



THE EXPERIMENT USES THREE DIFFERENT BATS WITH UNIQUE CHARACTERS.

SOUND ANALYSIS:

BATS USING FREQUENCY MODULATED (FM) SIGNALS DURATION AS THEY APPROACH AN OBJECT, THUS CONTINUALLY AVOIDING AN OVERLAP BETWEEN OUTGOING CRY AND RETURNING ECHO. THE TIME OR SPACE IN WHICH SUCH AN OVERLAP WOULD OCCUR, HAS BEEN REFERRED TO AS THE PULSE-ECHO OVERLAP ZONE OR THE INNER WINDOW.

INNER WINDOW:

INNER WINDOW IS AN INDICATOR OF THE SHORTEST RANGE AT WHICH A BAT IS SEARCHING FOR PREY. WE USED THE BATS' PULSE DURATION TO CALCULATE THE SIZE OF THE INNER WINDOW AS

$$1/2 \times \text{SIGNAL DURATION} \times \text{SPEED OF SOUND}$$

THAT IS THE MINIMUM TARGET DISTANCE IN FRONT OF THE BAT WHERE THERE IS JUST NO OVERLAP BETWEEN OUTGOING PULSE AND RETURNING TARGET ECHO.

GENERAL BEHAVIOUR :

THREE TYPES OF BEHAVIOUR WERE POSSIBLE IN EACH TRIAL: (1)INSPECTION OF THE NET, (2)CRASHING INTO THE NET AND (3)FLYING THROUGH THE HOLE.A BAT MIGHT SHOW ALL THREE IN ONE TRIAL, THAT IS FIRST CRASH INTO THE NET, THEN MAKE AN INSPECTION OF THE NET, AND FINALLY FLY THROUGH THE OPENING. WE WOULD THEN RECORD A COUNT OF ONE FOR FINDING THE HOLE, BUT ALSO COUNTS FOR EACH CRASH AND INSPECTION.

BATS V/S HUMAN BEHAVIOUR:

SIMILARITIES
IN CHARACTER



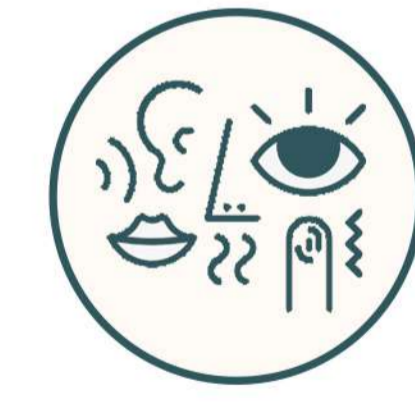
SPATIAL MEMORY CREATING A BETTER UNDERSTANDING OF THE SPATIAL ORIENTATION.



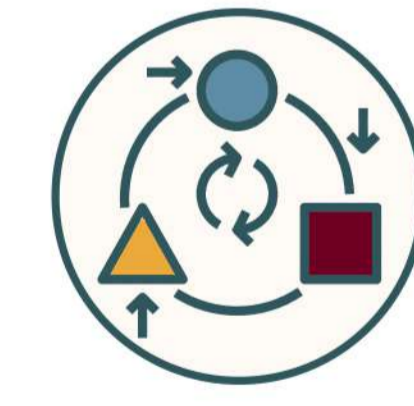
ECHOLOCATION TO REPRESENT SPACE WITH HIGH RESOLUTION.



INSPECTION OF UNKNOWN SPACES TO IDENTIFY AND LOCATE THE LANDMARK WHICH HELPS THEM ORIENT THROUGH SPACES.



USE OF SENSORY INFORMATION AS A GUIDE HELPS ONE SEE THE SPACE AROUND THEM.

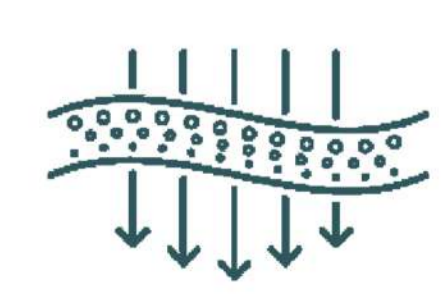


ABILITY TO OVERCOME OBSTACLES TO ADAPT INTO VARIOUS SITUATION.

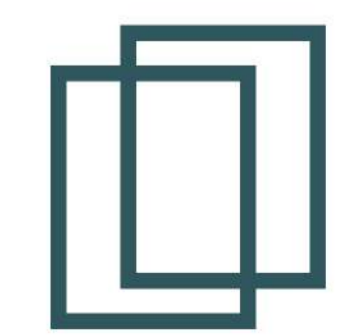


THUS ECHO AND OUTGOING CRY SHOULD NOT COLLIDE

MATERIAL:



SOUND ABSORBING MATERIALS CAN BE USED FOR BETTER ACOUSTICS AND TO CONTROL ECHO GENERATION AS PER THE DESIGN



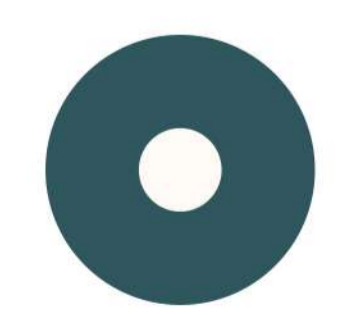
BRITTLE MATERIALS PRODUCE AN AMPLE AMOUNT OF ECHO.THE MATERIAL CAN BE USED WHERE MORE ECHO NEEDS TO BE PROVIDED.



WOOD FOR BETTER ACOUSTICS



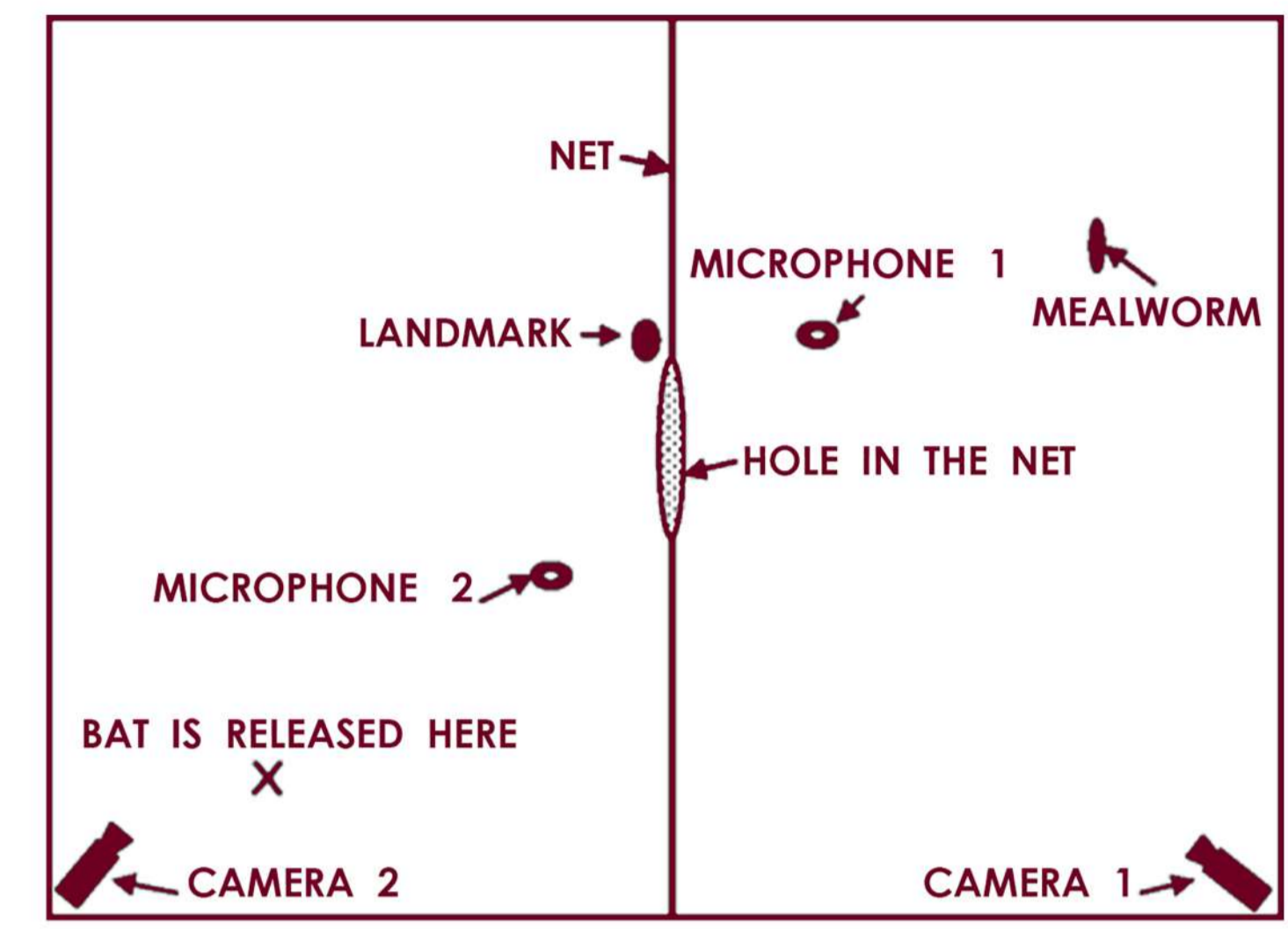
BRITTLE MATERIALS PRODUCE AN AMPLE AMOUNT OF ECHO.STEEL CAN BE USED WHERE MORE ECHO NEEDS TO BE PROVIDED.



THE INNER WINDOW SHOULD BE FREE OF SOUND EMITTING BODIES.

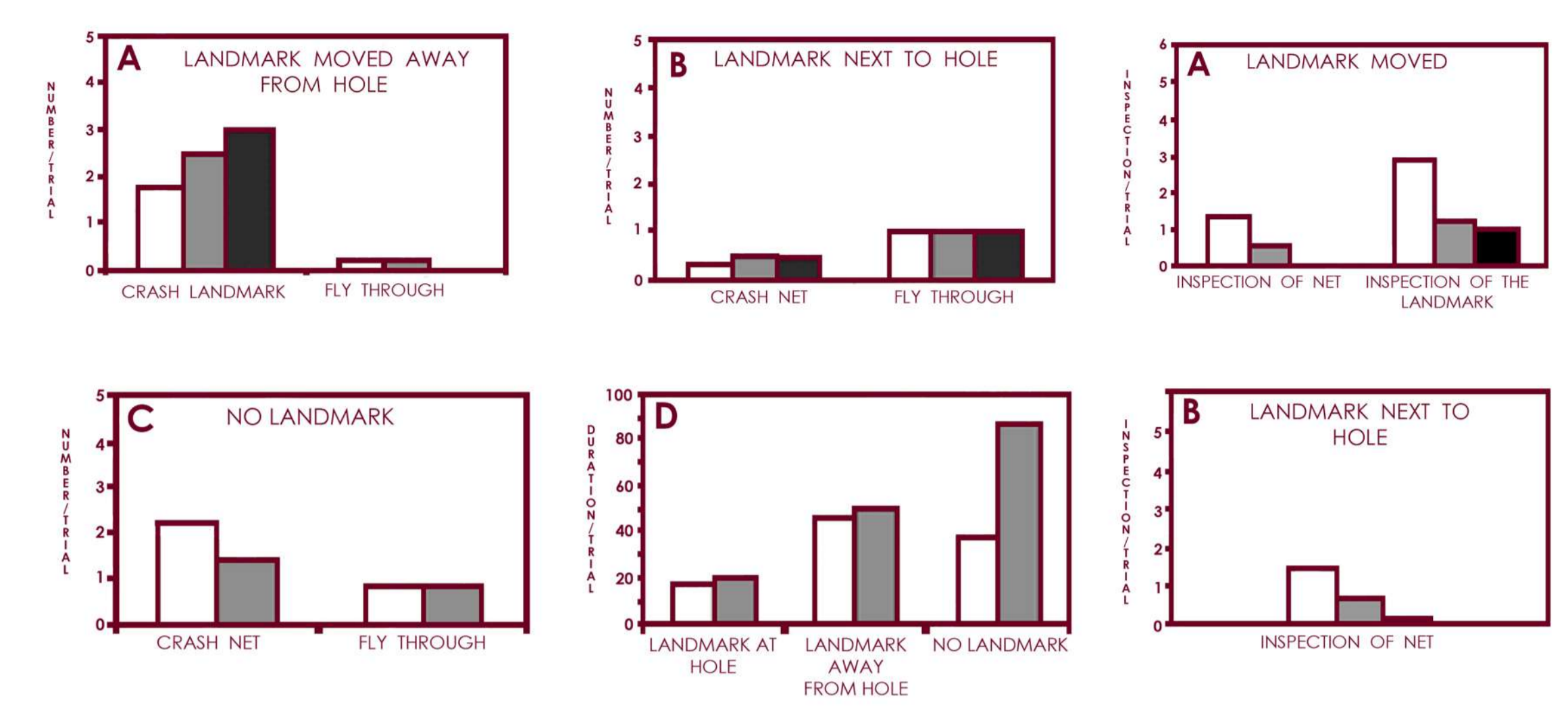
EXPERIMENTAL SETUP:

DURING EXPERIMENTS THE FLIGHT ROOM WAS ILLUMINATED WITH LOW LEVEL (LESS THAT 0.05LUX) LONG-WAVELENGTH, PRECLUDING THE BATS FROM USING VISION TO PERFORM THE TASK. THE ROOM WAS DIVIDED BY A MIST NETMADE OF 0.1MM DIAMETER THREAD WITH A HOLE WITH A DIAMETER OF 35CM IN NET.



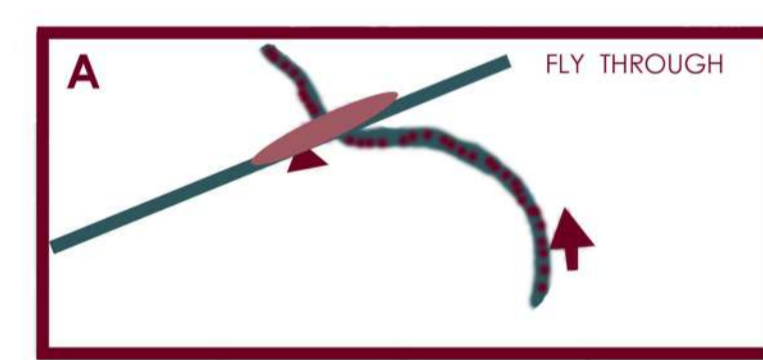
THE BATS WERE TRAINED TO FLY THROUGH THIS HOLE TO GAIN ACCESS TO A FOOD ON THE OTHER SIDE. THE POSITION OF THE NET OPENING WAS ADJACENT TO A LANDMARK

BEHAVIOURAL DATA:

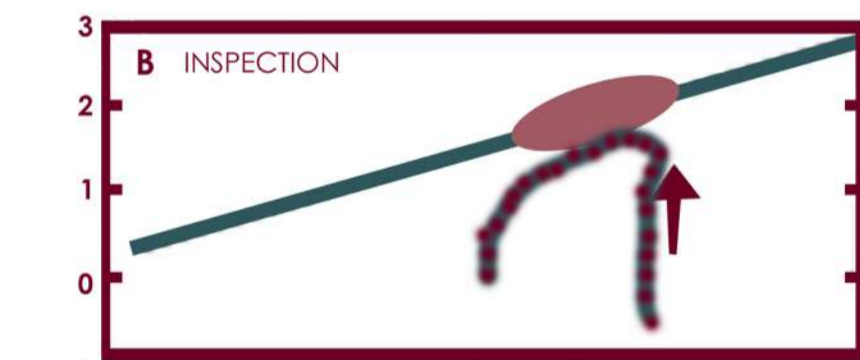


WITH THE LANDMARK ADJACENT TO THE NET OPENING, THE BATS QUICKLY FOUND THE HOLE. IN THE SECOND EXPERIMENT, BATS WERE TESTED IN CONTROL TRIALS IN WHICH THE LANDMARK WAS MOVED INDEPENDENTLY OF THE HOLE, BREAKING THE ESTABLISHED SPATIAL RELATIONSHIP BETWEEN THE TWO. IN CONTROL TRIALS THE BATS REPEATEDLY CRASHED INTO THE NET NEXT TO THE LANDMARK, AND INSPECTED THE AREA AROUND IT. IN THE FINAL EXPERIMENT, THE LANDMARK WAS REMOVED ALL TOGETHER FROM THE SET-UP. HERE THE BATS SPENT MORE TIME PER TRIAL SEARCHING FOR THE NET OPENING WITH AN INCREASED NUMBER OF INSPECTIONS AS WELL AS CRASHES INTO THE NET. HOWEVER, OVER THE COURSE OF A TEST DAY WITHOUT LANDMARK, BATS REDUCED THE TIME SPENT PER TRIAL AND FOCUSED INSPECTIONS AND CRASHES AROUND THE HOLE.

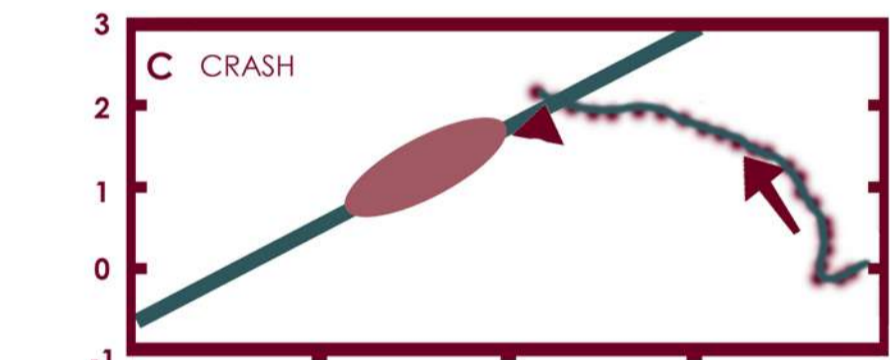
THE BEHAVIOURAL DATA SHOW FOR THE FIRST TIME THAT THE ECHOLOCATING BAT CAN LEARN TO RELY ON AN ACOUSTIC LANDMARK TO GUIDE SPATIAL ORIENTATION.



FLY THROUGH



INSPECTION



CRASH



USE OF ACOUSTIC LANDMARK FOR SPATIAL ORIENTATION



SENSORY INFORMATION TO BUILD REPRESENTATION OF SPACE IS IMPORTANT



RESPECT THE UNIQUENESS OF EACH INDIVIDUAL

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2 CASE STUDY: SCHOOL FOR BLIND

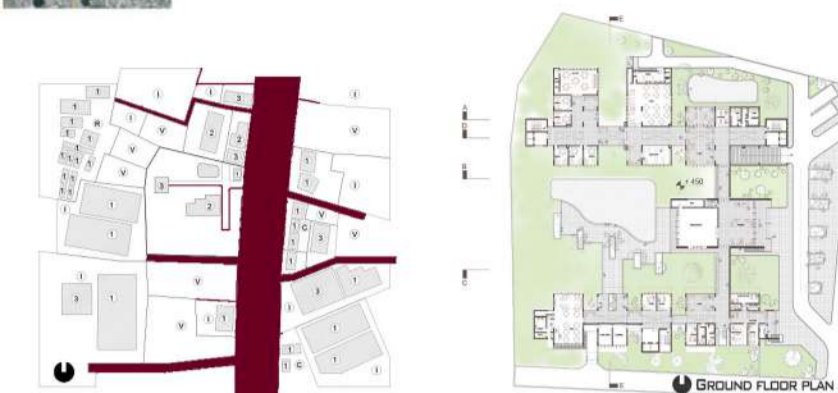


ABC SITE
2.5 KM NORTH OF JOYDEVPUR
AREA: 1.7 ACRE (7000 SQ.M)
FAR : 5.5 (18500 SQ.M)
BUILT AREA : 12000 SQ.M
MGC : 50% (3500 SQ.M)
BUILT COVERAGE : 2800 SQ.M

JOYDEVPUR CIRCLE
GAZIPUR

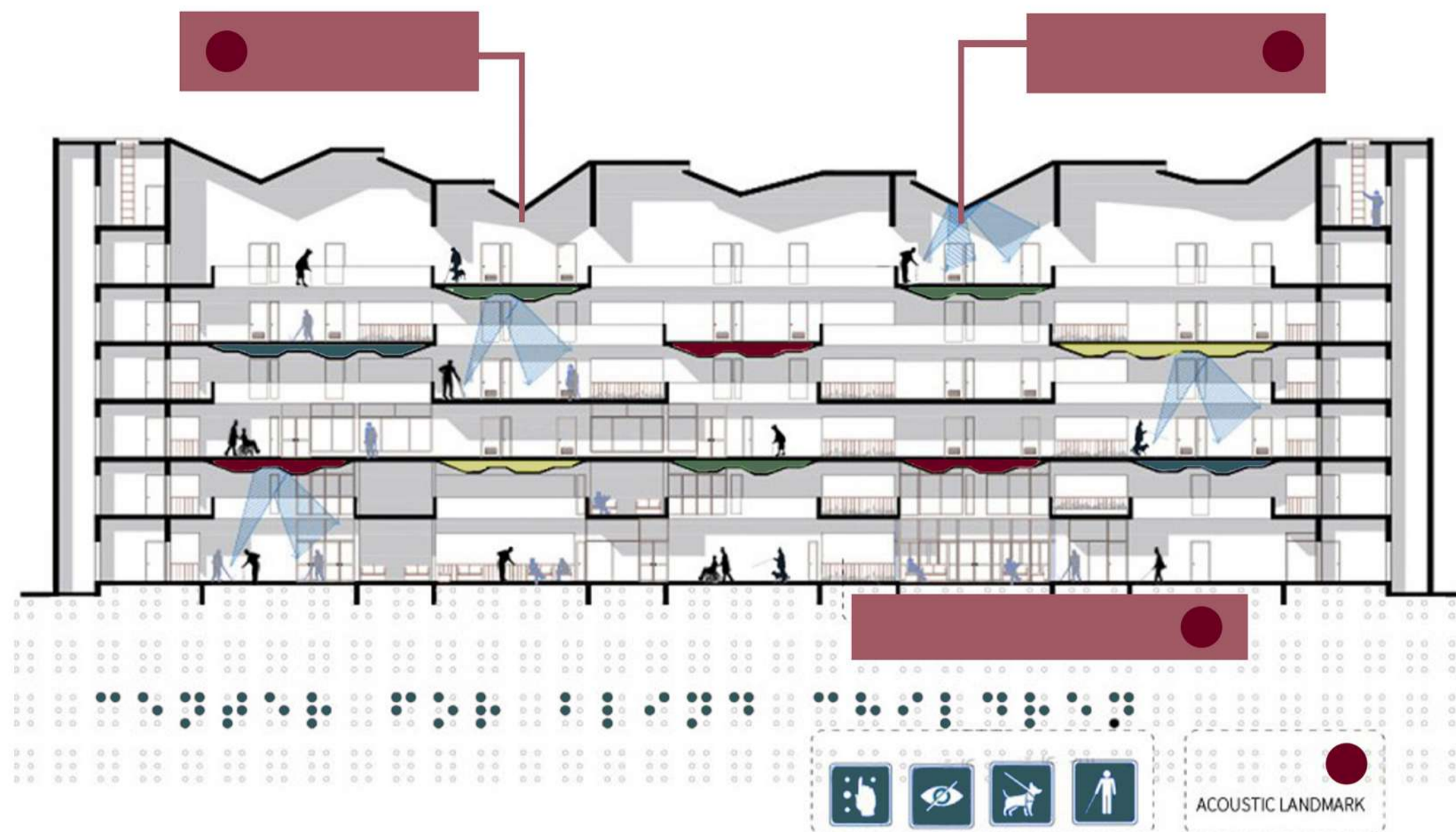
ENVIRONMENT APPROPRIATE FOR THE BLIND :

SOME CONSIDERS A 'PROTECTIVE' ENVIRONMENT IS APPROPRIATE FOR THE BLIND AND PARTIALLY SIGHTED PEOPLE. SOME CONSIDERS A 'PROTECTIVE' ENVIRONMENT WHERE THE ARCHITECT DESIGN AN ARTIFICIAL ENVIRONMENT COMPLETELY TAILORED TO THE SENSORY NEEDS OF THE BLIND PERSON ALTOGETHER. ANOTHER SET OF DESIGNERS ROPOSE THAT THE SUITABLE ENVIRONMENT IS PERHAPS ONE THAT IS 'PROGRESSIVE' WHICH SERVES TO INTEGRATE THE BLIND MINORITY INTO THE SLIGHTED MAJORITY.



THE PROGRESSIVE METHOD IS APPLIED IN THIS THESIS PROJECT. SUCH ENVIRONMENTS ARE 'PROTECTIVE' WITHIN THE CENTRE AND 'HOSTILE' TOWARDS THE EXTERIOR WHEN INTRODUCING THE INDIVIDUAL TO THE SIGHTED ENVIRONMENT

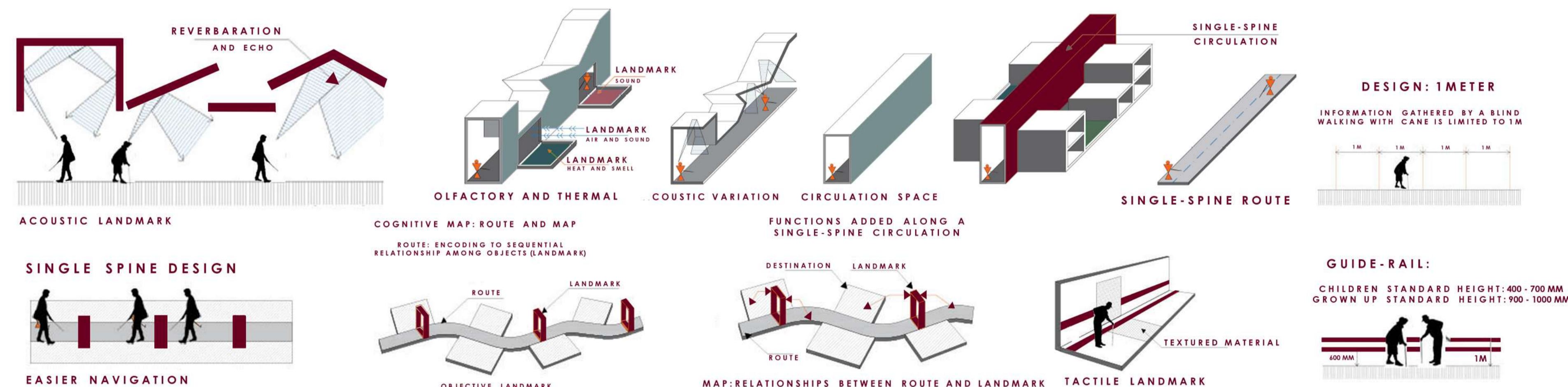
CENTRE FOR BLIND CHILDREN NSU 1



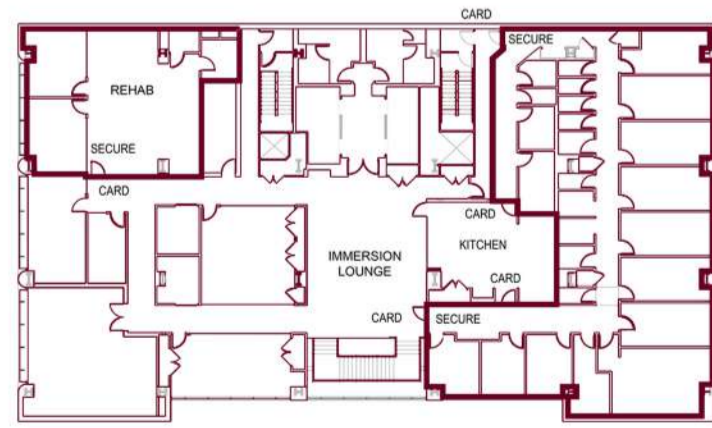
THE INSTITUTION LOCATED IN GAZIPUR CONSISTS OF EDUCATIONAL, TRAINING AND RESIDENTIAL FACILITIES, AIMS TO PROVIDE A SUPPORT ETWORK FOR THE VISUALLY IMPAIRED PERSON. THE PURPOSE IS TO EMPOWER THEM SO THAT THEY CAN LEAD INDEPENDENT LIVES THROUGH THE PROVISION OF EDUCATION, TRAINING AND EMPLOYMENT SERVICES. THROUGH THE EXPLORATIONOF SENSORY ARCHITECTURE, IT IS EVIDENT THAT VISUALLY IMPAIRED USERS BENEFIT FROM POSITIVELY FROM ARCHITECTURE THAT COMMUNICATES WITH THEM THROUGH THEIR REMAINING FUCTIONAL SENSES. HENCE ACOUSTIC ARCHITECTURE ALONG WITH OLFACTORY HAS BEEN GIVEN PRIORITY IN THIS DESIGN. A CONCEPT OF SINGLE SPINE DESIGN AND COGNITIVE MAP IS USED IN THIS DESIGN. FOR A BLIND PERSON, THE DEVELOPMENT OF SPATIAL REPRESENTATIONS OCCURS THROUGH A COGNITIVE MAP CONSISTING OF ROUTES AND LANDMARKS. A BLIND PERSON DEFINES THIS DESTINATION POINT THROUGH MENTAL REPRESENTATION OF ROUTE, WHICH IS PHYSICALLY DEFINED BY VARIOUS ACOUSTICS,TACTILE AND OLFACTORY LANDMARKS. OTHER FACTORS LIKE CLIMATE AND ENVIRONMENTAL PARAMETERS, SITE FORCES SUCH AN EXISTING VEGETATION AND FLORA FWAUNA AS WELL AS THE FINDINGS FROM SITE ANALYSIS ARE TAKEN UNDER CONSIDERATION FOR THIS DESIGN.

A UNIT OF 1 METER AND A MODULE FOR DORM ROOMS HAS BEEN DEVELOPED ACCORDING TO THE ERGONOMICS OF BLIND CHILDREN AND USED THROUGHOUT THE DESIGN PROCESS.

SPECIAL FEATURES:



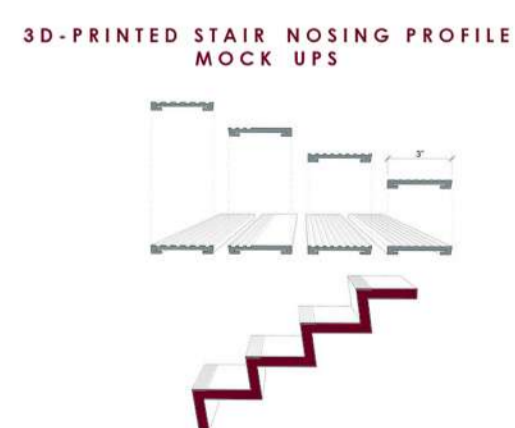
LIGHTHOUSE FOR BLIND AND VISUALLY IMPAIRED 2



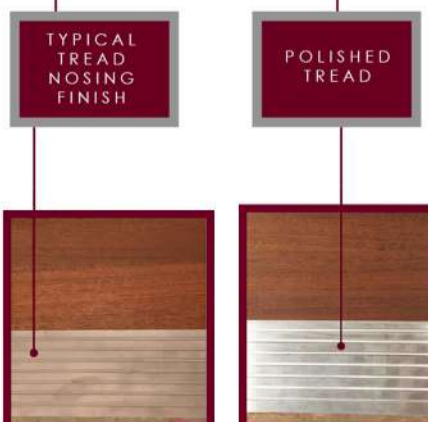
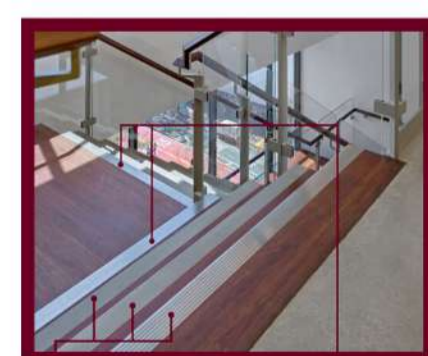
USE OF SIMPLE SPATIAL ORIENTATION MAKES THE SPACE LEGIBLE.

1.

TACTILE MARKING USING USING SIMPLE ELEMENTS.



WOOD IS USED AS FLOORING MATERIAL FOR STAIRS AS IT PRODUCED SOUND AS YOU WALK ON IT.



CORRIDOR OPENING TO A LARGER SPACE.

USE OF CONCRETE AND CARPET TO INTEGRATE BETWEEN SPACES.

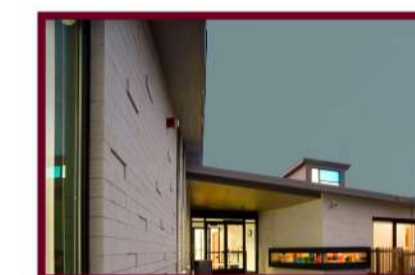
THE NOISE OF THE CANE IN THE CORRIDOR DIFFERS AS IT REACHES AND OPEN SPACE. THIS PRINCIPLE OF ACOUSTIC MODULATION THUS ACTS AS A LANDMARK OR A WARNING.

THE SPACE IS PROTCTED FROM NOISE WHICH MAKES IT EASIER TO CONTROL THE INTERIOR ACOUSTICS. THEY ARE MANIPULATED AND MODULATED ACCORDING TO THE USER,S REQUIREMENT.

ANCHOR CENTRE FOR BLIND: CHILDREN 3

THE ANCHOR CENTRE FOR BLIND CHILDREN IS 15,000 SQ.FOOT EACH FACILITY IS A FUCTIONAL YET GRACEFUL FACILITY THAT SERVEES AS AN ACTIVE EACHING TOOL FOR BLIND AND VISUALLY-IMPAIRED INFANTS, TODDLERS AND PRESCHOOLERS.

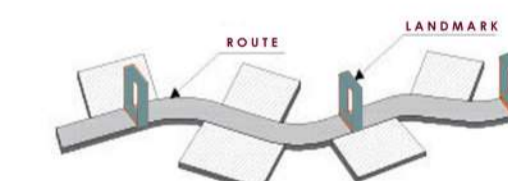
SITUATEDS ON A 2.2-ACRE SITE, THIS SERENE FACILITY HAS BEEN METICULOUSLY DESIGNED TO ELEVATE LEARNING AND ENGAGE CHILDREN IN A DEEPER UNDERSTANDING OF THEIR WORLD. SUBTLE, STRATEGICALLY PLACED SENSORY ELEMENTS AND CHILD-SIZED DETAILING THROUGHOUT THIS "TOUCH-FRIEND" BUILDING AND SITE SERVE AS INTUITIVE GUIDES AND INTEGRATED TEACHING TOOLS.BRACING THE SENSE OF SIGHT, SOUND, TOUCH, SMELLAND TASTEN INNOVATIVE WAYS, DAVIS PATNERSHIP,S SEAMLESS MARRIAGE OF INTERIOR AND EXTERIOR SPACES PROVIDE THE IDEAL CONTAINER FOR ANCHOR CENTRE,S SPECIALIZED MULTI-SENSORY CURRICULUM.



EXTERIOR PROPERTIES

DESIGN AS AN INTEGRAL PART OF ITS NEIGHBOURHOOD.THIS ONE STOREY STRUCTURE ALIGNS WITH THE STREET EDGE, RESPECTFULLY MIRRORING THE ADJACENT RESIDENTIAL SCALE. CLASSROOM "PODS" , CLAD IN A SUBTLE BRAILLE-INSPIRED-PATTERN OF BOND MASONRY THAT PLAYS LIGHT AGAINST SHADOW, REACH SKYWARD, WHILE REVEALING THE BUILDINGS INTERIOR SPATIAL ORGANIZATION. THE ELONGATEDS SERIES OF PODS, CONNECTED BY A CENTRAL CIRCULATION SPINE, ARE FLOODED IN DIFFUSED NORTHERN LIGHT THROUGH A SERIES OF FILTERED CLERESTORY WINDOWS JUST BELOW THE ANGLED ROOFLINE. VARIATIONSIN SCALE, MATERIALS AND LIGHTING ASSIST CHILDREN WITH ORIENTATION.

THE BUILDING'S INTERIOR ARCHITECTURE IS INTENTIONALLY CLEAN, SIMPLE AND FREE OF OBSTRUCTIONS. INTERNALLY, THREE COLOURS -BLUE, YELLOW AND ROSE- SERVE AS WAY FINDING ELEMENTS WHILE VISUALLY SEPERATING THE THREE @MIND, SPIRIT AND BODY@ PODS OF THE BUILDING. CHOSD BASED ON A CAREFUL STUDY OF COLOUR THEORY AND THE ACTUAL PASSIVE OR ACTIVE NATURE OF EACH POD, THIS TRIAD OF HUES IS INTEGRATED THROUGHOUT THE BUILDING IN THE FORM OF SKYLIGHTS, DOOR LIGHTS AND WALL SCHONES.



COGNITIVE DESIGN USING LANDMARKS



LANDMARKS CAN BE CREATED USING ACOUSTICS, TACTILE AND OLFACTORY ELEMENTS.



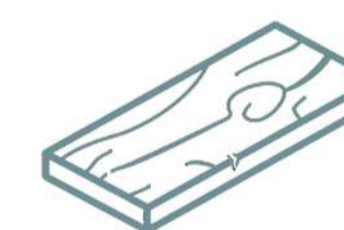
SIMPLE DESIGN APPROACH HELPS IN EASY NAVIGATION.



USE OF COLOUR POD SYSTEM AS A LANDMARK ELEMENT



ANGLED WALLS HELPS IN NOISE REDUCTION AND WILL HELP TACLE NOISE DUE TO A COMBINATION OF DIRECT SOUND AND ECHO.

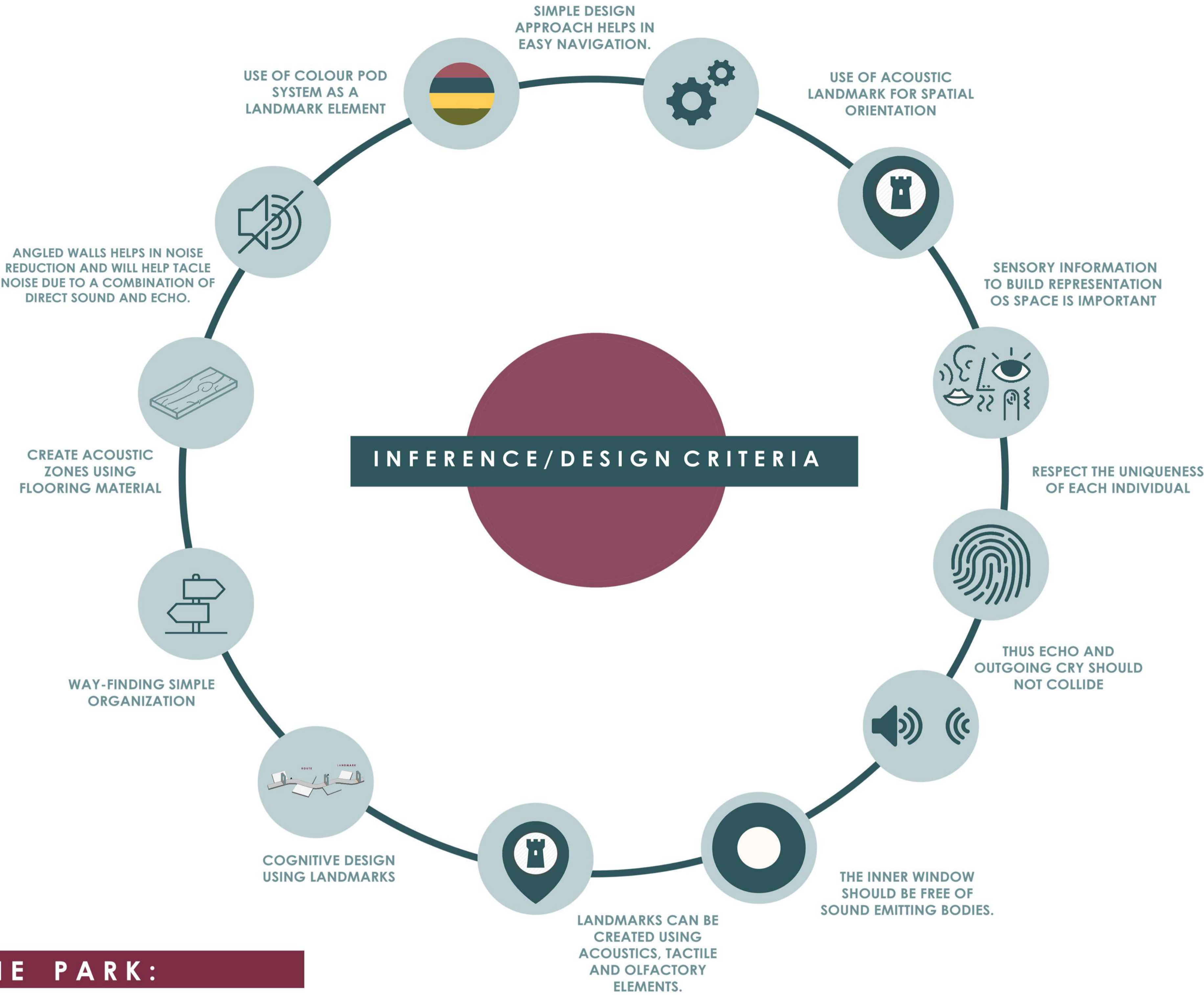


CREATE ACOUSTIC ZONES USING FLOORING MATERIAL

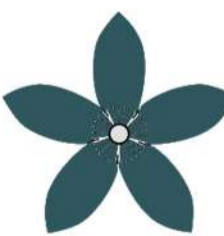


WAY-FINDING SIMPLE ORGANIZATION





THE PARK:



USE OF FLAURA AND FAUNA FOR EMOTIONAL HEALING AND AS A LANDMARK



SIMPLE ART INSTALLATION GIVING THEM AN EXPOSURE TO THEIR WORLD OF ART.



MUSICAL INSTRUMENTS THAT CAN BE EASILY INSTALLED AND EXPERIENCED IN THE PARK.



ELEMENTS LIKE ROPE CLIMBING WILL HELP DEVELOP A FEELING OF FREEDOM .

SOLUTION FOR URBAN PROBLEM:



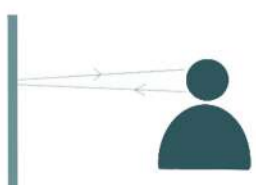
USE OF TACTILE MAPPING AND OTHER IDENTIFIABLE TEXTURE FOR WAY-FINDING.



TRAFFIC SIGNALS WITH AUDITORY SIMULATION.

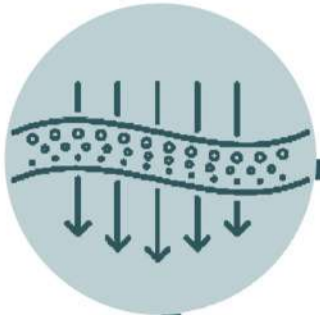


SPACES SHOULD PROVIDE A SENSE OF SAFETY FOR ALL. THEY SHOULD BE ACCOMODATING TO ALL



USE OF ECHOLOCATION IN PATHWAY USING SOUND REFLECTING PANELS.

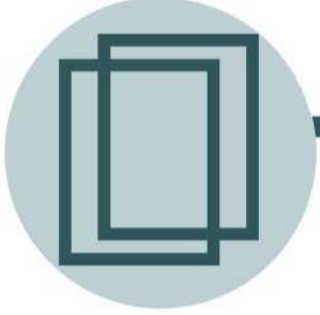
SOUND ABSORBING MATERIALS CAN BE USED FOR BETTER ACOUSTICS AND TO CONTROL ECHO GENERATION AS PER THE DESIGN



BRITTLE MATERIALS PRODUCE AN AMPLE AMOUNT OF ECHO.



MATERIAL



GLASS CAN BE USED WHERE MORE ECHO NEEDS TO BE PROVIDED.



WOOD FOR BETTER ACOUSTICS



LEGEND:

- SENSORY
- MULTI-SENSORY
- AUDITORY
- TACTILE
- OLFACTORY
- WAYFINDING
- KINAESTHETIC LEARNING
- CIRCULATION
- LOCOMOTION
- SOUND / NOISE

THE PROPOSED CHART WILL HELP ANALYSE THE FUNCTIONALITY OF THE BUILT SPACE. THIS MULTISENSORY APPROACH WILL THUS FOLLOW THE NORMS ACCORDING TO THE RIGHTS OF PERSONS WITH DISABILITIES ACT, 2016

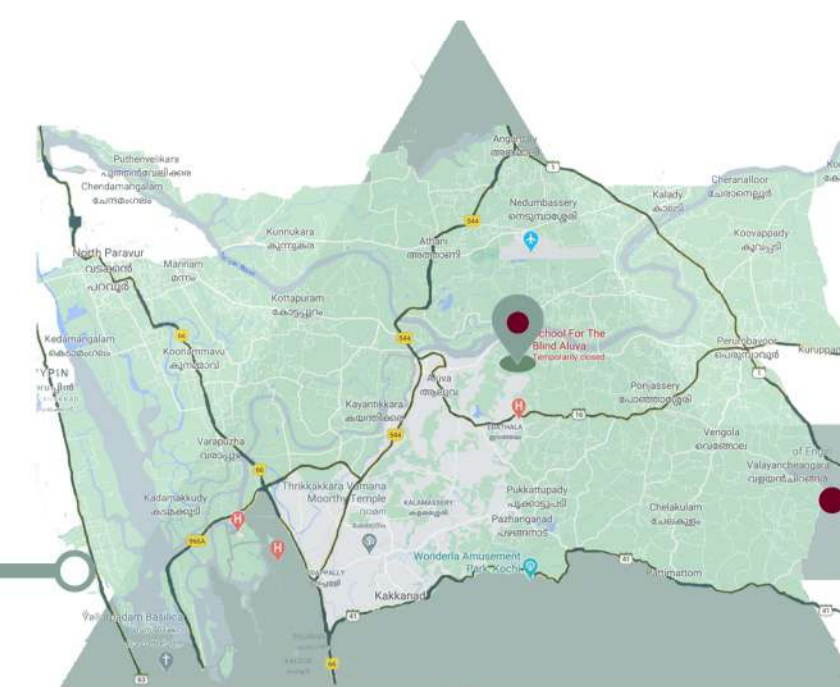
THE SCHOOL IS ASSOCIATED WITH THE BLIND SOCIETY AND HAS A
POTENTIAL OF BEING LINKED WITH THE FOOTBALL ACADEMY FOR BLIND.

LOCATION:



FOOTBALL ACADEMY FOR BLIND.

THE SCHOOL IS ASSOCIATED WITH THE
BLIND SOCIETY AND HAS A POTENTIAL
OF BEING LINKED WITH THE FOOTBALL ACADEMY FOR BLIND.



EXISTING CONDITIONS

THEY RENT OUT THE AUDITORIUM FOR
LOCAL FUNCTIONS WHICH GENERATES
ECONOMY.

STUDENT ARE OBSERVED TO
CLIMB TREES AND SPEND
QUALITY TIME AROUND THE
TREE.

PROVISION FOR REHABILITATION
CENTRE PHYSIOTHERAPY.

THE BUILDING LACKS MATERIALS AND
RECOGNIZABLE TEXTURES.

POOR DEFINITION OF SPACES
DEVELOPS A LACK OF FREEDOM TO
MOVE AROUND FREELY.

POOR CONSTRUCTION TECHNIQUES
AND INFRASTRUCTURE WHICH LEADS TO
SLIPPERY CORRIDORS.

LACK OF AMPLE TACTILE
MAPPING.

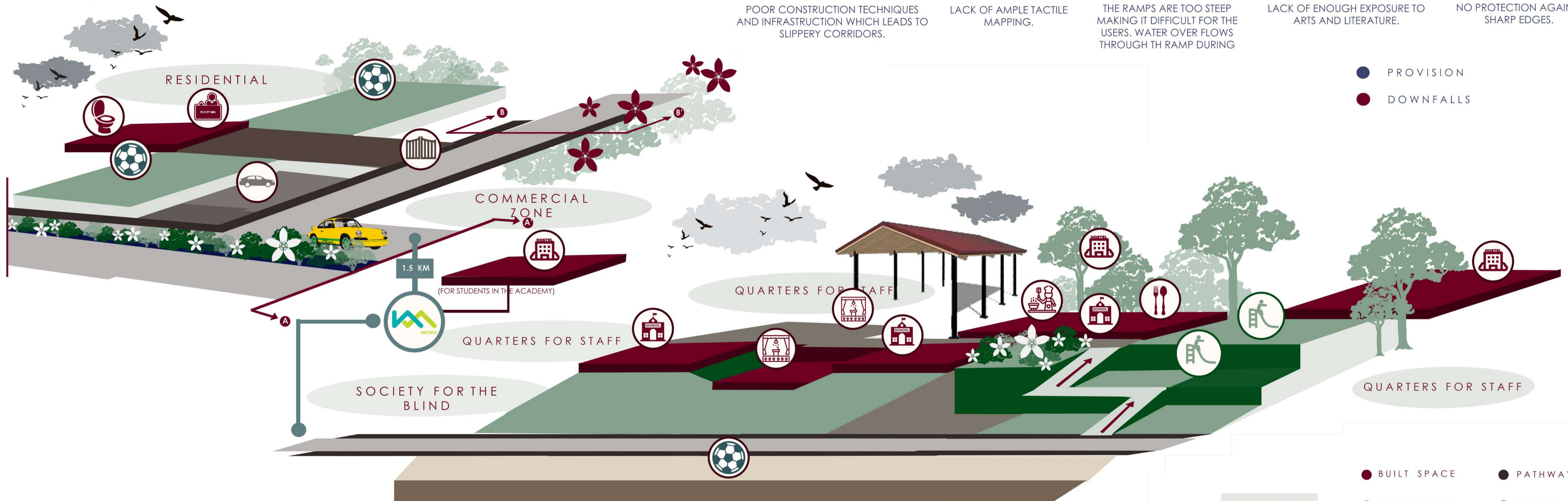
THE RAMP ARE TOO STEEP
MAKING IT DIFFICULT FOR THE
USERS. WATER OVER FLOWS
THROUGH THE RAMP DURING

LACK OF ENOUGH EXPOSURE TO
ARTS AND LITERATURE.

NO PROTECTION AGAINST
SHARP EDGES.

WHY?

THE SCHOOL HOUSES
FOOTBALL PLAYERS
DURING THE MATCH THAT
OCCASIONALLY TAKES PLACE
IN THE SCHOOL GROUND



● PROVISION
● DOWNFALLS

LEGEND:

● BUILT SPACE
● VEGETATION
● VEHICULAR MOVEMENT
● PATHWAY
● SCHOOL GROUND
● HEIGHT VARIATION

SCOPE FOR IMPROVEMENT

THESE INFERENCE WILL NOW SERVE AS THE DESIGN CRITERIA



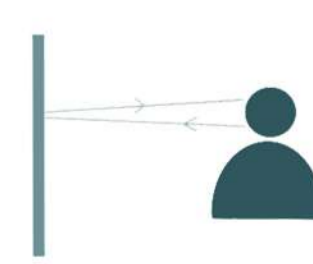
EXPOSURE



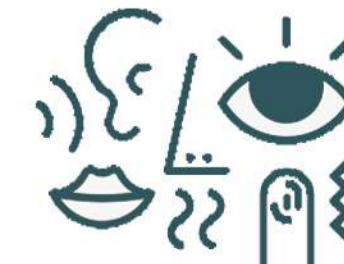
FREEDOM



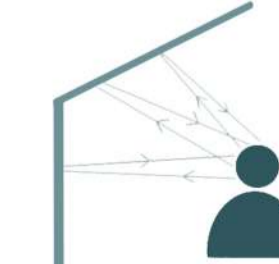
SENSORY SIGNAL
(CROSSING ROAD)



STREETS AND
ECHOLOCATION



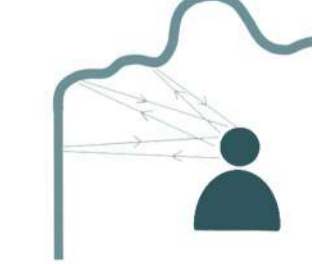
MULTI-SENSORY
ARCHITECTURE



ACOUSTICS



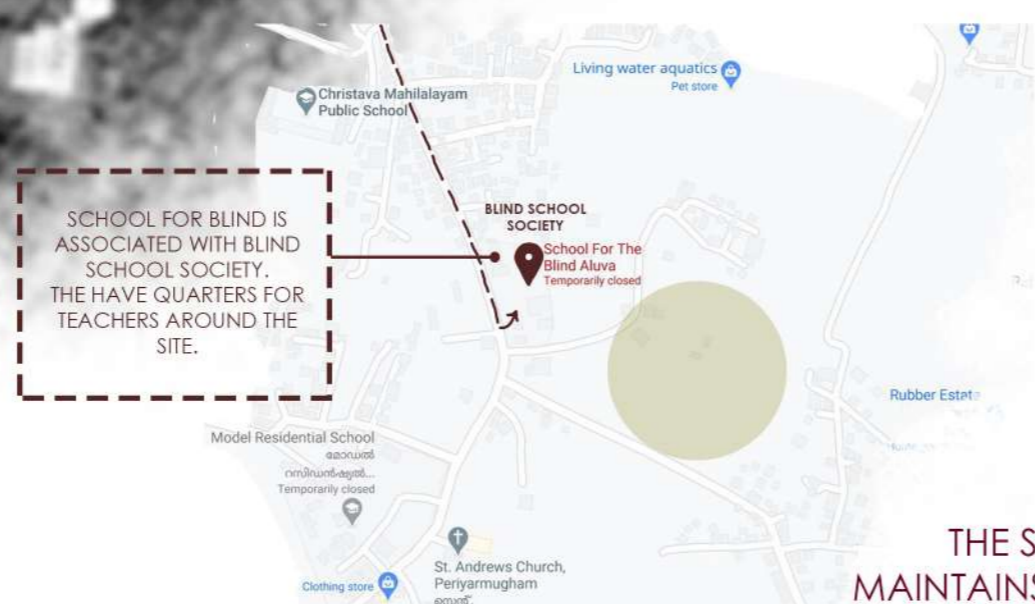
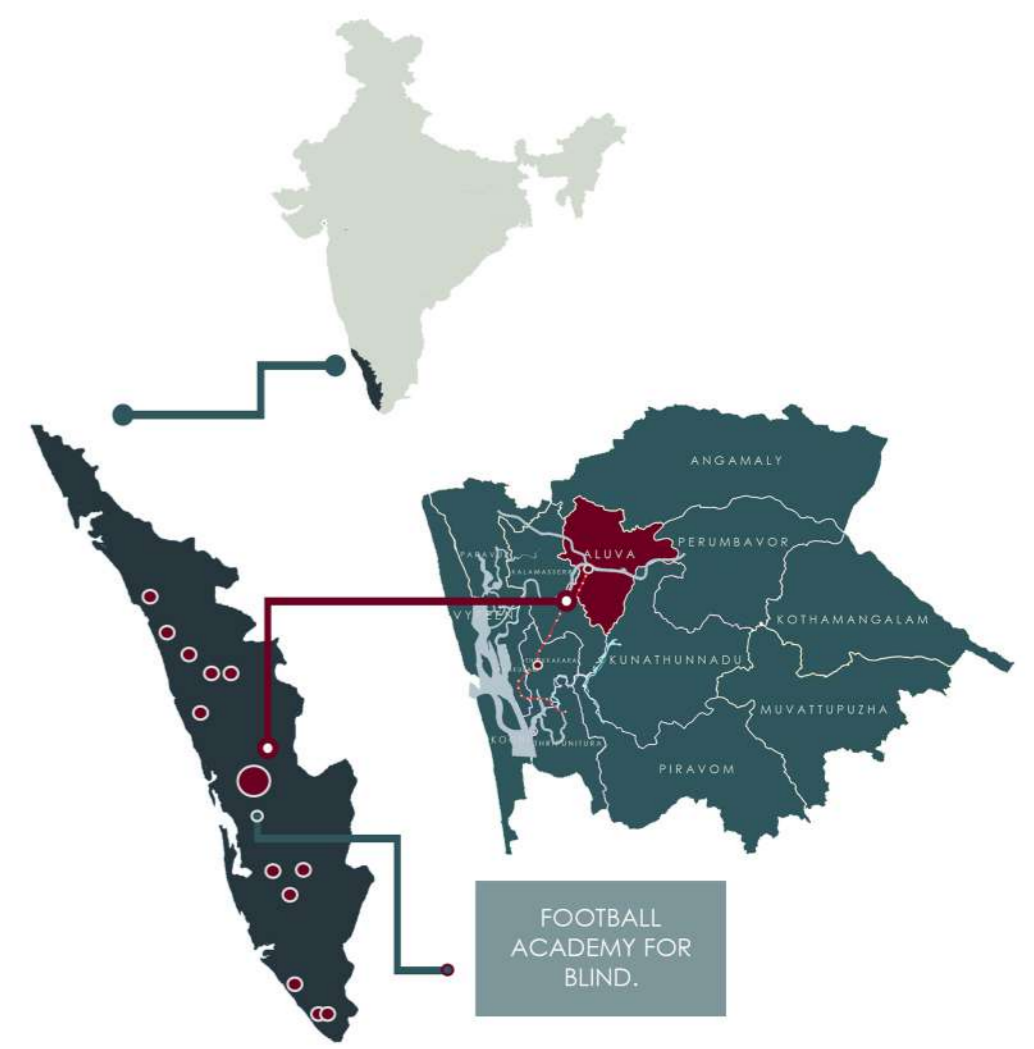
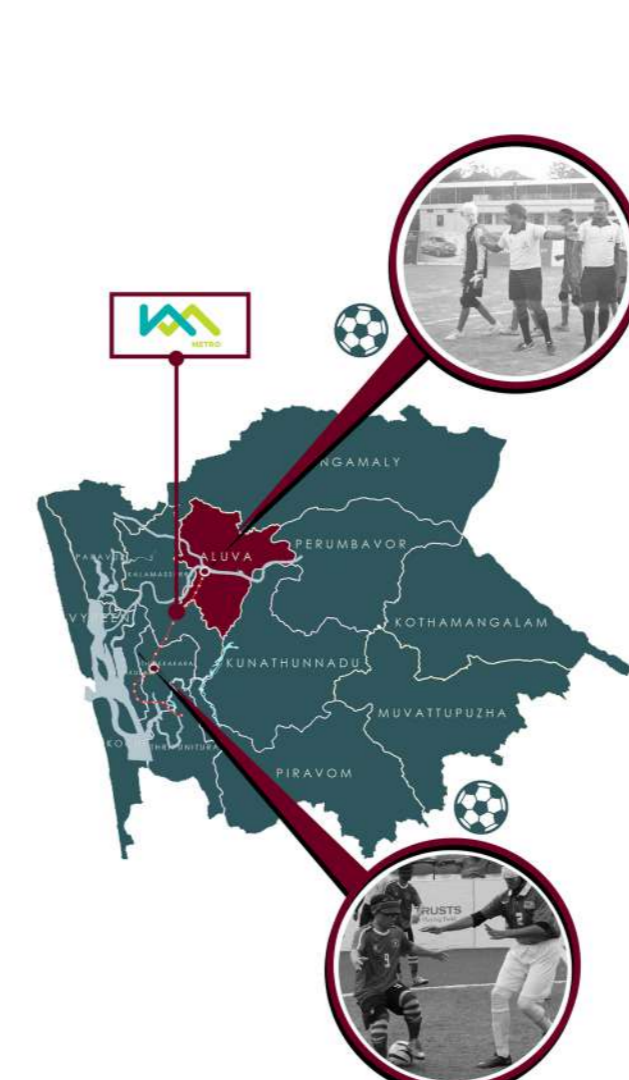
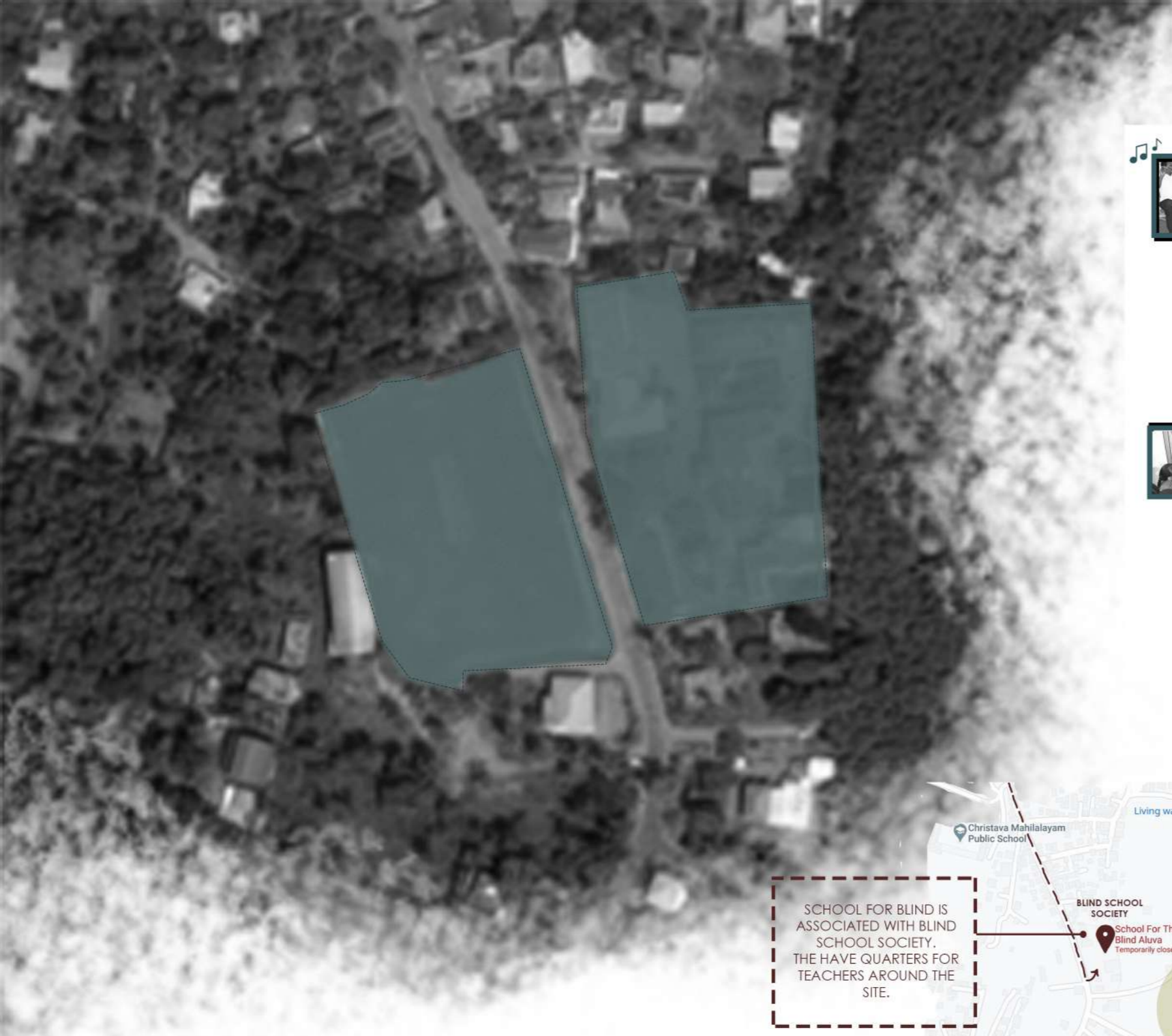
FOCUS ON TACTILE
DESIGN



ECHOLOCATION



INTEGRATION OF
TECHNOLOGY

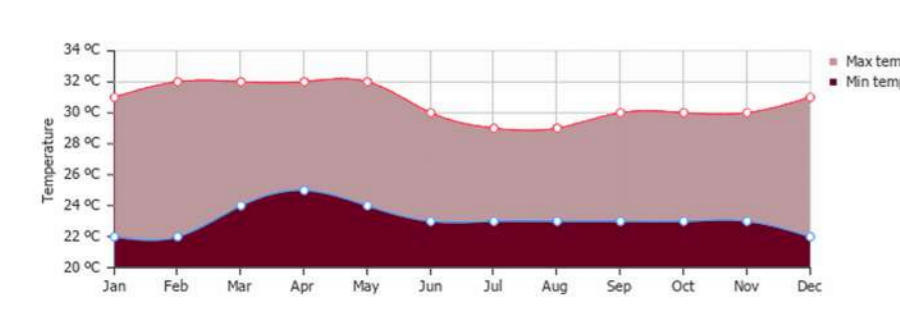


SEVEN METER HEIGHT DIFFERENCE IN THE SITE SHOULD BE CONSIDERED.
RAMPS TO BE MADE CONSIDERING WHEELCHAIR FACILITIES.

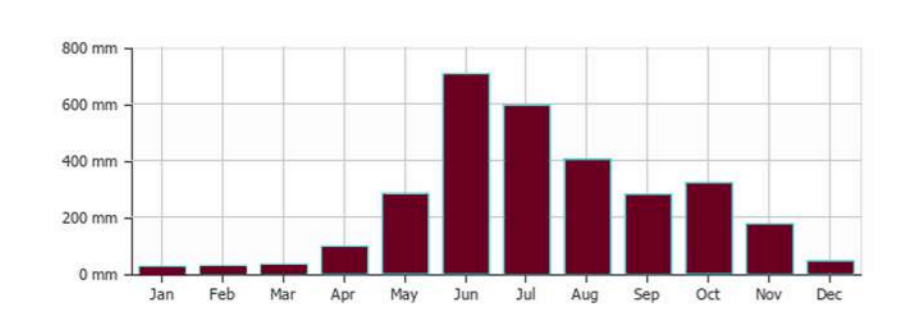


SCHOOL FOR BLIND, ALUVA.

SUMMERS ARE EXPERIENCED WITH VERY HIGH TEMPERATURE. THUS DESIGN ELEMENTS SHOULD BE SUCH THAT IT MAINTAINS THE AVERAGE TEMPERATURE OF THE ROOM. OVERHEATING OF SPACES CAN CAUSE DISCOMFORT TO THE USER GROUP.



MONSOONS ARE VERY HARSH IN KERALA. THUS DESIGNS SHOULD CONSIDER THE RAINS THAT LAST ALMOST FOR FIVE TO SIX MONTHS. OVER FLOODING OF WATER CAN MAKE WAY FINDING AND SPATIAL ORIENTATION DIFFICULT FOR THE BLIND.



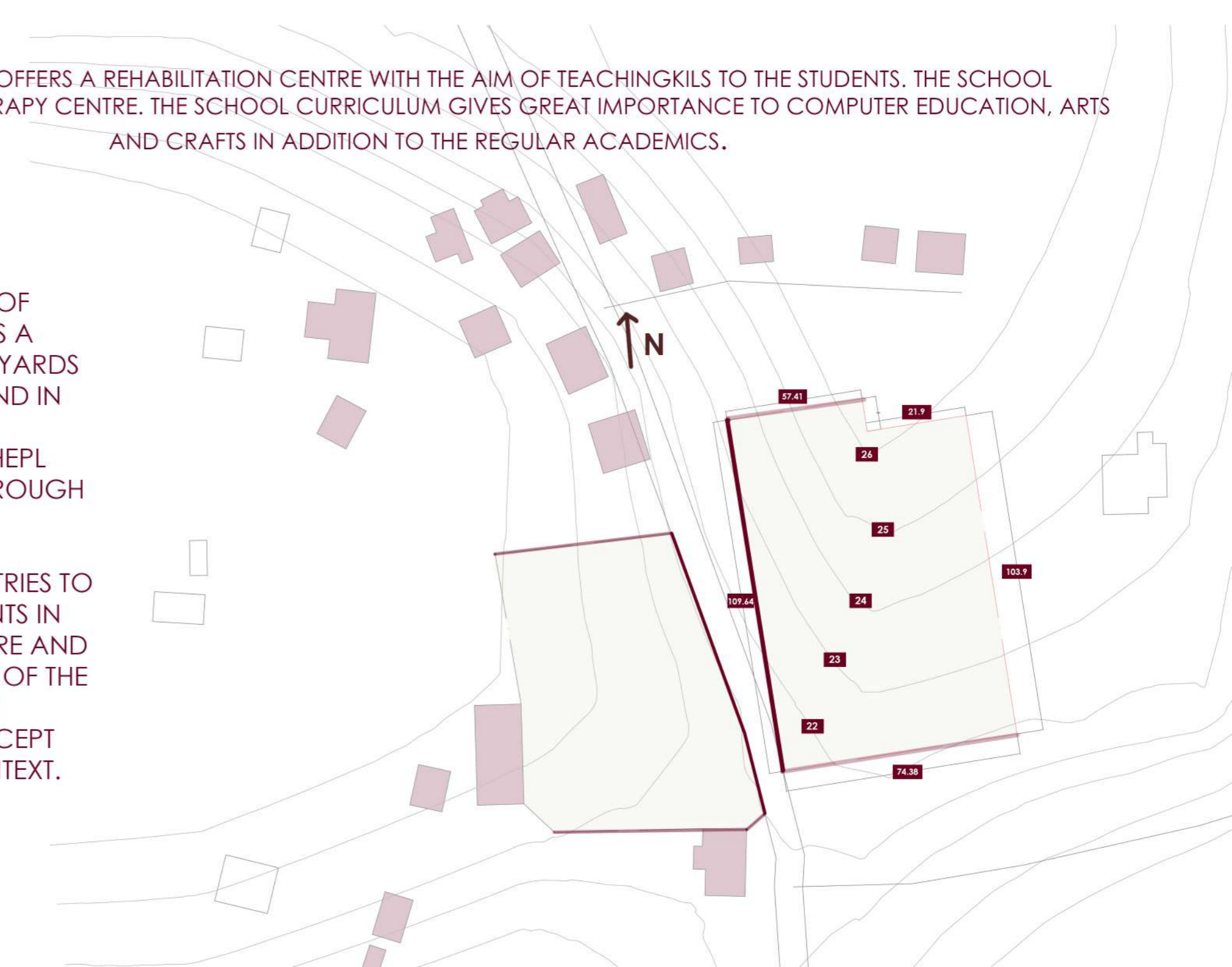
CONNECTIVITY



THE SCHOOL ALSO OFFERS A REHABILITATION CENTRE WITH THE AIM OF TEACHING KILLS TO THE STUDENTS. THE SCHOOL MAINTAINS A PHYSIOTHERAPY CENTRE. THE SCHOOL CURRICULUM GIVES GREAT IMPORTANCE TO COMPUTER EDUCATION, ARTS AND CRAFTS IN ADDITION TO THE REGULAR ACADEMICS.

THE TWO CONCEPT OF 'PARAMBU' WHICH IS A BACKYARD AND COURTYARDS ARE COMMONLY FOUND IN KERALA. THE CONCEPTS WILL HELP SUSTAIN A COMFORT THROUGH TEMPERATURE.

PLANS AROUND KERALA TRIES TO INCLUDE THESE ELEMENTS IN THEIR DAILY ARCHITECTURE AND THUS THIS BECOMES ONE OF THE MOST IMPORTANT ARCHITECTURAL CONCEPT FROM WITHIN THE CONTEXT.



PROGRAMME PROPOSAL

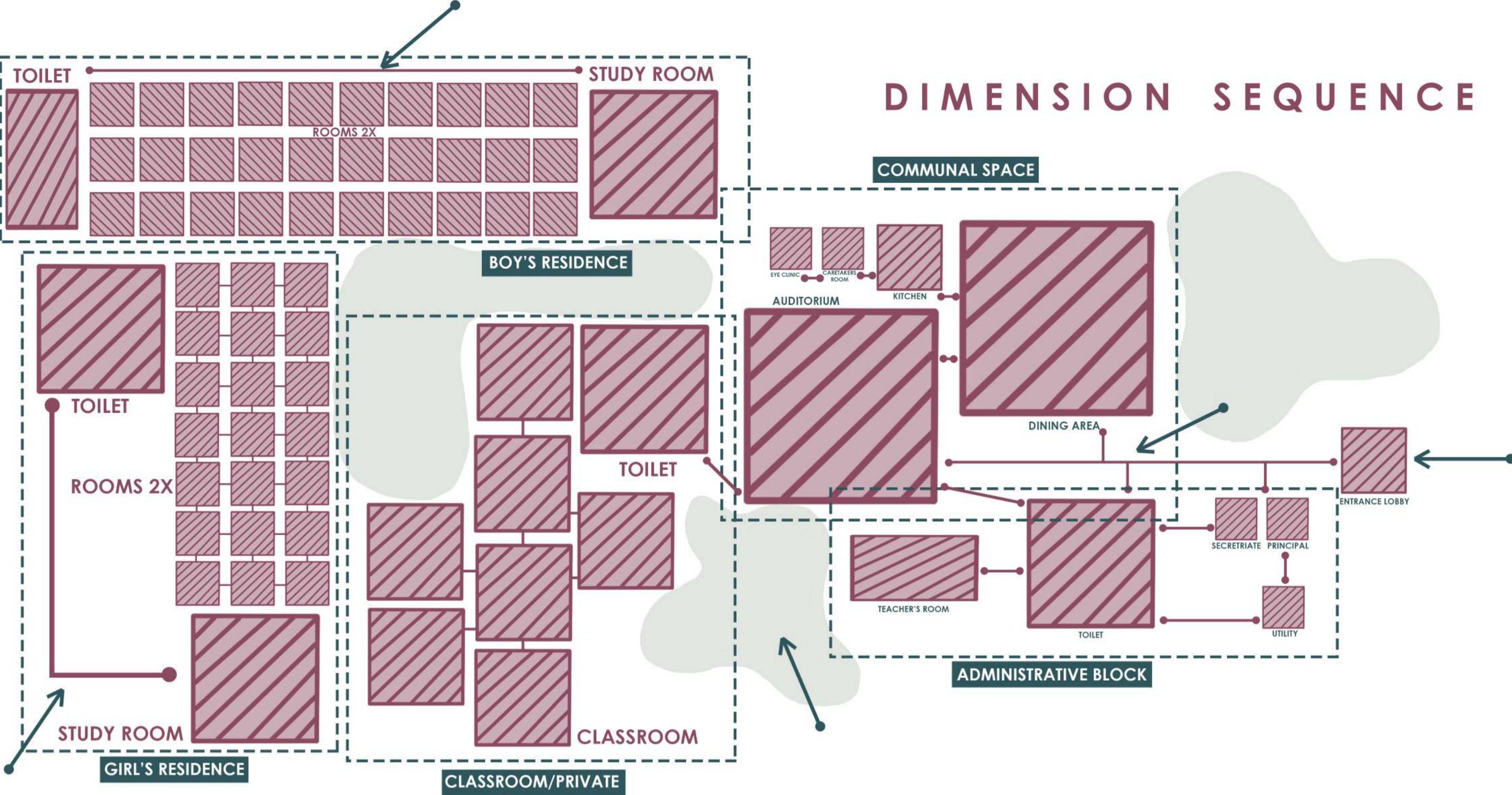
TOTAL AREA (FOR SCHOOL) = 6173.00 m2
TOTAL AREA (FOR GROUND) = 5,209.29 m2

GROUND COVERAGE = 25%
F.A.R = 1.5 - 1.75

GROUND COVERAGE = 2160.00 m2
EXISTING GROUND COVERAGE = 1,380.39m2

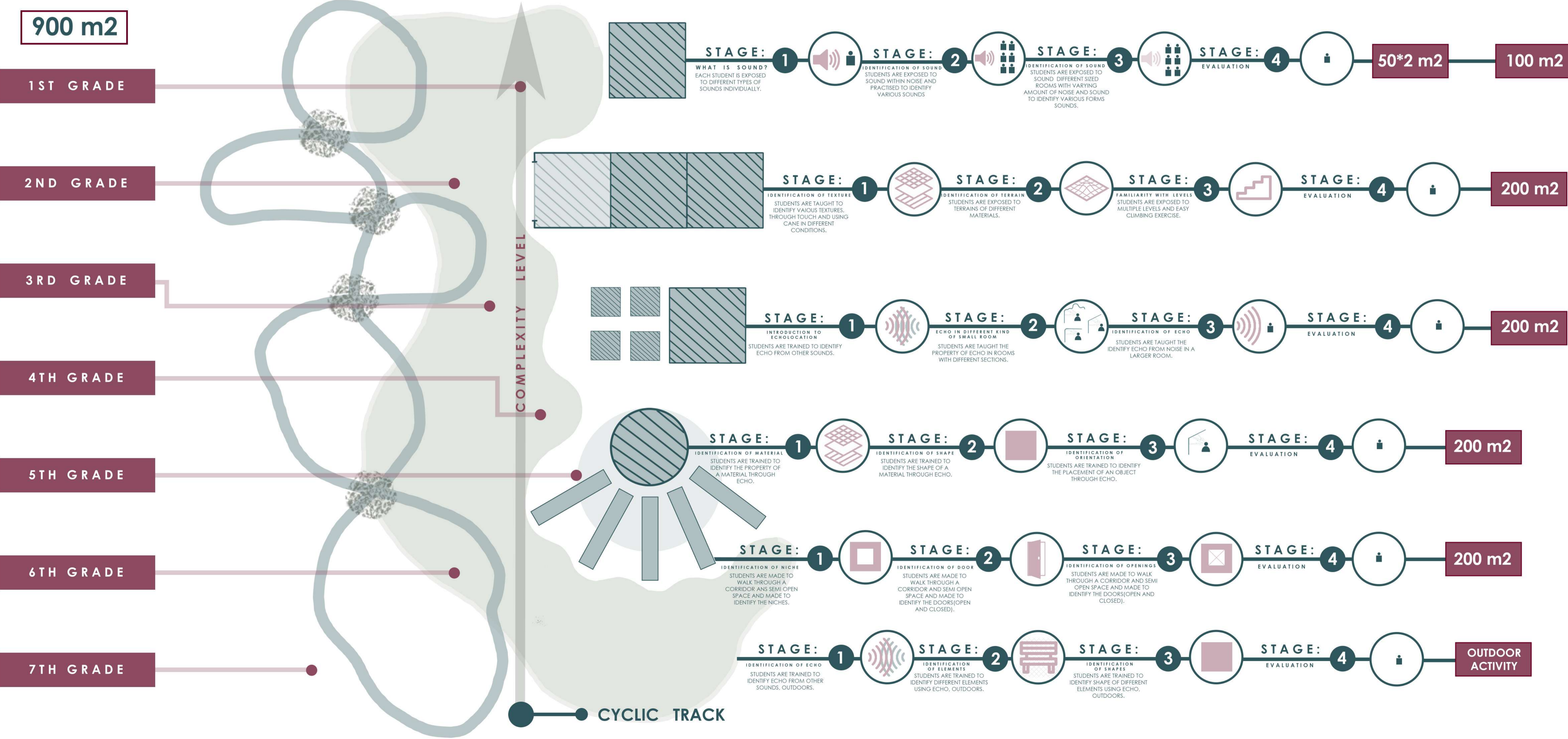
AREA / PERSON = 5m2

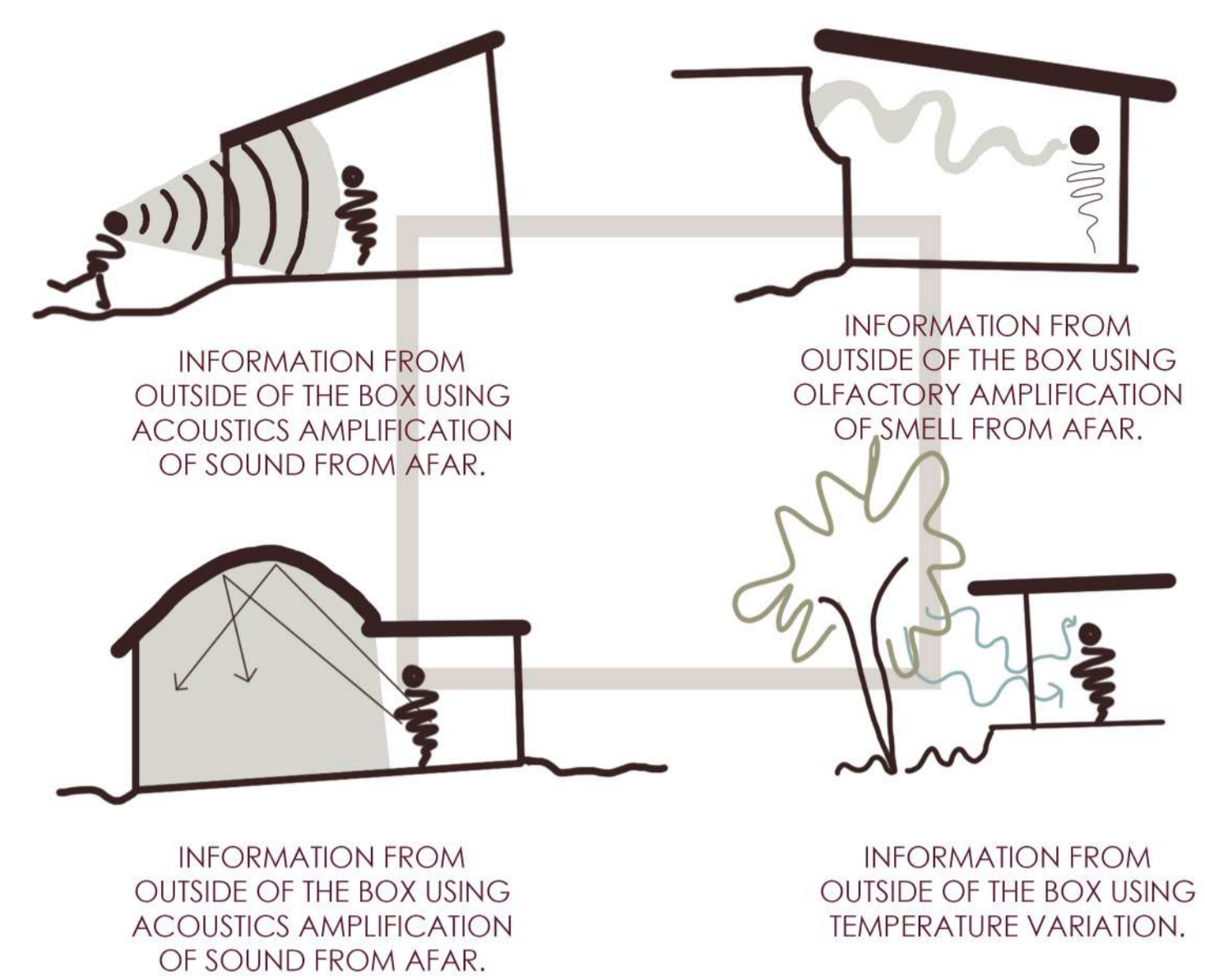
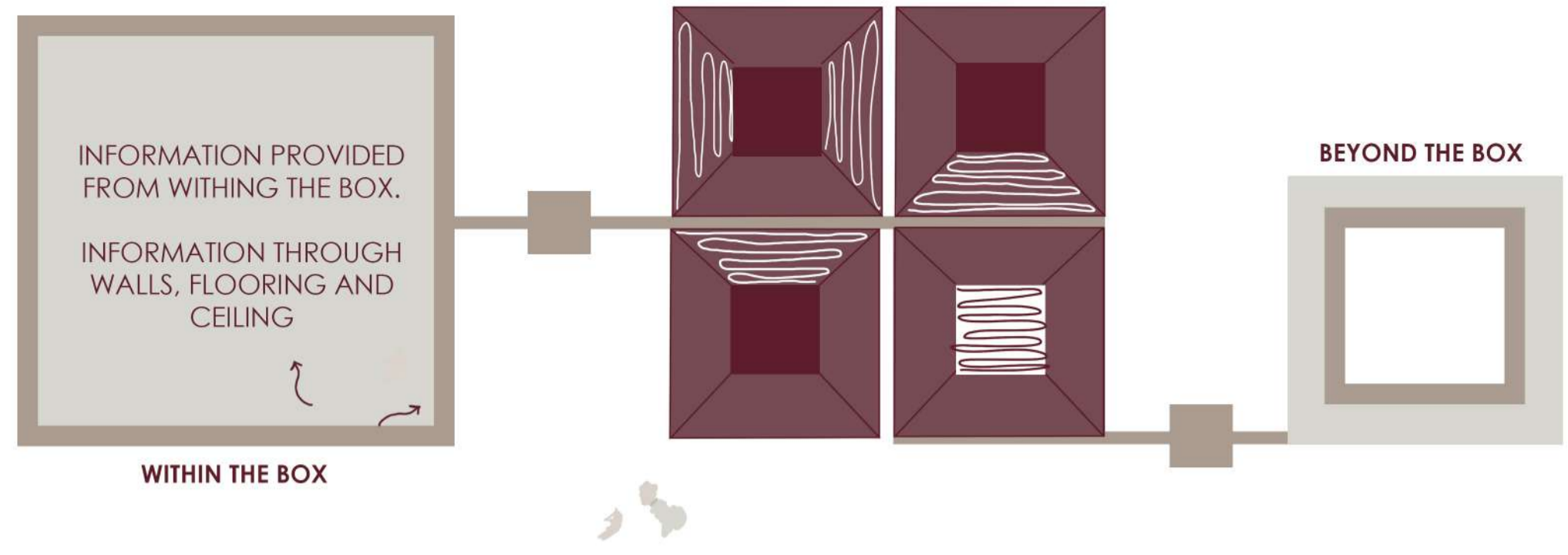
ADMINISTRATIVE BLOCK	189 m2	STUDENT RESIDENCE	705 m2
HEAD TEACHER'S ROOM	12 m2	BED ROOM (FEMALE)	240 m2(12m2/2s)
SECRETARIAT	18 m2	BED ROOM (GENTS)	360 m2(12m2/2s)
TEACHER'S ROOM	24 m2	TOILET (FEMALE)	65 m2(1 T/2s)
CARETAKER'S ROOM	12 m2	TOILET (GENTS)	40 m2(1 T/2s)
TOILET (FEMALE ANDGENTS)	105 m2		
COMMUNAL AREAS	454 m2	PRIVATE SPACE	560 m2
KITCHEN SERVRY	24 m2	CLASSROOM (7 NO.S)	350 m2
DINING ROOM	200 m2	TOILET	105 m2
SIDE ROOM	18 m2	COMPUTER LAB	105 m2
AUDITORIUM	200 m2	ECHOLOCATION CENTRE	900 m2
EYE CLINIC	12 m2		
UTILITY AREAS	30 m2	CORRIDOR SPACE	
ROOM FOR CLEANING MATERIAL	18 m2	= 20% OF GROUND COVERAGE	432 m2
STORE ROOM	12 m2		
		TOTAL AREA	3,270 m2



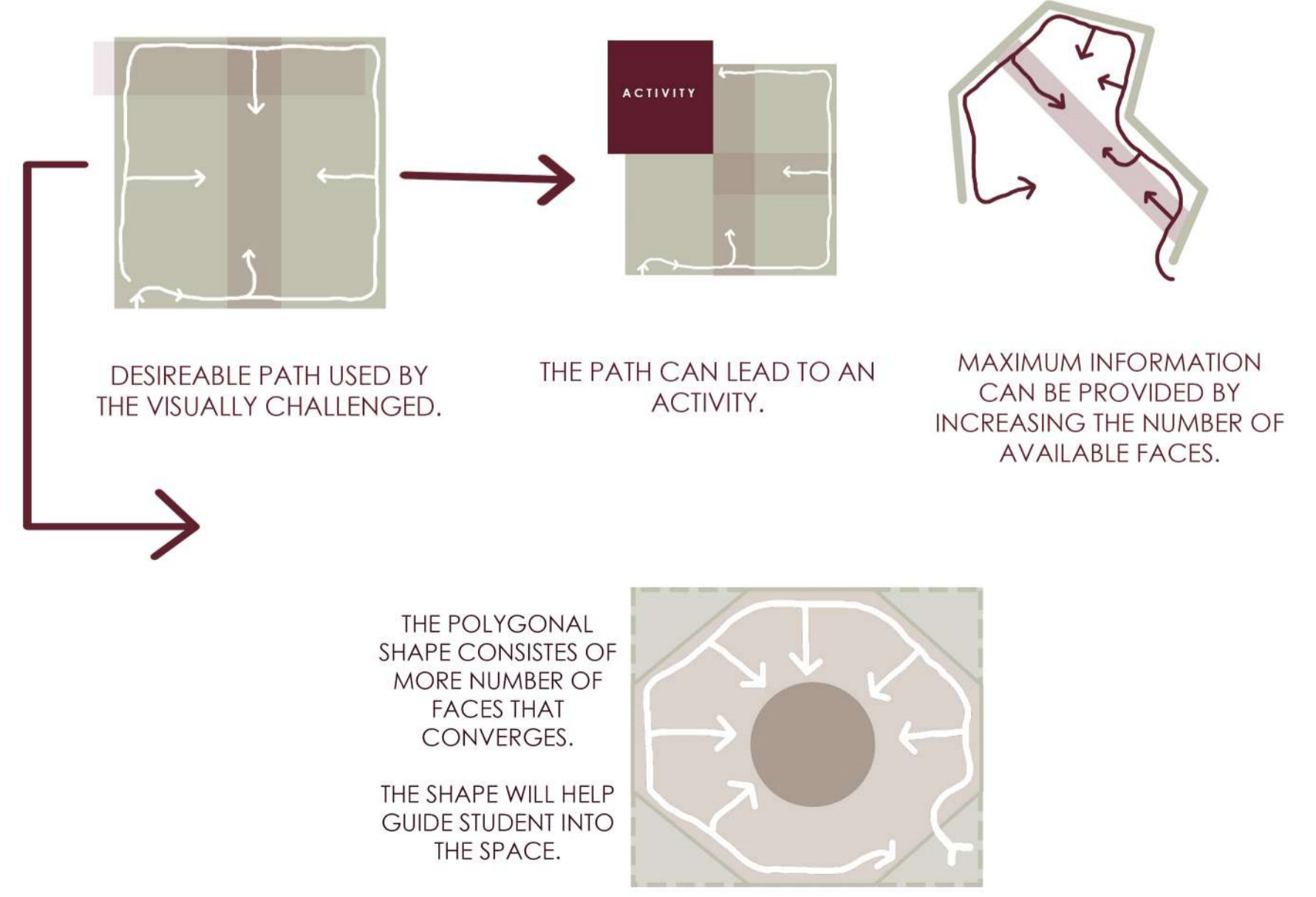
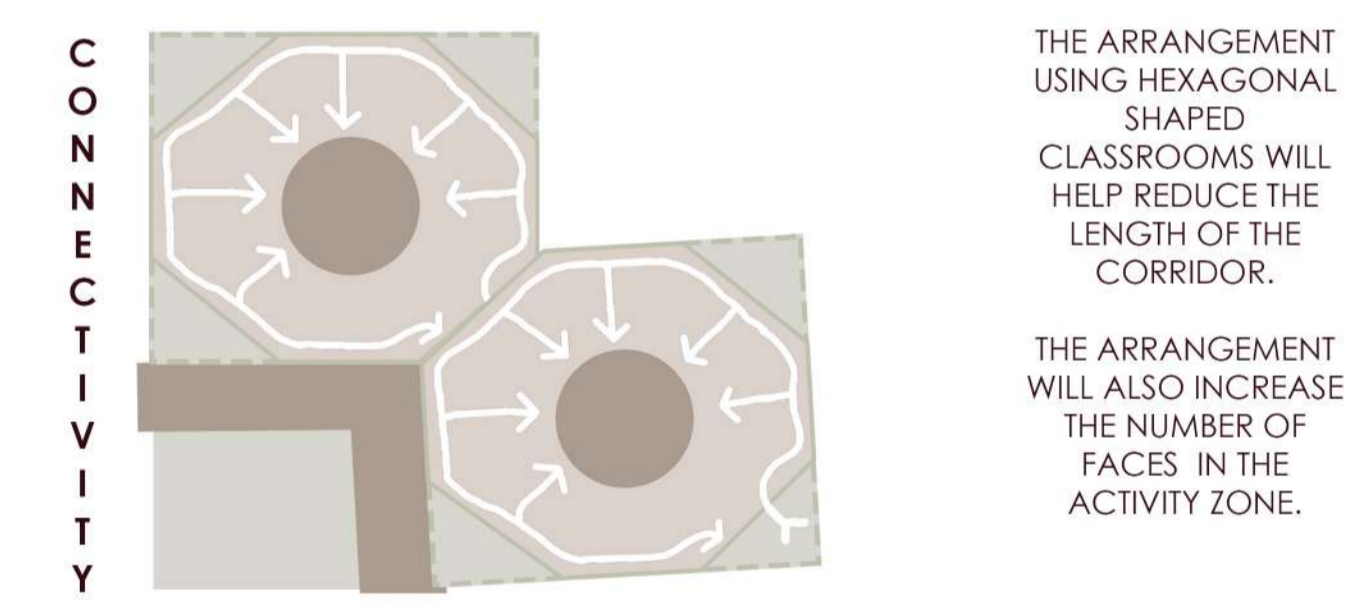
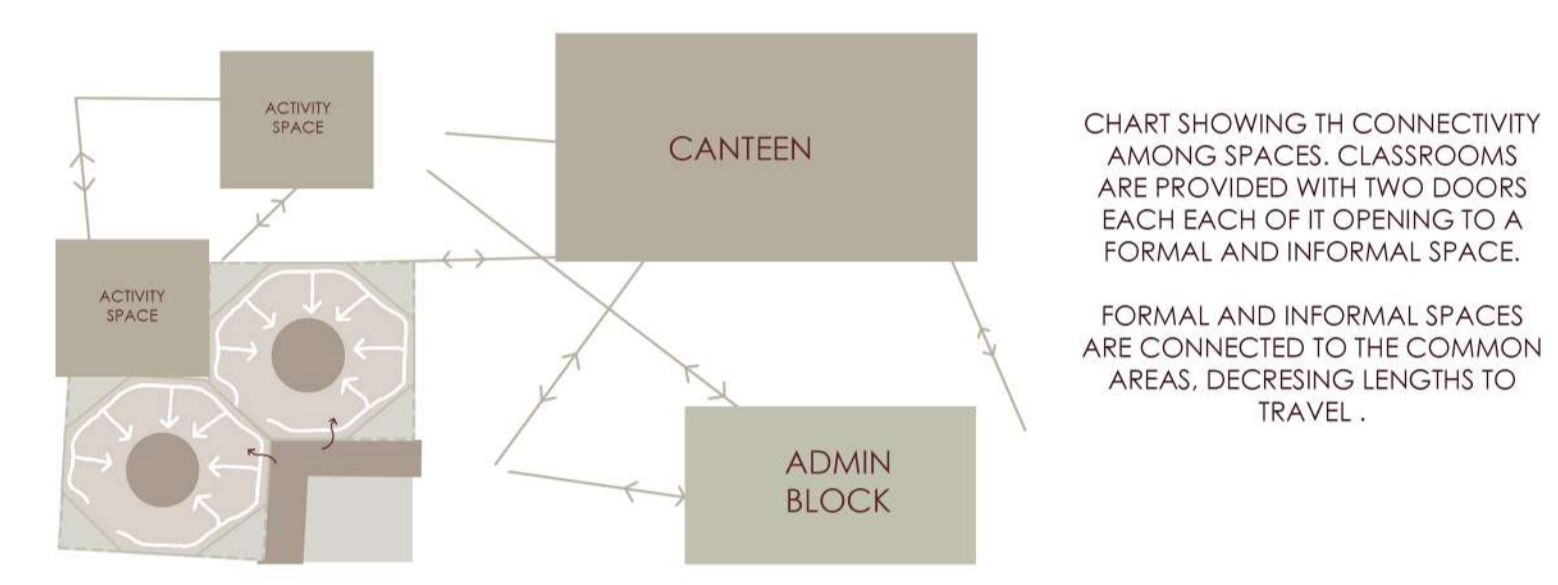
ECHOLOCATION TRAINING CENTRE

DIMENSION SEQUENCE

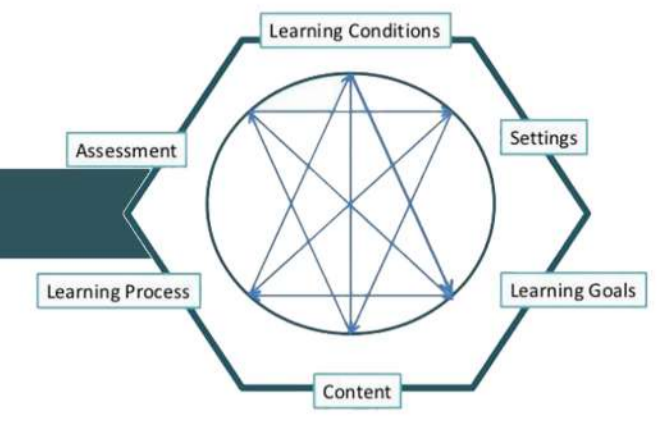




THE POLYGON



THE STORY BEHIND E.T.C



1 BASIC THEORY AND INDOOR EXERCISES IN ACTIVE ECHOLOCATION

Determination of a useful signal/sound; the learner's preferred sound;
Awareness of echoes;
Stimulation exercises;
Basic skills inside;
Basic skills in a corridor;
Basic skills outside in different surroundings.

2

BASIC INDOOR EXERCISES IN ACTIVE ECHOLOCATION



3

ACTIVE ECHOLOCATION EXERCISES OUTDOORS

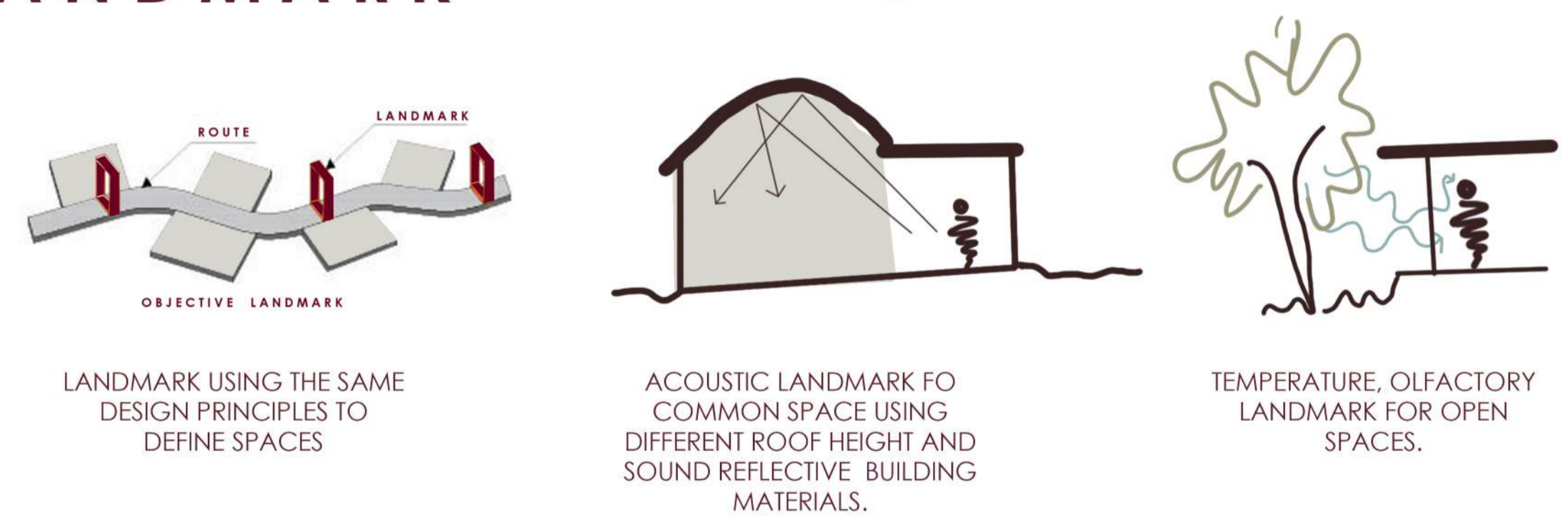


4

COMPLEX ROUTE LEARNING ASSESSMENT, PORTFOLIO

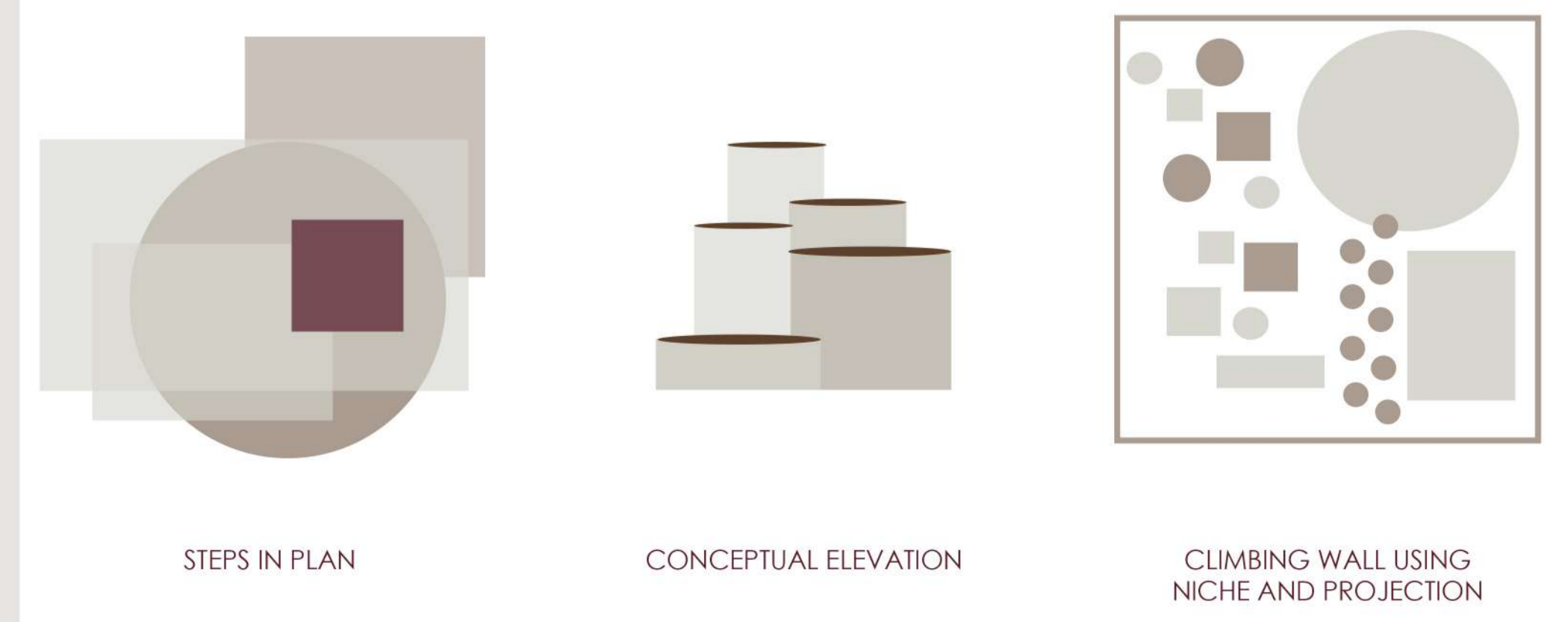


LANDMARK



THE MUSE

'THE MUSE' HELPS DEVELOP A FEELING OF FREEDOM WITHIN EACH STUDENT. THE SPACE PLAYS WITH MULTIPLE LEVELS TO STEP UP AND CLIMB. USING MATERIALS LIKE FOAM WILL MAKE THE SPACE SAFER FOR THE SAME. THE IDEA IS TO LIBERATE THEM FROM THE FEAR WITHIN BY PROVIDING EXPOSURE TO THE ELEMENTS AS A DAILY ACTIVITY.

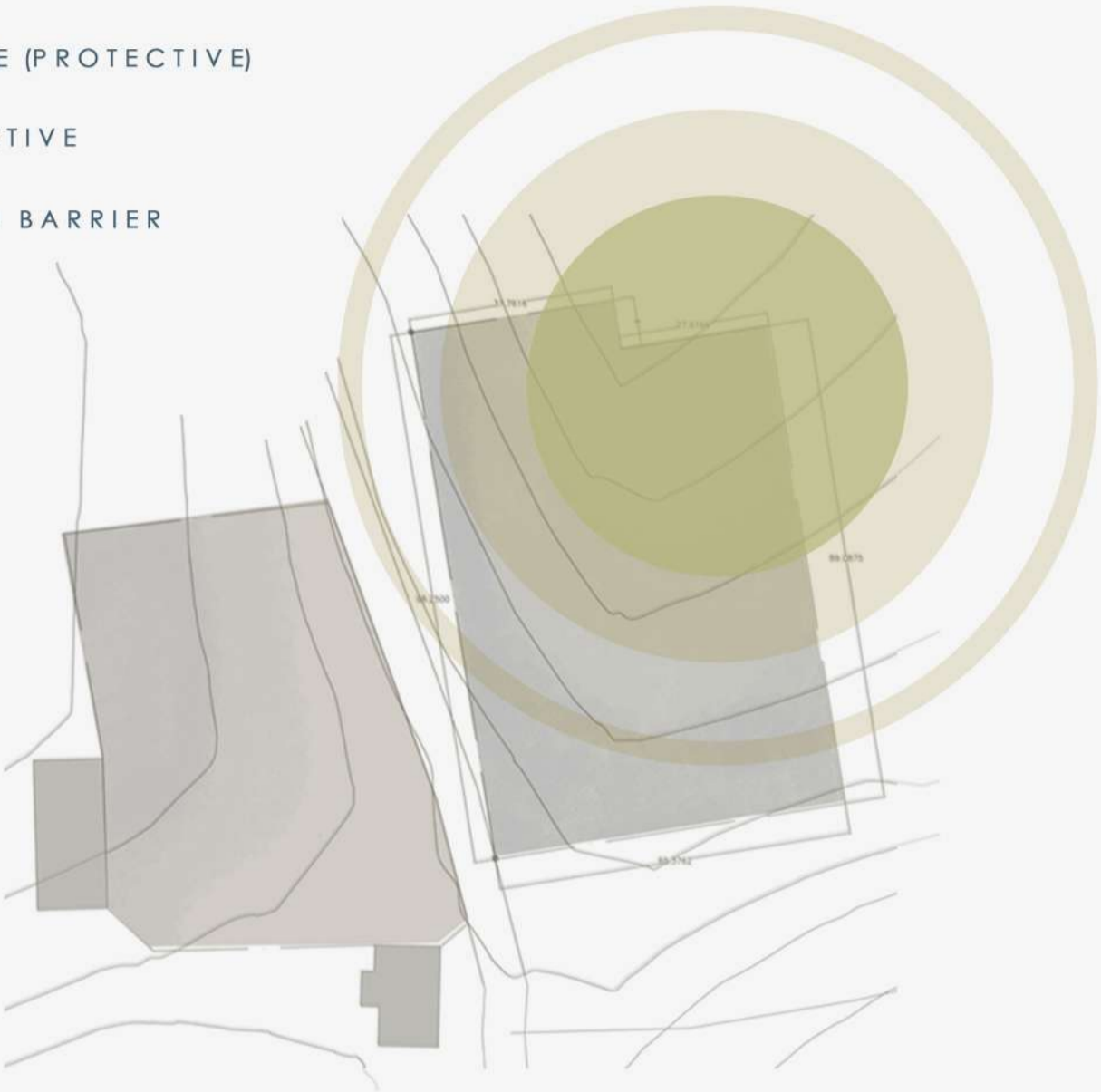


SPATIAL HIERARCHY

HIERARCHY BASED ON PRIVACY

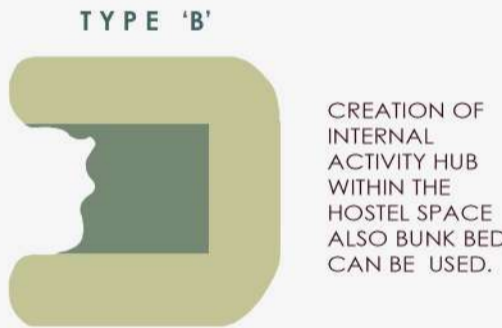
HIERARCHY BASED ON BARRIER

- BARRIER-FREE (PROTECTIVE)
- SEMI-PROTECTIVE
- SPACES WITH BARRIER



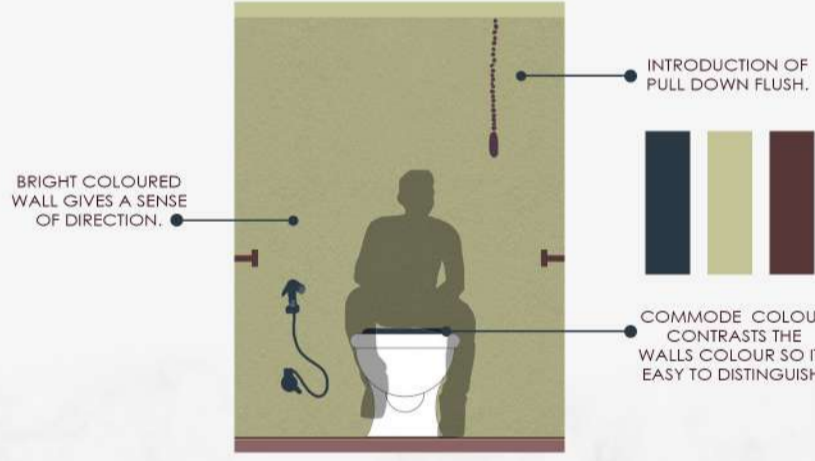
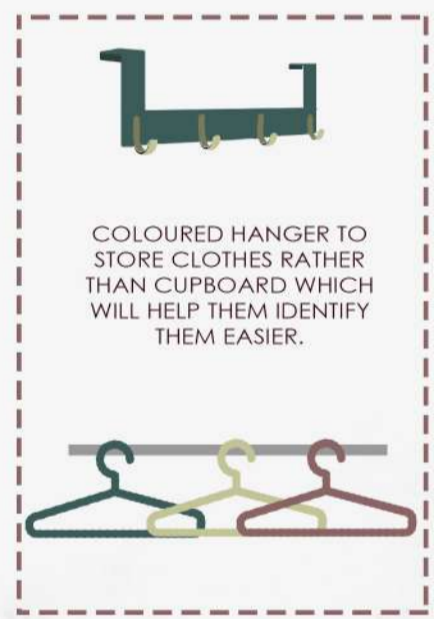
THE ENVIRONMENT IS SUCH THAT THE SAFETY DECIDES FREEDOM. THE PUBLIC SPACES WILL HAVE BARRIER AND HENCE WILL INDICATE THAT THE STUDENTS NEED TO BE CAREFUL. BARRIER FREE ENVIRONMENT WILL BE AROUND THE PRIVATE SPACES AND WILL HELP THE STUDENTS DEVELOPE A FELLING OF FREEDOM.

DESIGN APPROACH

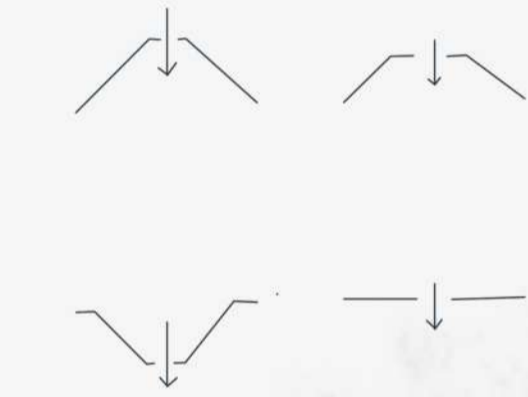


HOSTEL STRATEGY

HANGER SYSTEM



TOILET STRATEGY



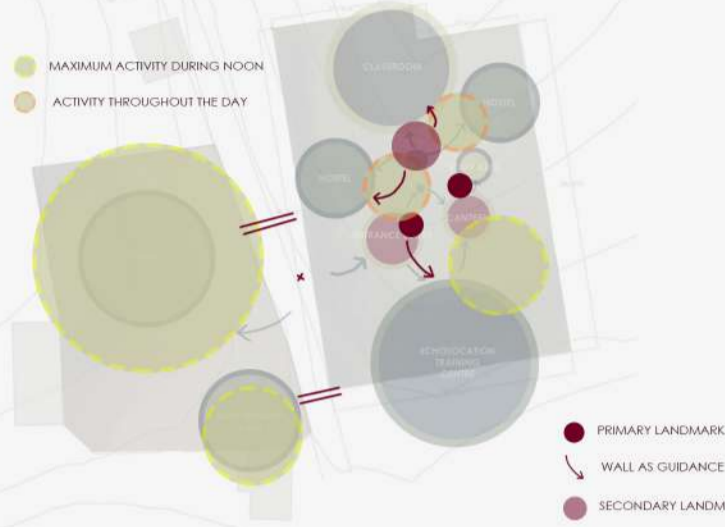
CLASSROOM

LANDMARK STRATEGY

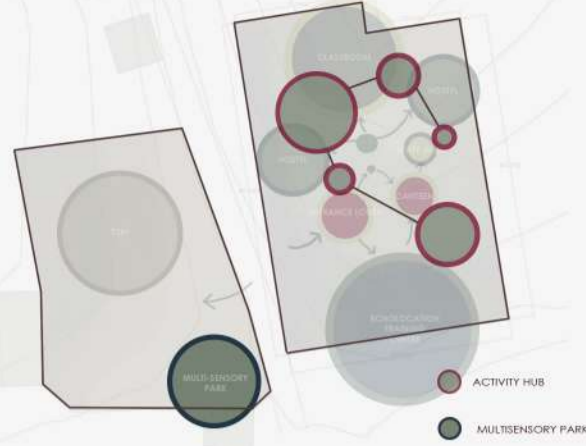
THE IDEA IS TO SIMPLY LINK ALL THE ACTIVITIES FROM A CENTRAL LANDMARK WHICH WILL THUS HELP GUIDE AND RELOCATE IF LOST. THE CENTRAL LANDMARK IS LOCATED SUCH THAT THE SOUND FROM THE ACTIVITY ZONE IS DIRECTED TO THE SPACE, KEEPING IT LIVELY. THE PRIMARY LANDMARK IS FOLLOWED BY SECONDORY LANDMARKS. ONE USES TEMPERAURE DIFFERENCE AND THE OTHER USES THE SAME PRINCIPLE AS THE PRIMARY LANDMARK.



MOVEMENT STRATEGY



ACTIVITY ZONE



CIRCULATION STRATEGY

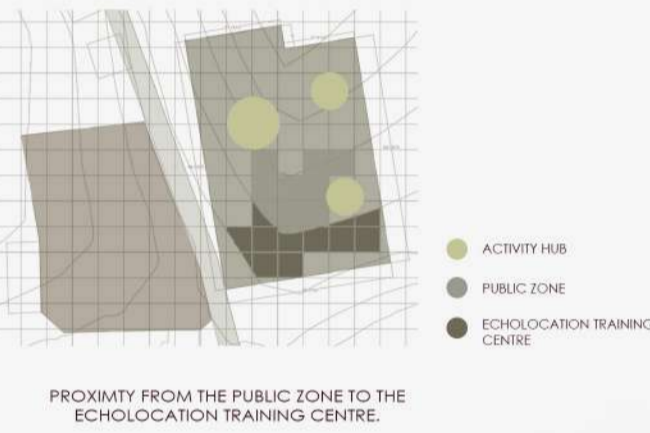
WALLS HAVE BEEN USED AS A MAJOR GUIDE. ORGANIC WALLS HAVE BEEN PROVIDED FOR LEGIBLY NODES AND STRAIGHT FOR FORMAL SPACES. CLASSROOM HAVE BEEN LINKED TO THE FORMAL AND INFORMAL SPACES. RAMPS OF 5-MAXIMUM 8 DEGREE HAS BEEN USED. CIRCULATION IS ALSO GUIDED USING OUT OF THE BOX CONCEPT WHERE USERS ARE GUIDED USING INFORMATION FROM AN UPCOMING SPACE.



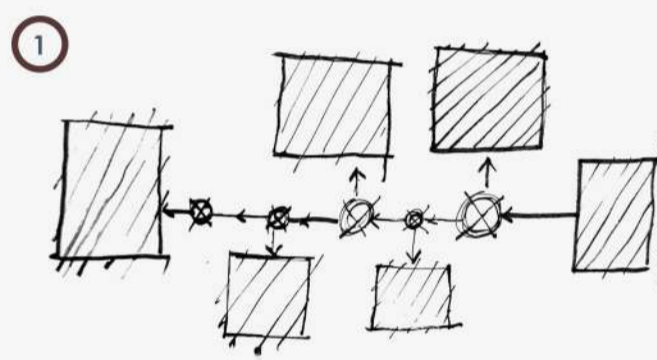
ZONING



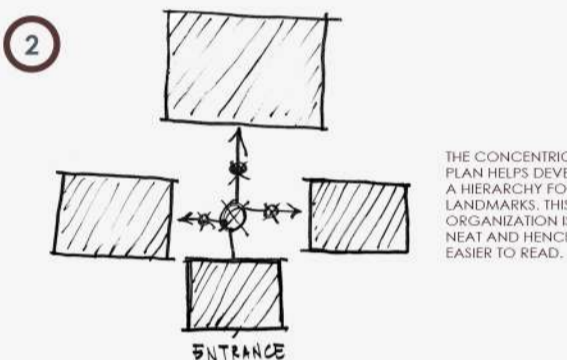
PROXIMITY CHART



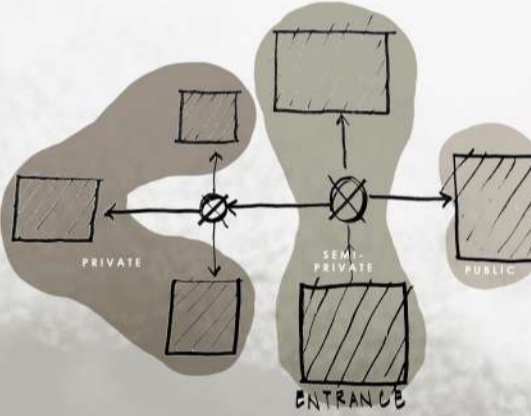
ORGANIZATION



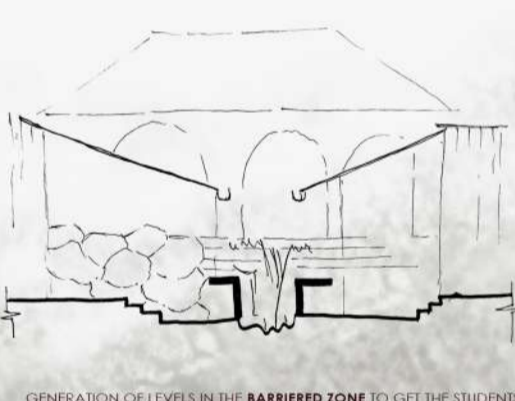
LINEAR ORGANIZATION



CONCENTRIC ORGANIZATION



INTERMEDIATE ORGANIZATION



COLOURED FLOORING HELPS CREATE A CONTRAST WHICH WILL IN TURN HELP DIFFERENTIATE ELEMENTS.



ROOF PLAN: IKSHANA
SCALE : 1:500



LEGEND:

- ECHOLOCATION TRAINING CENTRE
- SEMIPUBLIC AREA
- CLASSROOM
- HOSTEL

THE PLANS INCORPORATES COGNITIVEMAPPING WHICH USES LANDMARK TO GIVE IDENTITY TO EACH SPACE.



THE COMMON REPETITIVE ELEMENT IS THE JALI WALL WITH PATTERN. EACH WALL HAS A DISTINCTIVE CHARACTER USING THE SAME PATTERN ARRANGED DIFFERENTLY. THE IDEA IS TO CREATE UNIFORMITY WITHIN THE DISTINCTIVE CHARACTERS.

WAYS TO REDUCE NOISE IN A PUBLIC SPACE

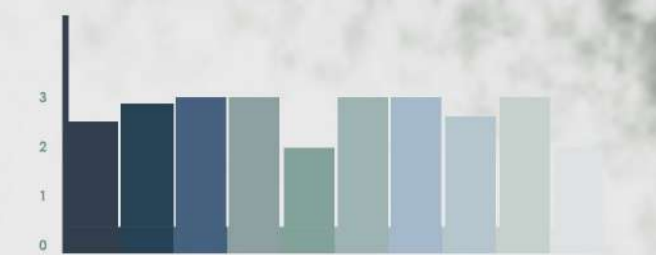
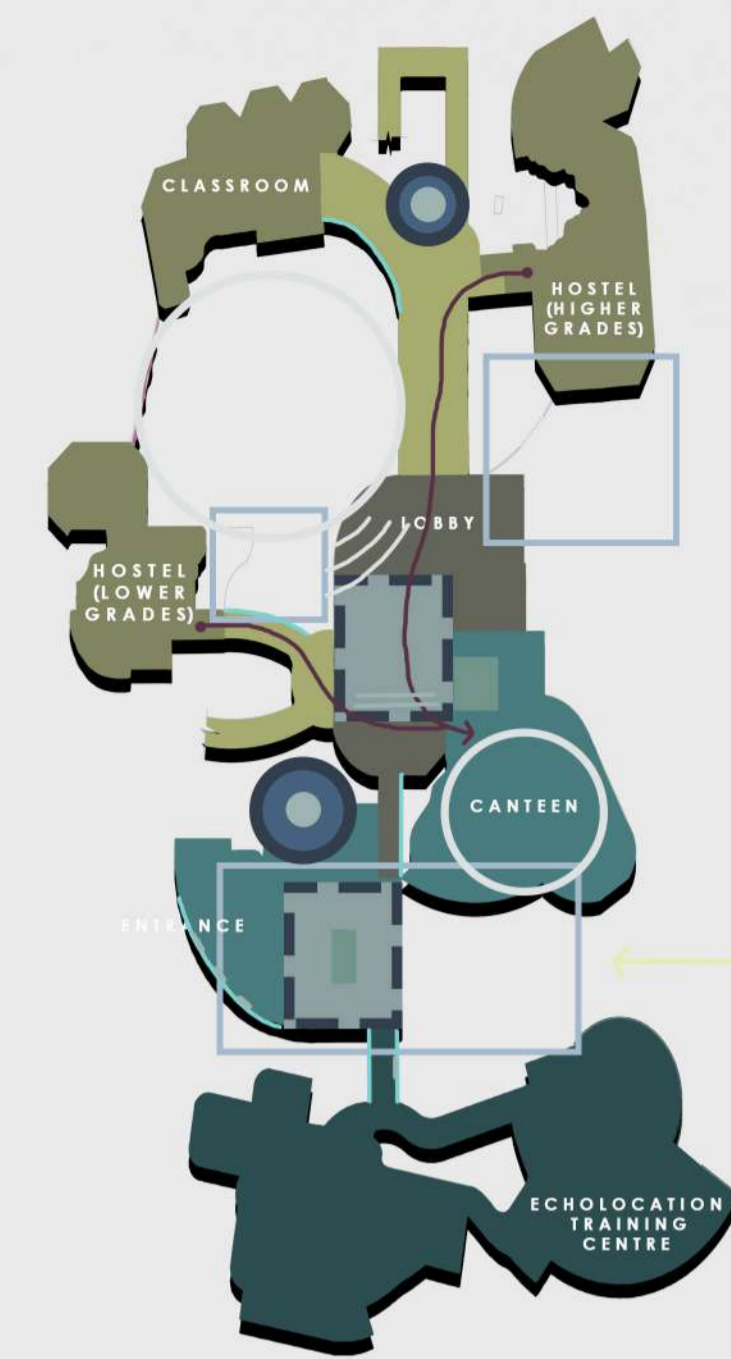
1. LEAVES BROADER AND SMALL WILL HELP REDUCE UP TO 10 DECIBELS.
2. SOUND ABSORBING MATERIAL ALONG THE NOISY PATH AND INCREASED NUMBER OF SURFACE.
3. INTRODUCTION OF WHITE NOISE WHICH WILL REDUCE THE NOISE.

IT IS IMPORTANT TO CONTROL THE NOISE LEVEL TO ATTAIN A PERFECT SOUNDSCAPE. THE NOISE LEVEL CAN CONFUSE THE THE BLIND MISGUIDING AND ITS OFTEN HARD TO READ THE SURROUNDING. THE PRINCIPLES OF ECHOLOCATION CAN BE EASY PRACTICED WITH A REDUCED NOISE LEVEL.



ENTRANCE LOBBY

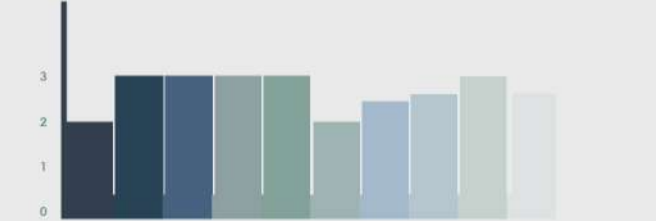
PLANNING APPROACH



PUBLIC



SEMI-PUBLIC



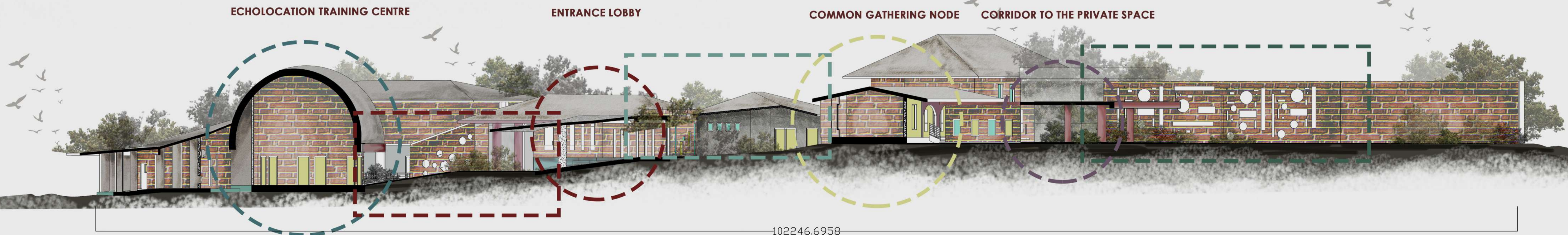
PRIVATE

THE PROPOSED CHART WILL HELP ANALYSE THE FUNCTIONALITY OF THE BUILT SPACE. THIS MULTISENSORY APPROACH WILL THUS FOLLOW THE NORMS ACCORDING TO THE RIGHTS OF PERSONS WITH DISABILITIES ACT, 2016



MASSING MODEL

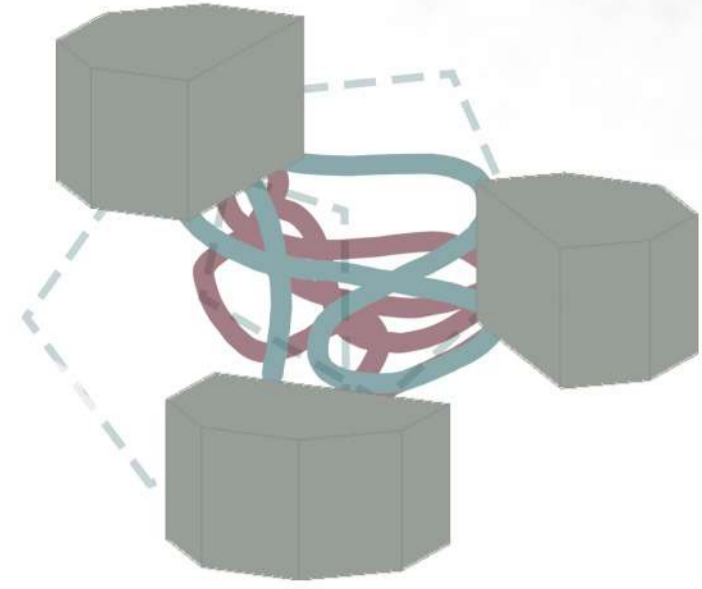
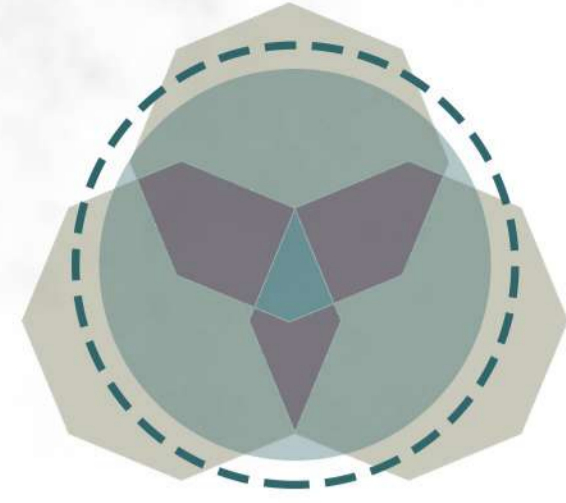
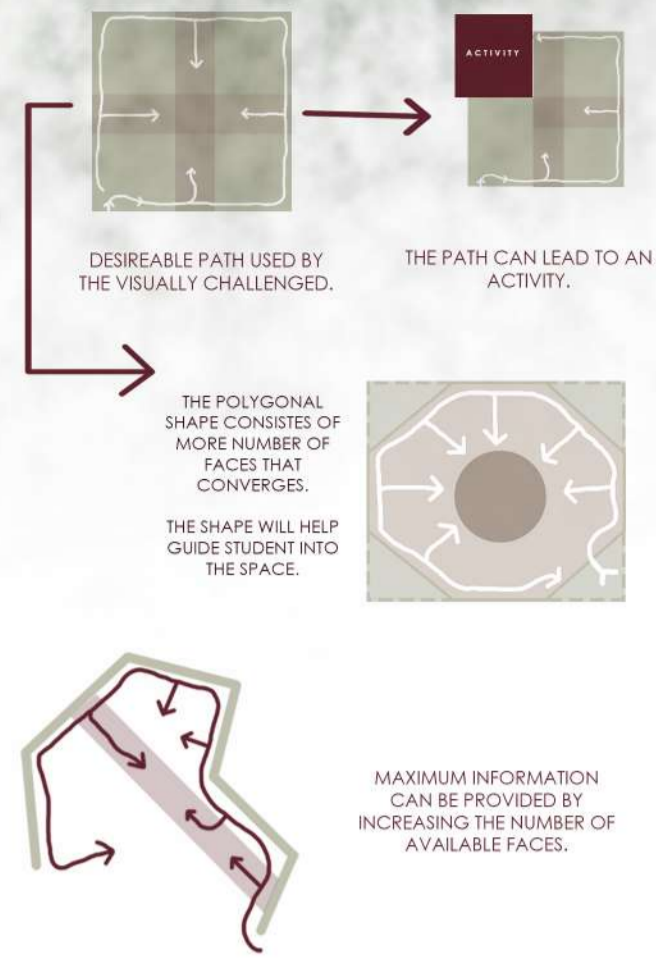
- FLOWING WATER AS LANDMARK
- TEXTURE FOR GUIDANCE
- DISTINCTIVE CHARACTER TO EACH PATTERNED WALL



SITE SECTION

SCALE : 1:150

102246.6958



CONNECTIVITY

LEVEL 2

ACTIVITY

GROUND FLOOR

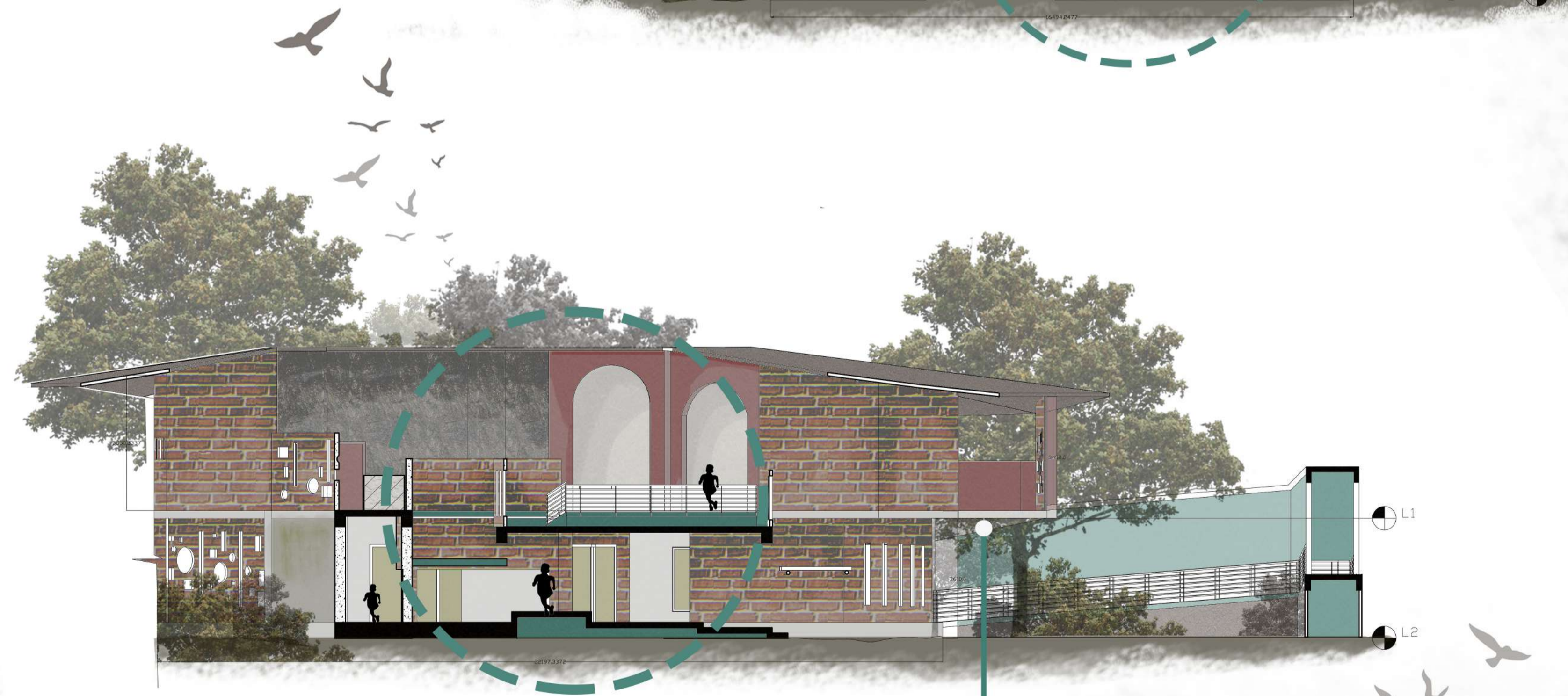
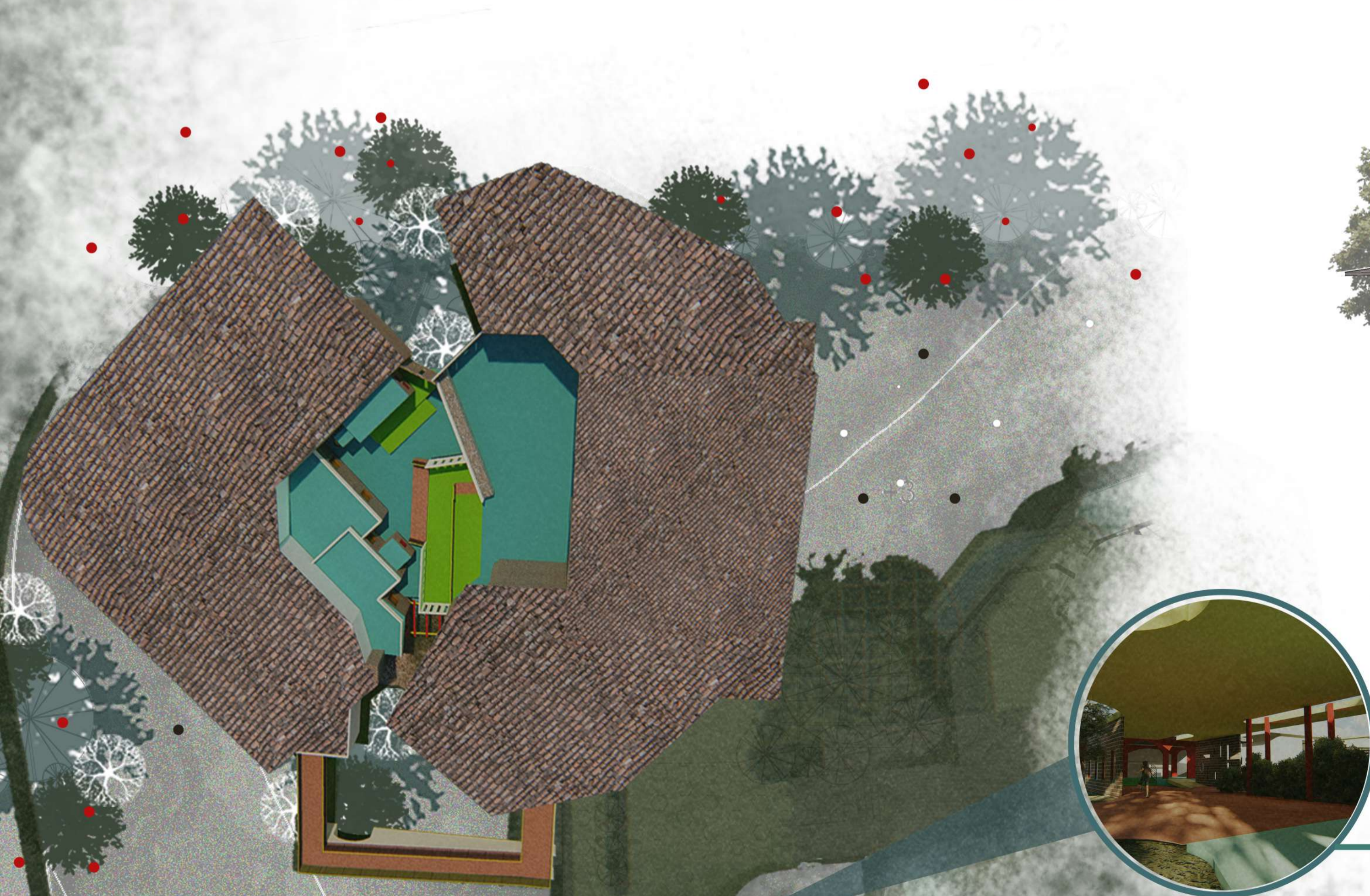
MEZ

ECHOLOCATION EXPERIENCE CENTRE

ACTIVITY ZONE ON MEZZANINE FLOOR

ACTIVITY ZONE ON FIRST FLOOR

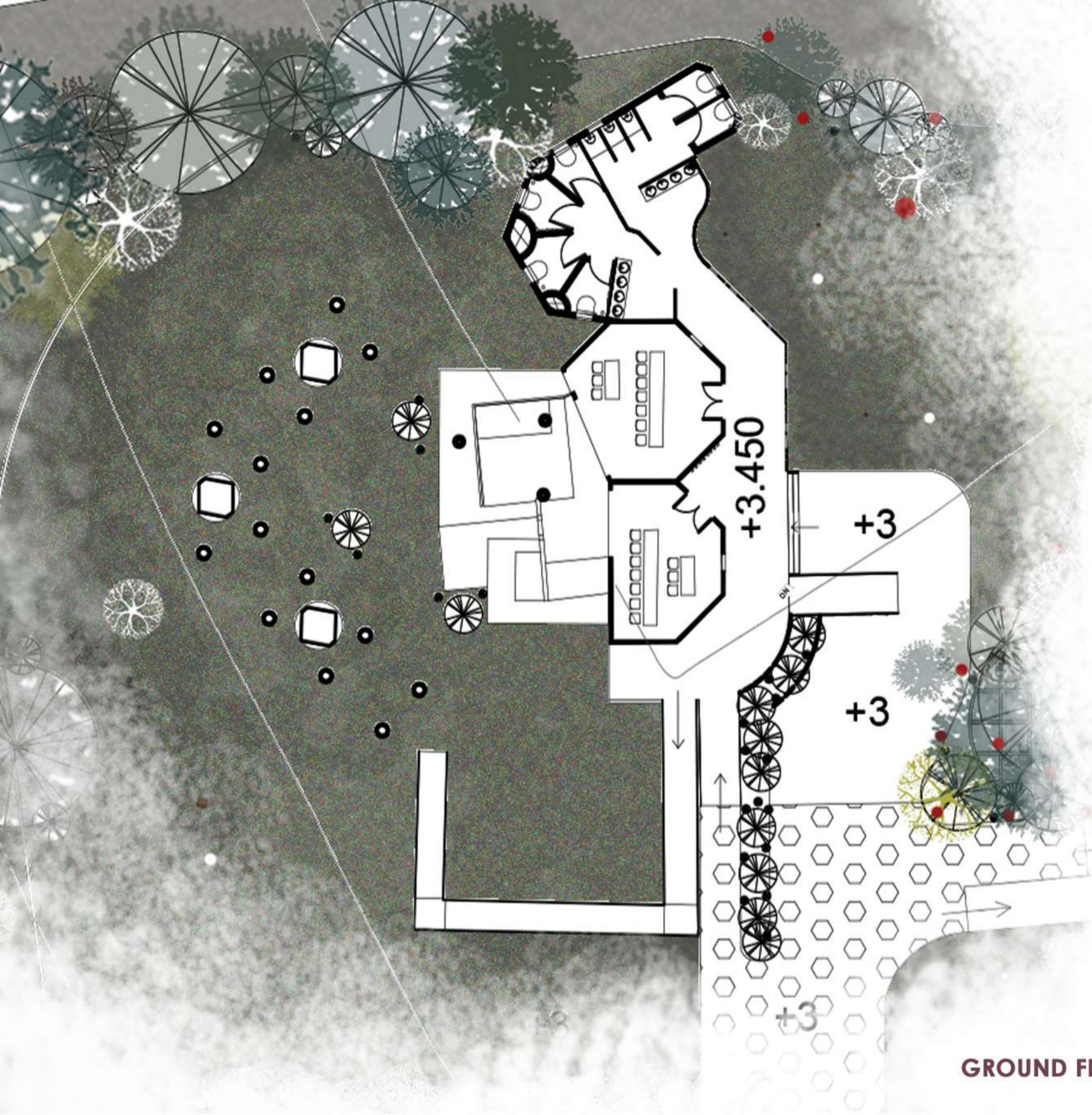
ACTIVITY ZONE ON GROUND FLOOR



LONGITUDINAL SECTION THROUGH THE ACTIVITY ZONE

THE CORRIDORS





GROUND FLOOR



THE INTERIORS ARE MADE PLAYFUL USING THE LEVELS AND WITH ELEMENTS LIKE CLIMBING WALL

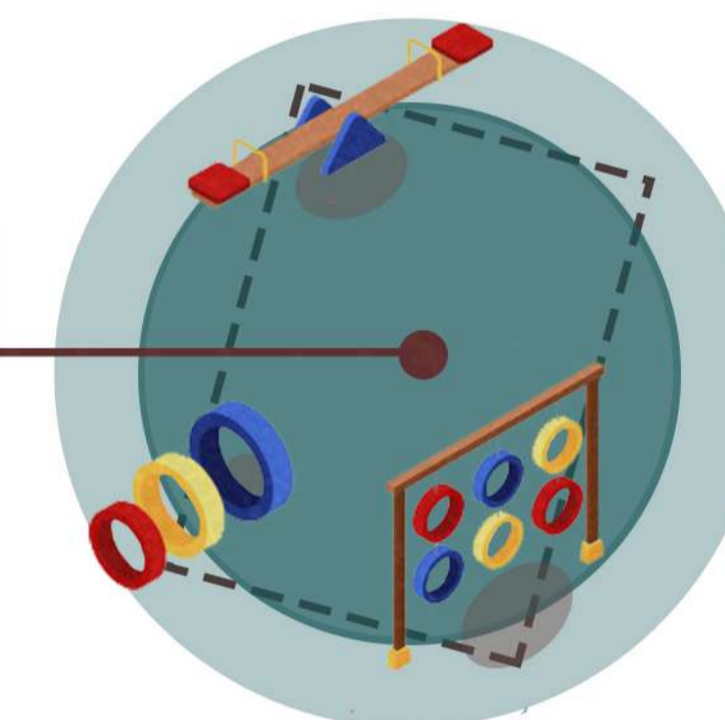


EXISTING

INTERACTIVE WALL



INTEGRATION OF EXISTING ELEMENTS INTO THE ACTIVITY HUB



PROJECTION WHICH CAN USE BOTTLE CAPS TO MAKE UP NEW WORDS AND SENTENCES.

INTERACTIVE WALL NOT ONLY SIMULATES THE TACTILE SENSORY. THEY CAN ALSO BE USED FOR EDUCATION. IT CAN BE A FUN INTERACTION FOR THE STUDENTS.

PSYCHOLOGICAL IMPACT



THE CONTRAST CREATED USING COLOURS WILL HELP THE VISUALLY IMPAIRED DIFFERENTIATE BETWEEN ELEMENTS. EXPOSURE TO COLOURS WILL HELP THEM DIFFERENTIATE COLOURS TO AN EXTEND WHEN THEY FACE THE REAL WORLD AS WELL.



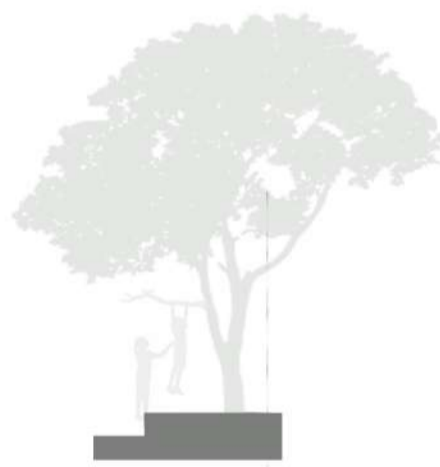
THE CONCEPT OF THE CLIMBING ROPE IS TO LIBERATE THE BLIND FROM THEIR FEARS. INCREASING THE FAMILIARITY WITH LEVELS AND TEXTURES WILL HELP THEM BUILD CONFIDENCE TO FACE THE WORLD.



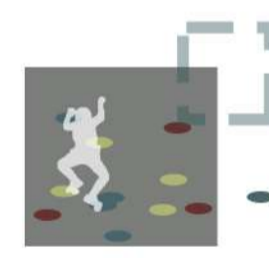
INTERACTIVE WALL NOT ONLY SIMULATES THE TACTILE SENSORY. THEY CAN ALSO BE USED FOR EDUCATION. IT CAN BE A FUN INTERACTION FOR THE STUDENTS.



THE SPACE UNDER THE RAMP IS BEING UTILISED AS A SECONDARY ACTIVITY HUB. THE MONKEY BAR THAT CURRENTLY EXISTS AN BE FIXED UNDER THE RAMP, CREATING A FUN ACTIVITY ZONE.



PLATFORM NEXT TO THE CLIMBING WALL AND THE TABLE IS AN OUTDOOR ENVIRONMENT WHERE THEY CAN CONDUCT CLASS. SIMILAR TO THE GOURMETS SYSTEM.



THE CONCEPT OF THE CLIMBING WALL HELPS TO LIBERATE THE BLIND FROM THEIR FEARS. INCREASING THE FAMILIARITY WITH LEVELS AND TEXTURES WILL HELP THEM BUILD CONFIDENCE TO FACE THE WORLD.

SECONDARY ACTIVITY



THE INTERIORS ARE MADE PLAYFUL USING THE LEVELS AND WITH ELEMENTS LIKE CLIMBING WALL

