

MUSIC CONSERVATORY

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

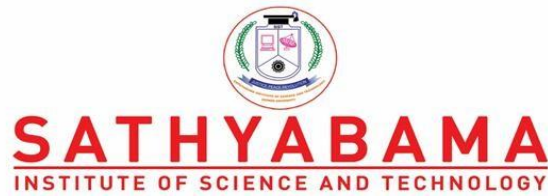
INSTITUTE OF SCIENCE AND TECHNOLOGY

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JUNE 2021



BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of S.Sophia stephy rose (3621073) who carried out the project entitled “Music conservatory” under our supervision from January 2021 to June 2021.

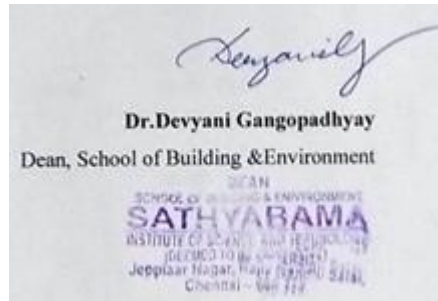
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I, **S. Sophia stephy rose** hereby declare that the Project Report entitled “**Music conservatory**” done by me under the guidance of **Ar.Kaviya** (Internal Guide), **Ar.Ebin Horrison** (Internal Review Member) and **Ar.Diwakar kowshik** (External Guide). Sathyabama Institute of Science and Technology is submitted in partial fulfilment of the requirements for the award of Bachelor of Architecture Degree.

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ACKNOWLEDGEMENT

SIGNATURE OF THE CANDIDATE

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.

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ABSTRACT

A music academy is an educational institution specialized in study, training and research of music. Instruction consists of training in the performance of musical instruments, singing , musical composition , conducting , Musicianship as well as academic and resarch fields such as musicology , music history and music theory.

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Music conservatory

1. INTRODUCTION

A music academy is an educational institution specialized in the study, training, and research of music. Such an institution can also be known as a school of music, music academy, music faculty, college of music, music department (of a larger institution), conservatory, conservatorium or conservatoire. The conservation and restoration of musical instruments is performed by conservator-restorers who are professionals, properly trained to preserve or protect historical and current musical instruments from past or future damage or deterioration. Because musical instruments can be made entirely of, or simply contain, a wide variety of materials such as plastics, woods, metals, silks, and skin, to name a few, a conservator should be well-trained in how to properly examine the many types of construction materials used in order to provide the highest level of preventive and restorative conservation.

1.1. Aim

- To study the existing connections on the relationship between the music and architecture
- To study how the existing musical instruments are preserved
- To design an academy for music to polish the talents and to promote new opportunities in music in the future generation by providing state-of-the-art facilities.

1.2. Objective

- To study how the music conservatory is more functional for both public and private
- To determine how it is user friendly
- To know how it is acoustically protected from outdoor noise effects.

1.3. Scope

- Even though there are several style of music, only certain common instruments and styles can be handled in one institution. This campus provide all music amenties in one land.
- This campus is not only for students this can be used by various Users

1.4. Categories of music

- Concussion - Instruments that create sound when struck against a similar object such as castanets
- Friction - Instruments that create sound when rubbed such as a glass harp
- Percussion - Instruments that create sound when struck such as a triangle
- Plucked - Instruments that create sound when plucked such as a harp
- Scraped - Instruments that create sound when scraped such as a washboard ▪
- Shaken - Instruments that create sound when shook such as a maraca



Fig 1.1.a. Concussion



Fig 1.1.b. Friction



Fig 1.1.c. Plucked



Fig 1.1.d. Percussion

- Stamping - Instruments that create sound when stamped against a hard surface such as a tap shoes
- Stamped - The sound that the surface itself makes when something is stamped against it
- Membranophones - Membranophones are instruments that have a membrane that is stretched over a structure, often wood or metal, and struck or rubbed to produce a sound.

1.5. Extinct musical instruments in India

- Sambuca
- Mayuri.
- Morchang
- Nagfani
- pena
- Yazh.
- Tapang

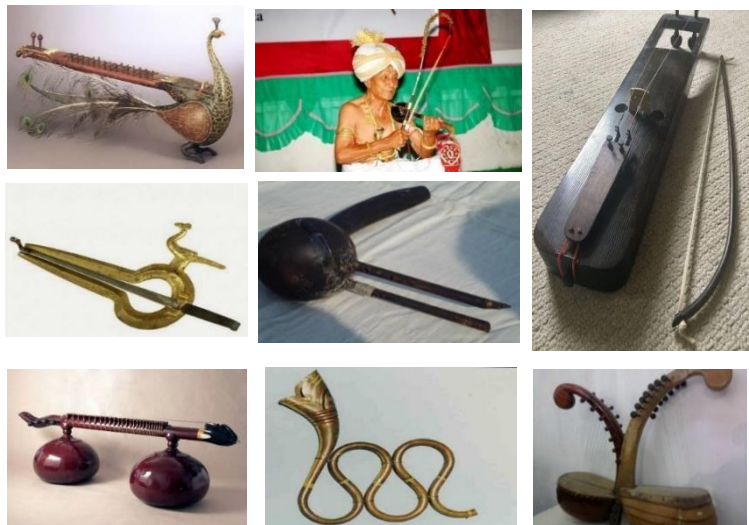


Fig 1.2. Extinct musical instruments in India

- Saranda
- Sarangi

1.6. Factors affecting instruments

- Fire
- Pests
- Light
- Incorrect relative humidity
- Thieves and vandals
- Water
- Pollutants
- Incorrect temperature
- Dissociation

1.7. Programme

- preparatory courses
- UG courses in music
- PG courses in music
- Summer courses
- Audio engineering

1.7.1. Preparatory courses

-
- Part time course, one year curriculum Courses for music enthusiasts at all the ages above 5 years.

It includes compulsory music theory class and practical music lessons.

1.7.2. UG courses in music

- Two year full time course This course helps in theoretical ,practical ,technological ,historical aspects of both western and Classical music.

1.7.3. PG courses in music

- One year full time course
- This course helps in theoretical practical technological historical aspects of both western and Classical music.

1.7.4. Summer programme

This course offers for aspiring musicians of all ages

One or two month course (short term course)

1.7.5. Audio engineering

- Training in all the key aspects of professional audio engineering, covering a wide range of skills, from basic theories of sound through to recording, mixing and mastering
- Also teach acoustics, audio for video, sound design, sound reinforcement and audio for broadcast Option of taking a six month introductory course or a full year of study

▪

1.7.6. Music Instrumental conservation

- Now a days most of the popular historical musical instruments such as veena, mayuri, yazh are been extinct so to aware this, conservatory has to be deigned to people to know about the instruments which are extinct.

This space is used for conserving and restoring the instruments from the factors it have affected.

1.8. Musical instrument courses

- Strings and bowed strings:

Violin family, dilruba, guitar, sitar, sarod, tampura, veena, gottuvadyam



- Percussion:

Mridangam, thavil, kanjira, ghatam, morsing,

- Wind:

Flute, saxophone, Nadaswaram.



- Brass:

Trumpet, French horn, trombone, tuba



- Keyboard instrument:

Plucked, struck, aerated, electronic keyboard



- Guitar family:

Bass guitar, charango, guitar

Fig 1.5. Musical instruments

-
- Violin family:
Violin , viola, cello, double bass

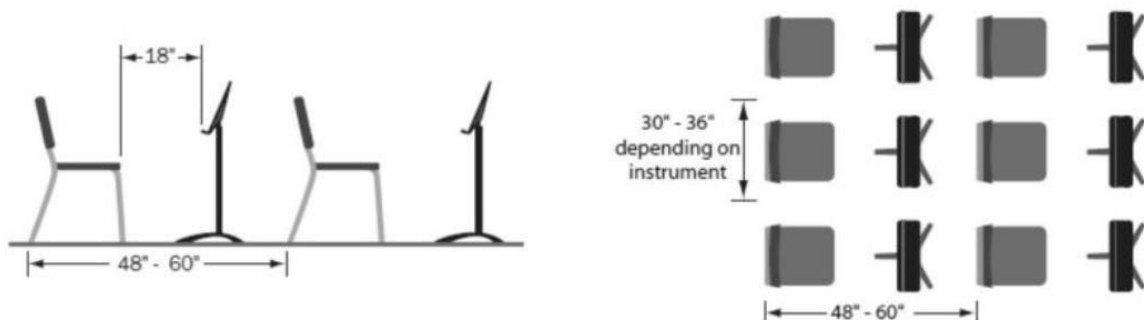
2. STANDARDS

2.1. Music lecture room

- Designing a music includes room size, room dimension, symmetry, sound isolation, reverberation time, early deflections, diffusivity, room modes, as well as coordinated design for environmental factors such as ventilation, lighting and temperature control.
- According to studies for music room a musician needs 1.4sq.m per musician with minimum distance parameters to each wall in space that is 70% as high as width
- Code of conduct specifies volumes per instrument type such as
 - Wind instruments >7.3sq.m
 - Grand pianos >18.5sq.m
 - Other instruments >4.6sq.m
- The reverberation time for musical instrument room varies for rooms between 7.3 - 20sq.m

Instrument Type	Preferred RT
Percussion Instruments	0.3 - 0.5 secs
Bowed String Instruments (violin, cello)	0.6 – 0.9 secs
Wind Instruments (trumpet, flute)	0.4 – 0.7 secs

2.2. Instrumental rehearsal room



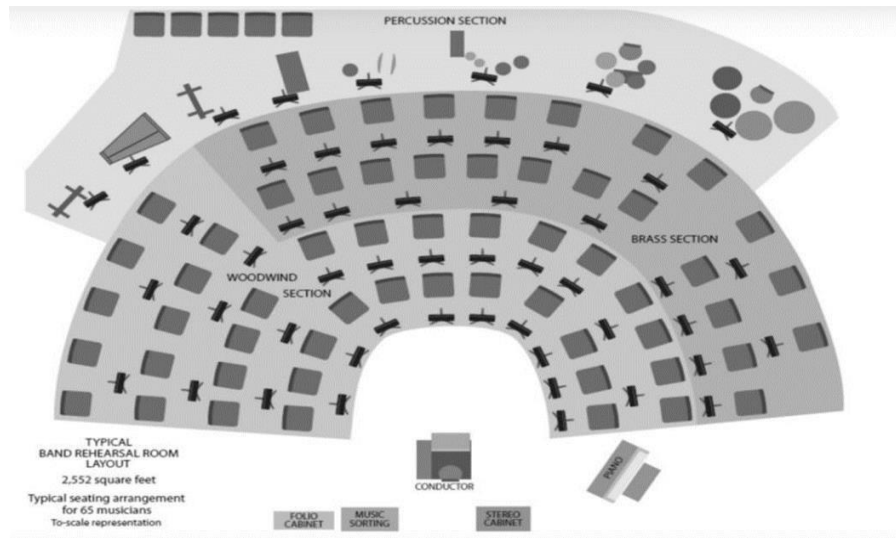


Fig 2.2. Instrument rehearsal room standard

- Room for designing instrumental rehearsal room we have remember that music is physical activity
- Musicians need space for their instruments and elbow room to play it
- The space should accommodate equipment and traffic flow for a band needs about 232 sq. m or per vocalist is about the number if the group is 60-75 instrumentalists and 60-80 vocalists.

2.3. Choral rehearsal room

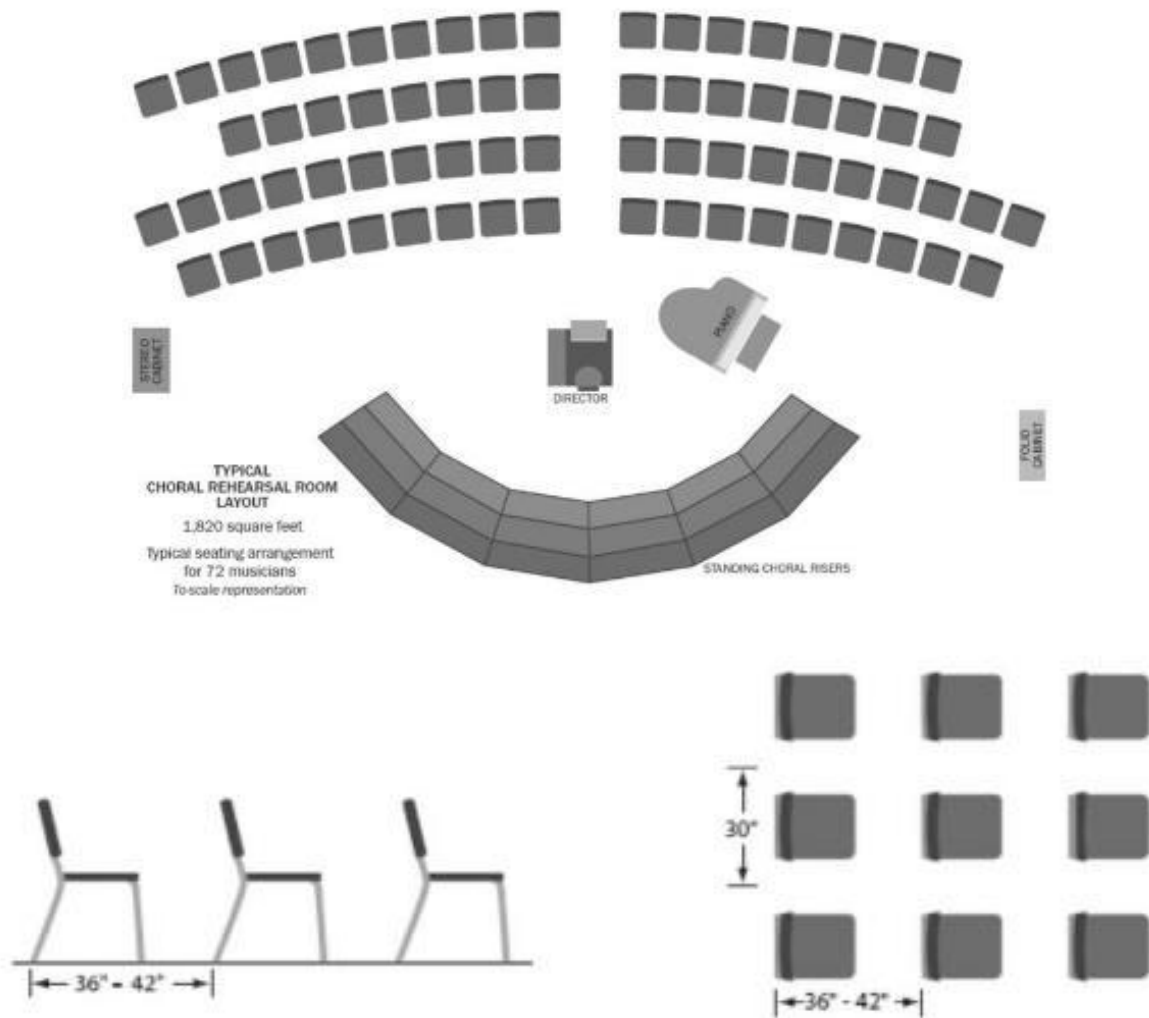


Fig 2.3. Choral rehearsal room

- Choir members need space for choral exercises and choreography
- The space should accommodate equipment and traffic flow 167 sq. m for chorals with small instruments or or per vocalist is about the number if the group is 6075 instrumentalists and 60-80 vocalists.

2.4. Practice room and studio

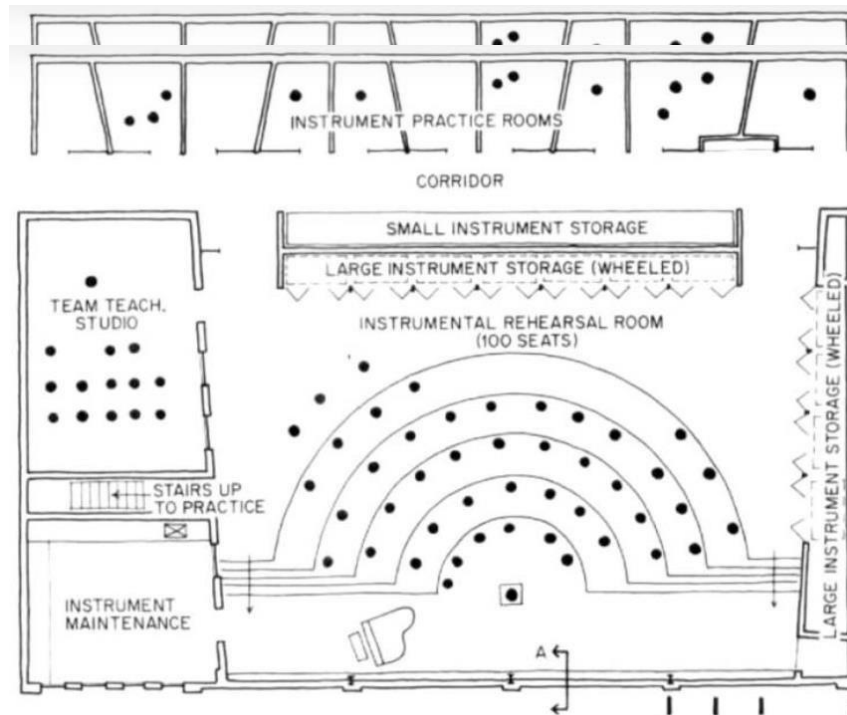


Fig 2.4. Practice room and studio

The practice room's ceiling has to be 50 percent reflective and 50 percent absorbent so that one section of the room can hear the other.

2.5. Concert hall

- Concert hall is a part of a building where an audience sits as distinct from the stage, the area on which the performances or other object of the audience's attention is presented.
- In a large theatre, a concert hall includes the no.of.Floor levels frequently designed as stalls, private boxes, galleries, balconies.
- A sloping floor allows the seats to be arranged to give a clear view of the stage
- The walls and ceiling usually contain concealed lights and sound equipment and air extracts or inlets and may be highly decorated.
- The concert halls should be accessible for the general public as well as students.

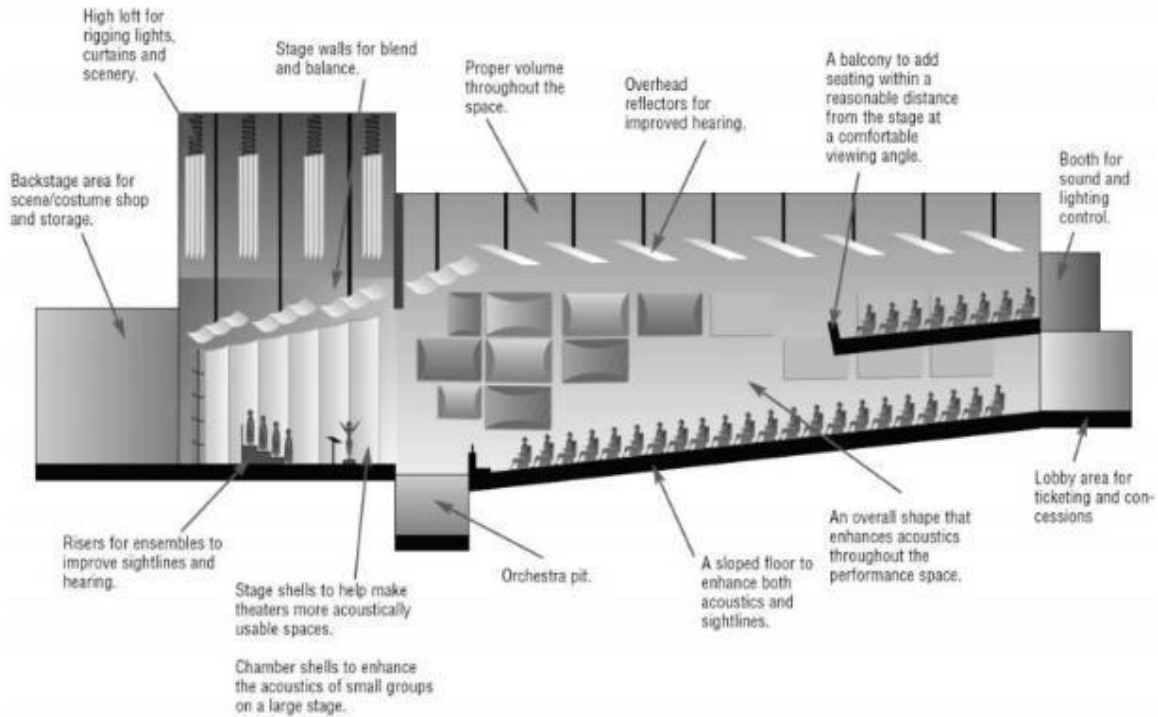


Fig 2.5.a. Concert hall

- The concert hall seating is considered as stepped seating Arrangement is desirable. Spaces has to be well ventilated with good viewing and

Hearing conditions with close to the stage and projection Area.

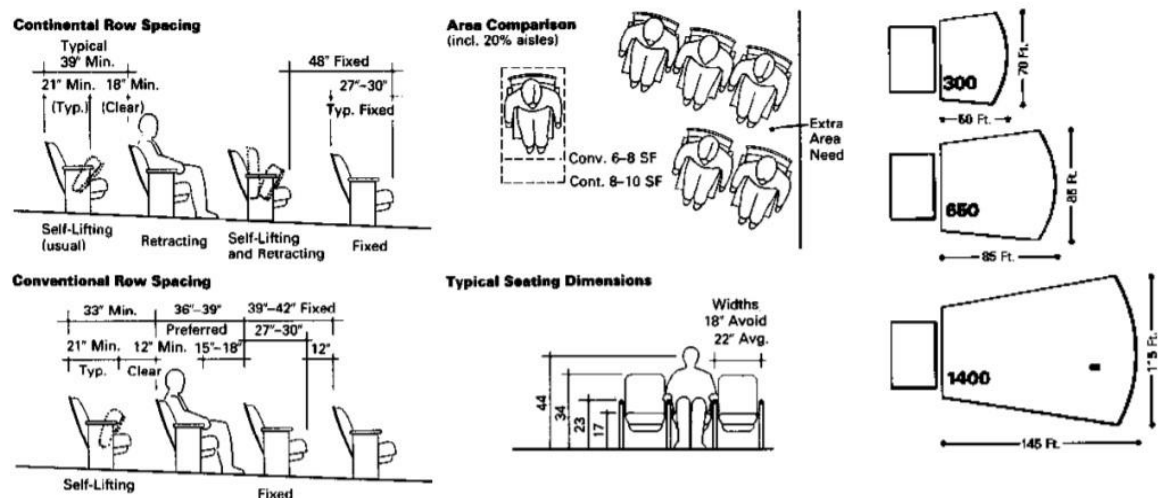


Fig 2.5.b. Concert hall seating

2.6. Music storage room

- The music storage room should provide safe, sanitary protection against robe and uniform destruction.
- Cabinets, 3ft deep, 30ft long, equipped with racks and hangers and space above for hats and lockers, for special band equipment such as flags and batons and with lockable sliding doors are desirable.
- Instruments need maximum care and preservation from damage.
- Adjustable shelving must vary according to instrument sizes
- Rollaway racks for bulky instruments are needed. Smaller instruments are best cared in cabinets,
- Other provisions include lockers with master-keyed padlocks, student benches, record cabinet, music filing cabinet, piano dolly and music stands.
- Large instruments are stored in the rehearsal room in rolling racks for their easy moving for away from home performances.

2.7. Library standards

- Space per reader at stacks 0.45sq.m
- Space per reader at tables 2.8sq.m
- Height of wall shelving 2m
- Height of bottom shelf from the floor 380mm
- Overall capacity 65 vol / sq.m

2.8. Storing Pianos Safely

- Don't worry about loosening the strings. Unlike other string instruments, piano strings shouldn't be loosened – they are designed to not buckle under pressure.

- The pedals and legs of the piano should be wrapped in padding to ensure they stay in good condition.
- Make sure your piano is covered with a tarp or other protective covering to prevent dust coverage and keep it looking pretty as possible.
- It's essential that your piano be stored in a climate-controlled storage unit. The piano must stay in an environment between 65-78°F at around 50% humidity at all times. Temperature extremes can easily affect every component of your piano, which will end up extremely costly and, most of all, very sad.

2.9. Storing Stringed Instruments, Including Guitars

- If you're storing your stringed instrument long term, loosen the strings a bit, but don't leave them completely loose. Leaving the strings tightened on your instrument for a significant chunk of time adds tension to the neck and may result in warping.
- Get a decent case for your instrument. This will keep your instrument protected from dust, accidental damage, and ensures that the color and finish of your instrument remains in mint condition.
- Stringed instruments are very susceptible to temperature and humidity damage, most of them being made of wood. They should be stored between 65-78°F at around 50% humidity at all times. Extreme temperatures or humidity can wreak havoc on your stringed instrument, leading to the warping or cracking of the body.

2.10. Storing Brass Instruments

- Clean the instrument appropriately, but make sure you dry it completely prior to storage. This will prevent mold growth and rust.
- Remove all the of the instrument's slides and valves. Wipe them down completely and store them in airtight bags. This will prevent jammed slides and valves.

- Brass instruments are a bit less susceptible to temperature and humidity extremes as compared to other instruments, but it is still recommended they be kept 65-78°F at around 50% humidity at all times to prevent bacteria growth and other damage.

2.11. Storing Woodwind Instruments

- Prior to storage, make sure your woodwind instruments are broken down into their individual components if it's possible. This relieves pressure on the joints of the instrument and prevents damage from occurring.
- Clean the instrument appropriately beforehand, but make sure you swab and dry the instrument completely before storage. This will prevent the harmful effects of moisture on the instrument's body and keep pads from sticking.

Woodwind instruments are very sensitive to temperature and humidity changes. Too high of a humidity can cause the wooden bodies or pads of a woodwind to swell. Too low of a humidity can result in the drying out of an instrument and may even lead to cracking.

2.12. Drums

- If you are using leather drum skins, be sure to oil them prior to storage. This prevents them from drying out or cracking.
- Wipe all drums down with a dry cloth to remove dust.
- Store drums in their original cases.
- Lessen the tension on drum skins to prevent them from stretching.
- Store drums in a humidity and temperature controlled storage unit at 65-78°F at around 50% humidity at all times to keep them in perfect condition.

3. LITERATURE STUDY

3.1. Kala academy

The kala academy is a vibrant representation of the culture and art of the people of goa and this is expressed in the staggering amount and variety of cultural programmes held in its premises. In November, kala academy morphs fluidly into the main hub of the international film festival of india, holding 3-4 screenings a day.

Situated at Campal, Panaji along the banks of river Mandovi. Area has mixed land use with a military hospital across the road, a cricket ground and a park on either side.

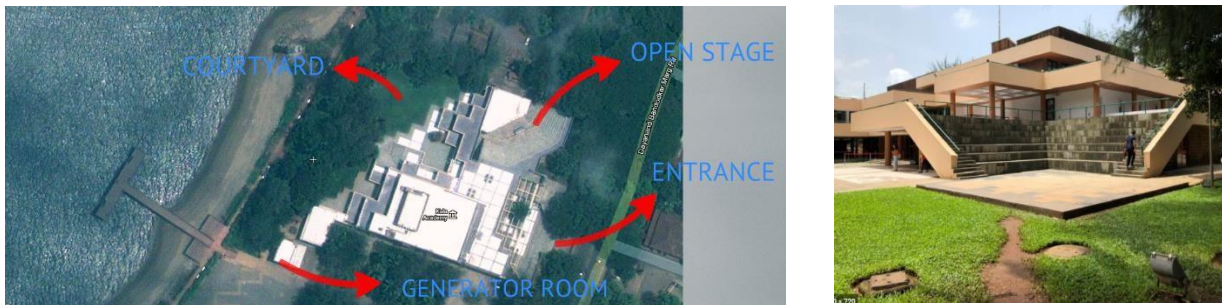


Fig 3.1. Kala academy site

Architect: Charles Correa

Building Type: Institution

Site Area: 6.3acres

Site Gradient: Gentle Slope

Construction: Commenced in 1973 but finished in 1983

Approach: Four entries pedestrians leads to school vehicular both leads to auditorium

3.1.1. Theme

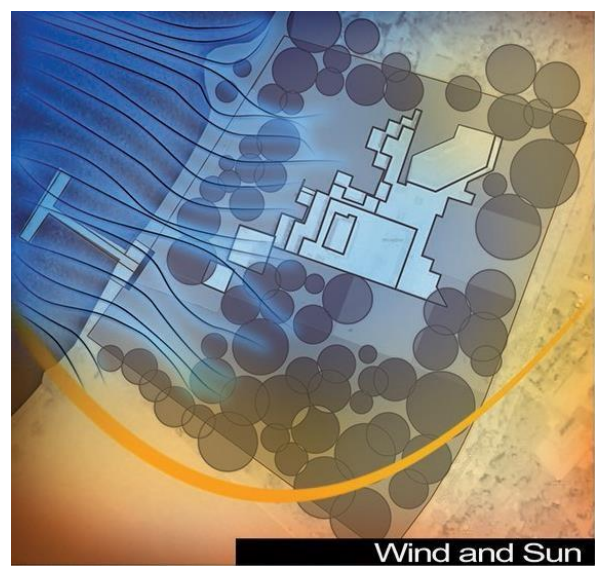
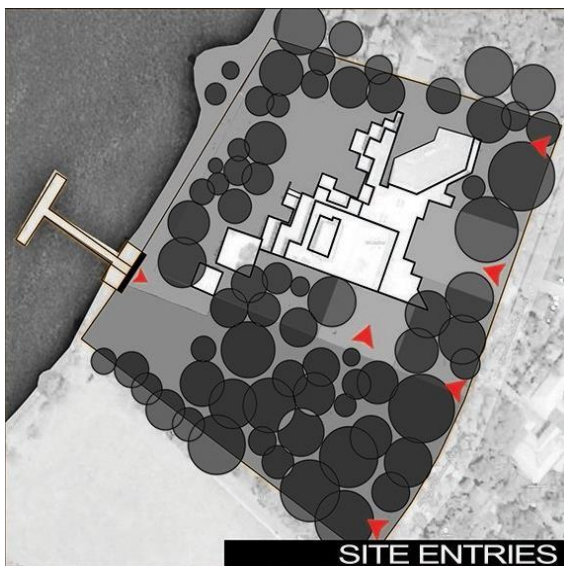
Architect Charles Correa has successfully managed to integrate an elaborate internal street like passage into a relatively formal scheme of a performing arts venue and achieved delicate balance between inside and outside

One is very away from the greenery outside, from the cool breeze coming in over mandovi river from the sun, from lights & shadows.

Correa masterfully unites all these elements to draw one through the space, the the circulatory pathway being one of his special features.

People are made to walk through the careful manipulation of vistas, volumes, freames, colors, light, dark.

Strategically placed platforms & seats allow people to relax and converse & while time away enjoyed till start of the function, acting out.



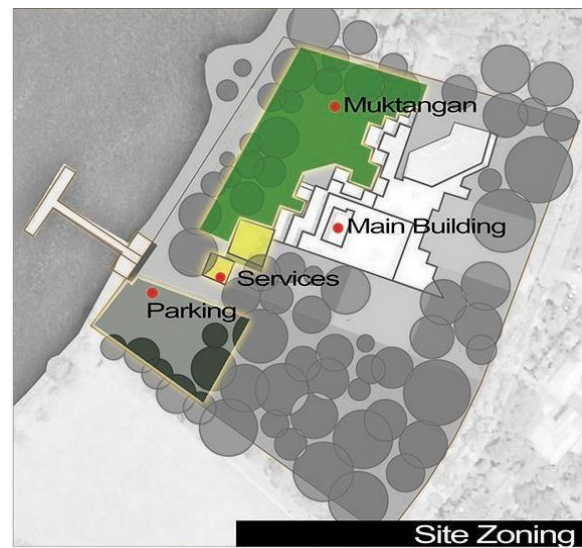
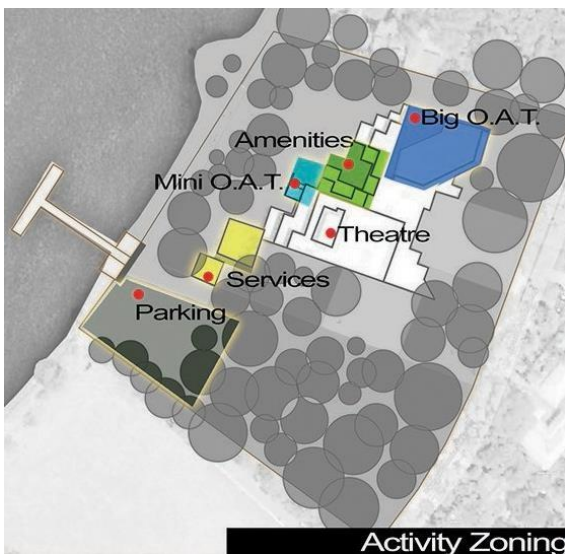
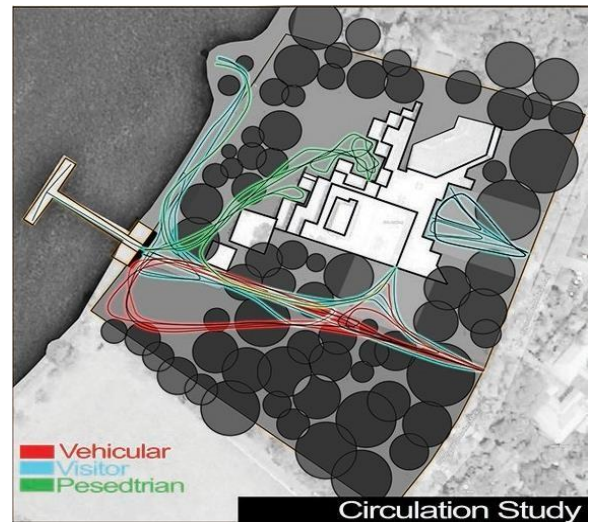


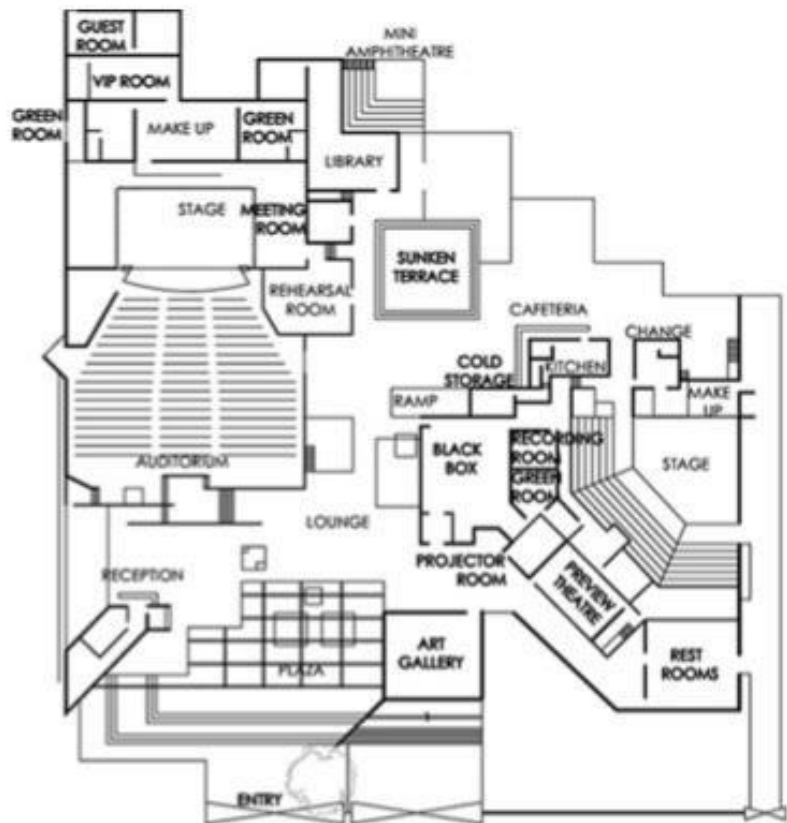
Fig 3.1.1.a. Site zoning

3.1.2. Ground floor

Four entries to the site. Boat jets provided on the river side. Coverage is about 40% Well defined pedestrian and vehicular systems Includes the cafeteria, garden and amphitheatre. Site is divided into main building, service building, muktangan, parking area, the exhibition space.

Facilities in kala academy (Ground floor)

- D.M Kalamandir
- OAT
- Mini OAT
- Black Box
- Rehearsal Room
- Art Gallery
- Meeting Room
- Guest Room
- Preview Theatre
- Cafeteria
- Library



□ Teaching Studio

Fig 3.1.2.a.Ground floor

- Green Room
- Kitchen
- Administration
- Reception
- Lounge

D.M Kalamandir

- Drama, khel tiatr, magic shows, professional drama, western music, concerts, gathering, orchestra, beat show, dance concert, fashion show, lectures, and meetings.
- Seating capacity-954 seats
- Proscenium stage opening 9-10m
- Proscenium height 4.7m
- Orchestra pit 7.2m - 2.16m
- No. of .Green rooms are 3



Fig 3.1.2.b. Concert hall

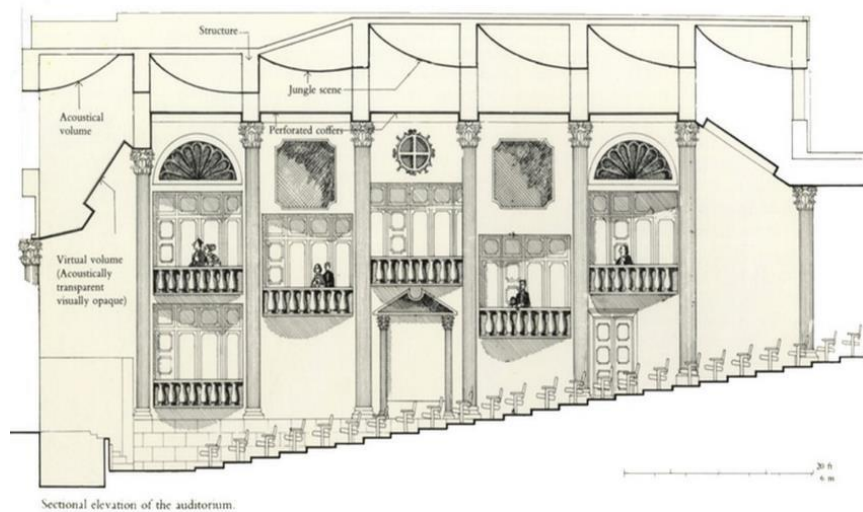


Fig 3.1.2.c. Section of concert hall

- The auditorium allows for a variety of acoustical conditions ranging from speech and plays to [sitar] recitals and orchestral arrangements.

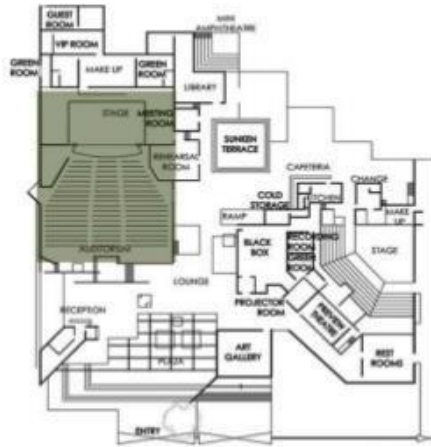


Fig 3.1.2.d. Auditorium

- The transparent false ceiling allows acoustic changes to be made by manipulating absorbent material placed within compartments hidden from view above this ceiling.
- The walls of the auditorium are painted illusions of an old Goan theatre, complete with boxes and 'typical' local inhabitants, by the Goan artist Mario Miranda. Behind the figures in the boxes, real curtains may be pulled to reduce reverberation time in space.

Mini open air theatre

- 300 people. Used as a outdoor classroom & meeting space
- Oat has a tread of 85cm and rise of 45 cm. Steep risers give it excellent sightline.
- Farthest seat is 6m away and no amplification required.
- Two aisles run along either end. The width is 120cm and the steps have 15cm risers and 28 cm treads.
- The stage is square in shape and has an area of 7.5 x 7.5 m



Fig 3.1.2.e. Mini amphitheatre

Black box

- Seating capacity - 200
- Area - 175 sq.m, used for experimental productions, music concerts, meetings and amateur performances and also used as a recording studio.
- Control room and a green room provided. Black box lobby is also provided.



Fig 3.1.2.f.Blackbox

Real, and imaginary elements, the illusion continues in the entrance foyer This concern with illusion and metaphor continues in much of Charles Correa's works in ninteenseventies and eighties.



Fig 3.1.2.g.lobby

Art gallery

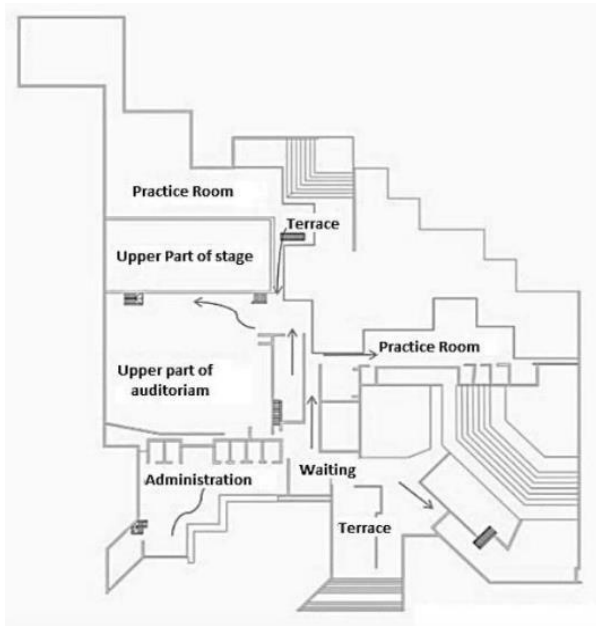
- Running walls space display – 51m Carpet area
165 sqm 3 mobile display panels to be used on
both the sides – each having a space of 4x1.5m

3.1.3. First floor

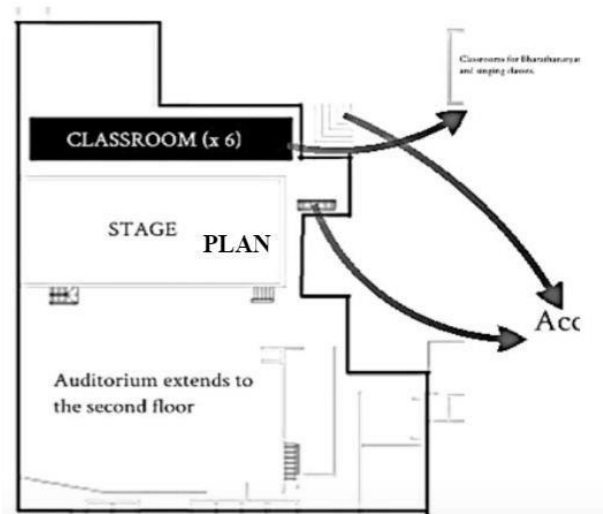
Facilities in kala academy (First floor)

- 1) Practice room
- 2) Terrace
- 3) Upper part of Stage
- 4) Upper part of auditorium
- 5) administration
- 6) Waiting room





3.1.3.a. First floor

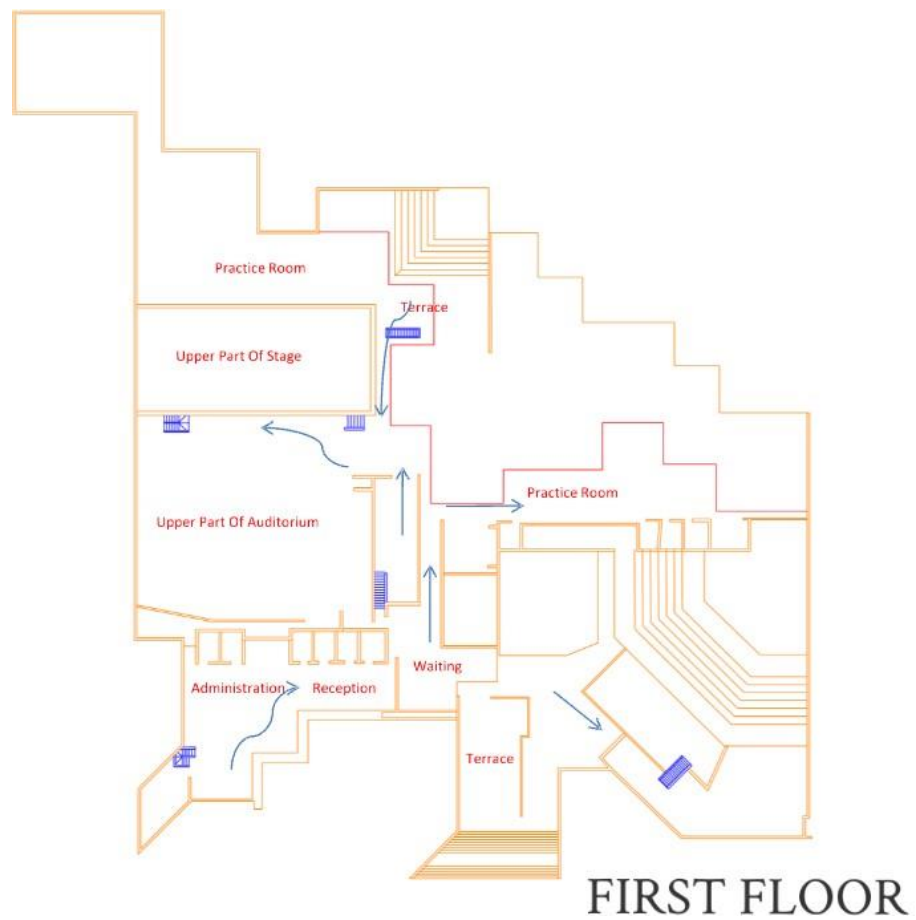
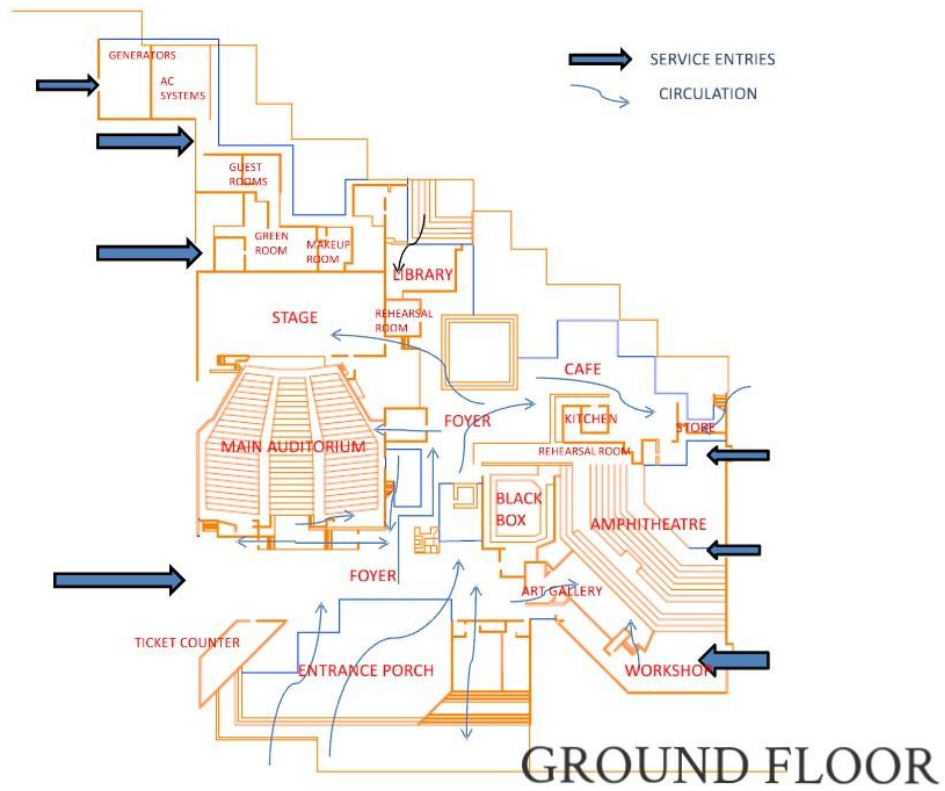


3.1.3.b. First floor

3.1.4. Material used:

- The outer walls of the academy are constructed from red laterite rock, found all over Goa and reminiscent of the great forts that can be found across the state. The rough, unfinished laterite surface creates a pleasant contrast with the smooth concrete surfaces of the columns and pergolas

3.1.5. Circulation



3.2. Kalakshetra

Kalaskshetra, means a holy place of arts (kala: arts, kshtra: field)

The training of young and talented people by masters of art, with the background of a religious spirit, has been its main aim

Kalakshetra aims aims at

Training students in the fields of music and various fine arts.

Education of public through concerns, public lectures, exhibitions and publications

Site area: 100 acres

Location: Thiruvannamipur , Chennai

Completion: 1962



Fig 3.2. kalakshethra

3.2.1. Functions

- Kalakshetra is a cultural academy dedicated to the preservation of tradition values in indian art, especially in the field of bharathanatyam dance and gandharvavedha music

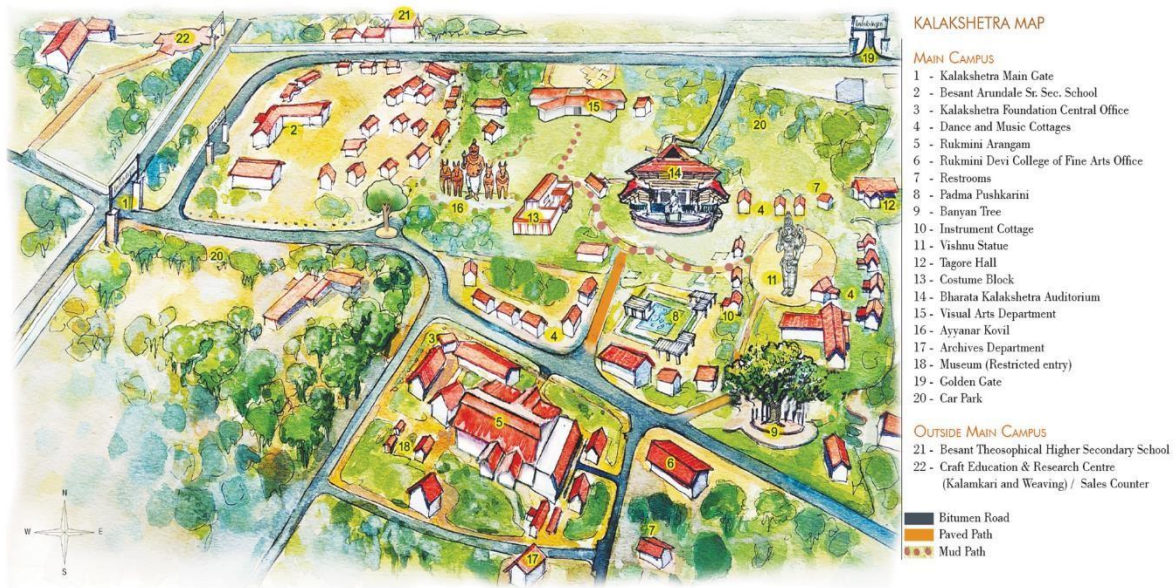


Fig 3.2.1.Site plan

- Kalakshetra focuses on bharathanatyam, Carnatic vocals and instrumental music, the visual arts , traditional crafts and textile design, textural heritage, aesthetics, history and philosophy.

3.2.2. Auditorium

- Designed by Appukuttan nair, the bharatha kalakshetra auditorium was built like a traditional koothambalam in kerala style.
- Measuring 40' x 40', the auditorium can seat 750.
- 50 can be accommodated on the floor directly in front of the stage. There are 428 chairs in the octagonal well of the theatre , 168 chairs in the peripheral veranda, and 104 galleries in the balconies.
- The stage itself is raised on foot and a-half from the rest of the floor , allowing the audience to clearly observe the foot work of the dancers.
- Auditorium walls are made of wooden slats, which allows the breeze to blow through, along with sounds from the outsidedressing rooms are available for artists on the ground floor.

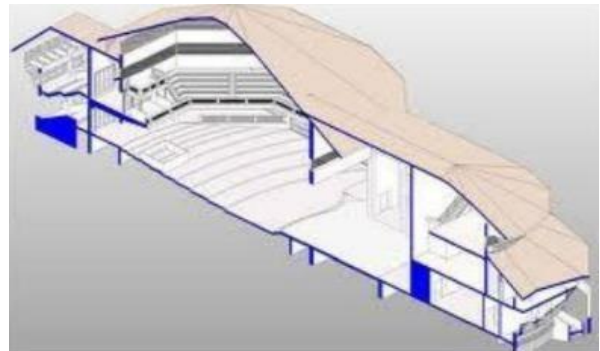


Fig 3.2.2. Auditorium

- The auditorium is used primarily for dance performances, the level of the stage is just 18 inches higher than the lowest level of the seating area, enabling all audience to see the footwork clearly
- The proscenium, like the shakespearean theatre in Stratford-upon-aven, thrusts forward into the audience, and there are doors on each side for entrances and exits.
- There are no pillars that hides the view of the stage.
- The stage is equipped with advanced lighting and sound systems.

3.2.3. Rukmini Arangam

- It was designed with the help of architect kiffin peteron. Measuring 70' x 80' the open air space can accommodate 300 and an additional can be accommodated on the floor directly in front of the stage.
- Dressing rooms are available on the either side of the stage which is covered under a thatched roof each measuring 10' x 12'.
- The stage is made of black oxide which is suitable for open-air theatre is equipped with lighting and sound systems.

3.2.4. Padma pushkarini



Fig 3.2.4. Padma pushkarini

Padma pushkarini is a pond in the campus – a stage for musicians was inaugurated. Three elegant mandapams surround the pond, one of which is the stage for the musicians. The pond is bordered by granite steps and terraces. It is named after dr. padmasini, who was a reverd teacher at kalakshetra.

3.2.5. Classrooms

- The classrooms here are thatched cottages where dance- bharathanatyam and classical music- singing and instruments like the violin, veena, fute and mridangam are taught
- These are naturally lit and ventilated spaces. Practice sessions are often held outdoors
- Open spaces, spreading trees, buildings which are open to the light and the breeze, cultivate a spirit of reverence for learning and for the environment.
- The cottages are arranged such that they for a courtyard amidst them which is landscaped and maintained to act as spill outs.

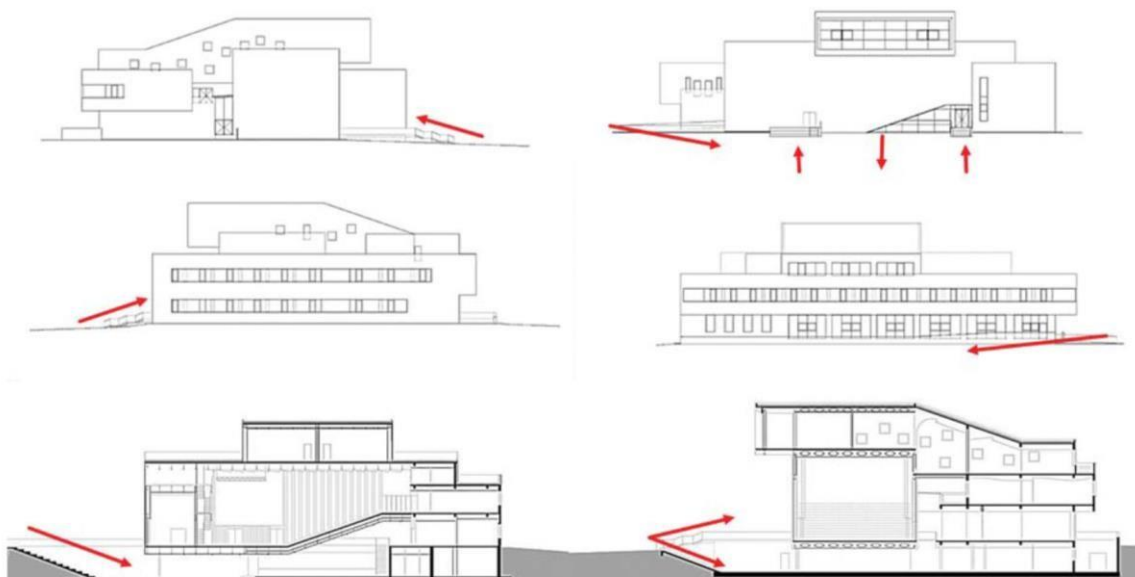
3.3. School of Music and Arts – Romania

Location: BUCHAREST, ROMANIA

Architects: LTFB Studio

Year: 2012

- The exterior image is formed by an white L-shaped volume that surrounds the red bond volume of the two performance halls, and over this red one is placed, on a perpendicular direction, another white volume – a window display of the building towards the street. The window display hides/shows the choreography area.
- In the L-shape volume we find at the ground floor a lecture room, a web-art space and the open space for drawing, painting and sculpture.
- At the first floor we have grouped all the small 35 music classrooms with angled walls and ceilings (resulting from the acoustic studies) and a small interior terrace.
- The highest white volume hosts also some music spaces (for choir and instrumental orchestras) and the choreography area with two main halls for dancing.



- At the underground we find the administrative annexes, dressing rooms for performing artists and a recording studio.

- The red volume is floating independently over the forum space and hosts the two performance halls, a small one for chamber music and a 200 places hall for bigger concerts or events, with the entrance through a small bridge.

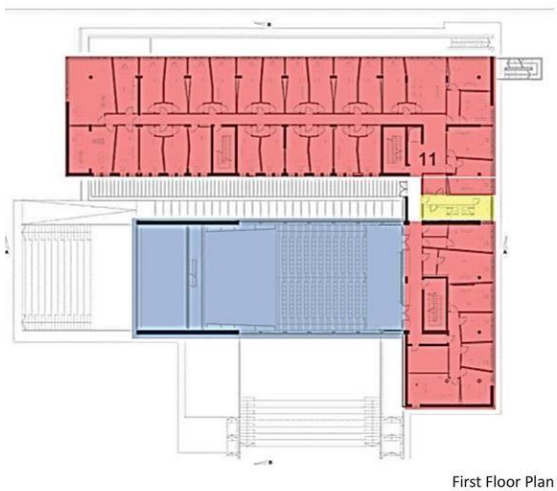
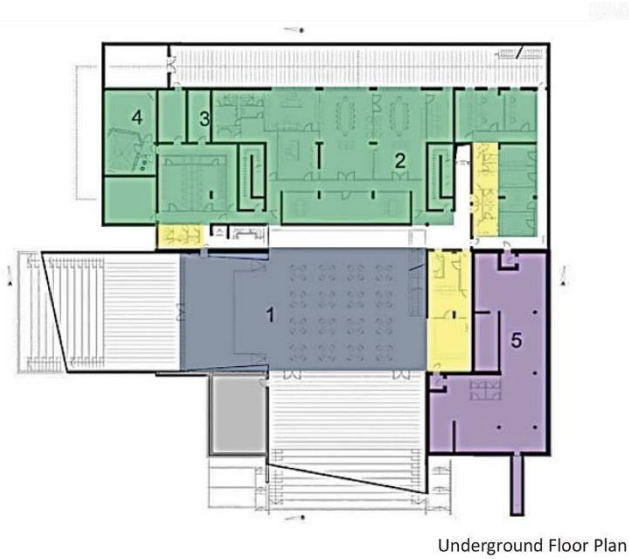




Fig 3.3.a Main performance hall



Fig 3.3.b. South facade

The white L-shaped volume has a classic concrete structure, but the red bond volume has more a bridge-type metal structure for sustaining the main concert hall slab for an opening of aprox. 14m/20m

The furniture of the school is simple, joyfully colored, flexible and easy to store. The space dedicated to drawing, painting and sculpture has mobile storage furniture that can also be used to separate two or three classrooms within.



Fig 3.3.c. View from underground floor

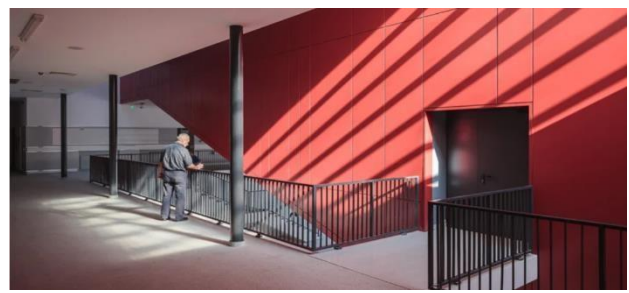


Fig 3.3.d. Main gallery entry

4. AREA STATEMENT

S.no	Space	No.of.people/usage	Area per person	Total area
1	Ug western course(3yr course)			
	voice(3)	10	3	90
	wind(3)	10	6	180
	brass(3)	10	6	180
	percussion(3)	10	8	240
	keyboard(3)	10	8	240
	string(3)	10	4	120
	guitar(3)	10	4	120
	theory class(3)	10	3	90
	Total			1260
2	Ug classical course(2yr course)			
	voice(2)	10	3	60
	woodwind(2)	10	2	40
	brass(2)	10	2	40
	percussion(2)	10	4	80
	violin(2)	10	3	60
	string(2)	10	3	60
	veena(2)	10	3	60
	Total			400
3	Pg course in music (1 yr course)			
	voice	10	3	30
	composition	10	4	40
	Total			70
4	Audio engineering (3 yr course)			
	theory class	40	1	120
	practical class	40	2	240
	Total			360
5	staff room			
	gents room	15	2	30
	ladies room	10	2	20
	gents'toilet	6	3	18
	ladies toilet	6	3	18
6	toilet			
	boys toilet	30	3	90
	girls toilet	50	3	150
	Total			204
7	library			
	reading space	150	1	150
	book shelves	70	2	140
	office	6	2	18
	staff reading space	30	1	30
	Total			338

8 music research center			
audio visual room	2(100)	1	
conservatory (workshop)	25	2	50
toilet	20	2	40
instrument repair room	20	2	40
Total			130
9 instrument rehearsal room			
studio (2)	30	3	90
Total			90
10 choral rehearsal room			
studio(2)	30	2	60
Total			60
11 recording studio			
sound room	5	2	10
voice booth	4	2	8
rest room	5	3	15
live room	5	2	10
Total			43
12 open air theatre(2)			
stage	10	2	20
seating	250	1	250
Total			270
13 concert hall (700)			
seating	600	1	600
gallery	100	1	100
ticket office	6	2	12
rehearsal room (2)	10	2	20
costume room	10	3	30
costume storage	15	2	30
projector room	4	2	8
spot light room	4	2	8
instrument storage room	15	4	60
gents toilet	30	3	90
ladies toilet	30	3	90
back stage	10	2	20
Total			1068
14 recreational facilities			
tennis			260
basket ball court			677
Total			937
15 cafeteria			
kitchen	15	2	30
dining	250	2	500
wash	20	2	40
rest room	30	3	90
Total			660

16 medical room			
resting room	20	2	40
toilet	10	3	30
Total			70
17 computer room			
computer room	40	2	80
server room	5	2	10
electrical room	2	4	8
Total			98
18 services room			
Total			1000
19 Admin			
Office			300
Total			
20 Entrance lobby			
Total			500
21 Hostel			
men's hostel rooms(40)	160	6	720
women's hostel rooms(40)	160	6	720
mess	450	3	1350
Total			2790
22 seminar hall(500)			
seating	500	2	1000
lobby	125	2	250
stage			360
store room			20
light room			10
rest room	50	3	160
Total			1800
23 Museum			
Exihibtion area	250	2	500
Atrium	30	1	30
Ticket office	10	1	10
Services room	5	1	5
music unit	10	2	20
Total			565
TOTAL BUILTUP AREA			13099

5. SITE SELECTION – (AKKARAI ,INJAMBAKKAM ,CHENNAI.)

The site is in the outside of the city so no noise can affect the music academy

-The site is near the Akkarai bus stop so the buses goes via the site.

-The site is surrounded by many residential buildings as well as commercial buildings

-It is near the junction so people around panaiyur and Adyar, Thiruvannamiyur can use this site very easily.

-If the students need free mind they can be taken to the beach to have pleasant time or else they can taken to beach for vocal excersises and instrumental practices .

-so around 20km there is no music schools for the upcoming musicians so providing at the outskirts of the city gets students around the outskirts.

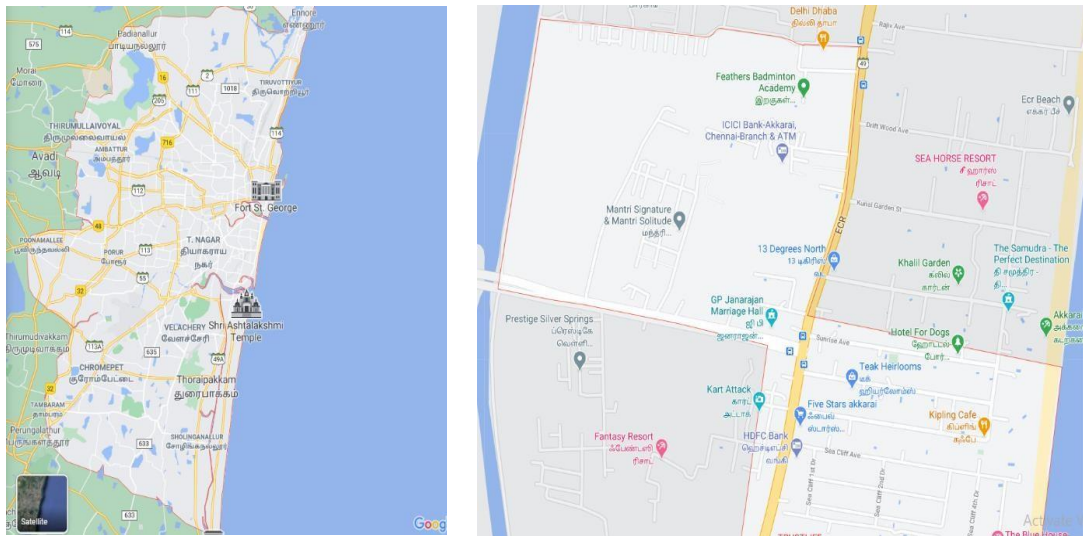


Fig 5.a. Site selection

- The site is located in the city of Chennai, at a place called Akkarai , Injambakam , chennai.
- It lies in 418089.69 m E 1426162.35 m N
- It is in the east of the Chennai, proximity towards all the three main transportation hubs are close and easily accessible.

Shollinganallur landuse map

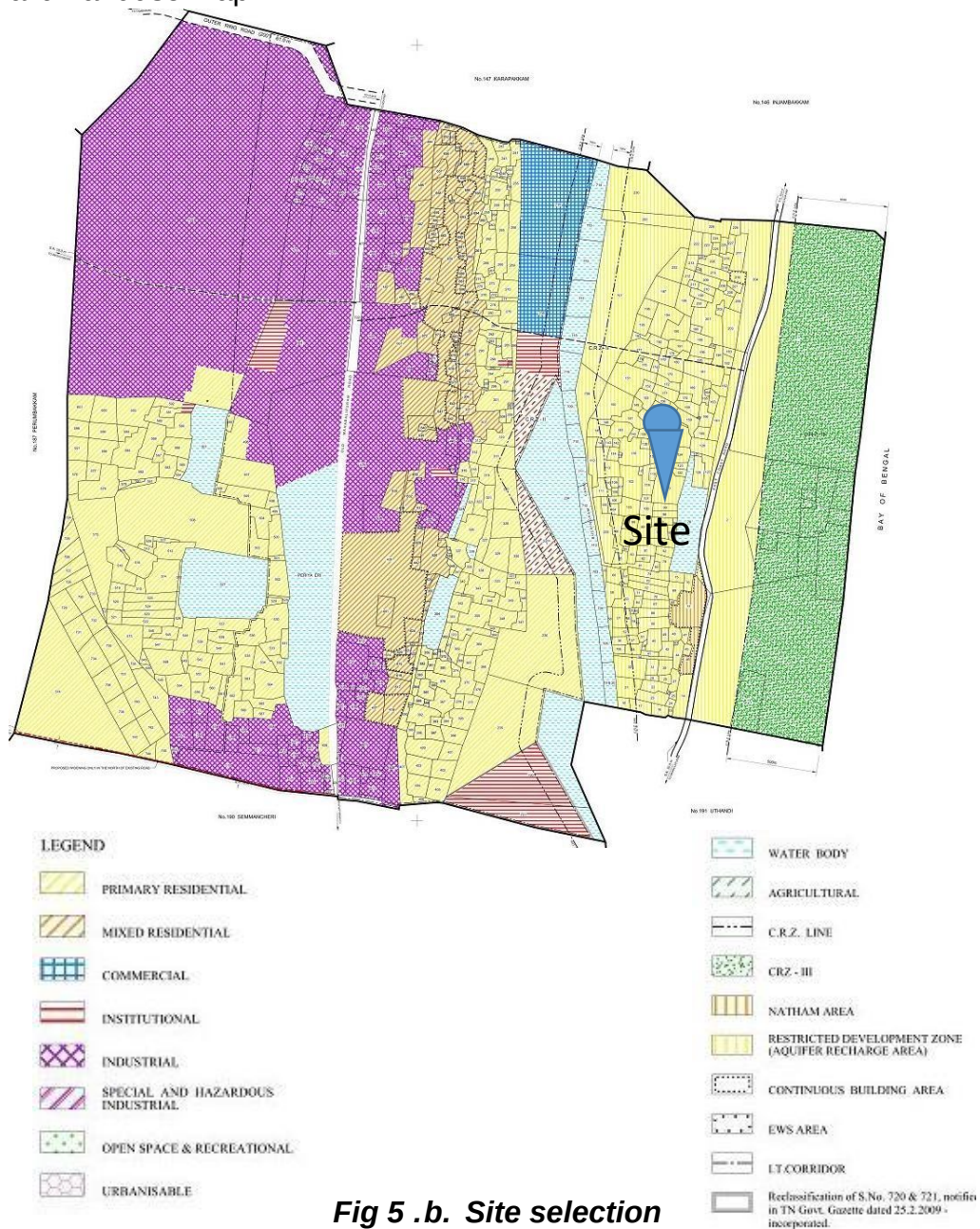


Fig 5 .b. Site selection

5.2. Why akkarai ?

The site is in the outside of the city so no noise can affect the music academy

- The site is near the Akkarai bus stop so the buses goes via the site.
- The site is surrounded by many residential buildings as well as commercial buildings
- It is near the junction so people around panaiyur and Adyar , Thiruvanmiyur can use this site very easily .
- If the students need free mind they can be taken to the beach to have pleasant time or else they can taken to beach for vocal excersise and instrumental practices.
- so around 20km there is no music schools for the upcoming musicians so providing at the outskirts of the city gets students around the outskirts.

5.3. Access to site

Roadways

- The site is strategically located on karunanidhi salai the east coastal road is perpendicular to the the site
- The site is 1.5 kms away from shollinganallur 5 kms away from thuraipakkam and 8 kms away from thiruvanmiyur.
- People can access through 4 wheelers as well as 2 wheelers

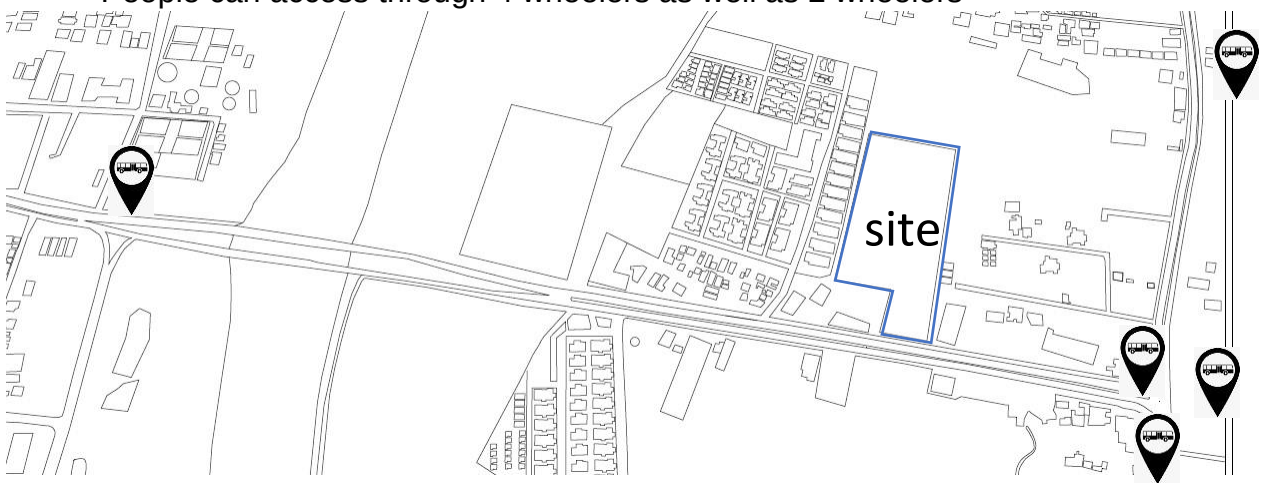


Fig 5.c. Site selection

So there are 5 bus stops near the site

1- leads via the site through shollinganalur and it is 600m away from site

2-leads via the site to akkarai and it is 800m away from site

3-leads to thuraipakam , thiruvanmiyur and adyar and it is 2kms away from the site

4-leads to panaiyur, kovalam, mahabalipuram and Pondicherry and it is 610m away from site 5-leads to shollinganallur

So people taking buses can easily access to the site

Railways:

The city has major railway system which runs for both intra and inter cities. Thiruvanmiyur railway station is next to the site and it is 12kms away from the site. The metro projects are on progress near the site so there is very biggest scope of access to the site.

Site dimensions

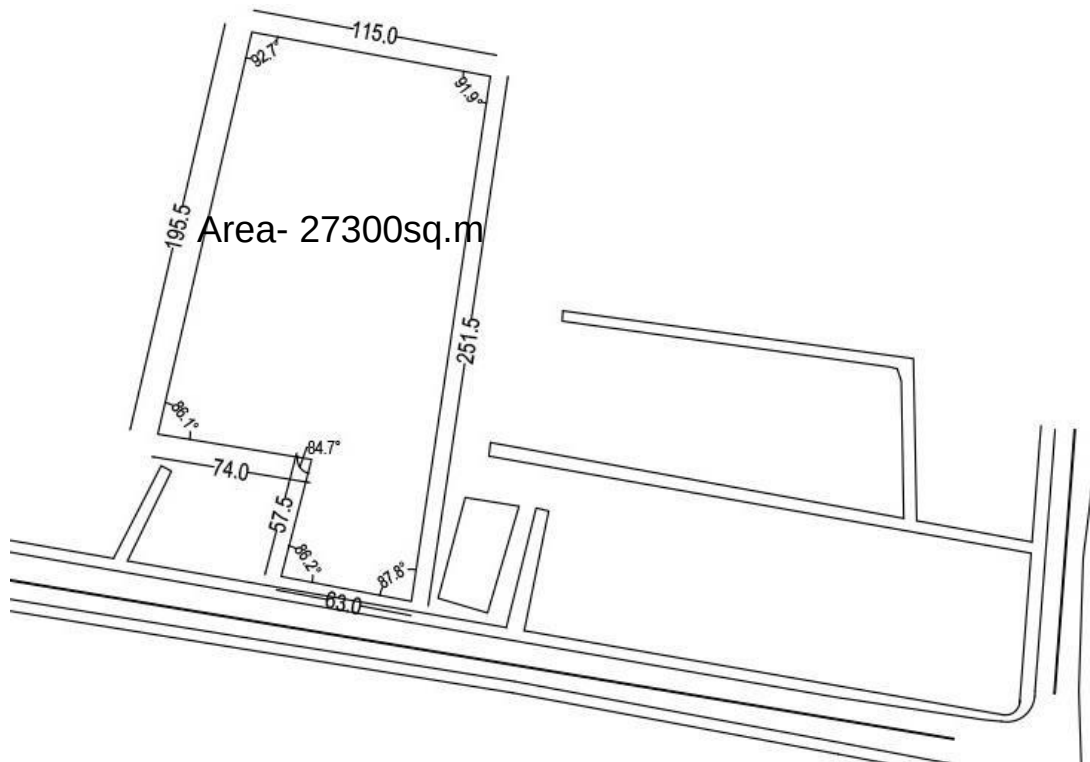
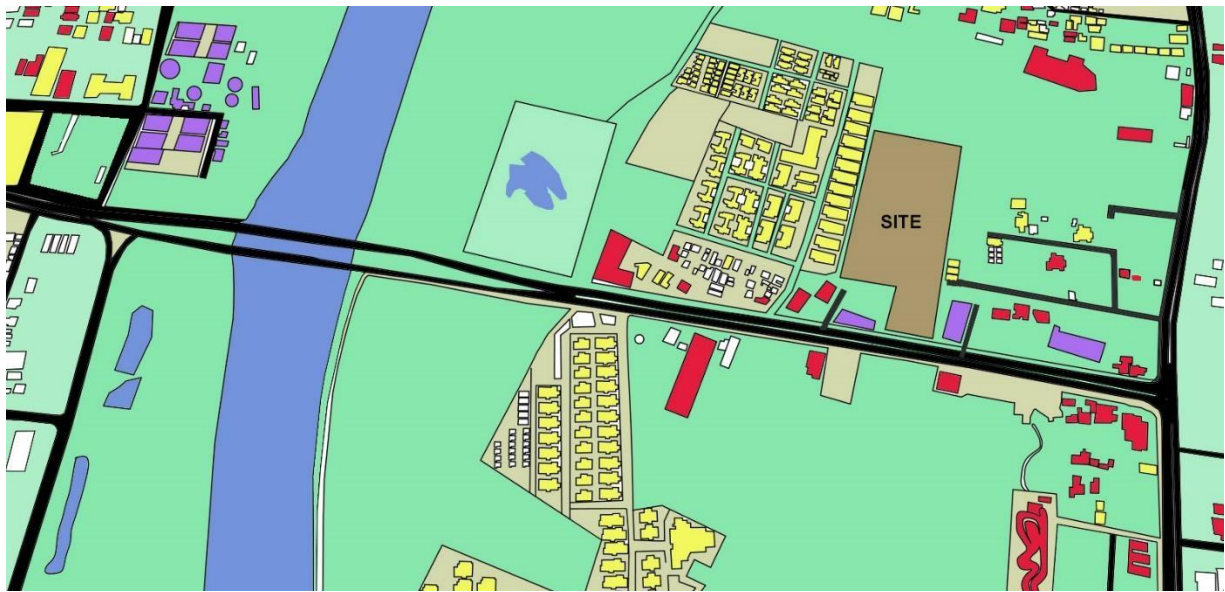


Fig 5.d. Site Dimension



Commercial



Residential



Industry



Waterbody

Fig 5.e. Site Landuse

- The site is next to Buckingham canal. This backwater runs near to the site.
- The site is surrounded by 40% of residential buildings 20% of commercial buildings and 10% of industrial buildings and 30% of open spaces.

5.4. Climate condition

- Hot days and cold nights (dashed red and blue lines) show the average of the hottest day and coldest night of each month of the last 30 years.
- The second graph shows the monthly number of sunny, partly cloudy, overcast and precipitation days. Days with less than 20% cloud cover are considered as sunny, with 20-80% cloud cover as partly cloudy and with more than 80% as overcast.

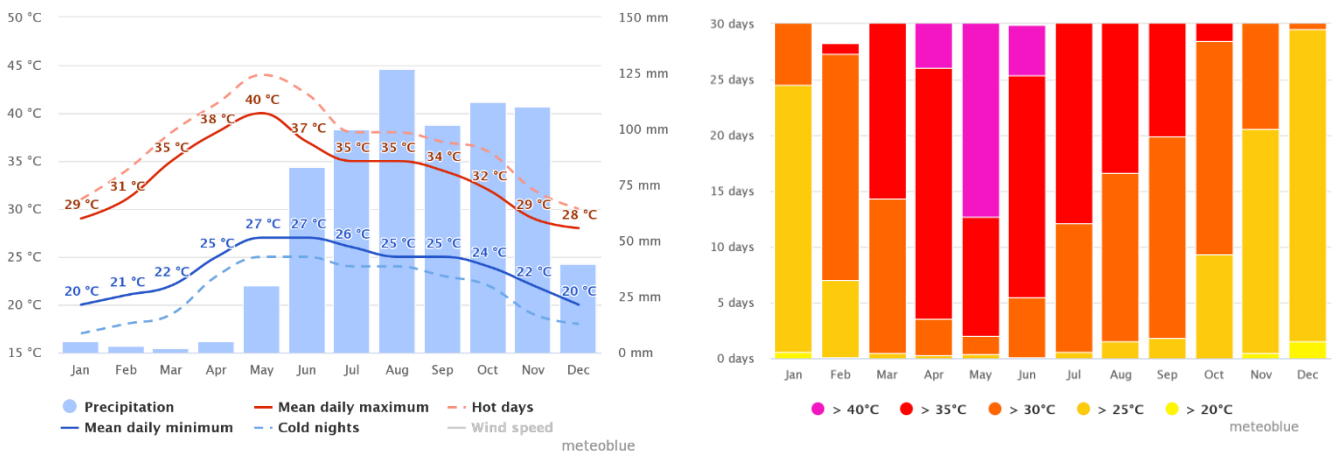
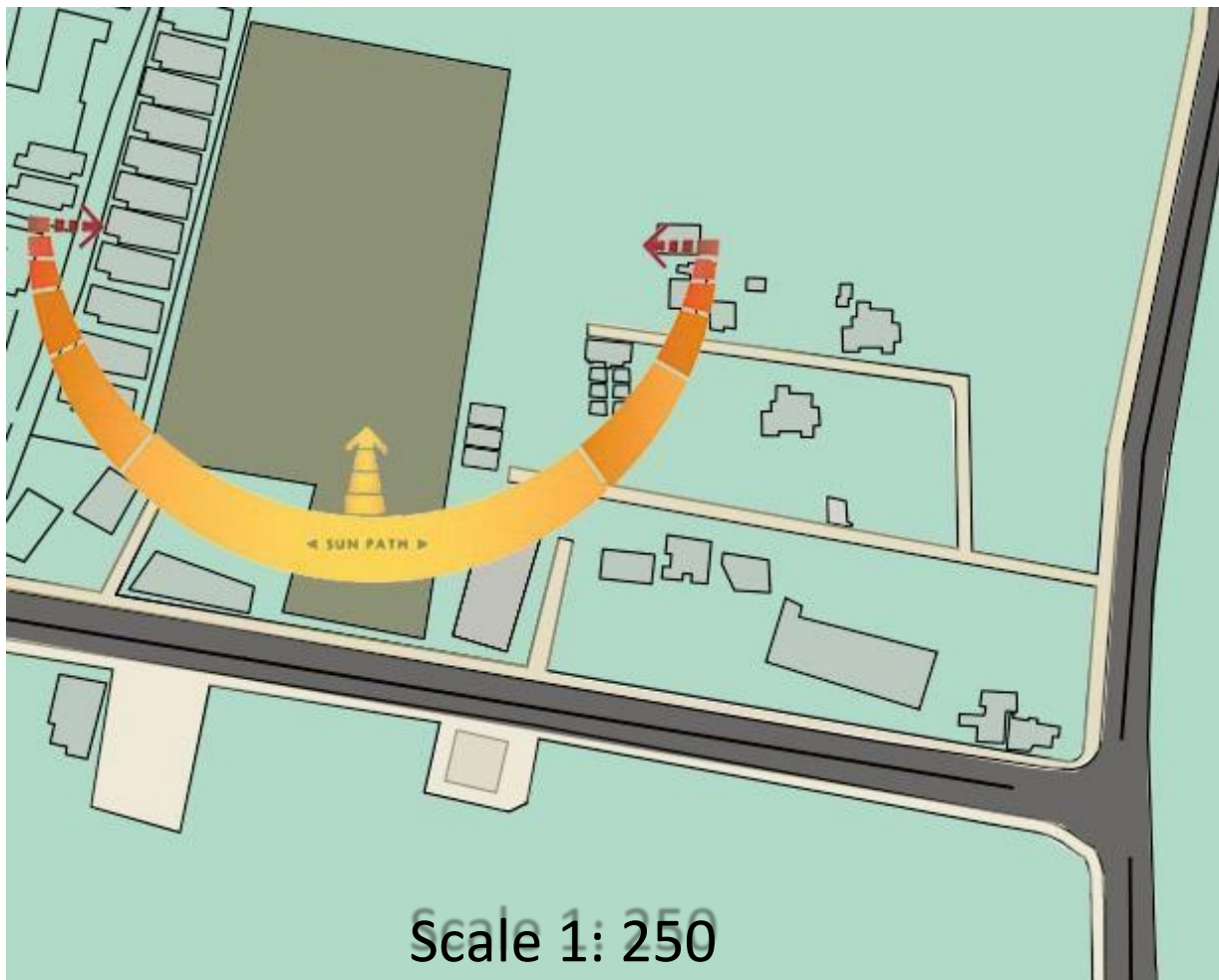


Fig 5.4.a. Climate condition Average maximum

temperature-40°C (May)

Average minimum temperature-25°C (december)

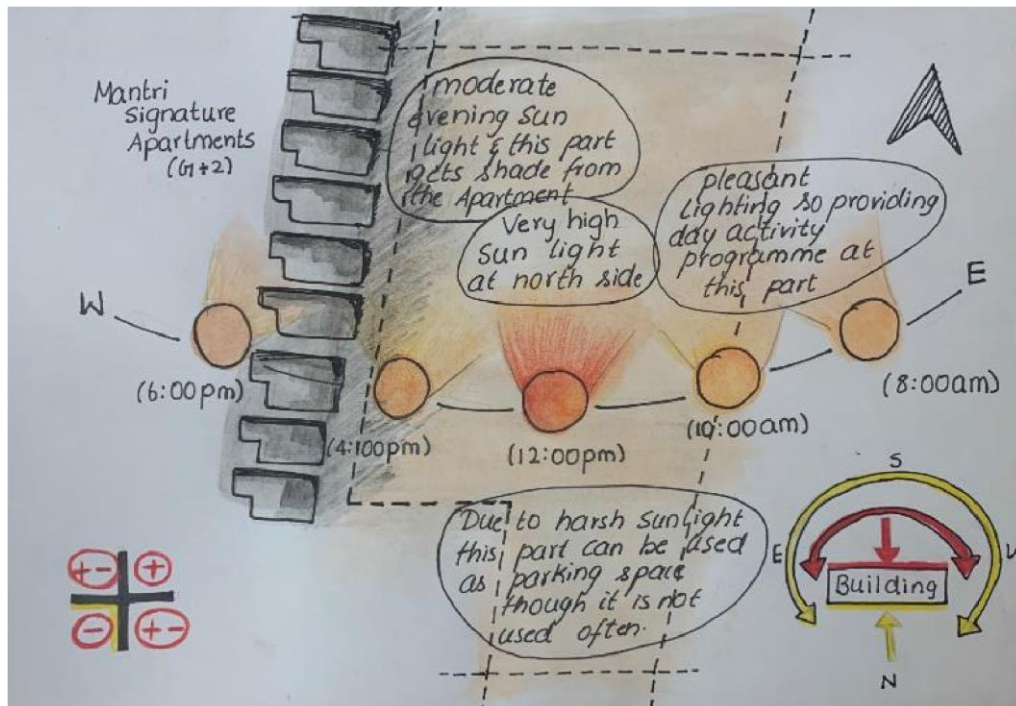


Fig 5.4.b. Sun path analysis

5.5. Wind analysis



Fig 5.5.a. Wind analysis

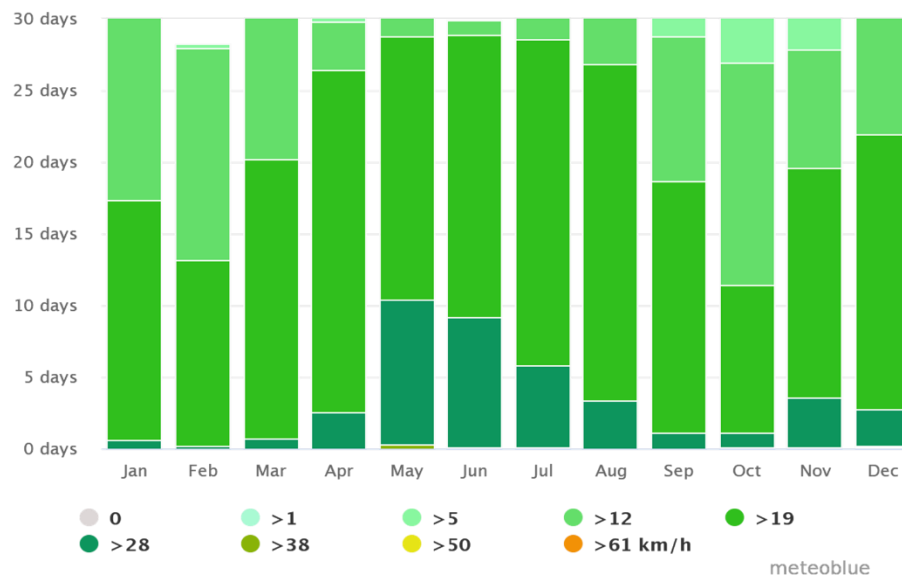


Fig 5.5.a. Wind analysis

- The north west winds are from the beach (bay of Bengal) so there is more wind access into the site and there in no barrier to block those winds
- -the monsoon creates steady strong winds from December to April, and calm
- The diagram for Injambakkam shows the days per month, during which the wind reaches a certain speed

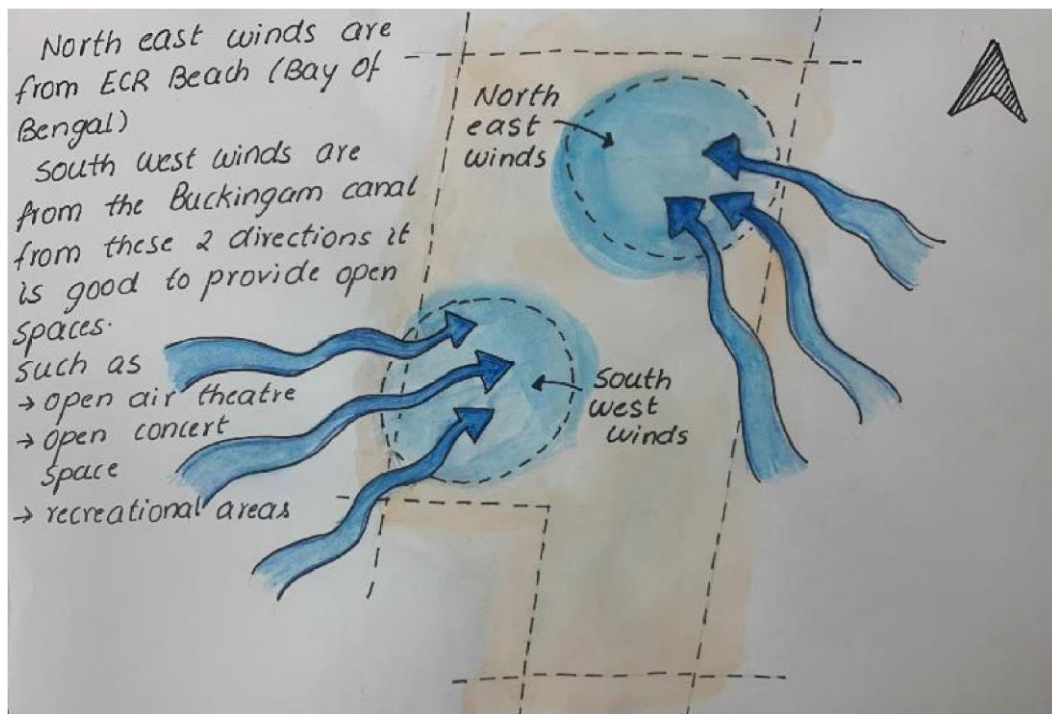


Fig 5.5.b.Wind path

- The site is near mantri signature apartments it is about g+2 heigh and it provides shade to the site and because of the height of the building wind flows freely without any disturbaces.

5.6. Noise Analysis

The noise comes from the south west direction of the site.

- The site is not very noisy
- For designing the music lecture class it is better to give at the north west and north east of the site.

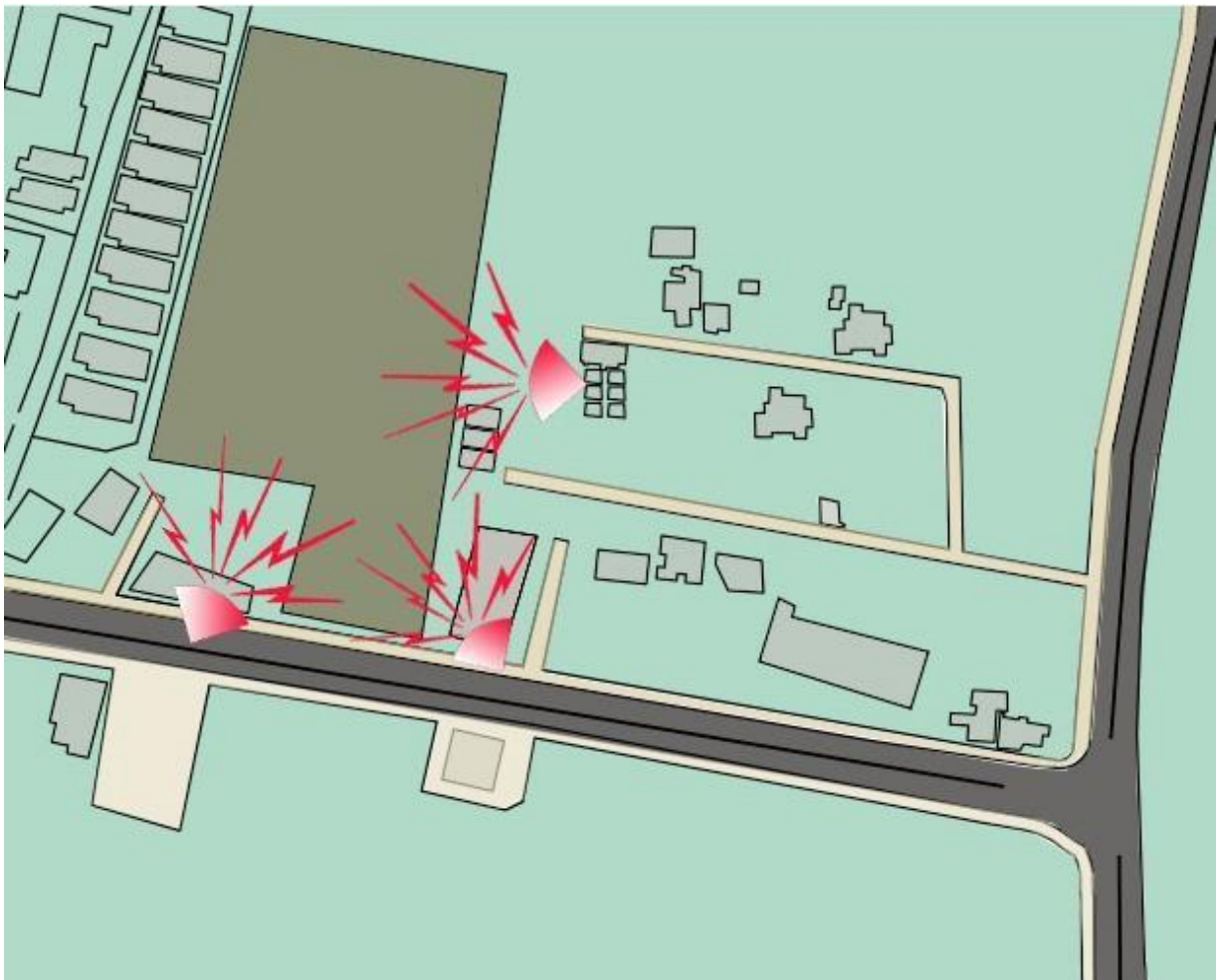


Fig 5.6.a.Noise path analysis

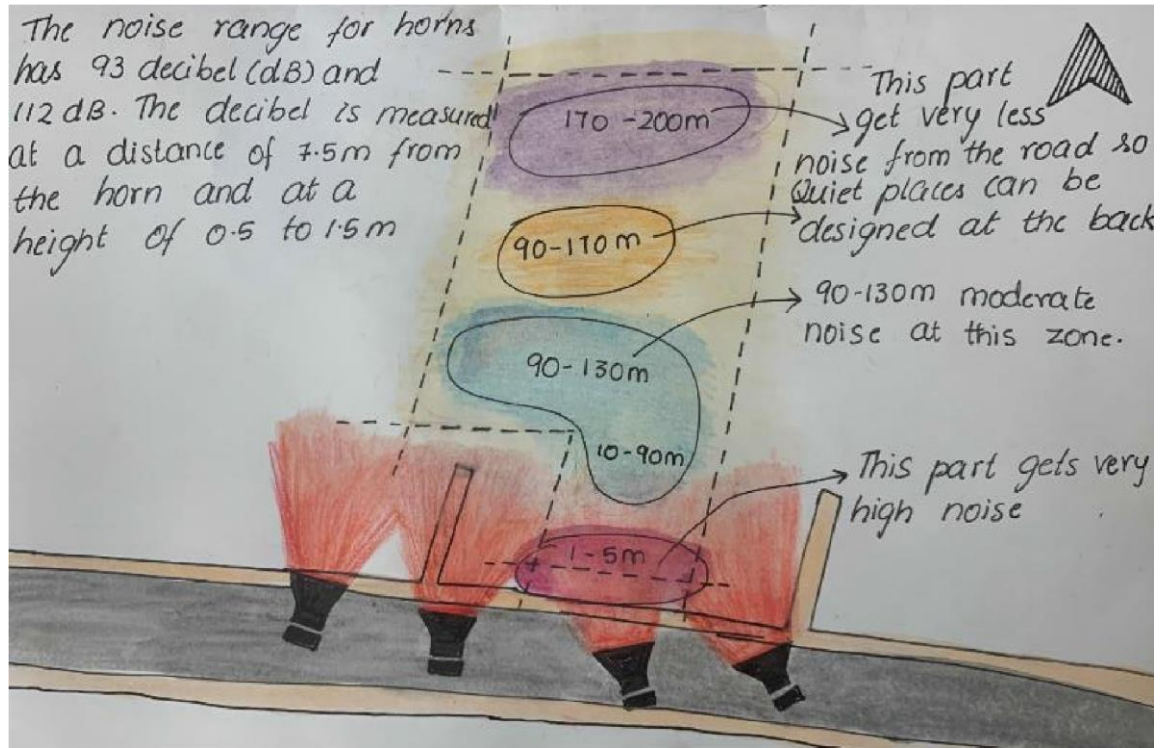


Fig 5.6.a.Noise path analysis

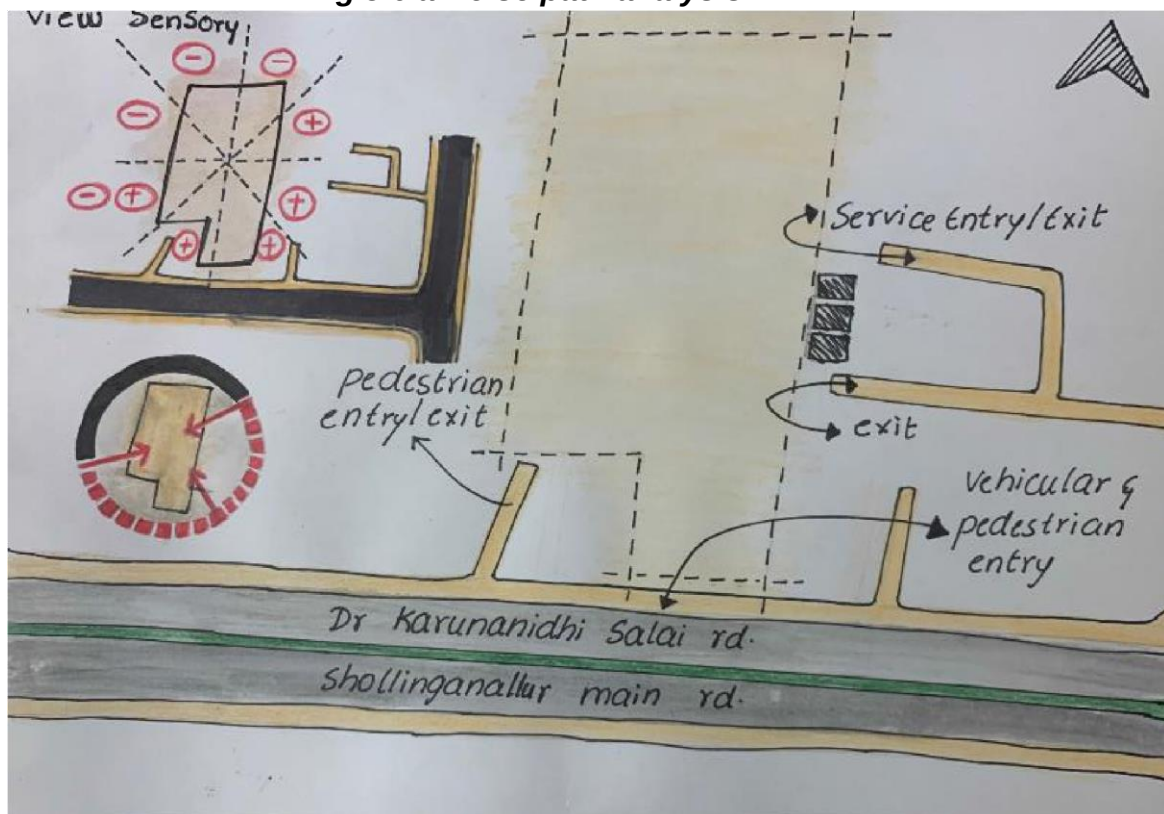


Fig 5.6.c.Noise path analysis



5.7. Section of the site



The slope starts from 0.97 m to -1.5 m



The slope starts from 1.35m to -0.42m

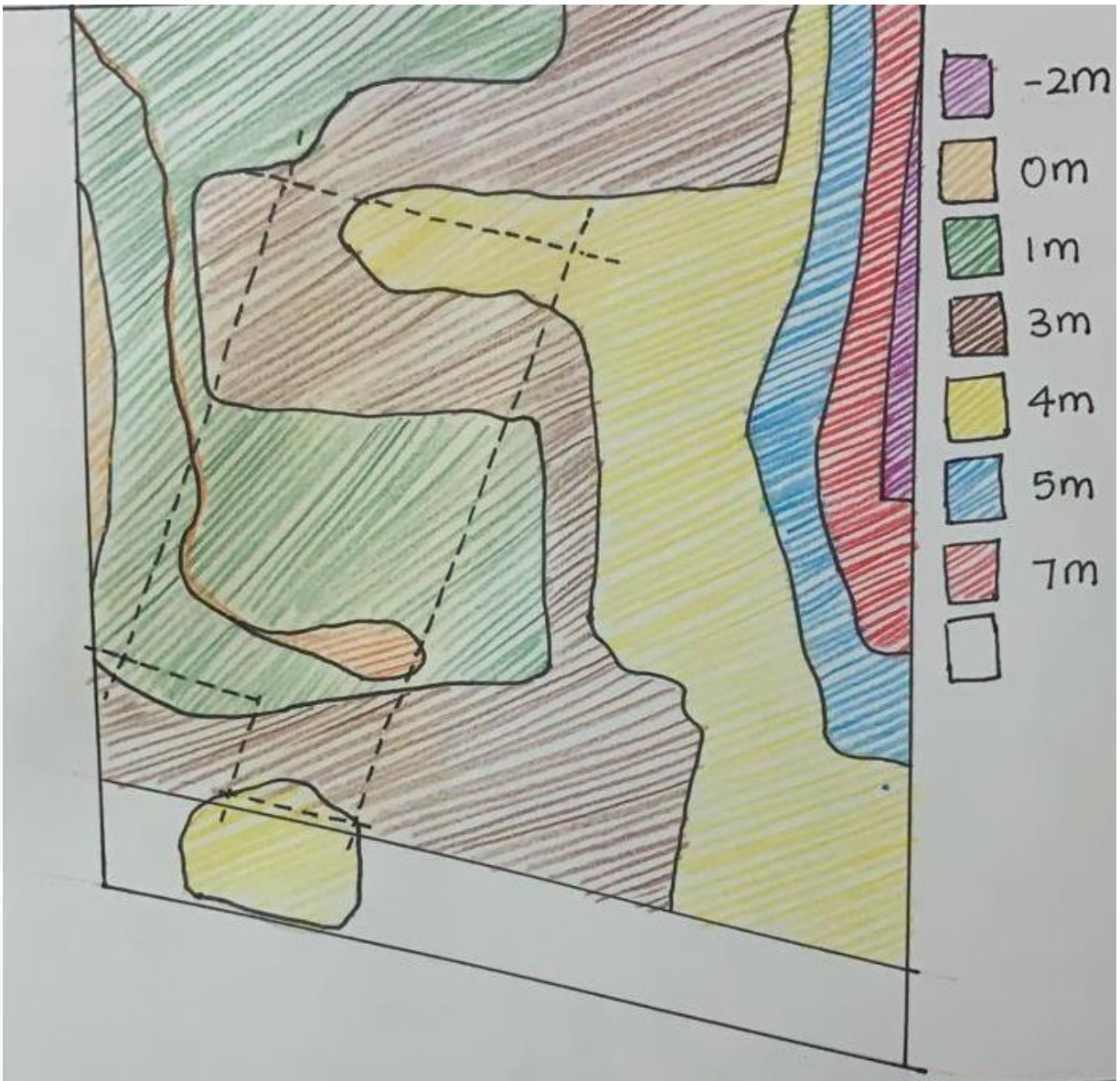


Fig 5.7.a. Contour map

- 5.8. Music school near the site
- Swarnambhoomi music school (31.7km)
 - K4c music school (27.6km)
 - KM music conservatory (13.3km)
 - Pavo school of music (13.3km)
 - Chennai music school (31km)
 - Seven notes music school (20km)

- VM music academy (35km)
- TamilNadu Government Music College (20km)
- Kalakshetra (15km)
- Chennai School of Music Therapy (15km)
- Lyra school of music (10km)

5.9. Other college near the site:

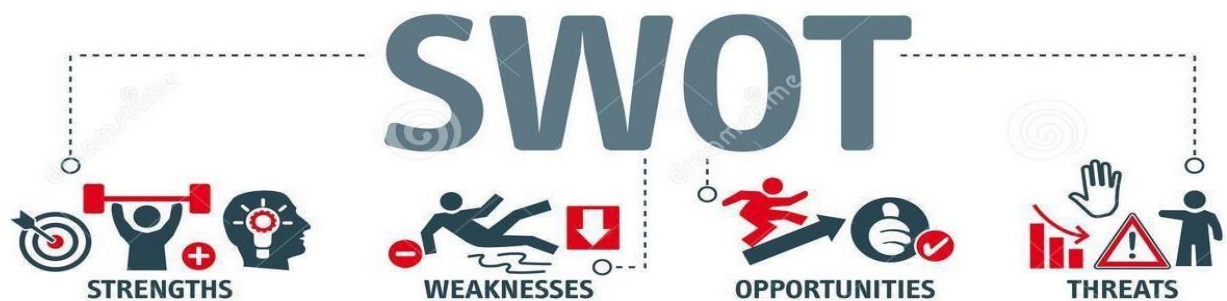
- Sathyabama institute of science and technology
- Maritime college
- St Joseph engineering college
- NIFT
- Jeppiyar college
- Davinci college
- Jain college
- Mohamed sathak college
- Hindusthan college

5.10. Recreational spaces near the site:

- VGP kingdom
- VGP marine world
- Feathers badminton academy
- Click art museum
- ECR beach
- Bollineni hillside park
- GP janaharan marriage hall

- Kart attack
- Snow kingdom
- ISKCON
- Newry arcade
- Vivira mall
- Marina mall
- MGM dizzee world
- Maayajal

5.11. Swot analysis



Strength of the site

The site is immediate adjacent to main road which serves main access view towards the site

-The site has good view point.

-There is no noisy sound near the site because the road is not too traffic to produce any noise.

-since the site is surrounded by open spaces it is very convenient to provide views from the site.

-people from any transport can easily access to the site.

-properly laid roads

Weakness of the site

-water stagnates at site so have to design according to the stagnation.

-The site is at the less marshy land and has less soil bearing capacity so the foundations has to be strong

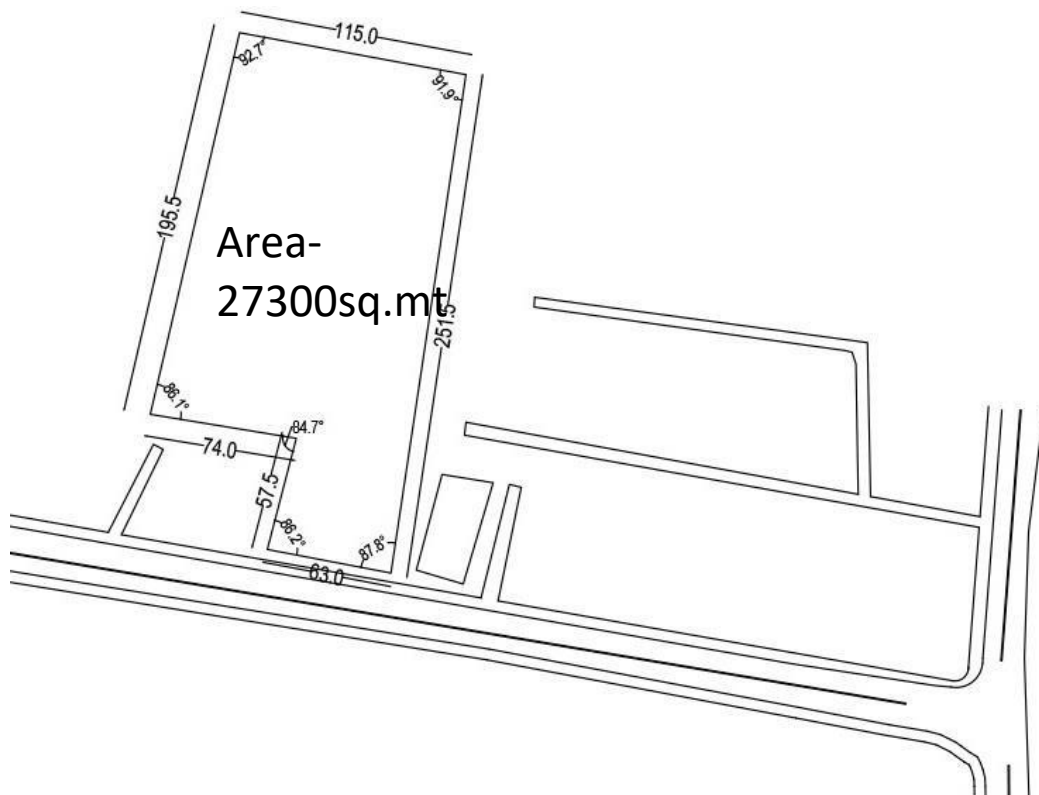
-the site is at the main road so deigning music school acoustics has to be well designed.

Opportunities

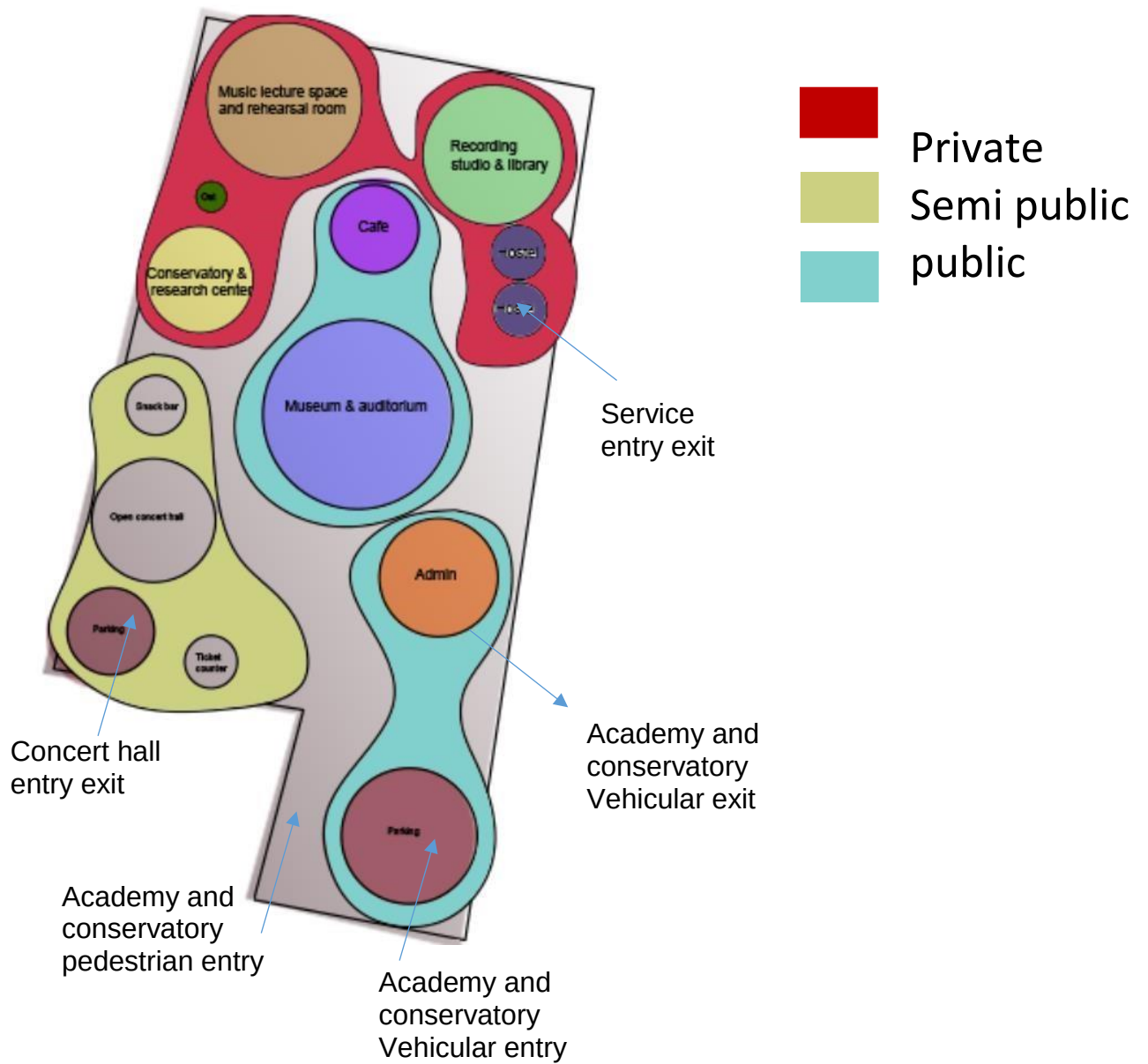
-Since the site is located near

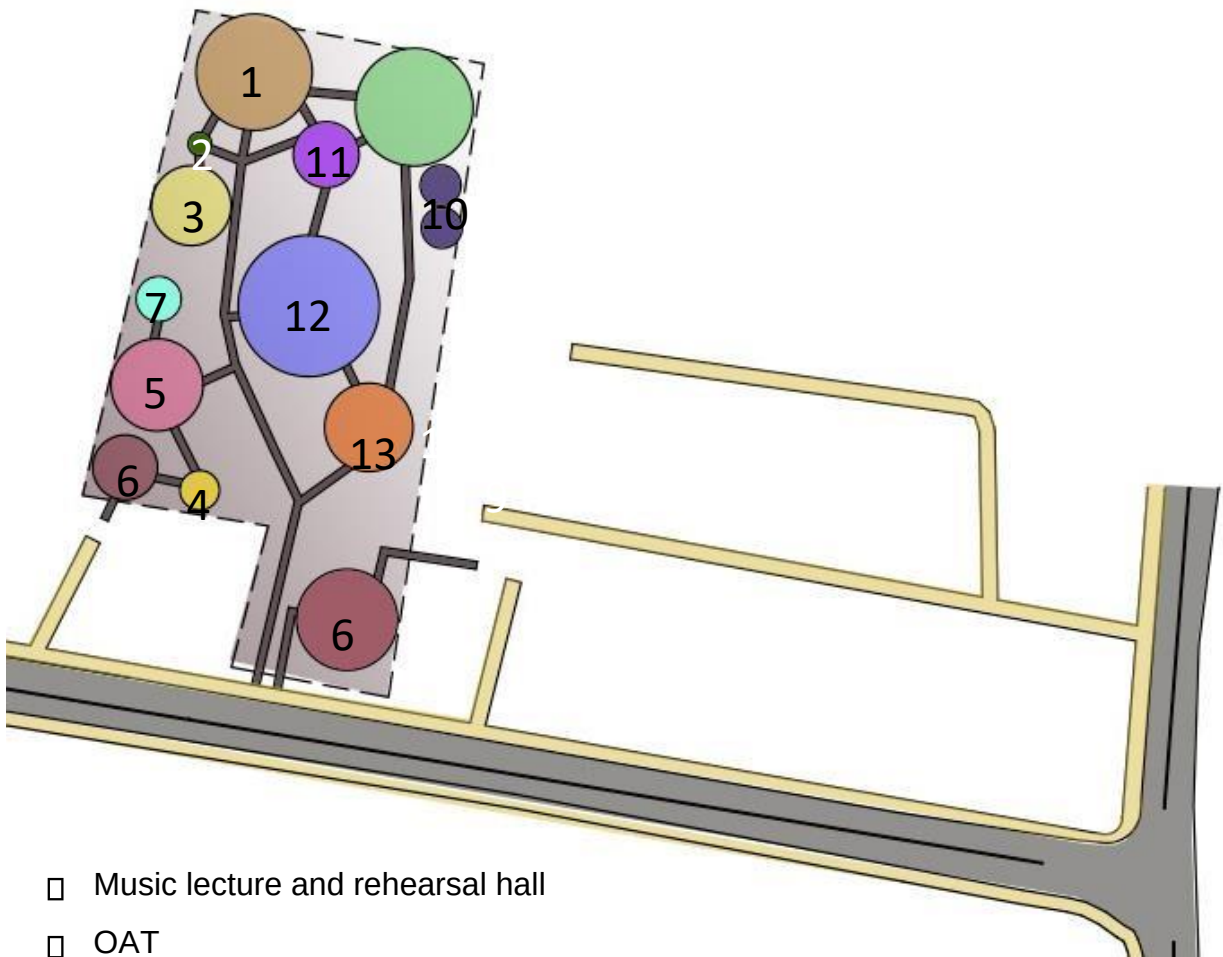
East coastal road people who visit beach can also visit the site for concerts -This site is surrounded by dense vegetation and it can used for many purposes.

-the site at the developing area so in future it will be very useful.



6. ZONING





- Music lecture and rehearsal hall
- OAT
- Conservatory and research center

□

Snack bar

- Open concert space
- Parking for open concert space (public)
- Ticket counter
- Administration
- Hostel
- Recording studio and library
- Café
- Museum
- Parking for academy and conservatory users (private and semi private)

- Other recreational area

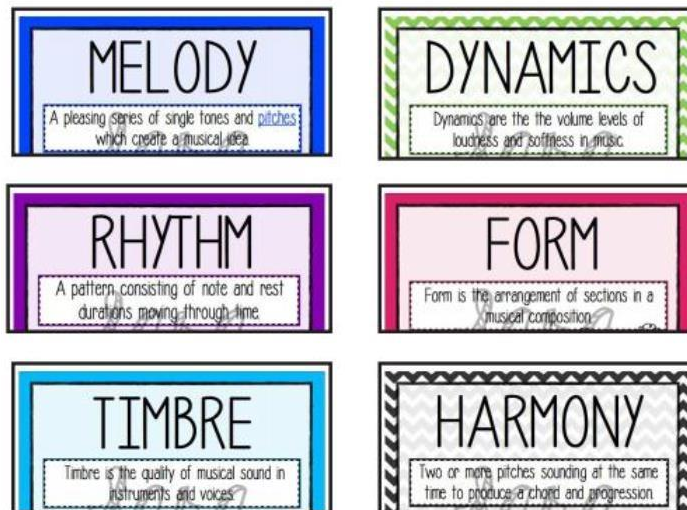
Music lecture halls and rehearsal rooms are placed at the rear part of the site so that the musicians , students will not get disturbed from the roadside noises . From road to lecture hall the road is away by 200m.

- OAT is between the Hostel and lecture hall so this space can used for recreational purposes. Around 4pm this OAT serves as a breezy space for evening programme
- Conservatory and research center is at the north west to the site it is semi public space used for conserving and researching instruments once it is done it is taken to the museum for viewing
- Snack bar is for the concert hall visitors
- Open concert space is at the south west of the site it is going to cover by ETFE panel for open concert space separate entry has given to avoid the disturbances
- Parking is at the south west to the site. Audience for concerts can enter through the service road and can park their vehicle
- Ticket counter is vert next to the parking
- Administration is semi-public space which is for the offices and this leads to the auditorium
- Hostel is for both the genders is next to the canteen
- Recording studio is also needs very silent space and even library needs silent atmosphere
- Cafe
- Open concert space is at the south west of the site it is going to cover by ETFE panel for open concert space separate entry has given to avoid the disturbances

7. CONCEPT (MUSI-TECTURE)

The conceptual idea for the music conservatory is fusing music in architecture with music elements. In music there are some patterns seen in the music pieces

- Music has various elements and they are
 - Harmony
 - Rhythm & melody
 - Tone
 - Dynamics
 - Musical genres
 - Texture



- The **harmony** is in the every musical note which adds feelings in every musical piece and it enhances the music.
- The **tone** color is different types of a sound by vocal or instruments or percussions
- The **Texture** is the combination of various sounds which includes solo vocals , group of them and polyphonic sound are the part of this element

- The **Dynamic** shows the volume of the sounds either it is loud, very loud, soft , very soft is in this element.

7.1. Music fusing architecture

7.1.1. *Color with harmony*

In architecture colors are used to enhance the space in the same way harmony is used to enhance the music. the different gradients in colors & each effects differently while in music there is harsh & soft notes which effect the same way to human.



Fig 7.1.1. Color with harmony

Architectural styles with musical genres. The style evolved from the history since now the music styles also evolves gradually with time and in both of arts

7.1.2. *Form with rhythm & melody*

Form are made of two basic elements space & void and from this elements the pattern is created. In music the rhythm & melody are such objects which are made of interval & beat and they also create patterns

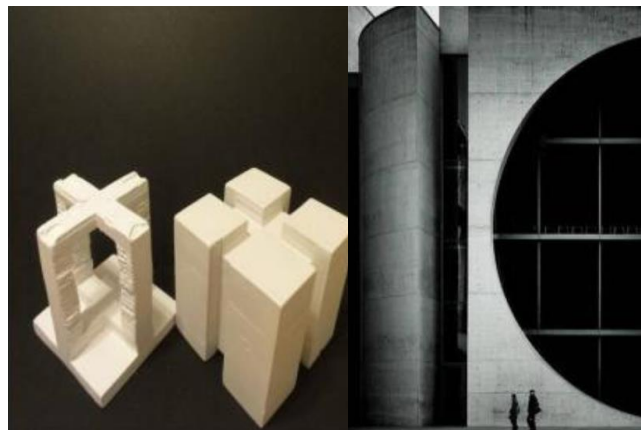


Fig 7.1.2. Form with rhythm and melody

7.1.3. Light & shadow with dynamics

Light and shadow are used in architecture to emphasise the space. More the light and shadow can give a specificity in musical sense dynamics does the same. Dynamics does the same and emphasise the up and down



Fig 7.1.3. Light and shadow dynamics

7.1.4. Material with tone

Material are used in architecture as per their unique effect on user as in music there is a tone color which means the sound of different musical elements which are used as

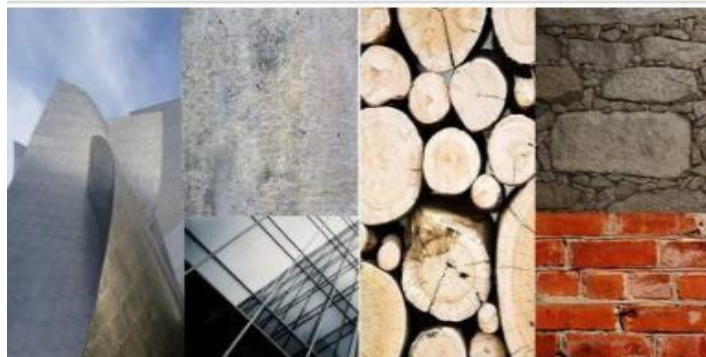
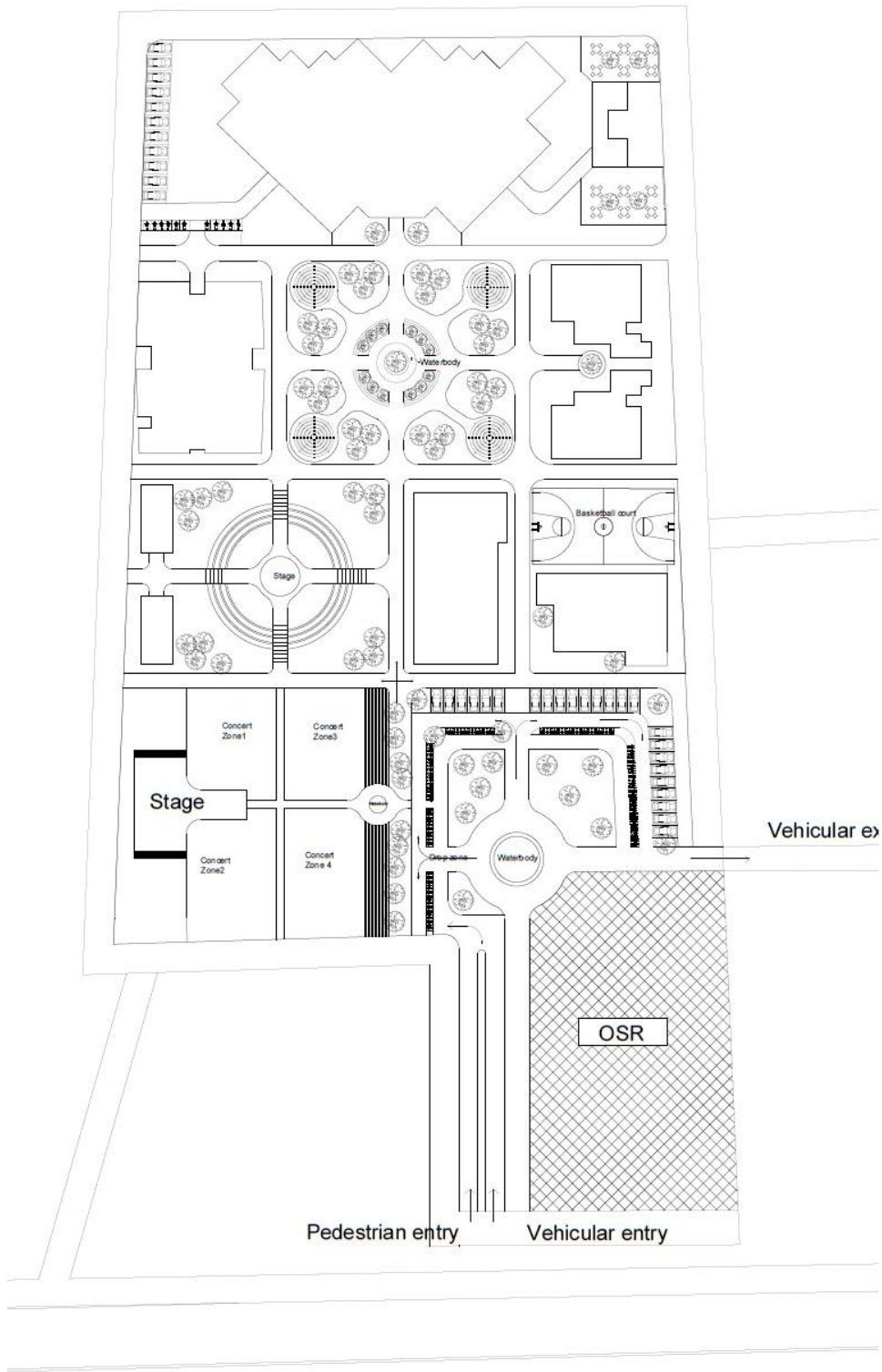


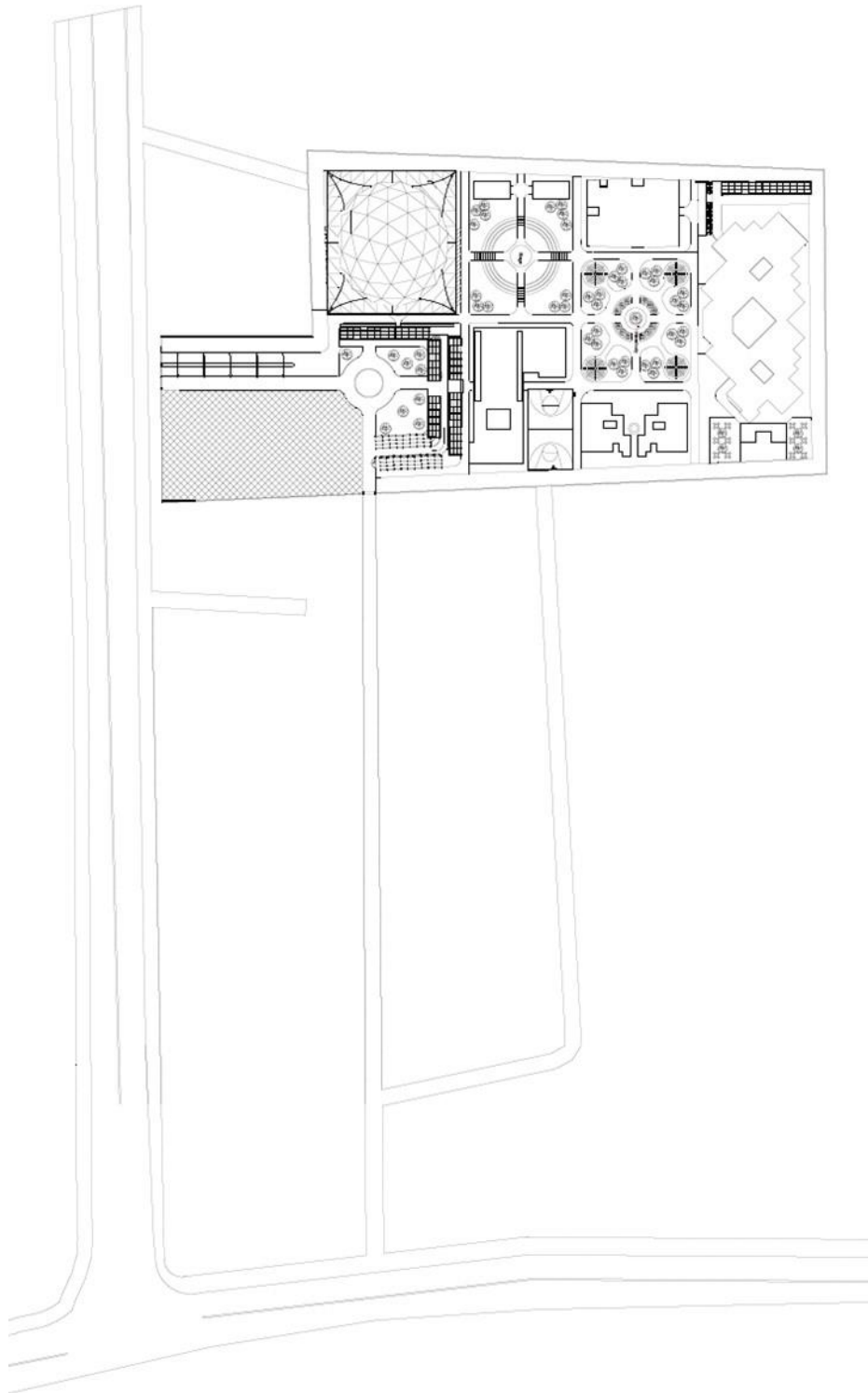
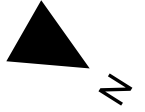
Fig 7.1.4. Material tone

8. MASTER PLAN

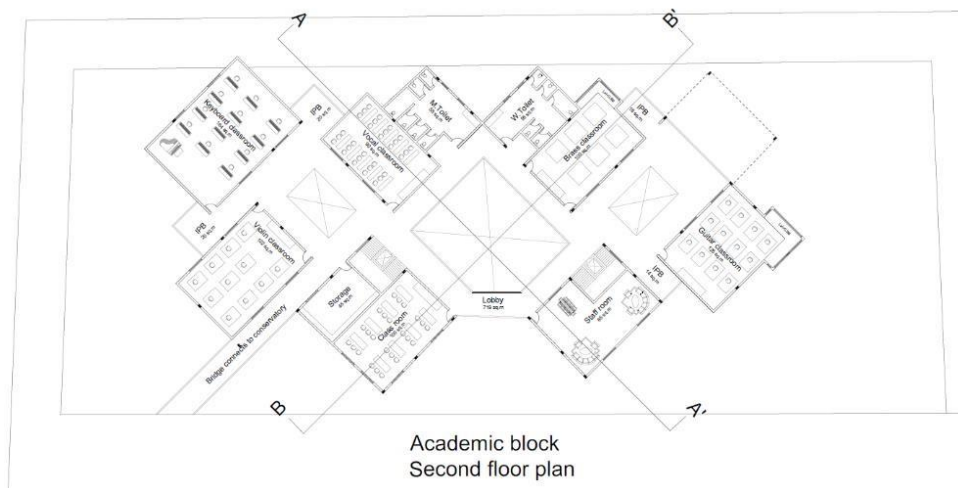
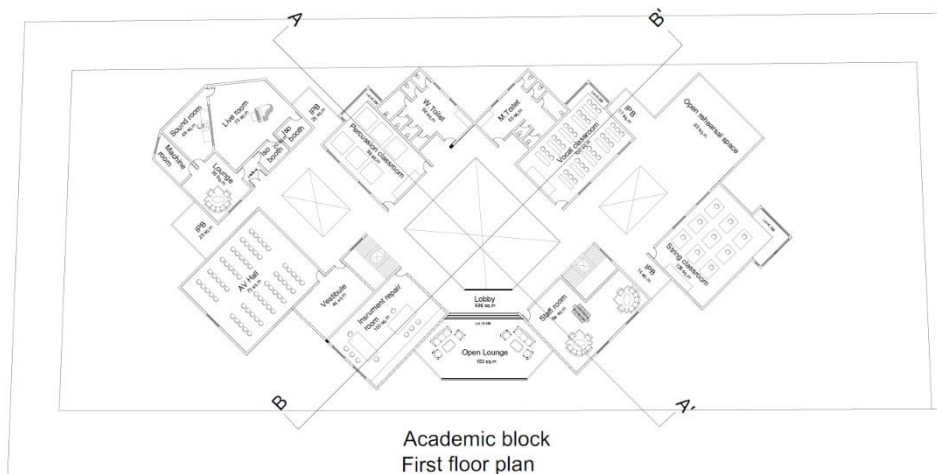
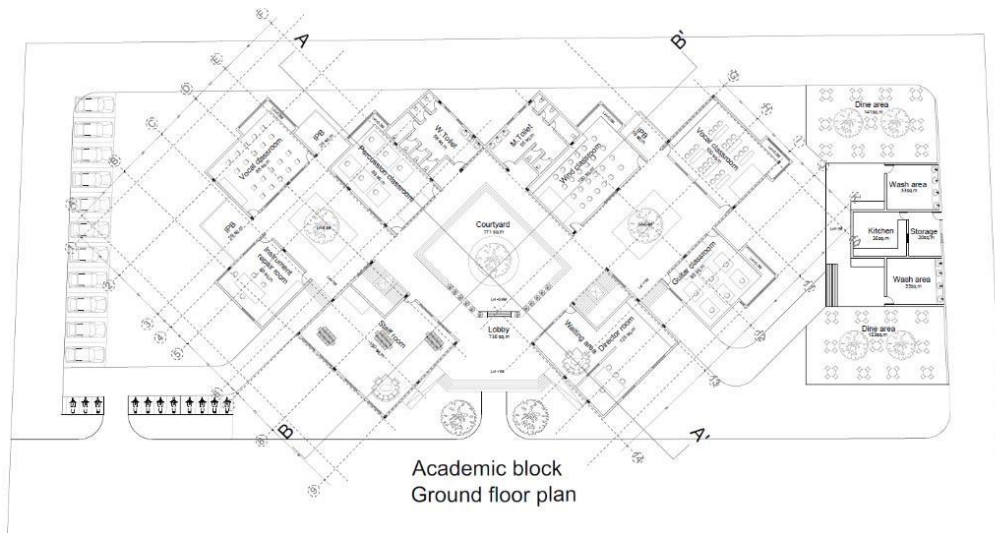
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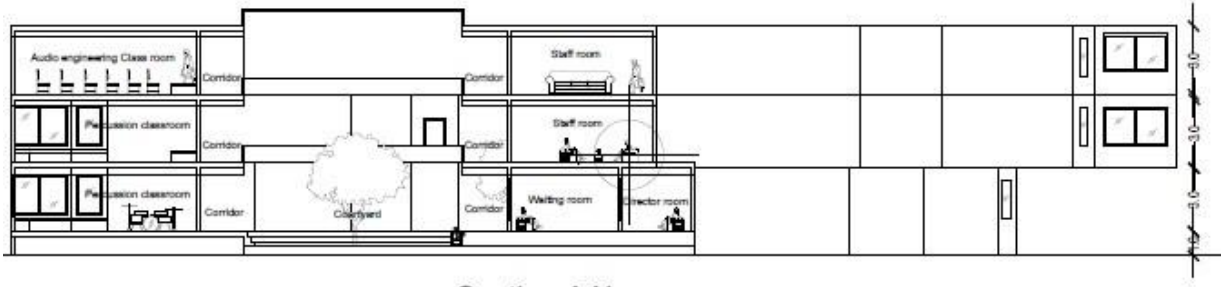


8.1. Site plan

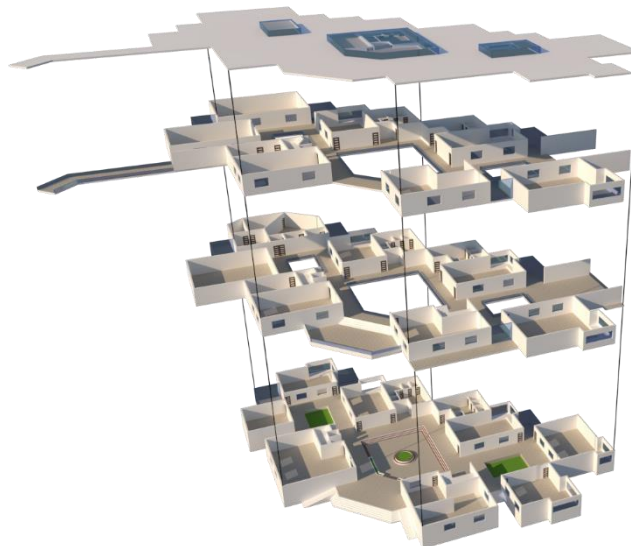
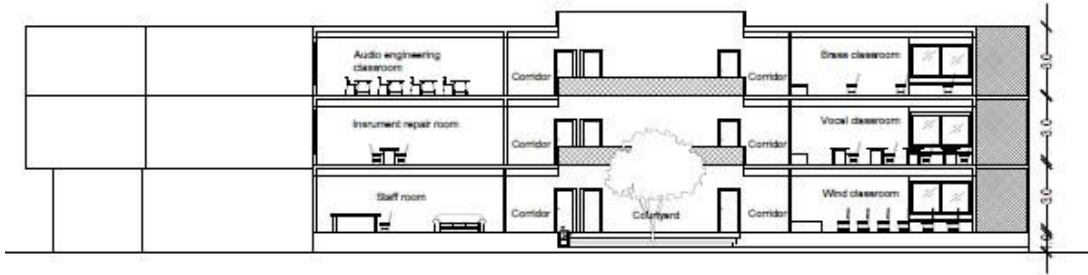


8.2. Academic block

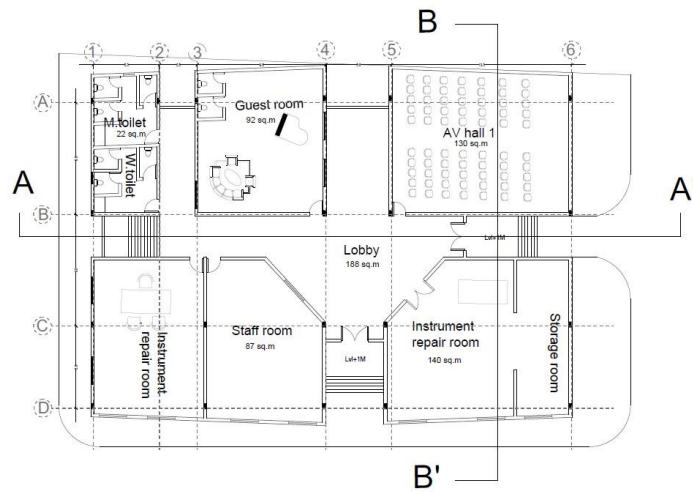




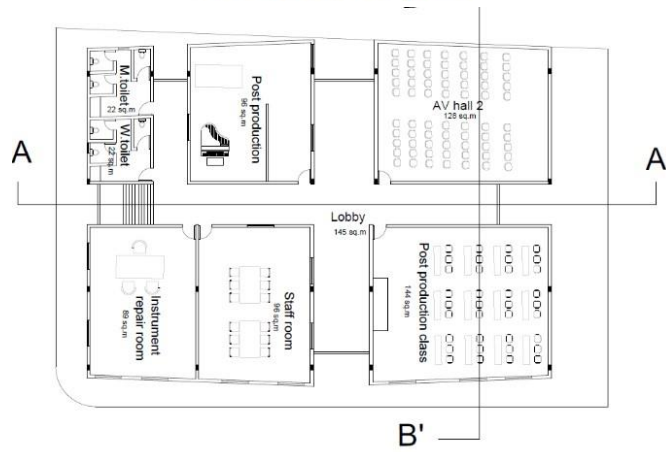
Section AA'
Scale 1:100



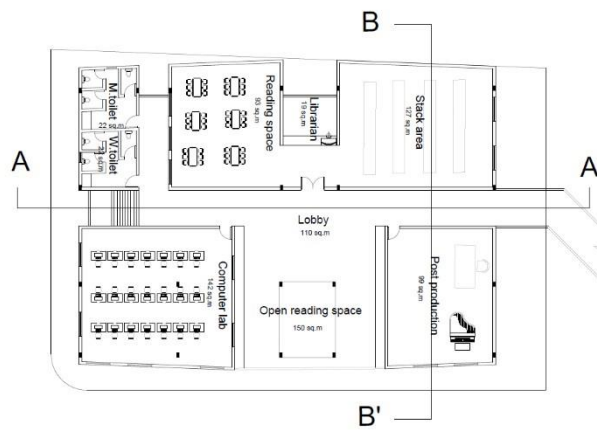
8.3. Conservatory block:



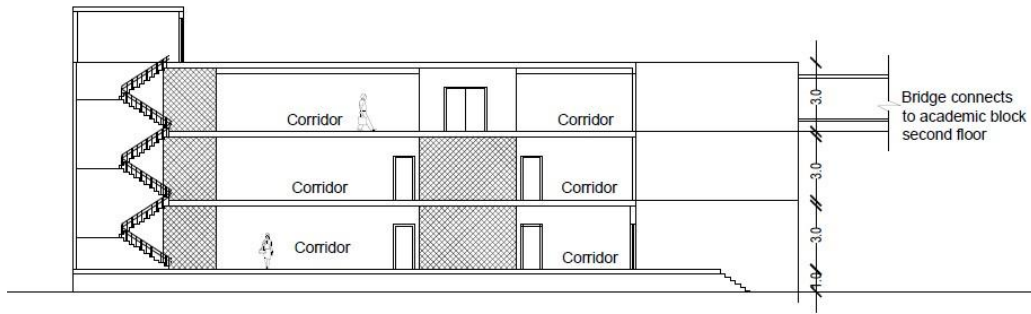
Conservatory block
Ground floor plan



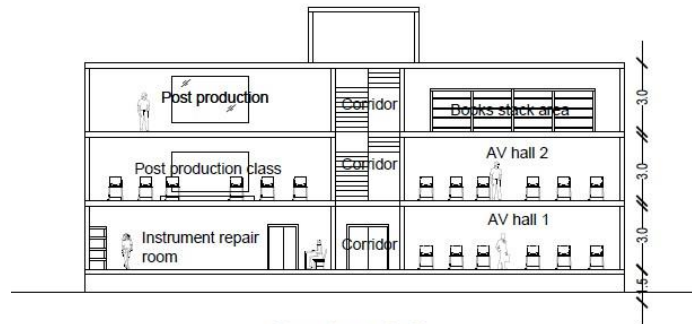
Conservatory block
First floor plan



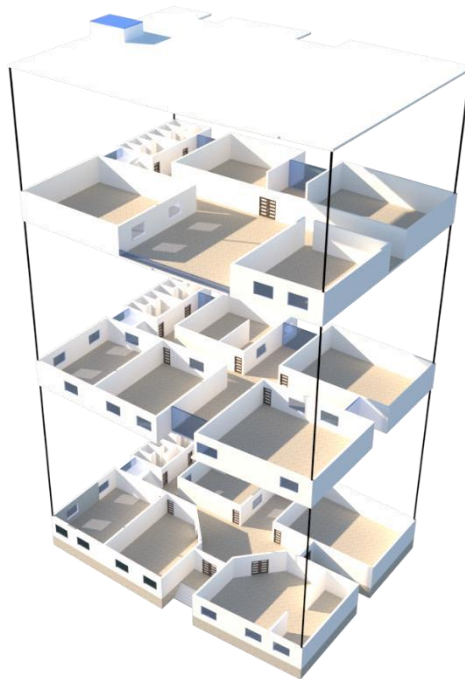
Conservatory block
Second floor plan



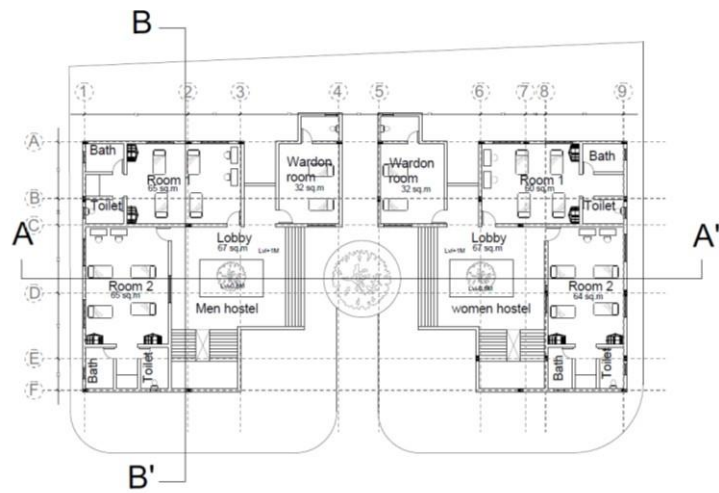
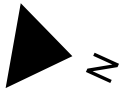
Section BB'
Scale 1:100



Section AA'
Scale 1:100

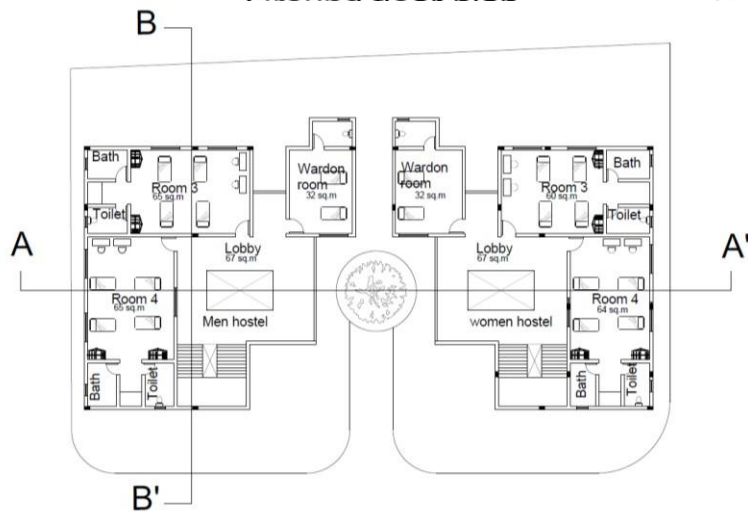


8.4. Hostel I



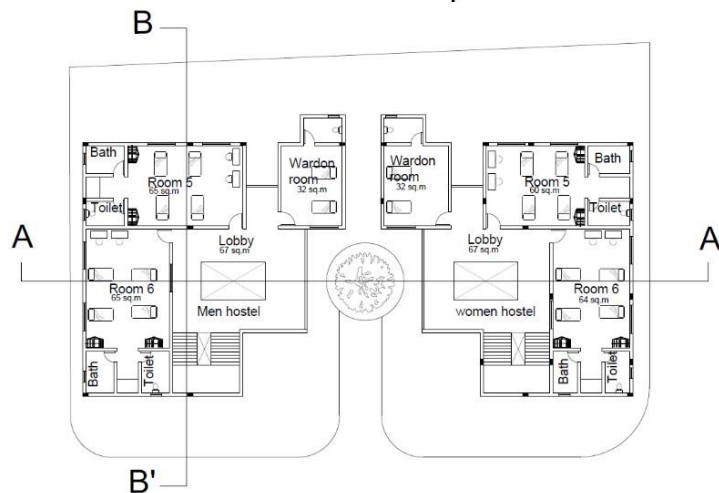
Hostel block

Ground floor plan



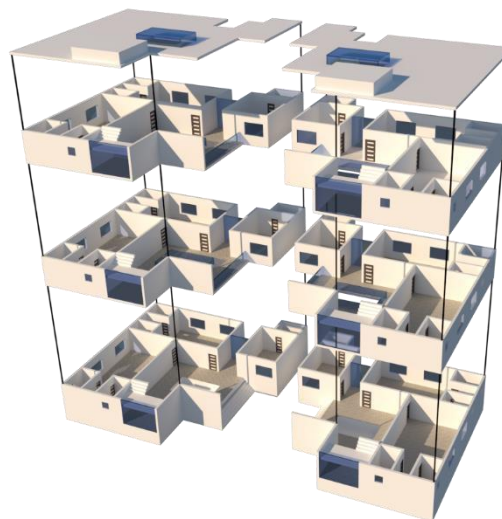
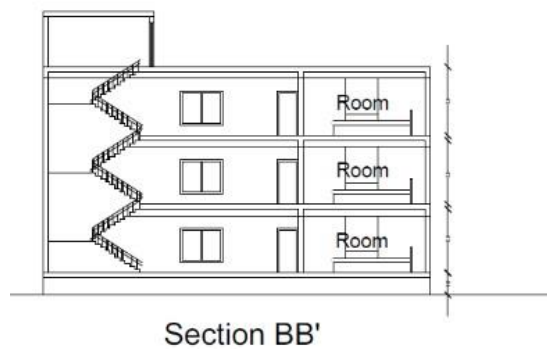
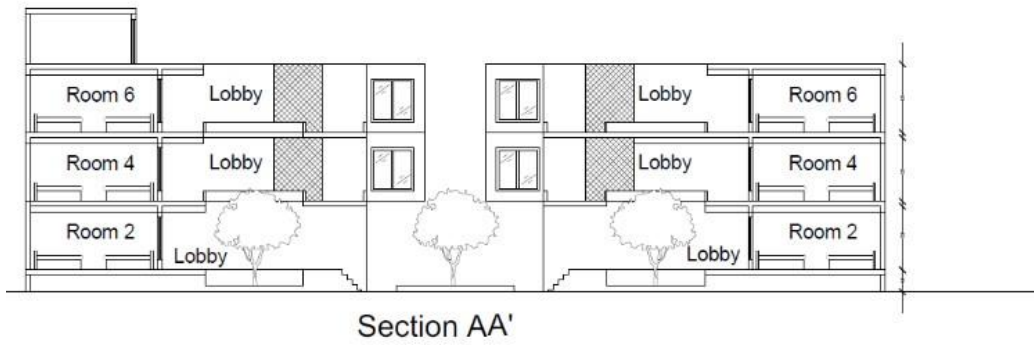
Hostel block
First floor plan

Act
Go t



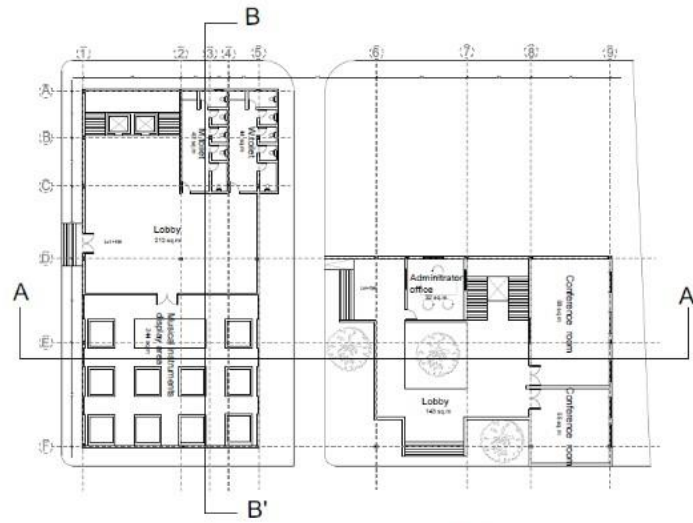
Hostel block
Second floor plan

Ac
Go

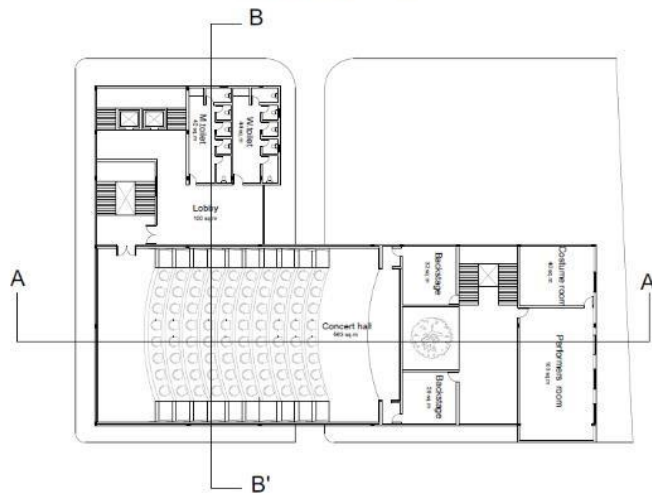


8.5. Museum and admin block

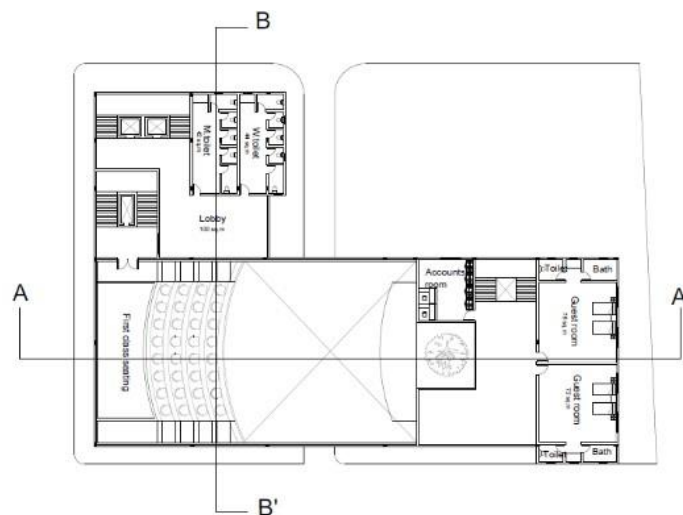
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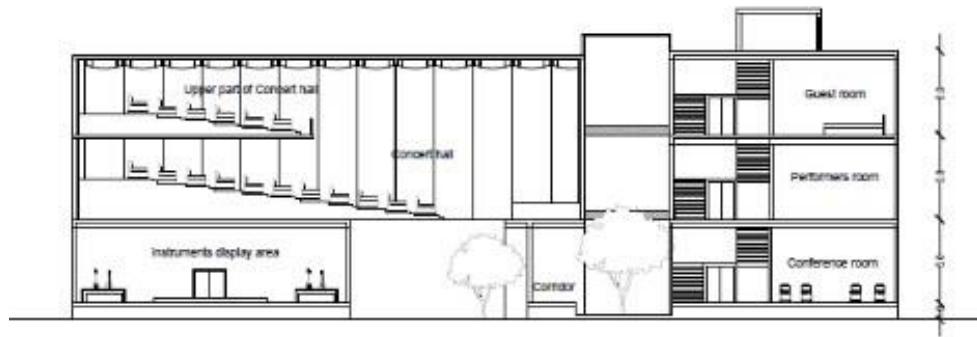
Museum and admin block
Ground floor plan



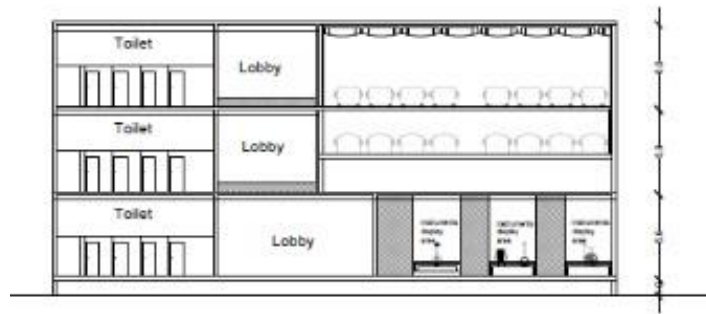
Concert hall block
First floor plan



Concert hall block
Second floor plan



Section AA'
Scale 1:100



Section BB'
Scale 1:100

