SUSTAINABLE HOUSING PROGRAMME
PILOTS IN CONSTRUCTION MATERIALS AND LAYOUTS
ENERGY EFFICIENT BUILDING DESIGN IN ASHRAMASHAALA

Implementation of the Dining Hall

Past construction of the dining hall through prefabricated construction.

KEY IMPACTS & LEARNINGS

Sustainable building material helps in increasing thermal comfort
Enhanced built environment improves the health and productivity of the students
Improved quality of life of the students

Sustainable Housing Programme intends to explore the possibilities of achieving sustainability in built environment through different interventions on a pilot basis and subsequent scaling of pilots.

1. Pilots in construction materials and layouts
2. Pilots in energy efficient appliances and technologies
3. Pilots in institutional housing
4. Pilots in public housing

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ENERGY EFFICIENT DESIGN THROUGH CONSTRUCTION MATERIALS AND LAYOUTS
June 2019
GADAT ASHRAMSHAALA

Ashramshaala are residential schools which impart education to children from rural areas. Gadat Ashramshaala in Vyara region has been engaged in educating around five fifty students for about 50 years. It is supported by Gram SEWA Samaj Trust, Vyara. Students in the ashram are from economically weaker and diverse social backgrounds.

ISSUES IDENTIFIED IN THE ASHRAMSHAALA

- Classrooms used for dining and sleeping purposes
- Poor habitable condition of the existing classroom structure
- Lack of dining space for the students
- Difficulty during summers and monsoons

UNDERSTANDING THE NEED OF BUILT SPACE

MHT had identified a need of a multi-purpose space in Gadat Ashramshaala. The key purpose of the hall is to provide a space for 80 students to have their meals in a comfortable space with habitable conditions.

A holistic design is provided for the Dining Hall through its layout, building materials and construction technology.

INNOVATION IN CONSTRUCTION MATERIALS AND TECHNOLOGY

MHT has constantly worked on identification of various alternative sustainable building materials. We have imbibed the same values for this project. After thorough research on available sustainable technology, the materials used for the project are Honeycomb panels and PUF Insulated panels through Prefabricated Construction.

STRUCTURAL CONCEPTUALIZATION OF THE DINING HALL

Material:
- Honeycomb panels and PUF insulated panels.

Company:
- Industrial Foams (P) Ltd

Components for implementation:
- Walling and Roofing

SALIENT FEATURES
- Sustainable and Energy efficient Lightweight
- Flexibility in Installation
- Shorter construction period
- Reduced site disruption

HONEYCOMB PANELS

All the walls are of 100 mm honeycomb panels which ensures a better solution for effective curtailling, safety and water leakages.

POLYURETHANE PUF INSULATED PANELS

PUF insulated panels are used for the roof. These are made of 73 mm thick PUF panels which are further supported by an inner and outer layer of stainless steel sheets.