

**REIMAGINING THE VEDANTHANGAL
BIRD SANCTUARY
AND RESEARCH CENTRE**

A THESIS

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Architecture degree

By

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**DEPARTMENT OF ARCHITECTURE
SCHOOL OF BUILDING AND ENVIRONMENT**

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY) Accredited**

With Grade "A" by NAAC

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CHENNAI - 600 119**

MAY 2024



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BONAFIDE CERTIFICATE

This is to certify that Thesis Report is the bonafide work of **A. NANTHITHA (39210053)** who carried out the Thesis entitled "**REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY AND RESEARCH CENTRE**" under our supervision from December 2023 to May 2024.

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External Examiner

DECLARATION

I, **NANTHITHA. A** hereby declare that the Thesis Report entitled "Reimagining the Vedanthangal Bird Sanctuary and Research Centre" done by me under the guidance of **Ar. Seetha Visalakshi** (Internal Guide), **Ar. Ramkumar SSSR** (Internal Review Member), and **Ar. Sathish Moses** (External Guide) Sathyabama Institute of Science and Technology is submitted in partial fulfillment of the requirements for the award of Bachelor of Architecture Degree.

DATE: 20-05-2024

PLACE: Chennai



SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

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I convey my thanks to **Dr.Devyani Gangopadhyay**, Dean and Head of the Department, School of Building and Environment, Our Design Chair **Ar.Sarath C. Kanth**, Thesis Coordinator **Ar.Mohana gopiraj** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Thesis Internal guide **Ar. Seetha Visalakshi**, Internal Review member

Ar. Ramkumar SSSR and External Guide **Ar. Sathish Moses** their guidance, suggestions and constant encouragement which paved the way for the successful completion of my Thesis work.

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NANTHITHA. A

TABLE OF CONTENTS

CHAPTER No.	TITLE	PAGE No.
1	INTRODUCTION	6
1.1	INTRODUCTION	6
1.2	NEED OF THE PROJECT	6
1.3	AIM	6
1.4	OBJECTIVE	7
2	LITERATURE CASE STUDIES	8
2.1	SALIM ALI CENTER FOR ORNITHOLOGY	8
2.2	THE CORNELL LAB OF ORNITHOLOGY	16
2.3	SWISS ORNITHOLOGY INSTITUTE	22
3	PROGRAM	31
4	SITE STUDY AND ANALYSIS	36
4.1	SITE-1 VEDANTHANGAL BIRD SANCTUARY	36
4.2	SITE-2 RESEARCH CENTRE	43

5	ARCHITECTURAL DESIGN	46
5.1	MASTER PLAN	46
5.2	MUSEUM AND INTERPRETATION PLAN	47
5.3	AVIAN HEALTH CENTRE PLAN	48
5.4	RESEARCH CENTRE PLAN	49
5.6	STAFF ACCOMMODATION PLAN	50
5.7	CAFETERIA PLAN	51
5.8	STUDENT ACCOMMODATION PLAN	52
5.9	AVIARY PLAN AND DETAIL DRAWINGS	53
5.10	DETAILED DRAWINGS AND 3D VIEWS	54
6	REFERENCES	58

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Nestled in the heart of Tamil Nadu, India, Vedanthangal Bird Sanctuary stands as a testament to the harmonious coexistence of nature and humanity. Established in 1858, this avian haven holds the distinction of being one of the oldest bird sanctuaries in the country, attracting bird enthusiasts, ornithologists, and nature lovers from far and wide. Its name, "Vedanthangal," translates to "hamlet of the hunters," a historical reference to the village that once relied on hunting for sustenance. Spread across an expanse of lush greenery and shimmering water bodies, Vedanthangal Bird Sanctuary is a sanctuary not just for its feathered inhabitants but also for the myriad of ecosystems that thrive within its boundaries.

The sanctuary is a vital breeding ground and wintering haven for a diverse range of avian species, making it a crucial hub for bird conservation efforts in the region. The breathtaking landscape of Vedanthangal Bird Sanctuary is characterized by an intricate network of lakes, ponds, and marshes, providing an ideal habitat for both resident and migratory birds. As dawn breaks, the serene waters come alive with the melodious calls and vibrant plumage of countless bird species, transforming the sanctuary into a symphony of nature's wonders.

This thesis embarks on a journey to dissect the built environment of Vedanthangal Bird Sanctuary, delving into the intricacies of structures designed to protect and nurture the avian inhabitants. By analyzing the existing infrastructure, observing its impact on the local ecology, and envisioning future architectural interventions, The aim is to contribute to the ongoing discourse on sustainable design and ecological preservation.

1.2 NEED OF THE PROJECT

The location of this site is 3 km from the bird sanctuary in the eco-sensitive boundary. Experiencing the same habitat of birds will help the scholars to know more about them. The center can make people aware of the importance of birds as well as other living beings, the importance of the wetland, and the need for its conservation. The center could propose new projects for the betterment of the ecosystem

1.3 AIM

- The aim of this project is to conserve and develop the Vedanthangal bird sanctuary which is home to a variety of bird species. It attracts thousands of bird species every year because its rich in biodiversity
- Provide a research centre and which Provide a space where the researchers and scholars studying about birds and other natural beings be in the same atmosphere and study about them.

1.4 OBJECTIVE

- To enhance eco-awareness and conservation education of all the stakeholders visiting the sanctuary.
- A center where people working on the same field of study can share their experiences or other people learn about them.
- To enhance the eco-tourism near the bird sanctuary.

1.5 LITERATURE CASESTUDY

- SALIM ALI CENTER FOR ORNITHOLOGY AND NATURAL HISTORY (SACON)
- THE CORNELL LAB OF ORNITHOLOGY
- SWISS ORNITHOLOGY INSTITUTE

CHAPTER 2

LITERATURE CASE STUDIES

2.1 SALIM ALI CENTER FOR ORNITHOLOGY AND NATURAL HISTORY (SACON)

Location: Anaikkatty, Coimbatore, Tamil Nadu

Architect: Ar. Laurie Daker, C O S T F O R D

Built-up area: 4500 sq. m.

Climate: Tropical wet and dry

Temperature : 18°C – 35°C

Rainfall: 700 mm p.a

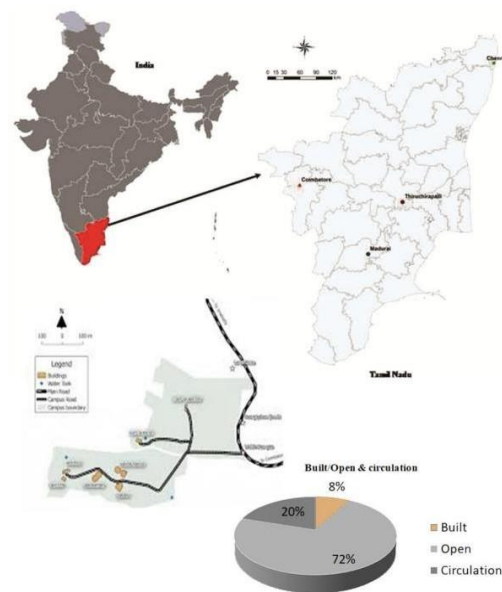
Vegetation: Highly vegetated area on the foot of the western Ghats

Soil: Red soil

SACON is the only center in India where institutional and research activities conducted about the birds as well as wetland ecosystems and its inhabitants. The center is located in Anaikkatty, Coimbatore, Tamil Nadu. The centre was set up with the help of Bombay Natural History Society (BNHS), now Bharath Natural History Society. SACON was dedicated to the nation on February 11, 2000 (SACON, 2015)

SACON conducts research in ornithology covering all the aspects related to biodiversity and natural history helps for sustainable use through research, education, and people participation with bird and central place. Prime focus is to conduct studies on conservation of birds and their habitats.

Being an institution committed to nature conservation, it was decided to have buildings for SACON IN TUNE WITH ITS PHILOSOPHY OF Eco friendliness in every action. Therefore, the renowned architect late Mr. Laurie baker, who was world famous for employing new and innovative technologies for constructing ecofriendly buildings was requested to design the buildings. He proposed to construct the building for sacon by utilizing optimum space, natural light, and breeze and also providing open atriums in each building to develop gardens. The sacon campus has attracted the attentions of a lot of students of architecture backgrounds from across the country as well as others interested in an aesthetically pleasing approach to building construction that is a cost-effective alternative as compared to technologies of modern building construction.

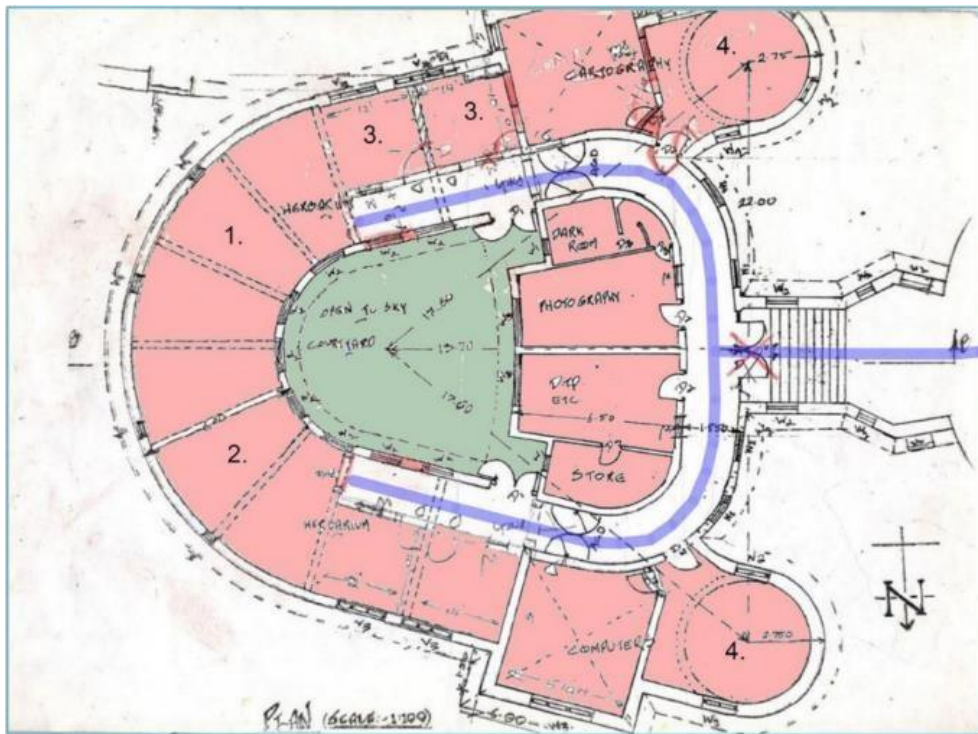


Admin main block



Top view of SACON

ADMINISTRATIVE BLOCK



Plan of rear block

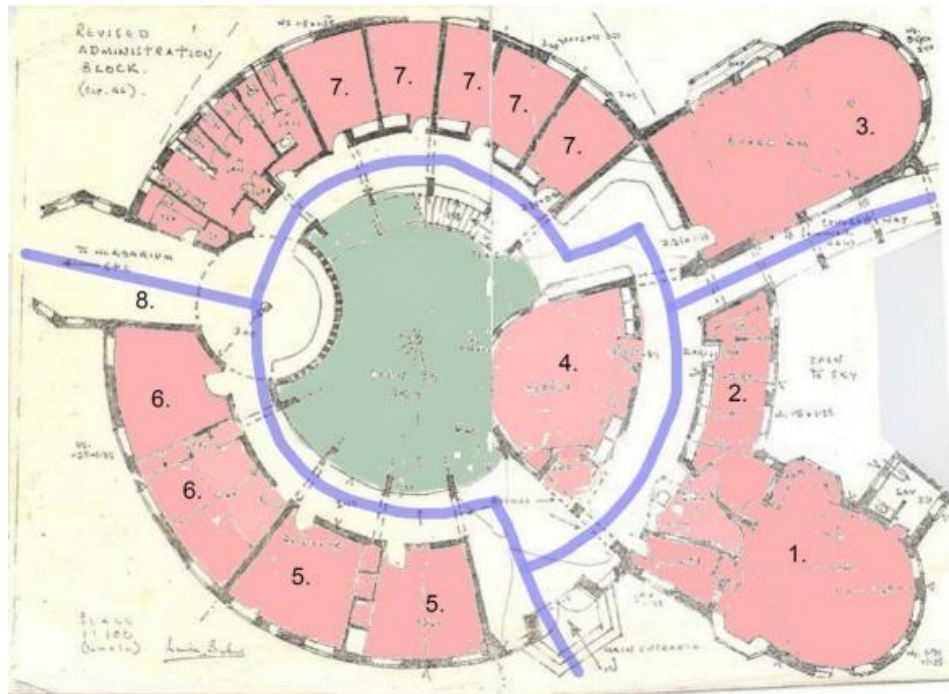
The rear block is the place where the official activities are carried on.

The rear block consists of:

1. Administration office

2. finance office
3. Site Engineer's Cabin
4. Computer Lab

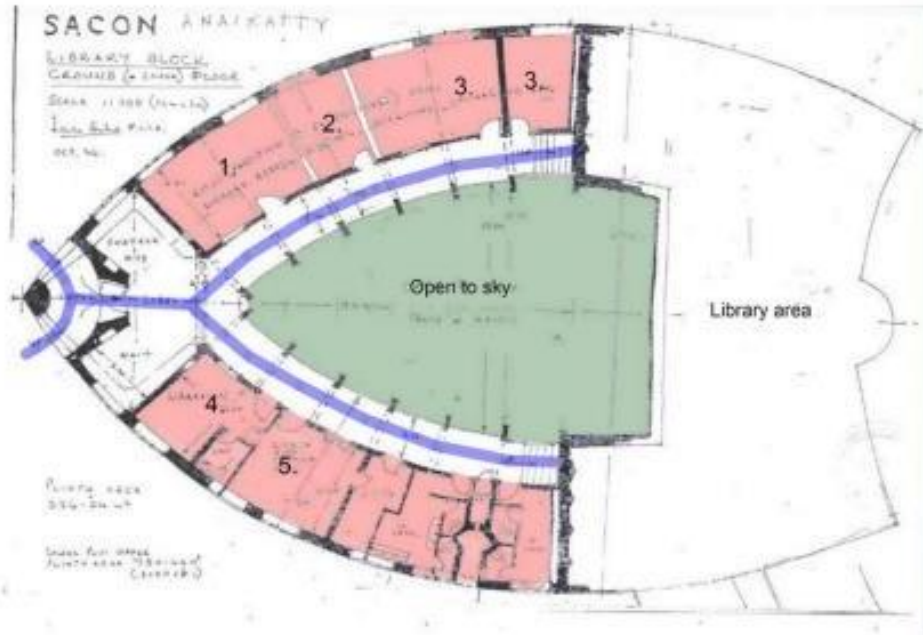
This connecting lobby connects the main and rear block



Plan of main block

The main block is the entrance to the administration section. The block is facing South-East direction at the entrance a security guard is there. Then for the staff, a biometric system is installed to mark the attendance. The main block consists of

1. Director's office
2. Director's PA
3. Conference room
4. A common waiting room cum xerox center
5. Principal scientist's office
6. Scientist's office
7. Junior scientist room's
8. A connecting lobby

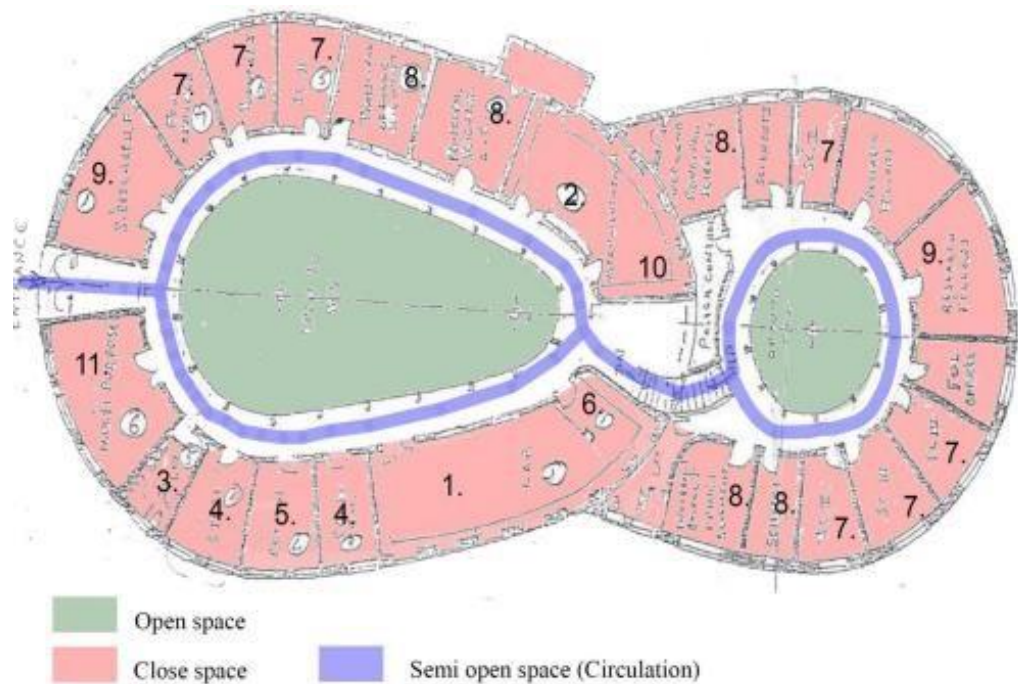


Library Block

The library block is placed in such a way that it is facing the administrative block. In this block also the architect has used the advantage of existing land profile. The library block is seemed to be a double storied building but actually it is not. The library block is consisting of:

1. Seminar hall
2. Scientist's offices
3. Student's rooms
4. 4. Principal's cabin
5. Security room
6. Library
7. Book store
8. Periodical station
9. Publication display

- 10. Old volume store
- 11. E- Resources centre
- 12. Map store
- 13. Store room for old periodicals



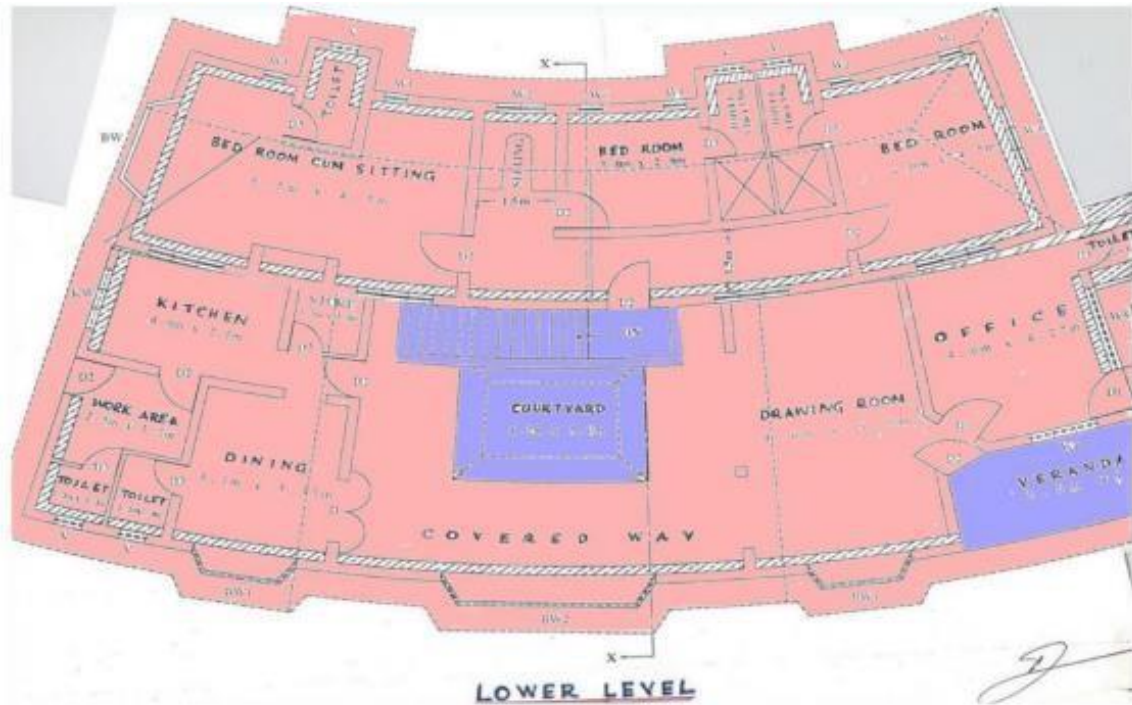
Laboratory Complex

Laboratory complex is also designed using the existing land profile and resemble a bite of Library complex. It is the main block in the site, Where the main research activities happen.

The laboratory block is consisting of:

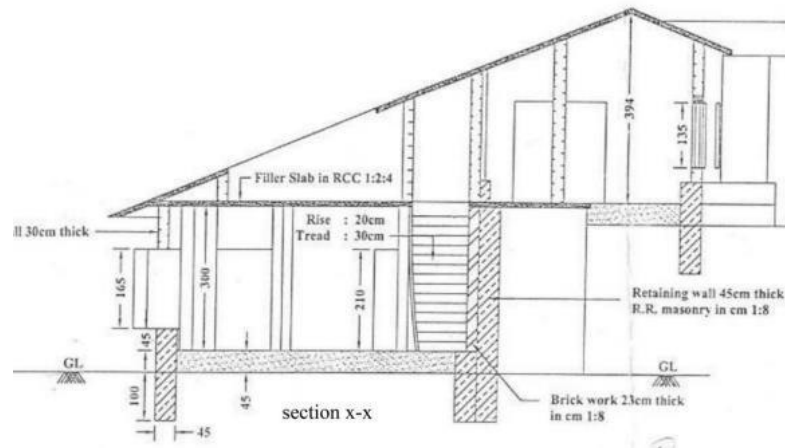
- 1. Eco – toxicology lab
- 2. Environmental impact assessment lab
- 3. Equipment room
- 4. Chemical store
- 5. Post mortem room
- 6. Research student's room
- 7. Scientist's room
- 8. Electrical switches and battery room

9. Sample store.

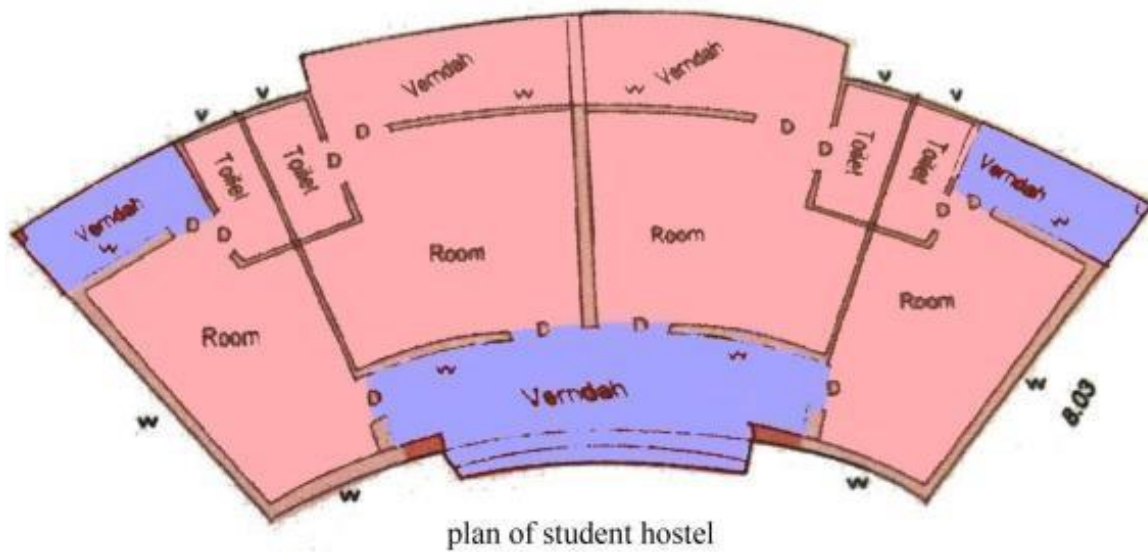


Guest House

The guest house is placed far away from other blocks and there is no proper connection to other blocks from the guest house. It is also an artwork from the architect using the site profile. He used a 45 cm thick retaining wall in the block." the only direct access to the guest house is from the main gate

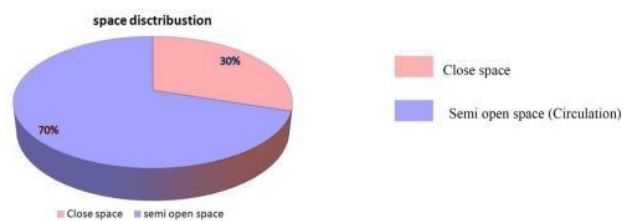


Section x-x



Student hostel

There are four rooms in students hostels which accommodate 12 students at a time.





2.1.2 AREA OF STUDIES;

Conservation Biology:-

It studies on various taxa that include presence and monitoring surveys, basic ecological studies, to address resource use, and genetic studies addressing evolutionary and ecological questions.

Conservation Ecology:-

It deals with the preservation and management of biodiversity, where biodiversity refers to the whole world including all species and their interactions with each other.

Ecotoxicology:-

It is the study of effects of toxic chemicals on biological organisms, at the population, community, or ecosystem level.

Environmental Impact Assessment:-

They work on the general Environmental Impact Assessment and development of Environmental Management Plans (EMPs), and other development projects mentioned in environmental legislation.

Landscape Ecology:-

Works on sustainable use of natural resources. They try to develop remote sensing and GIS in forest and wildlife ecology.

Ornithology:-

They study all the features of different and different birds in the various parts of the world

Wetland Ecology:-

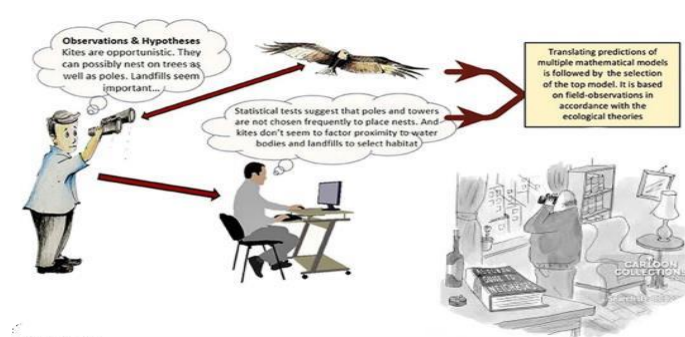
Their emphasis in research will be to study the ecological aspects of the wetlands and its utility to the flora and fauna including the bird species

2.1.3 INFERENCES OF CASE STUDY

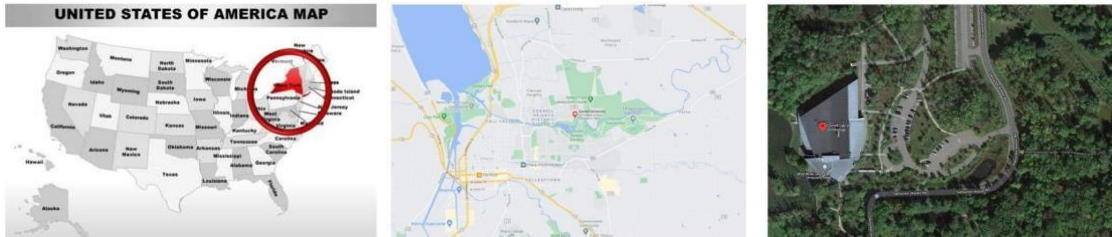
The scholars has to travel long distances to find and study about the birds and also the scholars studying about the wetland ecosystem also travel long distances for their studies. It is far away from the city and other infrastructure like hospital and all. But the sacon has shown the best example of utilizing the existing land profile at its maximum, With minimum land digging and filling.

The organic shapes followed by architect helps the building to with stand the earthquake. The incorporation of central atrium in every major blocks is very good for the natural ventilation and lighting.

The concept of virtual park room in Patuxent Wildlife Research Centre is really impressive. When a person enters the room he/she gets a feel of he/she is entering into the real bio reserve



2.2 THE CORNELL LAB OF ORNITHOLOGY



Location: Ithaca, New York, United states of America

Type: Research and conservation institute

Area ; 7400 sqm

Architecture Firm : RMJM hillier

Architects: Nicholas Garrison

Material: Wood,Steel,Stone, Glass

2.2.1 AIM;

The Cornell Lab of Ornithology is a world leader in the study, appreciation and conservation of birds. Hallmarks are scientific excellence and technological innovation to advance the understanding of nature and to engage people of all ages in learning about birds and protecting the planet.

2.2.2 Introduction:

The 226 acre sapsucker wood sanctuary contains more than 6 km of trails takin visitors around sapsucker pond on

Boardwalks, through wetlands and forests

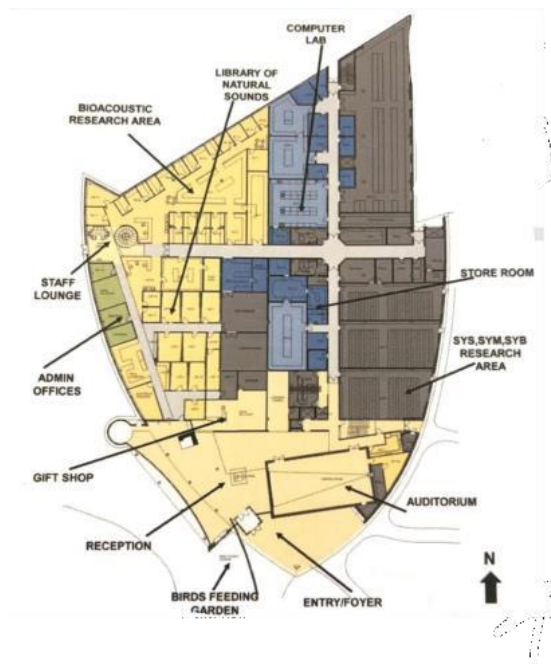
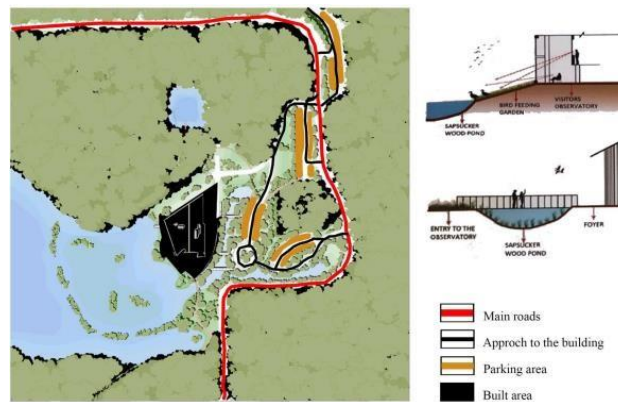
More than 200 species of birds have been recorded in the bird sanctuary. Approximately 55,000 people visit the sanctuary and public area of the cornell lab each year.

The visitor center is open dailty from 9.00 Am to 4.00 pm. Coenell university centre for birs and diversity is 7400 square meter building and a one of a kind facaility attracting bird and the world's top research centre.with feature such as the Macaulay Library of natural sounds, containing 130000 sound recording covering 5600 birds species.

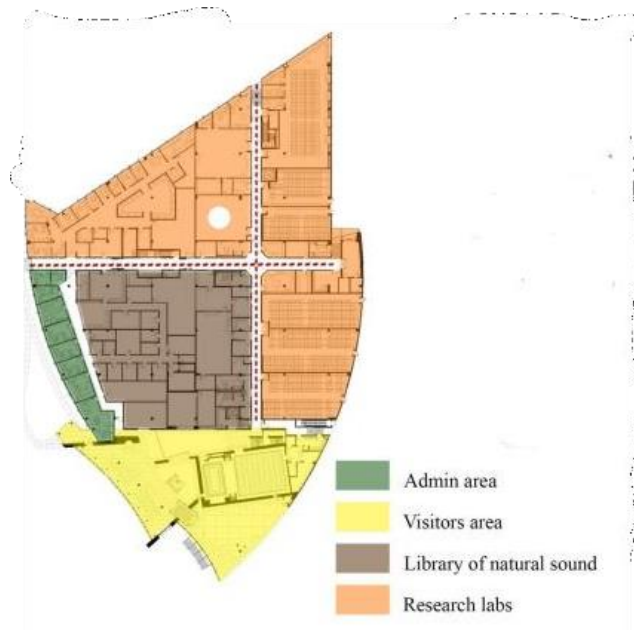
History:

The Cornell lab of ornithology was founded by Arthur . A. Doc allen who lobbied creation of the country's first graduate

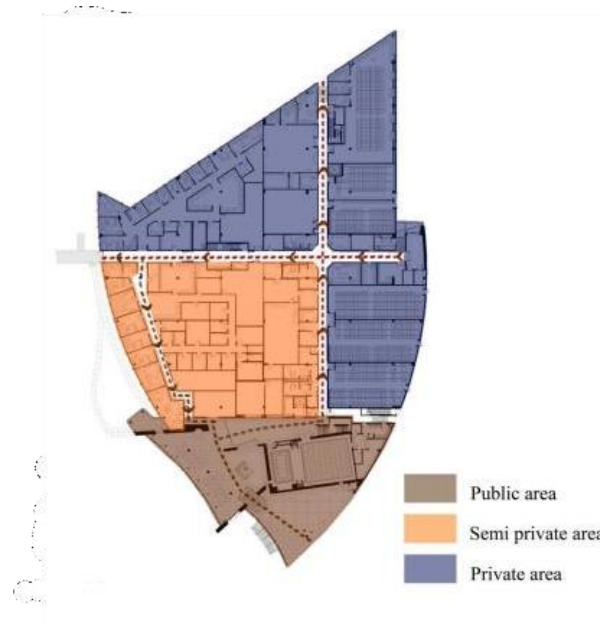
Program in ornithology established at Cornell University in 1915. initially, lab of ornithology was housed in the university's-entomology limnology and department.Bider/businessman lyman stuart limolot donors land owner purchased or donated farmland in 1954-which was set aside for the sanctuary. stuart helped finance the construction of the first lab building in 1957



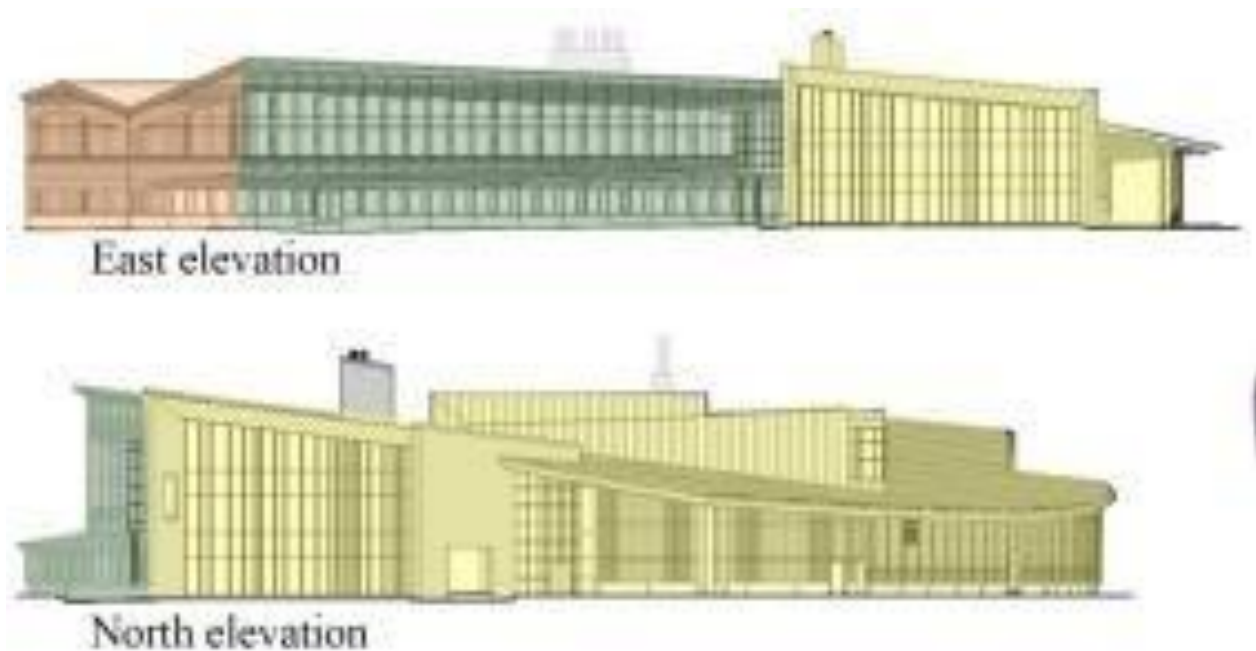
PLAN



AREA DISTRIBUTION



HIERARCHY OF SPACES



ELEVATIONS

2.2.3 About center:

- The lab is integrated into an expanded wetland escape defined by small island set in bio-filters and marshy swales
 - The visitors approach the lab from a series of bridges and boardwalks through this naturalized environment
 - Two huge murals can also found on observatory walls.
- The building shape is abstractly bird like and is the result of the desire to give everyone the best possible views of the plans curves follow the pond's contours narrowing to a collective point of entry that works to scale the building down and engages it with the sanctuary's natural trail system

Designers framed the windows, used curved glass, and created random patterns so that birds could detect the windows, while visitors inside could still watch the action outside.

The center observatory features seating, a fireplace, and spotting scopes.

Cornell University Centre for birds and Diversity is 7400 square meter building and a one-of-a-kind facility attracting bird and the world's top research center. with features such as the Macaulay Library of Natural Sounds, containing 130000 sound recordings covering 5600 bird species.



2.3 SWISS ORNITHOLOGY INSTITUTE

Location: Luzernerstrasse 6, 6204 sempach, Switzerland

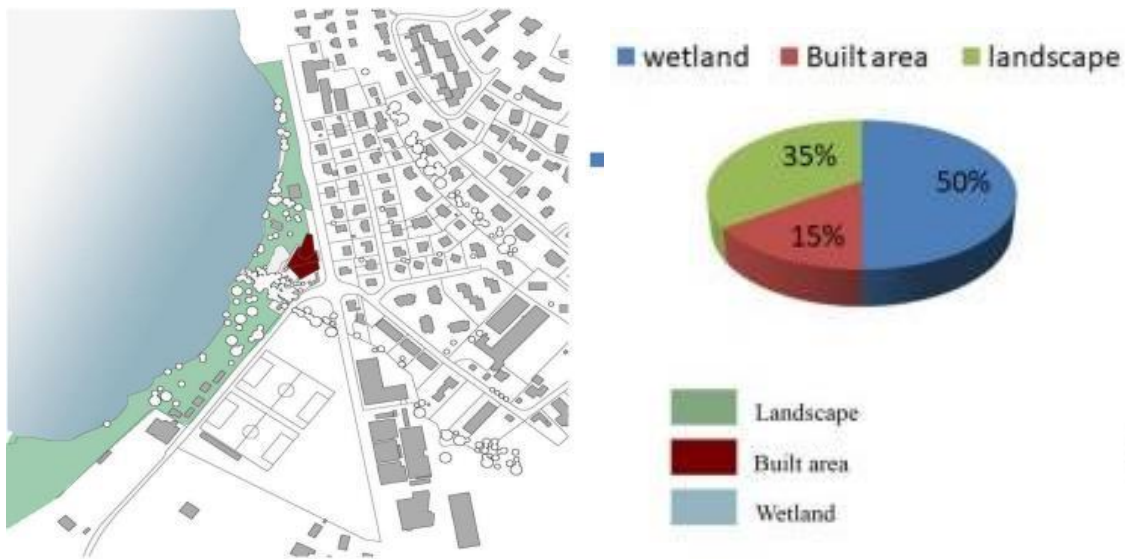
Architect: mizd

Area: 2030.0

Project year: 2015

Material: Rammed earth, Wood, Glass





2.3.1 Introduction:-

The Swiss Ornithological Institute was founded in 1924 as a ringing station for researching bird migration in the alpine region. Since then, it has grown from a one-man volunteer operation into an internationally recognized institute with more than 130 employees. In 1954, the Swiss Ornithological Institute was registered as an independent foundation under Swiss law

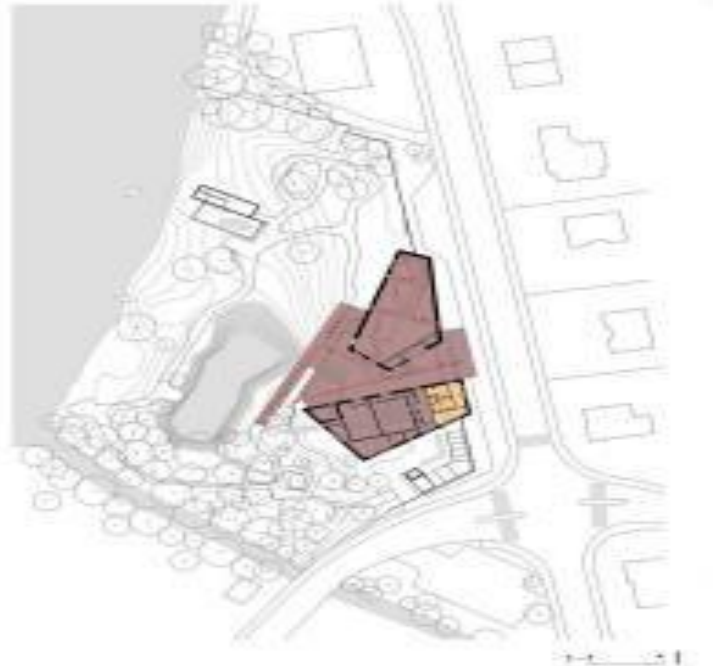
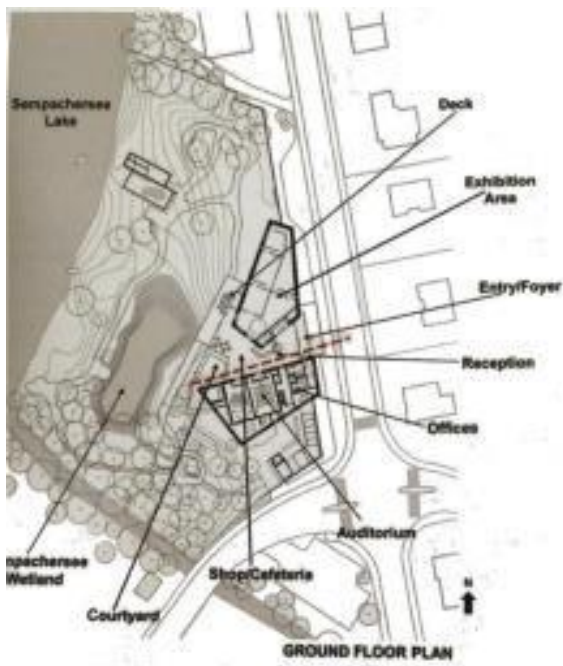
In 1955 it moved from the town hall in Sempach to a new building on, Lake Sempach. Since 1958, the institute has also operated a bird ringing station on col de Bretolet at 1923 m asl.

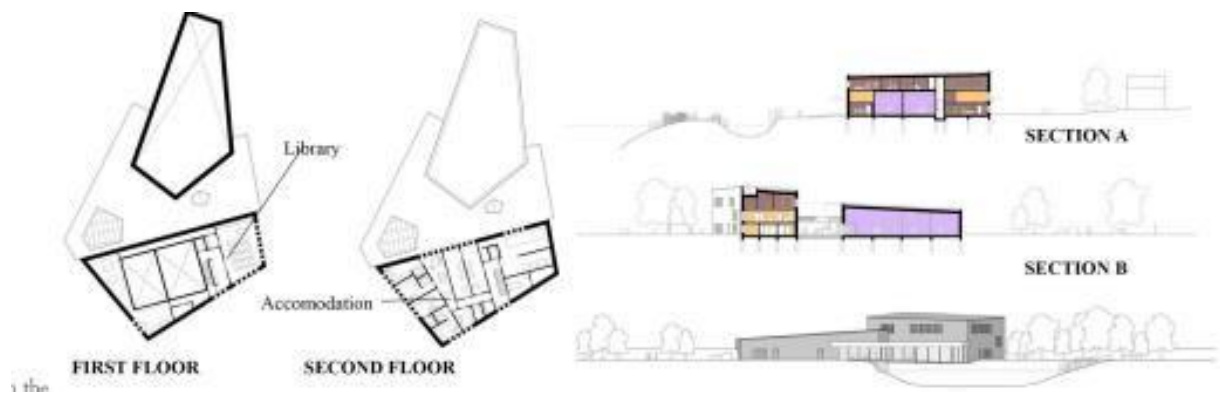
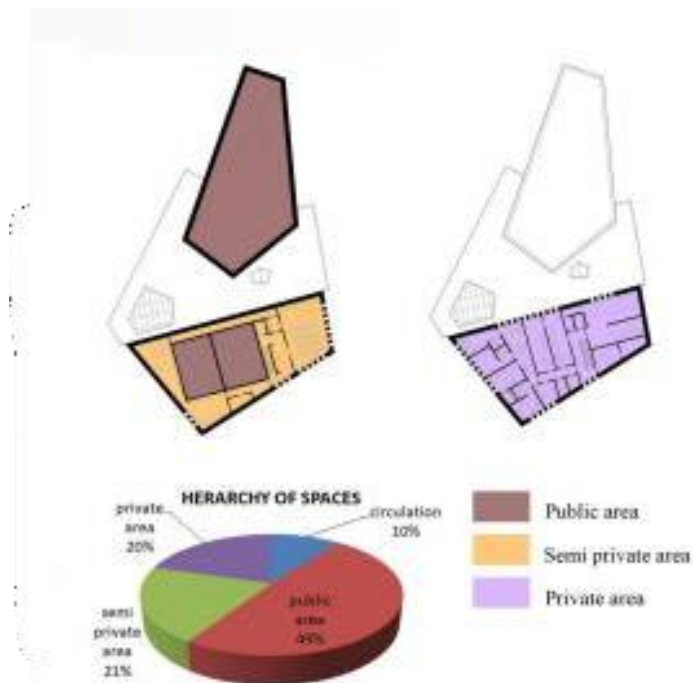
The Swiss Ornithological Institute monitors Switzerland's native birdlife, studies the behavior of wild birds and seeks to understand the threats they face. It develops protection and conservation measures for threatened species and, together with its partners, works to ensure that the results of its research are used for the benefit of nature and birds. The Swiss Ornithological Institute operates a care center for sick, injured, and orphaned birds.

The compact, polygon structures have been positioned so that they interact with the countryside and the lake. One part of the building houses the extremely flexible exhibition hall. The area between the building has been made into a spacious foyer, from where there is access to all parts of the exhibition.

The showcase aviary at the end of the foyer offers a gradual, Fleeting transition between the inside and outside worlds.

VIEW OF THE LAB







View from the Wetland



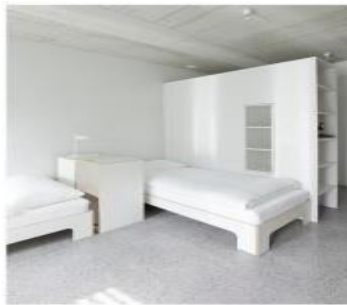
FIRST FLOOR



SECOND FLOOR



DECK



ACCOMMODATION



VIEW OF LIBRARY

The center comprises two angular structures connected by a large foyer. Elevations facing the road are largely solid, while the rear Fawades incorporate full-height windows that provide expansive views toward the lake.

The building's load-bearing outer shell is constructed from rammed earth using a technique involving the gradual compacting of layers of damp earth in a mold to form solid walls.

This building method, which uses natural materials and has a low environmental impact, was chosen in response to a brief calling for a building that exhibits a stronger ecological profile. Rammed earth is also extremely durable and has excellent thermal properties.

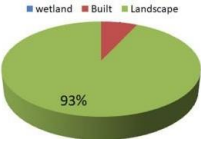
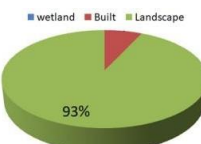
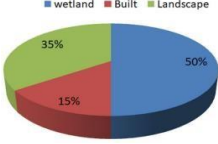
The earth surfaces are complemented by wooden canopies over the main entrance at the front and a terrace at the rear.

Decking and joinery including exposed roof beams continue the application of natural materials throughout the exterior and interior of the building.

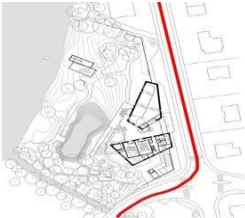
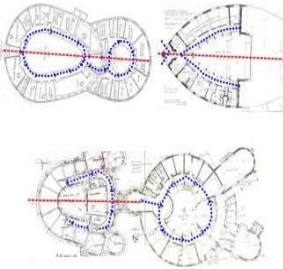
Rammed earth has seen a revival in recent years, with architects around the world using it to create structures that are more environmentally friendly than their concrete counterparts.

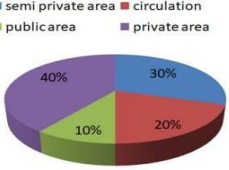
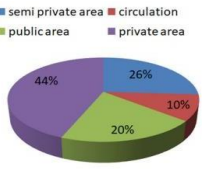
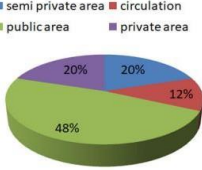
	SALIM ALI CENTER FOR ORNITHOLOGY AND RESEARCH HISTORY (SACON)	THE CORNELL LAB OF ORNITHOLOGY	THE SWISS ORNITHOLOGY INSTITUTE	INFERENCE
LOCATION	Annaikatty, coimbatore, Tamiul nadu	Ithaca, New York, United states of America	Luzernerstrasse 6, 6204 sempach, Switzerland	
TYPE	center for ornithology and education	Research and conservation institute		
OBJECTIVE	It conducts reserch in ornithology covering all aspects related to bio diversity and natural history	Its function is to research on birds and conserve the flora and fauna.	Its function to provide the public with more information about the work of ornithological institute and about bird	

AREA	4500 sq. m	7400 sqm	2030 sqm	
MATERIAL	Exposed brick and stone	Wood,steel,stone,glass	Wood,Rammed Earth, Glass	
				
FUNCTIONS	Administrative block Library Laboratory Jr.Scientist hostel Canteen Guest house	Bird feeding garden Foyer Reception area Admin offices Staff lounge Auditorium Store rooms Library of Naural Sounds Computer lab Gift shop Toilets	Foyer Reception area Admin offices Cafeteria Deck Accommodation Exhibition area Shoper Store rooms Library Toilets	Built areas should be minimal and in victory of wetland and forest areas. It should be proximate to a wetland or forest. The major use of the land is green as it is an environmental / biodiversity building it has large and small pockets for green area

SITE ANALYSIS	 Legend: wetland (blue), Built (red), Landscape (green) 93%	 Legend: wetland (blue), Built (red), Landscape (green) 93%	 Legend: wetland (blue), Built (red), Landscape (green) 50%, 35%, 15%	
USERS	Scientist -14 Students – 80 Staff - 60	Scientist -18 Visitors -55000 per year	Scientist -50 Member – 200	

	SALIM ALI CENTER FOR ORNITHOLOGY AND NATURALHISTORY (SACON)	THE CORNELL LAB OF ORNITHOLOGY	THE SWISS ORNITHOLOGY INSTITUTE	INFERENCE
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ACCESS				The building should be away from vehicular access yet well connected. There should be an adequate pause between main access and building access.
AXIS AND CIRCULATION				The axis to the building is direct and the building shape is result of desire to give every one the best possible views of the institute beloved pond the newrby woods.

SEGREGATION OF SPACES				The relation of various space should be such that all public accessible area connected but out side public not be able to go to the private area
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CHAPTER 3

3.1 PROGRAM;

Sr.no	Function	Area	User type	No of user	Reference
1	Administration				
	Entrance foyer Reception & waiting area Information desk Director's office Ast.Director's office Co-ordinator's office Irrigation departement office Forest departement office Account section Storage room Service(Toilet) Total Area	50 sqm 60 sqm 20 sqm 40 sqm 40 sqm 25 sqm 50 sqm 30 sqm 50 sqm 15 sqm 15 sqm 395 sqm	Public Public Public Personal Personal Personal Personal Personal Staff Staff Staff -	– 15 to 20 2 1 2 2 2 2 2 4 – –	Salim Ali Centre for Ornithology And Natural History

2	Interpretation center				
	Reception area	15 sqm	Staff	2	
	Baggage	20 sqm	-----	10	
	Information Paneling	50 sqm	Visitors	20	
	Film viewing Hall	25 sqm	-----	10	
	Total Area	110 sqm	-----	—	
3	Academic Block				
	Student's Classroom	150 sqm	Researcher	10 to 15	Salim Ali Centre for Ornithology And Natural History
	Researcher's Classroom	150 sqm	Scientist	10 to 15	
	Meeting room	80 sqm	Researcher	10 to 15	
	Conference room	80 sqm	Researcher	6	
	Seminar & visual room	100 sqm	Student	50	
	Total Area	560 sqm	-----	—	
4	Library				
	Reception area	15 sqm	Staff	4	Salim Ali Centre for Ornithology And Natural History
	Librarian's cabin	15 sqm	Staff	5	
	Carrel space	40 sqm	Researcher	20	
	Periodical Section	30 sqm	Researcher	5	
	Map Store	15 sqm	Researcher	5	
	Old volume room	40 sqm	Researcher	10	
	E-resource centre	25 sqm	Researcher	5	
	Research data bank	50 sqm	Researcher	2	
	Total Area	230 sqm	-----	—	
5	Research Laboratory				
	Eco - Toxicology lab	100 sqm	Researcher	15	Salim Ali Centre for Ornithology And Natural History Cornell Ornithology institute
	Ornithology lab	100 sqm	Researcher	15	
	Wetland eco lab	100 sqm	Researcher	15	
	Botanical lab	100 sqm	Researcher	15	
	Computer lab	100 sqm	Researcher	20	
	Equipment room	15 sqm	Staff	2	
	Chemical storage room	10 sqm	Staff	2	
	Post mortem room	20 sqm	Researcher	4	
	Cold storage room	20 sqm	Researcher	4	
	Specimen Storage room	20 sqm	Researcher	4	
	Staff room	20 sqm	Staff	4	
	Pantry	15 sqm	Staff	6	
	Toilet	30 sqm	Researcher	4	
	Total Area	650 sqm	-----	10	
6	Accommodation				
	Hostel rooms	770 sqm	Student	50	Swiss institute for Ornithology
	Cottage	415 sqm	Personal	20	
	Total Area	1285 sqm	-----	—	
7	Kitchen and Dining area				

	Kitchen	40 sqm	Public	5	
	Store	15 sqm	Staff	5	
	Wash rooms	06 sqm	-----	2	
	Cafeteria	300 sqm	Public	50	
	Total Area	361 sqm	-----	—	
	Total builtup area	3581 sqm			
	30% circulation	1077 sqm			
	Parking	600 sqm			
	Total Area	5258 sqm			

3.1.1 ECO-TOXICOLOGY LAB

Eco-toxicology lab is the study of toxic effects caused by natural or manmade substances on a biota. through ecotoxicology, we are able to determine the levels and types of contaminants that cause harm to animals and plants.



3.1.2 ORNITHOLOGICAL LAB

Ornithology is the scientific study of birds. the three main types of ornithology study are collection, field based, research, and laboratory based research. collection involves collecting live or deceased specimens and studying them for bodily structure and function.

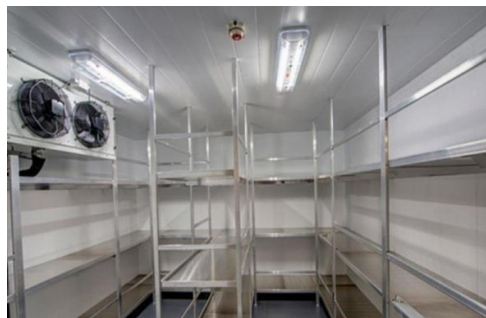


3.1.3 BOTANICAL LAB

The botanical research lab contains a range of equipment for surveying and identifying plants, invertebrates, and soils. This includes field surveying equipment, high quality, binocular and light microscopes, identification guides, a fume hood for processing samples and sample storage.



CHEMICAL STORAGE



POSTMORTEM ROOM;



CHAPTER 4

SITE ANALYSIS

4.1 SITE-1 VEDANTHANGAL BIRD SANCTUARY

LOCATION: Maduranthakam CO-ORDINATES:12°32'47"N - 79°51'21"E

- The Vedanthangal Bird Sanctuary, located in Maduranthakam Taluk of Chengalpattu District, is one of the oldest bird protected areas in Tamil Nadu.
- It comprises a small irrigation tank and a 5 km zone around the lake.
- The sanctuary is recognized internationally as an Important Bird and Biodiversity Area (IBA) with a code IN284, Criteria A1, A4iii. (A1 Globally threatened species:

The site qualifies if it is known, estimated or thought to hold a population of a species categorized by the IUCN Red List as Critically Endangered, Endangered or Vulnerable. In general, the regular presence of a Critical or Endangered species, irrespective of population size, at a site may be sufficient for a site to qualify as an IBA. For Vulnerable species, the presence of more than threshold numbers at a site is necessary to trigger selection.

A2 Congregations:

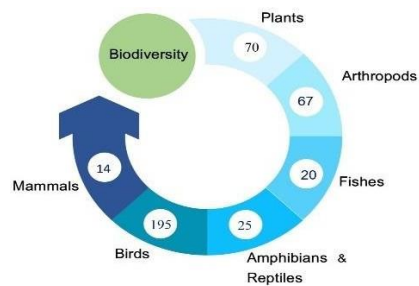
i. This applies to 'waterbird' species as defined by Delaney and Scott[6] and is modelled on criterion 6 of the Ramsar Convention for identifying wetlands of international importance. Depending upon how species are distributed, the 1% thresholds for the biogeographic populations may be taken directly from Delaney & Scott, they may be generated by combining flyway populations within a biogeographic region or, for those for which no quantitative thresholds are given, they are determined regionally or inter-regionally, as appropriate, using the best available information.)

- The site is known or thought to exceed thresholds set for migratory species at bottleneck sites
- The topography is undulating with a gentle slope, and the wetland is mostly clay with a fertile guano layer.
- The sanctuary is part of the Palar River Basin, with Northeast and Southwest monsoons contributing 54% and 36% respectively to the total annual rainfall.

4.1.2 CLIMATE:

- Kanchipuram/Chengalpattu district experiences hot, humid tropical climate with high temperatures from April-June and cooler temperatures from December-January.

4.1.3 BIODIVERSITY;



70 – PLANTS

67 – ARTHROPODS

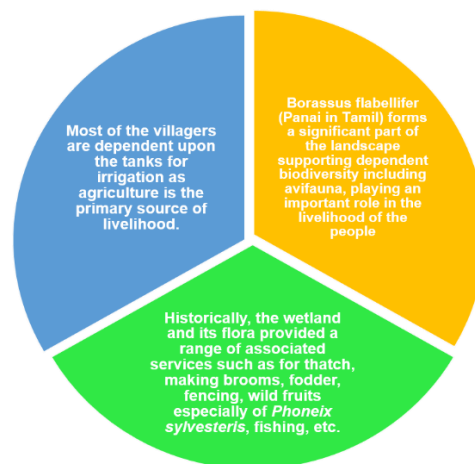
20 – FISHES

25 – AMPHIBIANS & REPTILES

194 – BIRDS

14 – MAMMALS

4.1.4 LIVELIHOOD:



- Most of the villagers are dependent upon the tanks for irrigation as agriculture is the primary source of livelihood
- *Borassus flabellifer* (panai) forms a significant part of the landscape supporting dependent biodiversity including avifauna, playing an important role in the livelihood of the people
- Historically, the wetland and its flora provided a range of associated services such as for thatch, making brooms, fodder, fencing, wild fruits, especially of phoenix *Sylvestris*, fishing, etc..

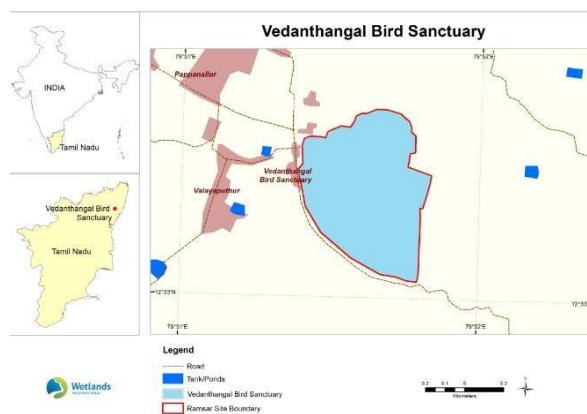
4.1.5 BIRDS MIGRATORY FLYWAY TO VEDANTHANGAL BIRD SANCTUARY :



Birds migratory map from other places to Vedanthangal

Birds migratory from places to Vedanthangal

- Iceland
- Northern Europe
- Europe
- Palearctic
- Western Europe
- Southern europe
- Kazakhstan
- Tajikistan
- Mongolia
- Russia



Vedanthangal Birds Sanctuary map

EXISTING FEATURES:

The following eco-tourism supporting infrastructure facilities and amenities are available at Vedanthangal Birds Sanctuary for visitors;

In Vedanthangal Lake area;

- Ticket Counter with cloak room.
- Photo Interpretation Centre
- High Watch Tower for Bird Viewing
- 2 Bird Watching Platforms
- Walk-through bund with sitting benches and shelters
- Drinking Water
- Sanitation Facilities
- Bird Spotting Scopes, Binoculars, WheelChairs, etc
- Parking Area

Visitor's Facilities are also available in Forest Rest House, which is about half km from the Lake and is managed by Forest Department. The location has;

Forest Rest house with 4 rooms for officers and visitors.

Common Toilets behind rest house

VISITOR'S DETAILS OF VEDANTHANGAL BIRDS SANCTUARY:

Sl.No	Year	No of visitors	Amount in (Rs)
1.	2015-16	134363	5,70,112
2.	2016-17	117008	4,83,928
3.	2017-18	117996	5,72,867
4.	2018-19	45001	4,20,538
5.	2019-20	78234	6,91,081
6.	2020-21	34162	3,19,207

Vedanthangal Lake attracts over one lakh visitors during good monsoon years, generating 8-10 lakh revenue for the government. Moderate birding seasons attract 40000-50000 visitors, with over 20 local schools participating in their nature education curriculum and are exposed to conservation education .

ISSUES

- No vehicle for student's eco camps and nature education programmes
- No dormitory for student's group stay
- Only 4 rooms in Vedanthangal forest guest house.
- No trained Bird Guides and hospitality staff
- Protection duty staff acting as bird guides too, who are very limited.
- No proper sanitation
- Watching tower and watching platforms to be improved
- Interpretation centre to be improved
- No exit point is available and the visitors need to walk back the same way to entrance to exit this creates crowd.
- No proper parking facility provided.

4.2 SITE 2 – RESEARCH CENTRE



Site : research center and other facilities

Area : 15 acre.

Location :Maduranthakam

Site: The site is 3 km away from the
vedanthangal bird sanctuary.

Road access: two sides road access

This site is 3km away from the vedanthangal bird sanctuary. In this site the research centre is given for researchers and scholars for education. and for tourism, the visitors can visit the interpretation centre and museum and also bird aviary where the live birds are their. and an aviaian health care for birds care if their any injury or flu where they can cure the birds here.

4.2.1 ACCESS AND APPROACH TO THE SITE VEDANTHANGAL

Birds Sanctuary is located in Maduranthagam Taluk of present Chengalpattu and erstwhile Kancheepuram District. It is at a distance of about 82Km from Chennai City towards the South West and is approached by NH 45. Nearest Railway Station is Chengalpattu Railway Station and it is at a distance of 26kms from the Lake. Nearest Airport is Chennai Airport at a distance of 65kms. The Sanctuary is easily accessible by road from all locations.

4.2.2 CLIMATE

climate Kanchipuram/Chengalpattu district generally experiences hot and humid climatic conditions. The climate is typically tropical as in most parts of Tamil Nadu. Temperature is uniformly high throughout the year. The three hottest months are generally April-June when maximum temperature exceeds 38°C. It is cooler in December – January when average minimum and maximum temperatures are 18°C and 29.5°C respectively.

4.2.3 HUMIDITY

High relative humidity between 50 and 80% prevails throughout the year. Relative humidity is maximum in the morning and minimum in the evening. Higher rates of relative humidity are observed between November to January. In the month of June, the humidity is lower.

4.2.4 RAINFALL

Vedanthangal receives maximum rainfall from North East Monsoon. North-East and South-West monsoons contribute 54% and 36%, respectively to the total annual rainfall. The South-West monsoon rainfall is highly erratic and summer rains are negligible. The rainfall fluctuates greatly from year to year varying from about 400 mm to almost 1700 mm. During November-December in the year 2015, the sanctuary suffered a deluge just as the other areas in and around Chennai. The driest month is March with precipitation of 4 mm. Most precipitation falls in November, with an average of 233 mm.

CHAPTER 5

5.1 VEDANTHANGAL ISSUE SOLVING

10

ISSUES

NO VEHICLE FOR STUDENTS' ECO CAMPS AND NATURE EDUCATION PROGRAMS
NO DOWNTOWN FOR STUDENT'S GROUP STAY ONLY 14 ROOMS IN VEDHANJANGAL
PREFECT QUEST HOUSE/NO TRAINED BIRD GUIDES AND HOST/STAFF
PROTECTION DUTY STAFF ACTING AS BIRD GUIDES TOO. WHO ARE VERY LIMITED.
NO PROPER SANITATION AND WATCHING TOWER AND WATCHING PLATFORMS
TO BE IMPROVED EXIT POINT IS AVAILABLE AND THE VISITORS NEED TO WALK
BACK THE SAME WAY TO ENTRANCE TO EXIT THIS CREATES CROWD/NO PROPER FACILITY PROVIDED.

REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY:

REMAINING THE VEDANTHANGAL BIRD SANCTUARY AS PER THE ISSUES FOUND .
THIS WOULD HELP THE SITE DEVELOPMENT ATTRACT MORE VISITORS WHICH HELP THEM
TO LEARN ABOUT THE BIRDS AND CREATE AWARENESS AND EDUCATE PEOPLE ABOUT BIRDS.
ITS ALSO HELPS STUDENTS TO EDUCATION, AND ITS ALSO A ONE OF THE BEST SPOT FOR
PHOTOGRAPHERS, AND ALSO RESEARCHERS ALSO ATTRACT TO THIS BIRD SANCTUARY.

BACK THE SAME WAY TO ENTRANCE TO EXIT THIS CREATES CROWD, NO PROPER PARKING FACILITY PROVIDED.

WALKING DECK

ADDING RAILING WHICH
CREATES THE BOUNDARY
FOR THE BIRD SANCTUARY

PLANTING AND GROWING TREES

ADDING SHADING
PAVILION ON THE
WALKING RAILING

ADDING PARKING
FOR THE VISITORS
VEHICLES.

CONSERVE THE EXISTING
ELEMENTS IN THE BIRD
SANCTUARY.

ADDING BENCHES AND WATCHING TOWER AND WATCHING DECK WOULD HELP THE VISITORS TO VIEW THE BIRDS.

FENCH

ALL UNITS ARE IN METERS
SCALE 1:1000

REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY
AND RESEARCH CENTRE : VEDANTHANGAL ISSUES SOLVING

NAME : ANANITHA ROLL NO : SP210053 BATCH : 2019 -2024
YEAR : 5 SEM : X GUIDE: AR SEETHA VISALAKSHI
COLLEGE: SAIHAYAMA INSTITUTE OF SCIENCE
AND TECHNOLOGY



02

REIMAGINING THE VEDANTHANGAL
BIRD SANCTUARY AND RESEARCH
CENTRE

In this site the redevelopment of existing elements is planned, adding of elements like pavilions, walking cock, railing, parkings for vehicle is provided, and issues are solved.

This site is 3km away from the vedatthangal bird sanctuary. In this site the research centre is given for researchers and scholars for education and for forum the visitors can visit the interpretation centre and museum and also old aviary where the live birds are there, and an avian health care for birds care if their any injury or flu where they can cure the birds here.

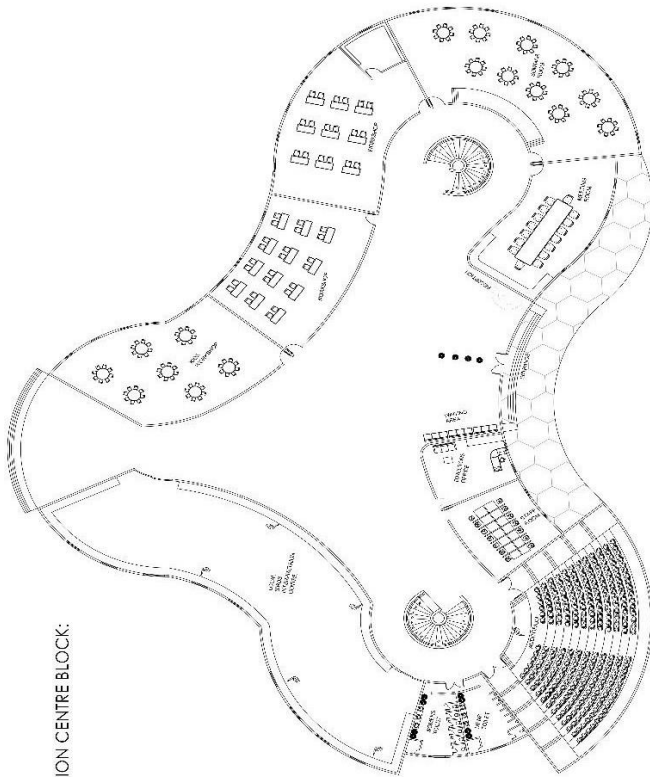


REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY AND RESEARCH CENTRE : MASTER PLAN

ALL UNITS ARE IN METERS
SCALE 1:60

5.3 MUSEUM AND INTREPRETATIN CENTRE GROUND FLOOR

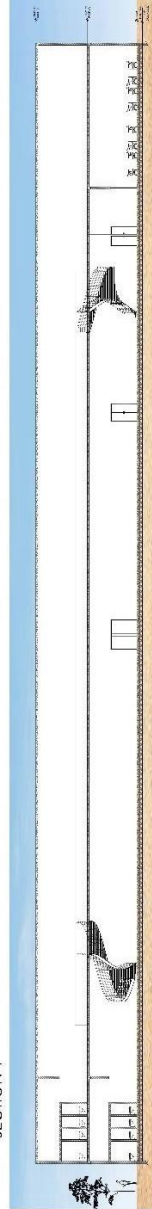
03



MUSEUM AND INTERPRETATION CENTRE BLOCK:
GROUND FLOOR PLAN



SECTION 1

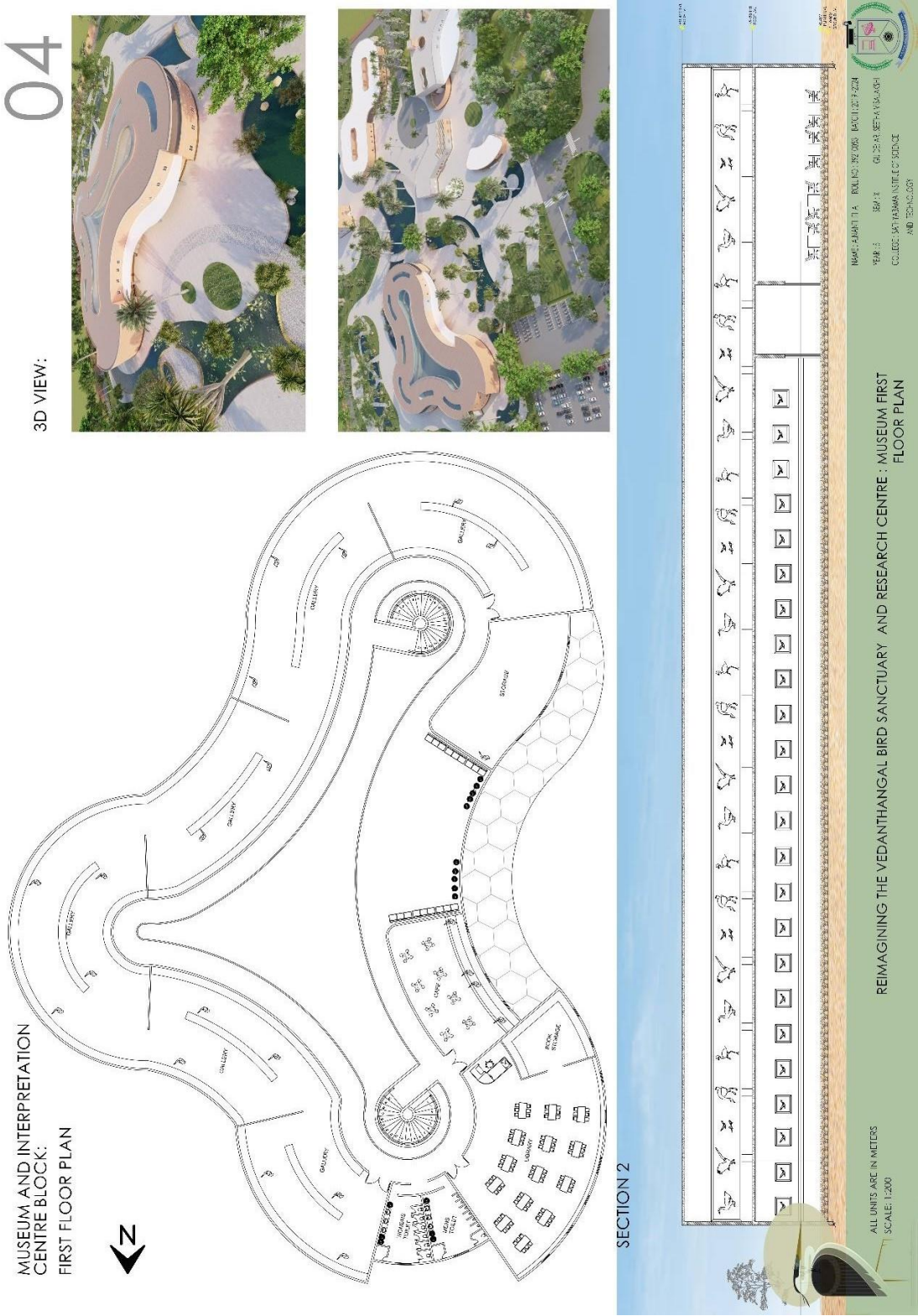


ALL UNITS ARE IN METRES
SCALE: 1:200



REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY AND RESEARCH CENTRE : MUSEUM GROUND
FLOOR PLAN

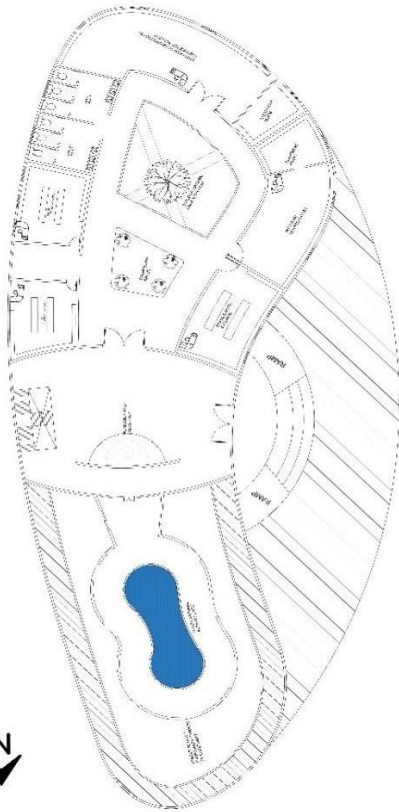
5.4 MUSEUM FIRST FLOOR



5.5 AVIAN HEALTH CENTRE GROUND FLOOR

05

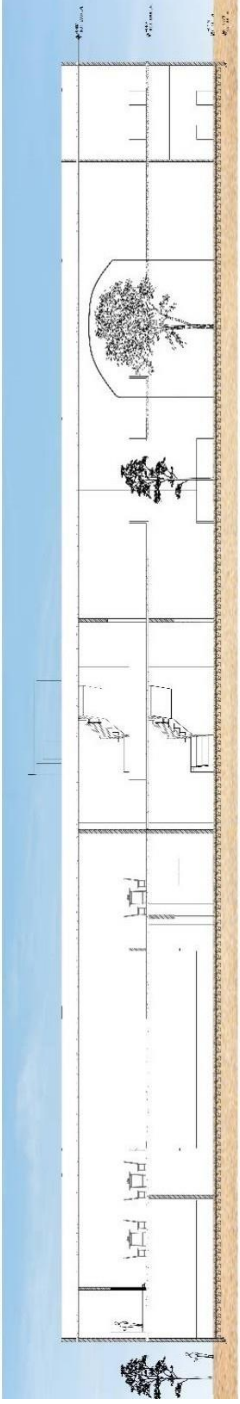
AVIAN HEALTH CENTRE:
GROUND FLOOR PLAN



3D VIEW:

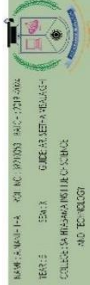


SECTION 1



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SCALE: 1:200

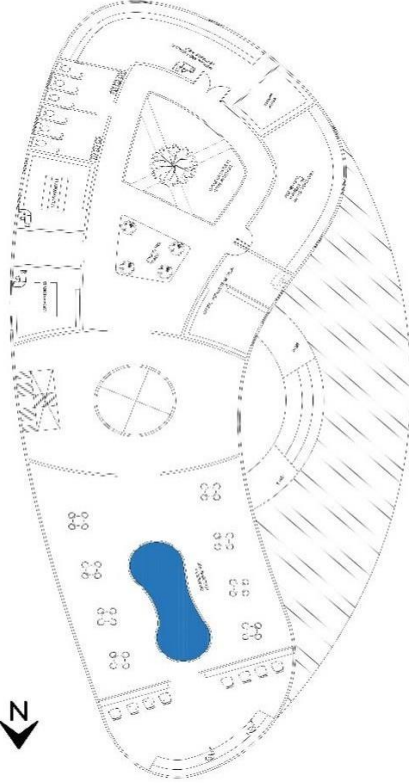
REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY AND RESEARCH CENTRE : AVIAN HEALTH CARE
FIRST FLOOR PLAN



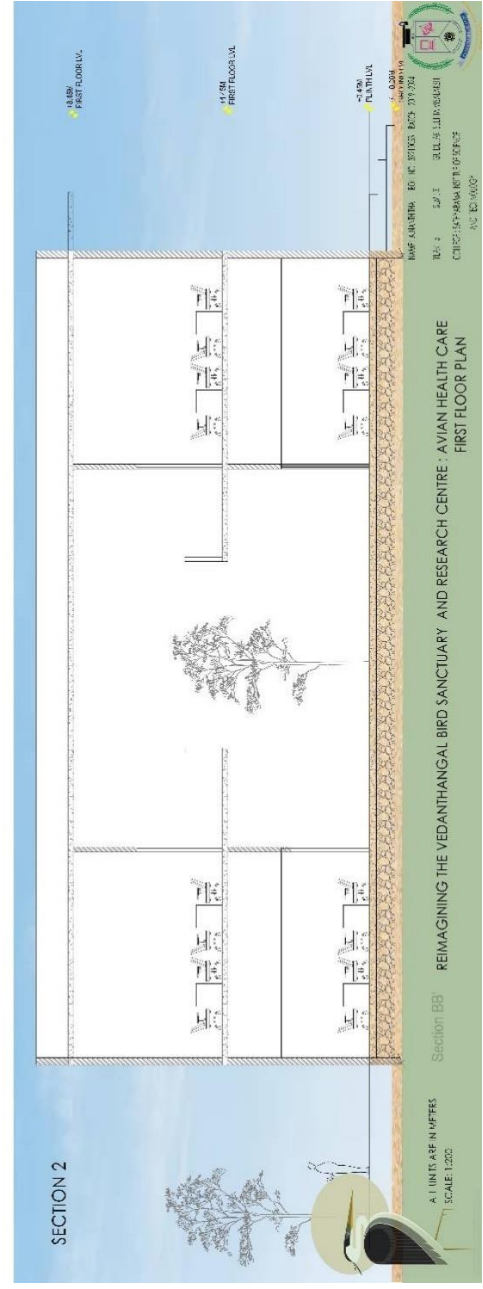
5.6 AVIAN HEALTH CENTRE FIRST FLOOR

06

AVIAN HEALTH CARE CENTRE:
FIRST FLOOR PLAN



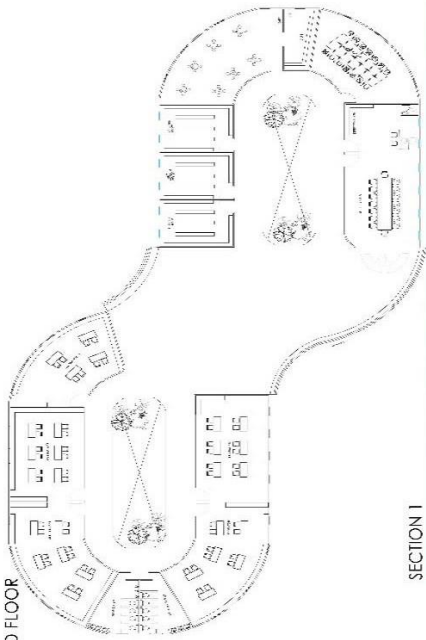
3D VIEW:



5.7 RESEARCH CENTRE

07

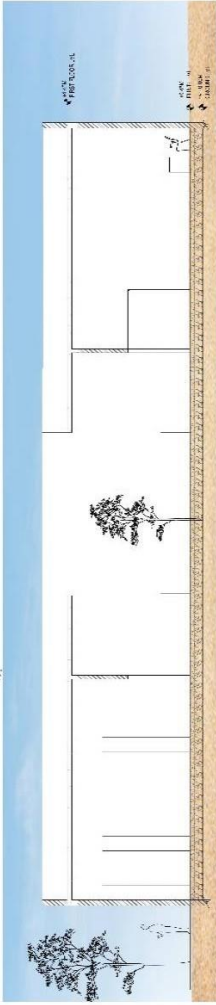
RESEARCH CENTRE:
GROUND FLOOR
PLAN



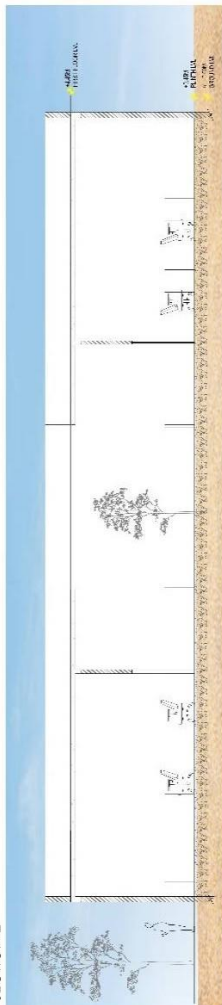
3D VIEW:



SECTION 1

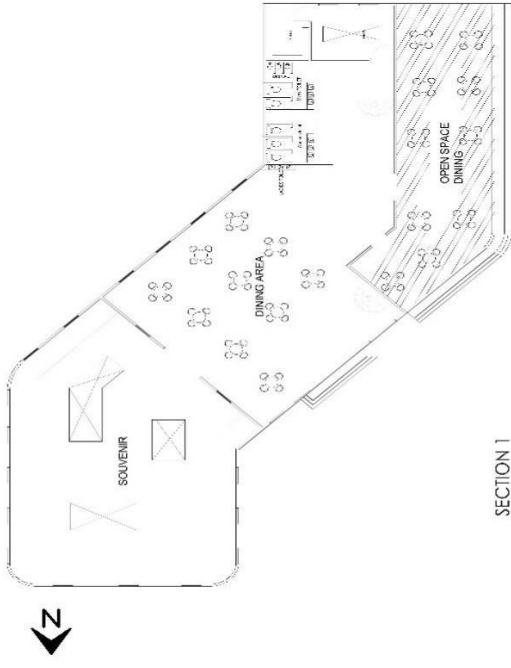


SECTION 2



5.8 CAFETERIA

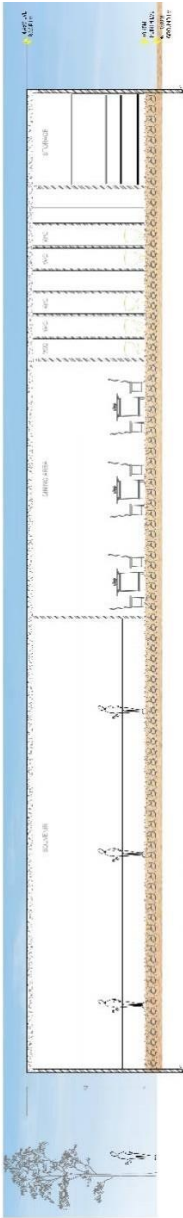
CAFETERIA GROUND FLOOR
PLAN:



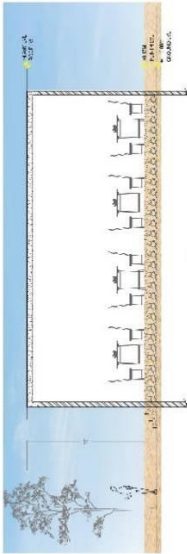
3D VIEW:



SECTION 1



SECTION 2



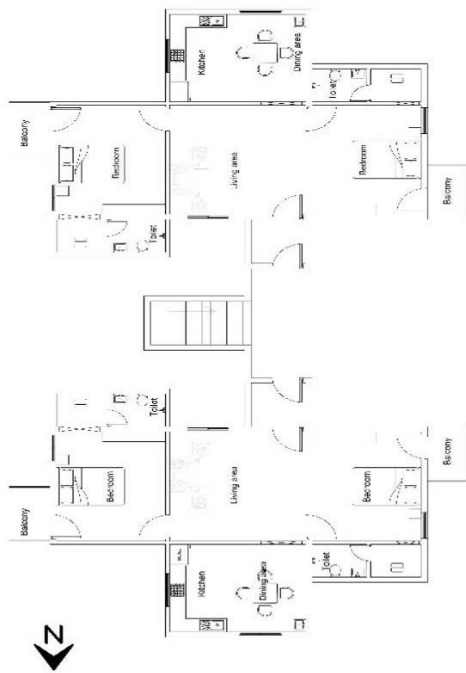
ALL DIMENSIONS ARE IN METERS
SCALE : 1:200

REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY AND RESEARCH CENTRE : CAFETERIA
GROUND FLOOR PLAN



5.9 STAFF ACCOMMODATION

STAFF ACCOMMODATION TYPICAL
GROUND FLOOR PLAN:

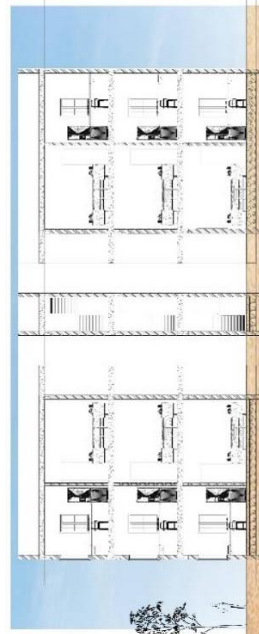


09

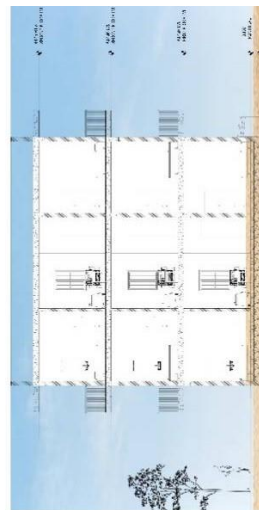
3D VIEW:



SECTION 1

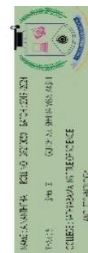


SECTION 2



ALL UNITS ARE 11 METERS
SCALE 1:100

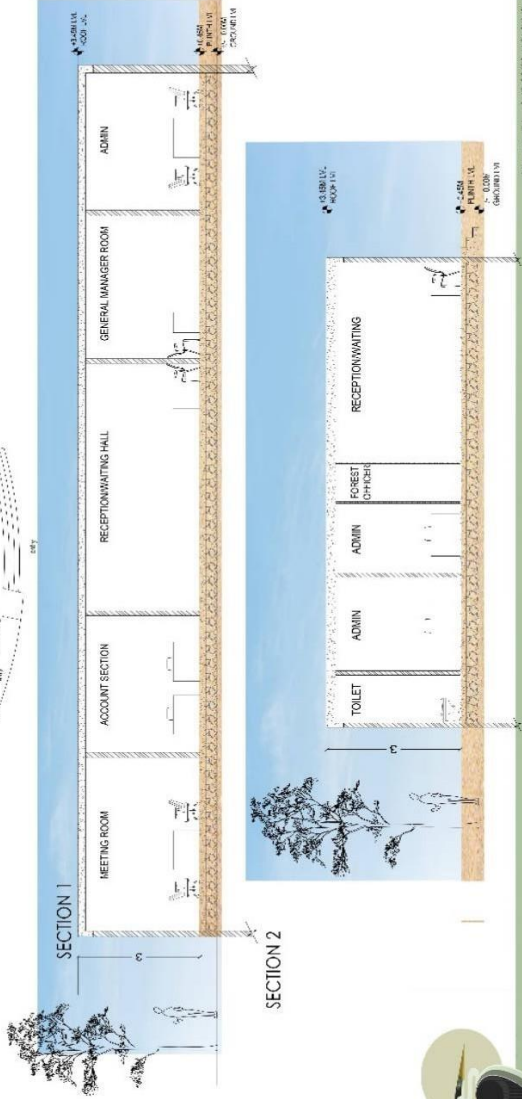
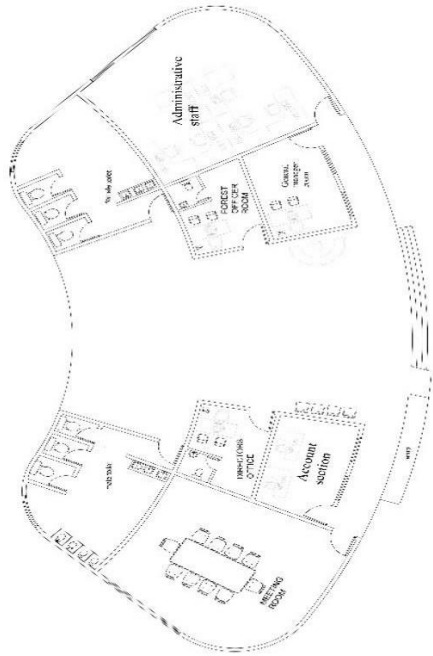
REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY AND RESEARCH CENTRE - STAFF ACCOMMODATION
TYPICAL GROUND FLOOR PLAN



5.10 ADMIN BLOCK

10

ADMIN BLOCK
GROUND FLOOR PLAN:





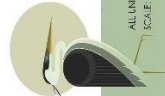
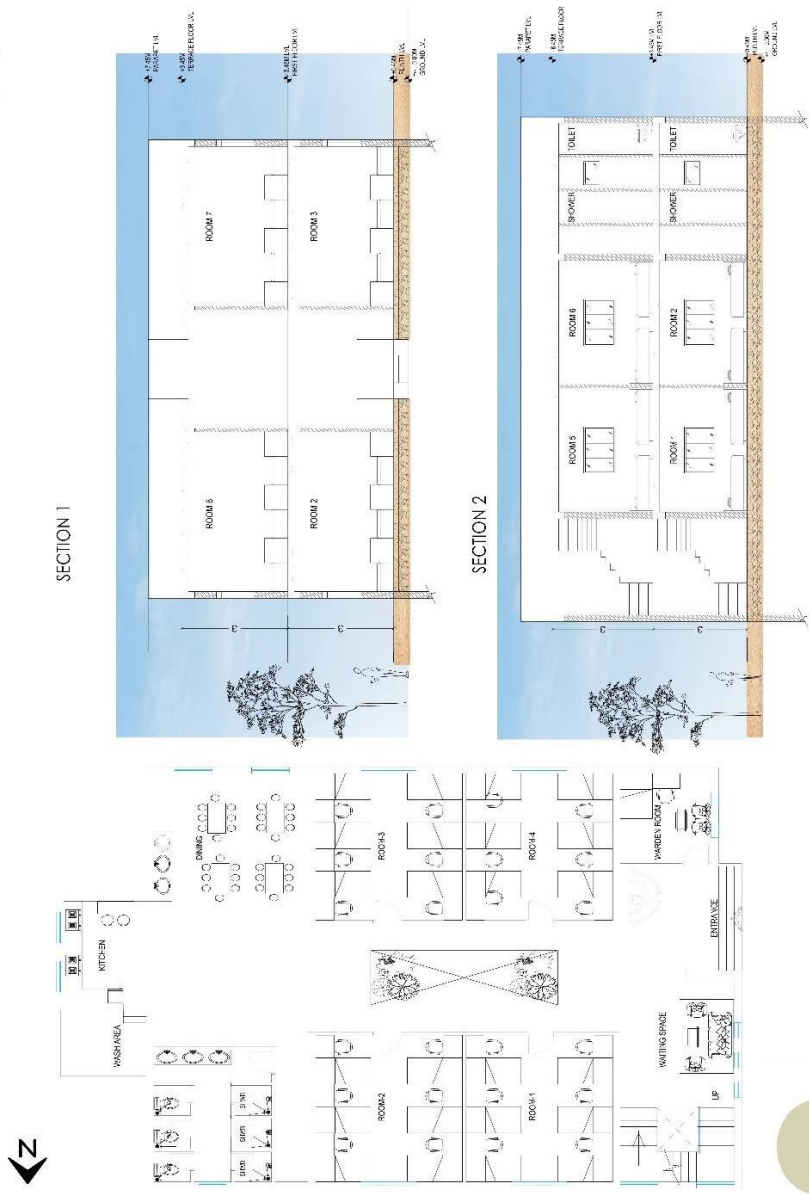
REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY AND RESEARCH CENTRE : ADMIN BLOCK
GROUND FLOOR PLAN



ALLEN SANKAR NATHAN
SCALE: 1:200

5.11 STUDENT ACCOMMODATION

STUDENT ACCOMMODATION
TYPICAL GROUND FLOOR PLAN:



12



OVERALL SITE 3D VIEW AND LANDSCAPE VIEWS



ALIGNMENT MARKERS
SCALE: 120C

REIMAGINING THE VEDANTHANGAL BIRD SANCTUARY AND RESEARCH CENTRE : BIRD AVIARY AND VIEWS

[illegible]

CHAPTER 6

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