

AN AWARD WINNING
PROPOSED PROJECT BY THE DEPARTMENT OF
SUSTAINABLE FASHION & INTERIOR DESIGN!



पर्यावरण सचेत नैतिक डिजाइन विद्यापीठ
(एक पुरस्कार विजेता स्वायत्त डिजाइन संस्थान भारतीय, ब्रिटेन
और यूरोप के डिजाइनर द्वारा प्रवर्तित। स्था. 2015)

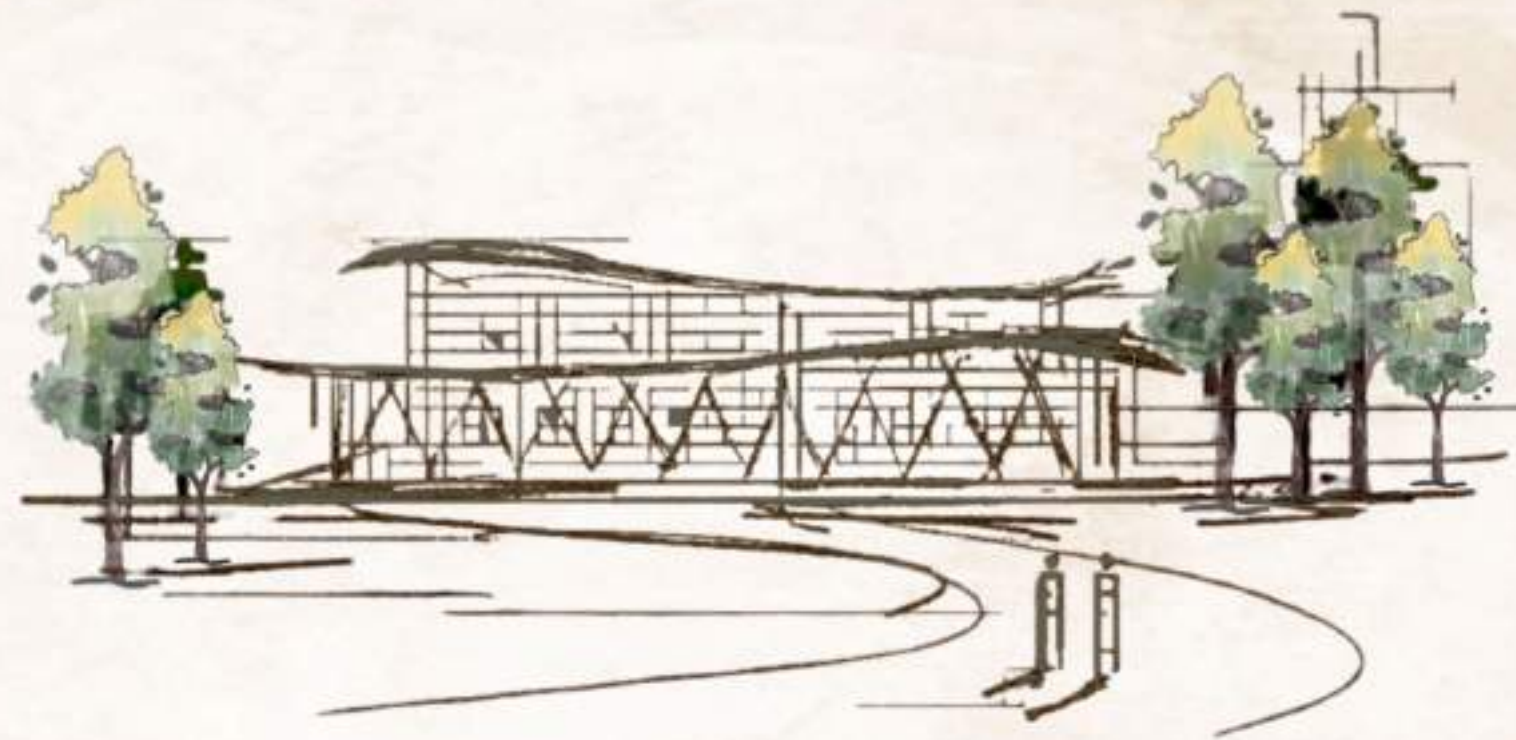
ECOVID SCHOOL OF ETHICAL DESIGN STUDIES
(An Award winning Autonomous Design Institute promoted
by designers of India, UK & Europe. Estd. 2015)

CREATING CHANGEMAKERS

**SUSTAINABLE
DESIGN INTERVENTION
THROUGH FASHION &
ARCHITECTURE IN A
VERNACULAR SPACE!**

উত্তরণ

UTTARAN





Where the mind is
without fear and the
head is held high

Where knowledge is
free...

- Rabindranath Tagore

The earth now serves as a home to over 7.9 billion people and out of that about more than a billion people are differently abled. The ratio is unmatched and so are the stereotypes - the shame and ignominy that comes with being differently abled.

When thinking of these issues from the point of view of a child, the turbulence only seems to be of a higher magnitude. The kind of education system that the country brings to the table is structured to serve those who fit into what society labels as "normal". Automatically when a country thinks like a hivemind, the people who are different are left on the curb to fend for themselves, the only support being that of their families, that too if they are lucky enough to have one.



*"How a society
treats its disabled
is the true measure
of a civilization."*

*Chen Guangcheng
(The Chinese civil
rights activist)*



Inspired from the famous verse by Rabindranath Tagore, "Chitto Jetha Bhayshunyo, uccho jetha shir", meaning "Where the Mind is Without Fear, where the head is held high", this project stands as a school for children who have special needs - the ones left behind, the ones overlooked, the ones that are often ignored and avoided - Uttaran strives to be the wind beneath their wings to help them reach newer heights and ascend to freedom.

SITE STUDY



Site Location:
Dhosa, a village beside the River Piyali in Jayanagar in the Baruipur subdivision of the South 24 Parganas District.

Connectivity:
Gocharan-Dhosa Road links Dhosa to the State Highway. Gocharan railway station is located at a 20 min drive.

Wind Direction:
Mainly from the South and blows towards the North.

Annual Weather Conditions:
Rainfall around 1750mm
Temperature ranges between maximum 36 to minimum 13 degree Celsius
Relative Humidity ranges from 71 to 85 %

Sun Path:
The sun rises from the Northeast of the site. And peak's during 10 am to 2:30 pm.

SUSTAINABLE DEVELOPMENT GOALS OF THE PROJECT



1 NO POVERTY



4 QUALITY EDUCATION



8 DECENT WORK AND ECONOMIC GROWTH

- Through providing inclusive education to a section of children often overlooked by society.
- Capacity building and knowledge exchange through exchange programmes and workshops by experts in the field.
- Vocational Training/ Adult education for locals.
- Employment of local workforce.



5 GENDER EQUALITY



10 REDUCED INEQUALITIES

- Unisex uniform design.
- No discrimination in employment.
- Empowering women through employment and vocational training.



2 ZERO HUNGER

- Food security and improved nutrition by providing meals to students.
- Promoting sustainable agriculture by providing farm-to-table experience for visitors.



3 GOOD HEALTH AND WELL-BEING

- Promoting good health by appointing on-site doctor and counsellor/therapist.
- Providing annual check-ups for students, employees and family members.



6 CLEAN WATER AND SANITATION

- Rainwater harvesting and natural filtration for reusing the water for irrigation and flushing.



7 AFFORDABLE AND CLEAN ENERGY

- Abundant solar energy of the tropical area captured through solar panels.



9 INDUSTRY INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



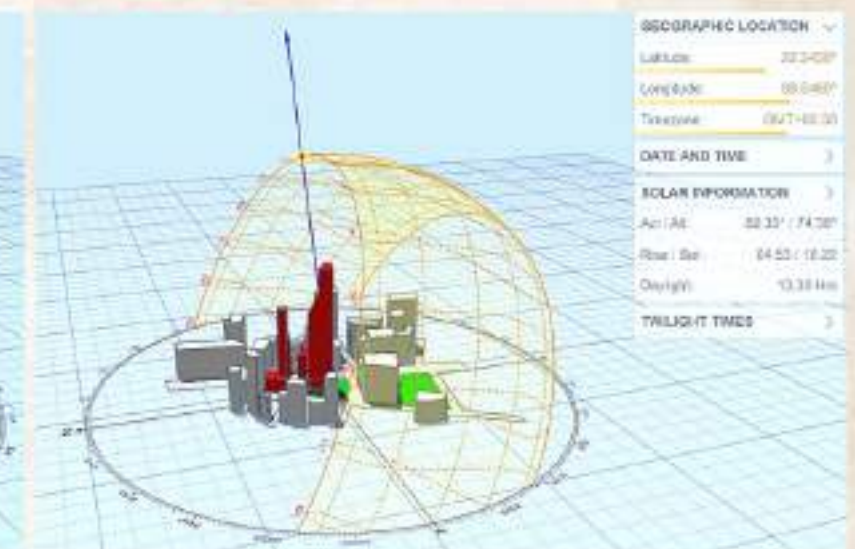
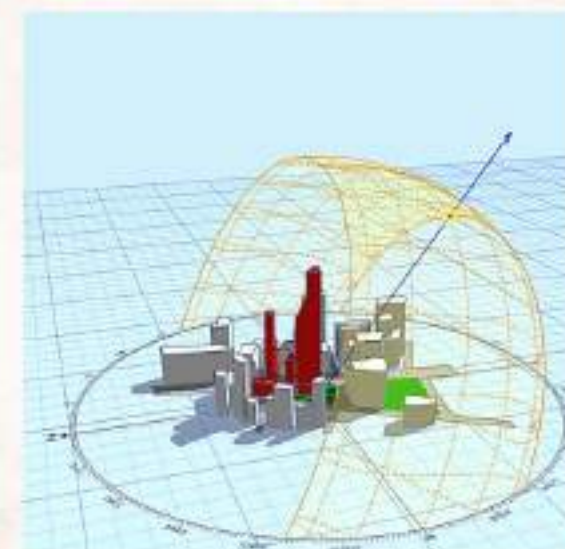
12 RESPONSIBLE CONSUMPTION AND PRODUCTION

- Use of local materials.
- Promoting indigenous construction methods.
- Design for disassembly.
- Zero waste construction/ garment pattern.
- Circular Economy.
- Barrier-free design.



17 PARTNERSHIPS FOR THE GOALS

- Collaborations with NGOs/ Institutions.
- Production of eco-colour dyeing companies.
- Cluster programmes.



SITE VISIT

UTTARON



Thatched roof and adobe construction of Vocational classroom

Sketches done on site



As it is a rural area, majority of the houses are made out of bamboo, Mud and Straw i.e. "Kutch House". And About 30% of the houses are constructed with Bricks. The main Local area is full of Agricultural land and few Brick Factories can be found nearby the River.



Bamboo Roof Construction



Site

Ticket to Dhara



Existing Pond



Piyali River

ZERO-WASTE CONSTRUCTION



BUILDING CONSTRUCTION BAMBOOS USED FOR MAKING FURNITURES



BUILDING CONSTRUCTION WOODEN PLANKS USED FOR RECEPTION TABLE



ROPES USED IN SCAFFOLDING USED FOR THE FALSE CEILING



BROKEN BRICKS USED IN LANDSCAPING



EMPTY PAINT BUCKETS USED AS URINALS



SUSTAINABILITY

The materials and components used are one of the main aspects determining the sustainability of a design. For this project, multiple components have been woven with bamboo and cane which are one of the locally available materials.



LOCAL MATERIALS

SOLAR PANELS

As the site is located in a tropical area, it receives ample amount of sunlight all year round. So, solar panels have been installed on top of the thatched roof to provide back-up electricity for the structure.



RECLAIMED FURNITURE

The furniture and decor for the interior have been sourced from reclaimed and repurposed wood. This saves up a lot by avoiding fresh timber processing. The doors have also been either repurposed or reclaimed. Thus, the overall look of the doors may differ individually.



DESIGN FOR DISASSEMBLY

The present structure of the school has been designed for two levels. However, beams and columns have been added to the second floor too so as to enable the addition of more levels or rooms in case more space is required.



SPECIALLY ABLED CHILDREN



Intellectually disabled students differ from other students in terms of rational, behavioral, and physical aspects; their education and activities must be planned with extra care and attention.

These children are more sensitive about their surrounding environment, so while building a school for them one has to think about a calming and safe environment. The architectural factors that must be considered in this context are:

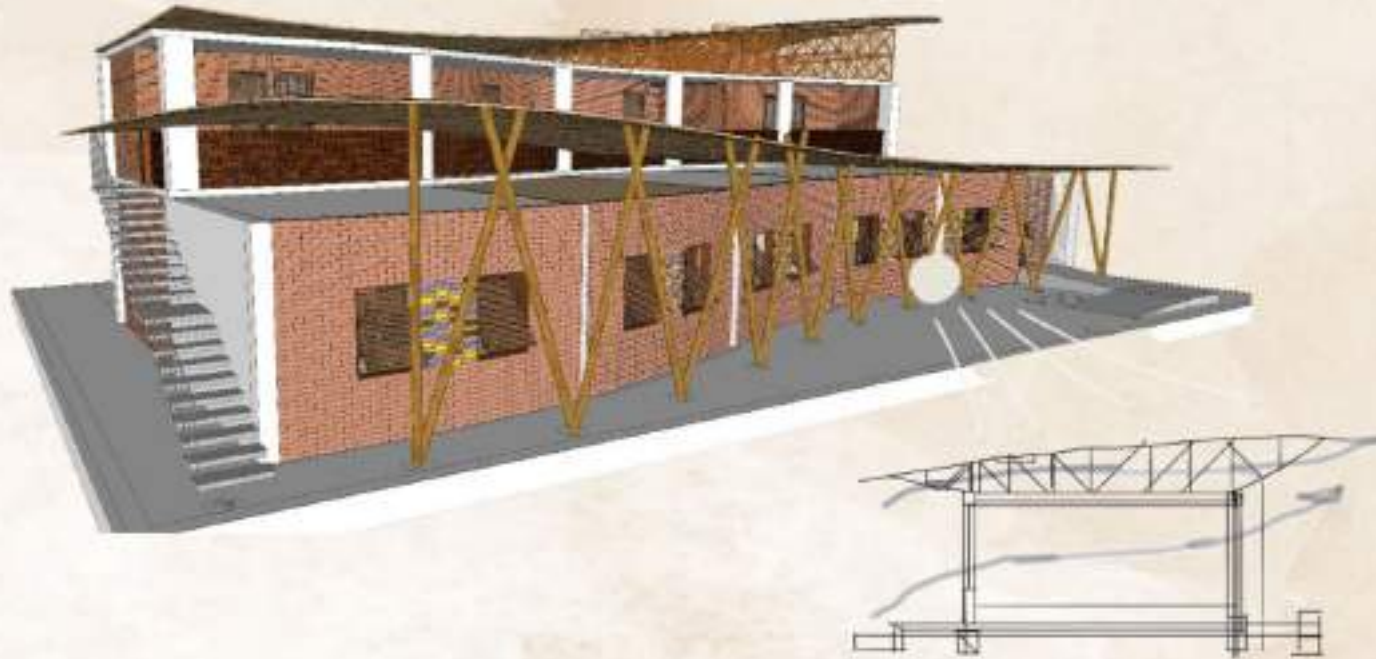
- The layout of the classroom
- Flooring materials
- Transition area
- Foldable furniture
- Insulation
- Ventilation
- Lighting
- Muted colors
- Greener environment
- Perforated walls



DESIGN DEVELOPMENT



The design concept has been developed from the fact that these special children do not follow the stereotype thought process like we do. They have a flowy thought process which is depicted in the drawing. Also the air flow from the nearby river define the fluid architecture of our proje



The notion of a fluid totality can be understood as both the characterization of an existing societal condition and as an architectural concept/ambition to make this condition perceptually palpable within the global built environment and to further intensify and facilitate its complex flourishing."



Vernacular architecture is a type of local or regional construction that makes use of traditional materials and resources from the area in which the building is located.



MODEL



Handcrafted bricks made out of waste lipping wood (more than 10,000 pieces colored- water based distemper terracotta)



Natural landscaping used instead of artificial plants to add life to the otherwise inanimate model

উত্তরণ

চিহ্ন যথা উন্নত শুল্ক and the head is held high



ZERO WASTE



FLUID DESIGN



VERNACULAR
MATERIALS



DESIGN FOR
DISASSEMBLY



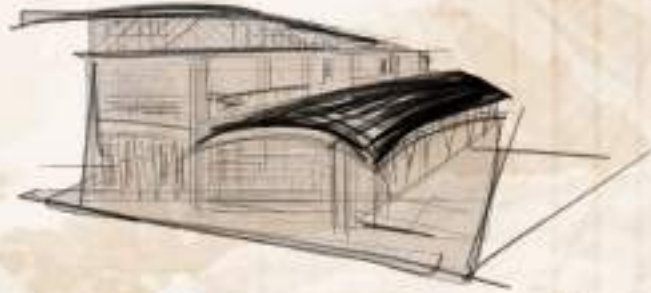
BARRIER FREE
DESIGN



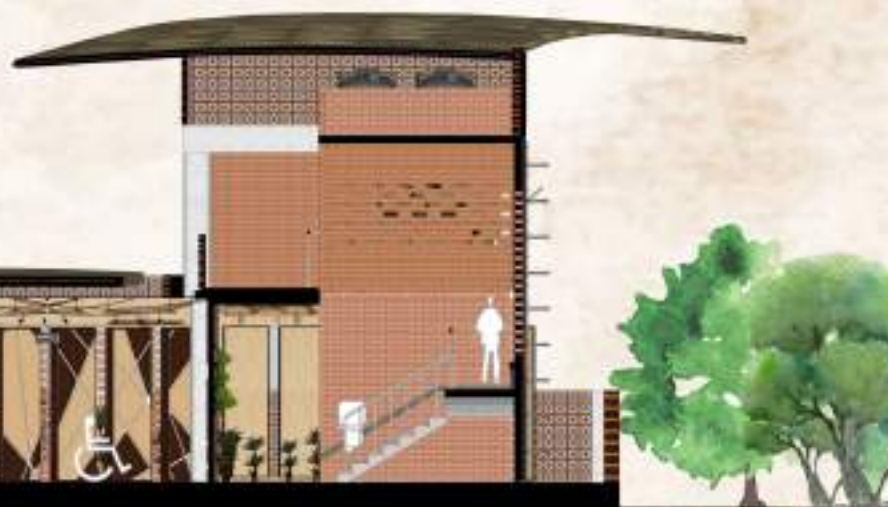
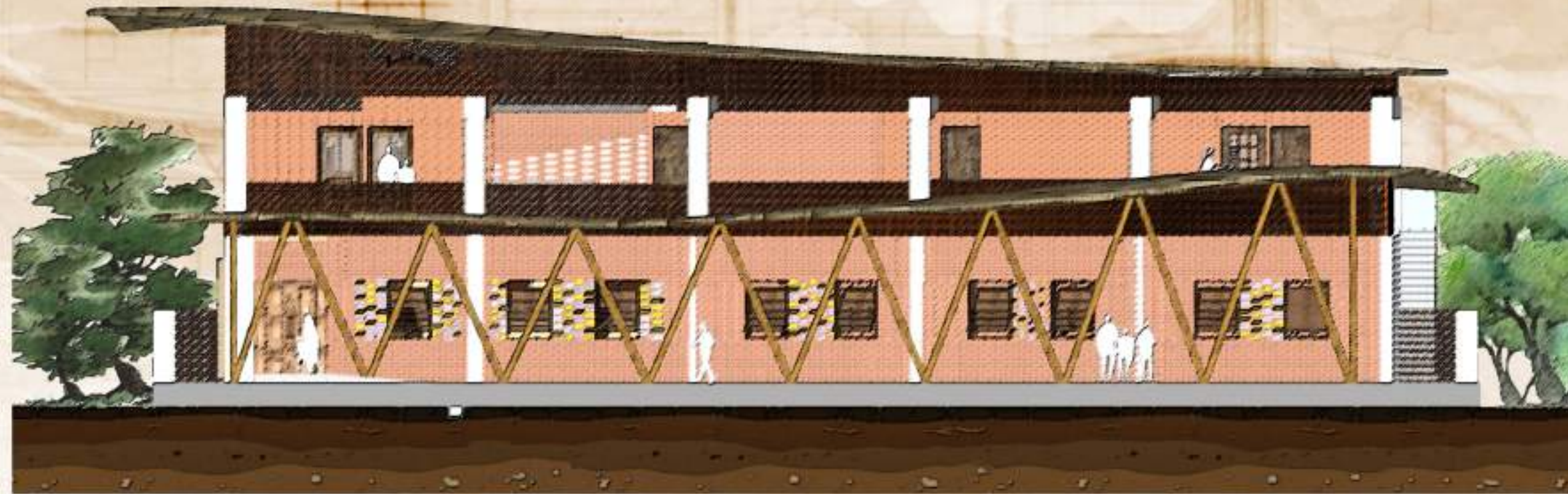
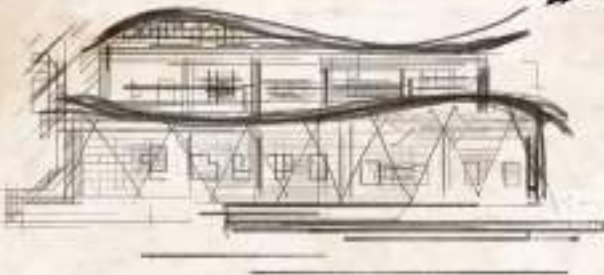
ECONOMIC
DESIGN



Wind direction dictates the plan of the building as this school will be serving as 'the wind beneath their wings' helping to give flight to their dreams and hopes.



Fluid architecture depicting the free flowing unique thought

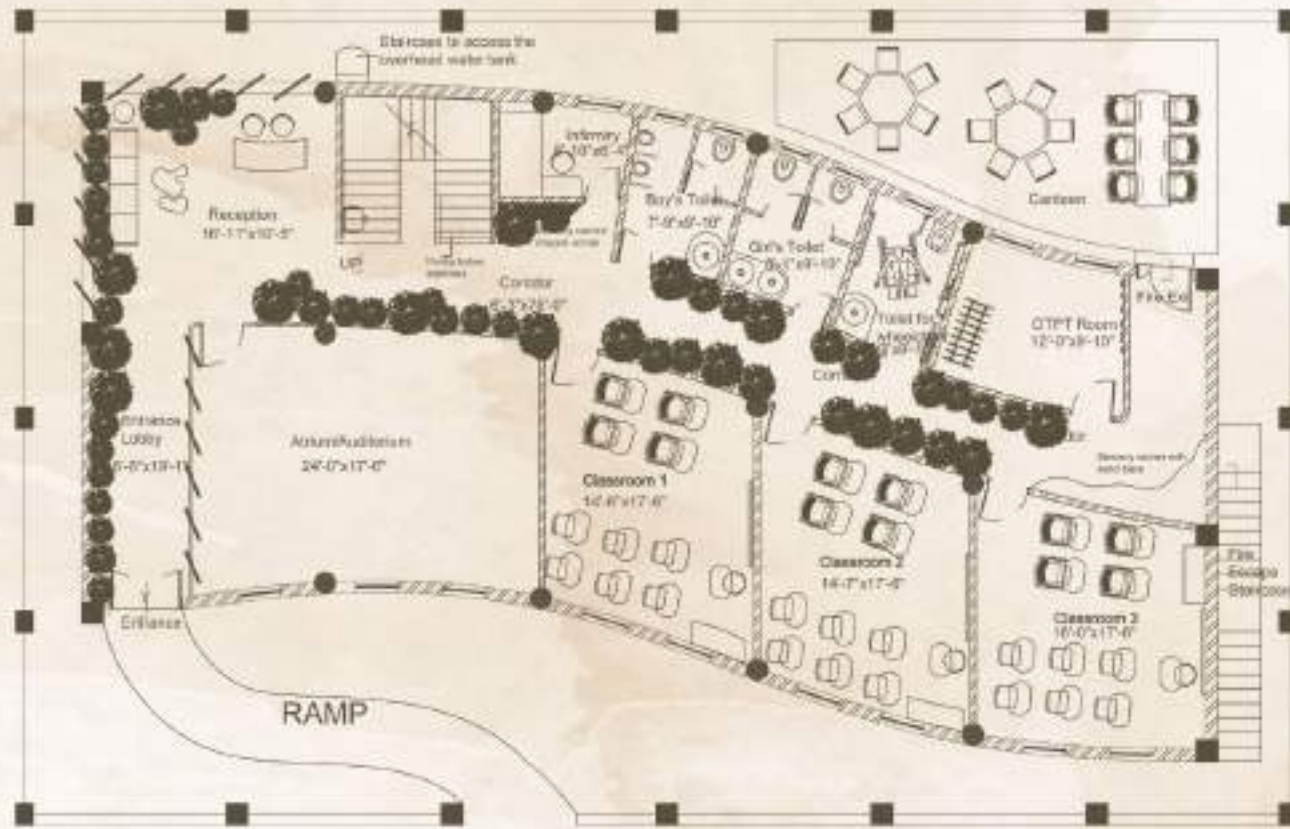


SECTION AA'

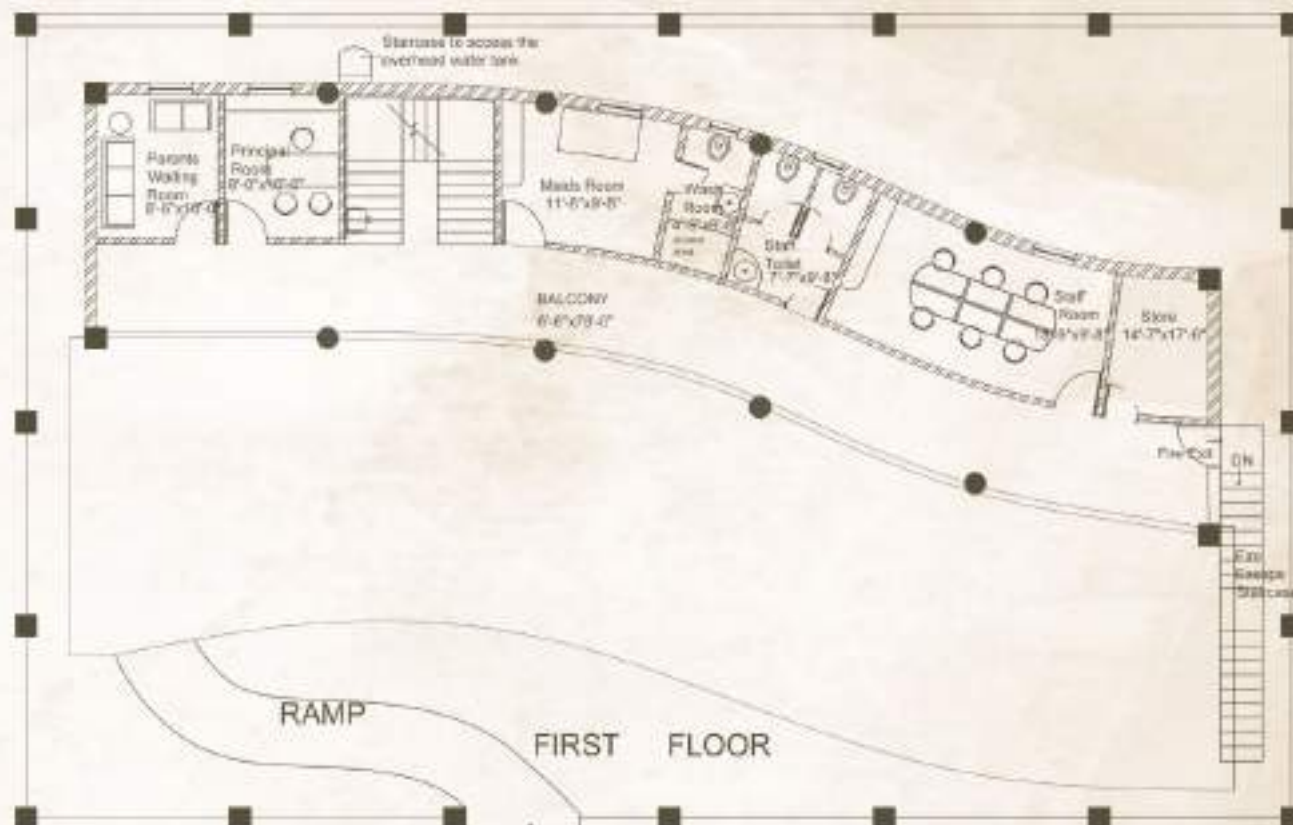


SECTION BB'

FLOOR PLANS

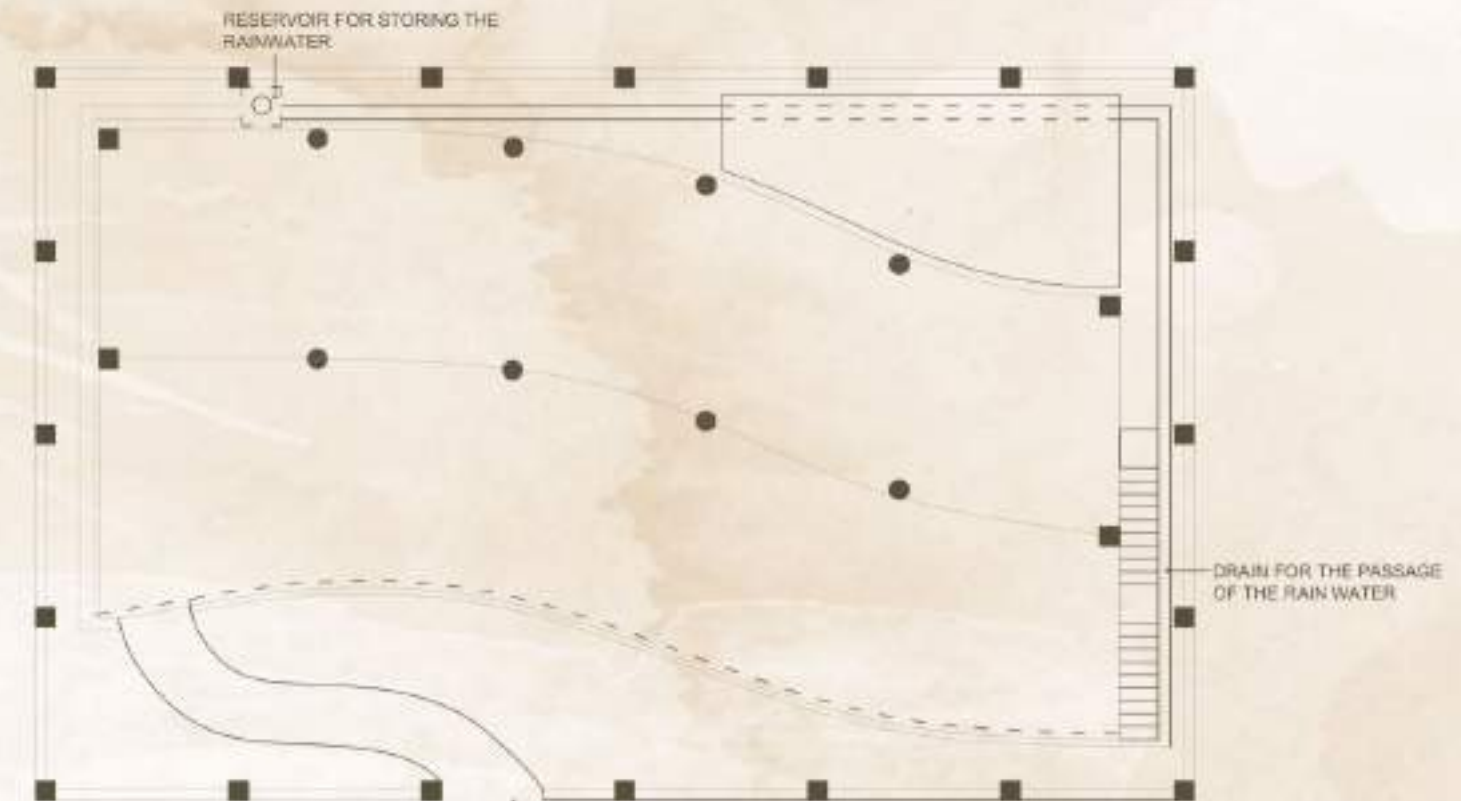


Ground Floor Furniture Layout

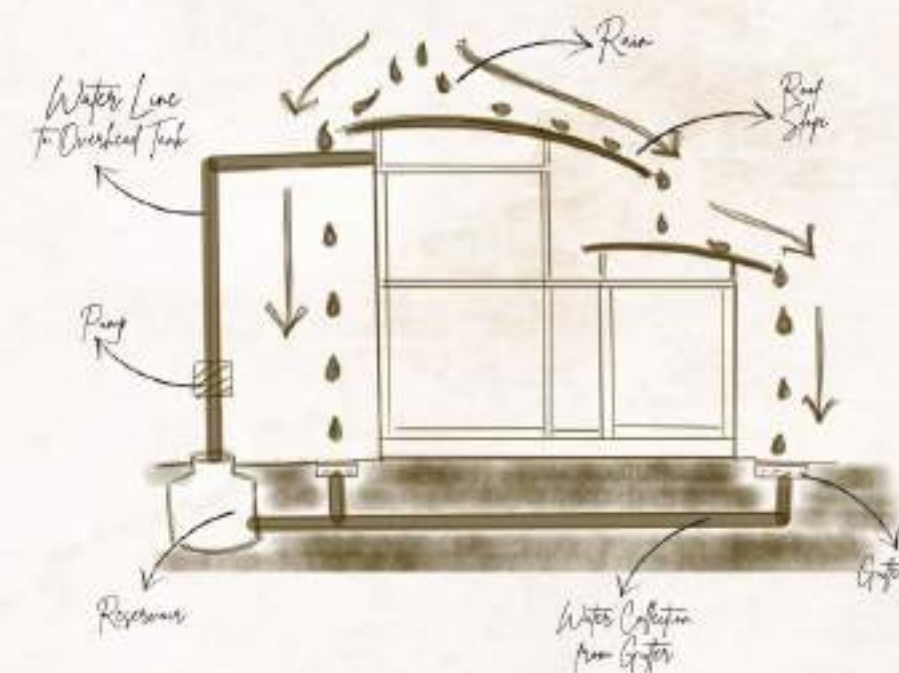


First Floor Furniture Layout

RAIN WATER HARVESTING



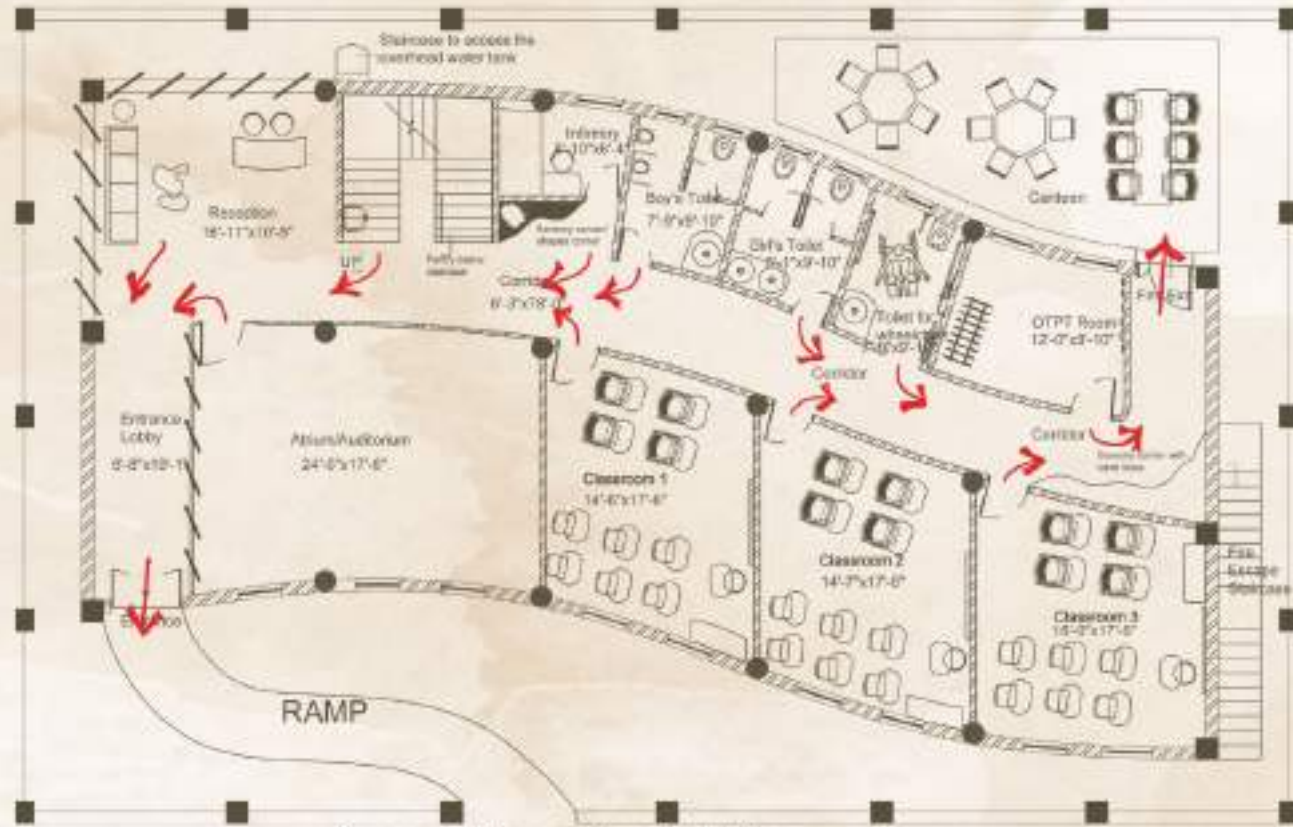
Rain Water Harvesting Layout



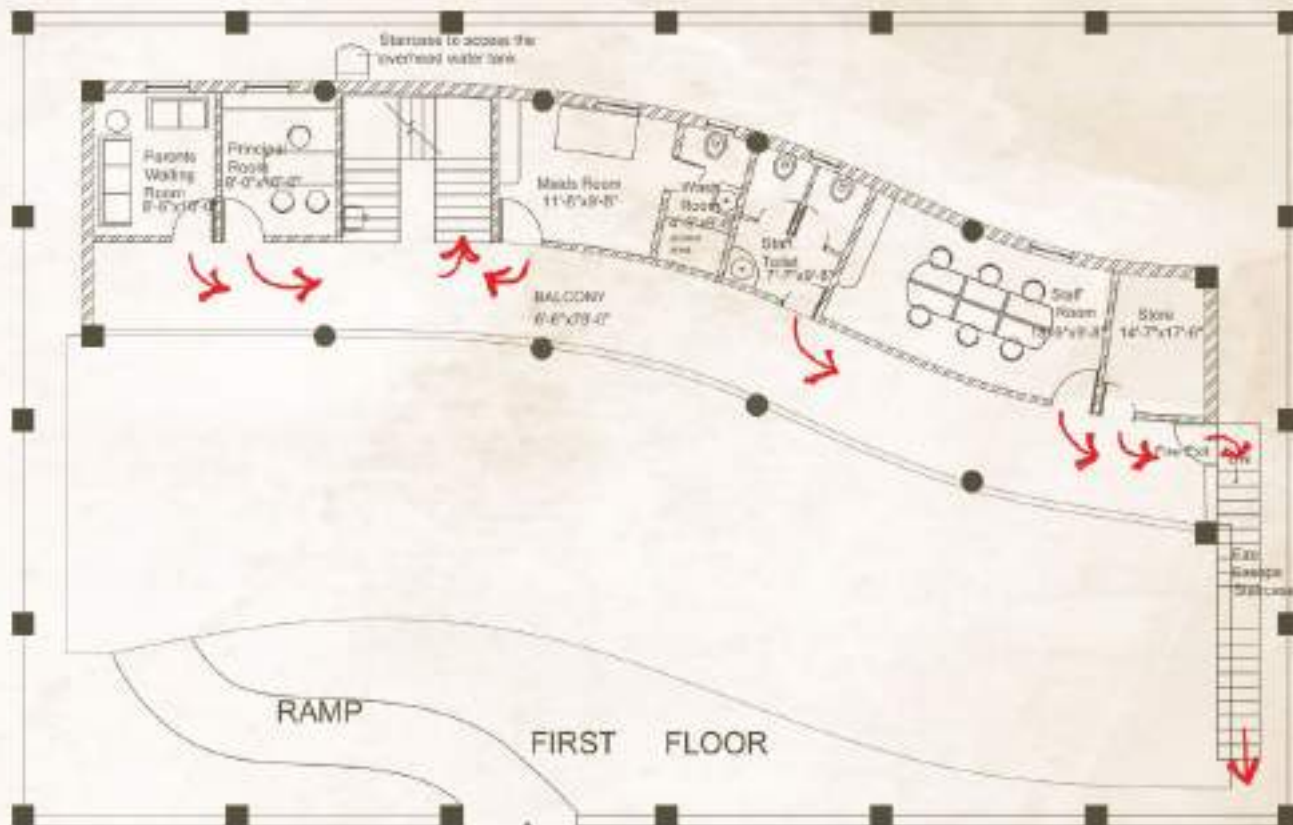
Diagrammatic Representation of Rain Water Harvesting Plan



FIRE EXIT PLANS



Ground Floor Fire Exit Plan



First Floor Fire Exit Plan



উত্তারণ



Idea Board



উত্তারণ

RECEPTION



Idea Board



উদ্ভাৱণ

CLASS ROOMS



Idea Board



উদ্ভাৱণ

STAFF ROOM



Idea Board





CLUSTER DEVELOPMENT PROGRAMMES aim to empower women in rural part of the state of West Bengal, India for social and economic development.

Jainagar Cluster development program was one such occasion where we arranged an experiential learning for the women in a rural setup. Through this program all the women learned the techniques required to earn a livelihood. These women are economically marginalised coming from a backward section of the society and are trained by ESEDS in vocational skills like stitching & embroidery to generate suitable employment opportunities for them within the ecosystem of the school proposed. This in turn completes the circular approaches of economy and women empowerment.





HENNA



TURMERIC



**INDIGO AND
TURMERIC**



**LIVING BLUE
INDIGO**



উত্তরণ



উত্তরণ



FLAT SKETCH DEVELOPMENT

USE OF ECO DYED, ORGANIC CERTIFIED FABRICS FOR THE UNIFORMS AND OTHER TEXTILES.



Unisex uniform design for Boys & Girls. The Uniform is a set of Kurta and Straight legged trousers. The garment is uniquely detailed with Honeycomb & Sundarvan print. The garment is dyed using natural colors and made of Organic Cotton.

FINAL DESIGN



Soft toys made out of waste fabric & cut pieces

Use – Washing Fabrics
Botanical name – Sapindus Mukorossi
It is mostly used for washing of the natural dyed fabrics due to its high concentration of saponin in it. It is also known as a natural soap in India.

RITHA



FOR YOU & EARTH

NEEL

Colour – Blue
Botanical name – Indigofera Species
Indigo's ability to produce an excellent range of beautiful blue shades has made it the most successful dye plant ever known. It has natural antimicrobial and bug repellent properties.

HERBS & TREES PLANTS

“The colours in our clothes!”

Colour – Yellow
Botanical name – Curcuma Longa
Turmeric was and is still used for textile printing and painting in India. It has many Therapeutic



MAJEETH

Colour – red maroon brown
Botanical name – Rubia Tinctorum
Madder's leafy tops sprawl untidily over the ground. Yet to the dyer madder is a miracle of colour because its roots contain alizarin, one of the most valuable red dye pigments ever known. It is a natural moisturiser for skin.



HARDA



PYAAJ

Colour – Orange, Yellow, Rust and Brown
Botanical name – Allium Cepa
It is the most useful and readily available dyestuff in India. It produces rich and vibrant shades of colour and does not impart any odour to the dyed materials.



Colour – Red
Botanical name – Woodfordia fruticosa
It is mostly used to get a red dye colour due to its high concentration of tannin in it. The leaves also contains a large proportion of tannin and make the commonest tan in India.



Colour – orange
Botanical name – Butea Monosperma
It is found in greater part of India, Sri Lanka, Burma they work well in floral, citrus, autumnal potpourris

PALASH

SAMUDREE NAMAK

Use – Natural Bleaching of fabrics
Chemical Name – Sodium Chloride
This natural salt is sourced from natural rocks near sea beach and has wonderful properties of bleaching and washing for clothes. It is a natural bleaching agent for natural or herbal dyed



ANAAR

Colours – yellow, greens
Botanical name – Punica Granatum
The edible pomegranate fruit yields a yellow – ochre dye and the skins are rich in tannin which improves colourfastness.



CERTIFIED GOTS FABRICS



MINIMAL CARBON FOOTPRINT



ORGANIC COTTON



NOT TESTED ON ANIMALS



OFFICIALLY ORGANIC



RECYCLED UP-CYCLED



GREEN INDIA



উত্তরণ

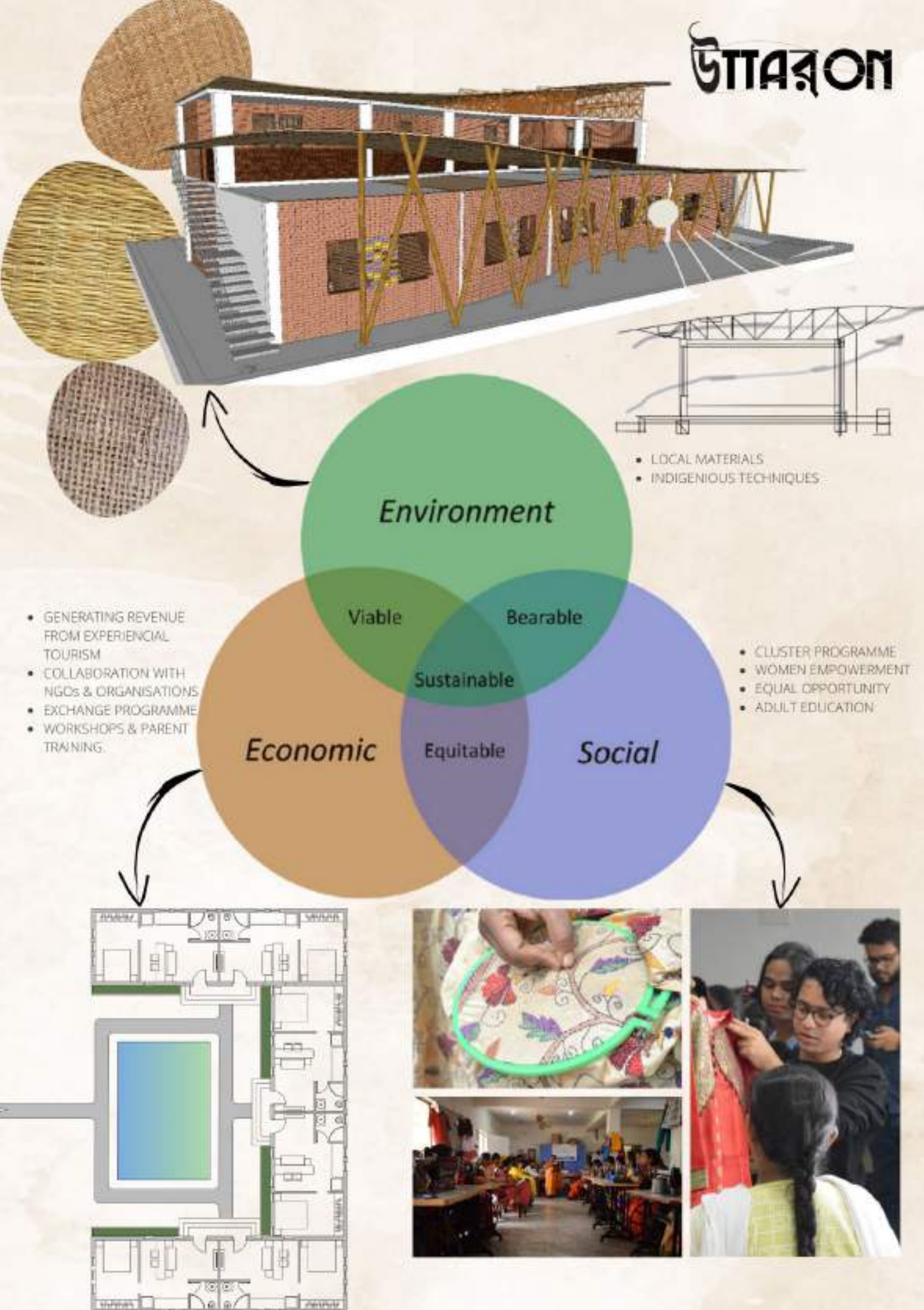


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**ASSOCIATION OF ARCHITECTS,
BUILDERS, INTERIOR DESIGNER
AND ALLIED TRADE, INDIA**

**SPECIAL JURY AWARD FOR THE BEST ZERO WASTE INTERIOR
ADVANCING CIRCULAR ECONOMY IN A SCHOOL DESIGN**





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An Institute of Sustainable Design, Management & Technology



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