CIVIC CENTRE

THESIS

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

By

Aarifa Begum.R
(3621001)

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

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www.sathyabama.ac.in

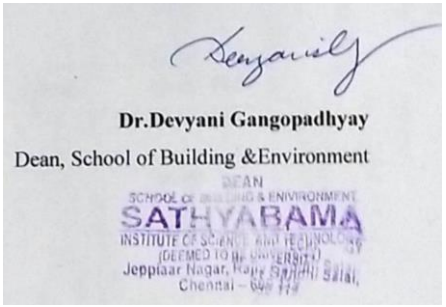
DEPARTMENT OF ARCHITECTURE

BONAFIDE CERTIFICATE

This is to certify that this thesis Report is the bonafide work of **Aarifa Begum.R (3621001)** who carried out the Dissertation entitled "**Civic Centre**" under our supervision from 2021.

Internal Guide	**Internal Review Member**	**External Guide**
(Ar.Sheetal)	(Ar.Devyani Gangopadhyay)	(Ar.Biswajith Paul)

Dean and Head of the Department
Dr. DEVYANI GANGOPADHYAY



Submitted for Viva voce Examination held on _____

Internal Examiner **External Examiner**

DECLARATION

I, **Aarifa Begum.R** hereby declare that the thesis project Report entitled "**Civic Centre**" done by me under the guidance of **Ar.Sheetal**(Internal Guide) and **Ar.Biswajith Paul** (External Guide). At **Sathyabama Institute of Science and Technology** is submitted in partial fulfillment 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** for their kind encouragement in doing this dissertation 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 Dissertation Internal Guide **Ar.Devyani Gangopadhyay**, Internal Review members and External Guide **Ar.Biswajith Paul** their guidance, suggestions and constant encouragement which paved the way for the successful completion of my dissertation works.

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 Dissertation.

ABSTRACT

The intent of this project is to create a new typology of designing a government building by combining both government and public spaces to break the age old belief of designing a government building through Civic Centre design where collectorate office block and other government buildings like S.P.office, integrated court complex anchored with some public amenity building like library, auditorium, community hall etc…The Civic Centre designed in a way to create a platform which bring people from different background to gather, collate and to share their culture by introducing series of network of spaces provided with essential services and the building is designed in a site which experience Hotdry climate and low ground water level, So various design elements and techiques like SuDS(Sustainable Drainage System), Biophilic design and passive design strategies like evaporative cooling mechanism and cross ventilation have been incorporated to enhance the micro climatic condition of the place and to improve the ground water level.

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1.INTROUCTION

The aim of this new government project is to design a master plan complex for new Collectorate office along with other government buildings with some additional public amenities based on local people need and occupation by replacing present Collectorate office complex which is presently located at the market committee in kallakurichi.The new government proposal for Collectorate office has been proposed in Veeracholapuram (ancient village) in kallakurichi district, which is located few meters away from the main town. The site is located in amidst of green field and surrounded by many ancient villages and temples.

2.OBEJECTIVE

People come from all over the district where sometime they are supposed to spend more time on it. So providing them with good environment by breaking the rigidity of the government building by incorporating efficient public spaces which was inspired from the collector office, Pune, Maharashtra.

3.LITERATURE STUDY

1. Indian context – Pune collector office
2. Western context – Marin Civic Centre

3.1PUNE COLLECTOR OFFICE

Table 3.1: Project Fact File

	 **Fig 3.1 Pune collector office**
Location	Station road, opposite Sassoon hospital, Pune.
Year	2017
Architects	Sunil Patil and Associates

Area	19,797 sq.m

No.of.storeys	5 floors
Programme	Collector office, Panchayat office, Revenue branch, Conference room, Offices, Café.

3.1.1 Introduction

Collector Office is an administrative headquarters of the district. It is perceived as the “Power House” and hence it needs to be designed as a “Monumental Building”. It is designed as a green building and also designed in a way, that creates harmony with nature.
The design is focused towards creating a lot of public spaces in the form of the central plaza, garden benches and even the kattas around the trees. With this innovative design, Ar. Sunil Patil is definitely changing the age-old belief about government offices being dull.

3.1.2 Location and its context

It is located near mumbai national highway surrounded by hospital, commercial buildings and schools etc...The site contained some old stone structures and 197 fully grown trees.

Fig: 1.2: Master plan

3.1.3 Conceptualization

Stage 1:

The entire campus around the collector office was covered with trees in order to protect the existing natural vegetation, the conceptualization process was done by isolating the areas with the lowest number of trees present.

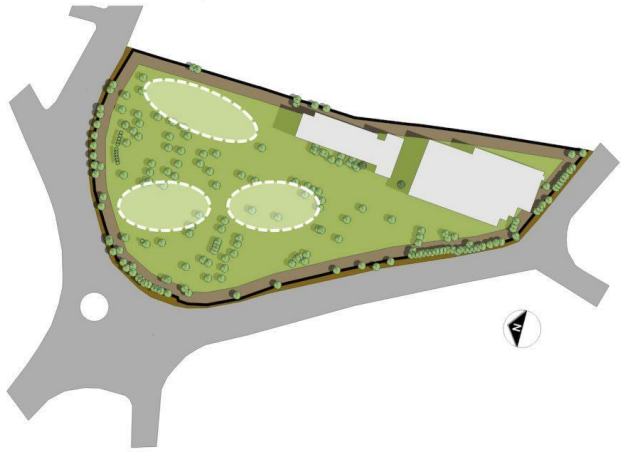


Fig 3.1.3 a) Isolating the area

Stage 2:

After isolating the areas, the concept was further expanded to fixate the placement of the building and the respective area.

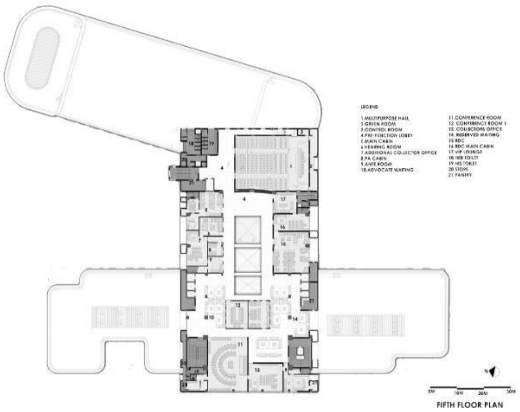
Fig 3.1.3 b) Placement of the building

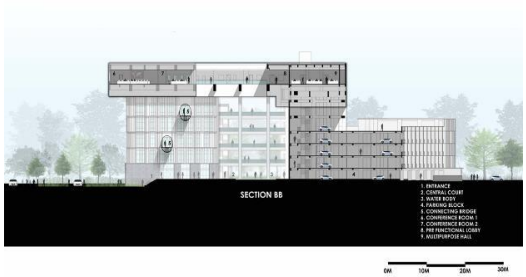
Stage 3:

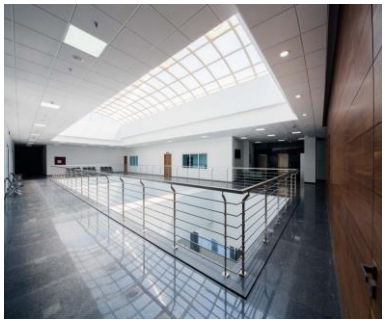
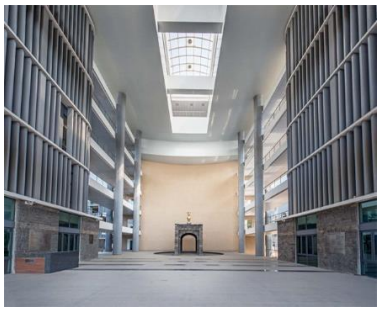
The real achievement of this design isn't one of these elements. It is the placement of the building itself.

Fig 3.1.3 c) Final arrangement

3.1.4 Design Features

Floor plans	 **Fig 3.1.4 a) Floor plans**	

Section	 **Fig 3.1.4 b) Sections**	
Programme arrangement	The building operates in layers, according to the programme and its functions. The public features such as cafe, store, dining are located at the lower levels. The more private features like collector office, conference room, multipurpose hall are located at higher levels in order to maintain privacy over public activities as well as reduced noise level for working.	
User experience and movement	The wide plaza acts as grand entrance from the main gate. The plaza and courtyards have been envisioned with the grandness in order to make the building better ventilated and better lit with the natural light. The heritage structure was erected in the middle of the plaza as a tribute to old collector office acts as a focal point from the entrance. The provision of waterbody and small plants and shrubs provides a harmonious blend of nature and freshness of air inside the building.	 

Spatial character	The beautiful design of courtyard with provision of seatings draw the public by providing comfortable environment ,so that the people can sit for sometime and enjoy and they acts as transition spaces. Pune experience dry climate so provision of courtyard act as a passive design strategy to generate ventilative cooling mechanism and maintains internal comfort. Wide corridors improves navigation and also provides better circulation throughout the building and also draws natural light and ventilation inside the building. The design of artificial water body around the structure at central plaza generates evaporative cooling mechanism and keeps surrounding environment cool.	 
Architectural expression	The provision of louvers acts as sun-breakers and allows light and breeze inside the building without increasing the internal temperature. The usage of stone in ground floor wall from earlier existing building stands as a good example for material reuse and cost efficiency. Opaque sunroof on the fifth floor allows natural light and in other hand prevent the amount of entry of heat inside the building.	

3.2MARIN CIVIC CENTRE

Table 3.2: Project Fact File

	 **Fig 3.2: Marin civic centre**
Location	San Rafael, California
Year	1957
Architects	Frank lyod wright
No.of.storeys	Administrative building = 4 story hall of justice = 3 story
Programme	Administrative office rooms Public library Cafeteria Central Gallery Auditorium Revenue department Court rooms

3.2.1 Introduction

The project was fully embodied Wright's ideal of organic architecture - A synthesis of buildings and landscapes, in wright's word, the structure was planned to "Melt into the sunburnt hills". The project is listed on national register of historic place and it also acts as a national historic landmark. It is currently being considered for designation as a UNESCO world heritage site.

3.2.2 Location and its context

The site is located away from the former countryside in downtown San Rafael, this expensive complex stretches across two valleys just east of US. The site itself has its own scenic beauty, surrounded by beautiful landscape.

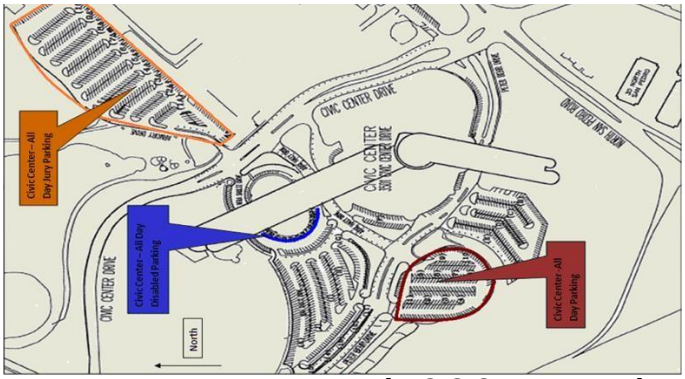
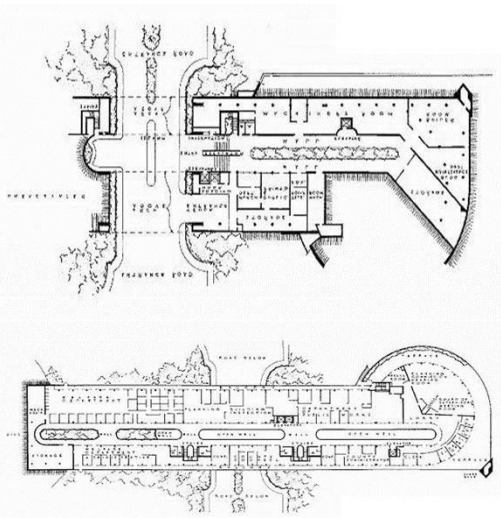
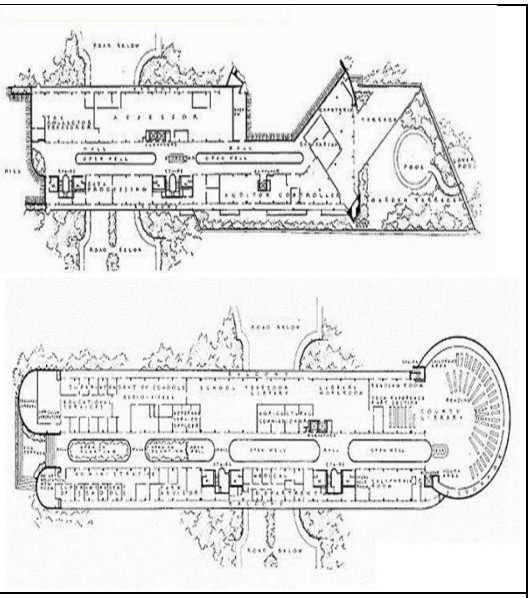
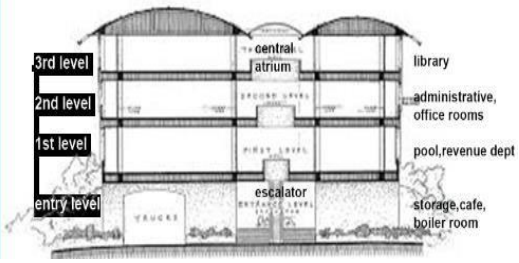
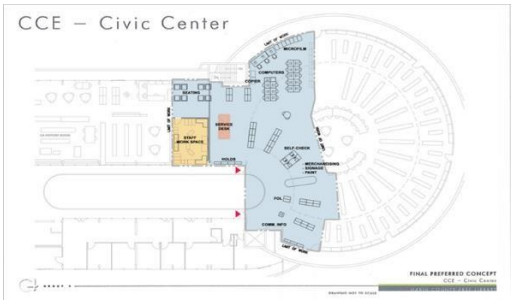
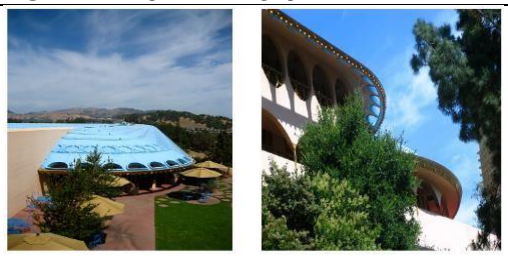


Fig 3.2.2:Master plan

3.2.3 Design Features

Floor plans	 **Fig 3.2.3 a) Floor Plans**	
Section	 **Fig 3.2.3 b) Section**	

Programme arrangement	The building operates in layers along horizontally and vertically according to the programme and functions. The public library present in the central dome area located at the topmost level experience calm environment ,accessed through escalator without any public interruption with other government activities like administrative building and hall of justice provided in two different wings which is connected by central dome space.	 **Fig 3.2.3 c) Library plan**
User experience and movement	The building merges with the surrounding landscape and also creates harmonious blend of nature inside the building by provision of water body, plants and central atrium allows natural sunlight inside the building and overall the building designed in a way to provide internal comfort. Provision of large windows, glass walls, large atrium spaces, wide corridors and terrace let the user to experience the concept of openness. Usage of colours like blue roof, pink stucco walls, hint of gold on the roofs, doors and railings creates a visual treat for the visitors.	 Hint of gold colour for roof and railings  Blue roofs  Pink stucco walls  Terrace large atriums wide corridors

Spatial character	The central atrium covered with skylight allows natural light inside the building. The atrium acts as transition spaces provided with seating and plants. Office rooms receives light from both exterior windows and skylight of the central mall. Library located at the topmost level provided with glass walls receives natural light from the corridor space which traps the heat and allows light inside the building. Central spire serves as an elaborate exhaust vent for heating/ventilating system of the civic centre. Auditorium was also used for country fair with a combination of flat-floor exhibition space and tiered seating spaces.	    
Architectural expression	The structure was designed in an innovative way bringing together steel and concrete surfaces and supports and cantilevering parts of the project and this made the structure more resistance to the earthquake. Roof painted with blue colour which adds uniqueness to the building and usage of light coloured paint reflects sunlight. Deep overhangs provided with canopy acts as a partial shading devices and allows natural sunlight inside the building. Glass walls- allow light to penetrate inside from the exterior and from the central atrium. Arches used repeatedly by serving different function like, for structural support, acts as shading devices and for aesthetic purpose in the facade framed in metal with a stucco where it overlaps slightly at the lower level, appears to stand on	    

	short slender gold anodized columns in the intermediate level and in the top level they become round openings and motifs in the roof.	

4.SITE STUDY

4.1 INTRODUCTION

The site is located in Veeracholapuram, an ancient village located few meters away from the main town of kallakurichi in kallakurichi district, Tamil Nadu.The site is located along the Salem – Ulundurpet national highway which act as the major acces point to the site from the south.Climate is Hot and Dry.The predominant wind direction is from south-west.The major part of the kallakurichi district has sedimentary and metamorphic rock

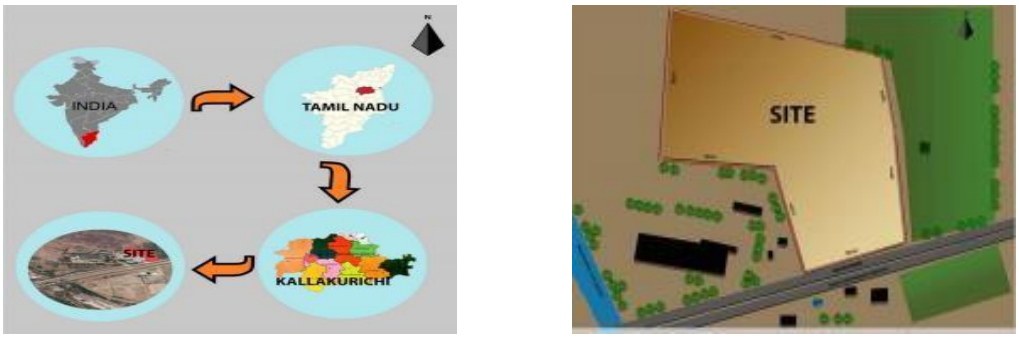


Fig 4.1 Location and site

4.2 NEIGHBOURHOOD CONTEXT

The site is surrounded by farm lands and Teacher training instituition is located in the southwest and few meters away from the site surrounded by ancient villages with some famous temples and mostly filled with residential zone. The major commercial hub is Kallakurichi in the west and Thiyagadhurugam in the east. There are two major water resources, one is from Gomuki dam and another is from Manimuktha dam and near the western part of the site runs a river stream from Manimuktha dam.

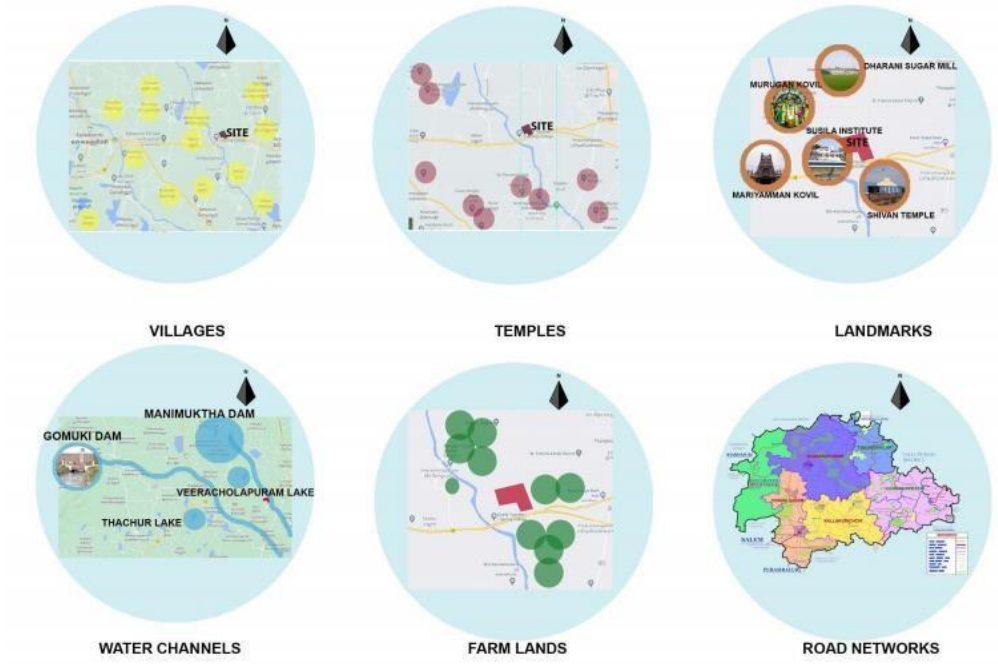


Fig 4.2 Neighbourhood context around the site

4.3 DEMOGRAPHY

Total district population = 16,82,687
Population density = 480/sq.km
Total number of villages = 562

Site located in veeracholapuram,kallakruchi.

Kallakurichi population = 52,508
984 females for every 1000 males.

Under age of six :
Males = 2,914
Females = 2,627

Literacy rate = 77.08%
No.of.Household = 12,801

Table 4.3: Total number of workers

Type of workers	No.of.workers
Cultivators	471
Agricultural labourers	840
Household industries	537
Other workers	14,673
Marginal workers	2,492
Marginal cultivators	33
Marginal agricultural labourers	414
Marginal household industries	102
Other marginal workers	1,943
Total	19,013

4.4 TRANSPORTATION

Rail - Kallakurichi is nearby chinnasalem railway station which is well connected with Salem junction and other parts of Tamil Nadu.At present there is no railway station in kallakurichi but there is an upcoming proposal for construction of railway station.

Road - Kallakurichi is well connected with important National Highways NH79 (West upto to Salem).NH32 (North upto Chennai) and NH38 (leading to South-East via ulundurpet.

Bus - A main bus stand is situatedin the city and well connected with all place in the District by Mofussal routes & Town bus routes.

4.5 HYDROLOGY

- The major source of water from Gomuki and Manimuktha River.
- These rivers cannot be used for irrigation purpose to the expected level because of low precipitation.
- They are only seasonal rivers so mostly irrigation done through wells, tanks etc.....

Groundwater level = 5 - 10 m bgl (pre-monsoon)
2 - 5 m bgl (post-monsoon)

Well irrigation of water:
Depth of wells = 6.64 to 17 m bgl
Water level = 0.74 to 9.7 m bgl (pre-monsoon)
= 0.7 to 4.45 m bgl (post-monsoon)

4.6 DRAINAGE PATTERN

The drainage density is very low. The flow of drainage pattern is towards Manimuktha stream in west.

4.7 SENSORY FEATURES

- Receives vehicular noise from south direction because of the presence of National highway.
- Beautiful view of green fields on the eastern and southern part of the site.
- Presence of green trees and small stream of Manimuktha river flowing on the western part of the site provides scenic beauty around the site.

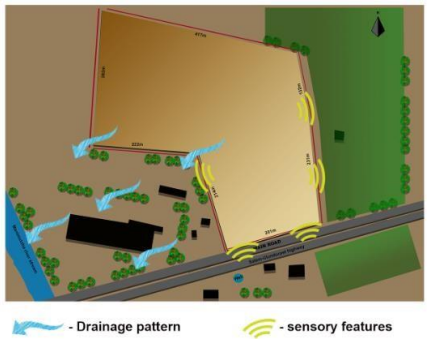


Fig 4.7 Drainage pattern and sensory features

4.8 OTHER ACTIVITIES

There are other major activities found around Kallakurichi District like tourism, Religious activities and market etc…

4.8.1 Tourism

Kallakurichi is closer to Kalvarayan Hills. The proximity of clouds fall near the peak of Vellimalai hilltop is a popular tourist spot for locals during the monsoon season. Vellimalai is a pristine unexplored location. There are so many of villages in Kalvarayan hills' hilltop. It is one part of the Eastern Ghats, lies on the western side of the Kallakurichi Taluk.

The Gomukhi River, foot hill of Kalvarayan Hills which comes from Gomuki Dam from Kallakurichi District,Tamil Nadu.It is about 16 kilometres (10 mi) north-west of Kallakurichi.

The Manimutha is located in Manimutha12 kilometres away from Kallakurichi in Tamil Nadu, India. It is the biggest reservoir of the Kallakurichi district.

4.8.2 Market

Kallakurichi Municipality Market is one of the Important Commercial Centre, Which supports the daily needs of Population Residing in the Surrounding rural areas & the town. The Municipality market is located in the Central Area of the Bustand accommodates 366 shops.It is a daily market and there were also weekly market, uzhavar sandhai etc.…

4.8.3 Religious activities

Kallakurichi district is also famous for few religious activities which brings people from different part of the world, which in other hand helps in increase of socio-economic growth of the place.

Koovagam Festival

Transgenders, popularly known as ‘aravanis’, are in the midst of celebrating the 18-daylong Koovagam festival, an annual event that attracts their kind from abroad, including Singapore and Malaysia, and from across the country, including Delhi, Maharashtra, Himachal Pradesh, Tamil Nadu and Karnataka. Their focal point during the fete is Koovagam temple.

Sri veeratteswarar Temple

It is one of the eight Veeratta temples (Ashta Veeratta Sthalas). This is the 11th Shiva temple in the Nadunadu region praised in Thevaram hymns which is located in Thirukkoilur,kallakurichi district.

4.8.4 Natural and Manmade Features

-The principal occupation of the district is agriculture.It is an emerging agriculture district and it is also called as sugarcane city.

- It has 10 rice-processing units.
- It has two major sugar mill and one private sugar mills.
- Site is surrounded by green fields and natural vegetation which adds scenic beauty to the site.
- Trees like coconut tree, Banana tree, Neem tree and Palm tree etc…are grown around the site.
- Rice, Paddy and Maize are the major crops grown around the site.
- A bus stop is located few meters away from the site.
- Irrigation well is located opposite to the site.
- Services like Electrical lines can be easily drawn into the site because transformer and number of electric poles are placed near the site.

5.SWOT ANALYSIS

Strength = Location

- Surrounded by many villages and has well connected road network so site can be easily accessible.
- Surrounded by green fields and trees adds scenic beauty to the site and improves micro climatic condition of the site.

Weakness = Sewage lines

- As it is a developing area, there is no well-planned sewage system.

Opportunity = Tourism

- Kallakurichi is a developing district surrounded by some tourist attractions like hill stations, dams and falls etc...

Threat = Water scarcity

- Less availability of groundwater level because of low seasonal rainfall which may in the future leads to water scarcity.

Inference

- As of designing a civic center, the major thing to be considered is public need. By providing community hall helps to promote multiple community based activities like Educational purposes (learning centre,worshop spaces), Art and culture (kalai arangam),To conduct campaign to promote job and agriculture activities.

- By providing recreational spaces through green spaces (parks and playground etc..) and physical infrastructure (Library, Art gallery, Craft bazaar) helps to promote leisure activities of the place which in other hand improve the social and economic growth of the place.

- Due to less ground water level, application of rainwater harvesting techniques, rain garden etc… helps to improve and conserve ground water level.

6.CLIMATIC ANALYSIS

The site possess Hot-dry climate.

6.1 CLIMATIC FACTORS

There are different climatic factors temperature, precipitation and wind speed which determines the climatic condition of the place.

6.1.1Average Temperature and Precipitation

Maximum Temperature = 39F (May)
Minimum Temperature = 19F (Jan & Dec)

Maximum Precipitation = During September
Minimum Precipitation = During January

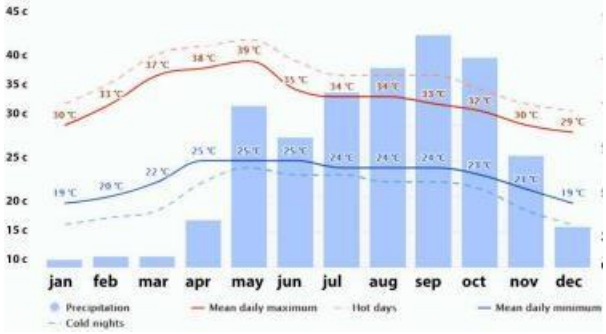


Fig 6.1 Chart showing amount of temperature and precipitation

6.1.2 Cloudy, Sunny and Precipitation days

Mostly sunny followed by partially cloudy.

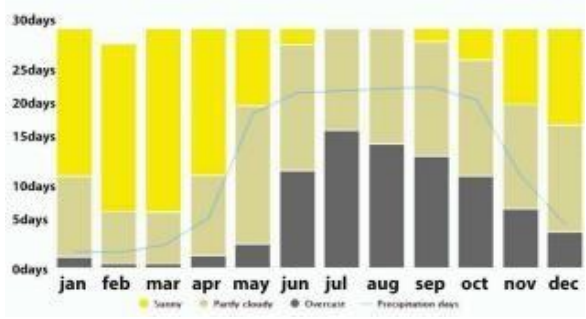


Fig 6.1.2 Chart showing number of cloudy,Sunny and Precepitation days

6.1.3 Maximum temperature

Receives large amount of heat throughout the year and mostly receives large amount of from south-west direction.

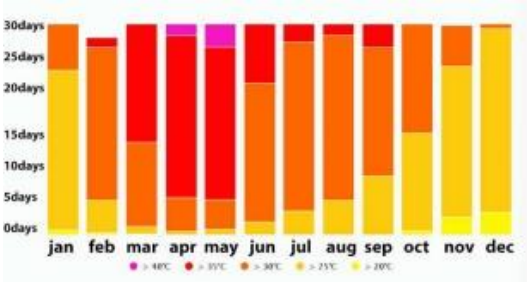


Fig 6.1.3 Chart showing Maximum amount of Temperature

6.1.4 Windrose

The predominant wind direction is from south-west to north-east.

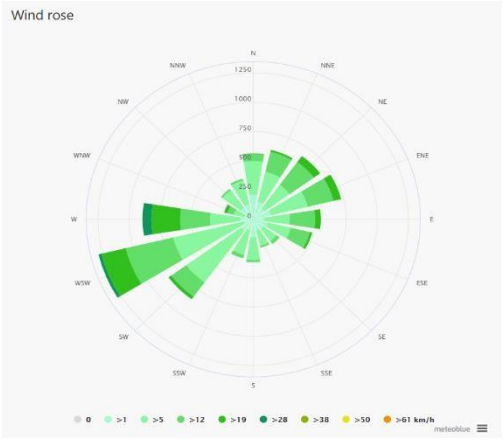


Fig 6.1.4 Chart showing Windrose

6.1.5 Wind speed

Maximum wind speed = >28km/hr (jul)
Minimum wind speed = >5km/hr (oct)

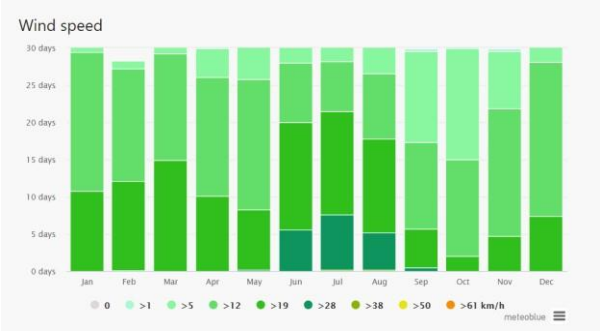


Fig 6.2 Chart showing amount of wind speed

6.2 INFERENCE

- Receives large amount of heat from south-west which is also the predominant wind direction, so provision of vertical louvers acts as shading devices which traps the heat and allows breeze inside the building without increase in internal temperature.

- As it is hot-dry climate, provision of waterbody like fountains etc..promotes evaporative cooling mechanism and keep surrounding environment cool.
- Provision of internal courtyard along with natural vegetation provides cross ventilation and natural cooling and in other hand promotes ventilative cooling mechanism which provides internal comfort.
- As the area receives low rainfall, provision of green landscape like pebble pathways, green roof etc...helps to conserve and increase ground water level.
- Provision of long verandas, corridors, green spaces in west acts as barrier to trap the Heat

7.SITE DATA

Project Type = Live
Site Location = Veeracholapuram, Kallakurichi.
Total Site Area = 40.18 acre

Master plan complex includes,

Building	Area(in acres)
Collectorate office	11.13
District court	5.23
S.P Office	3.47
Sports complex	9.28
Senior residential	3.05
General residential	3.51
Central park	Not considered
E.B substation	0.38
Roads	4.20
Other	1

Space to be designed = Collectorate office (11.13 acres) along with some Public Amenities.

7.1 AREA REQUIRMENT

COLLECTORATE OFFICE

PUBLIC ZONE			
S.NO	SPACE	QUANTITY	AREA(sq.m)
ACCOUNTS			
1	ACCOUNTS OFFICER ROOM	1	20
2	OFFICE OF ACCOUNTS	1	40
3	RECORD & STORE	1	20
AGRICULTURE			
1	AGRICULTURE OFFICER ROOM	1	20
2	OFFICE OF AGRICULTURE	1	40
3	RECORD & STORE	1	20
STATIONARY & FORM			
1	REVENUE	1	40
2	PANCHAYAT	1	40
TREASURY			
1	TREASURY OFFICER	1	15
2	OFFICE WITH STRONG ROOM	1	250
3	CONFIDENTIAL RECORDS	1	120
4	STORE	1	20
DISTRICT SUPPLY OFFICE			
1	OFFICER ROOM	1	20
2	OFFICE SPACE	1	40
3	MAPS,REGISTER,RECORDS	1	60
OTHERS			
1	SPECIAL DEPUTY COLLECTOR	1	20
2	OFFICE OF DEPUTY COLLECTOR	1	30
3	DEPUTY THASILDHAR	3(15)	45
4	THASILDHAR	1	15
5	ELECTRIC ROOM	1	15
6	TELEPHONE & TELEX	1	15
7	OFFICER TOILET	2(4)	8
8	GENTS TOILET	2WC+2U	10
9	LADIES TOILET	2WC	8
10	HANDICAP TOILET	1(2.5*2)	5

SEMI-PUBLIC ZONE			
S.NO	SPACE	QUANTITY	AREA(sq.m)
COLLECTOR			
1	COLLECTOR'S OFFICE	1	60
2	REST ROOM WITH ATTACHED TOILET	1	30
3	PA ROOM	1	15
4	WAITING ROOM	1	20
EXCISE SECTION			
1	ACCOUNTS SECTION	1	20
2	OFFICE OF EXCISE SECTION	1	30
DISTRICT BACKWARD WELFARE & MINORITY WELFARE			
1	OFFICER ROOM	1	20
2	OFFICE SPACE	1	50
3	SPECIAL THASILDHAR	1	20
DISTRICT AADHI DRAVIDA WELFARE SERVICE			
1	OFFICER ROOM	1	20
2	OFFICE SPACE	1	100
3	SPECIAL THASILDHAR	1	15
4	STORE	1	20
DISTRICT REVENUE OFFICE			
1	OFFICER ROOM	1	40
2	PA ROOM(CLERK)	1	15
3	REST ROOM WITH ATTACHED TOILET	1	20
4	WAITING ROOM	1	25
OTHERS			
1	CONFERENCE HALL	1	100
2	PANTRY	1	15
3	COMPUTER ROOM	1	50
4	ELECTRICAL ROOM	1	20
5	STORE	1	20
6	GENTS TOILET	2WC+2U	10
7	LADIES TOILET	2WC	8
8	HANDICAP TOILET	1	5

SEMI-PRIVATE ZONE			
S.NO	**SPACE**	**QUANTITY**	**AREA(sq.m)**
SURVEY AND LAND RECORDS			
1	ASSISTANT DIRECTOR	1	20
2	ADMINISTRATION SECTION	1	120
3	INSPECTOR OF SURVEY	1	12
4	TECHNICAL SEC FOR SURVEY &RECORDS	1	150
5	STORE FOR SURVEY MATERIALS	1	30
TECHNICAL DEPARTMENT			
1	TECHNICAL MANAGER	1	20
2	AEE FOR PUMP & POWER MAINTENANCE	1	15
3	AEE OFFICE	1	20
4	STORE AND RECORDS	1	40
DISTRICT SUPPLY WELFARE OFFICE			
1	WELFARE OFFICER ROOM	1	25
2	OFFICE SPACE	1	50
3	INDUSTRIAL CO-OPERATION OFFICER	1	15
4	RECORDS ROOM	1	40
5	STORE FOR SEWING MACHINE	1	80
BLOCK DEVELOPMENT OFFICE			
1	DEVELOPMENT OFFICER	1	15
2	DEPUTY BDO	1	15
3	DISTRICT PROJECT OFFICE	1	40
DISTRICT PANCHAYAT			
1	COLLECTORATE PANCHAYAT WING	1	100
2	OFFICER ROOM	1	20
OTHERS			
1	MEETING HALL	1	20
2	ELECTRIC ROOM	1	20
3	STORE	1	20
4	OFFICER TOILET	2	8
5	GENTS TOILET	2WC +2U	10
6	LADIES TOILET	2WC	8
7	HANDICAP TOILET	1	5

PRIVATE ZONE			
S.NO	SPACE	QUANTITY	AREA(sq.m)
GEOLOGY & MINING			
1	DEPUTY COLLECTOR	1	25
2	ASSISTANT DIRECTOR	1	20
3	ASSISTANT GEOLOGIST	1	20
4	OFFICE OF GEOLOGY & MINING	1	40
5	STORE & RECORDS	1	25
LAND & REFORMS			
1	THASILDHAR	1	15
2	OFFICE ROOM	1	120
3	RECORDS ROOM	1	20
DISTRICT TOWN PANCHAYAT			
1	EXECUTIVE OFFICER	1	15
2	OFFICE ROOM	1	15
3	RECORDS	1	15
4	PANCHAYAT WING	1	100
ELECTION			
1	SPECIAL THASILDHAR	1	15
2	P.A. ELECTION	1	20
3	OFFICE SPACE	1	15
DISTRICT RURAL DEVELOPMENT			
1	DRDA OFFICER	1	15
2	OFFICE SPACE	1	60
DISTRICT INSPECTION COMMITEE			
1	MANAGER	1	20
2	GENERAL MANAGER	1	15
3	INSPECTOR OF DIC	1	15
4	RECORDS	1	12
OTHERS			
1	MEETING HALL	1	20
2	ELECTRIC ROOM	1	20
3	STORE	1	20
4	OFFICER TOILET	2	8
5	GENTS TOILET	2WC +2U	10
6	LADIES TOILET	2WC	8
7	HANDICAP TOILET	1	5

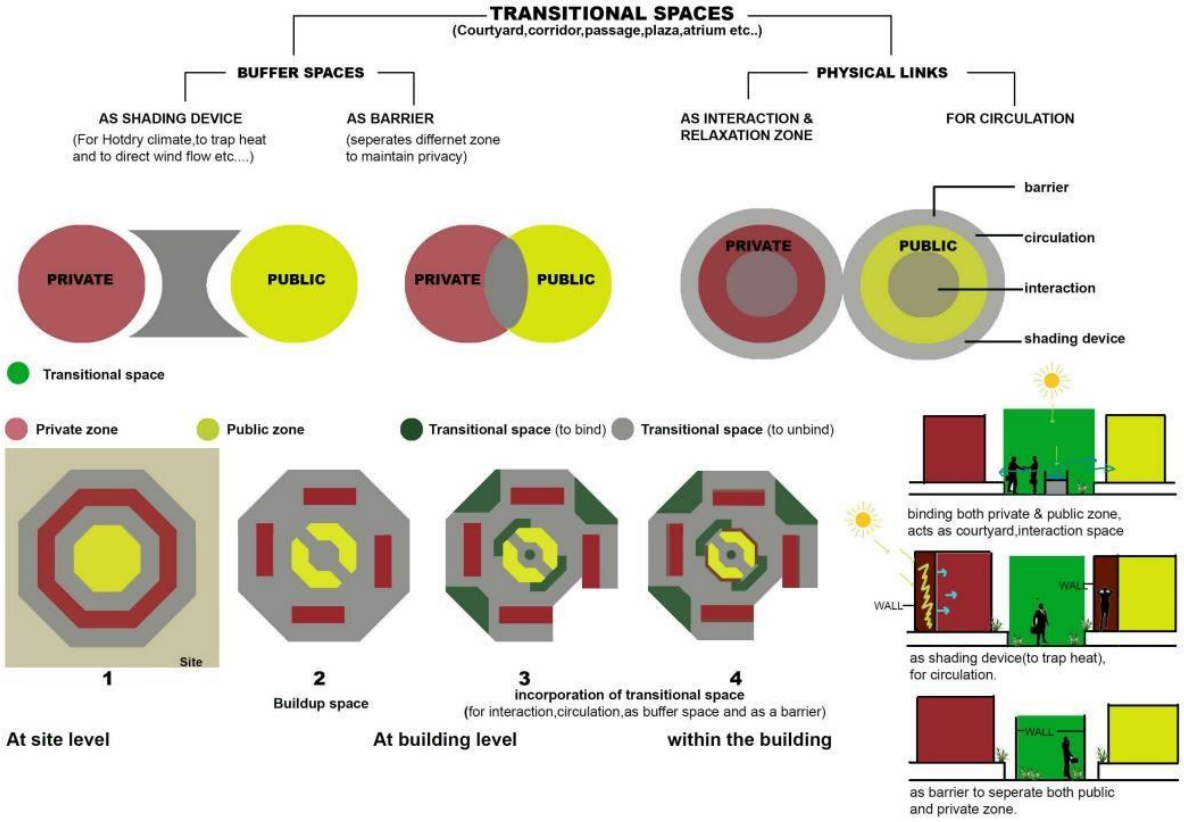
OTHER PUBLIC AMENITIES

S.NO	SPACE	QUANTITY	AREA(sq.m)
COMMUNITY HALL			
(ONSTAGE ACTIVITIES)			
1	STAGE FOR PERFORMING	1	100
2	CHORUS ROOM WITH ATTACHED TOILET	2	50
3	PROJECTOR ROOM	1	80
4	MEDIA LIBRARY	1	30
(OFFSTAGE ACTIVITIES)			
1	DRESSING ROOM WITH TOILET & BATH (M)	3WC+3U	45
	(F)	3WC	45
2	MAKEUP ROOM (M)	1	20
	(F)	1	20
3	REHERSAL ROOM	2	120
4	COSTUME STORAGE	1	50
5	EQUIPMENT ROOM	1	50
PUBLIC ACTIVITIES			
1	AUDITORIUM	1	850
2	LOBBY	1	150
3	GENTS TOILET	4WC +4U	20
4	LADIES TOILET	4WC	16
5	WORKSHOP SPACE	1	200
6	EXHIBITION GALLERY	1	100
HEALTHCARE CENTRE			
1	VISITING ROOM (FOR HEALTH CHECKUP)	6	90
2	WAITING AREA	1	30
3	OFFICE ROOM WITH ATTACHED TOILET	3	90
4	STORE ROOM	1	25
5	GENTS TOILET	2WC+2U	10
6	LADIES TOILET	2WC	8
CAFETERIA			
1	KITCHEN	1	30
2	STORE	1	20
3	EMPLOYEE DINING AREA	150(1.2)	200(aprox)
4	PUBLIC DINING AREA	150(1.2)	200(aprox)
5	GENTS TOILET	2WC+2U	10
6	LADIES TOILET	2WC	8

S.NO	SPACE	QUANTITY	AREA(sq.m)
LIBRARY			
1	LOBBY (SEATING AREA + LOCKERS)	1	100
2	REFERENCE COMPUTER TERMINALS	2 (20)	40
3	LIBRARIAN OFFICE	1	60
4	ASSISTANT LIBRARIAN	1	40
5	REFERENCE STACK	10(12)	120
6	COLLECTION STACK (INCLUDING TENANT USABLE SPACE)	100(12) (1.2 PER PERSON)	1200 1320(1.2) = 1584
7	STORE ROOM	1	200
8	HOUSE KEEPING	1	40
9	RESEARCH COMPUTER TERMINAL	6(20)	120
10	ELECTRICAL ROOM	1	15
11	GENTS TOILET	4WC+4U	20
12	LADIES TOILET	4WC	16
13	HANDICAP TOILET	1	5
RESIDENCE			
COLLECTOR BUNGLOW			
1	FOYER	1	15
2	LIVING AREA	1	30
3	MASTER BEDROOM	1	25
4	BEDROOM	1	20
5	KITCHEN	1	15
6	UTILITY SPACE	1	10
7	GARAGE	1	15
8	WASHROOM (TOILET+BATH)	1	10
STAFF QUATERS			
1	SINGLE UNIT	25(50)	1250
2	FAMILY UNIT	65(50)	3250
TOURIST HOME			
1	LIVING UNIT	40(30)	1200
MESS HALL(SEATING + KITCHEN + STORAGE)		1	300
TOILET	G =	2WC+2U	15
	F =	2WC	10

7.2 CONCEPT

“To play with Transitional spaces in multiple ways to bind and unbind the public and private zone.”



7.3 DESIGN ELEMENTS

Various design elements have been incorporated in the plan according to the typology of the building and to enhance the climatic condition of the place and to improve the groundwater level.

- Transitional spaces
- Biophilic design
- Passive cooling techniques
- SuDS(Sustainable Drainage System)

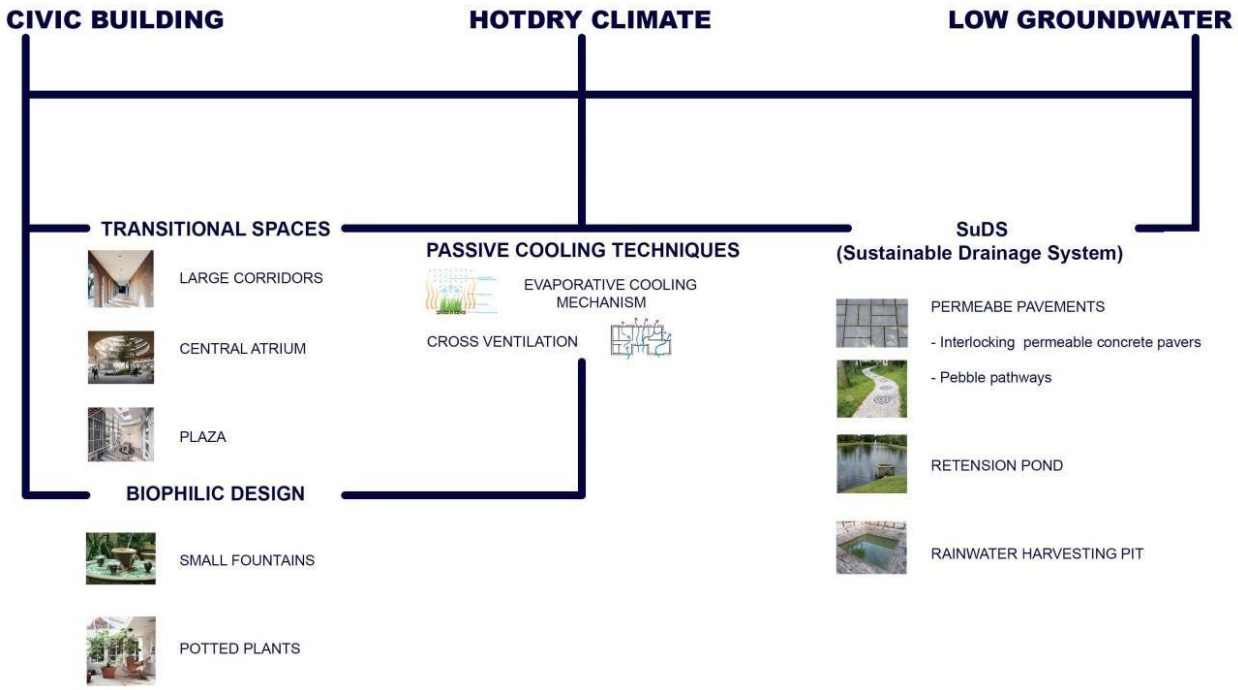


Fig 7.3 Design elements

7.3.1 Transitional spaces

- They helps to regulate circulation.
- They helps to maintain privacy between workers and visitors.
- They prevent direct entry of sunlight inside the building in order to maintain thermal comfort inside the building.
- Acts as a buffer space to trap heat and to allow moderate amount of sunlight inside the building.
- They helps to enhance the micro-climatic condition of the place.

7.3.2 Biophilic Design

It is a direct and indirect use of nature to increase occupant connectivity to the natural environment is to create healthy built environment.

- Provision of potted plants in the interior of the building helps to filtrate hot air and allows warm air inside the building.
- Provision of these natural elements like water body, plants etc….helps to regulate noise level inside the building.

7.3.3 Passive cooling techniques

This techniques helps to control heat gain and heat dissipation in a building in order to Improve the indoor thermal comfort without energy consumption. The techniques used

are ventilative cooling mechanism, evaporative cooling mechanism and cross ventilation etc….

7.3.4 SuDS (Sustainable Drainage System)

They are natural infiltration technique to improve and conserve groundwater level and to prevent surface runoff.

- Interlocking permeable concrete pavers = They also called as evaporative cooling pavement helps in reducing heat emission and helps improve groundwater level.
- Installation rainwater harvesting pit to collect and store rainwater in order to increase and conserve groundwater level.
- Rentension pond is an artificial pond remains dry throughout the year and collects rainwater during rain which helps to store and increase groundwater.