

CENTER FOR ENVIRONMENTAL FOUNDATION OF INDIA

THESIS

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

By

BHARGAVI
3621017



DEPARTMENT OF ARCHITECTURE

**SCHOOL OF BUILDING AND
ENVIRONMENT**

SATHYABAMA

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

**Accredited with Grade "A" by NAAC
JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119**

JUNE 2021



DEPARTMENT OF ARCHITECTURE
BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of Bhargavi T.H(3621017) who carried out the project entitled “CENTER FOR ENVIRONMENTAL FOUNDATION OF INDIA ” under our supervision from January 2021 to June 2021. Internal Guide Internal Review Member External Guide

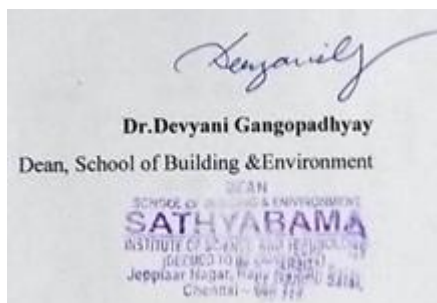
(Ar. Rajesh Kannan)

(Ar S. Catherine)

(Ar.Balaji)

Dean and Head of the Department

Dr. DEVYANI GANGOPADHYAY



Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

DECLARATION

I, **Bhargavi T.H** hereby declare that the Project Report entitled “**center for environmental foundation of india**” done by me under the guidance of **Ar.Rajesh Kannan** (Internal Guide), **Ar.S. Catherine** (Internal Review Member) and **Ar.Balaji Srinivasan** (External Guide). Sathyabama Institute of Science and Technology is submitted in partial fulfilment of the requirements for the award of Bachelor of Architecture Degree.

DATE:

PLACE: Chennai

SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **Sathyabama Institute of Science and Technology** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. Devyani Gangopadhyay**, Dean and Head of the Department, **Dr. Suresh Kuppuswamy**, Design Chair of School of Building and Environment, Department of Architecture and 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 Project Internal Guide Ar Rajesh Kannan, Internal Review member **Ar S Catherine** and External Guide **Ar. Balaji** their guidance, suggestions and constant encouragement which paved the way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **Department of Architecture** who were helpful in many ways for the completion of the project.

CENTER
For
Environmental

Foundation of India

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Abstract

EFI (Environmental Foundation of India) is a successful non profit organisation which has been conserving ecosystem by adopting

The structure is constructed to provide an architectural alchemy between EFI, which creates transparency between public and the environmental enthusiast to create awareness about the current environmental situation. To encourage and promote the public experiencing a nature integrated design.

Introduction

EFI

The Environmental Foundation of India (EFI) is a non-profit organization working in parts of southern and northern India for the scientific revival of water bodies through a community based collaborative conservation effort which are result oriented. Their primary goal is to create a bridge between natural habitat and the public around, by creating awareness for public.

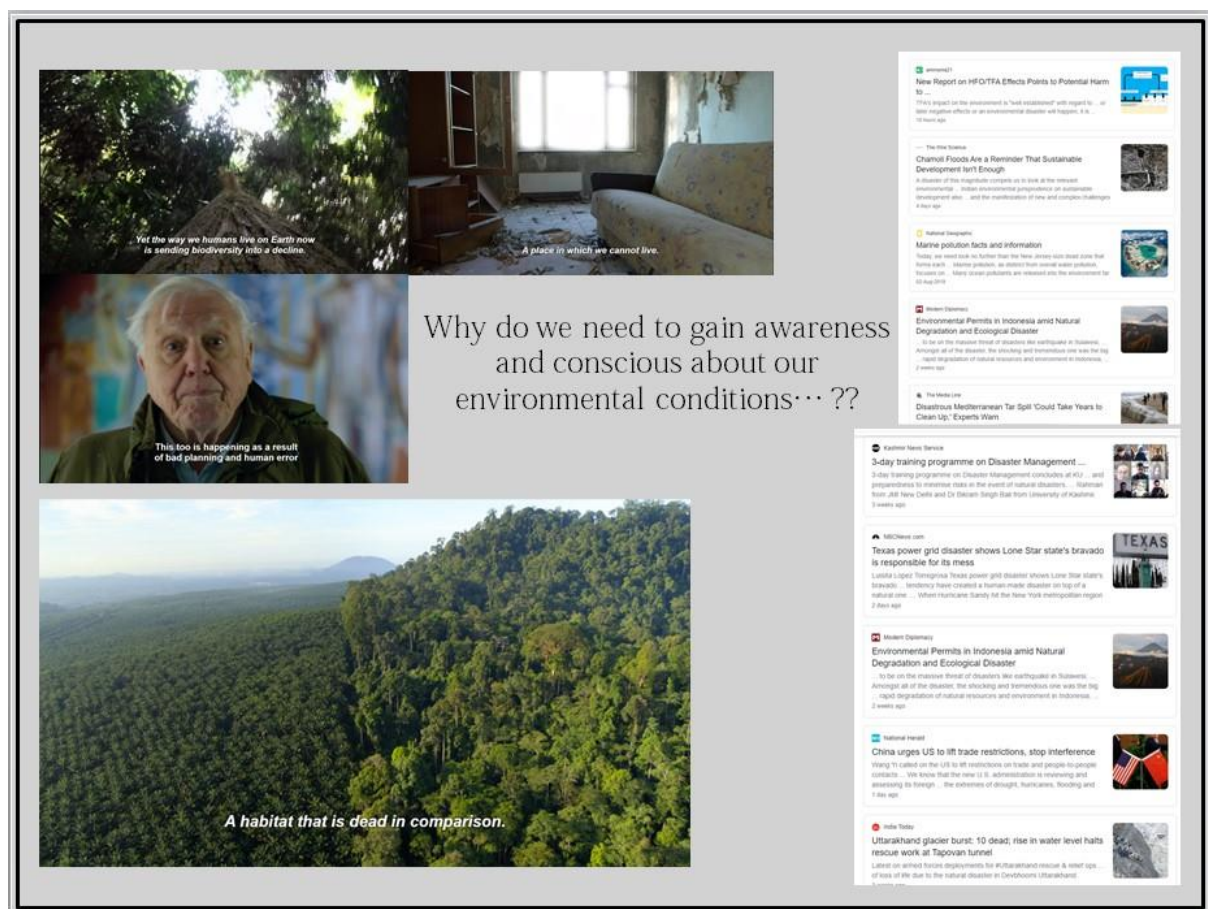


Fig: Explaining why do we need environmental awareness

EFI has been focusing in Chennai since the flood occurred and is trying to restore water bodies and connectivity between one to another.

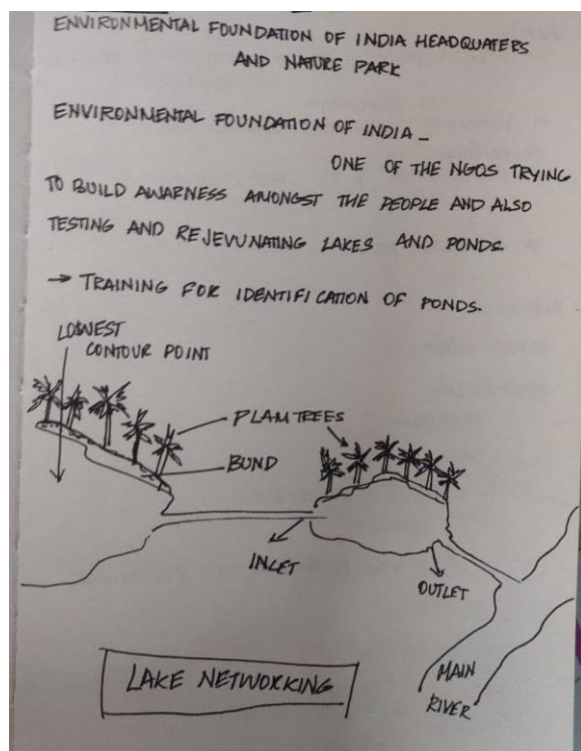


Fig: the work done majorly by the organization.

They also include educational institutions and encourage students to participate in the process of conserving the environment and encouraging the awareness that is created through them.

Limnology is a study of inland and fresh water bodies. It is a multi disciplinary research that has branches of categories widely ranging from the geography the meteorology, physical data, the toxicity and the chemical balance, the biological study of water's ecosystem, and the ratio of planktons in the water and eutrophication of water.

Site Selection

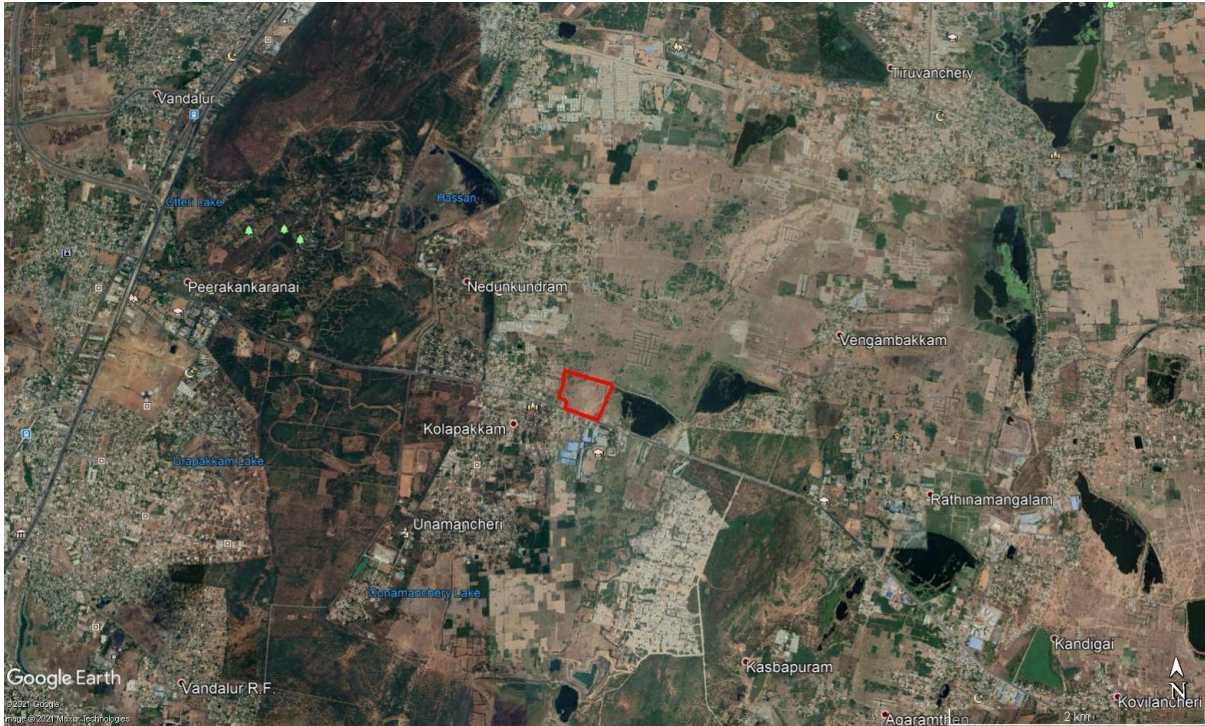
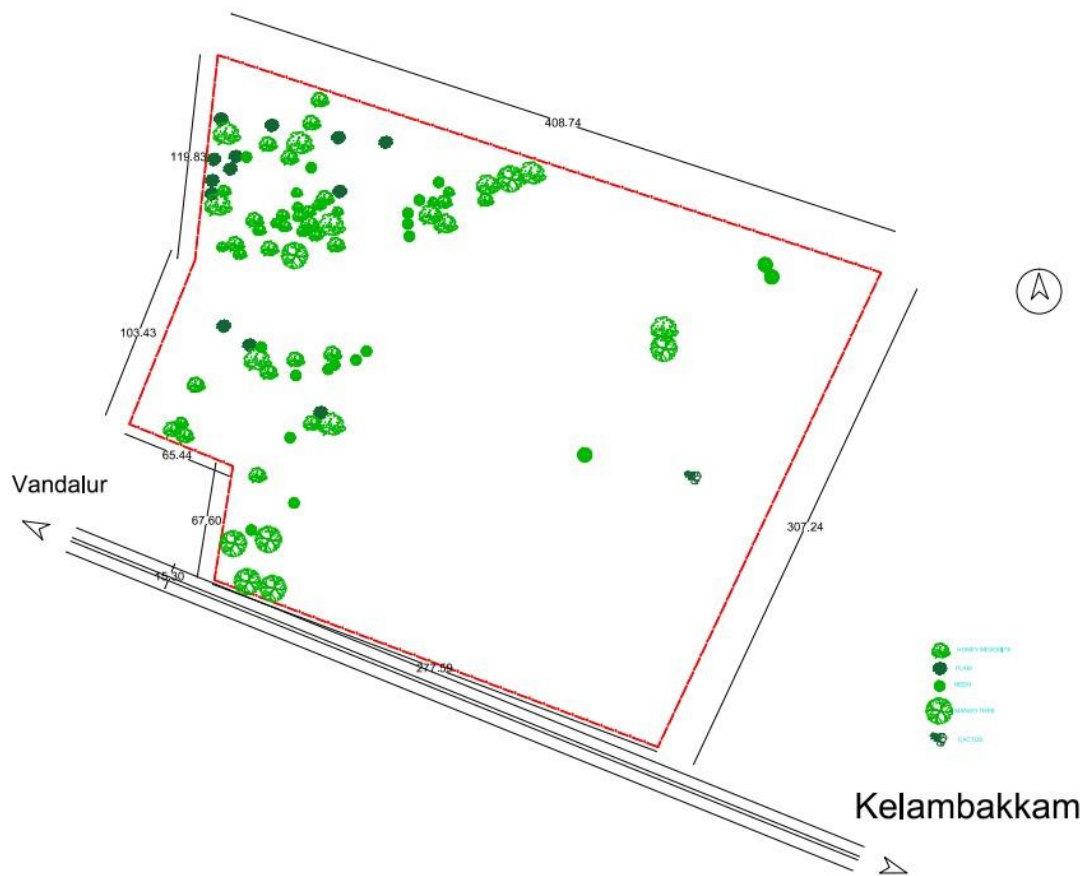
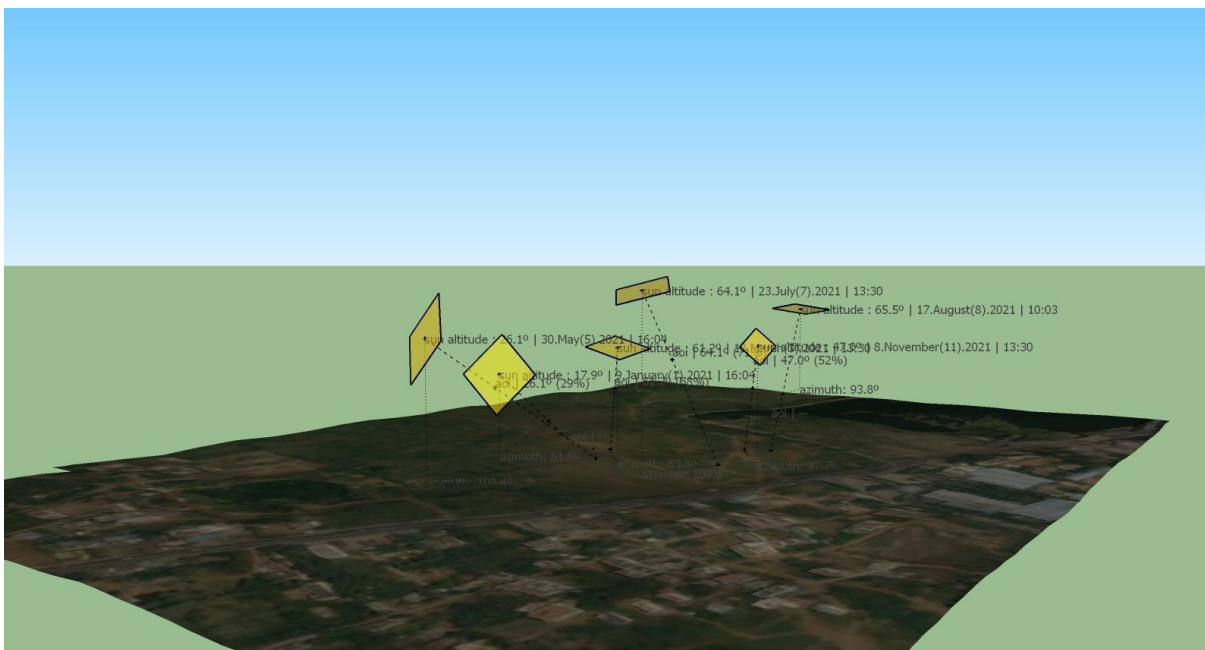


Fig: Proximity of the site.

- 18 km from an Airport.
- Less than 1 km from the bus stop.
- 3 km from vandalur zoo entrance and vembakkam reserved forest
- There are numerous institutions within the nearest proximity of the site.
- It is a suburban area which is located in the outskirts of the city and there is a history of numerous water bodies around the site. whis have lost connection with the nearest one so there is either excess amount of water or vice versa and had left without proper drains , flooding occurs.
- The site is present near a node of vandalur zoo campus and has a view of the hills all around the site.
- The climate zone is warm and humid. There might be less breeze during the afternoons so there is a slight thermal discomfort.



- The common native vegetation found there is plam because of the fibrous condition is planted around the water body which does not affect the water table. Neem , eucalyptus, cashew , mango, honey mesquite(a wild plant grown along with the plants in shooter height). rare cases of cactus are found around the site.
- The site has a slope of two meters from the road to the right corner.
- Most of these plants have a wide spread of three meters around. the site has a natural drain toward the top right corner.



- Altitude 26 degree to 68 degrees
- Azimuth angle 47 degree to 109 degree.

Program

environmental foundation of india headquarters and nature park						
type of area	program	timing	user group	area per person	no of person	total area (sqm)
private	administration					
	staff parking	wd/we				
	lobby	wd/we	staff and organisation officialated people	1.5- 2 sqm	10	70
	waiting area	wd/we	officials and public			30
	reception	wd/we	staff		1	20
	program director room	wd/we	head of EFI, official and public		4	35
	senior coordinatores	wd/we	official staff		3	40
	admin staff room	wd/we	staff		3	45
	records	wd/we	staff		1	25
	accounts	wd/we	accountant		2	35
	restroom-public			1		5
	restroom -staff			2		10
	conference	occational			10	120
	meeting room	occational			8	80
	data collection room	wd/we			2	60
	reports and documentation	wd/we			3	75
	media and publication	wd/we			3	45
	environmental engineers room	wd/we			5	60
semi-private	auditorium				450	
	projector room					15
	stage					200
	seating					675
	sound system					20
	green room					16
	store room					15
	operator room					20
	lobby & waiting room					250
public	lounge					50
	restrooms					30
	locker room					160
	seminar rooms				60	240
	display area				120	250
	security room/ cctv room				3	50
	entrance/ info desk				2	20
	cloak room				3	15
	cafeteria					300
	kitchen					65
	storage					50
	interpretation center					180
	gallery -temporary					150
	permanent					250
	outdoor					150
	shops				60	125
	restroom- public					50

<i>public-outdoor</i>						
	OAT					200
	eco-park	wd/we			floating population 150	200
	watchtower					
	playarea				floating population 150	200
	parking					
	sitout					250
	pedestrian pathway					450
<i>Research</i>						
	workshop zone				20	350
	eco-lab-					
	soil					150
	water					130
	chemistry					150
	botany					100
	environment					
	experimental and practical			2-3	25-30	250
	storage					5(48)

	storage for E&P					150
	electricity					30
	training			10		400
	pantry dining			20		60
	seminar hall					150
	library			80		160
	journal					50
	archieve					60
	librarian					25
	botany					60
	reading space					120
	discussion space			40		66
	accomodation					
	-reseachers			15		
	volunteers			10		
	guest			5	24(30)	
	staff room			5		90
	restroom					30
	event hall-					
	mutipurpose			250		550
	lounge					60
	staff quaters			10		(20)10
services						
	mechanical rom					30
	genrator room					30
	hvac					30
					total	9062
					circulation	2400
						12002

Concept

The inspiration is taken from an ant hill which is a thermal effective structure that retains the cold temperature in the building. The porosity is experimented and adapted to the warm and humid climate.

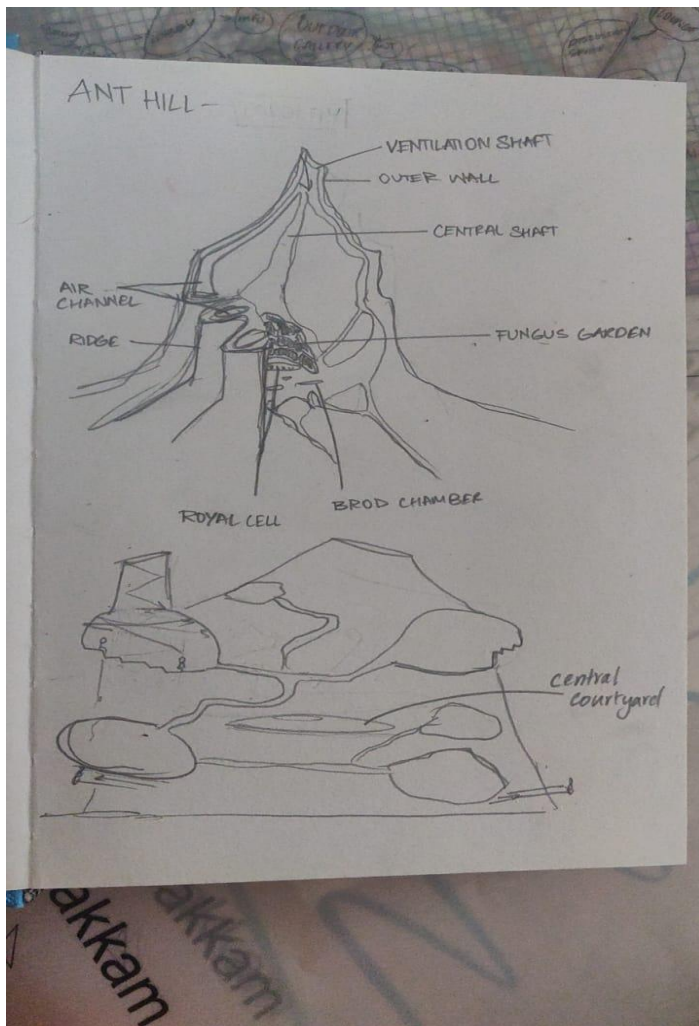
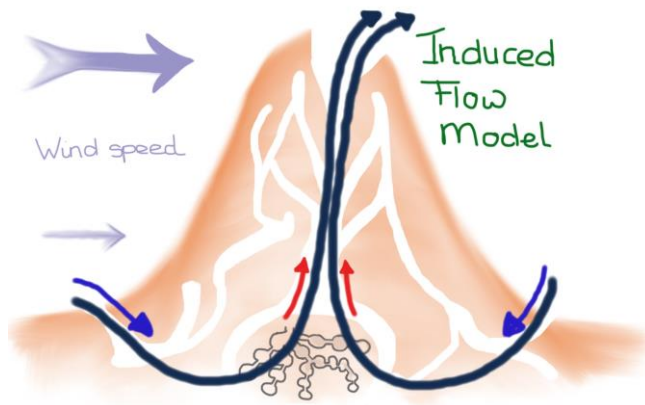
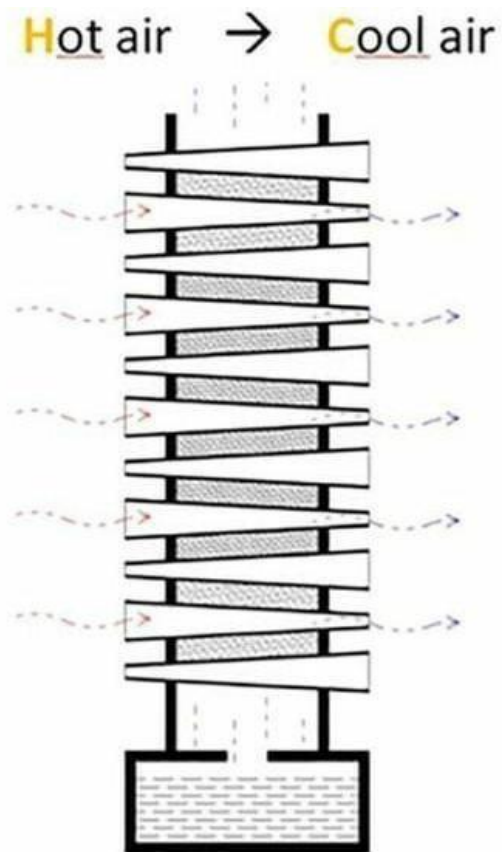


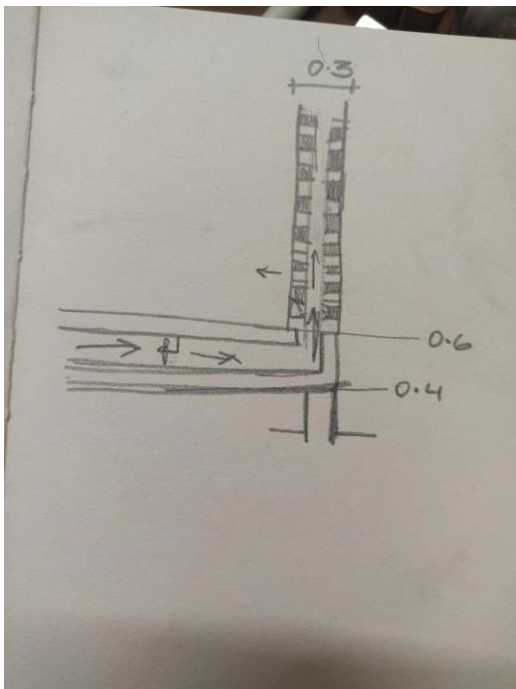
Fig: Anthill concept



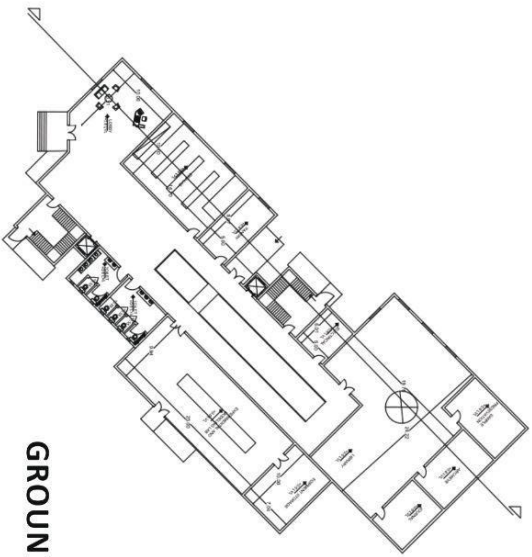
The ant follows a system like a lung that takes in the cold air through the phlores below and the hot air rises through the central shaft.



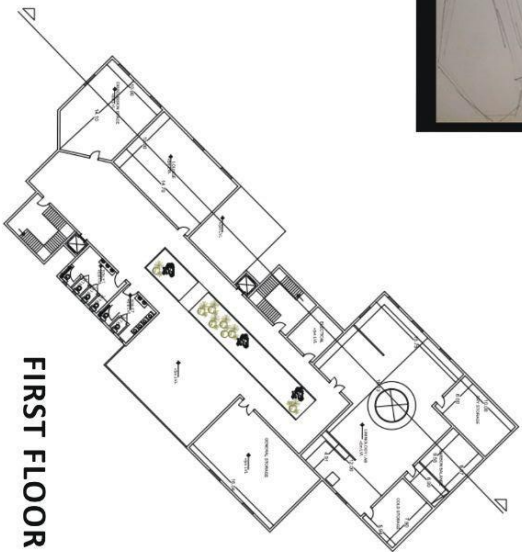
The above image is an inspiration taken from the device already built for hot and dry climate which by providing the suction (reversed fan) the floor plane for a warm and humid climate.



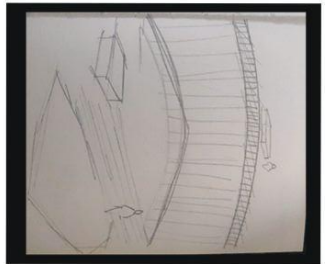
RESEARCH BLOCK



GROUND FLOOR



FIRST FLOOR

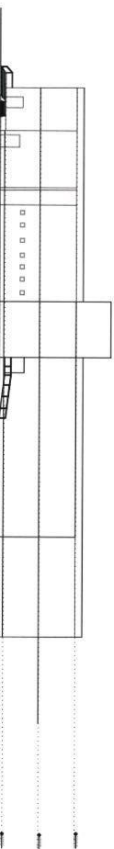


KEY PLAN

SECTION

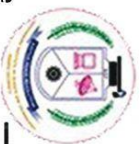


ELEVATION

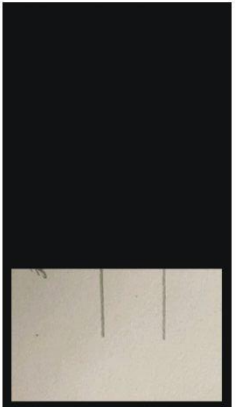


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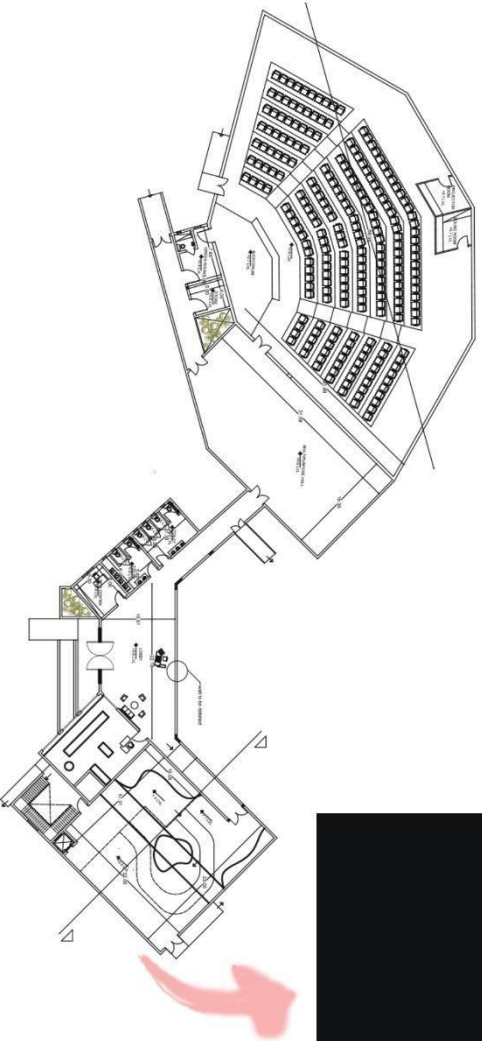
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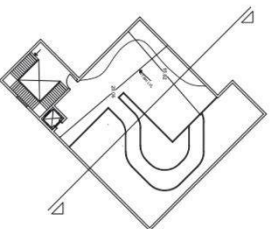
PUBLIC BLOCK



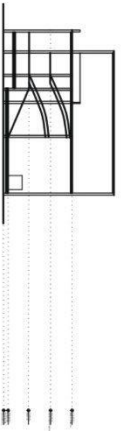
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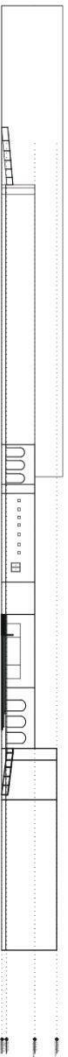
GROUND FLOOR



FIRST FLOOR



SECTION

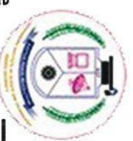


ELEVATION

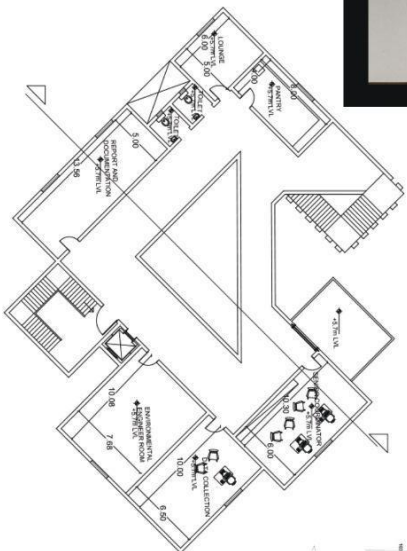
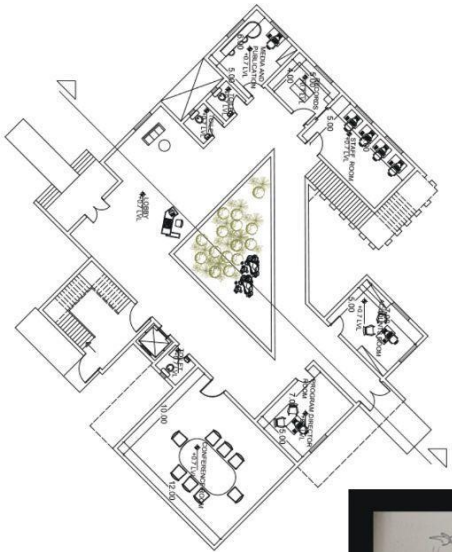


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ADMINISTRATION BLOCK



KEY PLAN

GROUND FLOOR

FIRST FLOOR



SECTION

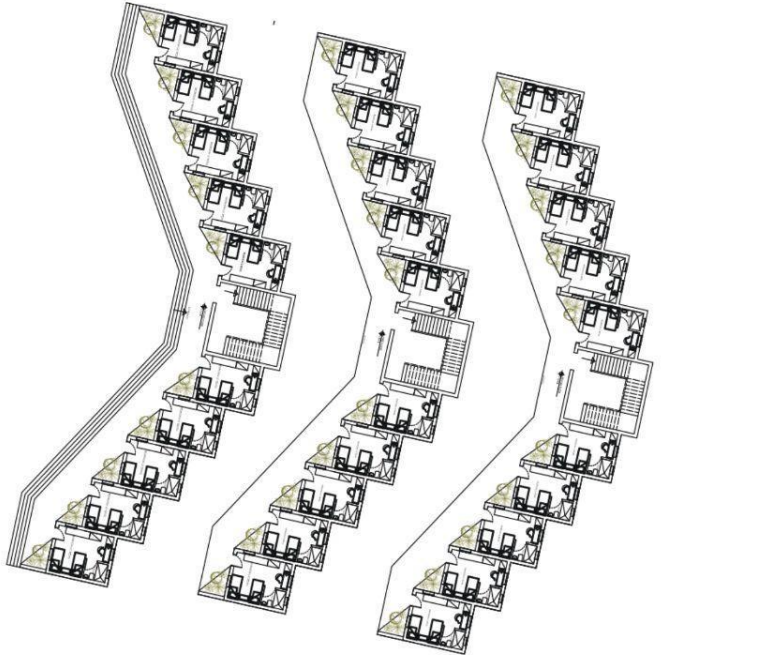


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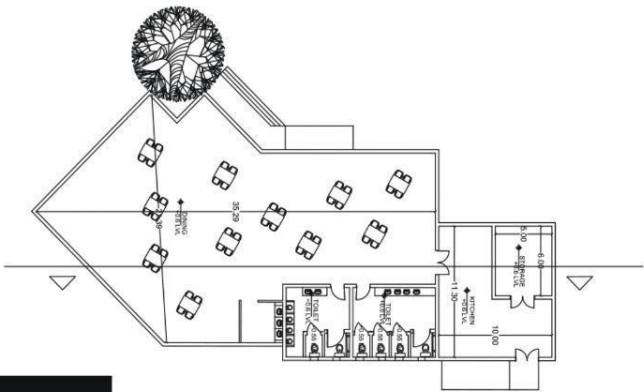
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ACCOMODATION AND CAFETERIA



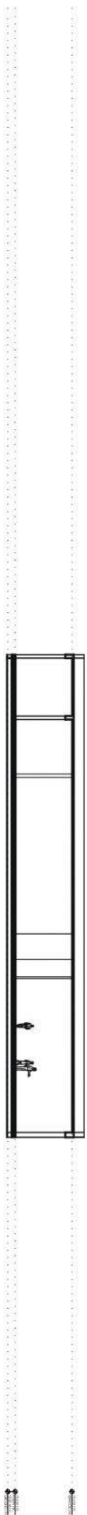
ACCOMODATIONS



CAFETERIA



KEY PLAN



SECTION



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