

SITE

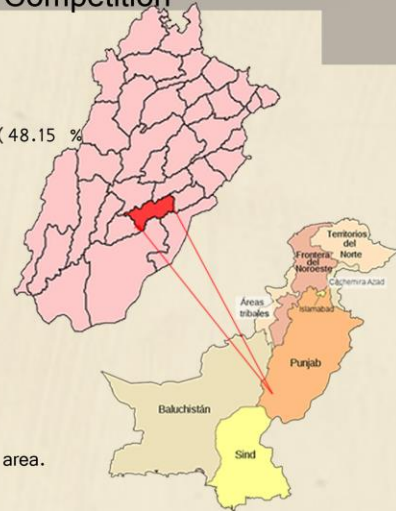
AIT-Affordable Housing Design Competition

Country	Pakistan
Province	Punjab
Capital	Vehari
Terrain	Flat
Population	1998 2090416 persons, Male 1083812 (51.85%) - Female 1006604 (48.15 %)
Climate	Hot Arid
Annual rainfall	100mm
Temperature	High 32 Degree Low 17 Degree

Vehari District is a district in the Punjab province of Pakistan, the city of Vehari is the capital of the district.

Industries in Vehari

There are several agro-based industrial units and cotton ginning factories due to the superior quality of cotton produced in the area. A total of 115 cotton factories exist in district Vehari. Besides these industrial units; 300 oil mills, 30 Flour Mills, 60 Rice Mills, 100 environmentally controlled poultry sheds and one of the largest egg processing unit is also working for the industrial uplift of the area.



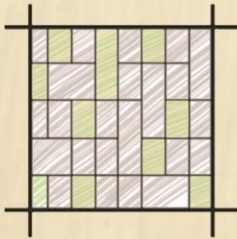
CONCEPT

AIT-Affordable Housing Design Competition

Revolves around the tradition of “Shared spaces”, which were celebrated in our society on the basis of Public, Private and Semi private spaces”. The semi private spaces become the heart of all homes, where the family and neighborhood gathered.

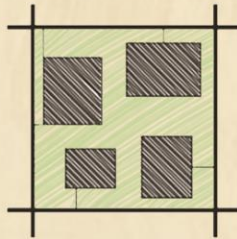
Such shared spaces, now a forgotten aesthetic need to be revived since they connect socially, architecturally and aesthetically. This connection with the agriculture fields becomes the focus of my master plan and design.

TRADITIONAL NEIGHBOURHOOD



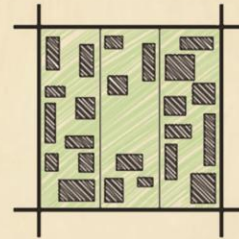
In traditional neighbourhood Balance of resources and land, neighbourhood unity

CITY OF POCKETS CAUSED BY COMMUNICATION GAP

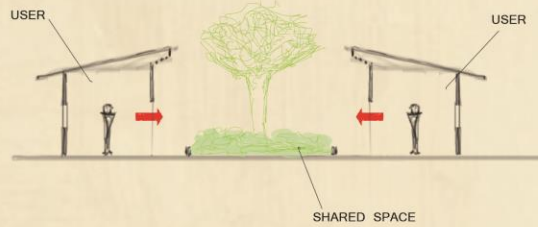


Absence of neighbourhoods, and shared spaces creates gap between architecture, Habitat & Habitant

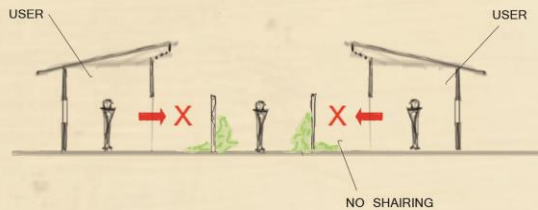
ALTERNATIVE



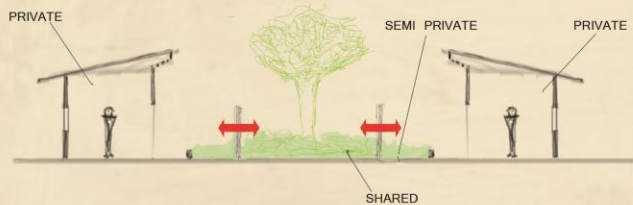
Shairing spaces, bifcateing the buffer between architecture, habitat & habitant



SHARED SPACE



NO SHAIRING



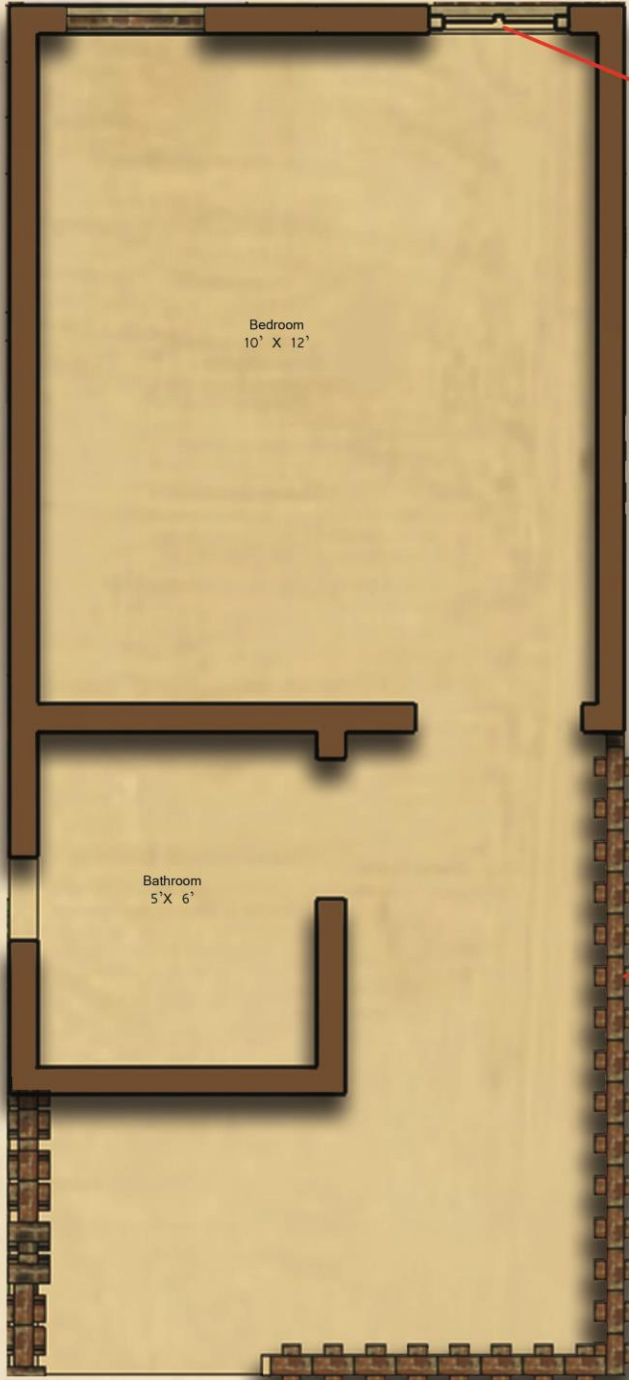
SHARED

CLUSTER AIT-Affordable Housing Design Competition



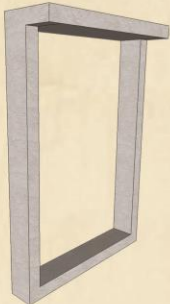
1st FLOOR

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Bedroom
10' X 12'

Bathroom
5'X 6'



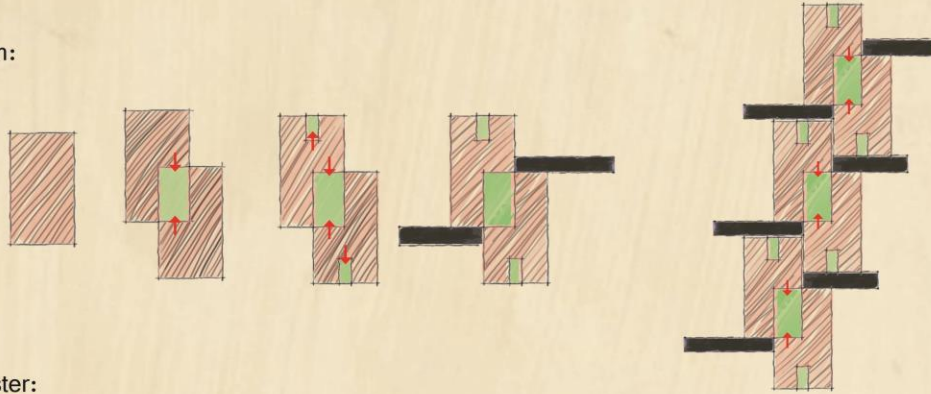
Precast window frame, support as lintel and sill.



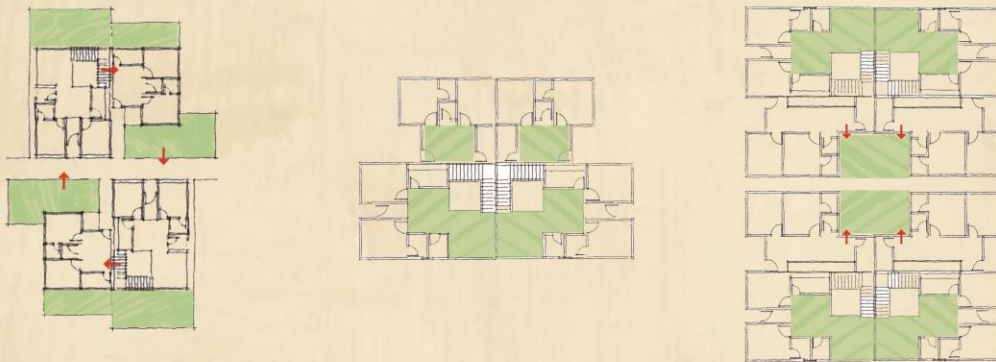
Perforated wall made by bricks.

DEVELOPMENT AIT-Affordable Housing Design Competition

Form:



Cluster:



Masterplan:



ELEVATION AIT-Affordable Housing Design Competition



SECTION AIT-Affordable Housing Design Competition

One roof provides shade for both units



MATERIAL AIT-Affordable Housing Design Competition



“The thing that hit me in the eye, right from the beginning, was that an enormous amount of use was made of mud! The first thing I discovered was that mud is one thing in one place and a different thing in another. It is used for different purposes and is used in different ways! There are different techniques of sticking it together and making it into a wall or whatever. This varied considerably, even sometimes in a matter of a few miles, from one district to another, Mud as a construction material has been extensively used since Neolithic times.

SOIL TYPE:

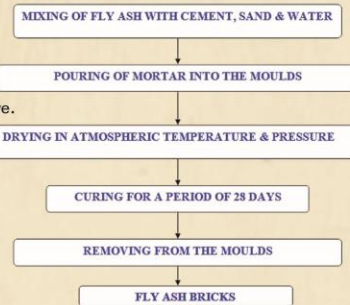
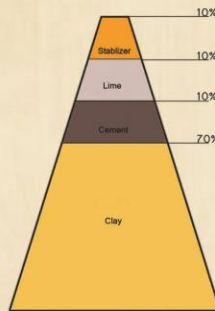
- Gravel:** Small pieces of stone varying from the size of a pea to that of an egg.
- Sand:** Similar small pieces of stone (usually quartz), which are small but each grain, is visible to the eye.
- Silt:** The same as sand except that it is so fine that you cannot see individual grains.
- Clay:** Soils that stick when wet – but very hard when completely dry.

STABILISERS:

When the available soil is not suitable enough for construction then the soil can be used by manipulating its composition by adding suitable stabilizers.

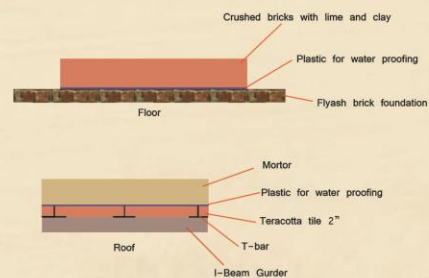
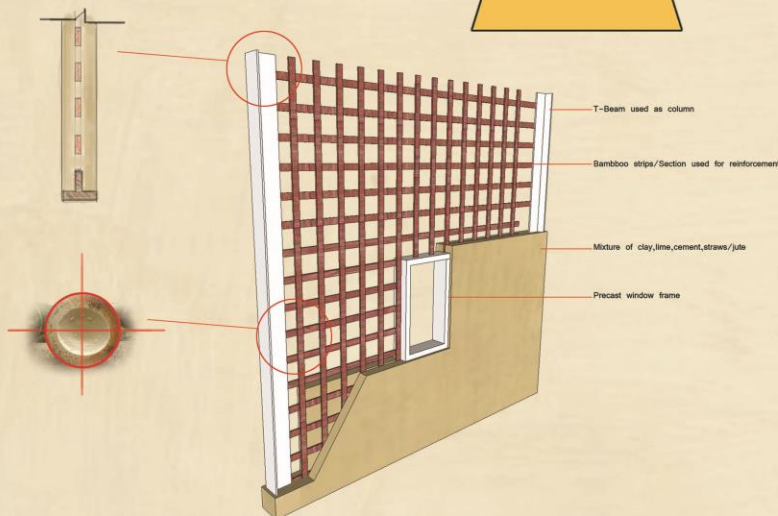
Stabilizing enhances the given property of the soil type. Increase Tensile and Shear strength & Reduce shrinkage. Most common and effective stabiliser is Soil itself. Cement, is the best example of a modern contemporary stabiliser. Various other indigenous stabilisers include:

- Straw
- Plant Juices
- Gum Arabic
- Sugar Or Molasses
- Cow Dung
- Animal Urine
- Fly Ash



Advantages of Fly Ash Bricks

- Fly ash bricks are produced with/ without frog.
- The bricks are uniform in shape and size, therefore, require less mortar in brick work.
- Plaster thickness required will be less compared to clay bricks, thus saving of cement mortar.
- These bricks are environment friendly as:
 - It uses fly ash, which is by - product of thermal power stations.
 - Saves agricultural land which is used for manufacturing clay bricks.
 - Less energy intensive compared to clay bricks and helps in keeping clean environment.
 - Can be manufactured at construction site also



MASTERPLAN AIT-Affordable Housing Design Competition

TYPE A: 1-storey
Plot Area
1027 sqft

TYPE B
Plot Area
805 sqft



Indian Beech tree (Pongamia Pinata), locally known as Sukh Chain or the tree of tranquility and happiness.



White Mulberry (Morus Alba), locally known as Tootie. This tree is famed for its shade and its fruit. A Punjabi saying thandia chaun toot dian celebrates the cool shade of this tree.



Indian Jojoba (Ziziphus Mouritiana), locally known as Bair, and bears the famous fruit of the same name.

VIEWS

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MATERIAL COSTING AIT-Affordable Housing Design Competition

Flyash Brick per piece 3-4 PKR. (0.04 \$)

Bamboo per running feet 15-25 PKR. (0.25 \$)

Sack of Lime 1/2 cubic feet 280 PKR. (2.75 \$)

Sack of Cement 1 cubic feet 550 PKR. (5.41 \$)

Terracotta Tile 2"x18"x24" 25 PKR. (0.25 \$)

Brick Chips per donkey cart 200 PKR (1.97 \$) (By-product in backing of bricks)

Window frame Precasted per frame 500 PKR. (4.92 \$)

Clay Free of cost only transportation.

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Straw/Jute Free of cost only transportation.

Door 1500-2000 PKR. (19.66 \$)

Foundation & Plinth 30,000 PKR. (294.91 \$) (Labour not included)

Wooden I-Beam 10,000 PKR. (98.30 \$) (from local trees)

Labour Artisan 600-1200 PKR. (5.90 \$ 11.80 \$) per day.
Helper 300-700 PKR. (2.95 \$ 5.90 \$) per day.