

KALAI KALANJIYAM

The Gurukul of Tamil Traditional Arts.

THESIS

Submitted in partial fulfilment 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

**JEPPIAAR NAGAR, RAJIV GANDHI SALAI,
CHENNAI - 600 119**

MAY - 2020



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BONAFIDE CERTIFICATE

This is to certify that this Thesis Report is the bonafide work of **R.Hemadeepika (3621029)** who carried out the Thesis "**KALAI KALANJIYAM -The Gurukul of Tamil Traditional Arts.**" under our supervision from Jan 2021 to May 2021

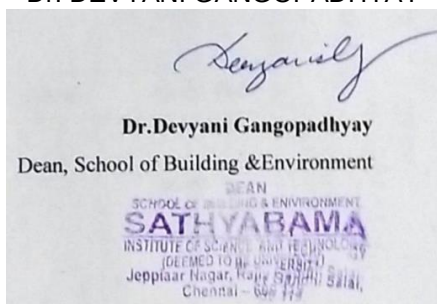
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Submitted for Viva voce Examination held on _____

**Internal Examiner
Examiner**

External

DECLARATION

I, **R.Hemadeepika** hereby declare that the Thesis Report entitled “**KALAI KALANJIYAM -The Gurukul of Tamil Traditional Arts**” done by me under the guidance of **Ar. Arun** (Internal guide) and **Ar.** (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

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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 Thesis.

ABSTRACT

The design was initially started with the idea of increasing the knowledge and increasing the physical activity of the current generation towards tradition and culture of Tamilnadu. The data says that there are 14 government and private colleges for Dance and Music in Tamilnadu for 6.79 crore people. So my aim is to design a space to educate the traditional classical Arts of Tamilnadu, with an ambiance for teaching the principles of life and history which says the bond between the people and nature.

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1. INTRODUCTION

This is a center for Traditional music, focusing on the learning of the classical music, dance and also some of the traditional arts of Tamilnadu. This attracts learners from different part providing them shelter for them. And also have a craft section. Dissertation topic is a study about Lime which is a vernacular material of this region. So the techniques using lime can be applied to the structure in the designing stage.

1.1. AIM:

- To create an environment to preserve the Tamil traditional arts.
- To design spaces that are comfortable for the user group and also maintain a eco-friendly relationship between the building and the environment.
- To encourage people in gaining more Knowledge in Tamil Traditional Dance, Music and Art.

1.2. SCOPE:

Exploring the different type of spaces needed for the creative community and knitting them together.

Experimenting the spaces and its architecture that can promote knowledge-sharing.

A platform where the input and output necessary for the individual to express his/her creativity is established.

1.3. OBJECTIVE:

- A platform that can unite the people on the basis of creativity and to spread awareness of the importance of art.
- To design Museum, Library spaces to preserve the arts and also performance and practising spaces.
- To maintain a quite ambiance, which makes the user feel the rhythm of music and arts in nature.

- To design a space which teaches the three “D”s according to Padma Bhushan V.P.Dhananjeyan, Discipline, Devotion and Dedication.

1.4. NEED FOR THE STUDY:

In future the importance of tradition and cultural importance may get reduced so designing a space to increase the chance of knowing these is a scope of this project. This structure and designing of spaces will reduce the energy and later it may become a zero waste production site. Because of the climate change and environmental issues these factors should be considered.

1.5. DESIGN INTENT:

- To earn
- To educate
- To exhibit
- To explore
- To evolve
- To enjoy

1.6. STATISTICS AND FACTS:

There are 14 colleges having dance and music courses allover Tamilnadu for 6.9 crore population which is very less. It will engage the public through dissemination of information through exhibitions, talks and events and other suitable mediums.

1.7.METHODOLOGY:

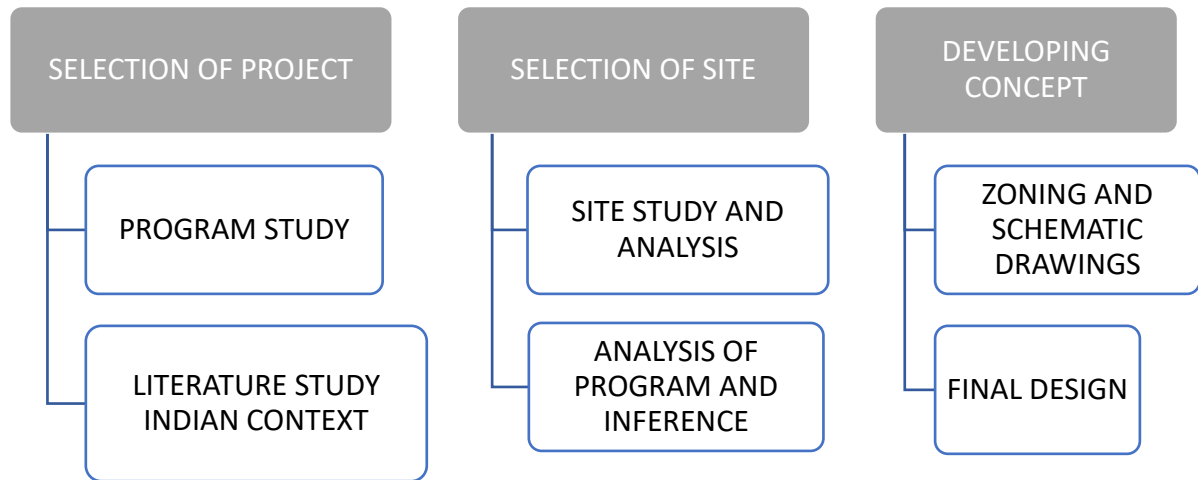


Fig. 1: Methodology

2. INITIAL DESIGN BRIEF

2.1. TRADITIONAL ARTS OF TAMILNADU:

2.1.1.BHARATANATYAM:

In dance, Tamilnadu has traditional, classical, folk and tribal dance styles. All the incredible classical dances originated in the country during the ancient times, Bharatanatyam being the oldest and one of the most popular ones known as the mother of all other classical dance styles, is considered as the oldest dance forms in the country India that originated from the temple dancers in Tamil Nadu. The dance is a pure amalgam of expressions, music, beat and rhythm.



Fig. 2: Bharatanatyam

2.1.2.PAINTING:

The most important form of Tamil painting is Tanjore painting, which originated in Thanjavur in the 9th century. The painting's base is made of cloth and coated with zinc oxide, over which the image is painted using dyes; it is then decorated with semi-precious stones, as well as silver or gold thread. A style which is related in origin, but which exhibits significant differences in execution, is used for painting murals on temple walls.

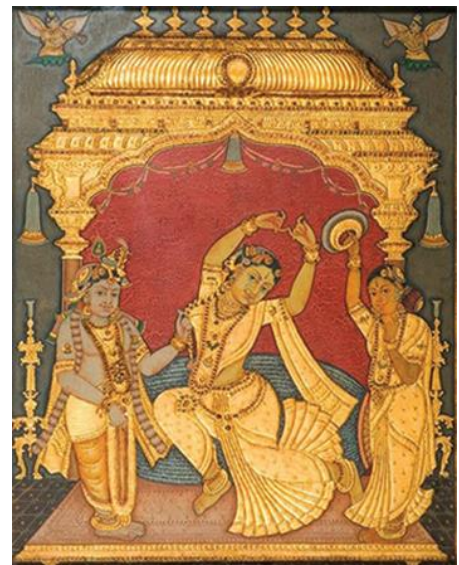


Fig. 3: Tanjore painting

2.1.3.SCULPTURE MAKING:

Tamil sculpture ranges from elegant stone sculptures in temples, to bronze icons with exquisite details. The medieval Chola bronzes are considered to be one of India's greatest contributions to the world art. In Tamil sculpture, the artist imposes his/her vision of the form on the material.



Fig. 4: Traditional sculptures

2.1.4.VEENA:

The South Indian veena design, used in Carnatic classical music, is a lute. It is a long-necked, pear-shaped lute, it has 24 frets, four melody strings, and three drone strings. It remains as an important and popular string instrument in classical Carnatic music. The long, hollow neck design of these Indian instruments allow portamento effects and legato ornaments found in Indian ragas. It has been a popular instrument in Indian classical music, and one revered in the Indian culture by its inclusion in the iconography of Saraswathi, the Hindu goddess of arts and learning.

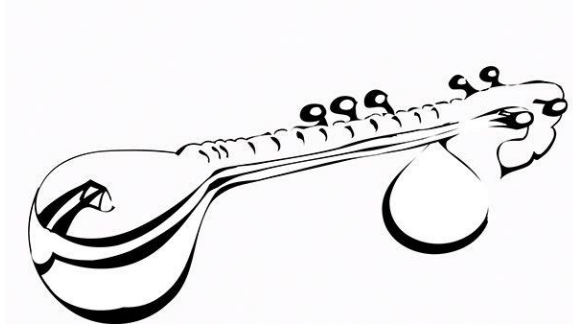


Fig. 5: Veena

2.1.5.FLUTE:

Flutes are the earliest known identifiable musical instruments, as paleolithic examples with hand-bored holes. Two main varieties of Indian flutes are currently used. The first, the Bansuri, has six finger holes and one embouchure hole, and is used predominantly in the Hindustani music of Northern India. The second, the Venu or Pullanguzhal, has eight finger holes, and is played predominantly in the Carnatic music of Southern India. Presently, the eight-holed flute with cross-fingering technique is common among many Carnatic flutists.

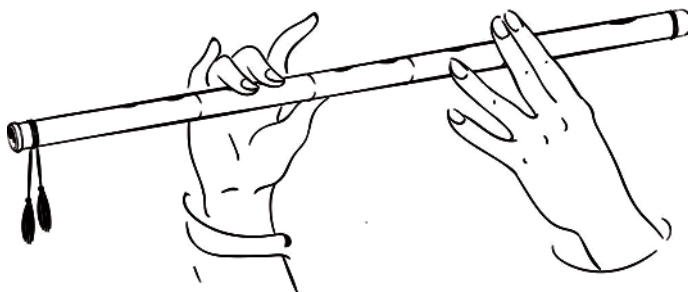


Fig. 6: Flute

2.1.6.MIRUDHANGAM:

The earliest mention of the mridangam in Tamil literature is found perhaps in the Sangam literature where the instrument is known as 'tannumai'. During the Sangam period, it was one of the principal percussion instruments to sound the beginning of war because it was believed that its holy sound will deflect enemy arrows and protect, the King. During the post-Sangam period, as mentioned in the epic Silappadikaram , it formed a part of the antarakottu- a musical ensemble at the beginning of dramatic performances that would later develop into Bharatanatyam. The player of this instrument held the title tannumai aruntozhil mutalvan .

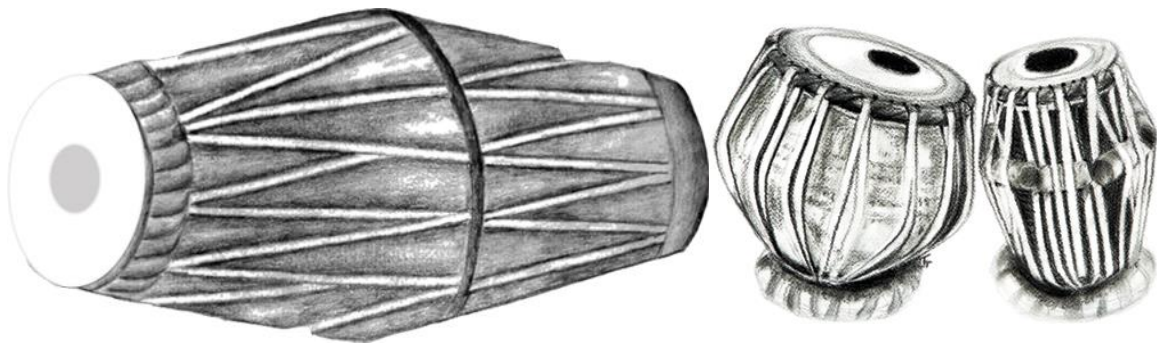


Fig. 7: Mirudhangam

2.1.7.CRAFTS:

Basket weaving is the process of weaving or sewing pliable materials into three-dimensional artifacts, such as baskets, mats, mesh bags or even furniture. Basketry is made from a variety of fibrous or pliable materials—anything that will bend and form a shape.



Fig. 8: Weaving basket

2.2. USERS :

The users are students, teachers, general public in case of any performances. The students include people from other places and also local area. There is a stay facility for the people from other areas.

2.3.BUILDING TYPOLOGY:

This Centre for music is a semi-public design which is little similar to institutional design and also have public spaces which includes the performance areas, exhibition spaces, etc.

3. LITERATURE STUDY

3.1. KALAKSHETRA:

Kalakshetra literally means the place for arts (kala- art: shetra- place), Deriving inspiration from this noble idea Kalakshetra was established in the words of Rukmini Devi.

This place was established with the purpose of resuscitating the artistic traditions of our country and of imparting to the young the true spirit of art with the background of a religious spirit.

SITE AREA: 40 ha

3.1.1.LOCATION:

At thiruvanmiyur, Chennai.

College is located far away from the main noisy road and it is surrounded by trees.

3.1.2.VICINITY:

Basant Nagar, South Chennai, The complex is only few meters away from the sea.

Theosophical Society and High school is located nearby.

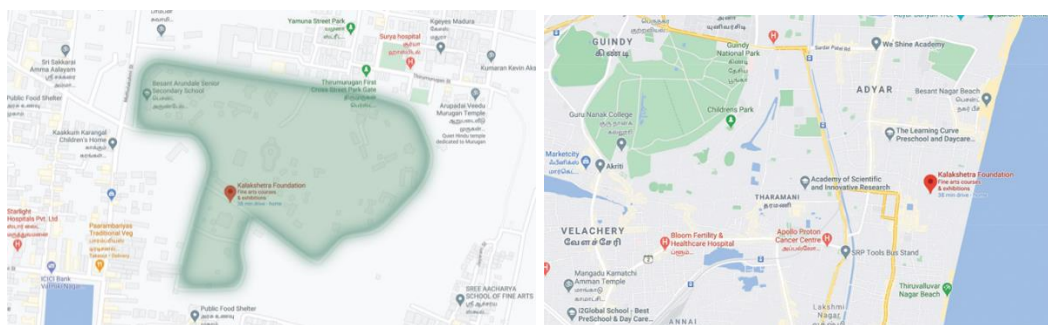


Fig. 9: Kalakshetra location

3.1.3.FUNCTION:

Kalakshetra is a cultural academy dedicated to the preservation of traditional values in Indian art, especially in the field of Bharatanatyam dance and Carnatic vocal and instrumental music, the visual arts and traditional crafts.

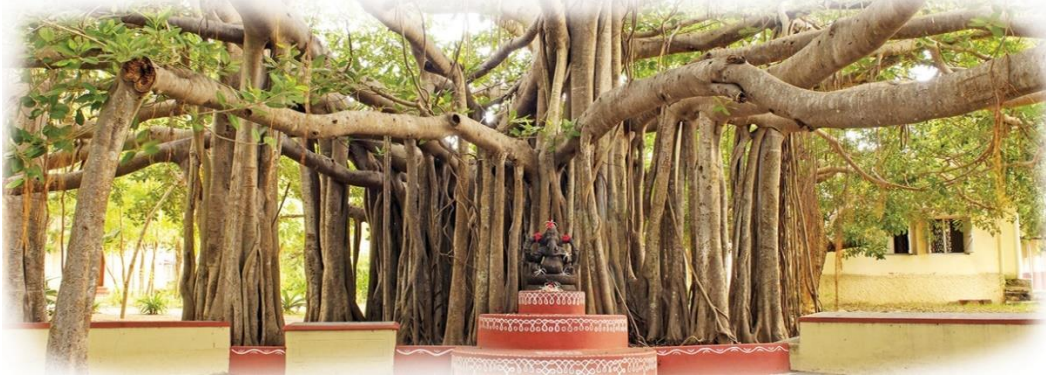


Fig. 10: Kalakshetra

3.1.4.HISTORY:

The center began under a tree in the Theosophical Society campus with one Student, Radha Burnier as she was later Known. Soon two other students joined her in a classroom with thatched roof and three mirrors (Kannadi kottagai). Rukmani Devi acquired a land in the village of Thiruvannamiyur, a short distance from the Theosophical Society. In 1951, a sapling of the banyan tree was planted. The new campus of Kalakshetra was consolidated in the years that followed until it covered one hundred lush acres besides the sea.

Rukmini Devi and her associates undertook the herculean task of finding the funds to build the institution. They built roads, planted trees and found committed architects, engineers and building material, during a period of shortages, to create a sylvan oasis for art and education. Sir C. P.Ramaswami Iyer laid the foundation stone of Kalakshetra on 27 December 1961.



By 7 May 1962, Kalakshetra had moved into its new home, a campus with a unique identity that reflected its founder's dream. Rukmini Devi's vision spread like the roots of the banyan tree and even today continues to grow, imparting the true values and spirit of art to the present generation.

This analysis was carried to understand how people react to lime construction and to know the percentage of people interested in lime construction.

This gave an idea of people's knowledge about lime and also the disadvantage of lime not being used today.

The below information's are collected from 84 persons of various age groups and also from various occupation.



Fig. 11 The Banyan

3.1.5.CAMPUS:

With a huge banyan tree in the centre of Kalakshetra campus, the classes are held in cottages and in the open sometimes. The institution follows a gurukul system and is associated with the cultivation and promotion of the ancient cultural traditions of India. The theatre within the Kalakshetra is built according to the Natya Shastra. The institute conducts research into works of several renowned Sanskrit scholars to stage dance productions. The Craft Education and Research Centre of Kalakshetra is famous for reviving traditional south Indian saree patterns and colours in silk and cotton. The hand block Printing Unit works with hand-carved wooden blocks to

create attractive sarees, dress materials and home linen. These units are also a good source of livelihood for destitute women from poorer sections of the community.

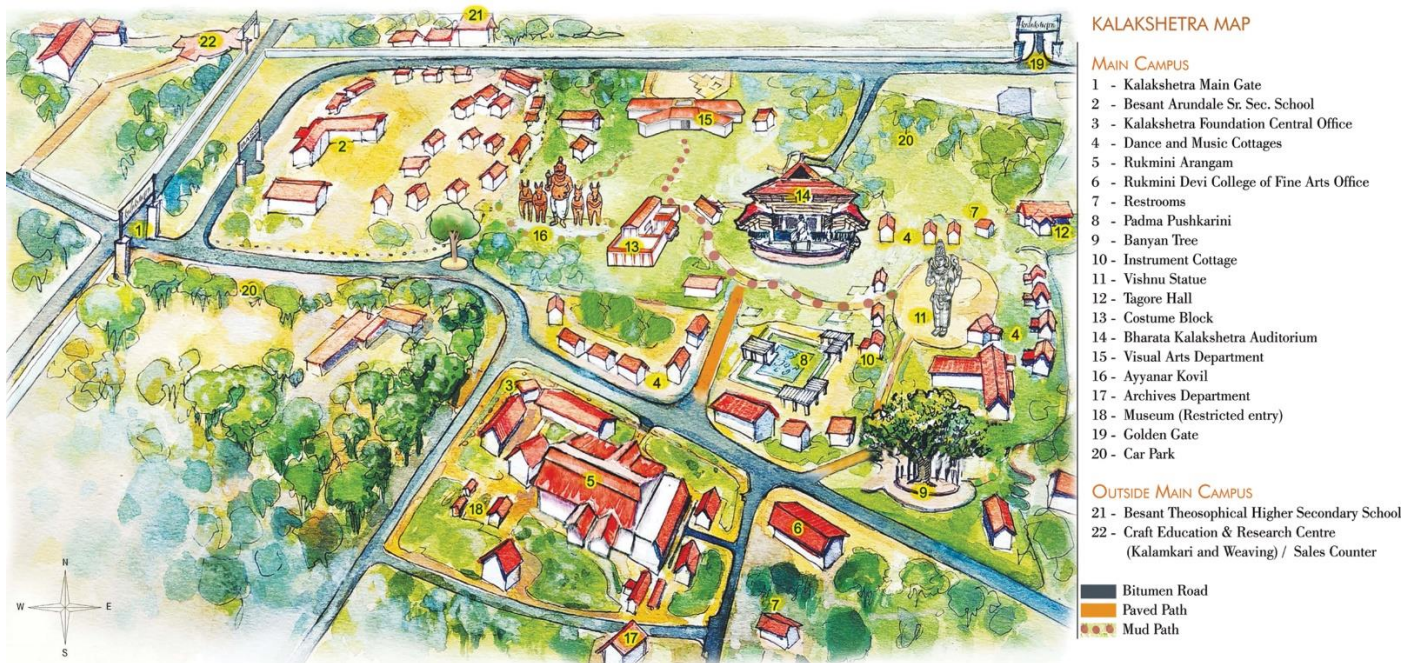


Fig. 12: Layout of Kalakshetra

LAYOUT AND PLAN:

The free flowing organic pattern that has originally grown with the needs of the institution. Most of the structures in the campus has only one floor. The classrooms, prayer hall and the auditorium are spread in the central part of the campus, while the administration, hostels, staff quarters, dining hall and school cover the outer region. All the classrooms for dance and instruments are single unites like cottages with separate plinths and sloping roofs.

Sound buffer- the campus has many neem trees which add as a buffer to the already existing quite environment. And also the placement of classes follow a distance between them.

3.1.6.SPACES:

3.1.6.1.Rukmini Arangam:

It was designed with the help of Architect Kiffin Peterson. Measuring 70'x80', the Open-air space can accommodate 300 and an additional 50 can be accommodated on the floor directly Infront of the stage. Dressing rooms are available on either side of the stage which is covered under a thatched roof, each measuring 10'x12'. The stage is made of black oxide which is suitable for effective lighting.



Fig. 13: Rukmini arangam

3.1.6.2. Classrooms :

The classrooms here are thatched cottages where dance, vocal and instruments are taught. These are naturally lit and ventilated spaces. The cottages have attached accommodation for the Guru to whom Shishyas



Fig. 14: classroom

come for learning in small

groups of about 10. Open spaces, spreading trees, buildings which are open to the light and the breeze cultivate a spirit of reverence for learning. Each cottage have a landscaped courtyard to act as spill outs.



3.1.6.3. Material study:

Traditional wood and thatch roof studios afford acoustical barriers, Jali work for the classroom for better ventilation which is important for dance classes. Most of the materials used are eco-friendly and sustainable.



Fig. 15: Informal practice areas

3.1.6.4. Padma Pushkarini :

A pond in the campus-a stage for musicians was inaugurated. 3 elegant mandapams around the pond, one of which was the stage for musicians. The pond is bordered by granite steps and terraces. It is named after Dr. Padmasini, a teacher of Kalakshetra.



Fig. 16: Padma Pushkarini

3.1.6.5. Hostel and Dining Room :

The hostel buildings are placed at an end of the site for privacy and to face the sea. Students are housed in dormitories with large ventilated rooms of 3 in each. There is a large dining hall opened to the sea breeze where meals are served. It has attached kitchen facilities. A basic dispensary and an infirmary with 2 beds are available. There is a small library that may be used for private study.



Fig. 17: Hostel

3.1.6.6.Sankara Menon Library :

The Sankara Menon library, located next to the banyan tree, the hub of the college, is for students, researchers and staff. The library contains over 10,000 books covering subjects such as dance, music, painting, literature and religion.

3.1.6.7.Rukmini Devi Museum :

The campus is host to a museum dedicated to Rukmini Devi, the founder of Kalakshetra. The personal office of Rukmini Devi is now the Rukmini Devi Library which has restricted access.

3.1.6.8.Other components of the campus are :

- Reception and resource centre
- 2 guest houses
- Admin block
- A senior secondary school
- Outdoor sport areas
- Toilet blocks - 6
- Covered prayer hall. Seating are placed as a part of Landscape which make spaces user friendly. There are spaces designed as spaces for informal practice areas. There are enormous trees covering the site.



Fig. 18: Weaving and kalamkari

3.1.6.9. Theatre design (koothambalam):

The Theatre is design by Appukuttan Nair, it is an vernacular style of Kerala incorporating good acoustics and air circulation measuring 40'x40', the auditorium can seat 750. 50 can be accommodated on the floor directly in front of the stage.



There is 428 chairs in the octagonal well of the theatre, 168 chairs on the peripheral veranda, and 104 chairs in galleries in the balcony.

The stage is raised 1.1/2 ft from the lowest level of the seating area allowing the audience to clearly observe the footwork of the dancers. Dressing rooms are available for artists at the ground floor. there is a single roofing without any column at the centre.



Fig. 19: koothambalam

The stage area is 45% of the audience seating area, reflecting the emphasis that the auditorium's designers laid on the art and the artists. Also stage has an advanced lighting and sounding sysytems. Material- The structure has walls of wooden slats allowing the breeze inside.

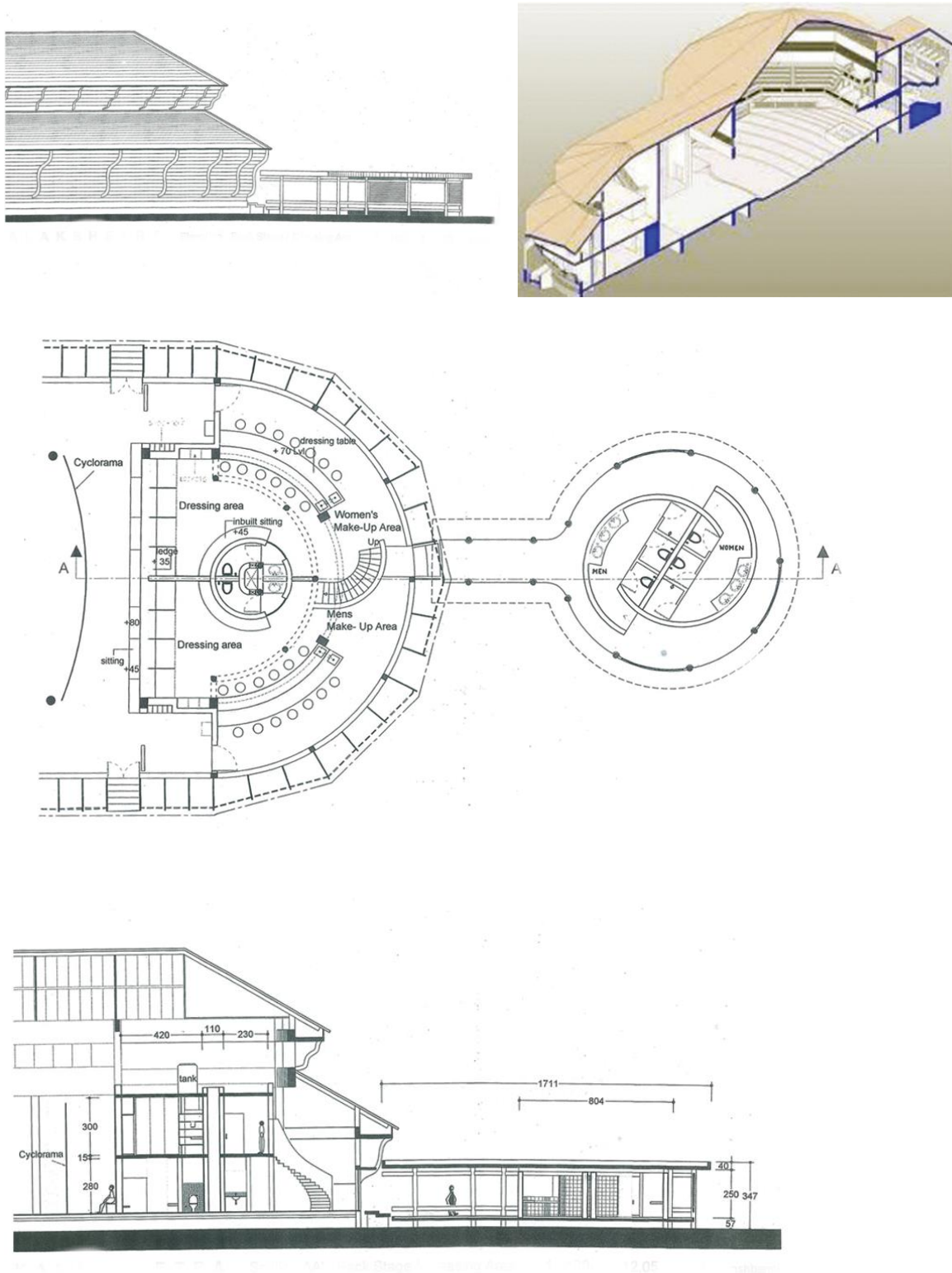


Fig. 20: Plan, Section and Elevation

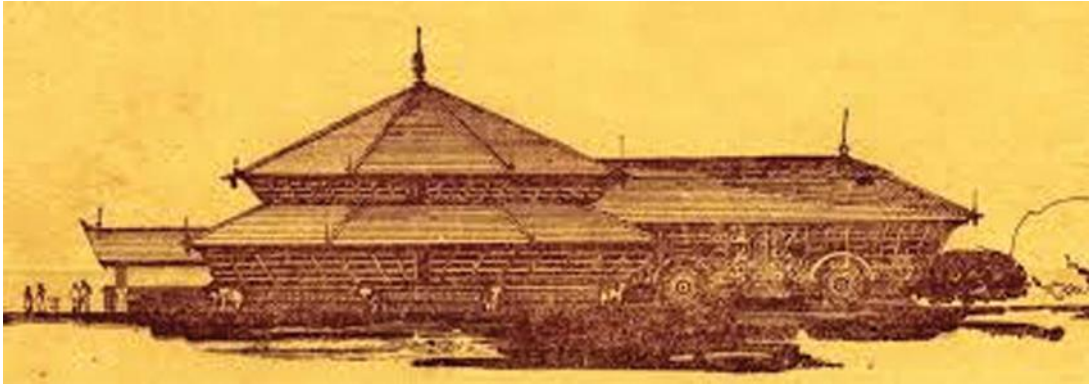


Fig. 21: Koothambalam view

3.2. KALAMANDALAM :

3.2.1. Introduction:

It is located about 32km north of thrissur, at Vallathol nagar, near shoranur, on the bank of celebrated river of cultural significance, Brahmaputra. Kalamandalam is the meeting point of the southern and northern styles of Kathakali as well as various visualant forms such as mishan koodiattam that blossomed in different parts of Kerala.

Kerala kalamandalam, the classical colosseums of Indian Heritage has been the dancing culture for 90 years and continues. It was a dream of Vallathol Narayana Menon and Mankkulam Mukundaraja.

The birth of Kalamandalam was remarkable in many respect. It was the first step in the cultural history of Kerala to institutionalize the classical performing arts which were left to the patronage of provincial kings and Landlords.

Kalamandalam offers 12 undergraduate and post-graduate courses apart from M.Phil. and PhD in the classical performing arts of Kerala including percussion ensembles and 'chutti' (make-up and costumes). A major contribution of Kalamandalam has been in redesigning the costumes of Kathakali, Koodiyattam and Mohiniyattam.



Fig. 22: Kalamandalam location

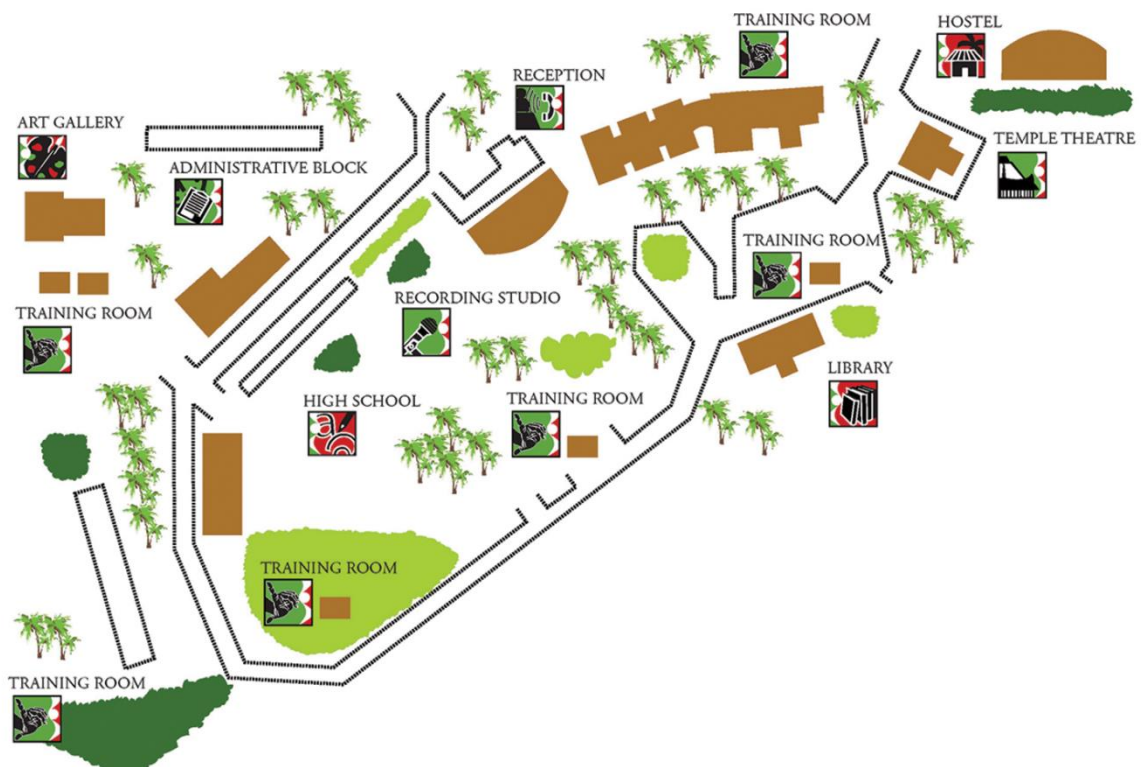


Fig. 23: Layout

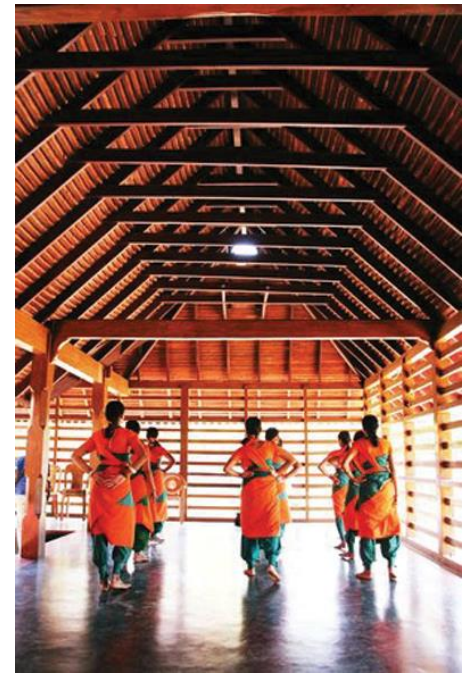
Dance Kalari Cluster :

Dance kalari cluster is next to koothambalam. This cluster consists of 4 dance kalaris, each dedicated to 1 style of dance. The peepal tree is the central focal point. There are seating around this tree to make the space more user friendly. Each kalari has got a practice hall with a raised platform for Guru. Adjacent to

these kalaris there is a small pond which gives a micro climate change. These spaces are semi open with Mangalore tile roof supported by granite pillars. The walls are of mud plaster and floor is made up of country tiles.



Fig. 24: Dance Halls



Accessibility :

Kalamandalam is easy accessible located on Thrissur-Shoranur highway. A railway station for Vallathol nagar is 3 mins walk and Shoranur station is 3 km away from this centre.

Approach :

Approach is from the highway to the statue of poet Vallathol. The founder is prominent from the road.

Imageability :

The imposing Koothambalam, designed in keeping with prescriptions of Natya shastra gives a strong imageability.



Fig. 25: Entrance Arch

Entry :

The entry is from the highway which has got an entrance arch.

Layout :

It has an organic planning where structures are built for the needs. Kalari are not grouped according to any department. Some of the sound producing Kalari are placed to each other which acts as a negative aspect.



Fig. 26: Program

Enclosure :

The Kalari are all semi enclosed. They have rectangular volume with a simple design.



Fig. 27: View

Circulation :

As the spaces not planned before construction they just have a pathway connecting all the spaces for circulation. Certain Kalari have a roundabout approach.



Fig. 28: Circulation

Kalamandalam is a very old school offering highly professional standard of training to its students.

- The temple theatre built in accordance with the traditional style in the main focal point of the school which attracts many visitors.
- The practice halls are not properly planned.

Open Air Theatre :

The open air theatre present in the campus is located behind the admin block. The rear elevation of the boys hostel adds to the unplanned location of open air theatre.

Koothambalam :

- Conceived and supervised by Appukutan Nair.

Built for presentation of traditional theatrical form of Kerala.

- Main performances are Koothu, Kathakali, Koodiyattam, Krishnattam and Mohiniattam.



Fig. 29: Auditorium

- Other forms like thayyam, mudiyyethu are held in the open stage without any fixed boundaries.
- There are green rooms and the stage is little raised. People are seated in the mats on the floor.

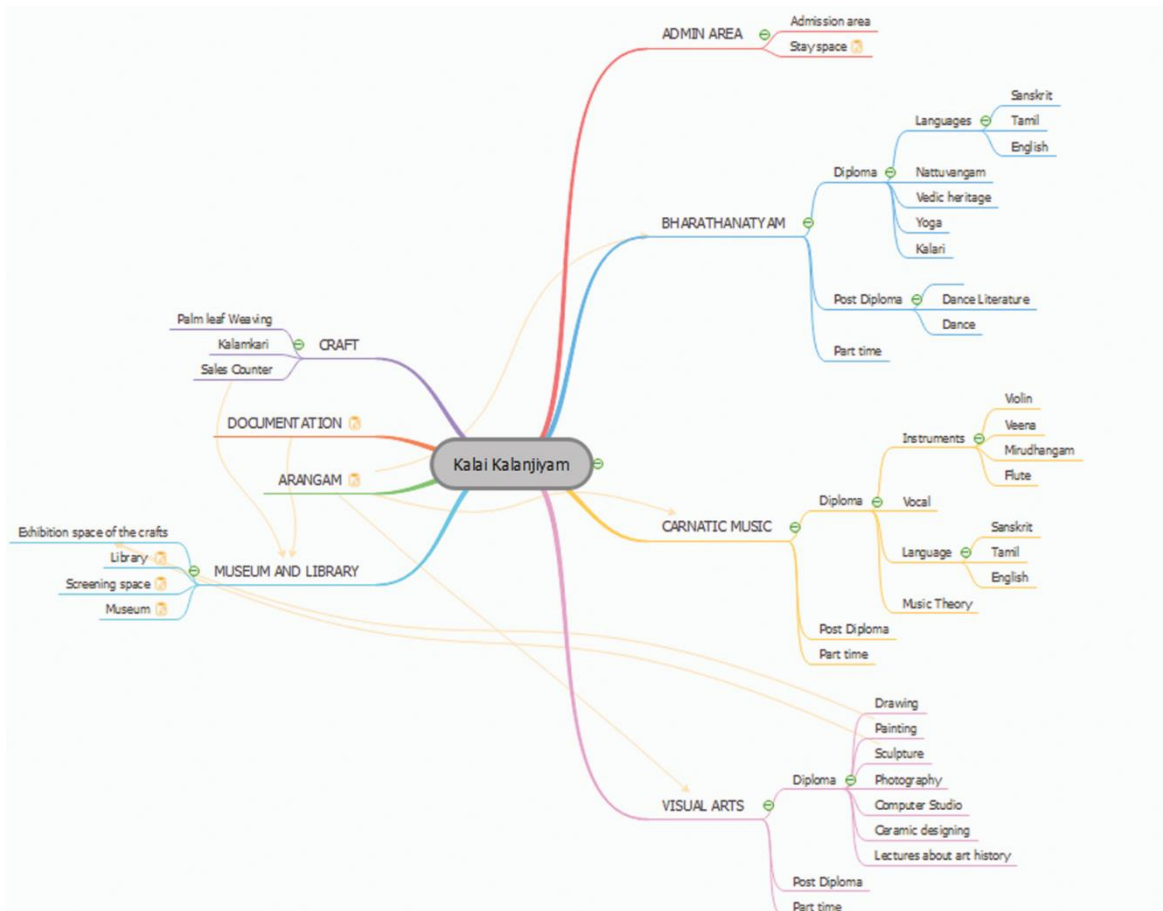


Fig. 30: Koothambalam

4. AREA ANALYSIS

4.1. PROGRAM :

4.1.1. DESIGN PROGRAM CLASSIFICATION:



4.1.2. AREA STATEMENT:

Design Program

	Acres	Sq.m	Sq.ft
Total site extent:	9.88	40,000	430556.42
FSI: 2			
Total built up area:	19.76	80000	861112.84
Site Coverage: 45%	4.446	18000	193750.389
Maximum no. of floors:	4.444444	(=4 aprox.)	

S.No	Program	Total area	Users	Floating polpulation
1	Bharathanatyam	900	196	
2	Carnatic music	770	192	
3	Visual Arts	690	197	
4	Craft	265	80	105
5	Documentation	210	58	
6	Arangam and library	1665	16	875
7	Admin and Hostel	5400	400	
8	Part time classes			212
	Total	9900	739	1192
	Sub Total area	9900		
	Circulation- 30%			
	TOTAL AREA	9900		

Design Program

S.No	Program	Total users	No. of Spaces	Area	No.of people per class	Types of spaces	
				sq.m			
	Bharathanatyam	196					
1	Dance and yoga room		5	600	30	Semi- open	Semi- private
2	Classrooms for language and vedic heritage classes		4	120	30	Indoor	Semi- private
3	Natuvangam class		2	60	30	Semi- open/ indoor	Semi- private
4	Kalari		1	80	20	Outdoor	Semi- private
5	Restroom			40			Semi- private
				900			
	Carnatic music	192					
6	Class room		3	90	30	Indoor	Semi- private
7	Hall for violin, Mirudhangam, Veena, Flute		4	360	30	Semi- open	Semi- private
8	Spaces for vocal		4	240	30	Semi- open	Semi- private
9	Hall for post diploma students		1	40	20	Semi- open	Semi- private
10	Restroom			40			Semi- private
				770			
	Visual Arts	197					
11	Drawing and Painting Halls		4	240	30	Indoor/ Semi- open	Semi- private
12	Space for sculpture making		1	300	10	Semi- open	Semi- private
13	Lecture hall for photography students		1	30	30	Indoor	Semi- private
14	Computer studio		1	30	30	Indoor	Semi- private
15	Classroom		3	90	30	Indoor	Semi- private
16	Restroom			40			
				690			

	Documentation	58					
24	Discussion spaces			-	53	Outdoor	Semi-private
25	Store room		1	10		Indoor	Private
26	Screening space		1	100	50	Semi- open	Semi-public
27	Working space- Hall		1	100	50	Indoor	Semi-Private
28	Restroom			40			
				210			
	Arangam and Library	16	floatin g -1325				
29	Library			105		Indoor	Semi-public
30	Museum			60		Indoor	Public
31	Auditorium					Indoor	Public
	Part time classes	212					
32	Bharathanatyam	52	2	-	25	Semi- open	Semi-Public
33	Vocal	52	2	-	25	Semi- open	Semi-Public
34	violin	27	1	-	25	Semi- open	Semi-Public
35	Mirudhangam	27	1	-	25	Semi- open	Semi-Public
36	Flute	27	1	-	25	Semi- open	Semi-Public
37	Veena	27	1	-	25	Semi- open	Semi-Public
	Admin and Hostel						
37	Enquiry and waiting area		}			Semi-open	Public
38	Admission area		}	200		Semi-open	Public
39	Finance and Maintanance		}	200		Indoor	Private
40	Restroom		}			Indoor	Semi- public
41	Accomodation	300		3500		Indoor	Private
42	Mess facilities			1500		Semi-open	Private
				5400			

	Craft	80	80+105 (Floatin				
17	Weaving hall		1	40	10 thari	Semi- open	Private
18	Kalamkari designing		1	40	10	Indoor	Private
19	Lecture hall		1	25	50	Indoor	Semi- private
20	Sales counter		1	50	5+30	Indoor	Public
21	Exhibition space of the crafts		1	100	75	Indoor	Public
22	Store room		1	10		Indoor	Private
23	Restroom		30	265			

Floating population	1200
Target group	740
Total users	1940

Non-teaching staffs	62
Hostel facilities	300
Students	680

S.NO	STANDARDS	Pg.no
	NEUFERTS	
1	College and theatres	198-222
2	Fire safety	511
3	Day light	488
4	Lighting	501
5	Student residences	167
6	Youth Hostel	184
7	Catering	174
8	Sustainable building	46
9	What is Design?	42
10	Drawings (Water supply and drainage symbols)	13
11	Accessibility	21
12	Dimensional basics and relationships	28
13	Building components	66
	Time Saver Standards (TSS)	
14	Library	260
15	Music facility for auditorium	387
16	Public toilets for handicapped	710
17	Parking	817-835
18	Furniture in classroom	313
19	Audiovisual/ lecture halls	319
20	Theatre site lines and stage space	362
21	Retail shops	730
22	Photographic lab	915
	NBC- National Building Code	
	Part-1	
23	Fire protection	307
	<u>Material standards</u>	
24	Lime	382
25	Brick	379
26	Clay and stabilized soil	
27	Timber and Bamboo	411
28	Waterproofing and Damp- proofing materials	415
	Part- 2	
29	Sound insulation for educational buildings	411-412
30	Sound insulation for auditorium and theatres	425
31	Water supply	623
32	Design of water distribution systems	628
33	Schematic diagrams for water supply	633-635
34	Colour code for water pipes	651
35	Toilet standards	677-678
36	Drainage and sanitation-Siphonic drainage system	707
37	Rainwater harvesting from the roof	708

38	Details of subsoil drainage system	710
39	Construction relating to conveyance of rain or storm water	713
40	Waste water treatment	717
41	Sanitary fixtures for auditorium	673
42	Sanitary fixtures for Art galleries, Libraries and Museums	674
43	Sanitary fixtures for Admin block	675
44	Sanitary fixtures for Schools and Educational Institutions	677
45	Sanitary fixtures for Hostels	678
46	Artificial Ground water recharge structure	706
47	Assessment of per capita waste quantity	746
48	Treatment of solid waste through biological process	747
49	Landscape planning	773
50	Approach to sustainability	839
51	Thermal performance of roof	856, 857
52	Thermal properties of materials	857
53	Design of shading device	865
54	Water management	882
55	solar energy utilization	902

TNCDBR

56	Planning parameters of institutional buildings	48
57	Corridor/verandah width	58
58	Structures in Setback spaces	37
59	Spaces excluded from FSI and coverage computation	38
60	Provisions for differently abled, elderly & children	58
61	Solar energy capture	63
62	Parking	106
63	Sanitation requirements	122
64	Sanitation requirements for auditorium	126
65	Sanitation requirements for educational occupancy	124
66	Septic tank	86
67	Exit Requirements	83
68	Stairway requirements	82
69	NDTA-Dance and music standards	
70	DTCP Standards	

5. SITE ANALYSIS

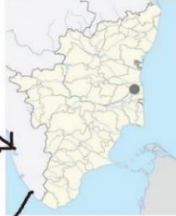
SITE ANALYSIS

LOCATION: Chidambaram bypass road,
Cuddalore district, Tamil nadu.

LATITUDE AND LONGITUDE: 11°24'38N 79°40'27"E



TYPE OF DESIGN: ART AND CULTURAL CENTRE
(Institutional)



Chidambaram is a town in the Cuddalore district in the Indian state of Tamil Nadu. The town is believed to be of significant antiquity. It is famous for Thillai Natarajar-temple (God of Natyam).



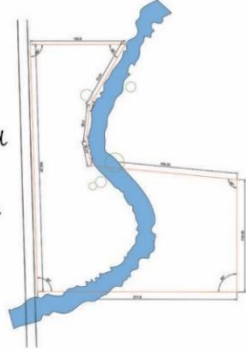
TOTAL SITE AREA: 36,500 sq.m, Acre: 9

Population - chidambaram municipality
Total = 62153
Male - 30582, Female - 31571

Why this site?

As the site selected is known for its artistic culture and also there are yearly performances happening at the Natrajar temple. This design encourages people to learn about the traditional arts and music of our native. This project is prioritized to gain the lost importance.

- The site has a Rivulet (Pasimuthan odai), crossing the site, this element gives a good ambience to the whole design and also this makes artist concentrate more without any disturbances.
- The chosen land is a non-agricultural land.

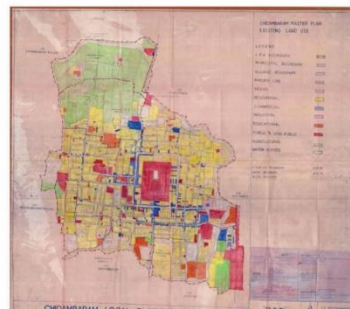


KEERAPALAYAM PANCHAYAT UNION

Sl. No.	Name of Panchayat	Population			Scheduled Castes			Scheduled Tribes		
		Total	Males	Females	Total	Males	Females	Total	Males	Females
1	2	3	4	5	6	7	8	9	10	11
	Kannangudi	1,905	966	939	675	342	333	4	2	2

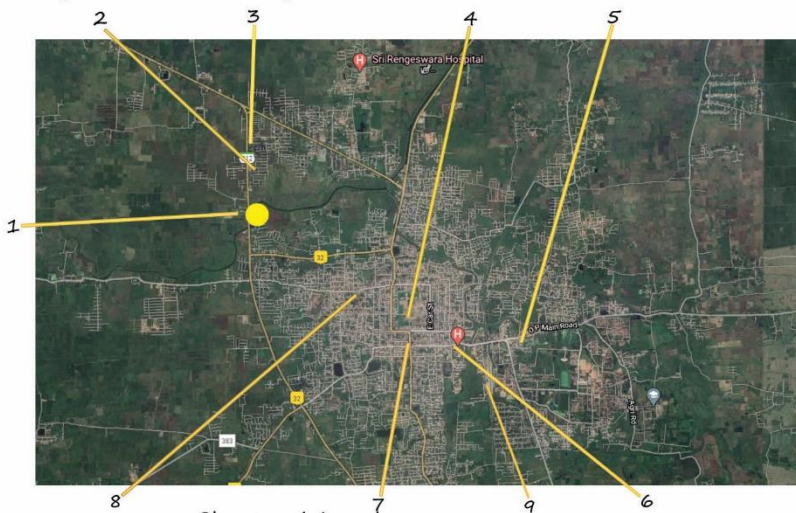
Byelaws: Directorate of town and country planning(DTCP),
Tamil Nadu Combined development and Building Rules(TNCDBR)

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Neighbourhood analysis:



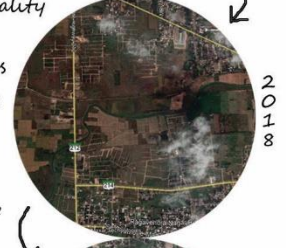
1. Site
2. Petrol bank - 650m
3. Police station - 1.2kms
4. Thillai Natarajar Temple - 3.4kms
5. Chidambaram bus stand - 4.5kms
6. Government hospital (Chidambaram) - 4.7kms
7. Banks and ATMs (Indian bank, SBI, Vijaya Bank, IOB, ICICI) - Around 3-4kms
8. Chidambaram municipality office - 2.5 kms
9. Railway station - 5.3kms



2007



2012



2018



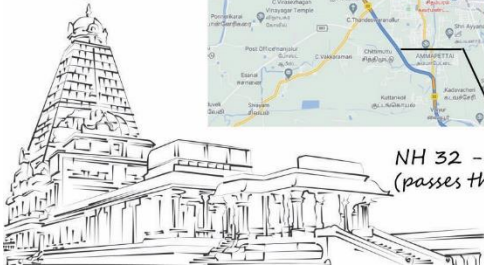
2021

How the morphology affects my site ?

- Currently site is surrounded by agricultural lands.
- Site has thorny bushes which is of no use and left barren. But before it was a farming land.
- The bypass road is been laid in 2010. So slowly the adjacent farming lands are becoming commercial area. There are very few buildings in the surroundings.

Bypass road for Chidambaram town-SH212

There is a bus stop near the bridge



NH 32 - ECR (passes through chidambaram)

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Population Growth Rate :

There was change of 14.02 percent in the population compared to population as per 2001. In the previous census of India 2001, Cuddalore District recorded increase of

Electricity:
The supply is from substation in chidambaram.

Religion : Hindu - 89.73%,
Muslim - 8.22%,
Christian - 0.02% and others.

UNIVERSITY: The famous Annamalai University is located very near to Chidambaram town.

Schools in The chidambaram bypass : 1. Shemford Futuristic School.

2. Arunachala Matriculation Higher Secondary School

Soil type : Loamy soil, which is rich in organic matter and plant growth

Water Supply

WATER SUPPLY STATUS																
S.No	Name of the Municipality	Project Population	Source	Impregnated by Hand-Dug Wells	Details of sources of water	Water supply system	From	From	From	From	From	From	From	From	From	From
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Chidambaram Municipality	62033	Chidambaram Municipality	1	1	1	1	1	1	1	1	1	1	1	1	1

NAME OF THE ULB :- Chidambaram

1	No. of Wards	: 33
2	No. of Census House Hold (2011)	: 15623
3	Census Population (2011)	: 62153
4	No. of Animators Survey House Hold (2017)	: 14058
5	Present Population (2017)	: 56232
6	Daily Per Capita Waste Generation (Gms)	: 0.250 kg
7	Total Garbage Generation per day (M.T)	: 14
8	Wet Waste - Bio Degradable (~1/3; 80%) 50... of Total Waste (M.T)	: 7

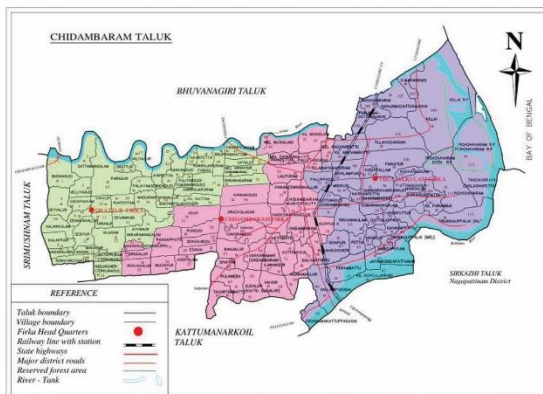
GENERATION OF DRY WASTE

	TOTAL QUANTITY IN M.T / PER DAY
NON - SALEABLE WASTE	3.60
SALEABLE WASTE	2.40
INERT & OTHERS	1.00
GRAND TOTAL	7.00

DISPOSAL OF DRY WASTE

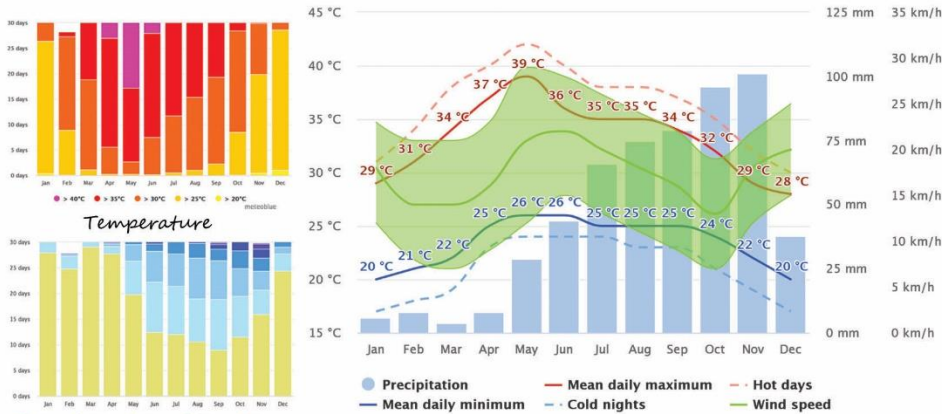
QUANTITY OF SALEABLE WASTE SOLD OUT (M.T)	162.54
QUANTITY OF NON SALEABLE DRY WASTE SENT TO CEMENT FACTORY TILL DATE	50.00
AMOUNT RECEIVED SO FAR IN RS.	625430

Source : <https://www.tnurbantree.tn.gov.in/chidambaram/>



Site for this proposal is under chidambaram taluk, chidambaram municipality (Keerapalayam panchayat union) area.

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Climate analysis :

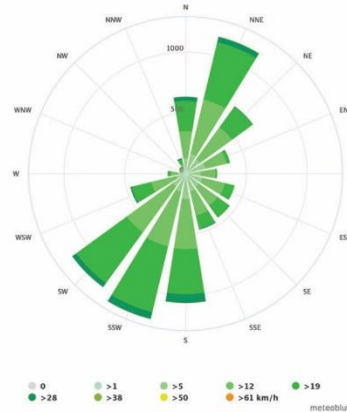
In Chidambaram, the wet season is overcast, the dry season is windy and mostly cloudy, and it is hot and oppressive year round. Over the course of the year, the temperature typically varies from 74°F to 97°F and is rarely below 71°F or above 101°F.

The coldest month in Chidambaram is January, with an average high-temperature of 27.8°C (82°F) and an average low-temperature of 22.8°C (73°F).

In Chidambaram, India, during the entire year, the rain falls for 189.4 days and collects up to 828mm (32.6") of precipitation.

The least humid month in Chidambaram, India, is June, with an average relative humidity of 59%. With an average relative humidity of 79%, November is the most humid month.

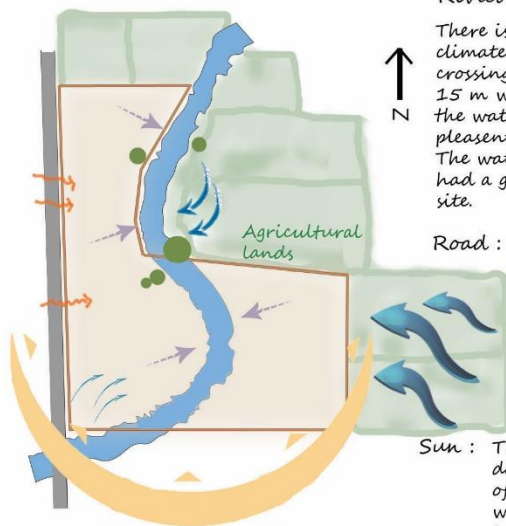
With an average of 5.9h of sunshine, December has the least sunshine of the year. May has the most sunshine of the year in Chidambaram, India, with an average of 11.9h of sunshine.



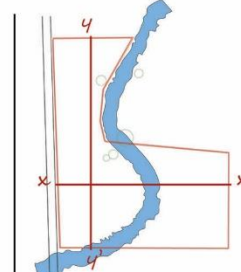
Wind rose

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Micro Climate analysis :

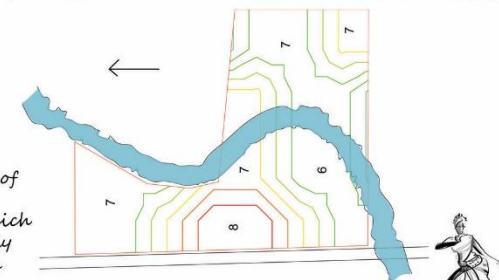


Slope analysis :

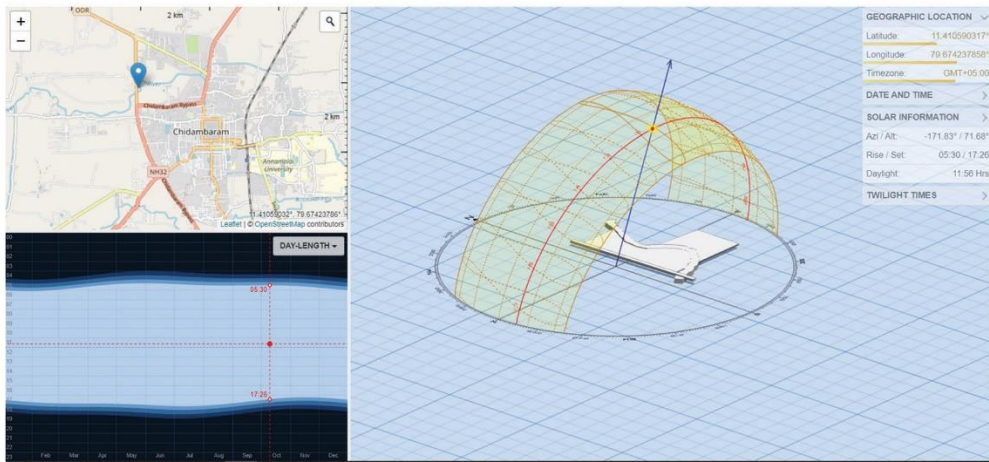


The slope of the site has been measured in many directions, the major slopes are measured in xx' and yy' axis

The site has its lowest point at east end and at north. Both measures a slope of 1 to 1.5 meters. The drainage can be places at north west. and water tank can be placed at any high points.



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Weakness :

Flooding in the Rivlet.

Sensitivity to rivulet may add limitations to design.

15 m buffer should be provided for the rivlet.

Threat :

The future expansion of roads may be a threat for the site.

Might increase traffic on the existing infrastructure.

SWOT :

Strength : The site induces regional romanticism which provides inspiration as well as seclusion for contemplation required for creative exercise.

The site has an easy accessibility.

As the wind direction is predominantly from the east, the rivlet in the east brings a cool effect with it.

Opportunity : The river can provide an extra attraction and experience for visitors as well as users.

It will also help the local transporters.

Rejuvenating the dead waterfront.



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Natural calamities :

- In 2004, there was a tsunami which affected the coastal regions of Tamil Nadu, Cuddalore district was the one of the most affected areas.

- During North East Monsoon 2015 period, Veeranam tank foreshore was inundated and a cut area of 720 acres of agricultural land had been affected.

Pasimuthan odai, K.S.Canal, Thillaiamman odai, Muthiyapillai surplus - water choked the Chidambaram Municipal areas.

- During 2020 cyclone Chidambaram temple was flooded.

Earthquake :

Cuddalore is given 'L' for earthquake, which refers to the earthquake caused by the coastal zones.

L stands for local.

WORKS UNDER NABARD ASSISTANCE - 2016-2017 (140.01 CRORE)

The Government of Tamil Nadu have sanctioned an amount of Rs.140 Crores to the following works under NABARD ASSISTANCE-2016-17:-

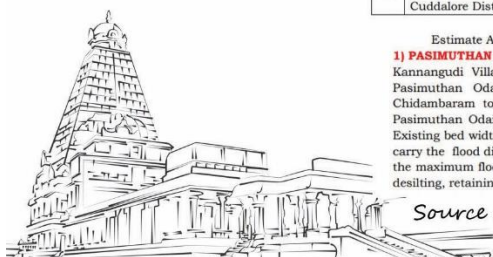
Sl. No.	Name of work	Estimate Amount	Stage of the work
1.	Improvements to increase the carrying capacity of Manavaikkal and Old Coleroon to avoid flood damages in Kattumannarkoil and Chidambaram taluk of Cuddalore District	Rs.75.00 Crore	Tender award committee approval awaited from Chief Engineer, PWD, WRD, Chennai.
2.	Permanent Flood Protection works to Pasimuthan Odai, Thillaiamman Odai, Omakulam Drain, Khan Sahib Canal and Muthiyapillai Surplus in Chidambaram taluk of Cuddalore District.	Rs.25.00 Crore	
3.	Rehabilitation and Strengthening of Gadilam River from Visoor Village to Devanampattinam Village in Cuddalore District.	Rs. 22.50 Crore	
4.	Rehabilitation and Strengthening of Visoor Odai and Periyakattupalayam Odai in Panruti Taluk of Cuddalore District.	Rs.14.60 Crore	
5.	Rehabilitation and Improvements to Vellapakkam Channel in Panruti and Cuddalore Taluk of Cuddalore District.	Rs. 2.91 Crore.	

Estimate Amount Rs.25.00 Crores

1) PASIMUTHAN ODAI:- Pasimuthan Odai originates from Ponneri Tank of Kannangudi Village and confluences with Vellar River near Navabpettai. This Pasimuthan Odai is a flood surplus water carrier thereby protecting the Chidambaram town from inundation during the flood period. The length of Pasimuthan Odai is 14.00 km and at present carrying capacity is 1800 cusecs. Existing bed width available is 15m to 40 m. As the existing odai is insufficient to carry the flood discharge, it is proposed to desilt and raise the bund height to carry the maximum flood discharge by 2800 cusecs. Rehabilitation of this Odai includes desilting, retaining wall for a length of 1.5 km. and flood banks.

Source : CUDDALORE DISTRICT- DISASTER MANAGEMENT PLAN 2017

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Cyclone Burevi: Chidambaram temple flooded

Water from Sivagnagi pond entered the temple as the drain near its premises was closed by the municipality.

Published: 05th December 2020 04:02 AM | Last Updated: 05th December 2020 04:02 AM



Chidambaram temple flooded due to heavy rainfall | Express

By Express News Service

TAMIL NADU

Team studies damage due to Burevi in Chidambaram

SPECIAL CORRESPONDENT

CUDDALORE, DECEMBER 30, 2020 01:44 IST
UPDATED: DECEMBER 30, 2020 01:44 IST

SHARE ARTICLE | f | t | w | s | e | p | r | i | n | t | A | A | A

Eight-member panel was deputed by the Centre

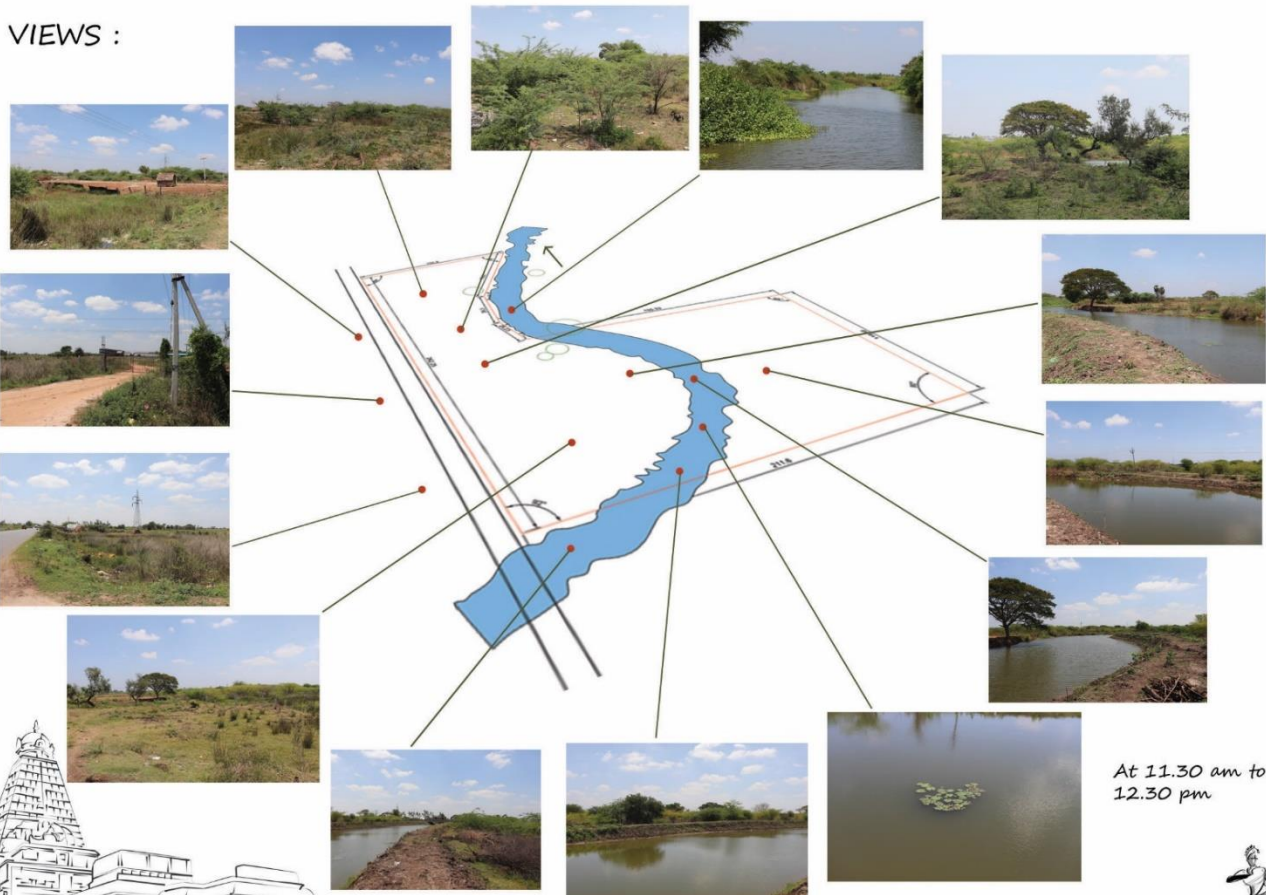
The eight-member inter-Ministerial team deputed by the Centre to Cuddalore district to assess the damage caused by Cyclone Burevi visited Chidambaram on Wednesday. The team, led by Ashutosh Agnihotri, Joint Secretary (CTCR and IS II), began its visit at Velakudi, near Chidambaram. The team inspected roads to assess the damage caused by flooding during rain.

The team also inspected agricultural fields submerged in rainwater at Saliyanthoppu and breach of the Pasimuthan odai bund.

Collector Chandra Sekhar Sakhamuri elaborated on the loss that had been estimated to agriculture and horticulture crops, roads and other infrastructure with the help of photos.



VIEWS :



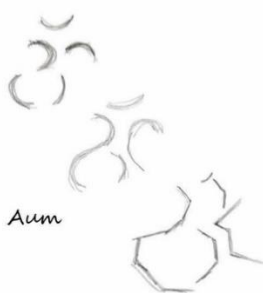
At 11.30 am to 12.30 pm

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PROXIMITY CHART :

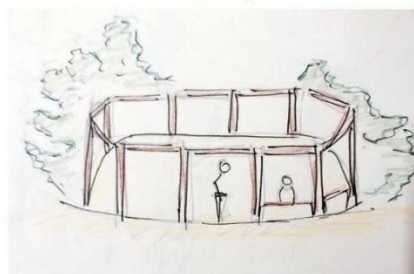
ADMIN	•
BHARATANATYAM	•
CARNATIC MUSIC	•
VISUAL ARTS	•
CRAFTS	•
LIBRARY	•
MUSEUM	•
ACCOMMODATION	•
DOCUMENTATION	•
ARANGAM	•
OPEN AIR THEATRE	•
SHOP AND WORKSHOP	•

- Yes
- May be
- No



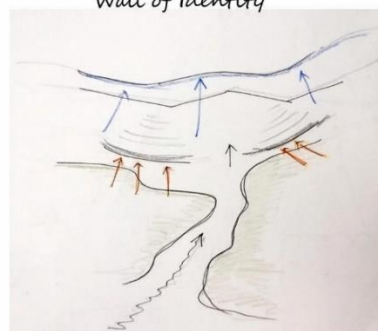
Aum

Open planning
Focused



Wall of Identity

Dedicated



Happy spaces

The colours which makes a person comfortable are Yellow, Green, Pale blue

WALLS



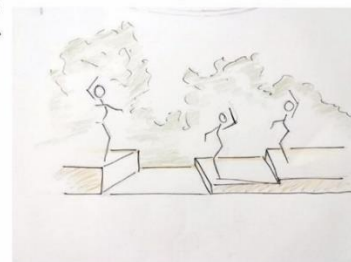
Excited

Eco-Friendly



Space flexibility

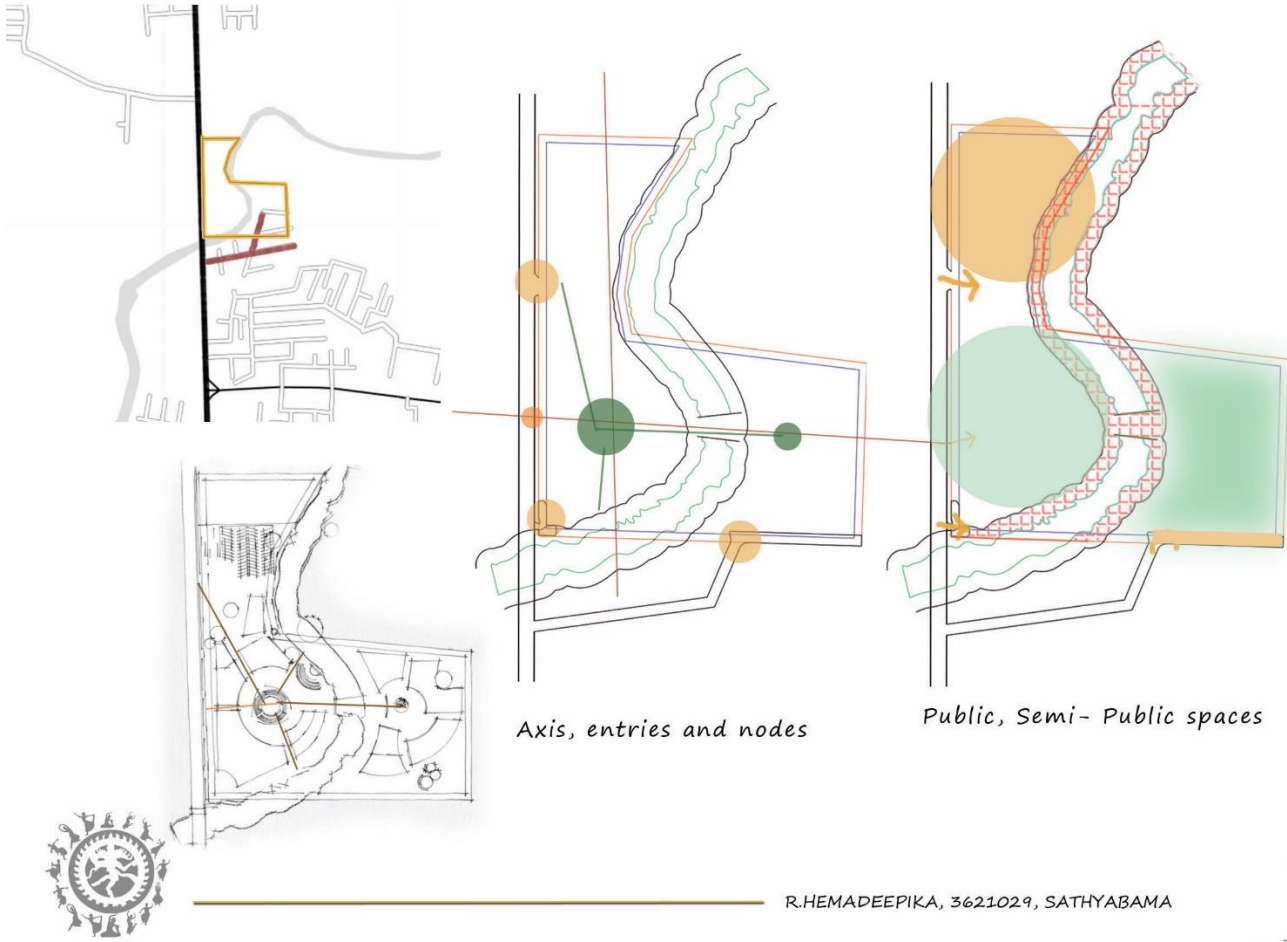
CONCEPT



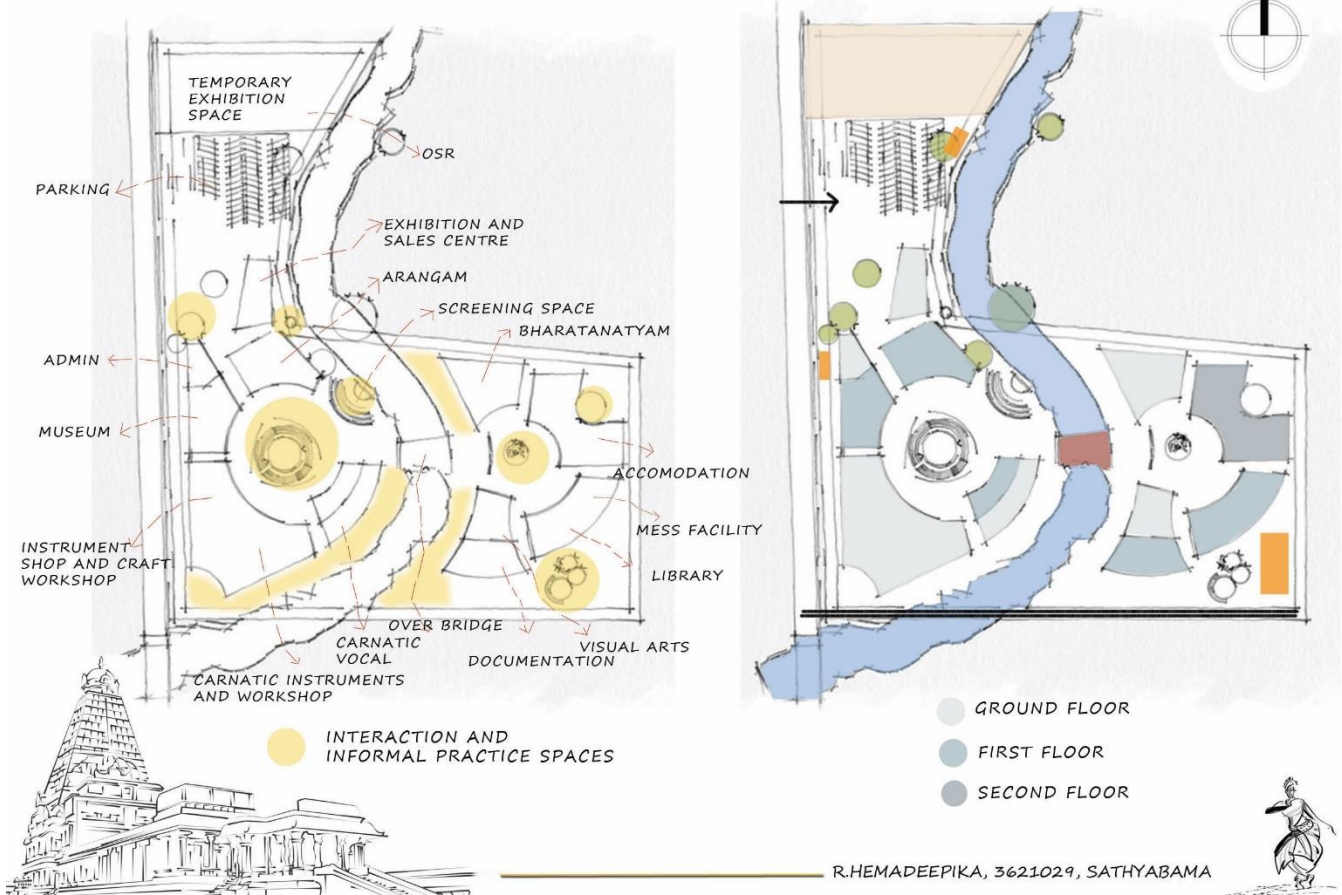
Cone of vision

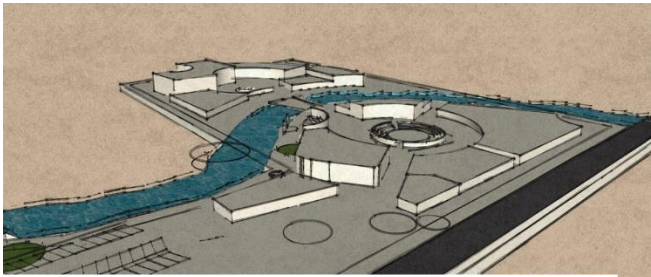
User-friendly

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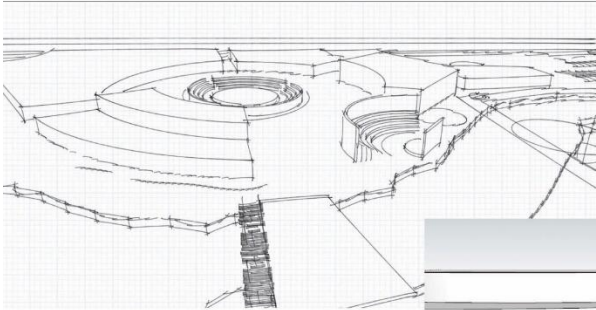


MASTER PLAN

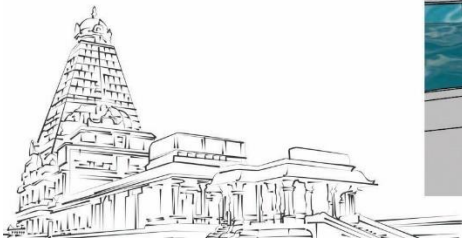
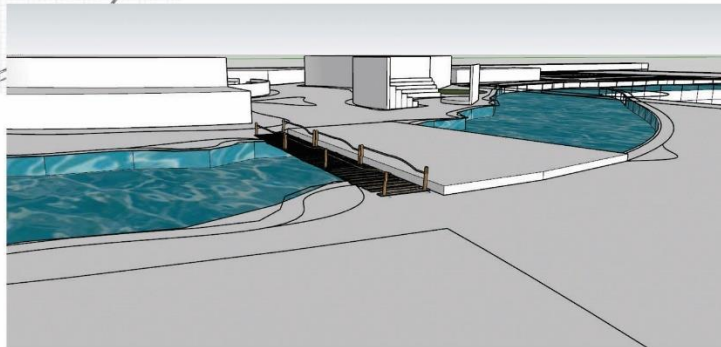
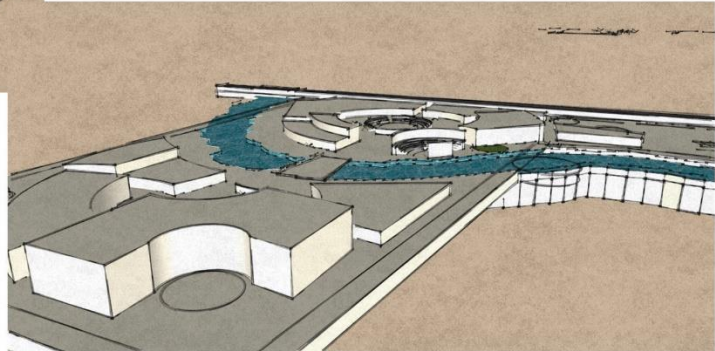




Conceptual model



Sketch



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LEGENDS :

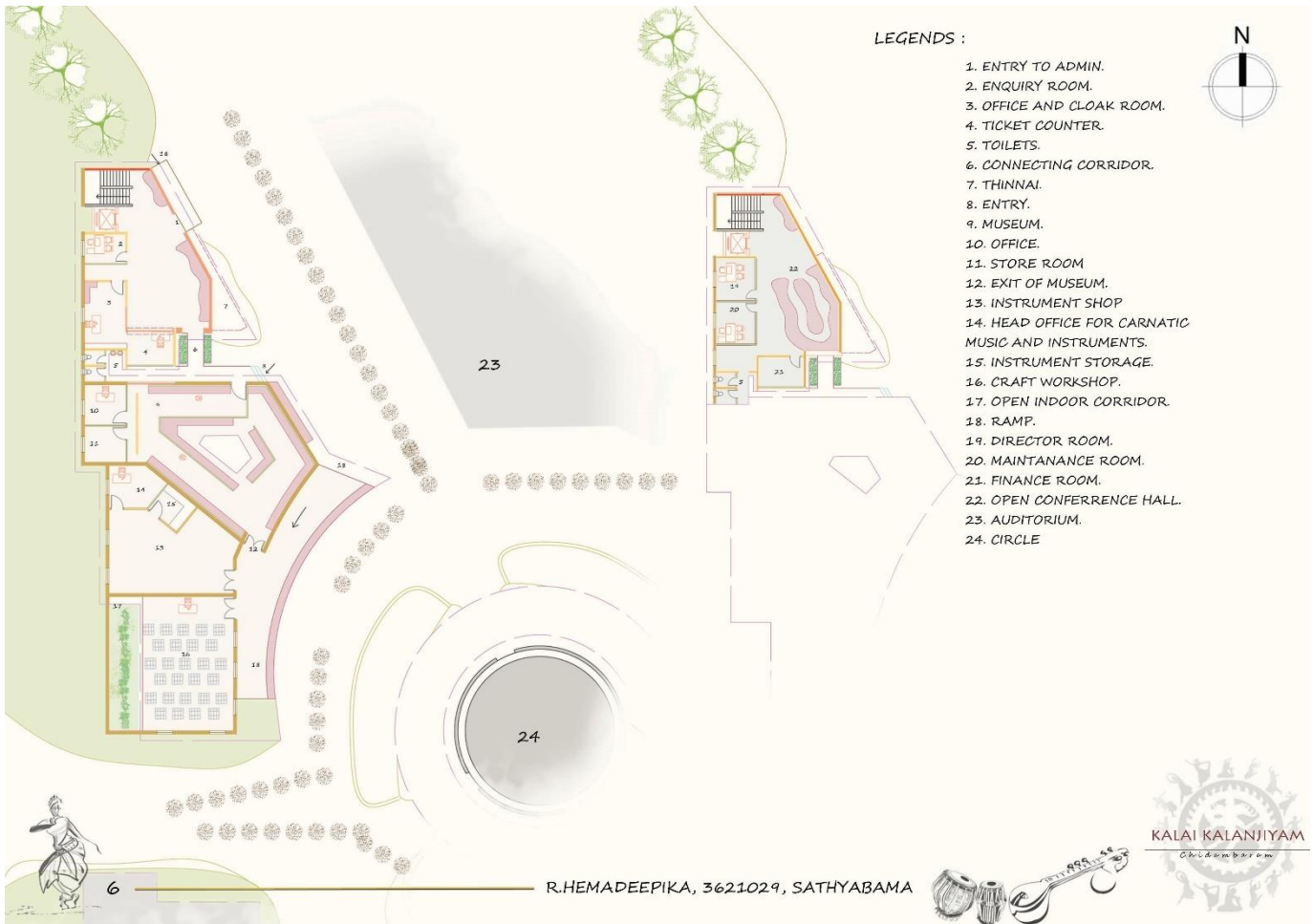
1. SHOP AND EXHIBITION.
2. ADMIN AND MUSEUM
3. AUDITORIUM
4. CARNATIC MUSIC
5. CARNATIC INSTRUMENTS
6. DANCE
7. PAINTING
8. LIBRARY
9. CIRCLE
10. SCREENING SPACE.
11. MINI PERFORMANCE SPACE AND STORAGE.
12. INFORMAL PRACTISING SPACES.
13. FOCAL POINT.
14. PARKING
15. OSR
16. RIVLET
17. SERVICE ROAD.
18. ACCOMODATION
19. PEDESTRIAN ENTRY
20. LANDSCAPE.



6

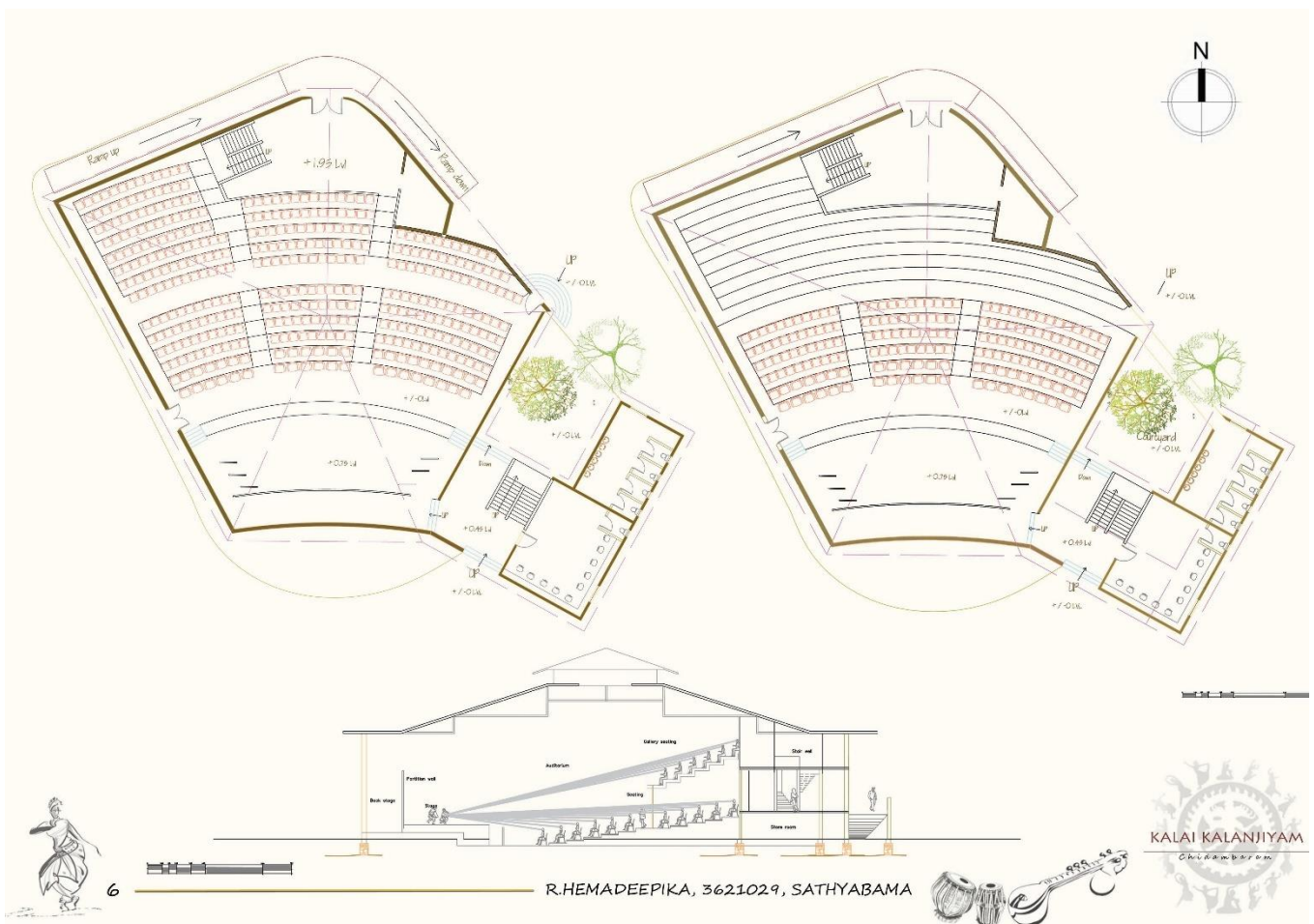
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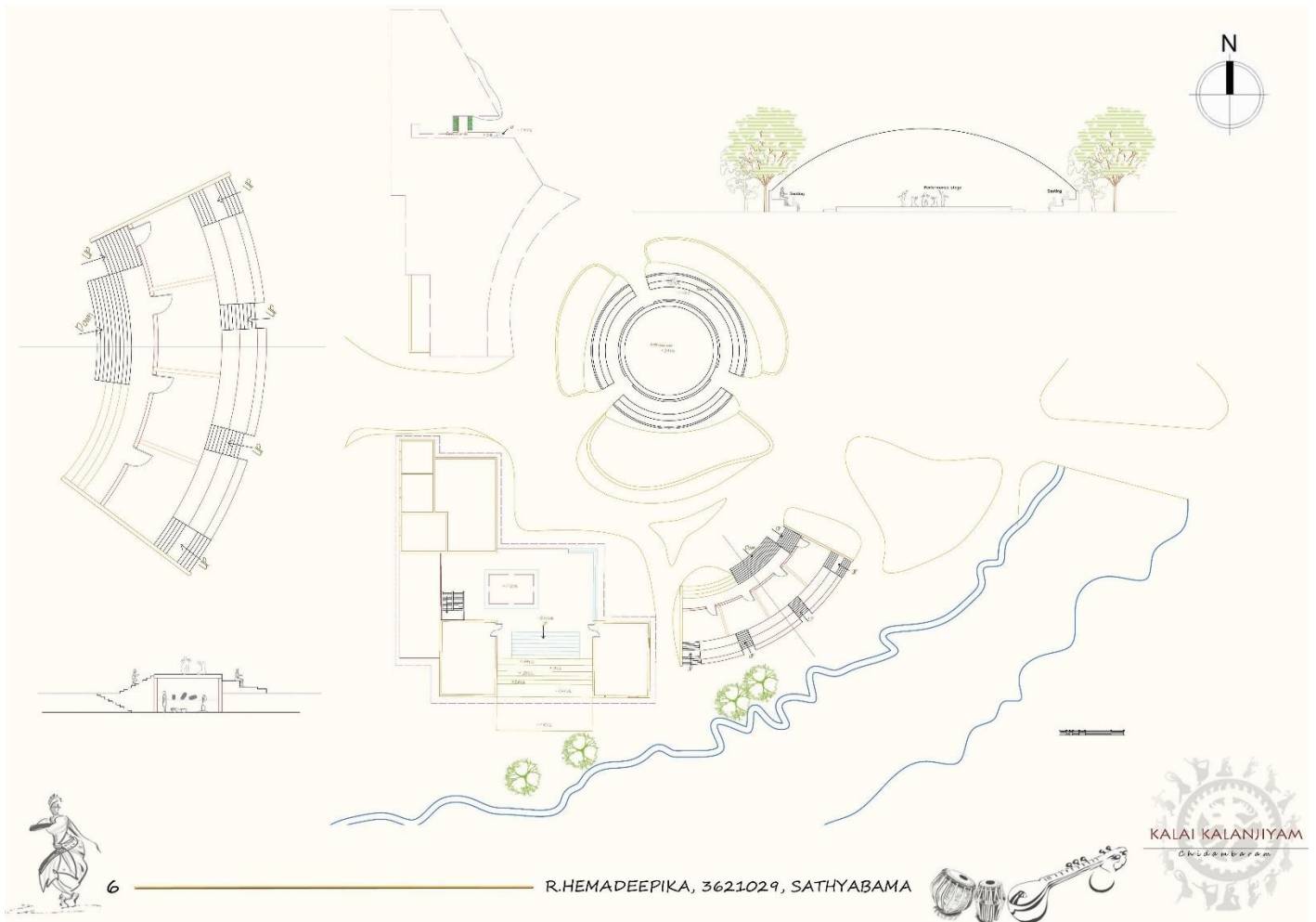












6. REFERENCE LIST

<https://eservices.tn.gov.in/eservicesnew/login/login.html>

<https://www.tnurbantree.tn.gov.in/chidambaram/master-plan/>

<https://paipa.in/history-of-bharatnatyam.html>

<https://www.tangedco.gov.in/distribution.html>

https://en.wikipedia.org/wiki/Tamil_Nadu_Generation_and_Distribution_Corporation

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https://cuddalore.nic.in/dept_chidambaram_mpty/

https://www.tn.gov.in/tcp/acts_rules.htm