RECREATION CENTRE DESIGN FOR IKORODU, LAGOS

A BLEND OF AN AESTHETIC AND FUNCTIONAL LANDSCAPE WITH THE ARCHITECTURAL STRUCTURE

BY

FAMIYESIN OLUFEMI O.

(BSc ARCHITECTURE)

MATRICULATION NUMBER:

08CA07426

A DISSERTATION SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE, SCHOOL OF POSTGRADUATE STUDIES, COVENANT UNIVERSITY, OTA.

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE MASTER OF SCIENCE (M.Sc.) DEGREE IN

ARCHITECTURE.

MAY, 2013

DECLARATION

I declare that this project is based on a study undertaken by me Famiyesin Olufemi in the department of Architecture, Covenant University under the supervision of Dr. A. P. Opoko This work is unique and has not been submitted for the award anywhere else. All ideas are a product of my personal research. Where the views of others have been expressed, they have been duly acknowledged.

FAMIYESIN. Olufemi Olufisayo.

08CA07426

Signature / Date	
CERTIFICATION	
It is hereby certified that this dissertation, written by Famiyesin Olu	ıfemi., was supervised
by me and submitted to the Department of Architecture, Col	llege of Science and
Technology, Covenant University, Ota.	
• Supervisors:	
Dr. A. P. Opoko	Signature & Date
• Head of Department:	

.....

Dr. A. B. Adeboye

Signature & Date

DEDICATION

This research is dedicated to the glory of God for His grace and provision throughout the research period. I also like to dedicate this research to my parents; Dr. and Mrs. Famiyesin, my brother; Kayode Famiyesin and the entire students of the department of architecture especially the MSc 2 class for being indeed a source of reassurance and

encouragement.

ACKNOWLEDGEMENT.

Firstly, I would like to give all the thanks to God for being my source of strength and help throughout the research period.

I will like to thank my parents, Dr. and Mrs. Famiyesin, my H.O.D. and supervisors for their intense support throughout this project exercise.

Special thanks to my lecturers who took time to lecture me right from 100level up to this level; Prof. E. A. Adeyemi, Dr. (Arc.) Aderonmu, Dr. (Arc.) Adeboye, Arc. Fulani, Arc. Adewale, Arc. Izobo – Martins, Arc. Adewale, Dr. (Arc.) Alagbe, Arc. Babalola, Arc. O. A. Dare-Abel, Arc. Ediae, Arc. E. N Ekhaese, Arc. Obi Uwakonye and Dr. A.A. Oluwatayo.

I will also like to thank all my floor mates for all the forms of support and encouragement they provided.

To the class of 2014, I would like to say thank you for being a wonderful class. Peace and Unity. Amen!

ABSTRACT

Recreation involves any activity a person engages in for the rejuvenation of the mind, body and the soul. Recreation is of great necessity in order to refresh the total man. From the popular adage "all work and no play makes Jack a dull boy", one can see that recreation should be integrated into any community if the physical and mental health of individuals are to be properly ensured.

In the city of Lagos there is a considerable decline in the number and functionality of recreational centers present. This has been attributed to poor turnout of visitors and subsequently poor maintenance of the centers.

This project is aimed at designing a recreation center as a relaxation place which establishes a balance between building and nature therefore serving the needs of residents, industrial workers and others in the project location, Ikorodu.

This dissertation "A Recreation Centre Design For Ikorodu, Lagos: A blend of an aesthetic and functional landscape with the architectural structures", is aimed at providing with appropriate architectural and landscape facilities, and enabling an

environment which will inspire, entertain and connect visitors with nature which will in turn influence their total wellbeing most especially mentally, bringing out the total man. In conclusion, part of the recommendations is for the Lagos state government to be more serious in providing well designed recreational parks if the vision for a tourist friendly state is to be achieved. The people should be studied on what interests them and should be included in any design proposal of the center. This would go a long way in ensuring viability of the park.

Key words: Recreational, Architectural and landscape facilities.

TABLE OF CONTENTS

Title page	i
Certification	ii
Dedication	iii
Acknowledgement	iv
Abstract	V
Table Of Contents	vi
CHAPTER ONE: INTRODUCTION	
1.0 Introduction.	1
1.1 Brief description of building type	3

1.2 Statement Of Research Problem
1.3 Aim Of Study4
1.4 Research Questions
1.5 Objectives Of Study4
1.6 Justification For The Project5
1.7 Location
1.8 Client's Background History6
1.9 Scope Of The Study8
1.10 Research Methodology8
1.11 Limitations To Study9
CHAPTER TWO: LITERATURE REVIEW
CHAPTER TWO: LITERATURE REVIEW 2.0. A Review Of The State Of The Design Of A Recreational Centre
2.0. A Review Of The State Of The Design Of A Recreational Centre10
2.0. A Review Of The State Of The Design Of A Recreational Centre
2.0. A Review Of The State Of The Design Of A Recreational Centre 10 2.1 Historical Review Of The Recreational Centre 10 2.2 Origins Of Games And Sport 10
2.0. A Review Of The State Of The Design Of A Recreational Centre. 10 2.1 Historical Review Of The Recreational Centre. 10 2.2 Origins Of Games And Sport. 10 2.3 Recreation And Leisure In Ancient Civilizations. 11
2.0. A Review Of The State Of The Design Of A Recreational Centre.102.1 Historical Review Of The Recreational Centre.102.2 Origins Of Games And Sport.102.3 Recreation And Leisure In Ancient Civilizations.112.4 Ancient Egypt.12
2.0. A Review Of The State Of The Design Of A Recreational Centre.102.1 Historical Review Of The Recreational Centre.102.2 Origins Of Games And Sport.102.3 Recreation And Leisure In Ancient Civilizations.112.4 Ancient Egypt.122.5 Ancient Assyria And Babylonia.12
2.0. A Review Of The State Of The Design Of A Recreational Centre.102.1 Historical Review Of The Recreational Centre.102.2 Origins Of Games And Sport.102.3 Recreation And Leisure In Ancient Civilizations.112.4 Ancient Egypt.122.5 Ancient Assyria And Babylonia.122.6 Ancient Israel.13

2.10 Recreation And Related Issues	16
2.10.1 Recreation.	16
2.10.2 Recreation and time	17
2.10.3 Recreation and health	17
2.10.4 Recreation and place.	18
2.10.5 Social Organizations.	18
2.11 Recreation Design.	19
2.11.1 Recreation Places.	19
2.11.2 Problems in recreation design.	19
2.11.3 Solutions to problems in recreation design.	20
2.11.4 Classification of recreation building.	20
2.12 Description Of Certain Spaces.	22
2.13 Conceptual Approaches In Recreation design	24
2.14 Development Of Parks And Recreational Areas	25
2.15 Types Of Recreational Spaces	25
2.15.1 Active recreation Spaces	25
2.15.2 Passive Recreation Spaces.	26
2.16 Botanical Recreational Gardens	26
2.17 Recreational Centre Facilities	26
2.17.1 Desired Indoor Spaces	26
2.17.2 Desired Outdoor Spaces.	27
2.18 Technological And Environmental Solutions Commonly Used In Recrea	ational

Centres

2.19 Types of Structures
2.19.1The Pneumatic Structures
2.19.1.1 Advantages Of Pneumatic Structures
2.19.2 A Pneumatic Structure in the Chaoyang Park In China
2.20 Important Factors/Issues Specific To Recreational Centre Design
2.20.1 Accessibility And Circulation
2.20.2 Social Factors
2.20.3 Landscaping
2.20.4 Architectural Forms
2.20.5 Aesthetic And Panorama Views
2.20.6 Building Materials
2.20.7 Acoustics
2.20.8 Safety And Security
2.21 Design Problems
2.21.1 Insufficient Number of Facilities To Attract And Keep The Interest Of The
Public.36
2.21.2 Use Of Banal Architectural Parks
2.22.3 Poor Maintenance Culture
2.22.4 Inadequate Flexibility in The Layout
2.23 Benefits Of Recreation
2.23.1 Personal Benefits

2.23.2 Economic Benefits
2.23.3 Social Benefits
2.24.4 Environmental Benefits
CHAPTER THREE: AREA OF INTEREST
3.1 Area Of Interest: A Blend Of An Aesthetic And Functional Landscape With The
Architectural Structure41
3.2 What Is Landscape?41
3.3 Elements and Principles of Landscape Design
3.4 Elements of Design42
3.4.1 Line43
3.4.2 Properties of Lines
3.4.2.2 Curved Lines
3.4.2.3 Vertical Lines
• Horizontal Lines44
• The Principles of Landscape Design
• The Artistic Principles
3.7 The Reality Principles67

CHAPTER FOUR: CASE STUDIES

4.3	Ikoyi	Club,	Ikoyi,
Findings			76
4.2.6			
Significance			76
4.2.5			
4.2.4 Menu of servi	ces		76
4.2.2 Membership fo	ees and Plan		73
4.2.1 Location			73
4.2 Sunfit Fitness A	nd Spa		73
4.1.11 Observation.			72
4.1.10 Facilities			72
4.1.9 Environmenta	l Support		71
4.1.8 Funding			71
4.1.7 Law and order			71
4.1.6 Open Hours			70
4.1.5 The Club Men	nbership		70
4.1.4 The Staff			70
4.1.3 The Ruling Co	ouncil		69
4.1.2 The History			69
4.1.1The Location			69
4.1 Lagos Country (Club		69

Lagos	76	
4.3.1		The
Location		76
4.3.2		The
History		76
4.3.3		The
Management		77
4.3.4		The
staff		79
4.3.5	The	Club
Membership	79	•
4.3.5	Law	and
order	79)
4.3.6		
Funding		79
4.3.7		
Facilities		80
4.3.8		Materials
used	80	
4.3.9		Layout
	•	80

4.3.10

Findings				81
4.4	Wonderland	Amusement	Park	And
Resort		82		
4.4.1		Location:		Abuja,
Nigeria			82	
4.4.2				
Characters				82
4.5	Arapahoe	Park	And	Recreation
District		84		
4.5.1				The
Plans				84
4.5.1				The
Elevations				84
4.5.2				The
Perspectives				86
4.5.3				
Project				86
4.6		Wild		Wadi
Park				86
4.6.1	Location:	Dubai	United	Arab
Emirates		86		

4.6.2 Challenges With 7	The Design Of T	he Park And	Unique	
Solutions	87			
4.6.3				Facilities
include			87	7
4.6.4				
Characteristics				88
4.7	Beach		Park/	Pleasure
Gardens			92	
4.7.1		Jumeira		Beach
Park			92	
4.7.2				
Characteristics				92
CHAPTER FIVE: .SI	ΓE AND ENVI	RONMENT	AL ANALYSIS	
5.1				Site
Description				97
5.1.1				Historical
Backgound			97	
5.1.2		The		Master
Plan	• • • • • • • • • • • • • • • • • • • •		99	
5.1.3		The		Residential
Area			99	

5.1.4	The	Industrial
Area		99
5.2		Site
Location		100
5.3	Site	Selection
Criteria		100
5.3.1		Physical
criteria		100
5.3.2		Environmental
Criteria		101
5.3.3		Socio-economic
criteria		101
5.3.4		Infrastructural
development		101
5.4		Site
Values		102
5.5		Climatic
Data		102
CHAPTER SIX: DESIGN CRITE	ERIA	
6.1		Design
Criteria		103

6.2	Design	Brief			
	103				
6.3					
Projec	et			• • • • • • • • • • • • • • • • • • • •	103
6.4					
Aim					103
• Pr	roject				
Ol	bjectives				103
6.6					Design/Planning
Consi	derations				103
6.7		Technolog	gy	And	Environmental
Criter	ia			105	
6.8					Facilities
	• • • • • • • • • • • • • • • • • • • •				106
6.9					Functional
Analy	'S				106
6.91		Indoor		Functional	Spaces
				106	
<i>(</i> 02	0	F1	C		
6.92		runctional	spaces		
•••••	10/				
6.10		Functional	And	Spa	ce Criteria

		108	
6.11	Equipment	And	Operational
Requirements		114	
6.11.1Lighting			
114			
6.11.2			Fire
Alarms			116
6.11.3			Flame
Detectors			116
6.11.4			Smoke
Detectors			116
6.11.5			Heat
Detectors			117
6.11.6			Ripple
Tank			117
6.11.7			Motorized
Vehicles			117
6.12			Services
Required			118
6.12.1Plumbing/Sar	nitary		

Installatio	ns		118	3
6.12.2	Electrical	Requirements		
11	8			
6.12.3 S	Sound Contro	1		
118				
6.12.4		,	Wall	Panels
				119
6.12.5				
Ventilatio	n			119
6.13	Te	chnological	And	Environmental
Criteria			120	
6.13.1	Materials/F	inishes		
120				
6.13.1.1				
Concrete.				120
6.13.1.2	Titanium C	Claddings		
120				
6.13.1.3				
Bricks				120
6.13.1.4				
Wood				121
6.13.1.5				

Steel				121
6.13.1.6				Building
Stones			12	21
6.14	Environmental	Conditions	s To	Be
Achieved		121		
6.15	Legal	A	nd	Planning
Regulations			122	
6.16	Desired	Behavoiur	And	Social
Needs		12	2	
6.17		Desired		Aesthetic
Goals			123	
6.18				Tree
Analysis				123
6.18.1	Palm	Tree	S	(Arecaceae)
			124	
6.18.1.1				Growth
Rate				124
6.18.1.2				Root
behaviour				124
6.18.2		Almond		Trees.
			124	
6.18.2.1		Growth		Rate

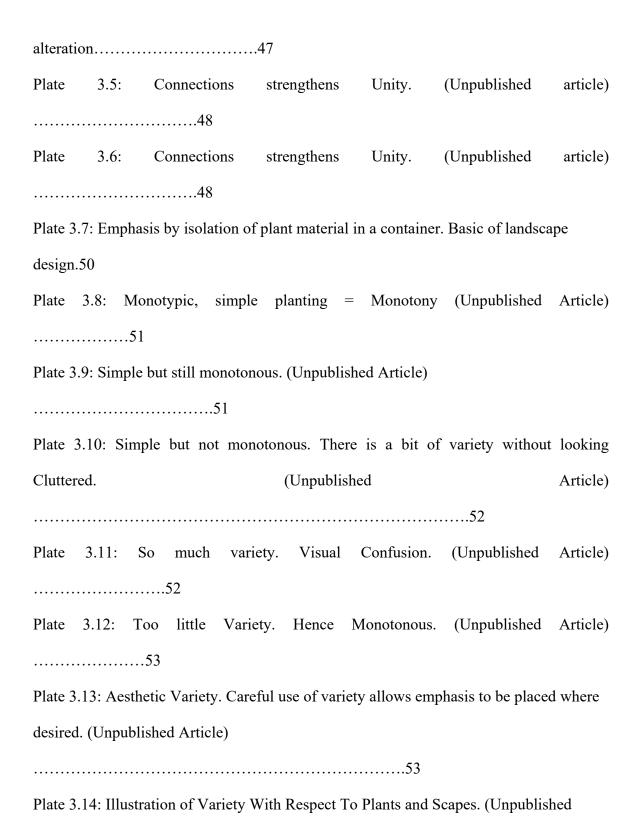
	125	
6.18.2.2		Root
behaviour	125	
6.18.3		Fir
Trees		125
6.18.3.1		Growth
Rate	125	
6.18.3.2		Root
Behaviour	125	
6.18.4		
Birch		126
6.18.4.1		
Betula		126
6.18.4.2		Growth
Rate	126	
6.18.4.2		Root
Behaviour	126	
CHAPTER 7 APPROACH TO DES	SIGN	
7.2	Schedule	Of
Accomodation	128	
7.3	Structural	Outline

Specifications		• • • • • • • • • •			131	
7.4						Services
						.132
7.4.1						Mechanical
Services					132	
7.4.2						Electricity
Services					133	
CHAPTER 8 RECOMM	ENDATION					
8.0 Recommended	Maintenance	Plan	For	The	Proposed	Recreational
Park134						
References						
136						

LIST OF PLATES

CHAPTER TWO

Plate 2.1: Six	Flutes Dating Bac	ck From 7000 T	To 9000 BC Pro	ovide Into the O	Cultural
Habits	of	an	Ancient	(Chinese
Society				.11	
Plate		2.3:		Pne	eumatic
Structure				31	
Plate	2.4:	P	Pneumatic	St	ructure.
			32		
Plate 2.5: The S	Steel and Glass Str	ucture in Eden's			
Project		33			
CHAPTER TH	REE				
Plate 3.1 Lines	in the landscape. I	Basic of landscap	e		
design		43			
Plate 3.2: Ur	nity Of Line. Pr	inciples of land	dscape design.	(Unpublished	article)
46					
Plate 3.3: Repe	eated plant types an	nd colours with li	ttle		
alteration		.47			
Plate 3.4: Repe	eated plant types an	nd colours with li	ttle		



Article).					
					53
Plate 3.15: Illustration o	f symmetry in	plants. (Unpub	lished Article	e)	
54					
Plate 3.16: Illustration o	f symmetry in	plants. (Unpub	lished Article	e)	
55					
Plate 3.17: Symmetrical	Balance aroun	d an Axis. Bas	ic of landsca	pe design.	
55					
Plate 3.18: Asym	nmetrical la	yout of	landscape.	Scene	from a
movie	58				
Plate 3.19: Unbalar	nced layout	around an	Axis. (Unpublished	Article)
58					
Plate 3.20: Fairly b	alanced and	pleasant to	the eye.	(Unpublished	Article)
58					
Plate 3.21: Asymmetrica	al balance arou	nd an axis. Bas	sic of landsca	pe design.	
58					
Plate 3.22: Proportion in	n plants. Basic	of landscape	design. Unive	ersity of Flori	ida (2010)
60					
Plate 3.23: Landscape v	vith proper pro	portion of var	ious greener	ies. Basic of	landscape
design. Un	iversity	of	Flori	ida	(2010)
			61		

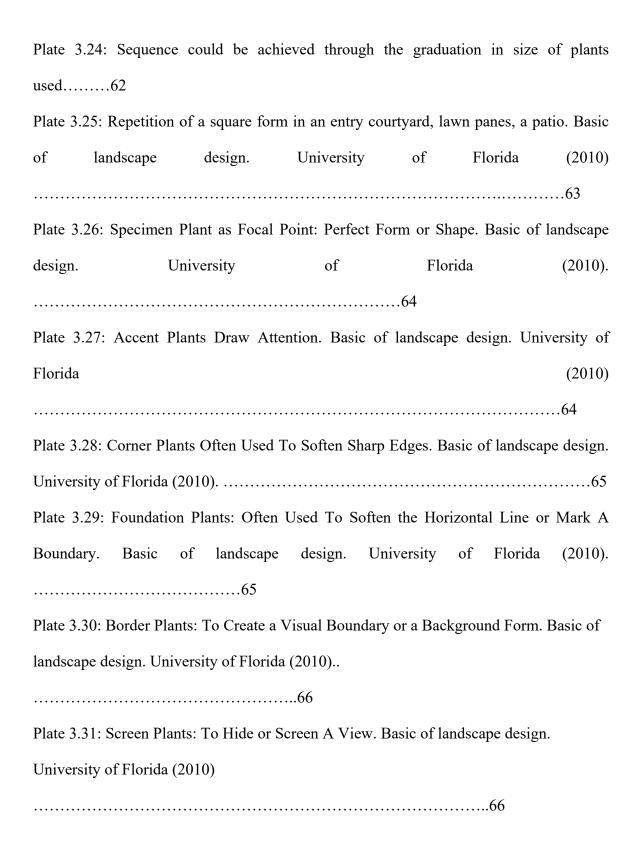


Plate 3.32: Shade Plants. Basic of landscape design. University of Florida (2010)
67
CHAPTER FOUR
Plate 4.1 Main
Entrance
Plate 4.2 Display
banner
Plate 4.3 Façade showing the
flag73
Plate 4.4 Approach
view73
Plate 4.5 Car park
view
Plate 4.6 Car park
view
Plate 4.7 Reception
office
Plate 4.8 Car park
view
Plate 4.9 Car park
view74

Plate 4.10				
Gents				74
Plate 4.11 Toilet				
interior				75
Plate 4.12				
Ladies				75
Plate 4.13 Lawn tennis				
court			75	
Plate 4.14				
Gents		•••••		75
Plate 4.15 Indoor				
Hall		• • • • • • • • • • • • • • • • • • • •	7	5
Plate 4.16 Stair leading to	indoor			
hall			75	
Plate	2	4.17		Outdoor
view			80	
Plate				4.18
pool	• • • • • • • • • • • • • • • • • • • •			81
Plate		4.19		Tennis
court			81	
Plate	4.20		The	fortified
façade			86	

Plate	4.21	Т	Гће		merry	go		
round					86			
Plate	4.2	22	7	The		fortified		
façade				• • • • • • • • • • • • • • • • • • • •	.87			
Plate 4.23 Arap	Plate 4.23 Arapahoe Park And Recreation							
District88								
Plate 4.24 Build	ding							
Elevations					88			
Plate	4.25	schematic	1	ayout	of	the		
park				89				
Plate 4.26 exter	rior							
scheme		•••••			92			
Plate 4.27exter	ior							
scheme					92			
Plate 4.28 aeria	ıl							
view					92			
Plate 4.29								
pool						93		
Plate 4.30 schematic								
aerial	aerial93							
Plate 4.31								
pool						94		

Plate 4.32				
pool				94
Plate 4.33				
				96
Plate 4.34 landsca				
	-		96	
-	••••••		90	
Plate 4.35 aerial				
view			97	
Plate 4.37 palms				
sitouts	• • • • • • • • • • • • • • • • • • • •		98	
Plate 4.39 burj al a	arab			
view			99	
Plate 4.40 play				
zone			99	•
CHAPTER FIVE				
Plate	5.1	A	map	of
Nigeria			100	
Plate	5.2	Map	showing	Lagos
state			100	

CHAPTER SIX

Plate 6	.1 Typical	l layout of t	furniture in	n a rest	aurant.	Neufert	Architect	data.
	112							
Plate	6.2	swings a	nd slic	des (Neufert	arcl	nitects	data)
			114					
Plate 6.3	3 Seesaw							
						1	14	
Plate 6.4	Slide and	climbing						
frame				• • • • • • • • • • • • • • • • • • • •	11	4		
Plate 6.5	5 Toddlers	swing (Neufert	architects d	ata)				
			114					
Plate	6.6	Green	house	(Ne	ufert	archi	tects	data)
		• • • • • • • • • • • • • • • • • • • •	115	i				
Plate	6.7	Average	dir	nensions		of	a	green
house				116				
Plate	6.8 Sou	rce: Standa	rd desk	with	drawe	ers (Are	chitect's	data)
	116							
Plate	6.9	Lightin	ıg	formats		(Architec	t's	data)
	119							

LIST OF TABLES

CHAPTER TWO

Table		2.1		Level		Of			
Stress									
	6.1 Spatial113	requirements	for	restaurant	(Neufert	Architect's	data)		
Table	6.2	Special		requirement		for	tree		
houses									
Table	6.3	Spatial	requirement for		for	pergolas	and		
Gazebos115									
Table	6.4	Spatial	requirement		for	administrative			
office117									
Table	6.5	Spatial	requirement		for	multipurpose			
hall117									
Table					Indoor				
games						131			
Table		7.2			Administrative				
court					132				

Table	7.3			Commercial
court		• • • • • • • • • • • • • • • • • • • •	133	
Table		7.4		Food
Court		•••••		134
Table		7.5		Maintenance
court		•••••	134	
Table		7.6		Miscellanous
court			134	
Table	7.7		Structural	Outline
Specification			135	