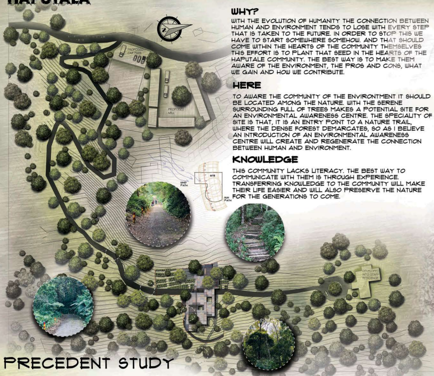
ENVIRONMENTAL AWARENESS CENTRE
HAPUTALA

L.A.S.SHIKARA SILVA
172145E
M.D.P 2020


PROPOSED CAR PARK
PROPOSED MILL
SITE
WIND PATH
SUN PATH
DEVELOPED INTO STAFF RESIDENCE

WHY?

WITH THE EVOLUTION OF HUMANITY THE CONNECTION BETWEEN HUMAN AND ENVIRONMENT TENDS TO LOSE WITH EVERY STEP THAT IS TAKEN TO THE FUTURE. IN ORDER TO STOP THIS WE HAVE TO START SOMEWHERE SOMEHOW. AND THAT SHOULD COME WITHIN THE HEARTS OF THE COMMUNITY THEMSELVES THIS EFFORT IS TO PLANT THAT SEED IN THE HEARTS OF THE HAPUTALE COMMUNITY. THE BEST WAY IS TO MAKE THEM AWARE OF THE ENVIRONMENT, THE PROS AND CONS, WHAT WE GAIN AND HOW WE CONTRIBUTE.

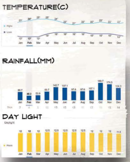
HERE

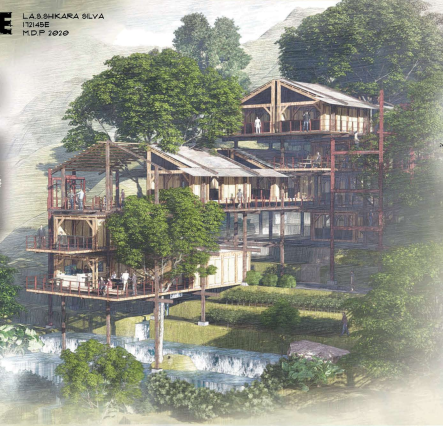
TO AWARE THE COMMUNITY OF THE ENVIRONTMENT IT SHOULD BE LOCATED AMONG THE NATURE. WITH THE SERENE SURROUNDING FULL OF TREES MAKES A POTENTIAL SITE FOR AN ENVIRONMENTAL AWARENESS CENTRE. THE SPECIALITY OF SITE IS THAT, IT IS AN ENTRY POINT TO A NATURE TRAIL, WHERE THE DENSE FOREST DEMARCATES, SO AS I BELIEVE AN INTRODUCTION OF AN ENVIRONMENTAL AWARENESS CENTRE WILL CREATE AND REGENERATE THE CONNECTION BETWEEN HUMAN AND ENVIRONMENT.

KNOWLEDGE

THIS COMMUNITY LACKS LITERACY. THE BEST WAY TO COMMUNICATE WITH THEM IS THROUGH EXPERIENCE. TRANSFERRING KNOWLEDGE TO THE COMMUNITY WILL MAKE THEIR LIFE EASIER AND WILL ALSO PRESERVE THE NATURE FOR THE GENERATIONS TO COME.

CLIMATIC DATA





INTRODUCTION OF THE SAW MILL
2021-02
2021-01
IMPORT RAIL TRACKS TO THE STEEL CO-OPERATION

ENVIRONMEN
A

SPACES

ADMINISTRATION
RECEPTION AND ENT
CAFETERIA
WASH ROOM
ADMINISTRATION OFF
STAFF REST ROOM

ACTIVITY AREA
WORKSHOP SPACE
LECTURE ROOM
EXHIBITION HALL

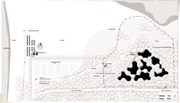
ACCOMODATION
6 BED DOMETRIES
COOKING SPACE
WASHROOMS
TVLOBBY

SERVICE AREA
MAINTANANCE ROOM
SERVICE ROOM
TOTAL

PRECEDENT STUDY

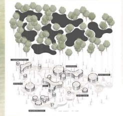
FUNCTIONS AND SPATIAL PLANNING

DESIGN RESEARCH & REHABILITATION CENTRE FOR SEA TURTLES IZTUZU BEACH-TURKEY

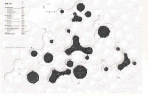


INSPIRED BY THE ORGNICALLY CURVED AND DYNAMIC TRACES OF THE BEACH TIDES, SURROUNDING RED PINES AND THE FORM OF THE ECO SYSTEM

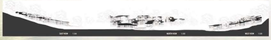
LISTEN TO THE SOUND OF THE SURROUNDING, PRESERVE CULTURAL VALUES AND USE LOCAL RESOURCES



HIDDEN AMONG THE WOODS TO MIMIC THE NATURE ITSELF, CREATE CALMING, SERENE SPACES INVITE, ENCOURAGE AND MOTIVATE THE VOLUNTEERS, VISITORS AND RESEARCHERS



FUNCTIONS AS ISOLATED UNITS BUT CONNECTED WITH SHADED PATHWAYS AND LINKED VISUALLY AND PHYSICALLY WHILE REDUCING THE TRAFFIC AND NOISE.

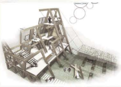

EAST VIEW
NORTH VIEW
WEST VIEW

THE DESIGN DO NOT SIT IN THE NATURAL GROUND, ALLOWING THE NATURAL LIFE OF THE SOIL TO CONTINUE.

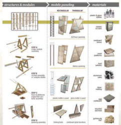
TECHNOLOGY

SYSTEMIC AGRO-TOURISM
CHILI RIVER- YONGTAI- CHINA

MERGE THE URBAN AND RURAL TOURIST ATTRACTION WHILE PRESERVING THE CULTURAL HERRITAGE



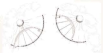
SELF MANUFACTURED SHELTERS TO PROMOTE ENVIRONMENTAL AWARENESS AND NEW SKILLS


structures & modules
mobile paneling
materials

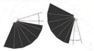
DETAIL

ECO MOYO EDUCATION CENTRE KENYA, KIFI
THE SCARCITY AND CREATIVITY STUDIO

CONSISTS WITH TWO SECTORS
1. PRIMARY SCHOOL
2. ECO MOYO FARM



1. WALL-PANELED SOFTWOOD
2. TRUSSES- SOFTWOOD
3. CORAL STONE AND CEMENT WITH LOCAL EARTH

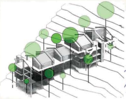


ROOF TO RAIN WATER HARVESTING

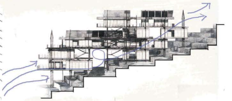
WINDOW DETAIL

THE DESIGN AND THE CONTEXTUAL RESPONSE

FOR THE HAPPUTALE COMMUNITY A TEA FACTORY COULD BE THE BEST KNOWN STRUCTURE AFTER THEIR LINE HOUSES, THERE LIVES HAS BEEN ORIENTED WITH THIS FORM AND PROCESS, IT IS ALWAYS GOOD TO BE IN A PLACE WHICH IS FAMILIAR

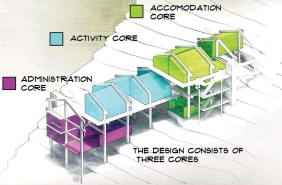


DEFINE NEW DEFINITION FOR THE RELATIONSHIP BETWEEN ARCHITECTURE BY BREAKING THE CONVENTIONAL ENVELOP OF A BUILDING AND MERGE IT WITH THE NATURE. THE BASIC STRUCTURE OF A TEA FACTORY IS BEING CONSIDERED

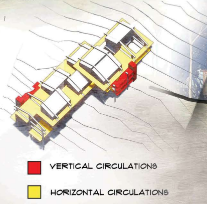


WITH THE 2M GROUND TO FLOOR HEIGHT GAP THAT IS MAINTAINED THROUGHOUT THE DESIGN, WILL ENCOURAGE THE BIO DIVERSITY TO EXISTS UNDER THE CONSTRUCTION HAVING ENOUGH SUNLIGHT FALLEN.

THREE CORES ARE ALIGNED WITH THE LAYOUT IN ORDER TO RECEIVE DAY LIGHT AND VENTILATION, PRESERVING THE BEAUTY OF THE WATER WAY.


ACCOMODATION CORE
ACTIVITY CORE
ADMINISTRATION CORE

THE DESIGN CONSISTS OF THREE CORES


VERTICAL CIRCULATIONS
HORIZONTAL CIRCULATIONS

MAIN OBJECTIVE

ELIMINATE THE DISASTROUS PINE TRESS FROM THE HILLS AND GROW ADVANTAGEOUS TREES INSTEAD.

MAKE THE COMMUNITY AWARE OF THE BY PRODUCTS THAT CAN BE PRODUCE FROM THE DISCARDS WHEN CUTTING PINE TRESS.

1. RELEASE TOXIC ELEMENTS
2. DRY WATER SOURCES
3. STOP UNDER PLANTATION
4. CAUSE POOR SOIL

MORE THAN 40000 ACRES IN THE HILLS WHICH KILLS THE BIO DIVERSITY AND CAUSES WILD LIFE TO ATTACK VILLAGES FOR FOOD

TIME LINE

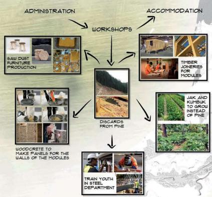
- 2021-03 — ERECTING THE STEEL STRUCTURE AT SITE
- 2021-04 — PREFABRICATION OF TIMBER DUST PANELS AT THE MILL
- 2021-06 — COMPLETION OF BASIC STRUCTURE
- 2021-06 — RECRUITING THE YOUTH FROM THE COMMUNITY
- 2021-07 — RE-PLANTATON OF THE FOREST
- 2021-08 — EXPANDING THE STRUCTURE WITH THE COMMUNITY
- 2021-10 — OPENING FOR PUBLIC
- 2021-12 — DEVELOPING THE FOREST AS A BIRD AND HERB SANCTUARY
- 2050 — REDEVELOPED TO AN ADVENTURE CAMP

BRIEF

NTAL AWARENESS CENTRE
AND YOUTH HOSTEL

	AREA (M²)	TOTAL AREA (M²)	TOTAL
CORE		87	SPACES WITH OPEN SPACES THAT CONNECTS WITH THE ENVIRONMENT
RANCE LOBBY	32		
	15		
	15		
ICE	15		
	10		
		310	DYNAMIC SPACES THAT ENHANCES THE FUNCTIONAL QUALITY
	130		
	30		
	150		
		150	SPACES TO GRAB THE MAXIMUM VIEW
(5)	90		
	30		
	30		
	30		
		50	
	10		
	40		
		600	

PROGRAMME



ADMINISTRATION → WORKSHOPS → ACCOMMODATION

DISCARDS FROM PINE

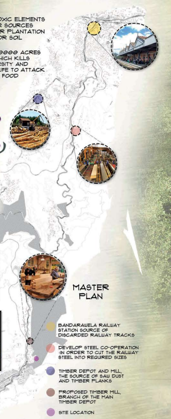
SAW DUST FURNITURE PRODUCTION

TIMBER JOINERIES FOR MODULES

WOODCRETE TO MAKE PANELS FOR THE WALLS OF THE MODULES

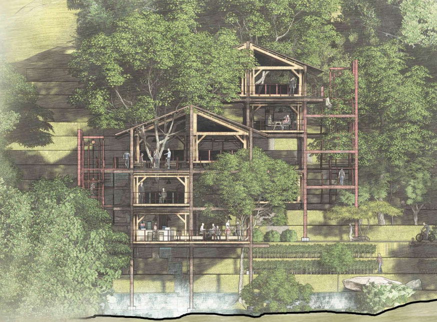
JAK AND KUMBUK TO GROW INSTEAD OF PINE

TRAIN YOUTH IN STEEL DEPARTMENT

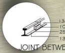


MASTER PLAN

- 🟡 BANDARAWELA RAILWAY STATION SOURCE OF DISCARDED RAILWAY TRACKS
- 🔴 DEVELOP STEEL CO-OPERATION IN ORDER TO CUT THE RAILWAY STEEL INTO REQUIRED SIZES
- 🔵 TIMBER DEPOT AND MILL, THE SOURCE OF SAW DUST AND TIMBER PLANKS
- 🟤 PROPOSED TIMBER MILL, BRANCH OF THE MAIN TIMBER DEPOT
- 🟣 SITE LOCATION

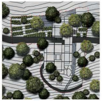


FRONT ELEVATION

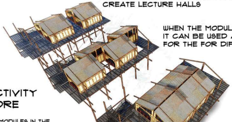


JOINT BETWEEN TWO RAIL TRACK

138mmx125mm type reused steel rail track section as beam
10mm thick steel plate
25ø type four nuts for 45 feet rail tracks
138mmx125mm type reused steel rail track section as beam



THE DESIGN IS PLACED CONSIDERING ABOUT THE EXISTING TREES AND CREATING SPACES ACCORDING TO THAT



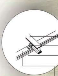
TWO MODULES ARE MERGED IN ORDER TO CREATE LECTURE HALLS

WHEN THE MODULES ARE SEPERATED IT CAN BE USED AS WORKSHOP AREAS FOR THE FOR DIFFERENT ACTIVITIES

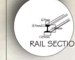
ACTIVITY CORE

THE MODULES IN THE ACTIVITY CORE CAN BE MOVED ALONG IN ORDER TO MAKE DIFFERENT SPACES WHICH IS BENEFICIAL TO GET THE MAXIMUM USE OF THE LIMITED SPACE, WHILE MAKING THE SPACES INTERESTING

WHEN ALL THE FOUR MODULES ARE MERGED TOGETHER IT FORMS A HALL WHICH IS USED AS AN EXHIBITION AREA

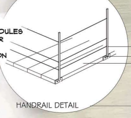


reused rail as beam
10mm thick steel plate bolted two way beam together [beam to beam joint]
1"ø galvanized & black painted nuts bolted to the column with 30 mm thick steel plate [column to beam joint]
reused rail as beam



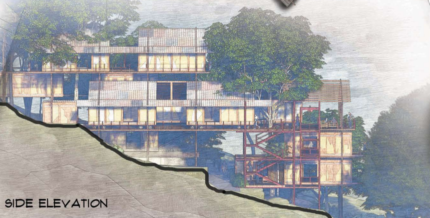
RAIL SECTION

67mm
37mm
125mm

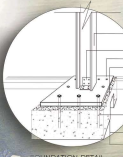


HANDRAIL DETAIL

maroon painted steel handrail with stainless steel tension cables
hand rail nut & bolted with steel by using end steel plate
black painted reused steel mesh

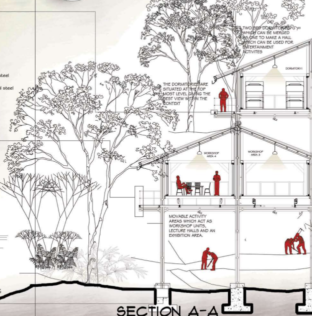


SIDE ELEVATION



FOUNDATION DETAIL

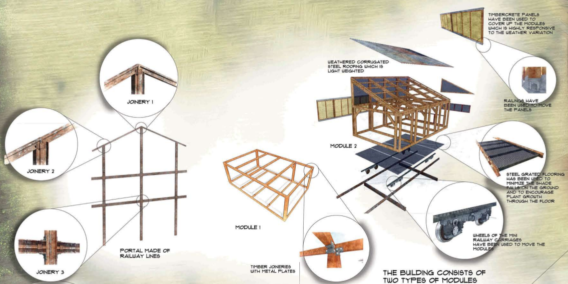
125mm x 138mm reused rail as column
tab plate
steel base plate
non- shrinking grout
GROUND LEVEL
anchor bolts
INVISIBLE CONCRETE FOOTING



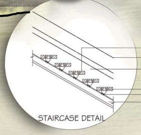
SECTION A-A

SCALE 1:50

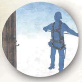
TWO BED DORMITORIES WHICH CAN BE MERGED AS ONE TO MAKE A HALL WHICH CAN BE USED FOR ENTERTAINMENT ACTIVITES
DORMITORY 1
THE DORMITORIES ARE SITUATED AT THE TOP MOST LEVEL GIVING THE BEST VIEW WITHIN THE CONTEXT
WORKSHOP AREA 4
WORKSHOP AREA 3
MOVABLE ACTIVITY AREAS WHICH ACT AS WORKSHOP UNITS, LECTURE HALLS AND AN EXHIBITION AREA.


JOINERY 1
JOINERY 2
JOINERY 3
PORTAL MADE OF RAILWAY LINES
MODULE 1
TIMBER JOINERIES WITH METAL PLATES
WEATHERED CORRUGATED STEEL ROOFING WHICH IS LIGHT WEIGHTED
MODULE 2
TIMBERCRETE PANELS HAVE BEEN USED TO COVER UP THE MODULES WHICH IS HIGHLY RESPONSIVE TO THE WEATHER VARIATION
RAILINGS HAVE BEEN USED TO MOVE THE PANELS
STEEL GRATED FLOORING HAS BEEN USED TO MINIMIZE THE SHADE FALLS ON THE GROUND AND TO ENCOURAGE PLANT GROWTH THROUGH THE FLOOR
WHEELS OF THE MINI RAILWAY CARRIAGES HAVE BEEN USED TO MOVE THE MODULES

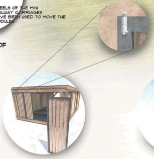
THE BUILDING CONSISTS OF TWO TYPES OF MODULES


50mm thick steel box bar framed grated step on steel rail section
stainless steel cable with maroon matte finish in tension.
reused wrot iron hand rail painted in matte black.
10mm thick steel plate welded at the end of steel railing and screw fixed to the box bar framed grated step
30mm thick steel plate bolted with reused rail
reused rail

STAIRCASE DETAIL



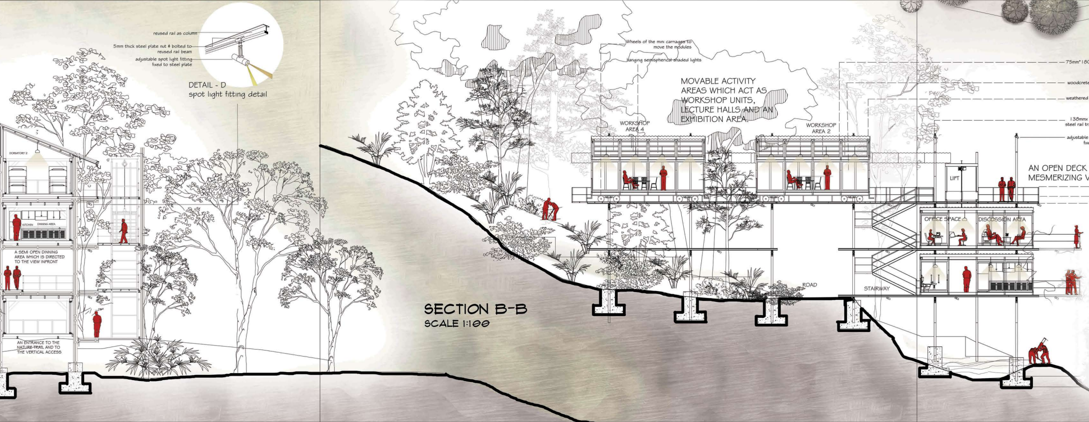
HARNESS FIXATION ON THE RAIL COLOUMNS TO HOOK WHILE MAINTENANCE


LOCKS TO FI THE RAINCOVER CLADDINS

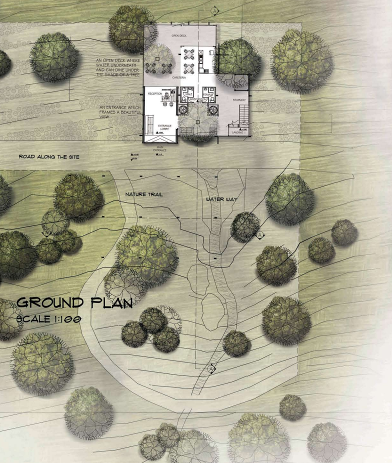
FIXABLE PINE TIMBER VERNEER COVERS IN RAINY TIMES

PROVIDED WITH A SPRINKLER SYSTEM FOR FIRE EMERGENCY

WOODCREET TIMBER FURNITURE

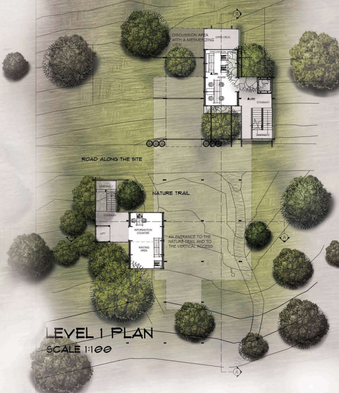

reused rail as column
5mm thick steel plate nut & bolted to reused rail beam
adjustable spot light fitting fixed to steel plate
DETAIL - D
spot light fitting detail
DORMITORY 2
KITCHEN
DINNING AREA
A SEMI OPEN DINNING AREA WHICH IS DIRECTED TO THE VIEW INFRONT
AN ENTRANCE TO THE NATURE TRAIL AND TO THE VERTICAL ACCESS
Wheels of the mini carnages to move the modules
Hanging semisphencal shaded lights
MOVABLE ACTIVITY AREAS WHICH ACT AS WORKSHOP UNITS, LECTURE HALLS AND AN EXHIBITION AREA.
WORKSHOP AREA 4
WORKSHOP AREA 2
LIFT
OFFICE SPACE
DISCUSSION AREA
ROAD
STAIRWAY
AN OPEN DECK
MESMERIZING V
75mm*180
woodcrete
weathered
138mmx
steel rail tr
adjustable
fixe

SECTION B-B
SCALE 1:100


OPEN DECK
AN OPEN DECK WHERE WATER UNDERNEATH AND CAN DINE UNDER THE SHADE OF A TREE
CAFETERIA
LIFT
RECEPTION
MALE
FEMALE
WASHROOM
STAIRWAY
AN ENTRANCE WHICH FRAMES A BEAUTIFUL VIEW
ENTRANCE LOBBY
LANDING 1
MAIN ENTRANCE
ROAD ALONG THE SITE
NATURE TRAIL
WATER WAY
A

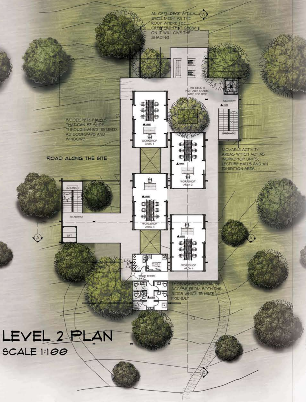
GROUND PLAN

SCALE 1:100


DISCUSSION AREA WITH A MESMERIZING VIEW
OPEN DECK
DISCUSSION AREA
ADMIN
STAIRWAY
LANDING 2
ROAD ALONG THE SITE
NATURE TRAIL
LANDING 1
STAIRWAY
LIFT
INFORMATION COUNTER
WAITING AREA
AN ENTRANCE TO THE NATURE TRAIL AND TO THE VERTICAL ACCESS
A

LEVEL 1 PLAN

SCALE 1:100


AN OPEN DECK WITH A STEEL MESH AS THE ROOF WHERE THE CREEPERS THAT GROW ON IT WILL GIVE THE SHADING
THE DECK IS PARTIALLY SHADED WITH THE TREE
STAIRWAY
WOODCRETE PANELS THAT CAN BE SLIDE THROUGH WHICH IS USED AS DOORWAYS AND WINDOWS
WORKSHOP AREA 1
LANDING 2
ROAD ALONG THE SITE
MOVABLE ACTIVITY AREAS WHICH ACT AS WORKSHOP UNITS, LECTURE HALLS AND AN EXHIBITION AREA.
WORKSHOP AREA 2
LANDING 2
STAIRWAY
WORKSHOP AREA 3
LIFT
WORKSHOP AREA 4
WASH ROOM
THE WASHROOM CAN BE ACCESS FROM BOTH THE SIDES WHICH IS USER FRIENDLY
A

LEVEL 2 PLAN

SCALE 1:100

Omm Glulam timber beams

e partition wall panel

aluminum corrugated sheets for roofing

125mm type reused ack section as beam

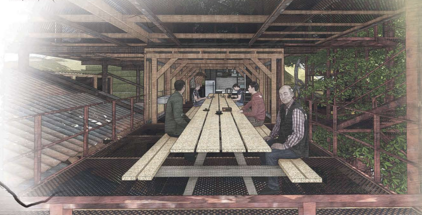
spot light fitting ed to steel plate

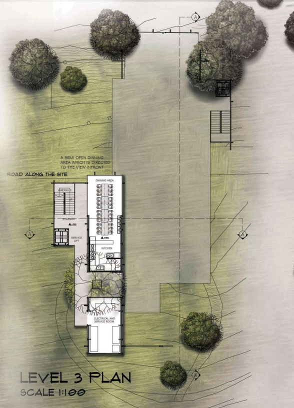
WITH A
VIEW

maroon painted steel handrail with stainless steel tension cables

hand rail nut ⁋ bolted with steel by using end steel plate

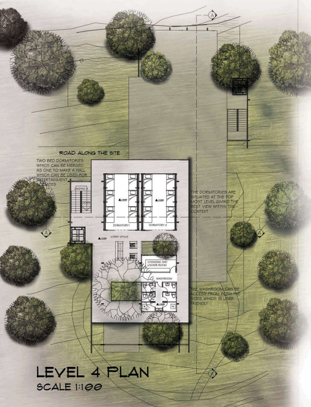
black painted ~~reused~~ steel mesh




A SEMI OPEN DINNING AREA WHICH IS DIRECTED TO THE VIEW INFRONT
ROAD ALONG THE SITE
DINNING AREA
LANDING 3
STAIRWAY
SERVICE LIFT
KITCHEN
ELECTRICAL AND SERVICE ROOM
A

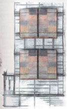
LEVEL 3 PLAN

SCALE 1:100

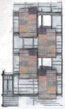

ROAD ALONG THE SITE
TWO BED DORMITORIES WHICH CAN BE MERGED AS ONE TO MAKE A HALL WHICH CAN BE USED FOR ENTERTAINMENT ACTIVITES
LANDING 3
DOWN
THE DORMITORIES ARE SITUATED AT THE TOP MOST LEVEL GIVING THE BEST VIEW WITHIN THE CONTEXT
DORMITORY 1
DORMITORY 2
LOBBY SPACE
CHANGING AND LOCKER ROOM
WASHROOM
THE WASHROOM CAN BE ACCESS FROM BOTH THE SIDES WHICH IS USER FRIENDLY
A

LEVEL 4 PLAN

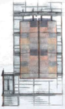
SCALE 1:100



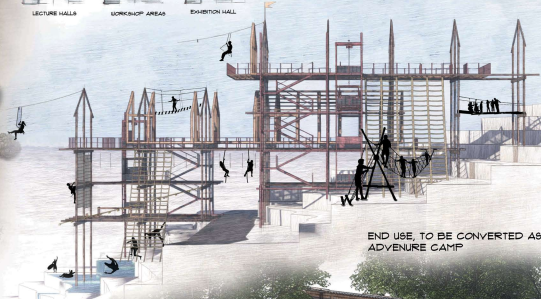
LECTURE HALLS

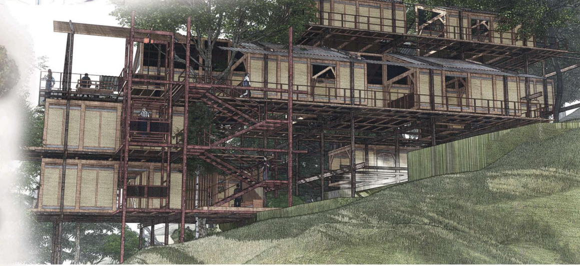
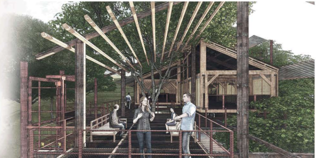
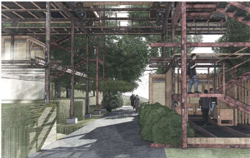


WORKSHOP AREAS



EXHIBITION HALL



END USE, TO BE CONVERTED AS AN ADVENURE CAMP