board,1991)

With this trend, tourism could easily become the largest source of foreign exchange. There are however problems involved in the provision of leisure facilities not the least which is the heavy investment which has to be made speculatively to establish infrastructure for resorts. For Nigeria, the reasons for the increased tempo in leisure activity are not hard to find. National population is increasing and becoming progressively more urban. There is more personal wealth, mobility and leisure time and a greater awareness of the new opportunities brought about by more widespread literacy.

There are no precise and reliable forecasts of the pattern of leisure activity in Nigeria. At best there are informed national estimates of the growth envisaged but there is little way in which participation in particular activities may be expected to grow. However there is every indication that for outdoor recreation, the trends are already being seen. At national level, at least a threefold increase in activity is expected by the end of the decade. It seems likely that activities associated with motoring and water based pursuits will continue to be among the most popular and occupy an increasingly high proportion in the league table of leisure pursuits. With this trend occurring within the overall increase in total leisure

time and proportional expenditure, a situation is created whereby a planned program is essential from the national to the local level. An awareness of environmental pressure and the need to conserve available resources and yet increase and improve the present facilities for water based leisure pursuit of all kinds can only be met by responsible and competent planning in both the public and private sectors.

3.6 LAGOS

The great advantage Lagos has over Nigerian inland cities are its long stretches of coastline, islands, creates and the lagoon which make up its unique character. Within easy reach of the city of Lagos are several superb beaches of fine, soft white sands washed by the clear blue Atlantic ocean. The beaches of Lagos could be seen as spectacular scenery of green palms, each with its numerous and varied unique characteristics.

Because of the tensions that are associated with urban Lagos, the opportunity to relax or just have a fun filled time is always welcome and this is evident from the population at the beaches at the slightest opportunity. There is however a restriction because infrastructure and facilities to meet up with such requirements are limited but all the same, vacationers make do and always find improper ways out. This is an all in all indication of the need for resort developments along the coast. Its architecture to the rescue.

According to the Fourth National Development Plan, the government is convinced about the need for adequate facilities for tourism in the country. Government will therefore continue to encourage the provision of adequate facilities for tourism.

The Federal Government through the National Tourist Board, will play a leading role of developing the Tourist industry by providing the national master-plan for tourism development while the State Government will play the Key role of developing infrastructural facilities required. Apart from providing guidelines and other support services, the Federal Government will provide some basic facilities in partnership with the State Government and international tourism organizations. Considerable outlets also exist for the private sectors to participate in the development of the sector by providing their own independent facilities or participating jointly in the public sector programs.

Holiday resort projects gulp up a whooping 100 million Naira. This sum is aimed at establishing medium-size holiday resorts to cater for people on vacation. Water side locations are preferred. The structures to be provided will be modest in order to reduce capital outlay and put the facilities within the reach of average tourists. The facilities to be provided will be graded to cater for different tastes.

Beachfront Plaza
Tarqua Bay

CHAPTER.4
WATER ENVIRONMENTS AND TECHNIQUES OF USE



CHAPTER FOUR

WATER - ENVIRONMENTS AND TECHNIQUES OF USE

4.1 WATER CONTEXT

According to Anthony Wylson, (19..) water not only provides a basis for mans existence and continuous challenge to secure its use, it is a source of metaphysical symbolism, aesthetic pleasure and therapeutic value. Water gives expression to natures moods and provides substance to seasonal change. Landscape is fashioned by water, which as cascades, resurgent sea or reflective calm, bears witness to a beneficial universe.

Waterscape inherently contains a variety of moods from the languid lake scene to the pounding waves on a rocky coastline with its scope for isolation, its etherial separation, congenial cool atmosphere and opportunities for leisure activities.

When water is included as a design element, it becomes an essential ingredient and even the quality of the water must be taken into account. An appreciation of the water amenity will reinforce a concern for natural water forms. Respect for water from an architectural point of view confirms man's essential responsibility for the value system conveyed by structure and surroundings.

Utilitarian Functions can be adapted to water display. The present day context of water features is related to urban conditions where noise, the intensity of the built environment, the loss of contact with the natural elements and excessive seasonal heat need to be counteracted. The great value of water features in popular urban spaces is that they can provide visual pleasure and establish contact with water as a natural element.

The capital costs and running expenses of water features need to be justified and thus, to adopt utilitarian functions involving water to achieve interesting effects makes sense. The plazas and mini parks that have water features to provide visual satisfaction, physical involvement for the young or a congenial atmosphere, can humanize the urban environment and in association with planting, can detract from hostile or overpowering surroundings.

The broad range of aquatechtonic experiences extend from the littoral view across the open water to the visual pleasure of reflective pools, the dynamic qualities of turbulence and to the physical confrontation inherent in waterplay and watersports. Water features capture these qualities and either relate the composition to the surrounding space or capture a particular effect.

4.2 WATER SURFACE

Still water of a reflective pool or lake can create an etherial separation. Compact buildings surrounded by calm water can simulate suspended detachment. Reflected sky and cloud patterns appear to replace the firm support of the ground. The effect of light on water and buildings is important both to emphasize the contracts and to reflect light up and into a building. Trees and foliage add a further quality, breaking up the light and creating deep reflected shadows.

Water surfaces can be activated in many ways. The effect of fountain sprays can disturb the water, the direction of the spray being affected by the wind. Underwater bubbles or outflow points create specific patterns of disturbance. Cascades and

waterfalls provide textural quality to the water surface. Obstacles in moving waterfall will provide linea patterns. Air movement over water cause disturbance patterns. Water surface activation results in varying patterns creating different effects with every situation.

4.3 WAVES

A wave is a ridge created by wind action which sets up a series of orbital movements. The manipulation of water surface could also be provided by a wave machine. The wave machine creates the rhythmic pattern of the sea and breaking waves can be provided effectively on a simulated beach. The principal use is for leisure wave pools and water parks. The force of a natural expansive wave motion is recreated, providing the opportunity for bathers to enjoy waves and breaking surf. Various systems have been developed to recreate natural wave formations and have been adapted for leisure pools.

Water particles in a wave oscillate in an orbital motion with little or no net displacement. Once a wave begins to break, the situation changes. As the water depth of a non breaking wave is reduced and the wave becomes higher in relation to its length, it will reach a point of instability due to gravity and begin to spill over. The breaking wave has considerable mass transport and it is this that pushes obstacles towards the beach.

The pneumatic wave machine system can be operated to create different patterns with a normal maximum wave height of one meter - trough to crest, parallel wave motion and with adequate machine power, waves suitable for surfing. The pleasures provided by the pneumatic wave pool suit most age groups. Considerable energy

is needed by swimmers to remain afloat in the rise and fall of the wave motion; the pleasure of floating on a raft in waves is less energy demanding. There is a modest opportunity to surf in the section of waves nearest the beach area.

4.4 POOLS

Pools are for people who want to enjoy themselves or take exercise or simply remain spectators; they may even be used for therapy. All modern pools have their own specialized needs with sophisticated systems and constructions involving many branches of science.

In addition to wave pools and swimming pools most resorts include an adventure pool (for the more daring) and kiddies pools. Adventure pools combine "assault course" challenges with simple chutes, water cannons, floating pads, cable trolleys and play structures. Pads consist of chain anchored rubber rafts or aerated rafts that provide insecure stepping stones combined with overhead cables. A cable trolley over the water allows swimmers to glide over and drop into the water.

Kiddies' pools provide for small children under supervision. The surrounding space would allow for silting spaces for parents. The pool should be shallow with play features as small slides, chutes, water cannons, sprays, fountains and structures for climbing, swinging and bouncing.

4.5 CASCADES AND WATERFALLS

Cascades and waterfalls convey the dramatic force of descending water with the impact on landing. The range of formal

is extensive: the fine sheet of water easing over a precisely machined edge; the single stream of water falling as a slender column; to the forceful crescendo and drama of spectacular cascades that can create a significant sound which obscures the noise of the urban city and the visual effect of turbulent water creating a rising misty spray which itself retracts light. The noise of water could be utilized to create an environment that ameliorates the tension-provoking urban surroundings and provide a cool atmosphere in hot tropical weather.

Water cascading through a sculptured form either through simulated rocks or through kinetic sculpture where the passage of the water moves elements within the composition, consolidates many outdoor visual dramatic qualities. To be able to walk behind and look through cascading water is an added attraction. The noise of a waterfall is emphasized if directed in front of a cavity rather than a flat surface and the shallower the receiving pool, the higher pitched the sound of the splash.

4.6 JETS, SPRAYS AND WATER CURTAINS

Fountains as jets, bubbles, geysers and sprays include an extensive range of devices that condition and control outflow. The water can be discharged as pure water or aerated to form a non transparent white water.

The scale of the fountain or feature in relation to the surrounding space is of optimum importance. Viewpoints, immediacy and architectural expression in relation to surrounding structures are all important in achieving a cohesive quality. The location in relation to sunlight and the use of artificial illumination provide the means to emphasize the water's

reflective and refractive qualities. The effect of wind upon water in flight and the noise, splash and diffusing effects on re-entry also require consideration. The dynamic qualities are an important part of water feature design.

There is a wide selection of outflow nozzles for different effects. The smooth bore nozzle provides the high narrow jet and the setting must be arranged to take into account both the effect of the rising water meeting the falling water and the effect of the wind or spray and mist. The former results in the interesting fluctuation of the high point of the jet as the force of the rising and falling water predominates. There is less wind drift the heavier the water particles. Formed nozzles are shaped to provide predetermined patterns and equipment can be included to create dandelion fountains, spheres and hemispheres.

Aerated jets produce full and foaming effects at high levels and provide textured surfaces to reflect light. The bubbler creates a low mound of aerated water. Geysers create heavy columns of water and can be particularly effective if mounted in a cluster. Spray jets consist of a number of fine jets mounted in a distribution head.

A water curtain can be formed either as a free fall line or a curtain of water controlled by laces. An anti-splash mesh can be included at the base but a cross wind or draught could be disruptive to a free fall curtain. Thus, the water curtain is more appropriate to an interior location. The laces provide a precise path that limits the pattern of water and reduces the size necessary for the base pool. Laces can be set at a maximum angle of 18 from the vertical therefore achieving interesting interweaving and fan forms.

4.7 WATER CONTAINERS

Multilevel cascades, fountains and pools must have the capacity to contain the water in the system if circulation is closed down. As a rule of thumb calculation, the maximum height of a fountain should be equal to the radius of the pool to allow for splash - back and wind draft. The outflow can be a feature; either water spilling over an edge or being sucked out through a sump-like drain. Dust can create problems both by clogging the jets and by leaving an unsightly sediment on the floor of the pool. Large systems require filtration and chlorination similar to swimming pools.

The noise of water falling into a metal basin can emphasize an unfortunate metallic element rather than being a comforting water sound. A black base to a pool can provide great reflective quality. If a pool is overlooked by high buildings or terraces the base of the pool can be treated as a feature with textured surfaces or colored patterns to be seen through still or activated water. Underwater colored surfaces can provide a unifying effect where there are several pools within one complex.

The main materials used for water features range from the traditional marble with bronze statuary to granite, brick and metals. Simulated rocks are constructed of granite, fiberglass, concrete or glass reinforced concrete. The naturalistic character is either imprinted, cut or molded into the surface as in the case of granite or performed with mould as in the case of fibre glass. Colors and surface textures are applied.

The movement of water through a feature requires particular attention and it is recommended that large scale models should be used to analyze the effects, the water movement and the

pattern sequences. The visual components of natural and artificial light in water, air movement and surrounding materials are dynamic and interactive.

4.8 CONCLUSION

Today a responsible appreciation of the water element is fundamental to environmental values. With the scale and potential damaging effect of modern industrial and urban outflow, there is a limit to the indiscriminate use of water, as a depository for waste. The long term effect could be immeasurable.

Attitudes have identified values concerning water and the way in which it can enhance the immediate surroundings. Dynamic water display could therefore provide a distraction from the traffic dominated city environments. Delicate landscaped areas utilizing the water element echo a tradition that otherwise appears to have been overwhelmed by modern urban development. New machinery for water filtration and circulation has increased the scope for moving greater volumes of water either for leisure activities or for visual effect. An increase in leisure time encourages the capacity to enjoy a visually attractive and sympathetic environment that is synonymous not only with resort developments but also with urban renewal.

The architecture of the water element can not only identify the visual and experiential pleasures that water can convey it can also affirm man's custodial role. The value that is placed on the waterfront, water resort, water park or natural water course is an index of continuing enlightenment and integrity.

Beachfront Plaza

Tarqua Bay

CHAPTER.5
REVIEW OF RELATED DESIGNS



CHAPTER FIVE

REVIEW OF RELATED DESIGNS

5.1 LA GRANDE MOTTE - SOUTH WEST FRANCE

This was developed by Jean Balladur, and has been described as the biggest holiday development in the world with a provision for 4,000 pleasure boats along the coastal stretch, catering for up to two million tourists a year.

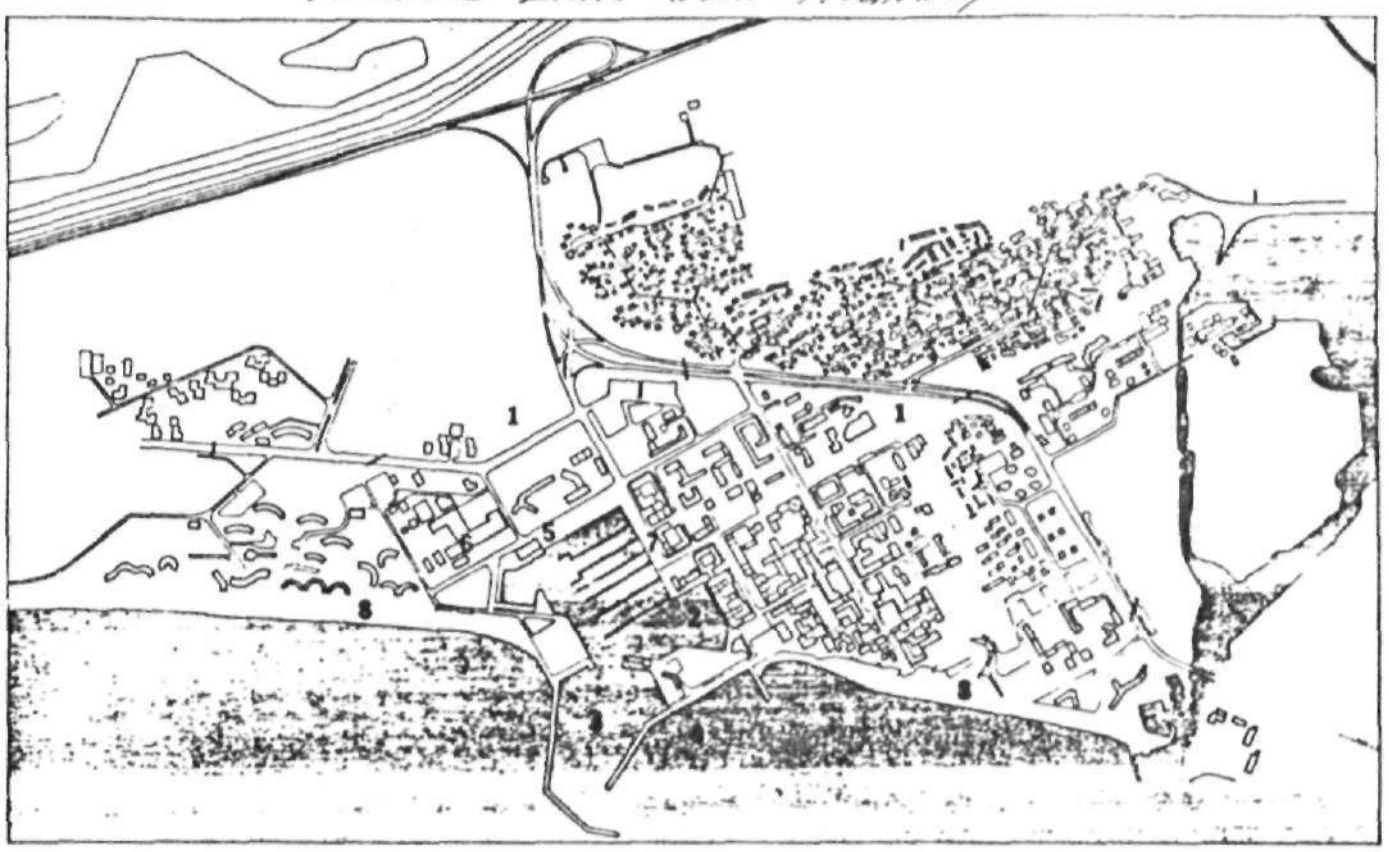
The land acquisition includes a total area of 1500 Hectares west of the historic medieval walled town of Aiques - Mortes. The land consists of vineyards and dunes that separate the lagoon from the sea.

The basic planning consists of an inland motor way that runs parallel to the coast with feeder roads running into the center of the town, the marina and the beach areas. Although there is a shopping boulevard that extends to the beach, the principal urban space is the inner basin of the marina harbor. The water space is enclosed on two sides by four storey high podium and pyramidic buildings. The remaining two sides are open to the sea and beach (Fig-5.1).

The layout of the water square is a variety of canopied cafes, pedestrian walks and parking areas surrounding the expanse of towering masts and the Hotel Frantel building which with its vertical emphasis forms a "fulcrum" structure. This is accentuated at evening time with artificial light maximizing the evocative water context with elaborate reflections. The landscaping of the water square and boulevards provide an important shading in the hot summer and thus provides interest in the off-season as well as during the holiday period.

The pyramidic form of the buildings is particularly well

Fig. 5:1 La Grange Motte - Plan showing Marina Water Square, Surrounding Spaces and Traffic Link with Highway



Key

1 - Access road
2 - Inner harbour and marina
3 - Outer harbour
4 - Mediterranean
5 - Frantel hotel
6 - Grande pyramide
7 - Water space terraces and promenade
8 - Beach.

Gourlé - Wylson A - Aquatecture

related to the water space and the coastline. They are designed to provide terraces for outdoor living and views of the sea and provide a deflective surface to the wind; to avoid the overshadowing and overbearing effect that a vertical high rise elevation can create and to provide an exciting panoramic profile for the total urban development in contrast to the flat littoral landscape. Apart from La Grande Pyramide with its sweeping lines and central buttress - like wing, the pyramid blocks are uniform in height. A few are truncated prisms in form; the majority have two parallel and vertical sides. The remaining two sides providing stepped terraces or balconies. Each has its own pattern of sun protection and of balcony projections. The spaces between the pyramids permit a diversity of views. On either side of the built up area, expansive sand beaches retreat from the waters edge into dunes and flat land. Stepped retaining structures support the promenades and dunes. The flats and villas incorporate strong geometric forms that contrast with rolling forms of the dunes and reflect the form of sand retaining structures that extend along sections of the beach (Figs-5.2, 5.3, 5.4 and 5.5).

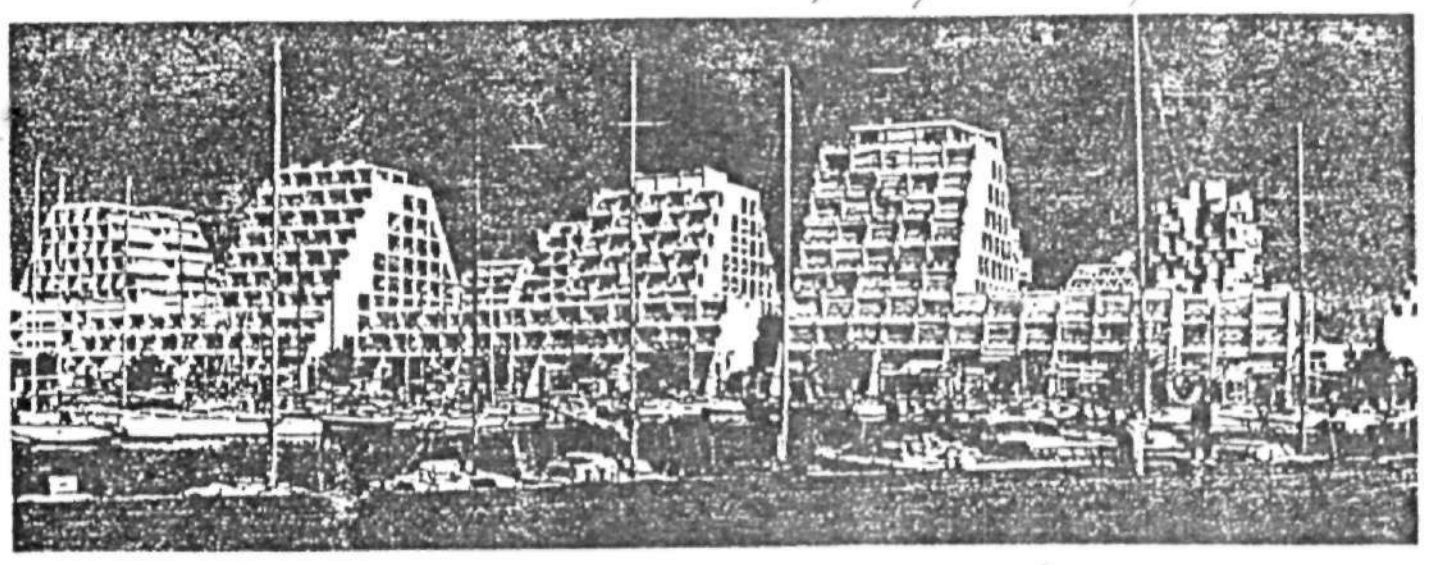
Merits

1. An almost limitless scope covering a vast range of interests
2. Siting of individual buildings are properly related to water square and coast sculpting interest into the almost featureless landscape.
3. Groups of buildings are well related to each other, defining external spaces and creating a variety of vistas and closed views.



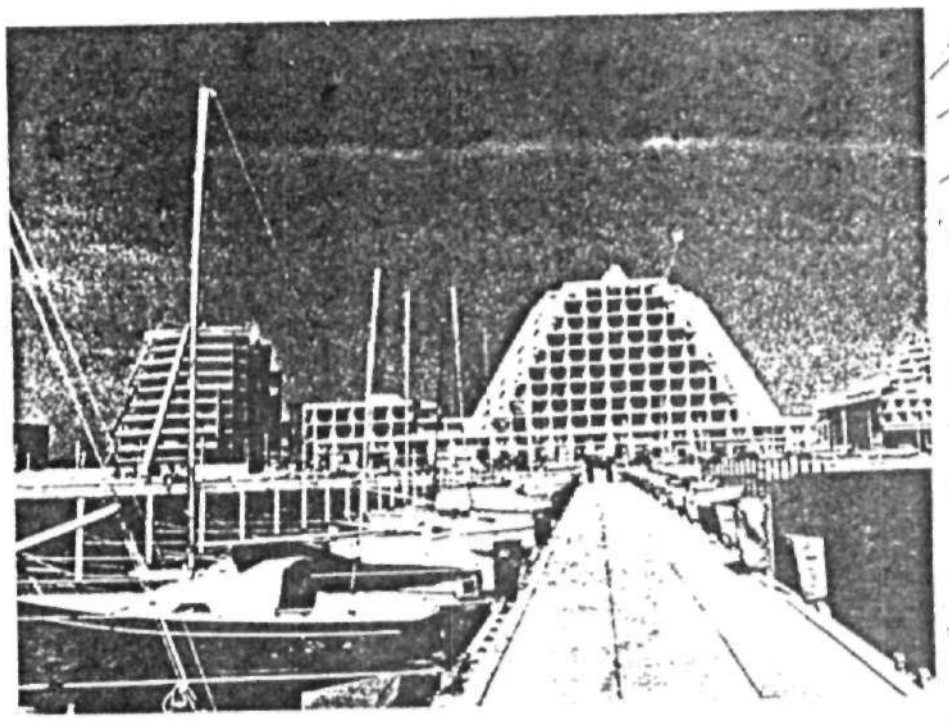
Fig. 5:2
La Grange Motte
Aerial View of
Total Development
Source -
Adie J. W. -
Marinas: A Working
Guide to their
Development and
Design.

Fig. 5:3 La Grange Motte - View Across
Marina to Pyramide Structures



Source Wylson A. - Aquatecture

Fig. 5:4 La Grange Motte - Pyramid Apartments seen from Walkway.



Source - Adie J. W. - Marinas: A Working Guide to their Development and Design.

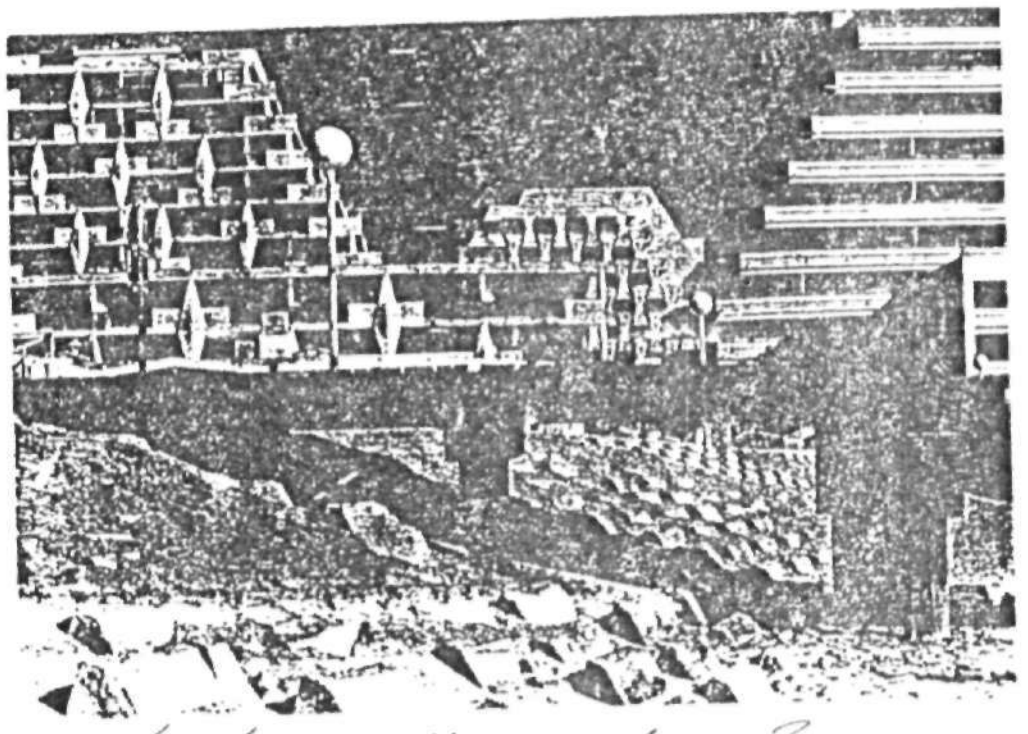


Fig. 5:5 La Grange Motte - Gang Retaining Stones, Platform and Breakwater Structures.

Source - Wilson A. - Aquatecture.

4. Vehicular and pedestrian circulation patterns are given imaginative and aesthetic treatment within zones.
5. Design of craft berths which relate to density of crafts are quite flexible and functional.
6. An ingenious use of sand retaining stones at beach side thus preventing sand erosion.
7. Architectural form is successfully carried through the whole scheme.
8. Use of sloped and vertical faces with facade treatments are efficiently adapted to sun and wind patterns.
9. Waterscape is sculpted to capture a variety of moods.

Demerits

1. Environmental impact is rather too high.
2. The layout of berths is not innovative and quite uninteresting.
3. Sheltering between individual buildings is not given thought.
4. Environment is beyond pedestrian scale.
5. Surface treatment is uninteresting with no level changes, patterning or color.
6. Construction costs are enormous.
7. Management has to be fully computerized to cope with scale of development.

5.2 ST.JAME'S CLUB - ANTIGUA

St. James's club is located on a private peninsula of 15 acres on a beautiful historic Caribbean Island, lined with beaches.

A combination of carefree architecture and sparse planning suggests the intended recreation ambience. The architectural forms help unite the buildings which make up the sparse planning. Thus giving a picturesque scene.

The central lobby and lounge lead out to a pool deck with views of the sea and gardens. There is a choice of accommodation which include deluxe club rooms, spacious premium, bay and club suites, and bayside or hillside villas with one or two bedrooms overlooking the sea. There is also the luxury of hilltop private homes (Figs 5.6 to 5.13).

Allied water activities provided for include snorkelling in the deep sea scuba diving. There is a marina with facilities for water skiing, wind surfing sunfish sailing and aqua biking. Land sports also include three pools, seven all weather floodlit lawn tennis courts, horseback riding, a fully equipped gymnasium, health club, a casino and a discotheque. Other facilities include restaurants, bars, boutiques, salons and shops.

Merits

1. Overall scheme integrates a large percentage of user requirements.
2. Siting of individual units is agreeable with topography and shore profile and natural vegetation.
3. Careful attention is given to visual impacts of the shore and coast from all points.
4. Static spaces such as paved areas, parking spaces and hard standings are ingenuously integrated with total scheme to achieve continuity and flow of spaces.
5. Carefree architectural style reflects recreation ambience
6. Architecture of individual units is quite simple and

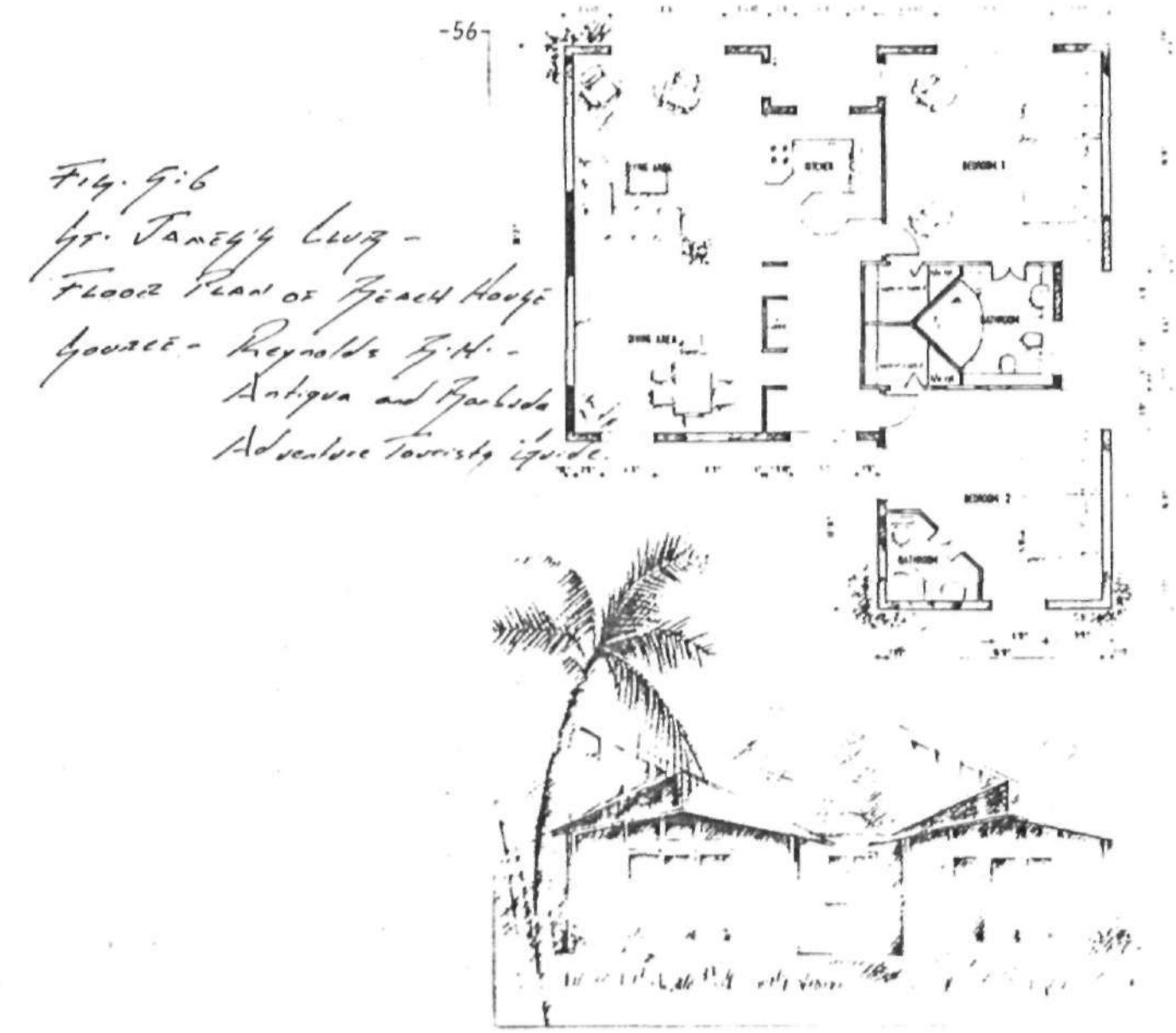


Fig. 5:6
St. James's Club -
Floor Plan of Beach House
Source - Reynolds B.W. -
Antigua and Barbuda
Adventure Tourists Guide.

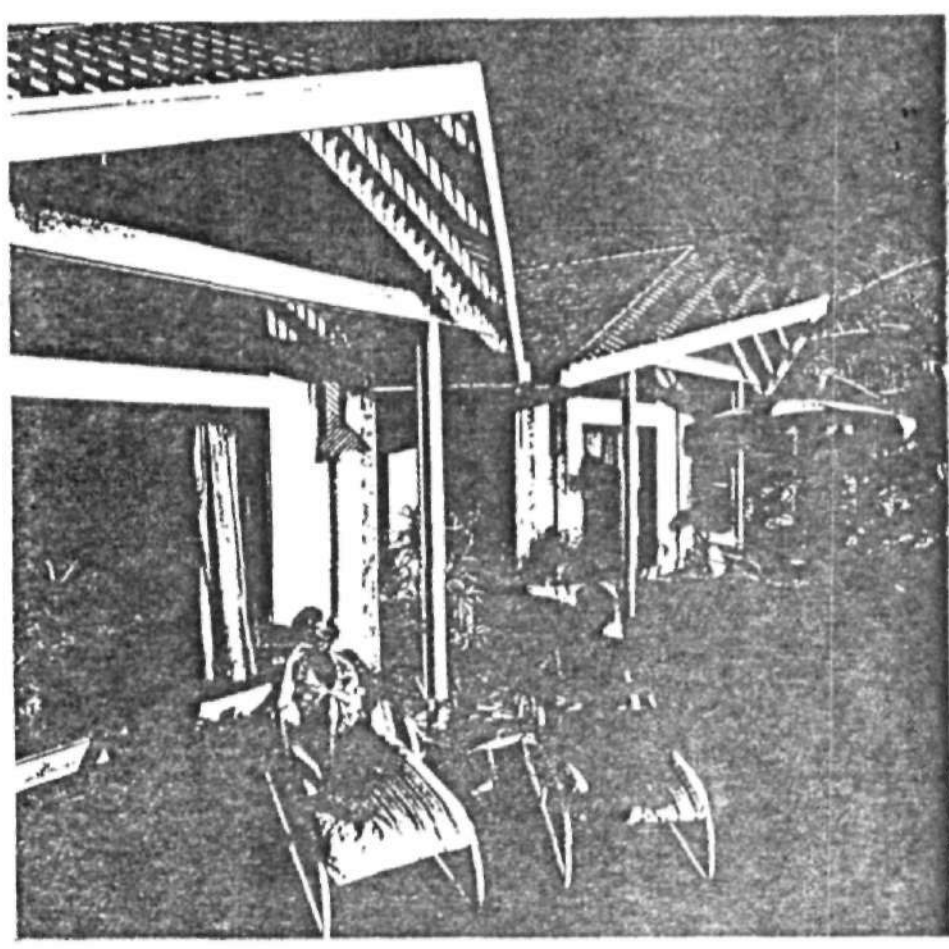


Fig. 5:7
St James's Club
Beach House Patio
Source -
Reynolds B.W -
Antigua and Barbuda
Adventure Tourists
Guide.

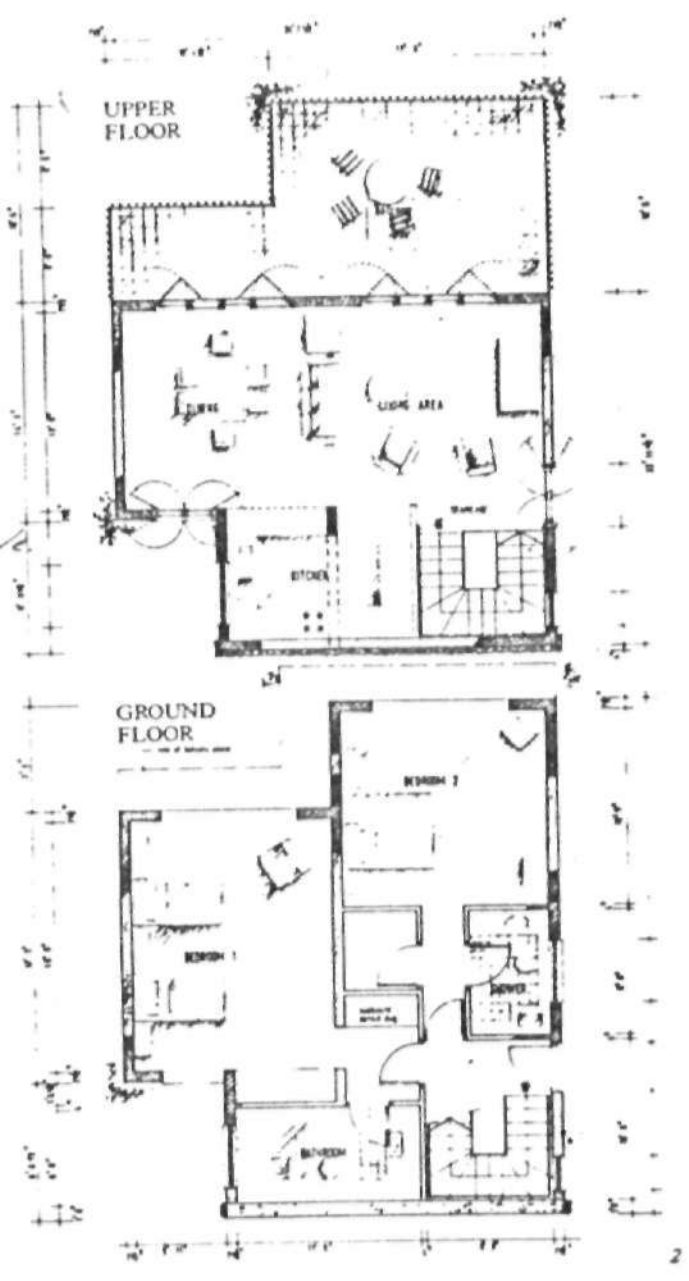
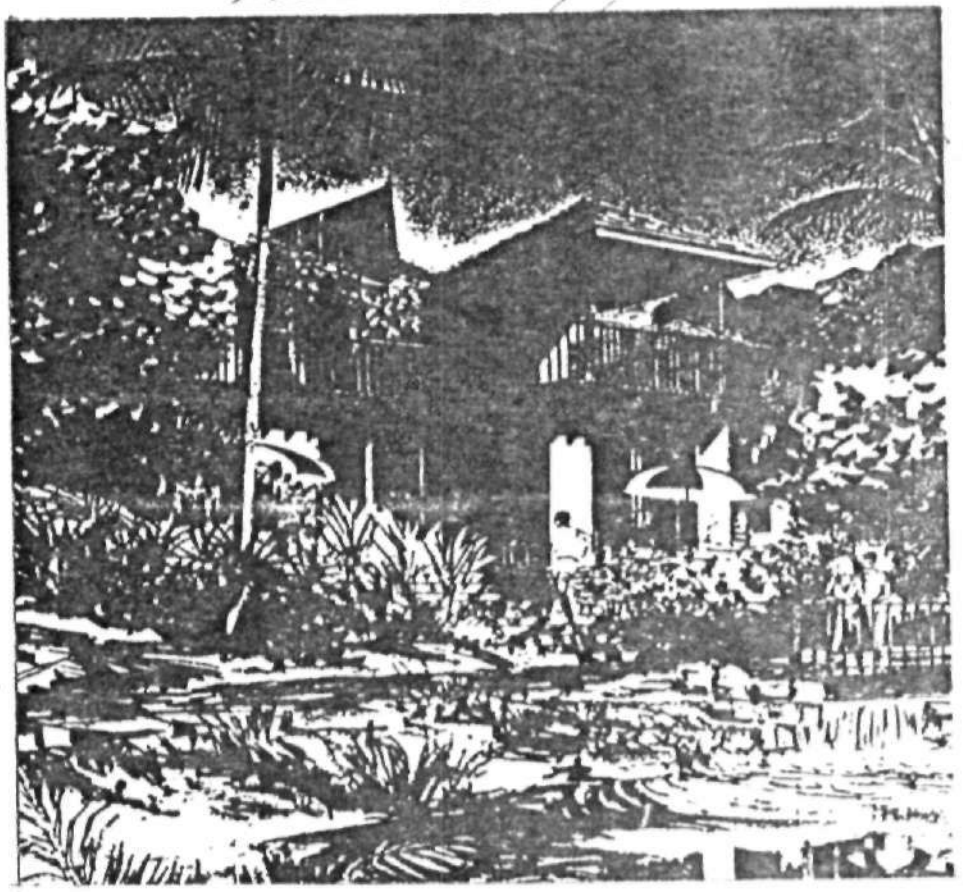


Fig. 5:8
St James's Club - Floor Plan of Town House
Source - Reynolds G.H. - Antigua and Barbuda Adventure Tourists Guide

Fig. 5:9 St James's Club - Town House
Source - Reynolds G.H. - Antigua and Barbuda Adventure Tourists Guide



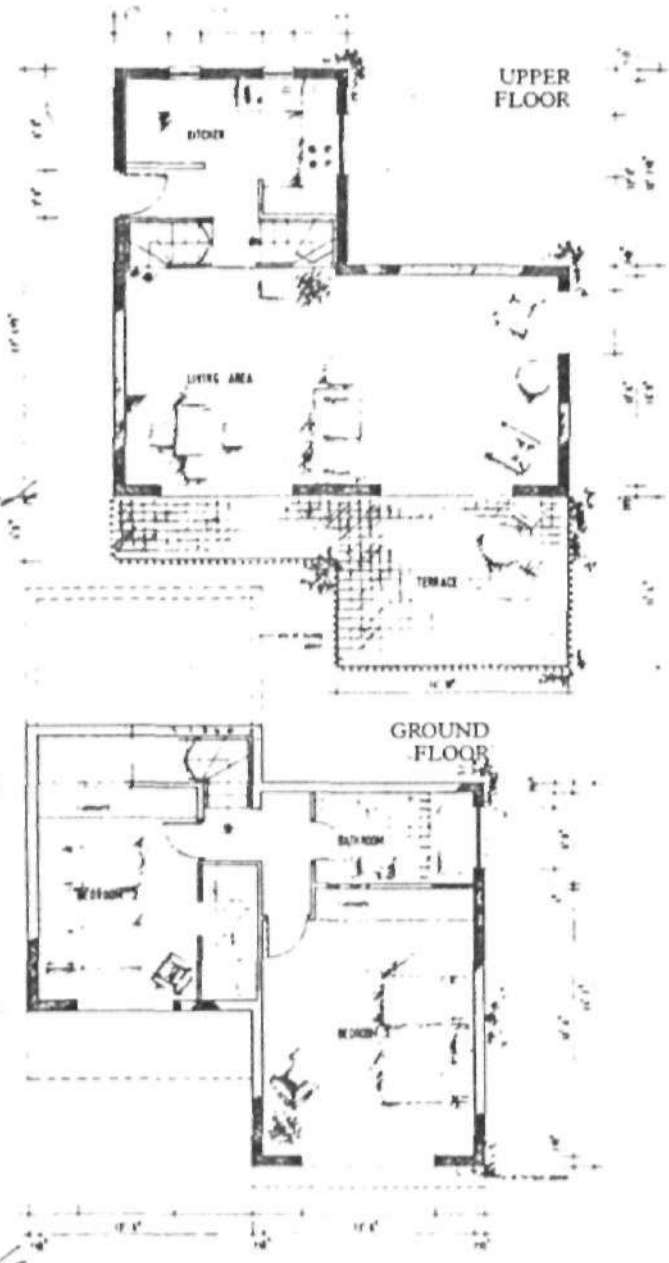
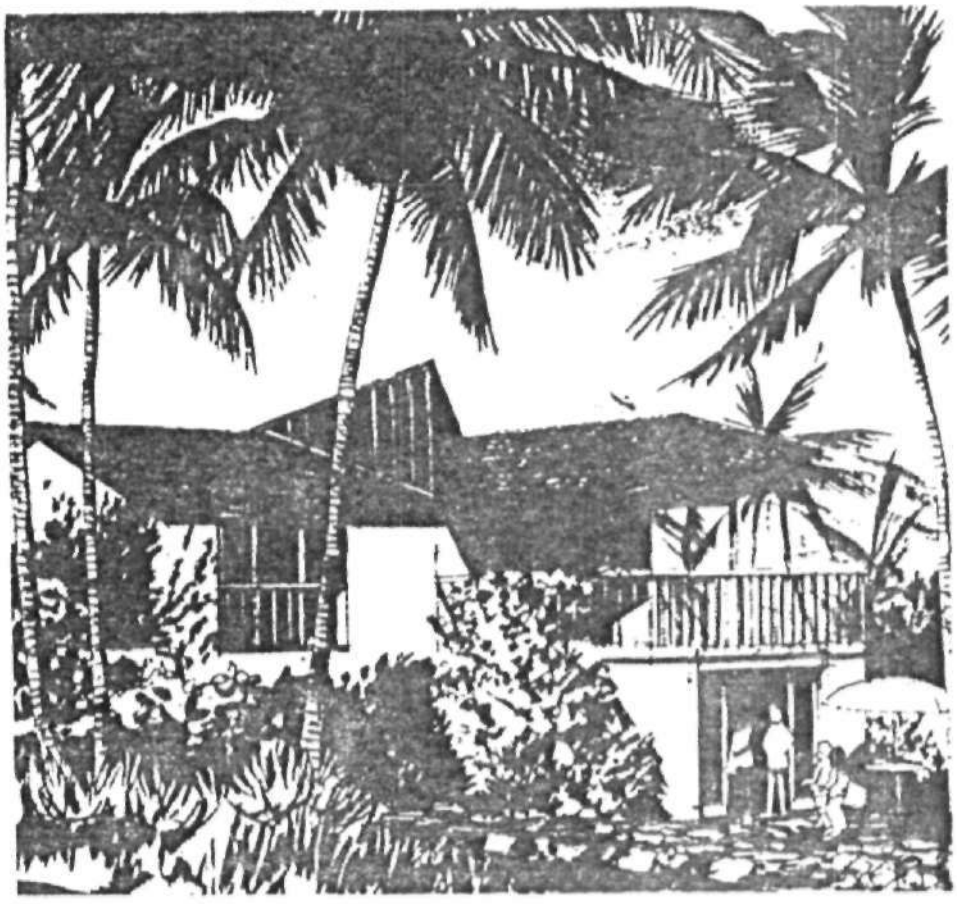


Fig. 5:10 St James's Court
Floor Plan of Fijian Villa.
Source - Reynolds G.H. -
Antigua and Barbuda
Adventure Tourist Guide

Fig. 5:11 St James's Court
Fijian Villa
Source - Reynolds G.H.
Antigua and Barbuda
Adventure Tourists Guide



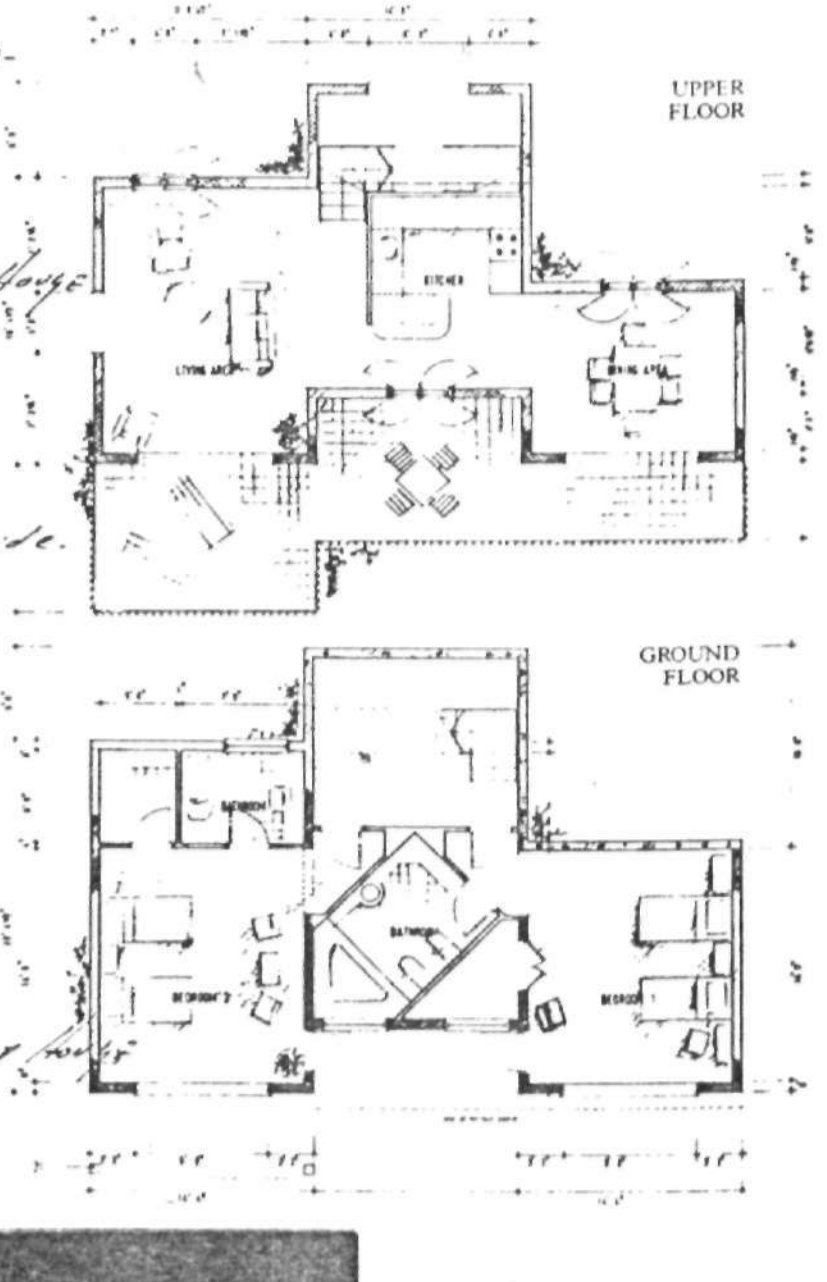


Fig. 5:12
Floor Plan of Courtyard House
Source -
Reynolds B.H.
Antigua and Barbuda
Adventure Tourist Guide.

Fig. 5:13
St James' Club - Courtyard Houses
Source -
Reynolds B.H.



FIG: 5:14 - WATER WORLD - PLAN SHOWING COMPOSITION OF TOTAL ENVIRONMENT.



KEY

1) Entrance
2) Activities pool
3) Toddlers pool
4) Jacuzzi
5) River ride
6) Flume rides
7) Wave pool
8) Play fountain
9) Beach
10 Changing rooms
11) Cafés
12) Sunning

Source: - Adie J.V. : Marinas: A Working Guide to their Development and Design.

functional.

7. Use is made of organic based materials which are quite suitable, durable and cost effective.

Demerits

1. Outdoor shelter from hazardous climatic elements is not incorporated within the scheme.
2. Climatic orientation of units is not really paid attention to.

5.3 WATER WORLD - HONG KONG

Water world was completed in 1984 as a supplement to the Difftgo marina animal and amusement park. The water fun park is particularly interesting in its controlled landscaping and use of color within the pools.

The layout consists of two main pool areas a large activity pool and a wave pool. The main entrance from the street is through a landscaped forecourt with a prominent seahorse logo and queue lines for ticket booths. The booths are within a covered lobby with a shop and information lobby which leads to terraces that surround the main activity pool. The entrance structure provides for changing room, a mezzanine - level fast food service with terraces overlooking the pools and a full service restaurant on first floor.

The main activity pool is 80m x 40m and varies in depth from 0.2m to 3m. A bridge leading from the entrance terrace to the wave pool crosses the activity pool and there are two islands with slides, water cannons and play equipment. Immediately adjacent to the activity pool, there is a toddlers pool, jacuzzi, two groups of flume rides and a river ride. The flumes start

from two timber towers at the high points of the site with fibre glass channels of 120m to 150m long and a descent of 20m to the splash pools. One group of flumes weaves over a "river" ride which consists of a series of channels, slides and pools. The river ride is constructed of fibre glass coated and sprayed concrete.

A 500 sq m underground room accommodates filters and a chlorine ultra violet sterilizing system and the total 2.7 million liters of pool water passes through the system every 2.6 hours.

The wave pool complex consists of a main pool 25m wide at the dispensing end and widening to 40m at the beach end. The maximum depth is 2.5m and the pool is 55m long. A sand beach is separated from the wave pool by a series of footbaths to reduce the transference of sand and to provide a toddlers pool (Fig-5.14).

A second underground 500sqm plant room accommodates the wave pool equipment. Adjacent to the wave pool is a large play fountain with a cascade, stepped waterfall and flow channel. With a depth of 150mm, it is designed for all age groups to floats, play and splash in. Between the wave pool and activity pool there is a food service area with terraces overlooking the pools (Fig-5.15).

Water world has been designed for complete evening use with floodlighting around the pool areas, bollard lights and tree lights to provide safely and interesting lighting. The circulation routes throughout the park are well defined and the landscaped areas are protected by low retaining walls. The color of the ground and underwater surfaces is a particular feature

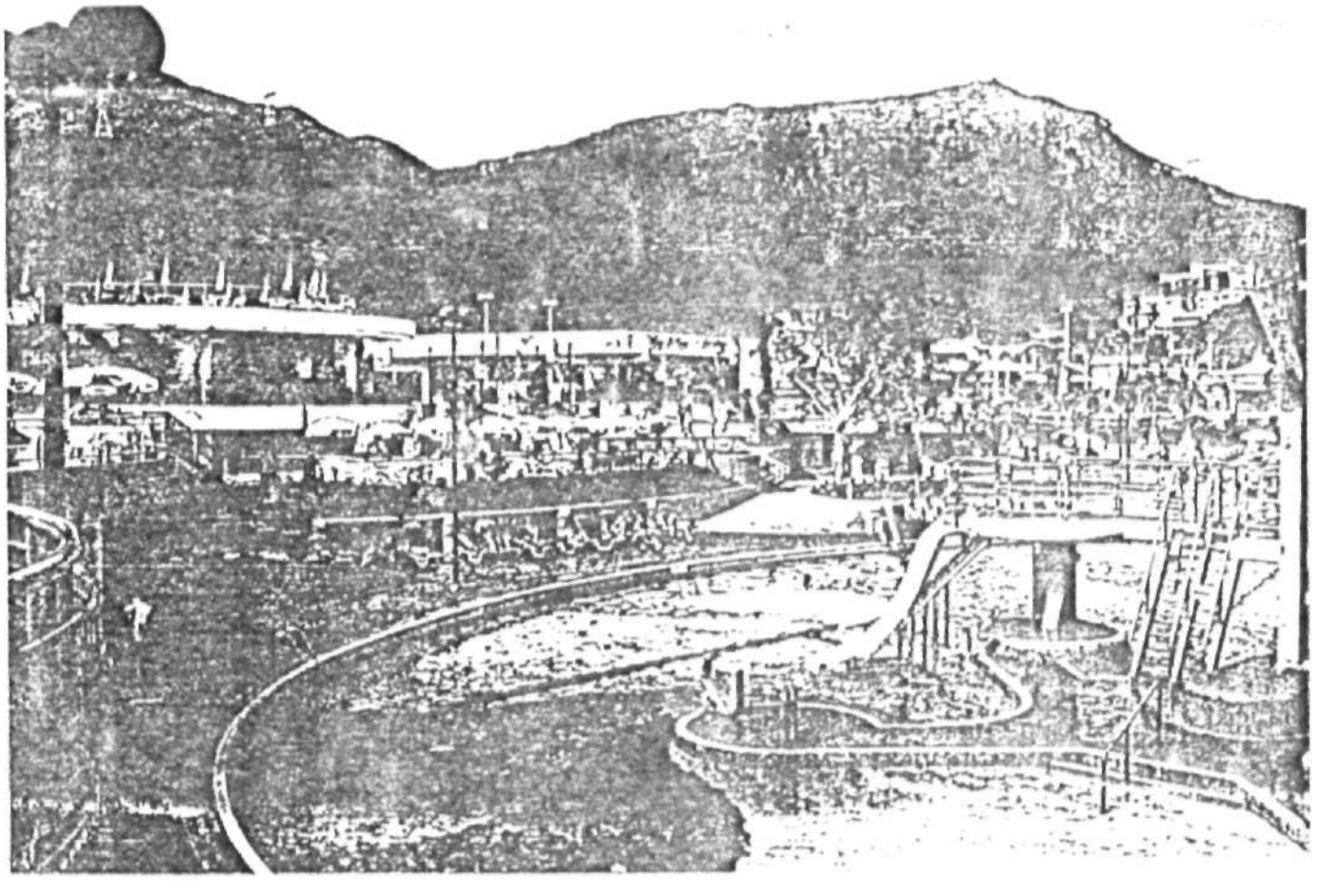


Fig. 5:15 Water Works - Acropolis Rock and Terraces

Source - Wilson A. - Aquitecture.

with Astra Turf used for relaxation areas. The park is planned for six thousand persons per day with an optimum capacity of two thousand five hundred.

Merits

1. Circulation spaces and patterns are properly articulated right from the entrance point all through the complex and around the features.
2. Ground surfaces are non-slip, ensuring safety around water facilities.
3. Use of color suggests recreation activity.
4. Organic architecture is efficiently articulated with site characteristics.

Demerits

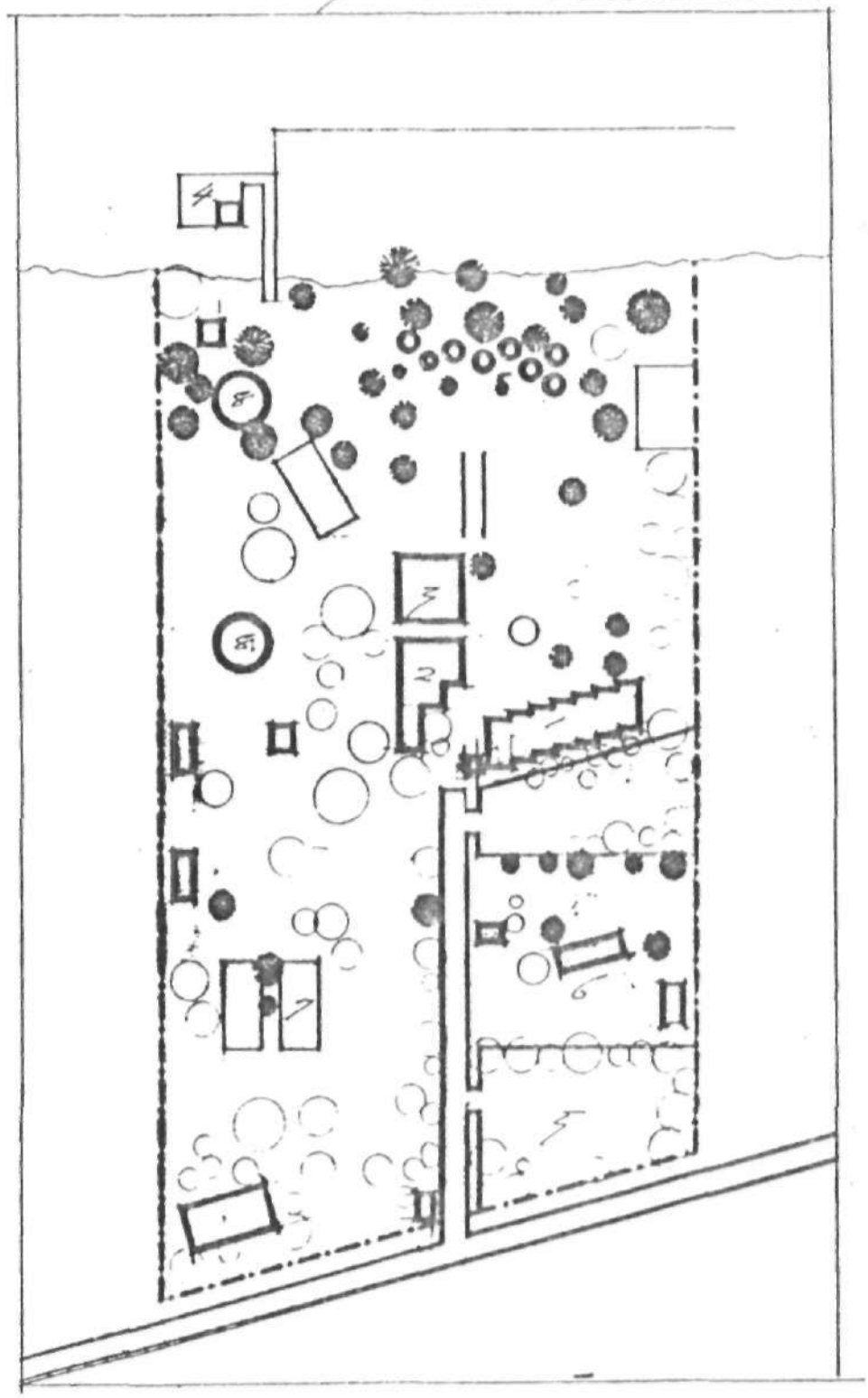
1. Most equipments are mechanically or electrically dependent.
2. Running costs are due to be high.

5.4 WHISPERING PALMS - LAGOS

Located at Iworo in the Badagry Local Government of Lagos State along the Lagos Lagoon, Whispering palms offers a beautiful natural setting with provisions for accommodation, group meetings, sports and leisure, health recuperation, relaxation, restaurant and bar facility, children play area and a body workshop (Fig-5.16).

A seminar room which seats thirty people comfortably, equipped with audio visual equipment make Whispering palms suitable for small meetings. Whispering palms' spacious open dining pavilion can accommodate at least a hundred persons in comfort. Added to this is a bar facility and a barbecue stand. There are sporting facilities for everyone ranging from lagoon

Fig. 5:16 Whispering Palms - Site Plan showing Total Composition of Environment.



KEY

1) Accomodation
2) Central service core
3) Dining Pavilion
4) Floating Restaurant
5) Parking
6) Children's Playground
7) Lawn Tennis Courts
8) Beach pavilions

Source - Ashley-Foyo.

boating, minigolf, lawn tennis, table tennis and handball to dart games and other indoor games. There is also a play area specially designed and equipped for kids.

Whispering palms is endowed with the elements of nature which promote good health; fresh air of the south - west trade winds of the Atlantic, a beautiful and sedate scenery, sunshine, lovely gardens, colorful butterflies, chirping birds and the soothing whispering palms. The serene atmosphere and natural African setting could be specially suited for purposes of recreation and recuperation (Figs- 5.17 to 5.30).

Being owned by a single individual, development is on a small scale and in gradual phases starting from the year 1986. This makes for difficulty in the overall planning as facilities are scattered in just the next convenient location. Architecture covers a conflicting wide range from traditional structures to modern structures.

Merits

1. Traditional architecture and use of organic based materials create a natural African setting.
2. Simple and cost effective construction and engineering techniques employed.
3. Natural landscape is retained and carefully sculpted to create enclosure, shelter, setting, contrast and amenity.
4. Ingenious use of automobile tyres to prevent the backwash of sand along the shore.
5. Management and construction costs kept at a minimum.

Demerits

1. Location of scheme out of proper catchment area.
2. Development is sporadic and lacks unified planning scheme.

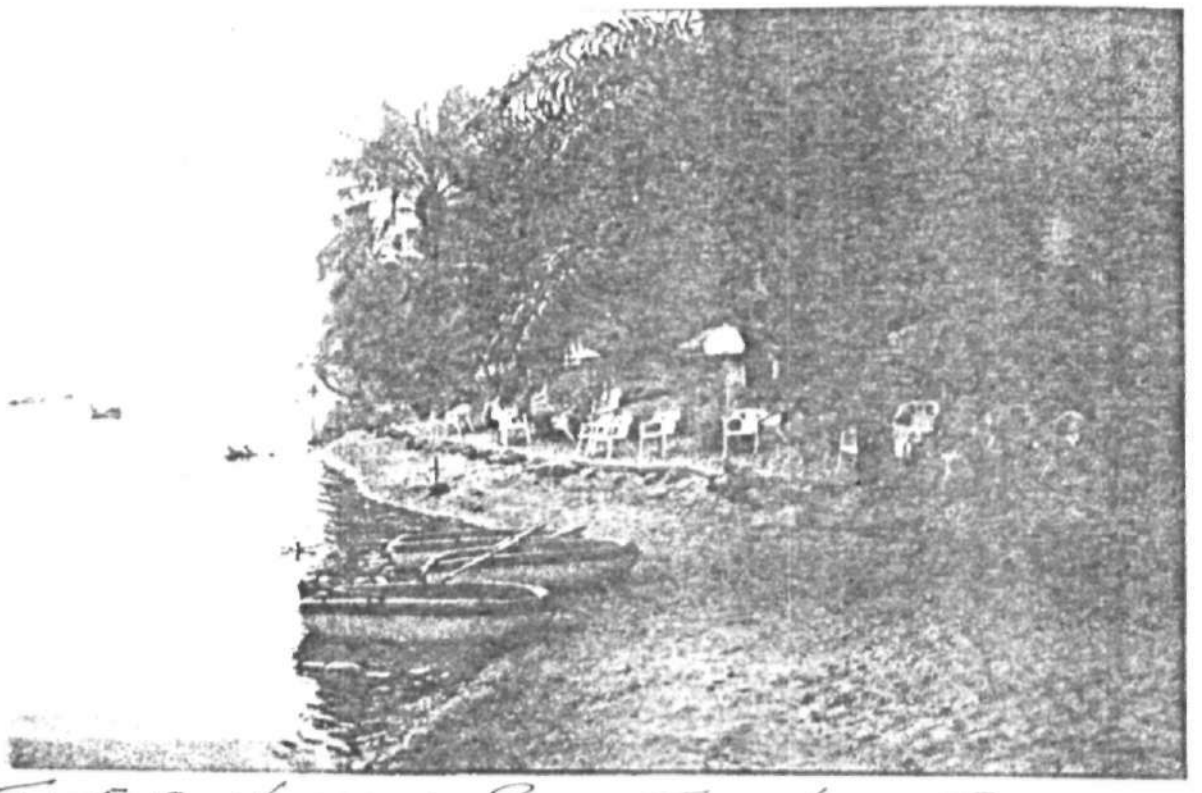


Fig: 5:19 Vuniyerina Palms - The Lagoon Front with Rowing Provision

Source - Author-Fiji

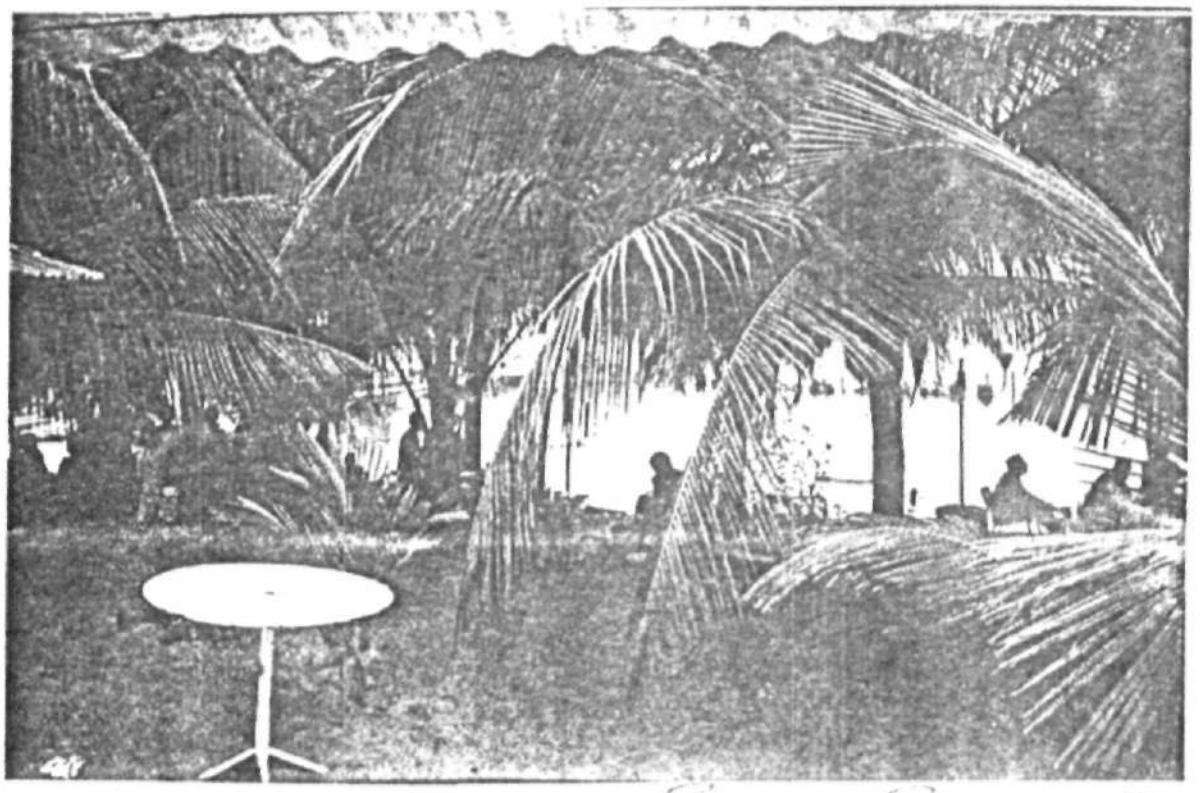


Fig. 5:20 Vuniyerina Palms - Provision for Picnics at Lagoon Front

Source - Author-Fiji



Fig. 5:21 "Whispering Palms - Central Service Unit
Source - Ashley-Pryce D.

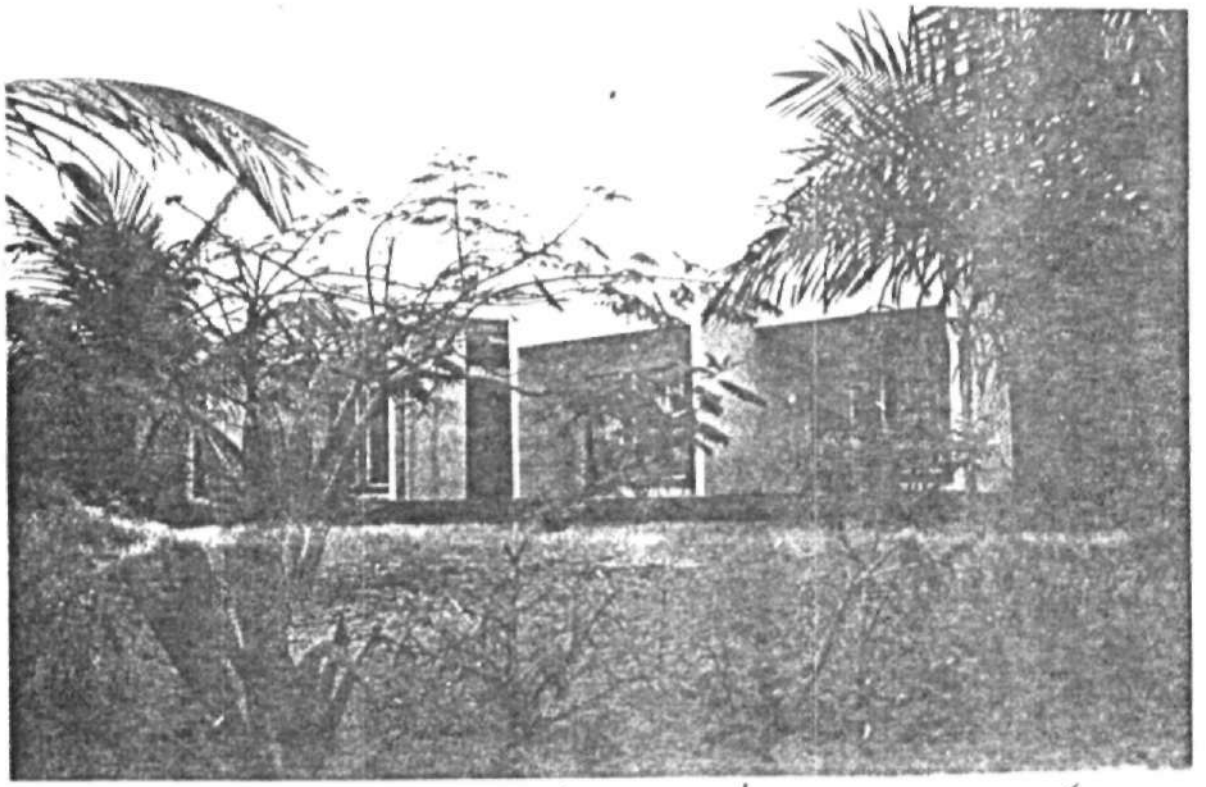


Fig. 5:22 Whispering Palms - Accommodation Units
Source - Ashley-Pryce D.

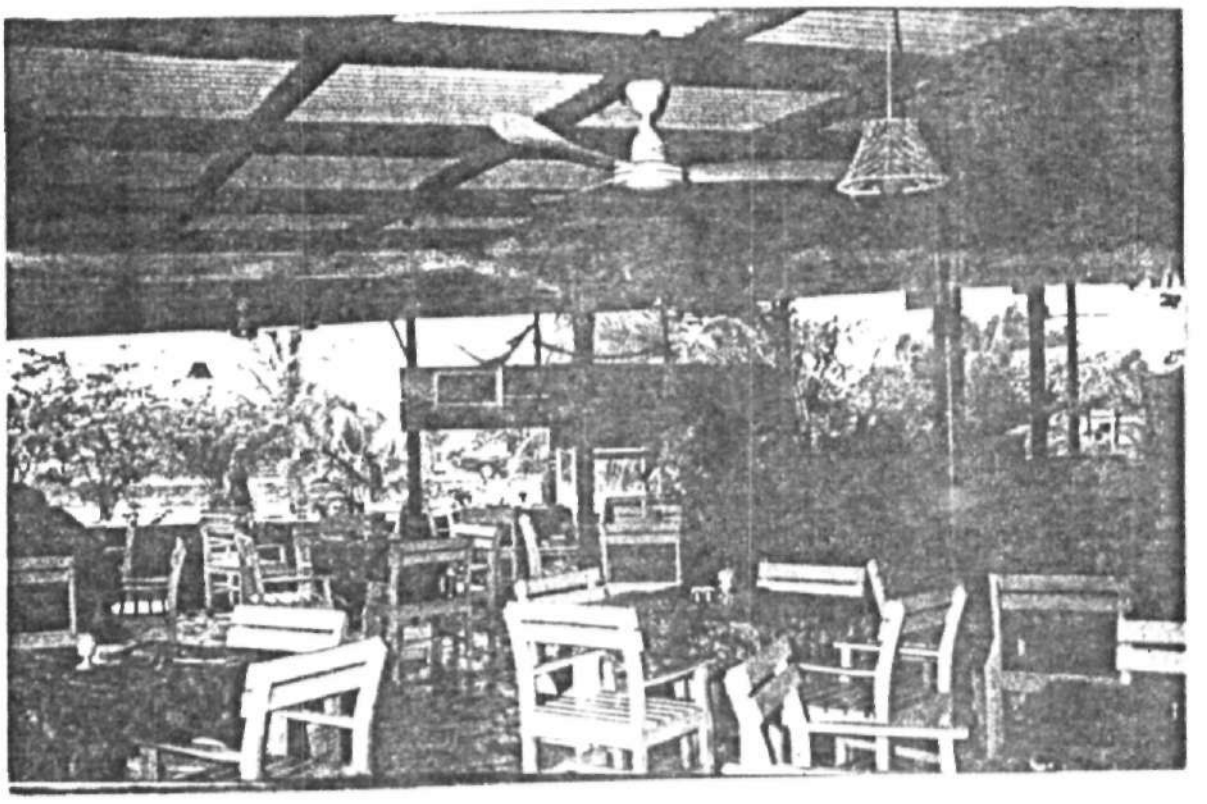


Fig. 5:23 Whispering Palms - Main Outdoor Dining with 100 Guest Capacity
Source - Kelley-Viejo D.



Fig. 5:24 Whispering Palms - Other Outdoor Group Sitting Pavilion
Source - Kelley-Viejo D.



Fig. 5.25 - Whispering Palms - The Mess Lounge
Source - Ashby-Tejada

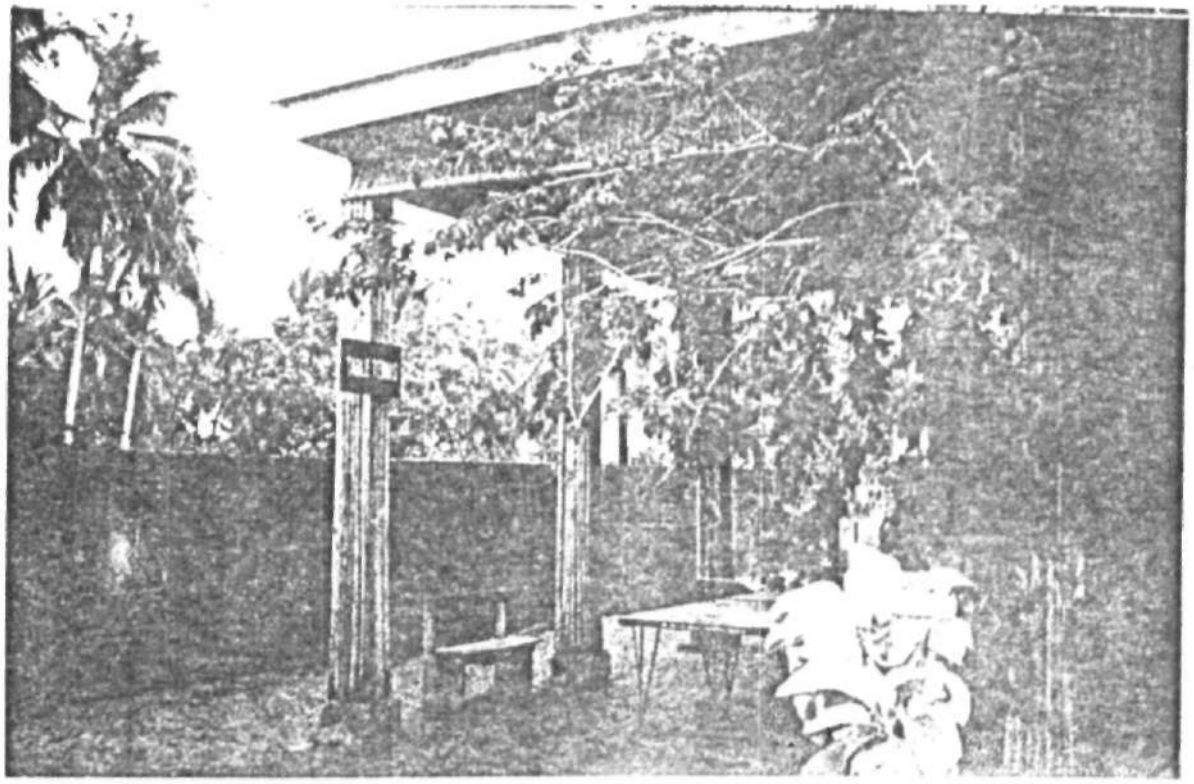


Fig. 5.26 Whispering Palms - The Table Tennis Pavilion
Source - Ashby-Tejada



Fig. 5:27 Whispering Palms - Informal Outdoor Volley Ball

Source - Ashley - Fiji D.

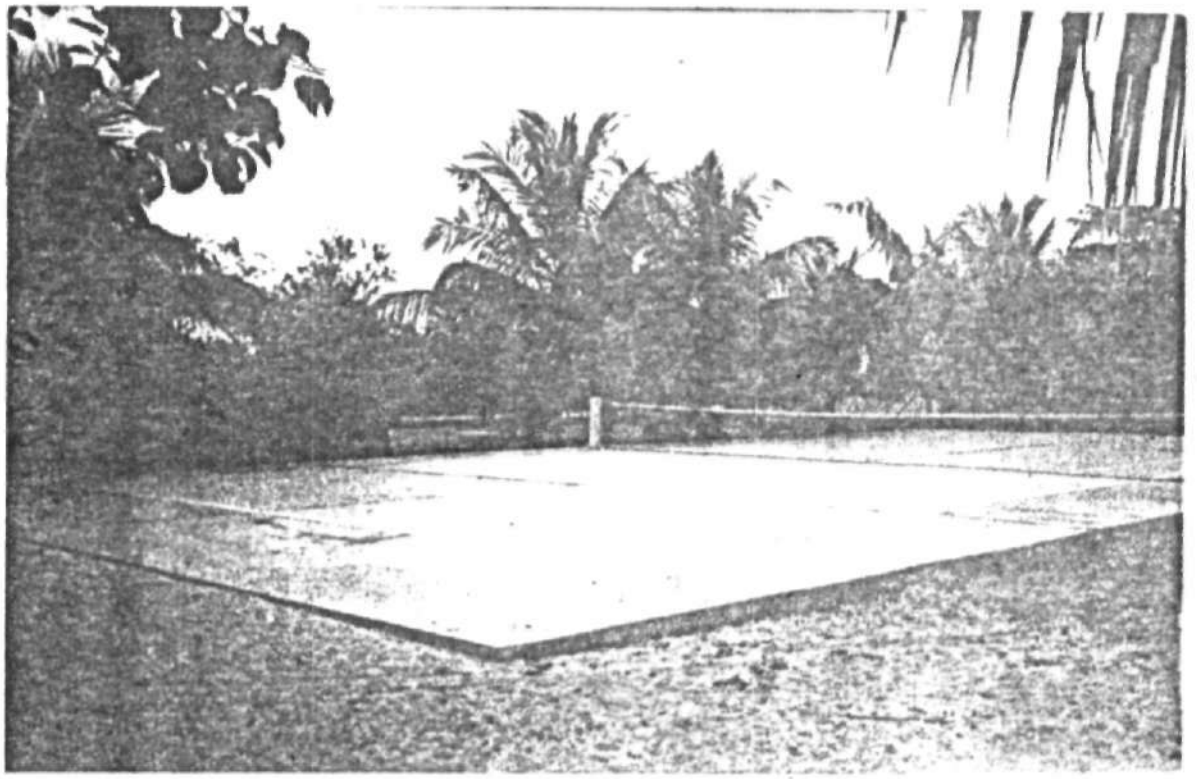


Fig. 5:28 Whispering Palms - Hard Packed Lawn Tennis Courts

Source - Ashley - Fiji D.

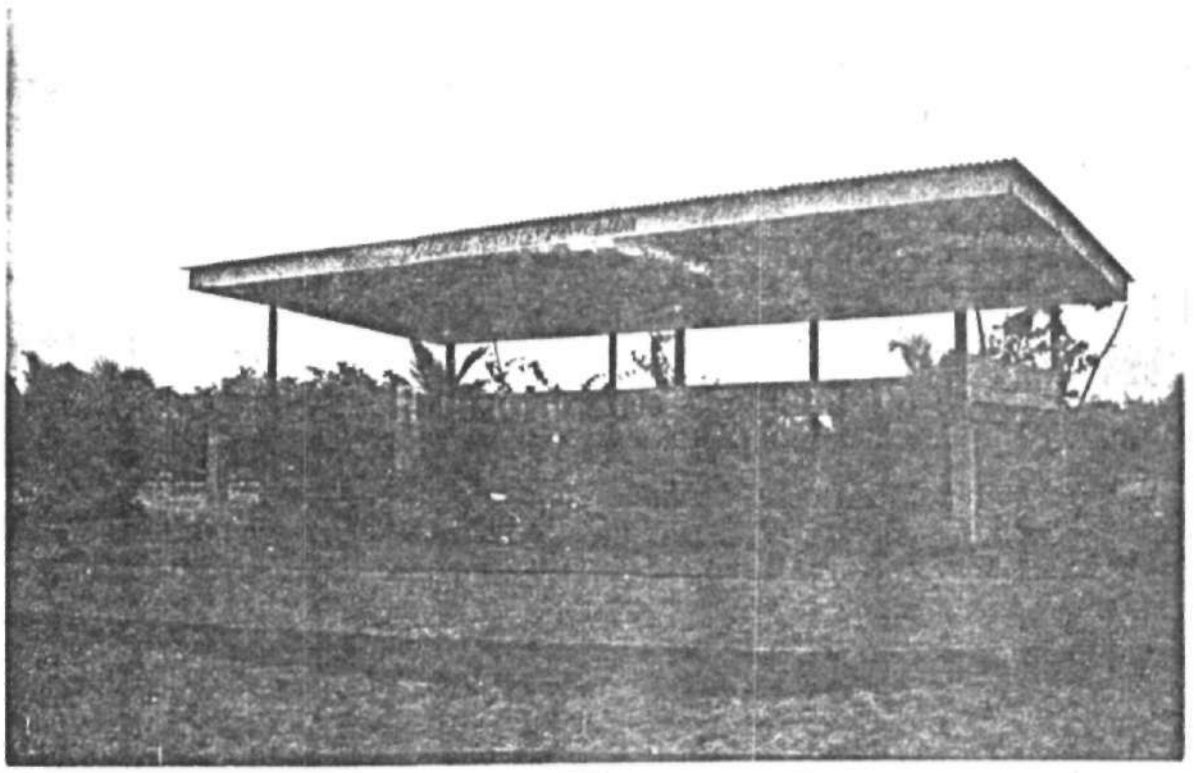


Fig: 5: 29 - Whispering Palms - Previous Pergola Pavillion

Source - Ashley-Fiji D.

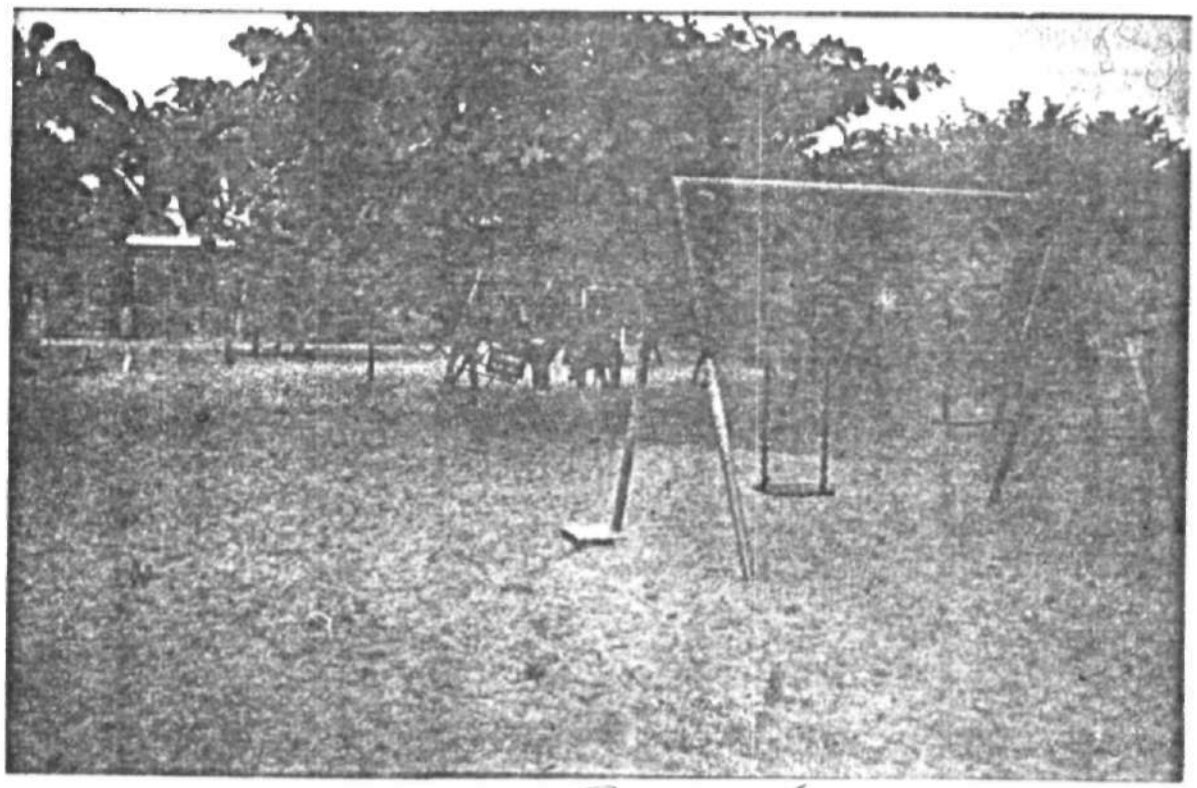


Fig: 5: 30 Whispering Palms - Swimming Pool Area

Source - Ashley - Fiji D.

3. Ecclectism of architectural styles defy visual harmony.

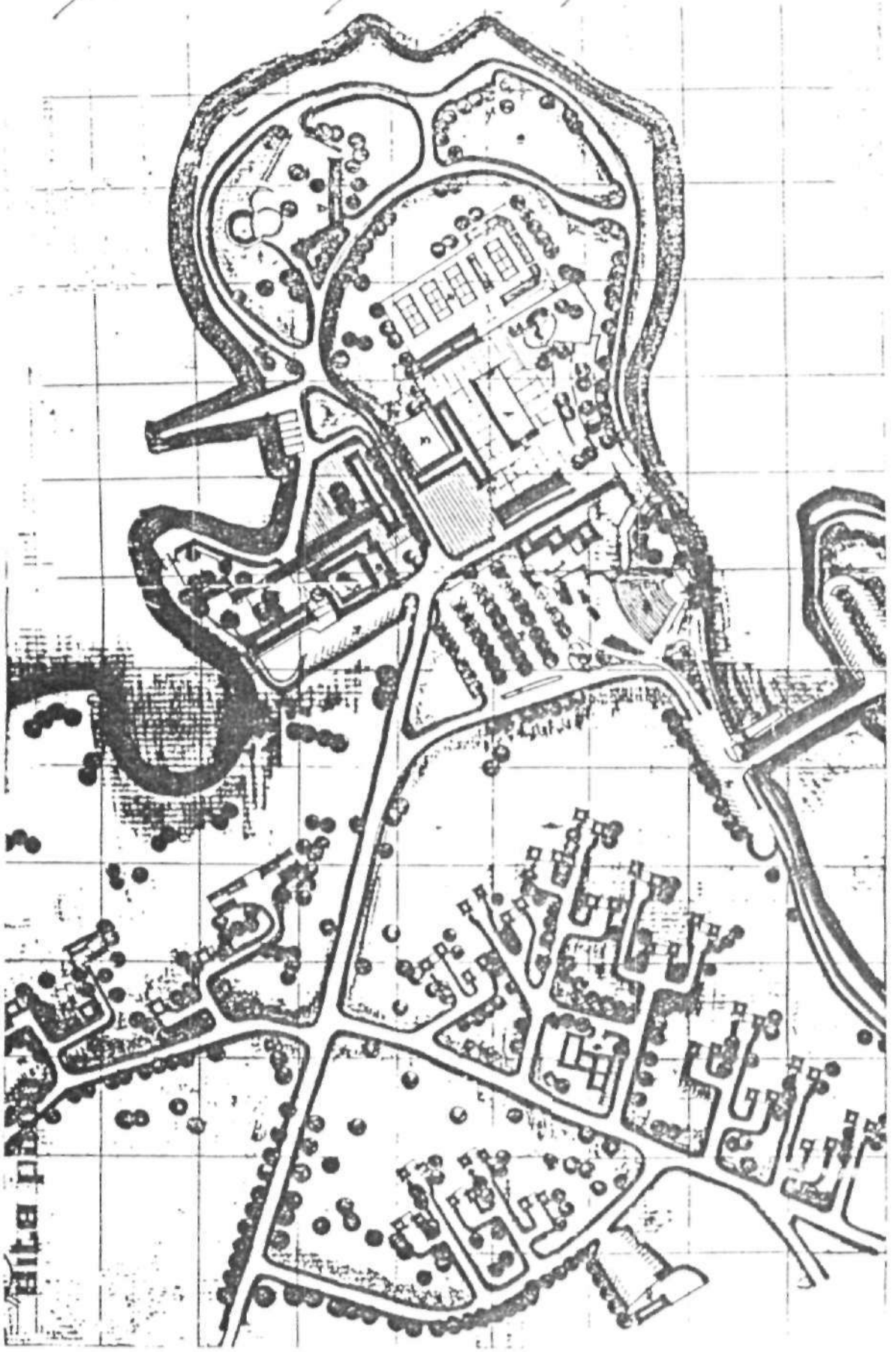
5.5 BAGAUDA LAKE RESORT - KANO

Bagauda lake resort is located some 65km west of Kano on the route to Zaria. The journey being an approximate forty five minute drive from Kano. This resort has beautiful grounds extending over 130 acres of land facing the Bagauda man-made lake. The dam was primarily constructed for the irrigation of 1500 acres of land for the provision of an average 25 million gallons of water for fishing. This later led to the secondary development of the holiday resort which was undertaken by the Kano State Ministry of Works. The project was completed in the year 1970 and commissioned in 1971 (Figs-5.31 to 5.33).

Facilities provided here include accommodation, restaurant and bar, a banquet hall a nite club, shop and bank. Also included are public function facilities such as an open air theater and a conference hall. Sporting facilities include a jetty which suggests a boating facility, a swimming pool and lawn tennis courts.

Accommodation is made up of fifty double chalets and fifty single chalets each with accommodation for four persons and four luxury suites all scattered over the large expanse. The restaurants and bar accommodate a hundred quests comfortably with no real specialized location. The banquet hall is located adjacent to the pool and doubles as a multipurpose hall. The nightclub is basically a discotheque with a bar service but no band stand. It has an estimated capacity of 250 persons. The open air theater is designed for a full capacity of 500 persons with a minimum of 0.8sqm per person. The conference hall called

Fig. 5.7 Bagauda Lake Report - Site Plan
Source -- Kano State Ministry of Works.



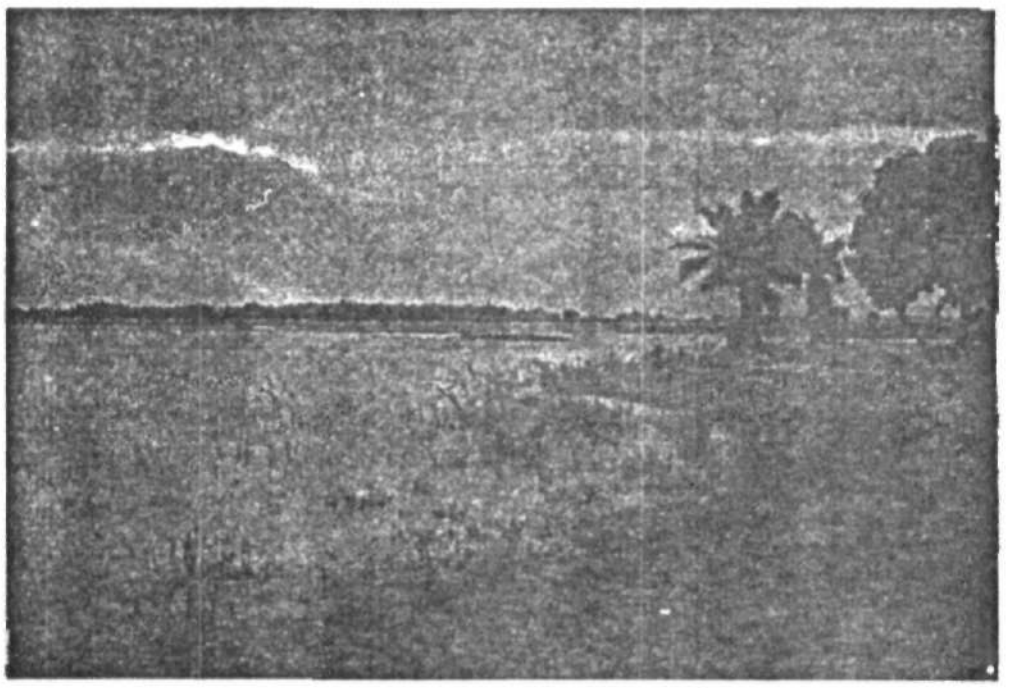


FIG. F:32 BAGAUDA LAKE RESORT - THE LAKE FRONT
SOURCE - ASHLEY-FEJO D.

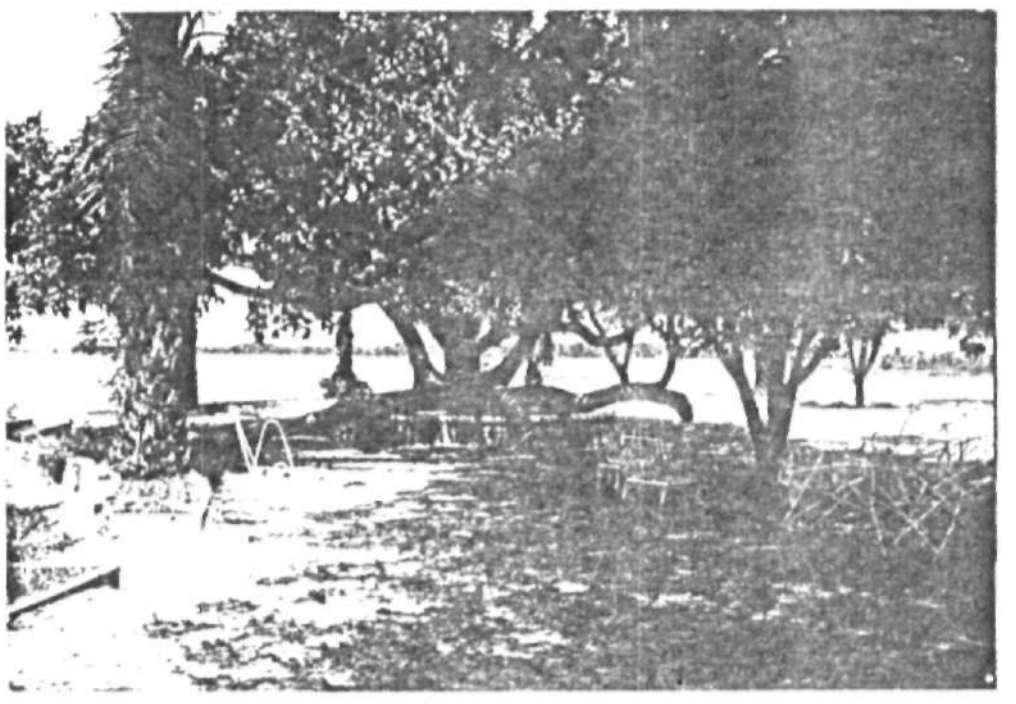


FIG F:33 BAGAUDA LAKE RESORT - THE TROPICAL
GARDEN WITH A SWIMMING POOL
SOURCE - ASHLEY-FEJO D.

the T-Chad hall has a capacity of 250 persons and is fully equipped with audio visual facilities. The jetty provides a suggestion of a boating facility which has so far been left unutilized. The swimming pool is to olympic standards and has provisions for changing rooms and lockers, terrace for sun bathing, a snack bar and a life guards post (Figs- 5.34 to 5.42).

Merits

1. Orientation of structures in conformity with climatic precautions.
2. Sporadic incidents of proper attention to landscape in design with the use of such landscape elements as fountains, lighting and planting.

Demerits

1. Planning is sparse and is centered around a lack of conception as an integrated environment.
2. Development lacks cohesive impulse as a facility taking advantage of the lake.
3. Lack of a central focal point, embarkation point and public interaction concourse.
4. Structures lack unity because there is no defined character. Architectural units do not appear to have been simultaneously conceived.
5. Rooms lack visual privacy due to poor portioning system.

5.6 CONCLUSIONS

The water resorts and fun parks are a product of water handling machinery. They are popular; combining non competitive water based activities in a protected and non-polluted water with a sociable leisure occasion. Commercially they depend on

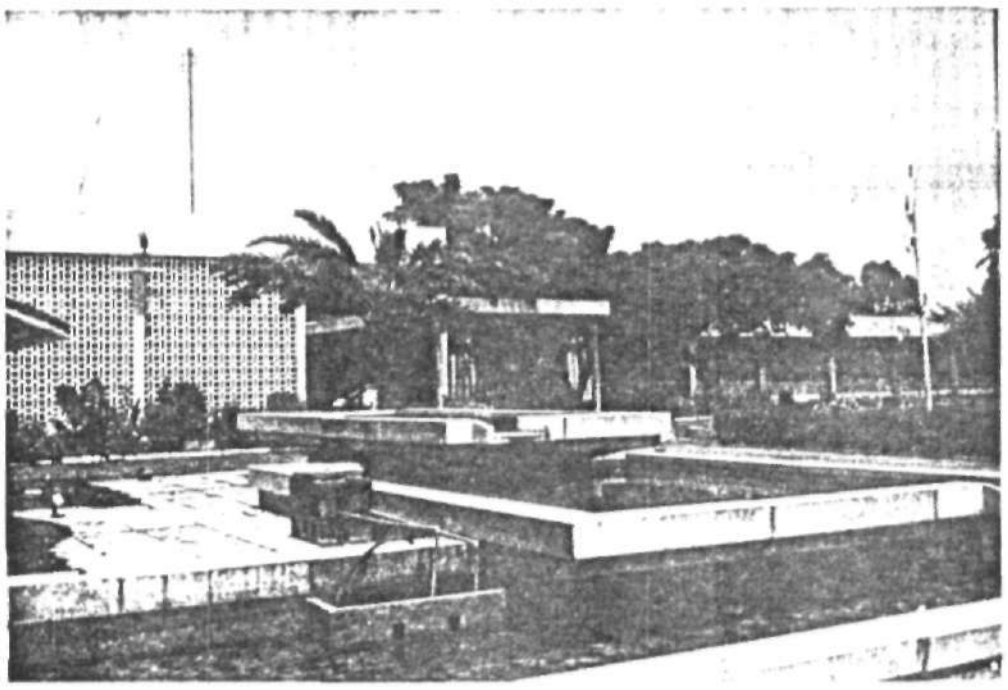


Fig. 5.24 Jagauja Lake Resort - Administrative Block with Fronting Fountain

Source - Ashley-Fejo O.

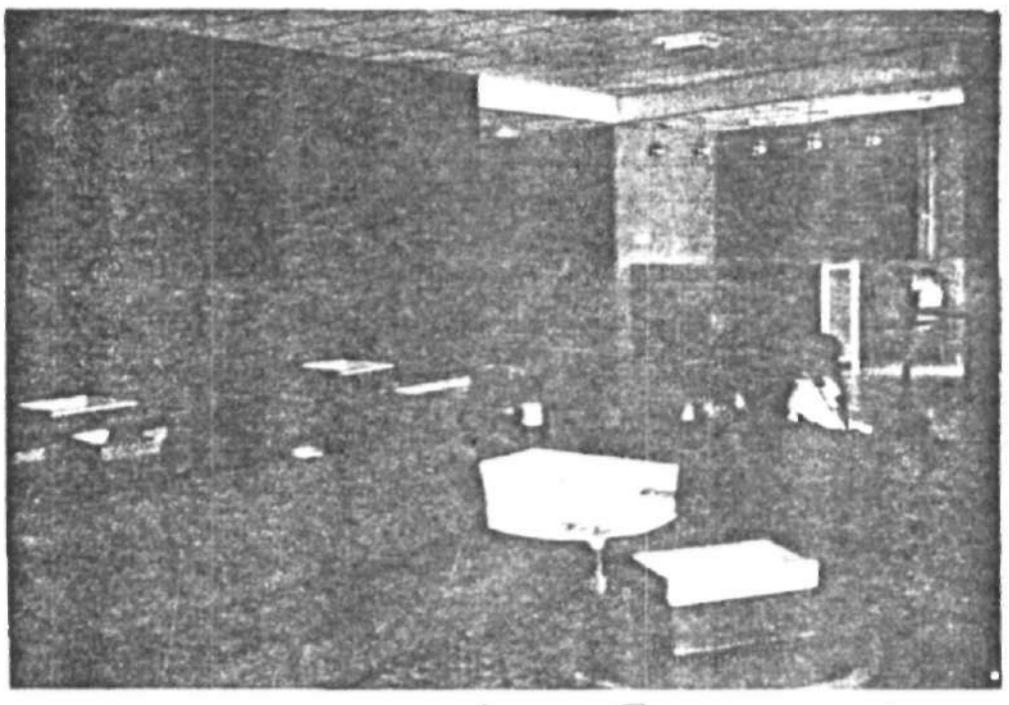


Fig 5.25 - Jagauja Lake Resort - Main Reception Lobby

Source - Ashley-Fejo O.

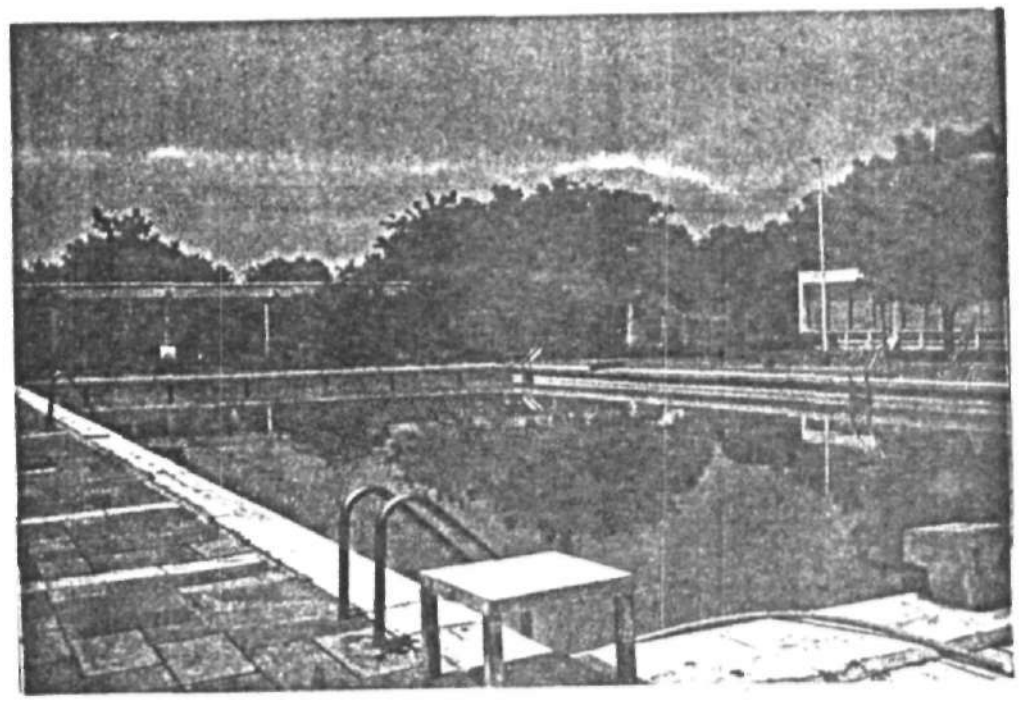


Fig. 5:36 Bhadbhada Lake Resort - Olympic Size Swimming Pool.
Source - Ashlop-Fig 0.

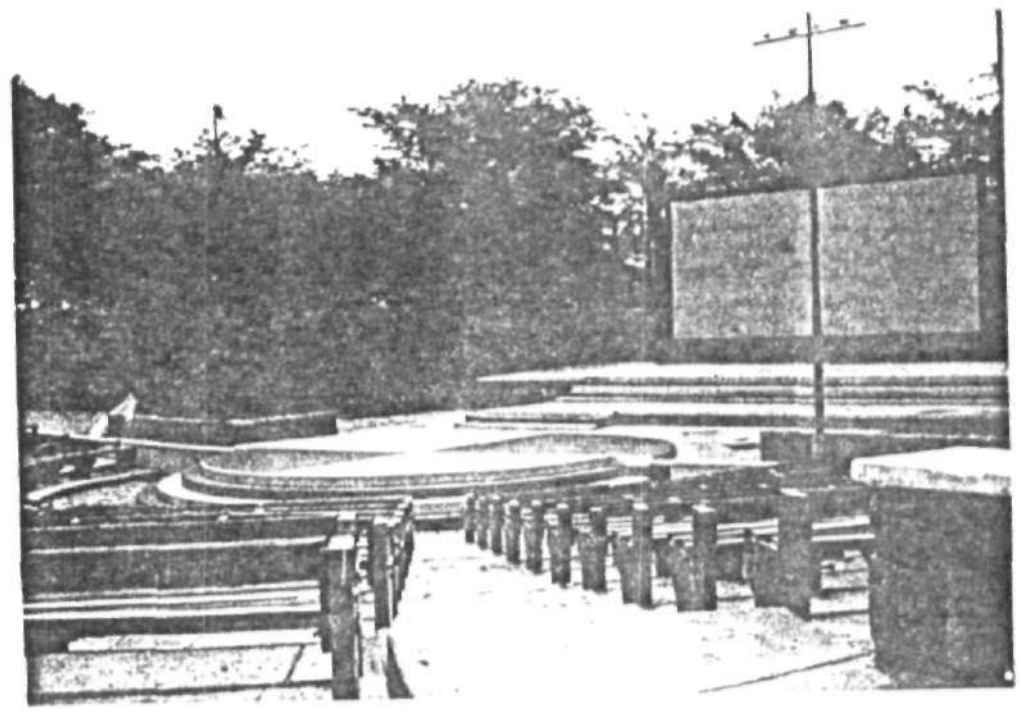


Fig. 5:37 Bhadbhada Lake Resort - Open Amphitheatre for 500
Source - Ashlop-Fig 0.

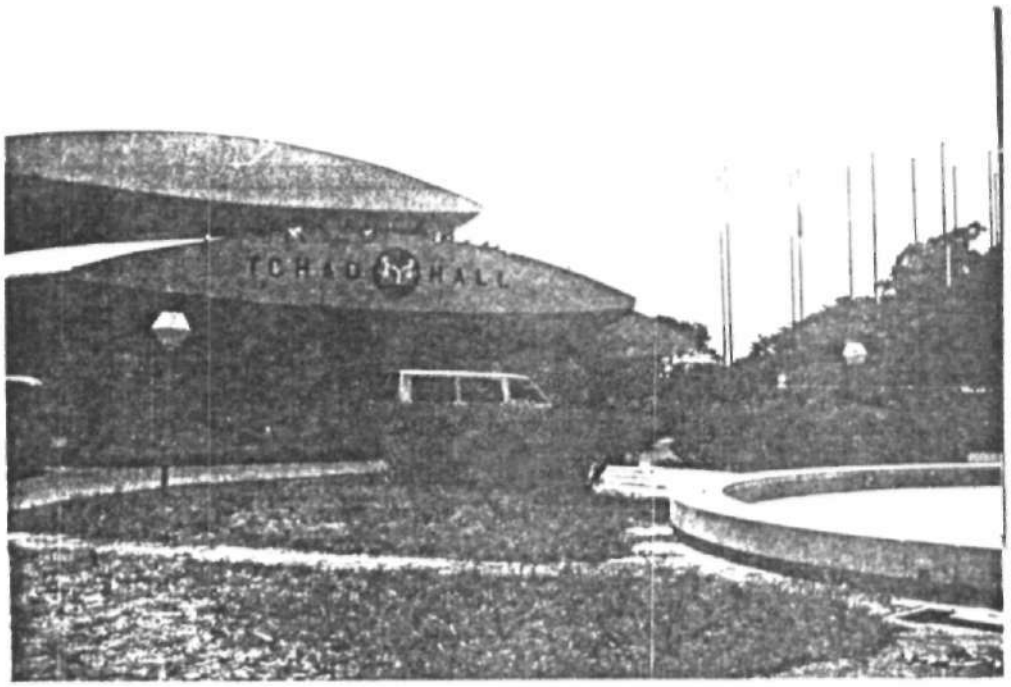


Fig. 5:38 Bagaduya Lake Resort - T. Chad Conference Hall

Source - Ashley-Tejo O.

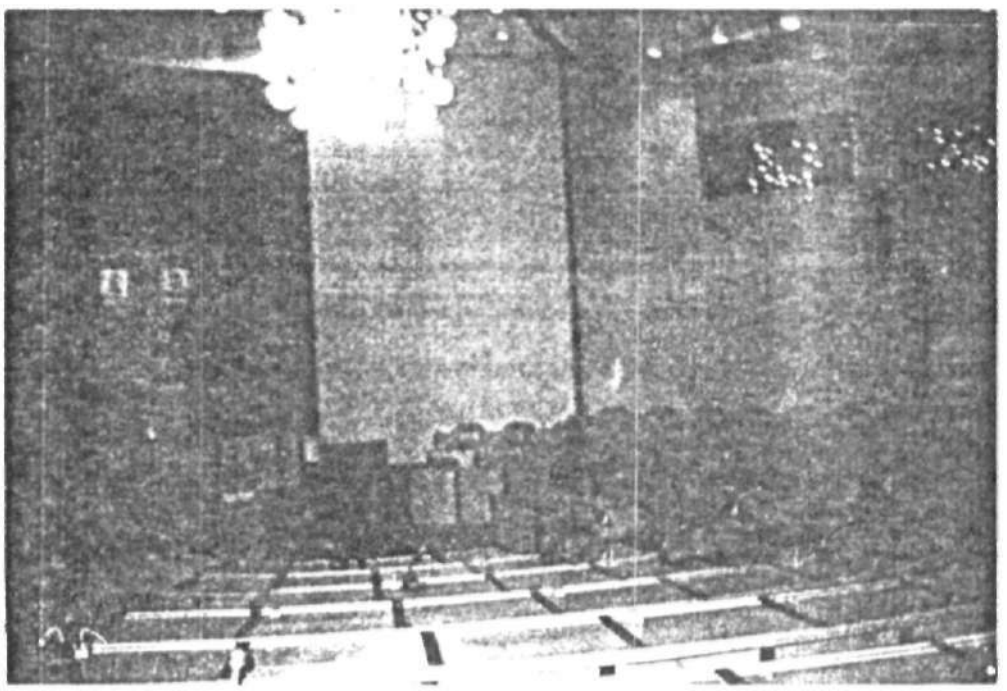
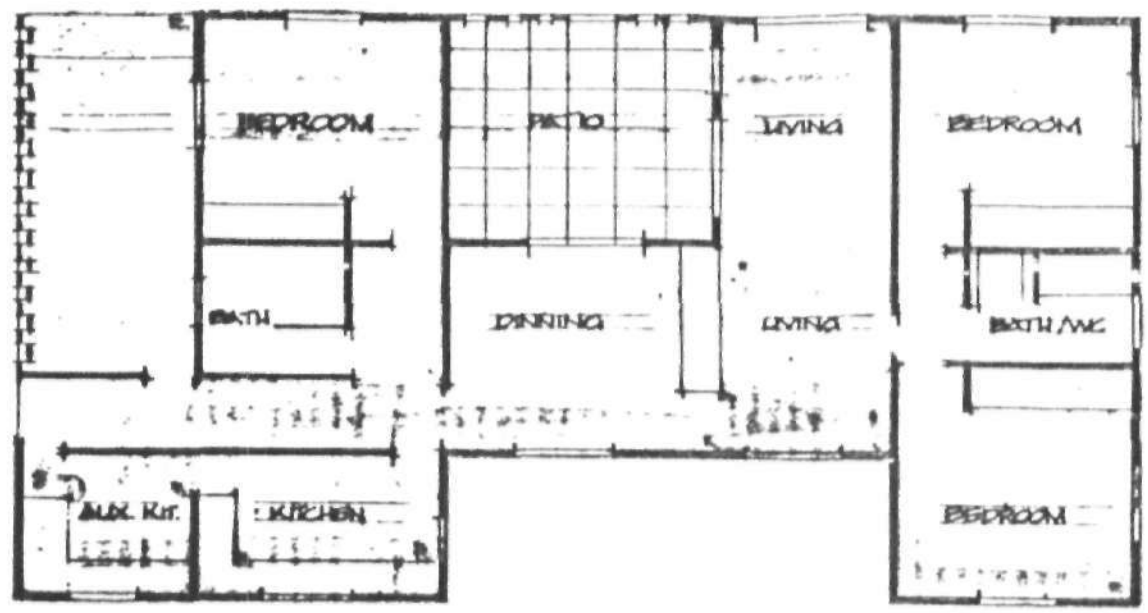
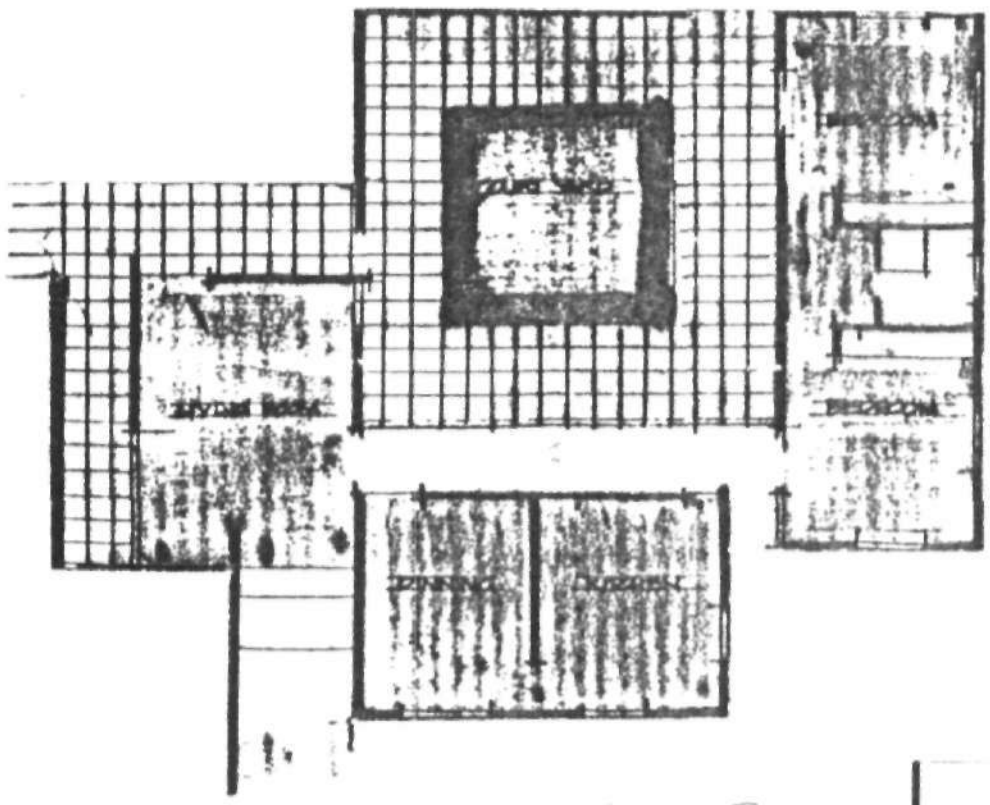


Fig. 5:39 Bagauya Lake Resort Interior of T. Chad Hall - Max. capacity 250.

Source - Ashley-Tejo O.





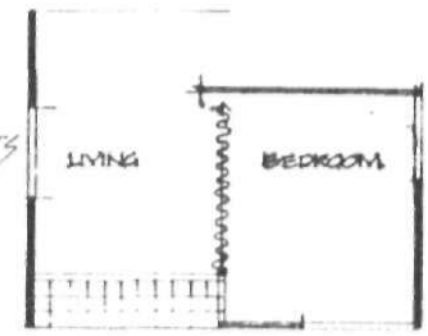


Fig. 5.40. Bagauda Lake Report
Plans of Accommodation Units
Source - Ashley-Jeyo D.

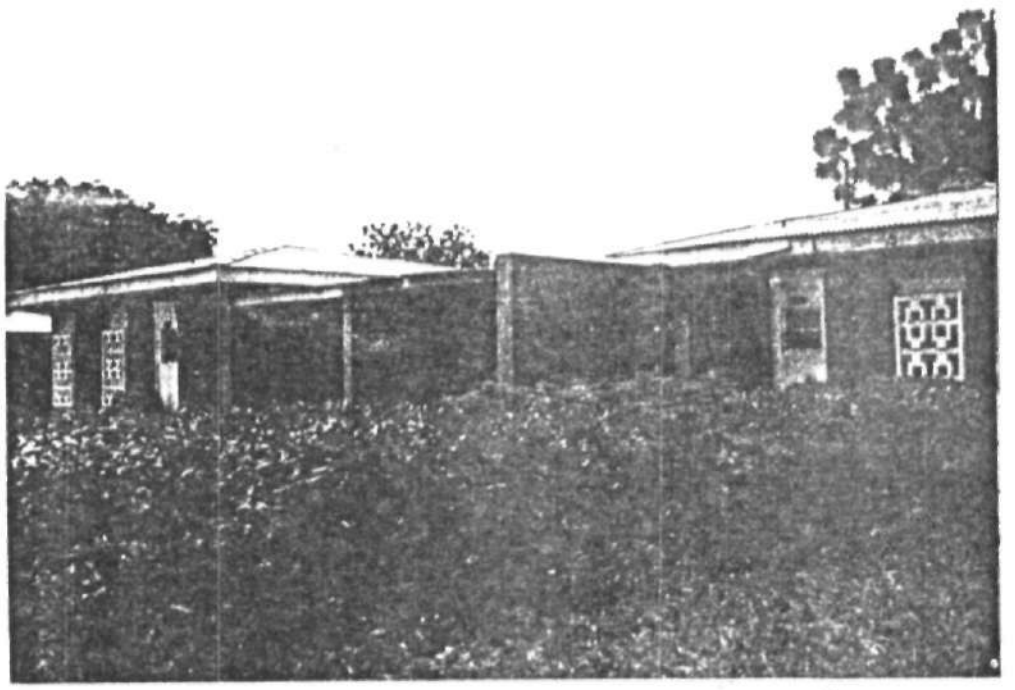


Fig. 5:41 Baganda Lake Resort - Quadruple Double Chalets
Source - Ashley-Pejo D.

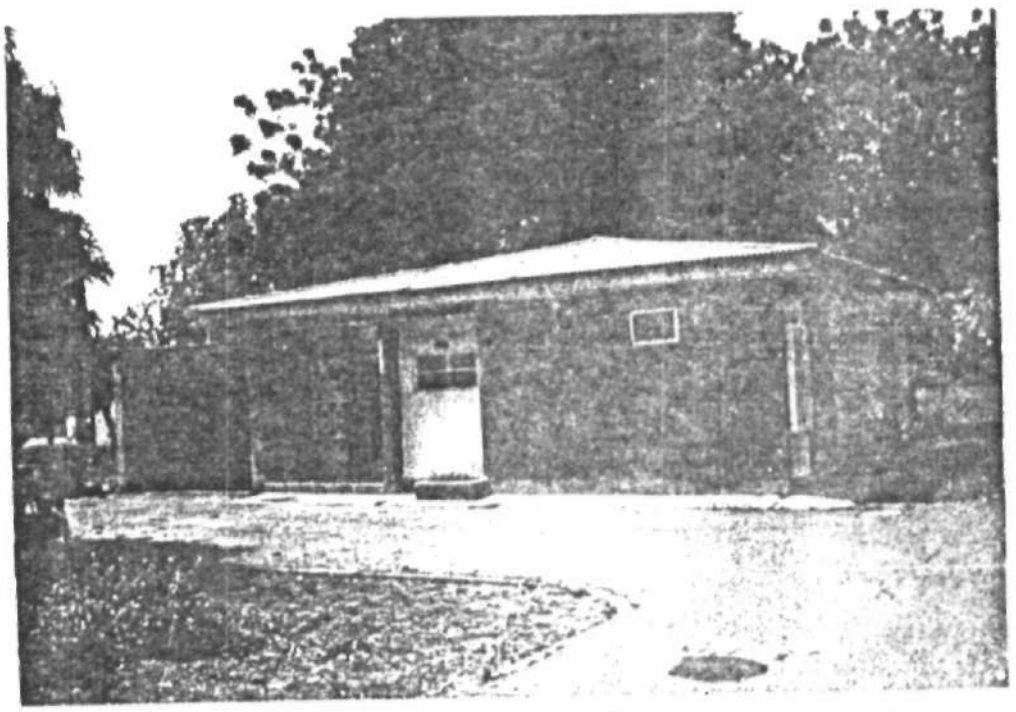


Fig. 5:42 Baganda Lake Resort - Double Chalet
Source - Ashley-Pejo D.

achieving optimum attendance with easy circulation around the features. Architecturally they provide an opportunity for imaginative design to achieve a conducive ambience for leisure activities and fun.

Water resort planning must take into account, the flow of visitors right from the entrance point through the various activity areas with each area having an optimum capacity per hour. A commercial resort should have the ability to gain revenue from food, refreshments, merchandise and rent of rafts and sun beds. Merchandise and food area should be located to gain the maximum benefits of passing traffic. Outdoor parks will however require shading areas, in particular where queuing is involved. Resorts and miniparks that have water features to provide visual satisfaction, physical involvement for the young or congenial atmosphere can humanize the urban environment and can detract from hostile or overpowering surroundings providing for an amenity area consisting of a series of traffic spaces within a cohesive complex of distinct architectural character.

The architecture of the water element cannot only identify the visual and experimental pleasures that water can convey, it can also affirm mans custodial role. This value that is placed on the waterfront, water feature, water resort, water park or natural water course is an index of continuing human enlightenment and integrity.

Beachfront Plaza

Tarqua Bay

CHAPTER.6
DESIGN PRINCIPLES



CHAPTER SIX

DESIGN PRINCIPLES

6.1 DESIGN APPROACH

The fundamental of a good design are common to all projects and usually involve relating the form to its purpose which is a fairly accurate definition of function. However, each project requires a different design approach stemming from unique site conditions which prevail and a study of the singular and unique problems. The principal divisions affecting the design approach include those of cost, location and range of facilities - these aspects being to some extent dependent upon each other. Flamboyant concepts should be precluded from a modest budget.

The design approach must be strongly related to the local environment. The design should thus be molded to the setting and by choosing natural materials, allowing an organic form to grow naturally from the landscape as a tree grows from the earth. The design functionally and aesthetically should grow from the considerations of context and surroundings but would also need to take into account the needs of the public. This could be difficult as any pre-conceived ideas may need to be re-assessed.

Charts present a logical approach in providing for recreational facilities that could be used almost without alteration as models for most projects, as a valuable part of the site selection process and as guides towards the final design (Figs- 6.1 and 6.2).

6.2 PRE-DESIGN

The point is now reached where the professional expertise of the architect, engineer and others is concentrated on

obtaining necessary information rather than determining on unalterable plan for the development of the design and physical development. Individual problems likely to be encountered in the design process and physical development of the project are sought out and tackled with the aid of an all encompassing checklist which could be used for most recreational schemes as outlined -

6.2.1 OUTLINE PROPOSALS

- Collate survey material, data studies and all information relating to site, setting context and environment.
- Determine principal elements in broad outline.
- Formulate design program

6.2.2 SITE SELECTION

- On the basis of legal work, planning considerations engineering considerations, etc. decide on site to be used for project.

6.2.3 EVALUATION

- Produce outline zoning plan by relating information from site appraisal to land use functions and user requirements.
- Relate the framework of the plan to the anatomy of the surrounding environment.

6.2.4 ASSETS AND LIABILITIES

- Establish which site elements are assets to be kept and which are liabilities to be dealt with.

6.2.5 DESIGN POTENTIAL

- Evaluate design potential of the site and its application to the proposed development.
- Prepare in outline the alterative design approaches.

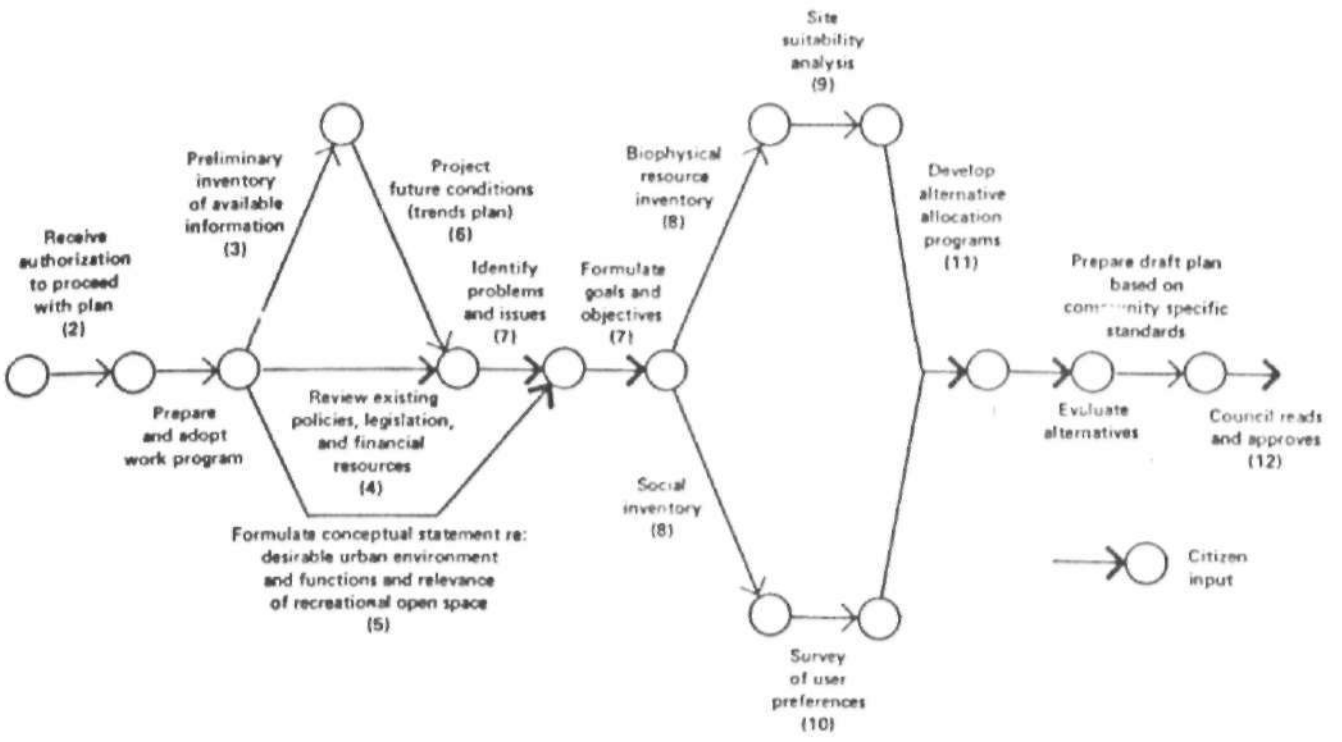


Fig: 6.1 Planning Process at System Level
Source- Gold S.M.- Recreation Planning and Design

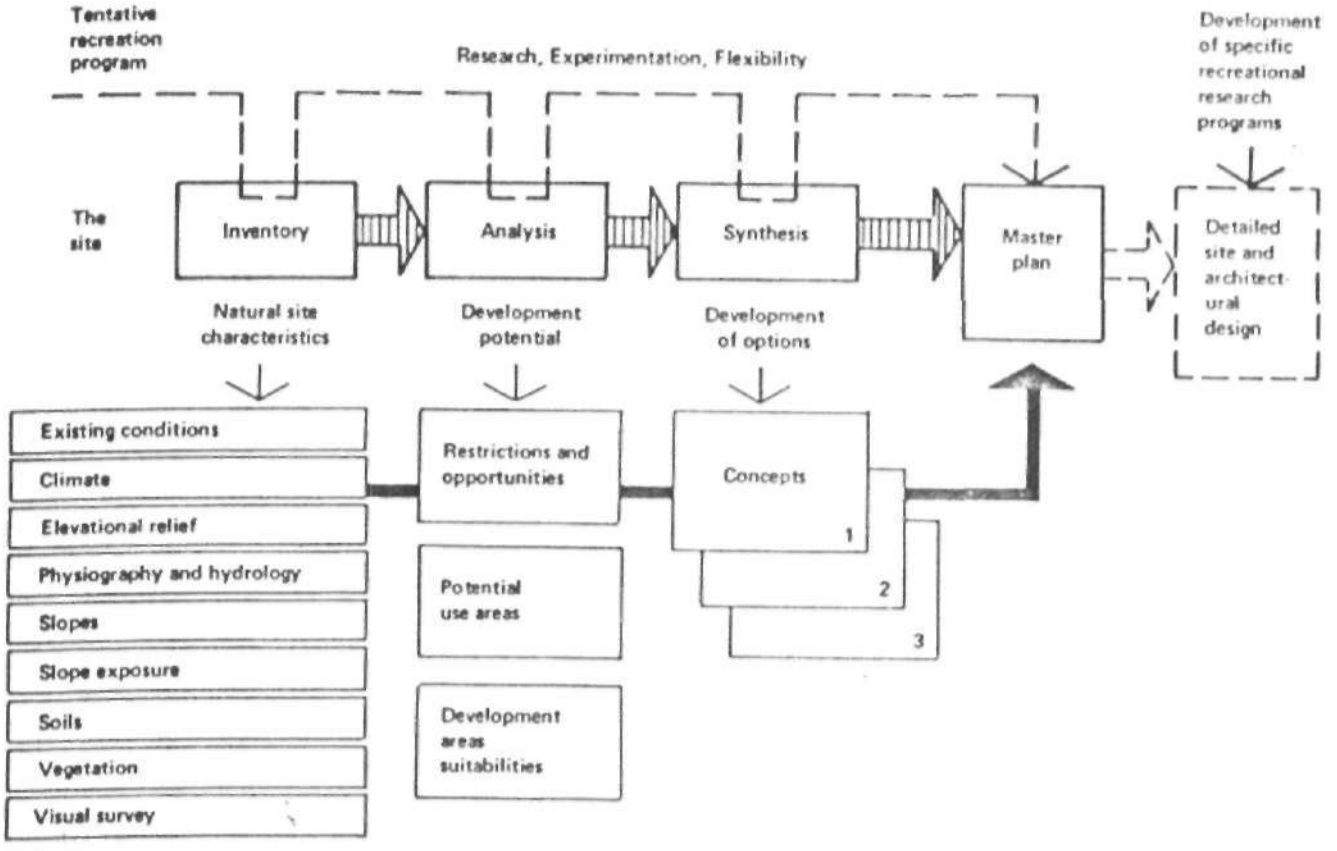


Fig. 6.2 Design Process at Site Level
Source - Gold S.M.- Recreation Planning and Design.

- Classify the factors and needs governing the location of principal elements.
- Review alternative design drafts and prepare guidelines for final selection.

6.2.6 CONTEXT AND SETTING

- Collate all environmental information on the area
- Continually review the outline proposals against background of local setting and consider orientation aspect and prospect.
- Review distant, medium and close up views at the site and from the site (both land and water). Consider night views, silhouette and lighting proposals.

6.3 SITE PLANING

To achieve a balanced spatial organization of all design elements, a detailed site planning process need be undertaken with the following in place (Fig-6.2).

6.3.1 COMMUNICATIONS

- Apply user requirement data to appraisal conclusions to produce communication pattern linking areas on the zoning plan.

6.3.2 ACCESS

- Ensure that layout meets requirements for deliveries and removal, ambulance service, refuse collection, etc.

6.3.3 CHECKS

- Check zone relationships and validity of circulation
- Relate zoning and circulation to the outline building proposals to ensure unity of internal and external flow patterns.

6.3.4 ENVIRONMENT

- Study likely effects of noise, visual aspects, effects on wildlife, coastal equilibrium, micro-climate, etc.
- Adjust proposals to mitigate adverse effects.

6.3.5 RESEARCH BACKGROUND

- Keep abreast of research work, engineering and hydraulic studies, micro-climatic data, e.t.c
- Tailor design to embody such evidence.

6.3.6 MASTER PLAN

- Prepare draft master plan on the basis of the preferred alternative.
- Include in broad terms, planning criteria, access roads, environmental acceptability, basic services, bye laws, fire precautions and day lighting.

6.3.7 STATUTORY APPROVALS

- Check practicalities of design concept with experienced specialists and intended clientele.
- Submit concepts for outline planning approval.

6.4 SCHEME DESIGN

On completion of site planning and concept proposals, a scheme design can now be embarked upon. The design should be constantly updated until satisfactory solutions are achieved. Taking care to inculcate the following.

6.4.1 COMPONENTS

- Ensure that the elements included within outline master plan include all initial requirements.
- Anticipate future needs and expansion opportunities.

6.4.2 LAND TO WATER RATIO

- Ensure that the apportionment system from an allocation according to user requirement and control the physical and aesthetic manner in which this is handled. Fig. 6.3 shows a typical allocation of principal spaces - on land and water as percentages.
- Compile planning, design and environmental context material in preparation for possible public enquiry.

6.5 CREATION OF SPACES

This deals with the manipulations of various configurations of form to define a solitary field or volume of space and how their patterns of solids and voids affect the visual qualities of the defined space. Few buildings, however, consist of solitary space. They are normally composed of a number of spaces that are related to one another by function, proximity, or a circulation path.

6.5.1 MASSES AND VOIDS

- Consider siting of individual buildings and engineering structures in relation to existing topography, contours, vegetation, coastal or river profile, drainage pattern, e.t.c.
- Site groups of buildings in relation to each other to define external spaces, create vistas and close views, avoid wind tunnels, avoid turbulent sailing conditions and dangerous harbor entrances.

6.5.2 VISUAL LINKING

- Consider linking of certain spaces vistas and views.
- Evolve these from pedestrian circulation.

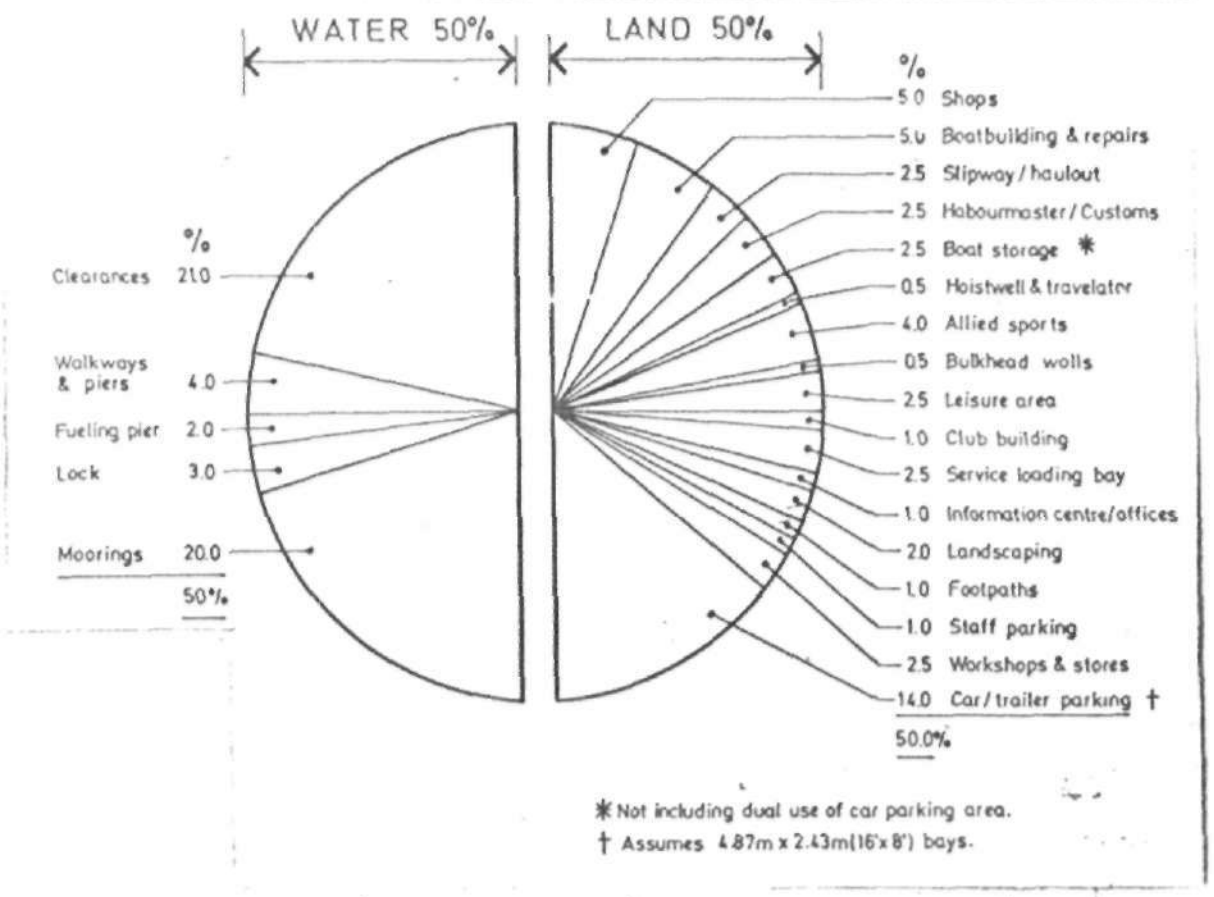


Fig 6.3 A Typical Allocation of On and Off Shore Space Assuming a 50:50 Land-to-Water Split

Source - Adie D. W. - Marinas: A Working Guide to their Development and Design.

- Other spaces to be visually or physically separated: consider privacy, surprise and concealment.

6.5.3 EXPOSURE/ENCLOSURE

- Need: Physical boundary, legal boundary, privacy, security, control, demarcation, wind, shelter, shade.
- Degree: Complete, partial or slight enclosure.
- Permanency: Fixed, temporary, moveable.
- Character: Insuperable, domestic, gouge,slated psychological.
- Construction: Walls, Pence, mounds, planting,building.
- Levels: consider enclosure in relation to ground slopes.
- Openings: Consider openings for pedestrians only.
- Design enclosures remembering sun, shade and wind turbulence.

6.5.4 SHELTER

- Consider exact siting of sheltering elements and relate to levels.
- Select materials in relation to function, durability color, etc.
- Prepare planting plan to illustrate form, density and species.
- Consider need for model and wind turn tests.

6.6 MOVEMENT AND CONTROL

The circulation path can be conceived as the perceptual thread that links the spaces of a building or any series of interior or exterior spaces together.

Since we move in time through a sequence of spaces we

experience a space in relation to where we've been and where we anticipate going. Movement through a buildings circulation system affects our perception of the buildings forms and spaces.

6.6.1 CIRCULATION

- Consider movement of craft, vehicles, visitors staff and objects between zones, buildings, enforces ramps, etc.
- Examine intensity, volume and periods of movement.
- Give thought to movement at all levels: ramps, parking, underpasses, escalators, etc.
- Meal imaginatively with static spaces such as paved areas, parking spaces, hard standing loading bays, etc.

6.6.2 CONTROL ELEMENTS

- Plan fences, screens rails gates, ramps, hoist areas, margins at waters edge screening mounds signals and notices.

6.6.3 PERIMETER WALKWAYS

- Check existing cements, rights of way and coastal paths.
- Consider continually of access with alternative or replacement routes.
- Give foreshore and marginal areas an imaginative treatment.

6.6.4 GROUND MODELLING

- Consider rising ground for views, spectator banking, hollows for privacy, protection and concealment. Consider fixed ground and changing water leads.
- Remember flooding and high water, control of surface

run off, economy of sloping banks as against bulkhead walls, and contrast of land undulations against plot water surface.

6.6.5 EDGE TREATMENT

- Basically vertical, sloping or both with choice dependent on fidel range, function, cost, water/wave forces.
- Vertical faces give constant land/water areas, may mean hoists, floating ramps, and perimeter hazards.
- Slopes give easy launching for light craft little protection and in filled areas a varying land/ water interface.

6.6.6 SURFACE TREATMENT

- To encourage movement consider, hard, level surface to vehicular standards, hard non-slip surfaces to pedestrian standards, semi hard surfaces for casual walking, concealed hard surfaces, e.g. fire paths, parking, etc.
- To discourage movement consider hard, rough surfaces: ridged stepped, etc. semi soft surfaces: ballast fill, thick gravel and sand, soft surfaces: rough grass planting.
- Promote interest by modelling changes of level, patterning, color bold, robust natured character rather than wealth appearance, avoidance of large flat areas of plain surfacing material.

6.6.7 CONTINUITY;SERIAL VISION

- Resorts are primarily pedestrian places,
- Plan for interest on foot path routes and contrast

visual constrictions against courtyards and long vistas.

6.7. FORM

Form refers to the manner in which surfaces come together to define shape and volume. An articulated form clearly reveals the edges of its surfaces and the corners at which they meet. Its surfaces appear as planes with distinct shapes; their overall configuration is legible and easily perceived. Similarly on articulated group of forms accentuate the joints between its constituent forms to visually express their individuality.

Space constantly encompasses our being. Through the volume of space, we move, see forms and objects, hear sounds, reel breezes made up of material substance such as wood or stone. Yet it is inherently formless. Its visual form, quality of light, dimensions and scale, depend totally on its boundaries as defined by elements of form. As space begins to be captured, enclosed molded and organized by the elements of form, architecture comes into being.

6.7.1 ARCHITECTURAL CONSIDERATIONS

- Likely to be low-rise for reasons of planning, stability and ground conditions.
- Consider use of roof space for viewing and leisure
- Avoid layouts that encourage wind funnelling or turbulence.
- Explore advantages of cantilevers for balconies, public viewing shade, etc.
- Explore advantages of pillars for open-ground floor, launch - through advantages, visual links, open plan,

flood precautions and boat storage or car parking.

- Explore advantages of building for extension of land over water, drama, environmental impact and immediacy, etc.
- Explore advantages of floating structures: may prove expensive but free of land ousts.
- Continually check the design against unique site conditions as the best solutions stem from skilful application of full and accurate information.

6.7.2 STRUCTURE

- Explore light weight framing and cladding materials, raft foundations, wind resistant structures, uniformity distributed ground loading, pile bearing capacity and water-proofing methods.

6.7.3 MATERIALS

- Establish traditional materials.
- Consider suitability durability, texture, color and cost.
- Check availability from local sources.

6.7.4 SITE FURNITURE

- Determine the location and form of seats, tables, litter bins, signs, mask, play poles, plant containers, etc.

6.7.5 LIGHTING

- Decide type and location of lighting, level, columns, floodlighting, illuminated signs, bollards, ornamental and functional.
- Relate to safety and security.

6.8 DESIGN CHECKLIST

Before commencing with design concepts, it is useful to utilize an outlined general design checklist, which would eventually be refined into a final design which would reconcile the plaza with its environs. The checklist being made up of principal elements as follows.

1. Social activities

   Clubhouse,

   lounges,

   drinks bars,

   snack bars,

   restaurants,

   viewing terraces,

   weather forecast board,

   multipurpose hall,

   indoor games room,

   children's play space.

2. Shops

   General stores

   Tobacco

   Stationery

   Clothes

   Beauty salon

   Hair dressers/ Barbers

   Sauna/Masseur

   Chemist

   Laundry/Dry cleaners

3. Services and information

   Information center

Care takers

Banking

Post office

Flagpole/Windsock

Weather station

Coast guard

Radar/ communications mast

Security station.

4. General services

Water supply

Electricity, lighting and power

Sewage and refuse disposal

Telephones

Centrally controlled security system

5. Allied sporting activities: Provision and instruction

Sailing

Rowing

Water Skiing

Swimming/Skin diving

Fishing tackle

Courts - Lawn Tennis, Badminton and squash

6. Allied accommodation

Unit rooms /Apartments

7. Boat services

Boat storage/Sales and hire

Launching and hauling equipment

Moorings

Information board of local services

8. Transportational services

Transport to and from local centers

Carts for stores and baggage

Electric run about

Boat trips and coach tours

9. Safety

Observation station

First aid/doctors station

Fire fighting equipment

Lifesaving equipment

Warning or Floodlights

General security fencing and lighting

Weather information

10. Miscellaneous

Casual recreation areas - picnic and kick about areas

Pools

Vending machines

Paved and landscaped areas

Landscaping/Waterscaping

Beachfront Plaza
Tarquu Bay

CHAPTER.7
THE SITE



CHAPTER SEVEN

THE SITE

Tarqua - Bay is a unique site sharing the contrast of both the calm warm water of the lagoon and the fury of the typhoon splash and backwash of the sea which gives it a somewhat inland/coastal characteristic. The site conjures up images of sunshine, beautiful landscape and spectacular scenery. The warm summer climate around Tarqua-bay throughout the year has made this area a favorite for vacationers and tourists. It has also become a sojourn for the rich who own second homes in this area (Figs- 7.1 to 7.5).

Tarqua bay has an undulating landscape with a profusion of low lying grass and tall, elegant palms bordering the soft, white sands of the shore. Certainly this is a unique coastal site awaiting exploration (Figs-7.18 and 7.19).

7.1 CRITERIA FOR SITE SELECTION

In examining the site for the beach front plaza there are six main categories of investigation all of which require a proper assessment. These are:-

1. Legal work
2. Planning
3. On-shore consideration
4. Off-shore considerations
5. Engineering
6. Finance

Each of these is composed of many related subdivisions. Some of these are naturally more important than others but all are worthy of some research as no location is likely to be found

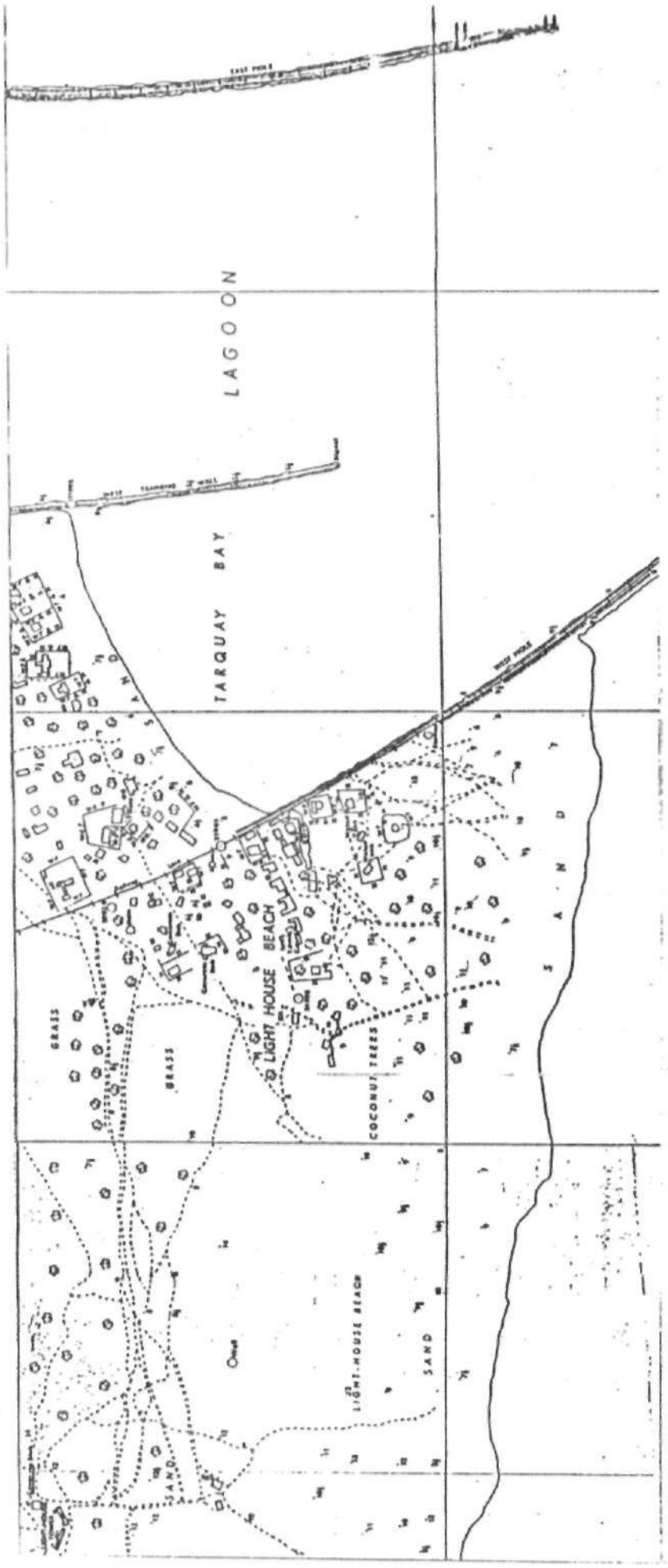


Fig 7.1 - Sketch Map of Tarquay Bay and the Lighthouse Beach
Source - Forest Division Survey

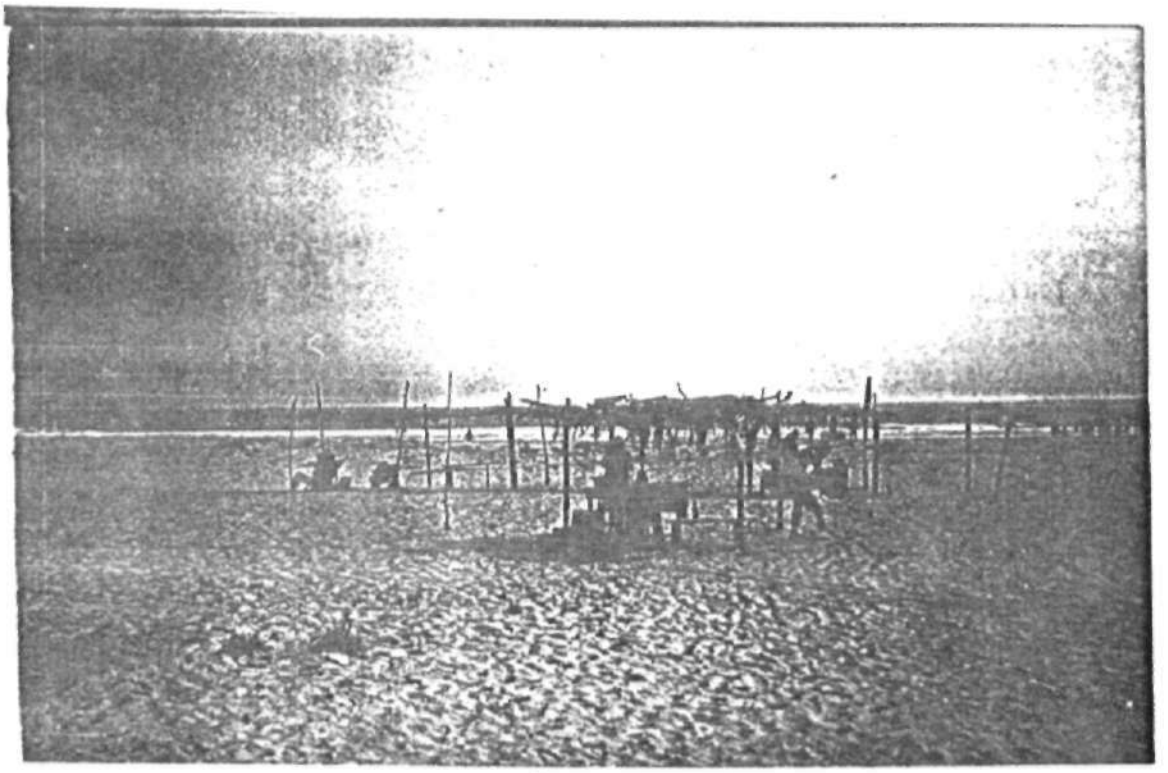


Fig 7.2. The Lighthouse Beach with Makeshift Structures Provided by Local Inhabitants

Source - Ashley-Nejo O.

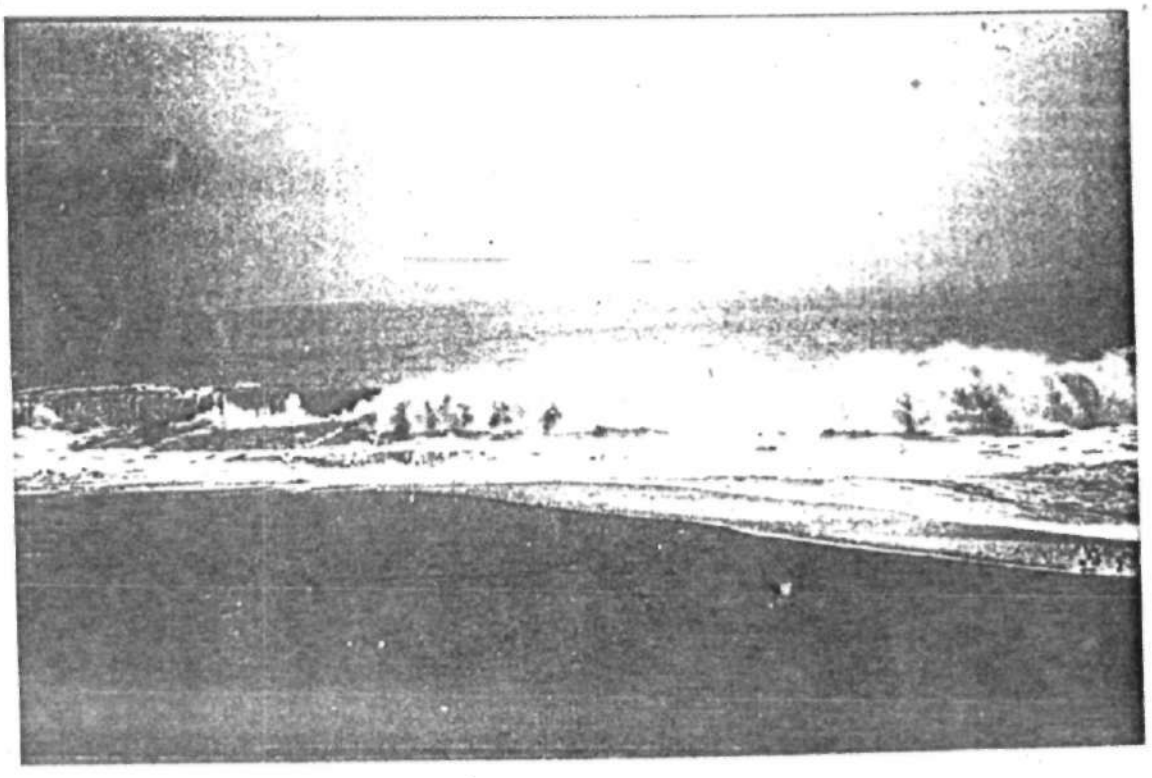


Fig 7.3 The Lighthouse Beach where Waves Lap Remorsely Against the Beach

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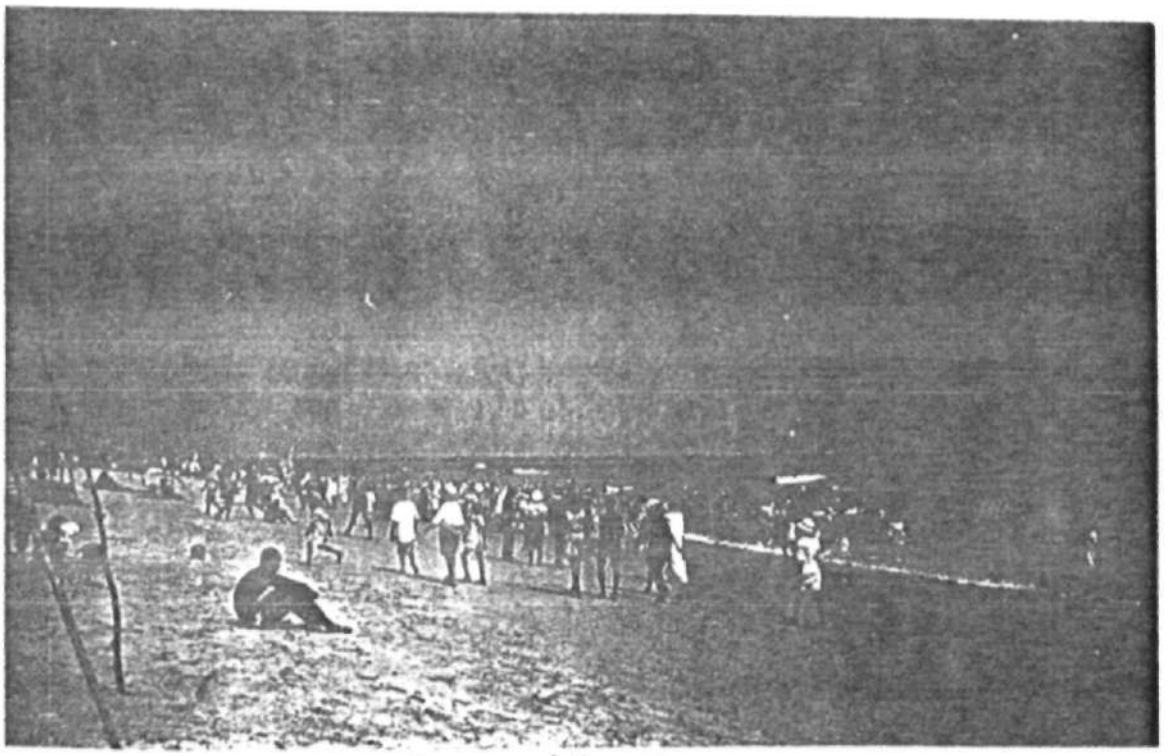


FIG 7.4 THE BAY - A FAVOURITE SPOT FOR VACATIONERS

SOURCE - Ashley-Tejo O.

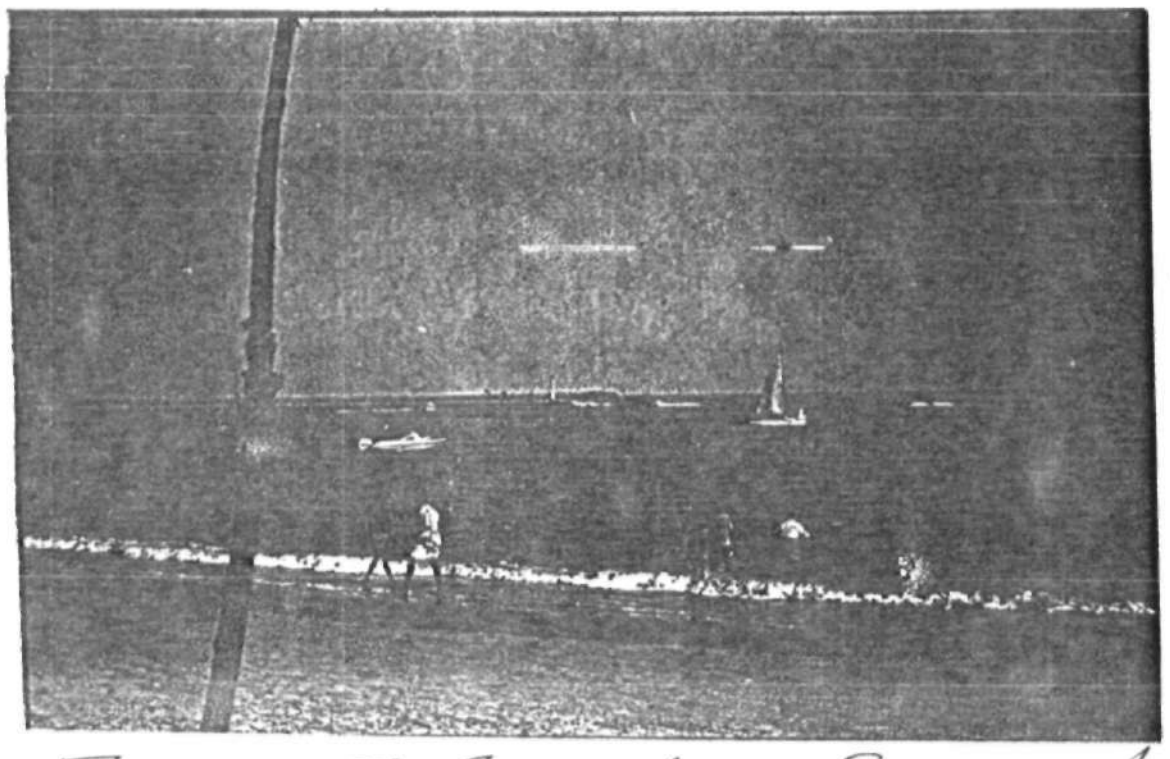


FIG 7.5 THE BAY - WHERE PEACE AND QUIET REIGN SUPREME WITH OPPORTUNITIES FOR WATER SPORTS.

Ashley-Tejo O.

that fully satisfies all the demands posed by each of these topics. It is only by weighing the collected data that a well founded and realistic judgement has been made on the suitability of the site to accommodate the proposed development.

7.1.1 LEGAL WORK

Legal work is most important in the early stages for as well as being suitable on technical grounds it is necessary to establish the viewpoints of all the parties involved and responsible for the developments eventual approval. This includes planning outlines at local and national levels and the need to include the opinion of advisory bodies such as the National Tourist Board.

7.1.2 PLANNING

The planning aspects cover a wide spectrum of considerations from the broad issues of national and regional policies and the evaluation of potential in terms of catchment, transportation and future expansion to the more parochial and immediate questions of land use planning consents, overall feasibility studies and the final physical, functional and aesthetic relationship between the component parts of the total layout.

7.1.3 ON-SHORE CONSIDERATIONS

The requirements needing to be satisfied in this category mainly occur within the land area of the proposed site limits as follows.

1. The actual quantity of land
2. The quality of the land
3. It's present use
4. It's future potential

7.1.4 OFF-SHORE CONSIDERATIONS

The basic tasks under this heading are to:-

1. Assess the existing natural conditions and the effects of the design on the ecosystem.
2. Decide on engineering and construction methods to be adopted to modify or over-come the existing natural conditions. The state of tides, current and overall climatic conditions will need independent examination.

7.1.5 ENGINEERING

The engineering aspect is that which takes care of much of the investigatory work and end up with recommendations on the engineering principles and overall framework of the construction. These recommendations help in overcoming the difficulties of hydrography and geology, efficiently and economically.

7.1.6 FINANCE

This aspect is covered in the initial stages by the legal representatives of the developer in co-operation with those responsible for costing individual parts of the future development.

As well as estimating the outgoings of construction, on assessment of income is necessary, which in turn requires some ideas of such things as possibilities of expansion and type of facilities likely to be provided and their relative profitability.

It will probably be the case, that no individual estimate of the complex items, which form the expenditure and income will in retrospect be entirely accurate - particularly in these times of rapid price increases and unstable economic conditions - but it is often found that accuracy is helped by under estimates in

one field being offset by over estimates in another.

7.2 LOCATION

Located within the longitudes of 350000 E and 358000 E and the latitudes of 868000 N and 872000 Tarqua-Bay and the light house beach fall along the beautiful coastline of Lagos, some 7.05 km from the heart of Lagos and 24.00 km from Nigerians foremost international airport.

It is bounded approximately to the North-East by Victoria Island, to the North by the Apapa quays, to the West by the endless strip of coastline which extends to other West-African coasts. It is however, isolated by a network of creeks. The creeks open out to the beautiful. Atlantic Ocean to the East of the site, cordoned off by break water moles. The open Atlantic bounds the site to the South.

Tarqua-Bay is very easy to reach. The journey to the site is by boat, along the creeks. Private jetties operating on a commercial basis are scattered all over Lagos and Victoria Island. The Journey from any part of the Island takes less than 30 minutes.

7.3 HISTORIC BACKGROUND

Tarqua-Bay forms part of an extensive land mass part of which is the "Ogogoro Village".

Ogogoro village is basically a fishing village which was until recently, untouched by the events of the outside world. It became a smugglers hide out during the colonial period and thus became popular for its manufacture of local gin - "Ogogoro" and hence its name.

Tarqua bay which was solely owned by the Federal Government under the land use act was handed over to the Nigerian Ports Authority (N.P.A.) in 1970 to help in decongesting the Apapa quays. Having realized the utility of Tarqua-bays potentials for resort development, plans for it becoming a decongestion harbor have therefore been diverted to the Tin-Can Island.

Recent development has therefore been limited and has not changed this picturesque village. Few structures are occasionally seen though. These are private villas and chalets owned by the multinationals and the exclusively rich. The local inhabitants for now still potter around their boats or sit mending their nets. Their makeshift structures provide comfort to their clientele at a token fee.

7.4 SITE ANALYSIS

The implications of the proposed physical context - the site, are carefully considered before design. Its climate, geography and peripheral conditions influence the overall building form, its orientation and relationship to the ground plane and its interior space design layout. These factors affect the choice of the structural system, its materials and construction. The site analysis also helps control natural light, thermal condition visual impacts, noise and other elements by providing a guide to design with access to desirable elements and absorption or shielding of the building from those elements which may be undesirable.

7.4.1 CLIMATIC FACTORS

A comfortable environment depends on maximizing the aspects of environment which reduce heat and the effects of humidity and

protect from rain and dust. Planning with climate takes place at all scales. Climate factors effect the building form, orientation, its construction and choice of building materials.

Solar radiation

There is a direct need for a knowledge of the occurrence of bright sunshine for the purposes of tourism.

There is a general increase in the total number of bright sunshine hours along the Nigerian Coast. The mean daily annual amount of sunshine is put at 5084. The monthly pattern of variation is the critical issue. During the dry months - November - April, the monthly variation in the amount of sunshine follows the general trend of an increase. As the wet months approach, the trend is increased cloudiness. The decline in sunshine hours becomes more intense and reaches its lowest values in the month of August.

FIG. 7.6 MEAN MONTHLY SOLAR RADIATION.

J	F	M	A	M	J	J	A	S	O	N	D
363	464	478	485	471	388	369	358	412	457	456	401

(Source: Federal Meteorological Station, Lagos,1990)

FIG. 7.7 MEAN MONTHLY BRIGHT SUNSHINE HOURS

J	F	M	A	M	J	J	A	S	O	N	D
6	7	7	7	6	5	3	3	9	6	8	7

(Source: Federal Meteorological Station, Lagos,1990)

Precipitation

The rainy season starts from April and tapers off very rapidly during the month of October. The duration of the rainy season thus is between 96 days and 130 days.

Total annual rainfall is put at 1500mm - 2400mm. The mean monthly distribution shows a tendency of concentration in three

or four months. Sixty percent of the annual rainfall occurs in the months of May, June and July. This concentration of rainfall shows the need for drainage systems that can cope with large volumes of water at a fast rate.

The proximity of the site to maritime winds also create a microclimate of irregular rainfall patterns throughout the year.

FIG-7.8 MEAN MONTHLY MAXIMUM RAINFALL - MM

J	F	M	A	M	J	J	A	S	O	N	D
50	100	200	200	300	400	300	200	200	300	100	50

(Source: Federal Meteorological Station, Lagos,1990)

FIG-7.9 MEAN MONTHLY MINIMUM RAINFALL - MM

J	F	M	A	M	J	J	A	S	O	N	D
<50	50	100	100	200	300	200	100	100	200	50	<50

(Source: Federal Meteorological Station, Lagos,1990)

FIG-7.10 MEAN MONTHLY RAINFALL - MM

J	F	M	A	M	J	J	A	S	O	N	D
<50	75	150	150	250	350	250	150	150	250	75	<50

(Source: Federal Meteorological Station, Lagos,1990)

FIG-7.11 MEAN MONTHLY NO OF DAYS WITH RAIN

J	F	M	A	M	J	J	A	S	O	N	D
3	4	8	10	12	14	14	10	12	16	8	2

(Source: Federal Meteorological Station, Lagos,1990)

Screen temperature

In human terms net radiation is felt as air temperature. Highest temperatures are recorded during the dry months when there are fewer clouds. Changes in temperature of as much as 12.5% have been recorded between maximum and minimum temperatures in 24 hours. During rainy seasons the maximum temperature is lower due to dense cloud cover. Diurnal variation is also much

lower, often not more than 5oC

FIG-7.12 MEAN DAILY MAXIMUM TEMPERATURE - oC

JAN	APR	JUL	OCT
30	32.5	27.5	27.5

(Source: Federal Meteorological Station, Lagos,1990)

FIG-7.13 MEAN DAILY MINIMUM TEMPERATURE

JAN	APR	JUL	OCT
22.5	22.5	22.5	22.5

(Source: Federal Meteorological Station, Lagos,1990)

FIG-7.14 MEAN DAILY TEMPERATURE

JAN	APR	JUL	OCT
26.25	27.50	25.00	25.00

(Source: Federal Meteorological Station, Lagos,1990)

Relative humidity

Human sensibility to temperature is greatly affected by relative humidity. During the drier months, relative humidity falls between 60% and 70%. In the wet months the relative humidity rises to as much as 95% resulting feeling is to be uncomfortably hot.

FIG- 7.15 MEAN MAXIMUM DAILY HUMIDITY - %

JAN	APR	JUL	OCT
90	95	95	90

(Source: Federal Meteorological Station, Lagos,1990)

FIG-7.16 MEAN MINIMUM DAILY HUMIDITY - %

JAN	APR	JUL	OCT
60	70	70	70

(Source: Federal Meteorological Station, Lagos,1990)

FIG- 7.17 MEAN DAILY HUMIDITY -%

JAN	APR	JUL	OCT
75.00	82.50	82.50	80.00

(Source: Federal Meteorological Station, Lagos,1990)

Wind

Two major air masses predominate the climate. These are the tropical maritime air mass and the tropical continental air mass. The tropical maritime is formed over the Atlantic ocean to the south and is therefore warm and moist. It blows inland generally in a southwest to north east direction. The tropical continental air mass is developed over the Sahara desert and therefore is warm and dry and blows in the opposite direction.

The proximity of the site to the Atlantic makes for a weakened tropical continental air mass and the southerly tropical maritime flow predominates thus resulting in a microclimate of high rainfall.

7.4.2 GEOGRAPHICAL FACTORS

Practically all buildings depend on the geography of site for ultimate location, orientation, construction methods and structure integrity.

Soil

Lagos is generally characterized by alluvial soils. The soil texture on site is typically sandy, which typifies its coastal location. It is shallow and has a well to imperfect drainage potential with moderate run off capabilities. The water table is high which makes the soil susceptible to flooding.

Topography

The site is characterized by a gentle slope. The lighthouse

beach is however typified by gently undulating terrain interlaced by slight depressions resulting from years of erosion. This adds character to the otherwise flat terrain. The crests of the topography fluctuate around 1200mm above sea level except for the built up mole which stands at approximately 3600 mm above sea level.

Vegetation

Generally, the vegetation of Lagos is characterized by mangrove swamp forests and fresh water swamp forests. The vegetation on site ranges from sparse to dense specifically characterized by a plant cover which varies from low lying grass and creeping vines which help protect the soil from erosion to palms and pines scattered in an almost regular pattern giving a unique beach character.

7.4.3 SENSORY FACTORS

Visual impacts

Various sub areas of the site have physical aspects which give them characteristics visual qualities quite different from each other. These qualities include the degree of topographical and vegetative variety, foreground/background relationships, skyline and configuration, apparent landscape contrasts and special interesting water surface features. Such qualities offer the potential for dramatic or otherwise attractive settings for a holiday resort complex.

Tarqua-Bay is generally characterized by magnificent expanse of soft white sands which shelve gently into the deep blue sea where waves lap remorselessly against the beach along the lighthouse beach or where the peace and quiet of calm waters reign supreme along the bay. To the north of the site is an

inedible scenery of an unspoilt area of vegetation with a profusion of low lying grass and vines, palms and pines. Behind the low lying vegetation, within the thickets of the palms and pines are dotted private villas, apartments, commercial clubs, restaurants, cafes and bars. To the west, the long sweep of sand disappears into the sunset. Approximately to the north-east is the magnificent view of the city scape of Victoria Island (Figs-7.18 to 7.21).

Sound

Tarqua-Bay is wholly free from sources of objectionable sound such as vehicular traffic, aircraft and other machinery. The only sources of sound around the site are the splash of the waves hitting against the beach and the rocky moles, the whistle of wind blowing through palms and pines and the occasional blare of horns of ships passing by at quite a distance. These sounds are non objectionable but rather, they are refreshing and serve as a constant reminder of the coastal location. The site is otherwise dominated by peace and quiet.



Fig. 7:18 Lighthouse Beach with Profusion of Low Lying Grass, Pines and Vines.

Source - Ashley-Tejo O.



Fig. 7:19 Lighthouse Beach - A Vast Expanse of Gently Undulating Terrain

Source - Ashley-Tejo O.

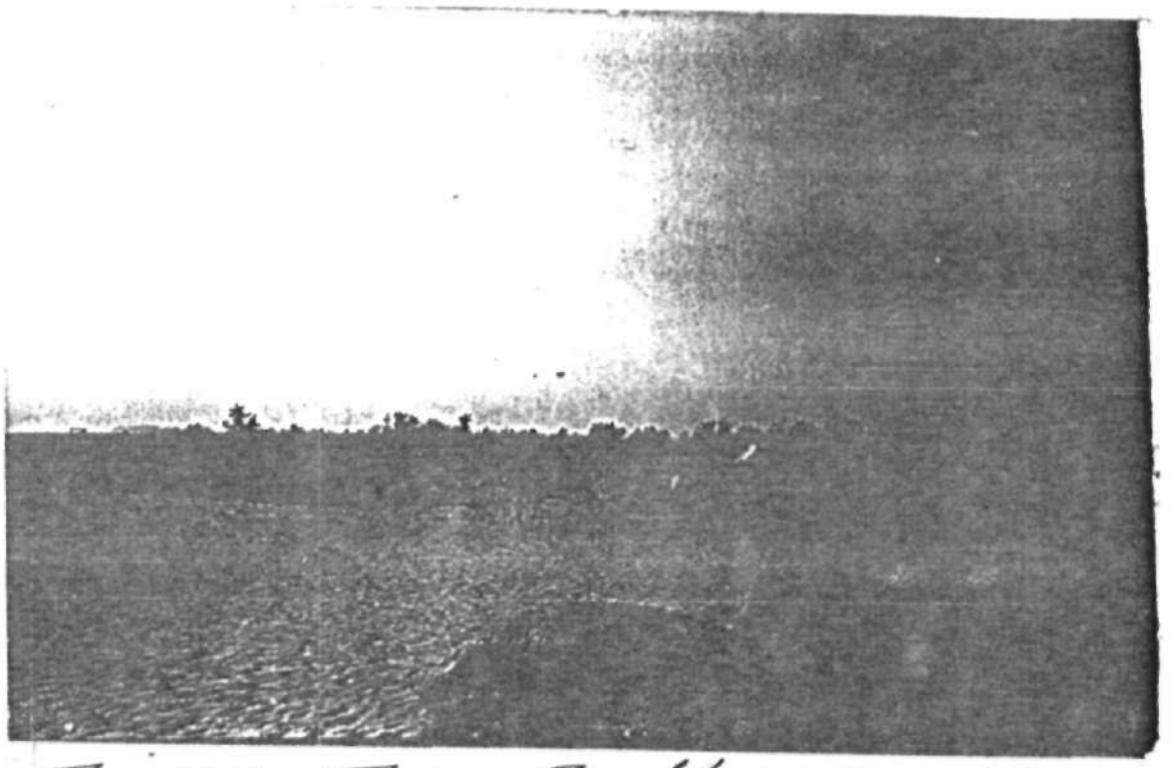


FIG. 7.20 TARQUA BAY / LIGHTHOUSE BEACH - VIEW FROM WEST INLET, ENLARGED.
SOURCE - Ashley-Tejo O.

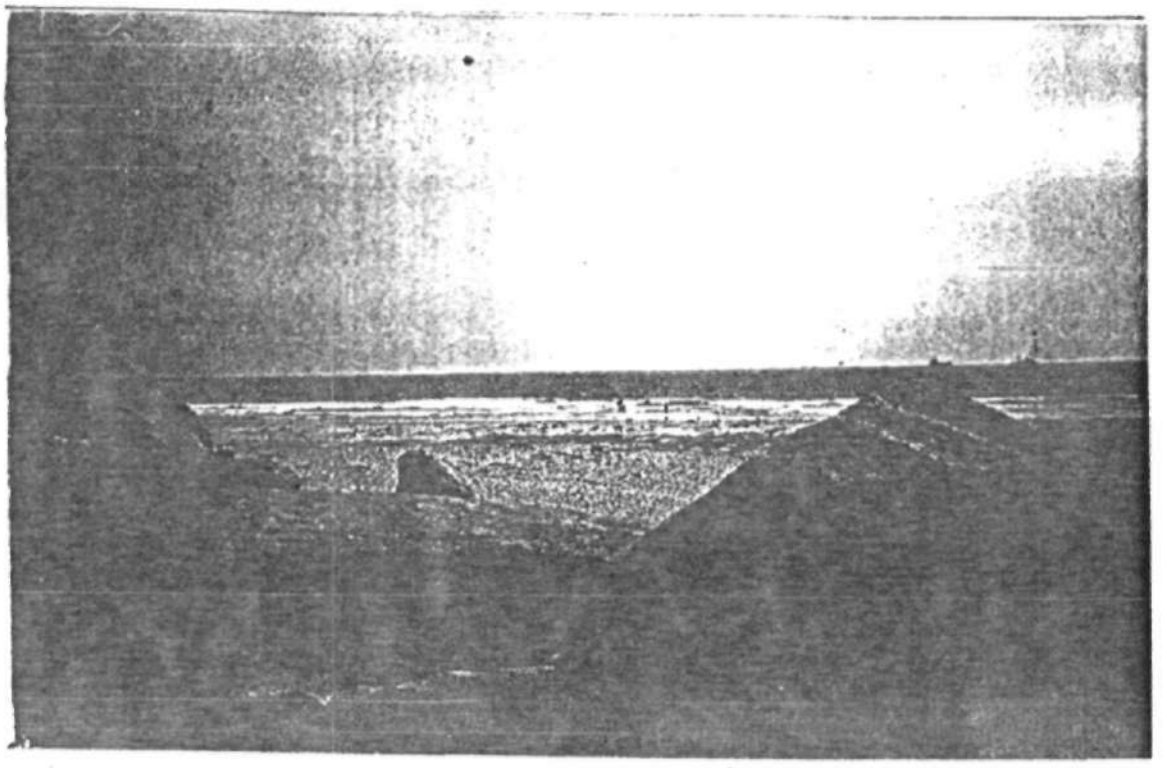


FIG. 7.21 TARQUA BAY / LIGHTHOUSE BEACH VIEW FROM WEST INLET ACROSS THE BEACH TOWARDS THE ATLANTIC

Beachfront Plaza

Tarquu Bay

CHAPTER.8
THE DESIGN



CHAPTER 8

THE DESIGN

8.1 DESIGN BRIEF; SPATIAL REQUIREMENTS AND COMPONENT PARTS.

Having recognised the need for the Beachfront Plaza and all preliminary investigations are carried out, an outline brief at this stage is evolved. The design brief is based on relating the form to its purpose which is a fairly accurate definition of function. The fundamentals of the spatial requirements and component parts stem from the considerations of the account of the publics needs, the context and surroundings. To this end therefore the following facilities are proposed.

1. SOCIAL ACTIVITIES
   - Clubhouse
   - Boat owners loung
   - Restaurants and Cafes
   - Bars
   - Multipurpose hall
   - Aqua exhibition hall
   - Meeting rooms
   - Nite club
   - Casino
   - Video and computer arcade
   - Viewing terraces and sun decks

2. SHOPS
   - Food and general stores - Tobacco, Stationery, etc
   - Water Sports equipment
   - Souvenirs and gifts
   - Hairdressers and beauty salon
   - Barbers
   - Sauna and masseur
   - Chemist
   - Laundry

3. SERVICES AND INFORMATION
   - Reception and general information centre
   - Workshop and storage facilities
   - Staffroom
   - Bank
   - Bisuness centre
   - Weather, tides and information
   - Administrative offices

4. BOAT SERVICES
   Boat hire
   Launching facilities
   Storage lockers
   Changing rooms
   Showers
   Water closets

5. ALLIED SPORTING ACTIVITIES
   Water skiing
   Swimming
   Fishing tackle
   Sail training
   Lawn tennis
   Badmington
   Squash
   Table tennis
   Billiards

6. ALLIED ACCOMMODATION
   Bedroom units

7. SAFETY EQUIPMENT
   First aid unit
   Observation platform
   Fire fighting equipment
   Weather tides and information

8. MISCELLANEOUS
   Casual recreation area, picnic and kickabout areas
   Vending machines
   Paved and grassed areas
   Landscaping

8.2 DESIGN CONSIDERATION

Different design approaches stem from unique site conditions which previal and are solved by a study of their singular problems. The principal divisions affecting the design approach are those of cost, location and range of facilities. These aspects being to some extent dependent upon each other. Design movelties are to be precluded from the modest budget.

8.2.1 Land to Water Relationship

The percentage of land-to-water areas and the allocation of all the necessary components within the area is the central question in planning. The size of each component, its position on site and its relationship with other constituent parts are

three main problems to be solved. The shape and form the land and water make with each other form half of the battle for the design. Designing in sympathy with existing elements for taking advantage of the natural configuration tailors the development to the site and brings aesthetic and financial benefits. In summary one could say the geography determines the engineering, the engineering determines the profile, the profile determines the layout and the layout determines the architecture.

8.2.2 The Basic Elements.

In the same way the site is selected by narrowing from a broad catchment area inwards towards the final position, so too the main principles of design best evolve from recognising the context in which the development is located before determining the layout within the site confines.

8.2.3 Aesthetic Principles.

There are long distance views to and from the site particularly because of its low lying coastal characteristic, and the undeveloped region of its location. The site may be considered as a point in the center of a triangle with views radiating to and from it. Planning the basic shape of the plaza within the demands of economic engineering and appealing visual impacts is an excercise in the functional design and does a great deal in ensuring the right relationship between context, function and form. The vista across low lying land or from the water itself results in the site being visually exposed and frequently being seen within a general panorama in juxtaposition to its entirely natural back cloth of water, sky, coastline or plush vegetation. The silhovette of the plaza is therefore considered

from all angles and this outline becomes increasingly vulnerable with the demands for high buildings.

8.2.4 The Physical Form.

The liberating qualities of the site make strong architectural forms quite acceptable where otherwise they may appear extreme or in appropriate. In this category are floating buildings, cantileuers, curving or serpentine plan shapes, building over water on piles, buildings rising form the water or built on the existing breakwater. The economy of these are carefully considered. More general features like balconies, flat sun roofs, screens and pergolas are more relevant.

The needs of beach users are often contradictory. On one hand, the open air life, sun bathing and active pursuits demand terraces, lawns, panoramic views and exploitation of open spaces. Funning counter to this is the need for enclosure and sheller which call for individual or communal seclusion in the form of countyard plans and intimate planning. Both are basic requirements for most people within a day. The built structure would therefore recognise and provide for these divrnal changes.

8.2.5 Qualities of Water.

Water around the site has a considerable range of character ranging from the pounding of the ocean waves to the quite smooth and untroubled water of the lagoon. Within the limits of safety the scheme would plan for people to enjoy the sight sound and use of the natural spectacle. The design factor here is that which provides a full view and use of the water with its contrasting but enigmatic character.

8.3 DESIGN PHILOSOPHY AND CONCEPTS.

The first phase of the design process is the recognition of a problematic condition and the decision to find a solution to it. Design is above all a willful act, a purposeful endeavour. The critical phase of the design process is the documentation of existing conditions, the definition of its context and collection of relevant data to be assimilated since the nature of a solution is inexorably related to how a problem is perceived defined and articulated.

Fundamentally, the physical manifestations of architecture accommodate human activity. However, the arrangement and organisation of the elements of form and space will determine how architecture might promote endeavours, elicit responses and communicate meaning. Architecture could therefore be presented as a means to solve a problem in response to conditions of function, purpose and context.

8.3.1 Design Philosophy.

In architecture, elements and systems should be interrelated, inter dependent and mutually reinforcing to form an integrated whole. When their relationships are perceived as contributing to the singular nature of the whole, then a conceptual order exists - an order that is perhaps more enduring than transient perceptual visions. To this end therefore the philosophy of the design is based on - THE ARCHITECTURE OF SPACE, STRUCTURE AND ENCLOSURE.

- Organisational pattern, relationships and hierach
- Spatial definition and image.

Experienced through MOVEMENT IN SPACE and TIME

- approach and entry
- path configuration and access
- sequence of spaces

Achieved by means of TECHNOLOGY

- Structure and enclosure
- environmental comfort
- health safety and welfare
- durability

Accommodating a PROGRAM

- User requirements needs and espirations
- legal restraints
- social/cultural factors
- historical precedents

Compatible with its CONTEXT

- site and environment
- climate: sun, wind, temperature, precipitation
- geography: soils, topography vegetation, water
- sensory: charater of the place views, sound.

8.3.2 Site Concept

This is based on the configuration of a linear pedestrian pathway linking up two points - the landing deck and the nerve centre itself. The pathway starts of from the main access point and terminates in a space which forms the core of the plaza from where it then radiates to other sub areas forming the macroscope of the design.

Prior to actually entering the buildings interior the building is approached along a frontal path which leads directly to the entrance. The visual goal that terminates the approach

is clear. This forms the first phase of the circulation system during which one is prepared to see experience and use the buildings spaces.

8.3.3 Design Concept.

This revolves around a centralised organisation which is a stable, concentrated composition that consists of a number of secondary spaces grouped around a large central dominant space. The central unifying space of the organisation is regular in form and large enough in size to gather a number of secondary spaces around its form. The secondary spaces differ from one another in their form or size as a response to their individual requirements of function, relative importance or context.

The form of the centralised concept stems from the dominant boundry elements which result in an equilateral triangle. The secondary spaces allow the form of the centralized organisation to respond to the other varying site conditions. Since the form of the centralized organisation is inherently non-directional, conditions of approach and entry are specified by the site and an articulation of one of the secondary spaces as an entrance form.

Circulation pattern within the centralised organisation is looped in form around the central space and radiates into the secondary spaces.

The centralized organisation whose form is relatively compact and geometrically regular is used to terminate the axial site composition and establish a point in space within a vast undeveloped region.

Space constantly encompasses our being. Through the volume of space one moves, sees forms and objectives, hears sound an feels breezes. Its visual form, quality of light, dimentions and scale depend totally on its boundaries as defined by elements of form. As space begins to be captured, enclosed molded and organised by the elements of form, architecture comes into being.

At the scale of the site the building form relates to the space around it by

1) surrounding and enclosing a courtyard space within its volume.
2) merging interior space with private outdoor space
3) defining a portion of its site as an outdoor room.
4) standing as a distinct form in space.
5) stretching out and presenting a broad face to dominant features of the site.) standing free within its site and having some private exterior space be an extension of interior space.

On the other end the building overall form also evolves from the hospitability of Nigerians always arm stretched in readiness for a warm embrace - Welcome!

8.4 DESIGN REPORT

This presents an account of the final design proposal outlining the scope and extent of the project and also elucidating on the basic elements of the design.

8.4.1 Space Criteria and Allocation.

Population at the beach is put at 2000 persons at peak periods.

Space criteria is based on a description of recreation planning as an incremental process for the determination of recreation opportunities and spaces. For the purposes of arriving at population per space on informed estimate of percentages is adopted. (Fig 8.1)

Fig. 8.1 ACTIVITY PERCENTAGE PREFERENCE

ACTIVITY	PERCENTAGE PREFERENCE	DESIGN POPULATION
Social and outdoor leisure	50	1000
Shops	31	620
Allied	11	220
Services and information	6	120
Miscellaneous	2	40

Based on this is a space allocation analysis for the complex. (Fig. 8.2)

FIG. 8.2 SPACE ALLOCATION ANDLYSIS.

COMPONENT	UNIT NO	FLOOR AREA(m2)
SOCIAL ACTIVITIES		
Clubhouse	1	1025
Boat owners lounge	1	154
Restaurants and cafes	6	1104
Bars	1	385
Multipurpose hall	1	240
Aqua exhibition hall	1	240
Meeting rooms	1	150
Nite club	1	264
Casino	1	264
Video and computer arcade	1	150
Viewing terraces and sun decks.	4	1080
SHOPS		
Food and general stores	3	216
Water sports equipment	2	108
Souvenirs and gifts	6	162
Hairdressers and beauty salon	1	54
Barbers	1	24

Sauna and Masseur	1	128
Chemist	1	50
Laundry	1	50
Others	1	50
	7	278
SERVICES AND INFORMATION		
Reception and general information	1	72
Workshop and general stores	1	228
Staffroom	1	108
Bank	1	128
Buisness centre	1	50
Administrative offices	6	210
SERVICES		
Storage lockers	1	
Changing rooms	12	108
Showers	12	108
Water closets	24	432
ALLIED SPORTING ACTIVITIES		
Boat hire	1	912
Water skiig	1	8100
Swimming	1	900
Fishing tackle	23	69.5
Sail		24300
Lawn tennis	2	700
Badmington	1	192
Squash	1	192
Table Tennis	1	96
Billiards	1	96
ALLIED ACCOMMODATION		
Bedroom Units		
Maids room	1	108
SAFETY EQUIPMENT		
First aid unit	1	48
Observation platform	1	113
Fire fighting equipment	12	48
MISCELLANEOUS		
Circulation		1620
Landscaping.		32400

8.4.2 The Architecture.

The architecture involved reconciles the building form with its site and environs. The approach to the design sets a trend in the architecture of coastal areas as a genesis of the development of beach front hotels, motels, holiday villas theme parks and entertainment centres, reconciling a contemporary design style with themed interiors.

Circulation is not complex and the factors that condition the plan are those of access orientation, and aspect in regard to is siting, servicing and internal plan. Functions are related to one another such that no bizzare divisions occur but with a functional flow that derives from a functional plan, unified by circulation and with colours and materials chosen to give a sense of unity cohesion and strength.

8.4.3 Materials

The choice of materials is of particular importance as the site is exposed to high wind velocities, salt sprays and damp conditions. Choice of materials is governed by significant physical characteristics and performance in use. These are affected by such factors as temperature, moisture content surface condition and internal structure. Building materials are charcterised by distinct properties of strength, slippness and elasticity, density or hardness, resistance to wear caused by physical or chemical action, fire resistance and thermal conductivity. The basic materials employed include:

1) Concrete
2) Non ferrous metals - aluminium
3) Glass
4) Paint finishes

Concrete has a wide application in the construction process because it combines many of the advantages of wood, steel and masonry. It is inherently strong in compression; to handle tensile forces, it can encase and bond with steel reinforcement, it is capable of being formal into almost any shape with a variety of surface finishes, textures and patterns and it provides foreproof construction.

Aluminium is a relatively soft yet strong lightweight and workable metal. It is corrosion resistant due to the transparent film of natural oxide it forms on its surface. This oxide can be thickened to increase its corrosion resistance by anodizing. Aluminium is widely used for secondary building elements such windows, doors, flashing, and reflective insulation.

Glass is a chemically inert, transparent, hard brittle material. It is used in building construction in various forms. Glass is used to control light transmission glare and solar radiation, and most importantly for glazing which provides opportunities for continuity of views.

Paint finishes are used to protect, preserve or visually enchance the surface to which it is applied. Depending on its end use, the paint film must resist deterioration due to sunlight, heat, temperature variation, water or moisture vapour, mildew and decay, chemicals and physical abrasion paint also serves to make surface more sanitary, improve healing and lighting effects and promote human comfort and safety..

8.4.4 Statutory Services.

Provision of main public utilities are connected to main inland syslems where local systems are uncertain and high priced.

Water supply isconnected to site via local inland water services with an adequate on site storage quality control and pressure systems to cataer for all needs including fire flighting.

Electricity is to be connected from the 11 K.V. NEPA grid lines which would be stepped down to 230/405 V by an on site transformer. Electricity supply is to be complemented by on site power generators.

Telecommunication services would be provided for via satellite transmission systems for contact with the outside world.

Sewage and drainage would be taken care of locally by use septic tanks systems.

Refuse could also be taken care of by an on site mini incerenator.

The overall layout of statutory services is to be as economic as possible. Services are placed beneath footways to avoid interruption of traffic during emergency repairs, routine maintenance or provisional materials.

Beachfront Plaza
Tarqua Bay

CHAPTER.9
CONCLUSIONS



CHAPTER 9

CONCLUSIONS

Architecture is normally conceived (cesigned) and realised (built) in response to an existing set of conditions which in this case are purely functional in nature, reflect in varying degrees; social, economic even whimsical and symbolic intensions. This is achieved by the recognition of the problematic condition and the decision to find a solution to it.

This design from inception through the documentation of the existing conditions of the problem, definition of its context and collection of data to the solution laid prime emphasis on the role of perceptions, attitudes, motivations and values as they affect user preferences and satisfaction of recreation activities. Efforts are made to satisfy the changing needs, priorities and lifestyles of a varied population by providing facilities in an environment which hopefully will help users understand and appreciate the need for recreation and importance of a well spent leisure time.

Permutations betweens uses are almost limitiless and the origin of the Beachfront Plaza is of particular interest for it has important implications for future schemes. Apart from development as a response to specific needs, the nucleus from hich the plaza grows covers quite a variety of associated uses and different sources of potential development can be identified.

1) As a base for catering and hotel development
2) As a centre for short term holiday residency.
3) As a visual amenity and facility in a total recreation plan
4) As an outlet for boat regattas

5) As an economic stimulant

6) As an outlet for cultural water based regattas

7) As a provision for water related sport activities.

The plaza provides visual satisfaction, physical involvement for the young and congenial atmosphere which humanise the urban environment and detracts from hostile overpowering surroundings.

The plaza has a particular opportunity to relate to the different moods of the natural water scope by its sheer location. The water feature successfully provides visual pleasure and establishes a contact as well as a natural landscape element.

As an art, architecture is more than satisfying the purely functional requirements of a building program. Fundamentally the physical manifestation of the plaza accommodates human activity. However, the arrangement and organisation of the elements of form and space determine how the architecture promotes endaevours, elicit responses and communicate meaning. These elements of form and inter-related, interdependent spaces are therefore not ends in themselves but means to solve a problem in response to conditions of function, purpose and context - that is architecturally.

Beachfront Plaza

Tarqua Bay

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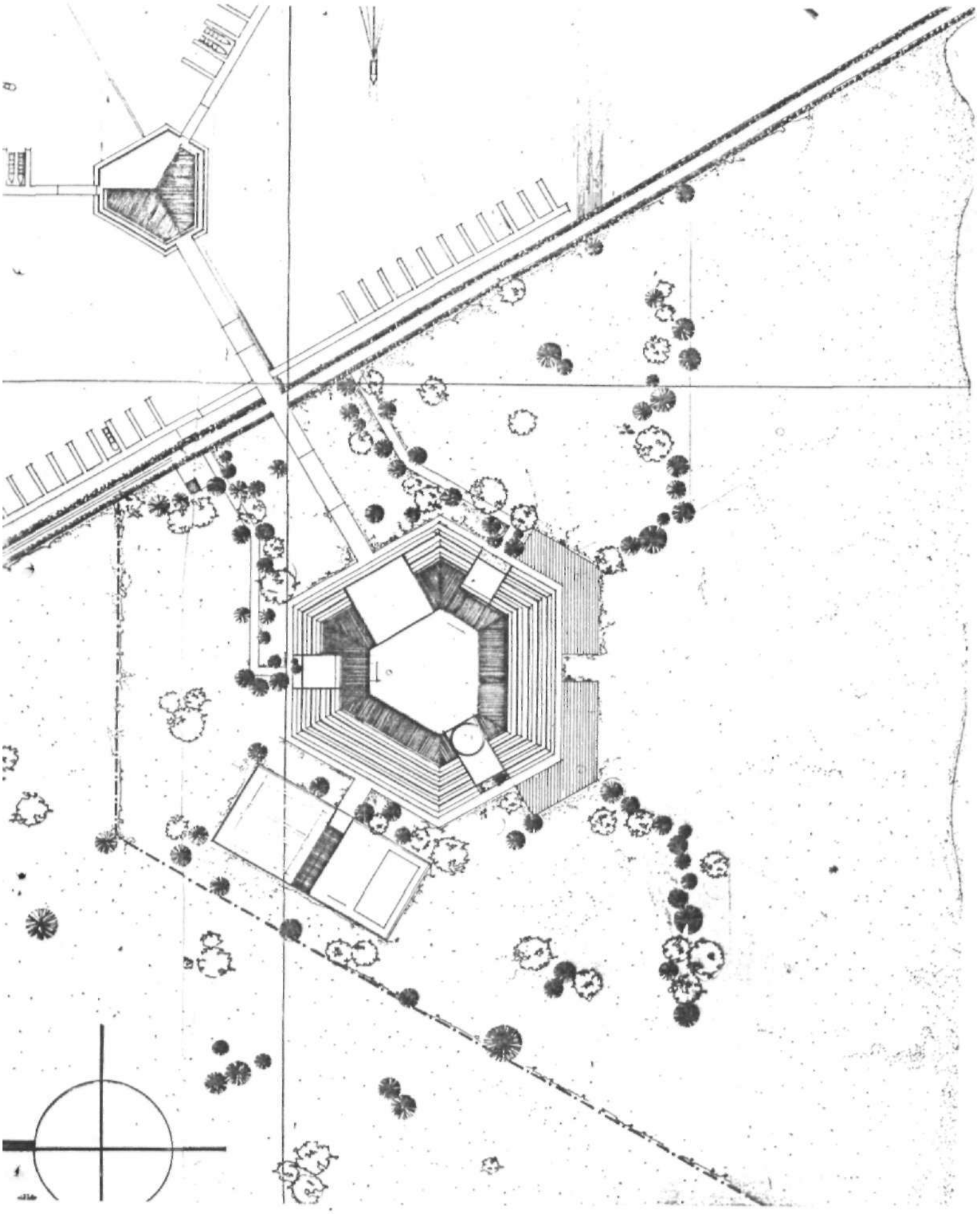
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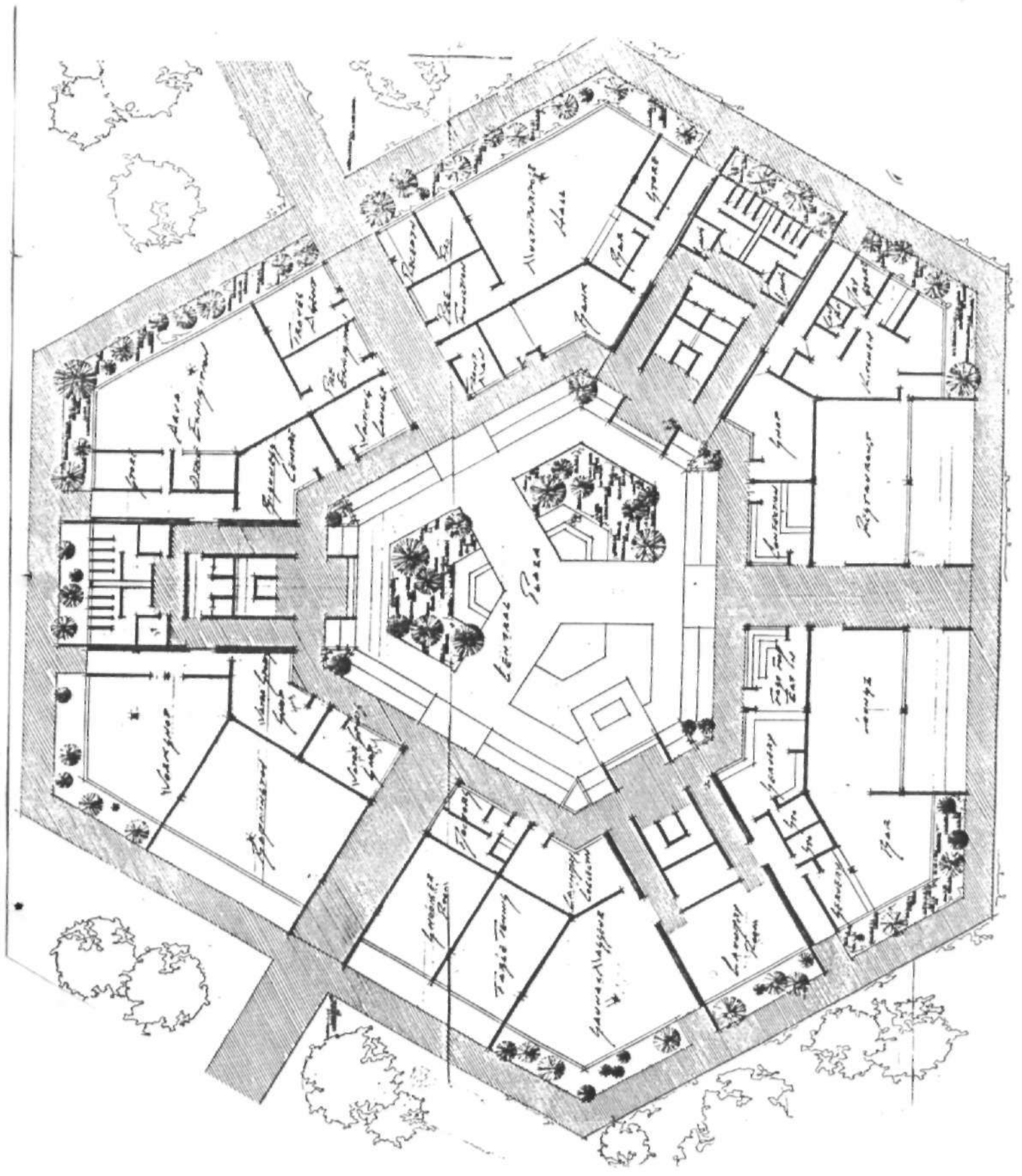
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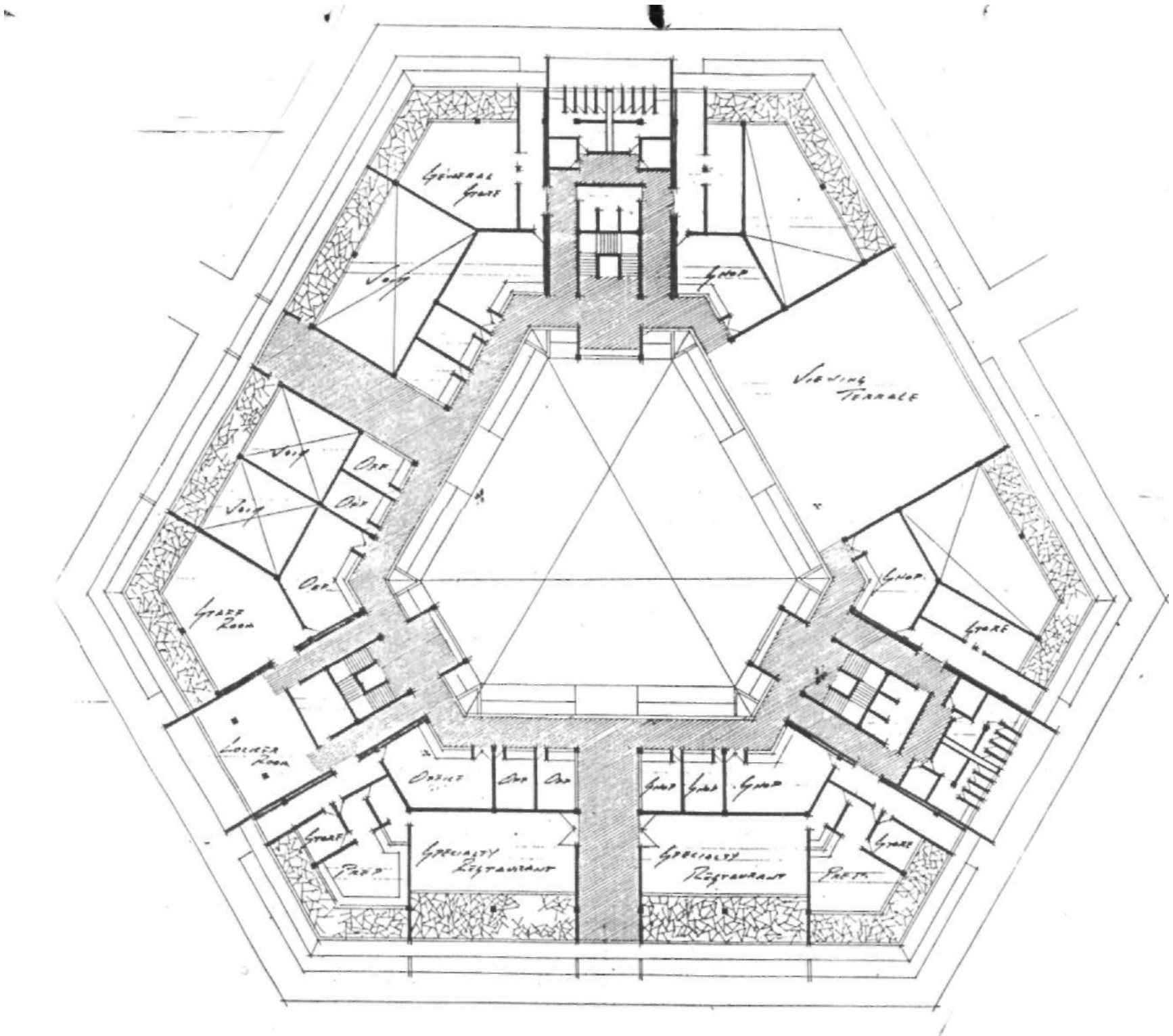
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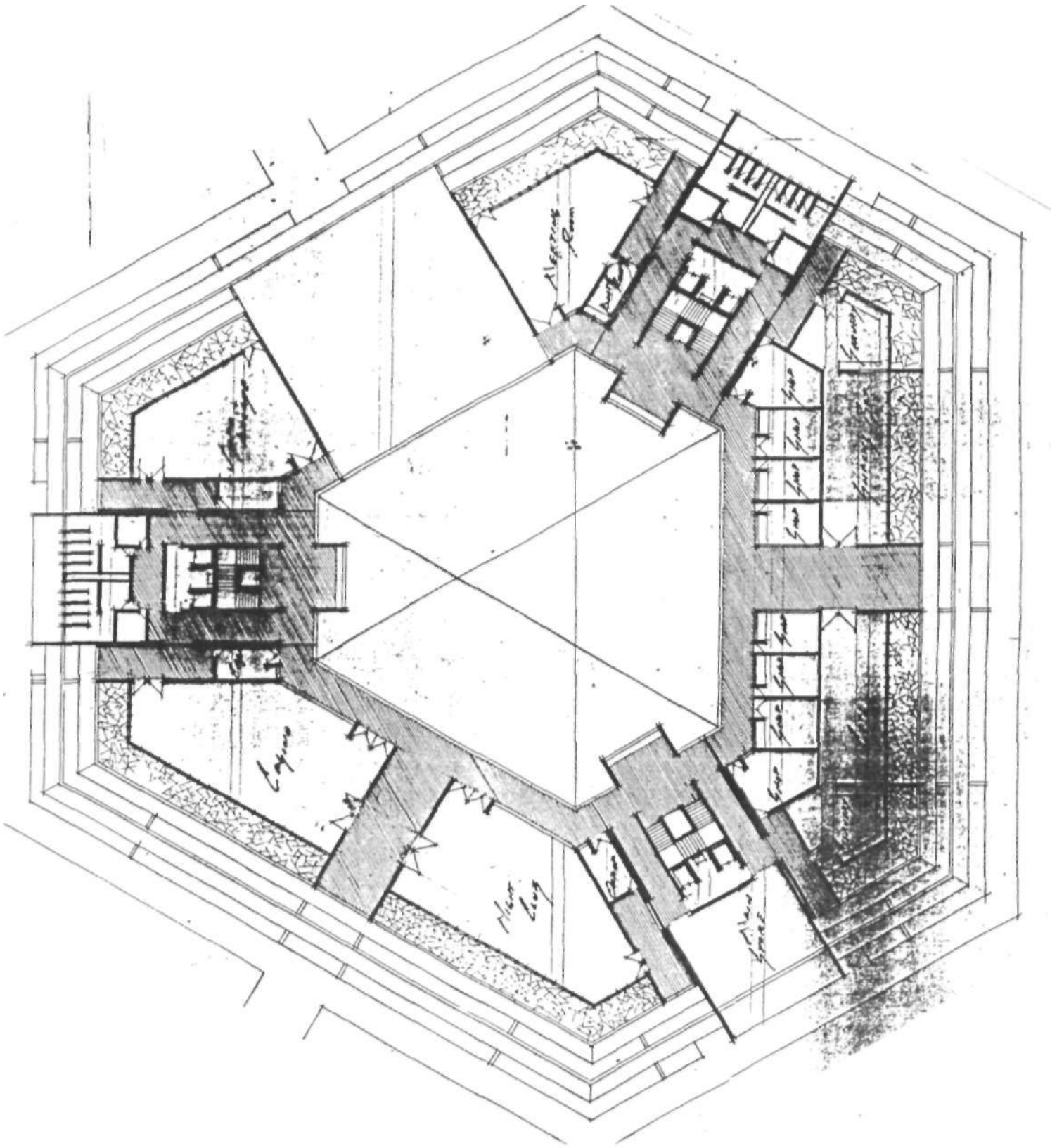
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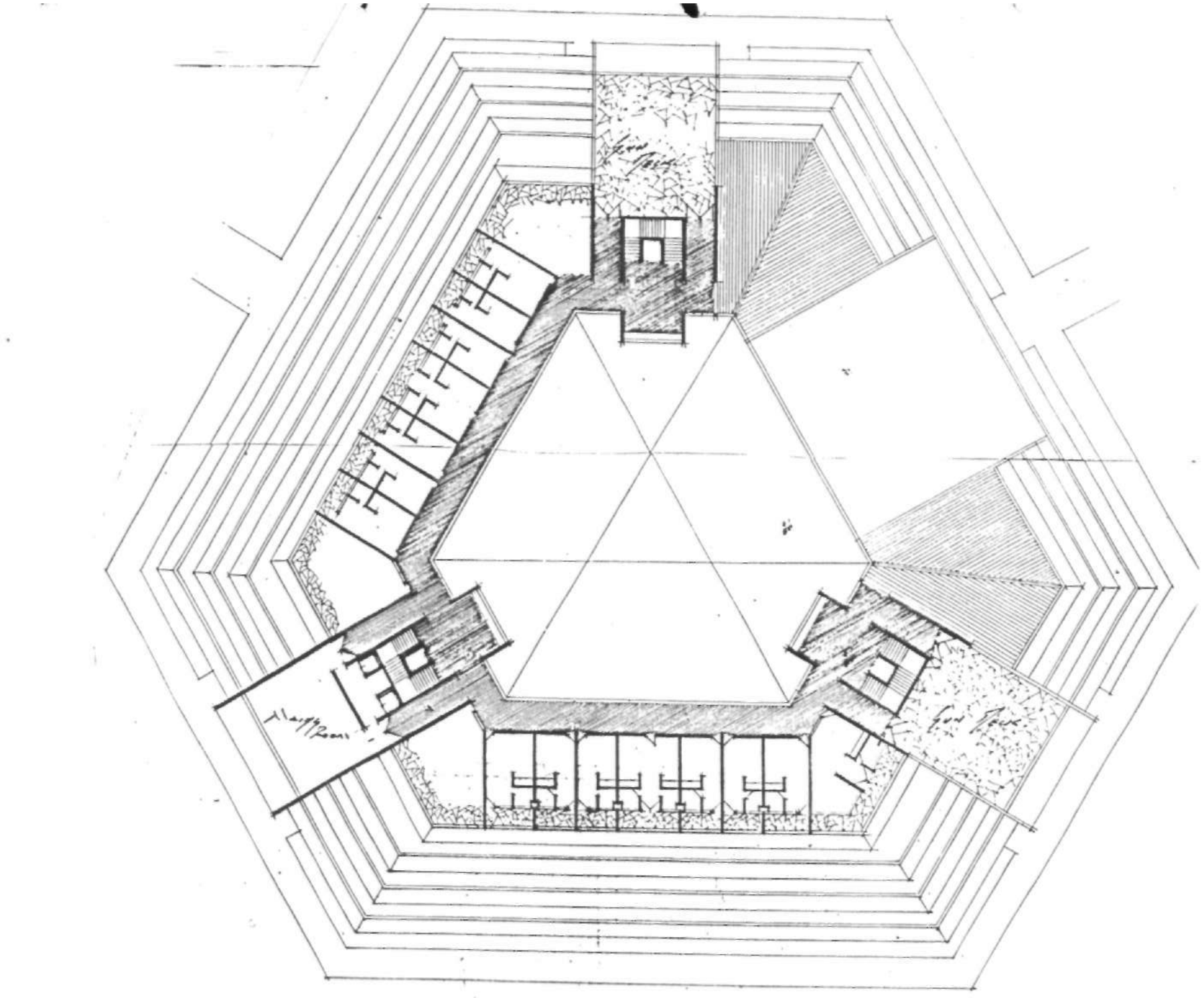
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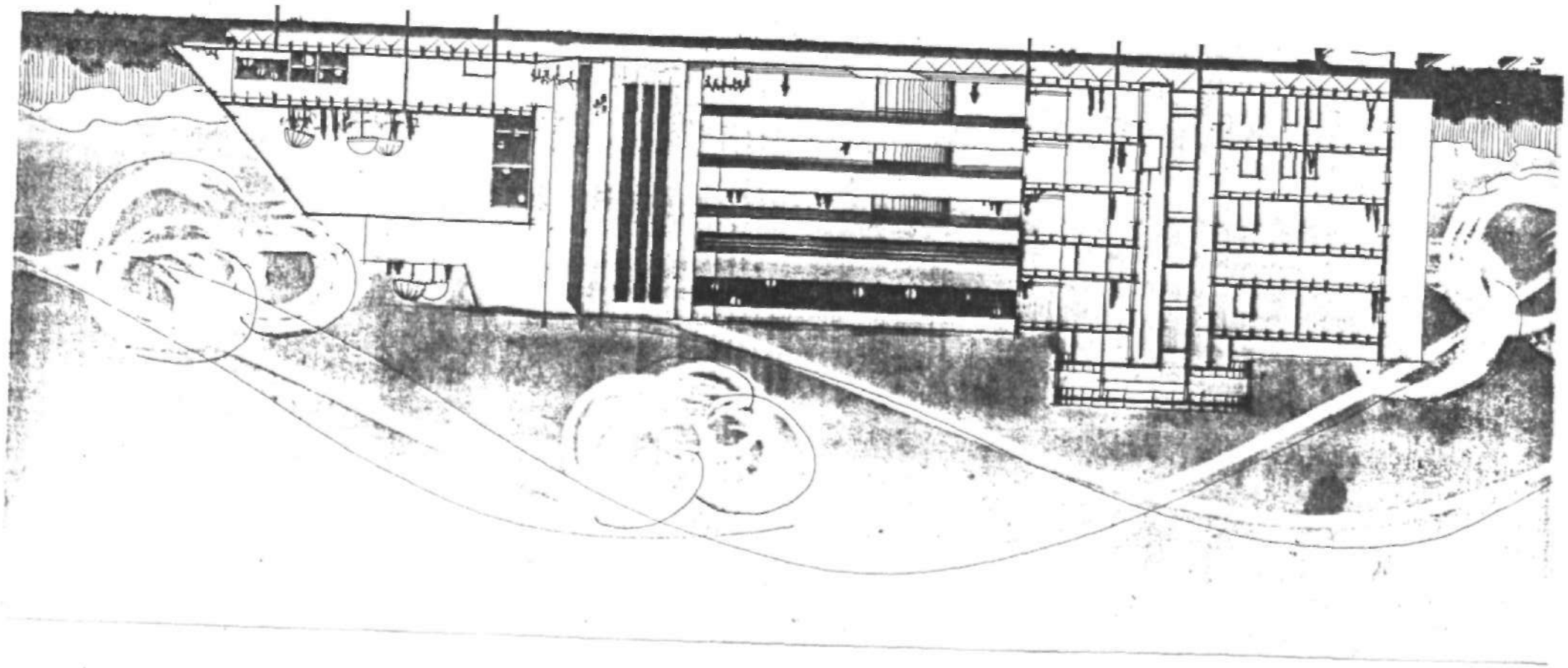


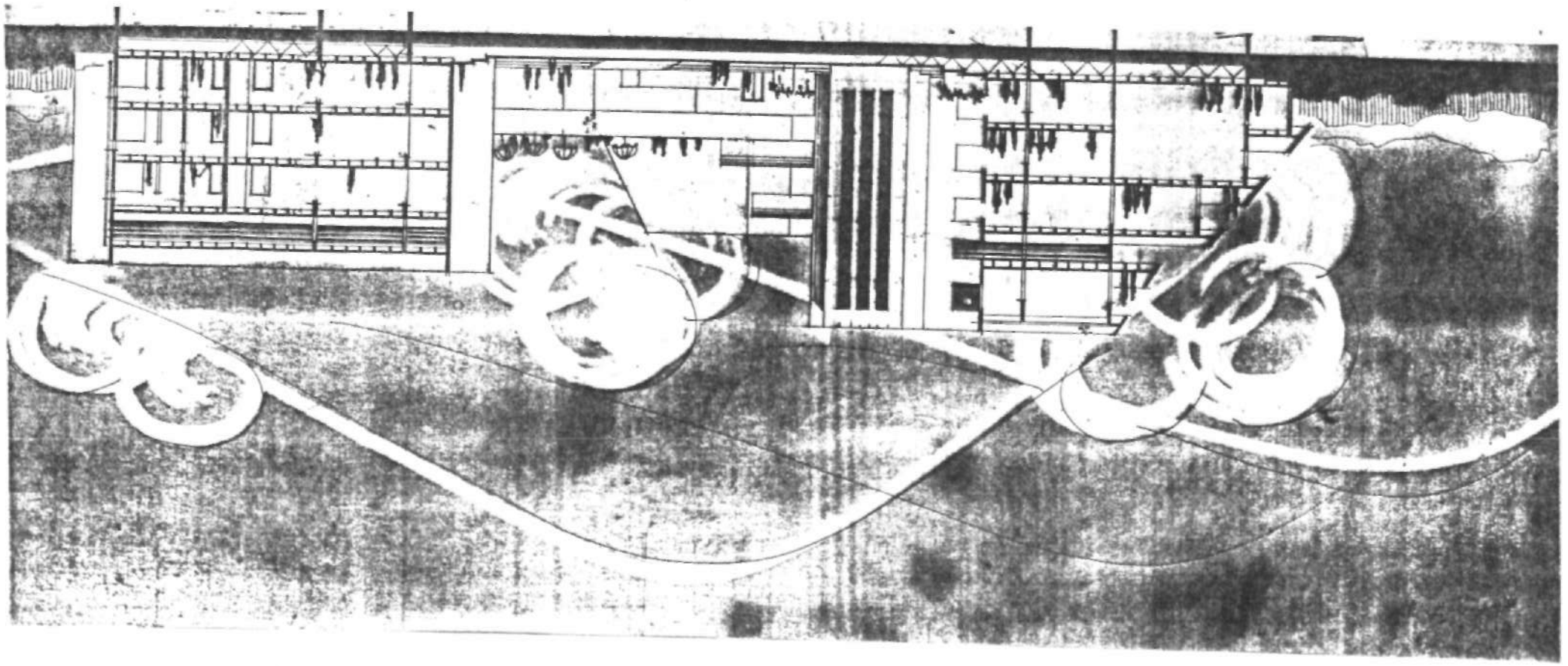


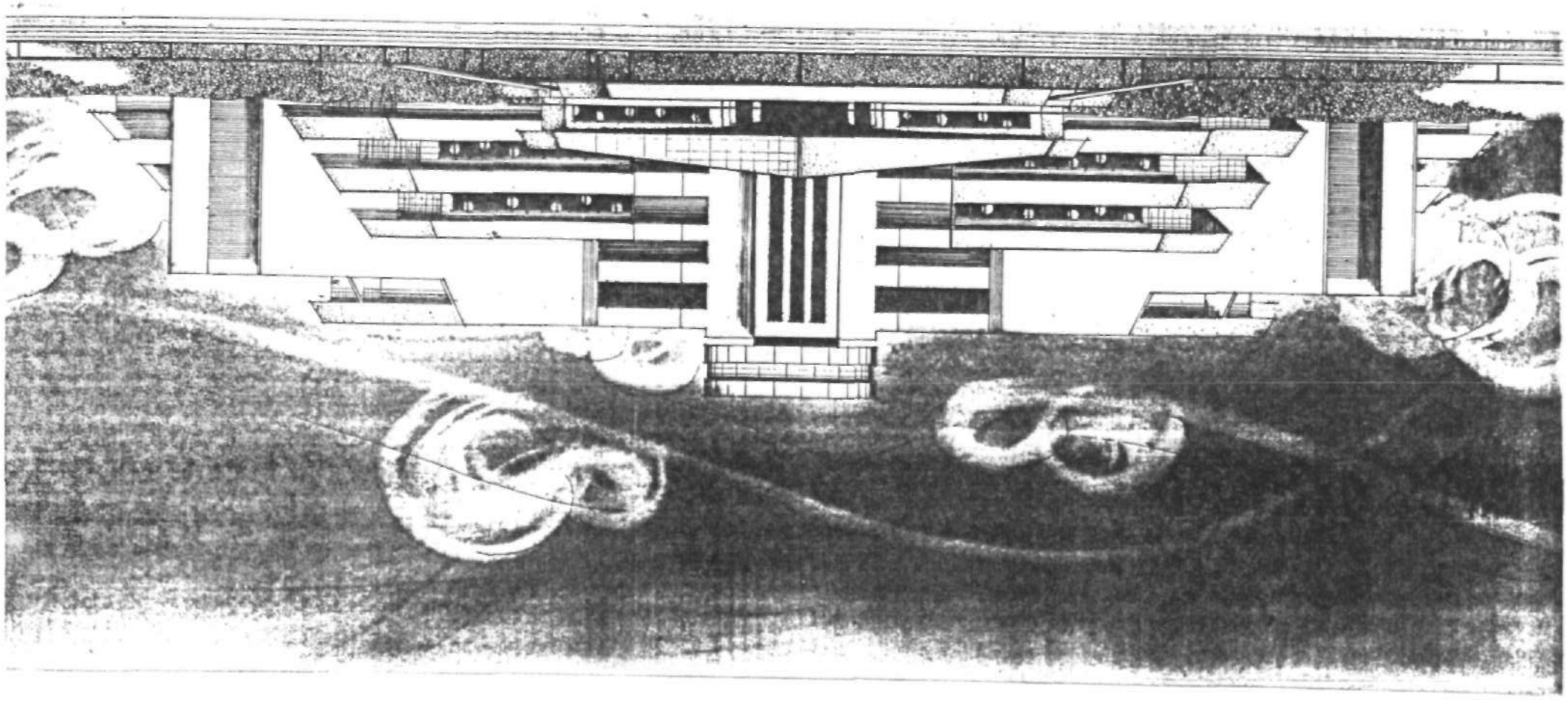

GENERAL STORE
VIEWING TERRACE
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STORE
STORE
STORE
STAFF ROOM
LOUNGE ROOM
SPECIALTY RESTAURANT
SPECIALTY RESTAURANT
STORE
STORE

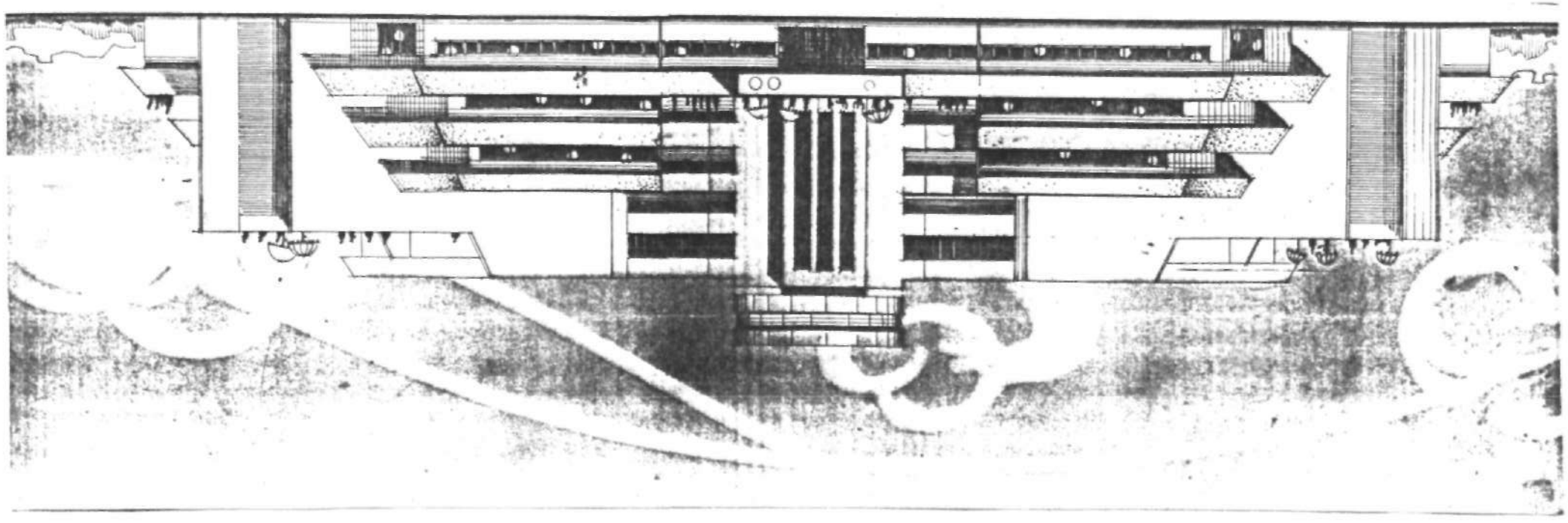


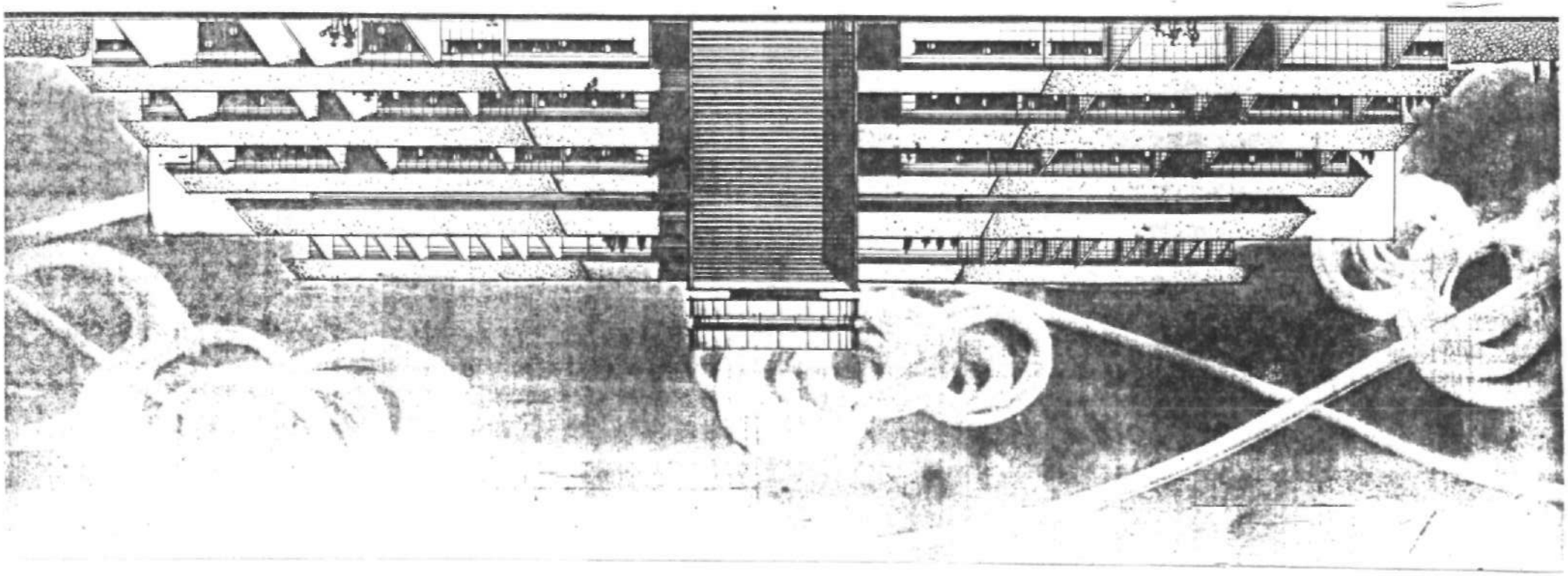

Gun Deck

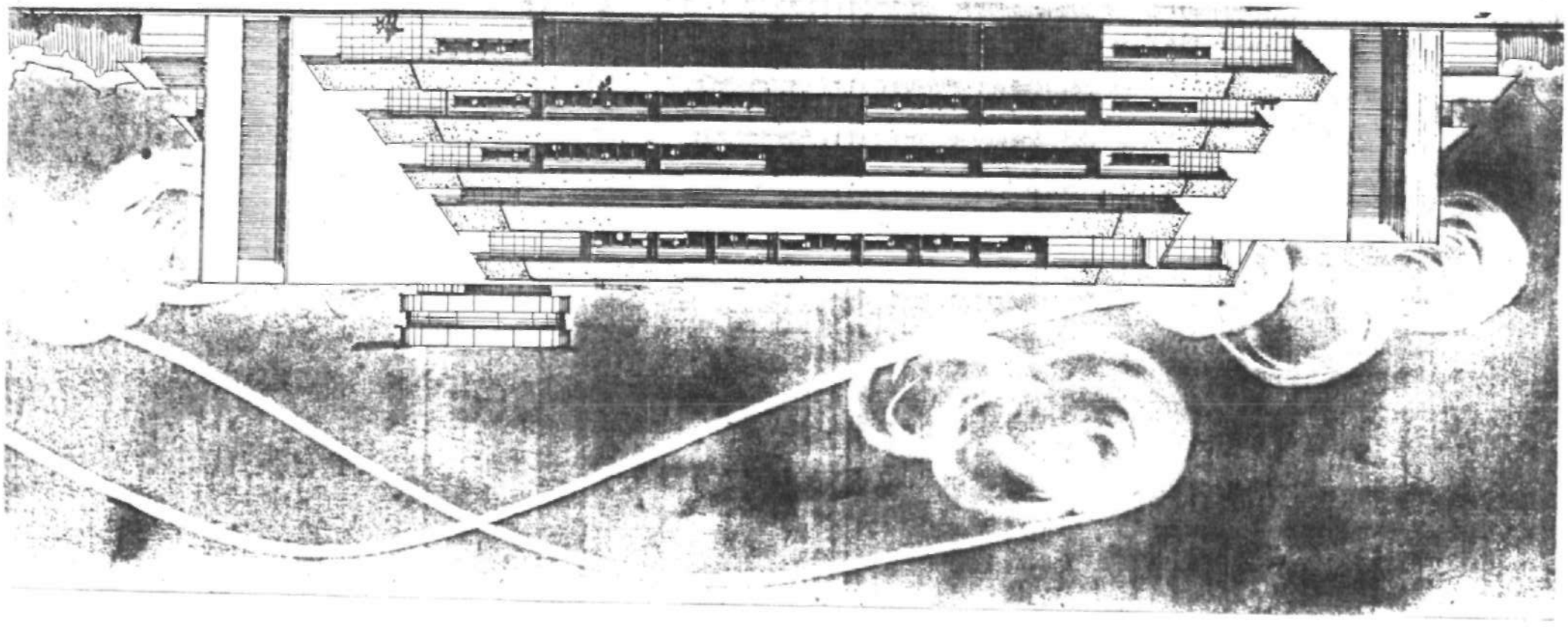


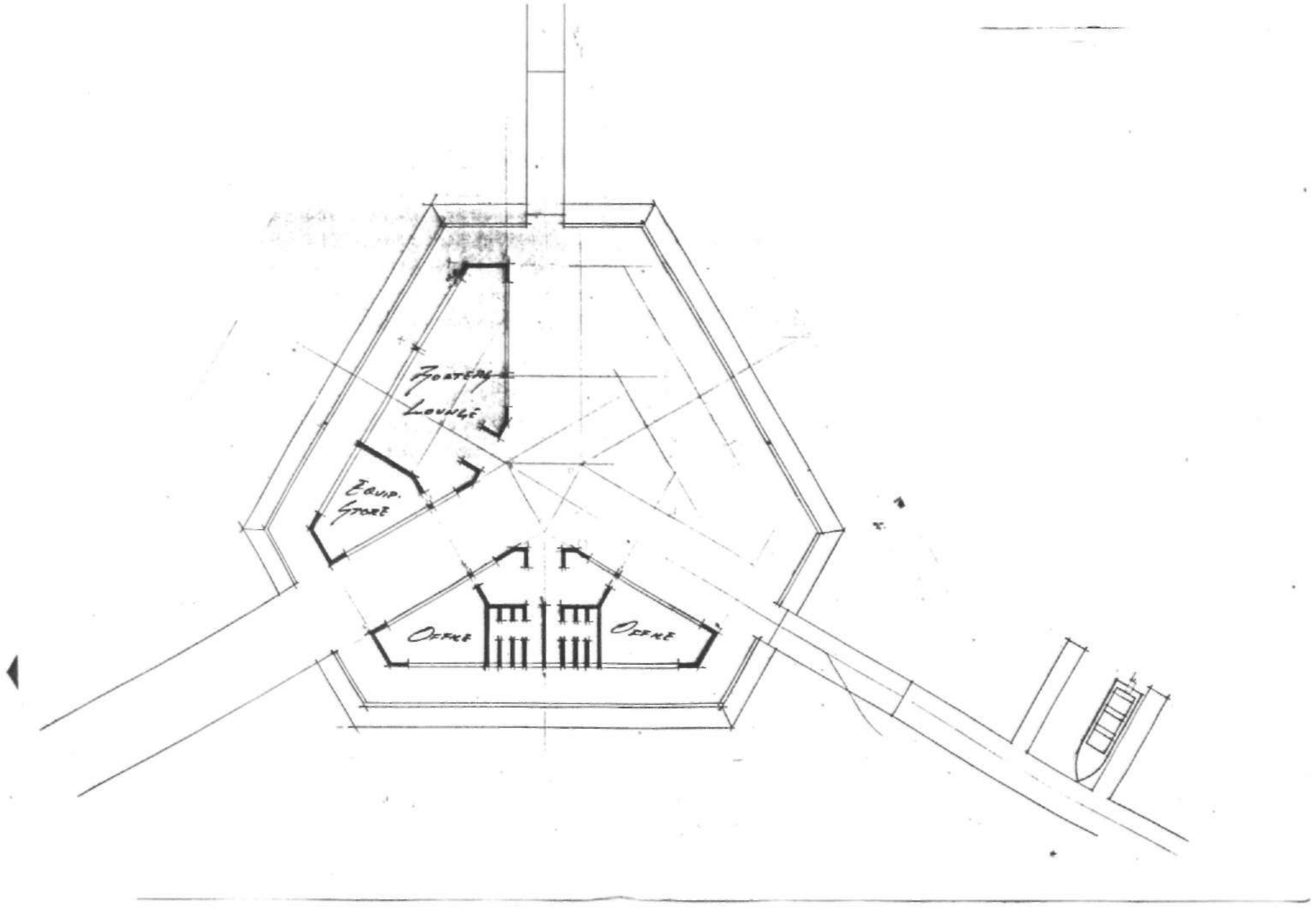











FOOTBALL
LOUNGE
EQUIP.
STORE
OFFICE
OFFICE

