



SUSTAINABLE HOUSING PROGRAMME

PILOTS IN CONSTRUCTION MATERIALS AND LAYOUTS

RECONSTRUCTION OF ANGANWADI CENTRE, BAGSIWANIYA, BHOPAL

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



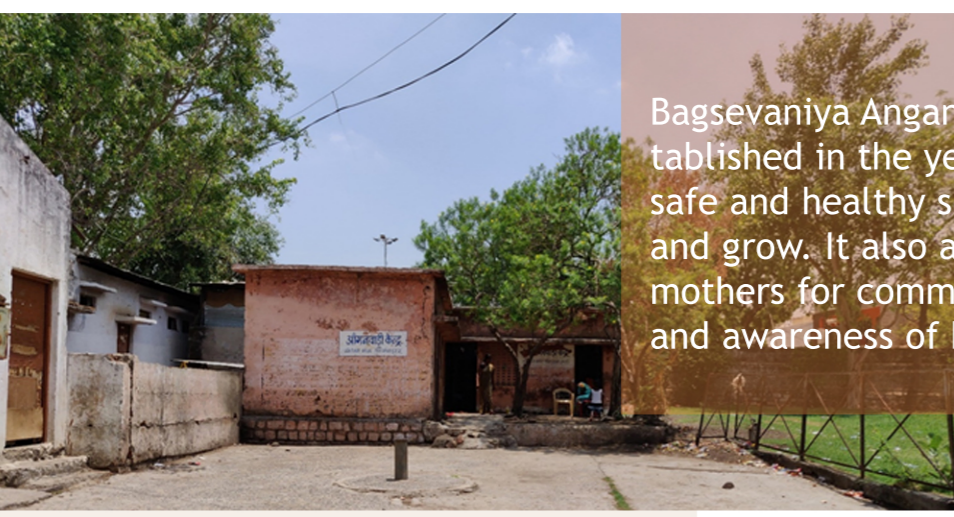
Pilots in institutional housing

4



Pilots in public housing





Bagsevaniya Anganwadi Centre, Bhopal has been established in the year 2000 with an aim to provide a safe and healthy space for the children to learn, play and grow. It also aims to provide interactive space for mothers for community gathering where education and awareness of health care.

Bagsevaniya Anganwadi is supported by Integrated Child Development Service (ICDS), Kolar. Today, the Anganwadi is engaged in educating about 25 students. These students are from neighboring economically weak communities.

UNDERSTANDING THE NEED OF BUILT SPACE AS INTERVENTION

MHT has identified a need for a safe and healthy habitable place for the children and a co-learning environment to interact and develop personally and in groups.

A space for to be and new mothers to gather and interact to educate one another and create awareness of health care needs.

Hygienic kitchen space to ensure the children's daily needs of meals are fulfilled.

Store space in kitchen and classrooms to store food and daily essentials for the children.

ISSUES IDENTIFIED IN THE EXISTING ANGANWADI CENTRE

1. Poor condition of the existing structure and the toilets.
2. Poor habitable conditions due to dampness and leakages on the interior walls.
3. Unhygienic conditions of the existing pantry.
4. Lack of space for the Anganwadi administrative/teacher.

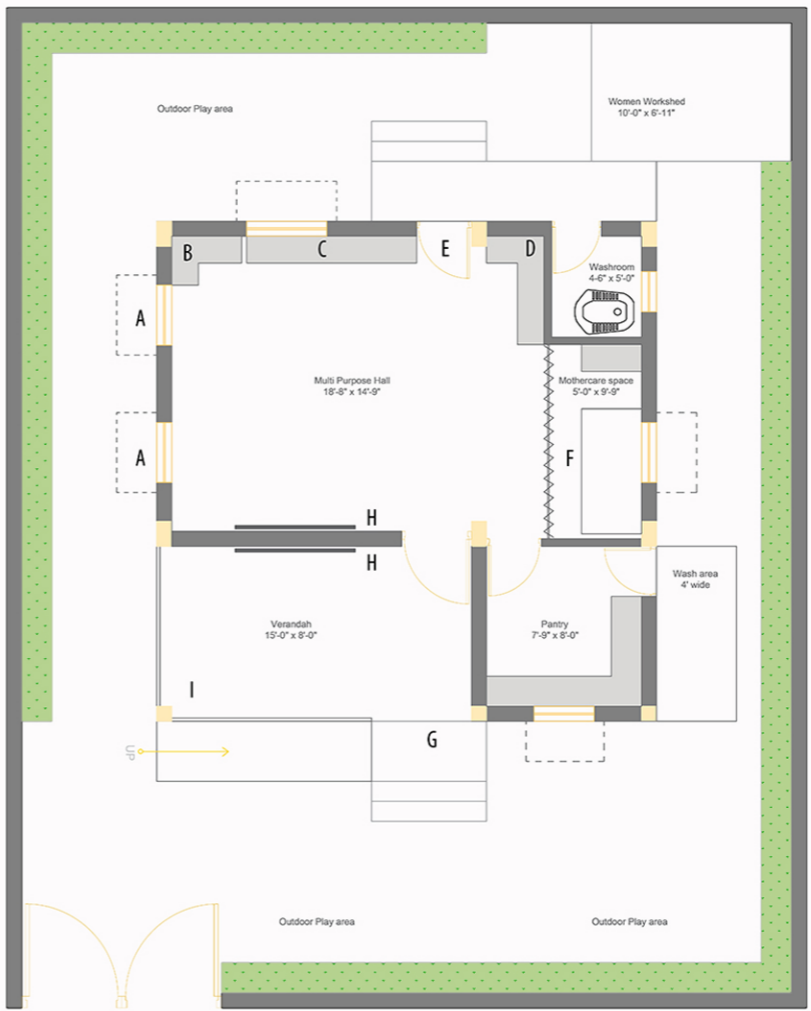


1. Multi Purpose hall
2. Pantry



3. Toilet
4. Teacher's room

PROPOSED LAYOUT DESIGN



ICDS has a pre-designed layout for implementation of Anganwadis. Through Multiple discussions with ICDS Kolar, Anganwadi staff and community members, MHT's team has suggested modifications to the layout design.

Modifications such as position of windows and doors for cross ventilation.

Addition of windows for allowing maximum day lighting and increasing the size of overhangs to reduce the glare.

Addition of Mothercare room with storage and a bed.

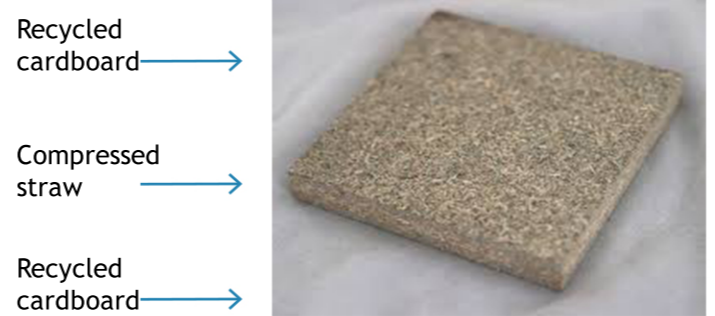
Addition of storage spaces in the classroom, kitchen and the Mothercare room.

Provision of a semi-covered workshed for the community women.

SUSTAINABLE MATERIALS IN BUILT ENVIRONMENT

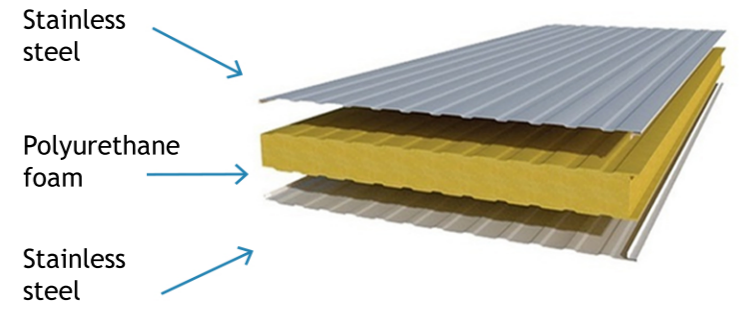
CAF Panels for the walls - Compressed Agricultural Fiberboard (CAF) panels are 100% natural, vapour permeable construction panels made from agricultural residue.

Company: Strawcture
Material - 9mm High density panels
Cost - Rs 32 per sqft



PUF sheets for the roof - Polyurethane Foam (PUF) Insulated Panels are made from 73 mm thick PUF panels enclosed between an inner and outer layer of stainless steel sheets for further support.

Company: Covestro - Industrial Foams
Cost - Rs 130 per sqft



GUIDING PRINCIPLES OF THE PROJECT

Efficient Spatial Design Planning, shape, orientation and shading with respect to the sun - to limit or enhance solar heat gain and improve ventilation and natural light.

Provide adolescent girls and mothers with interactive space for community gathering where education and awareness of health care needs

Children to have a safe and healthy space for play and learning. Provide children with a designed environment to develop personalities and confidence/ individuality through provide and group interactions.

Building Material and Insulation - Use of alternative and efficient building materials for roofing and Walling.



Good thermal properties



Quick & easy installation



Ecological alternative



Mechanically durable



Fire retardant and weather resistant



Capacity Building programme to Bagsiwaniya community women by MHT Bhopal team

KEY IMPACTS & LEARNINGS



Sustainable building material helps in increasing thermal comfort



Improved built environment enhances the work efficiency of the women



Improved well being of children and mothers



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SUSTAINABLE HOME BASED LIVELIHOOD THROUGH CONSTRUCTION
MATERIALS AND LAYOUTS
AUGUST 2020