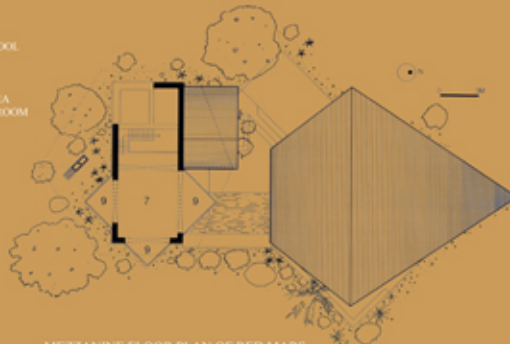


## 3241 .IND- EBRAHIM FAMILY HOUSE "REDMARS"

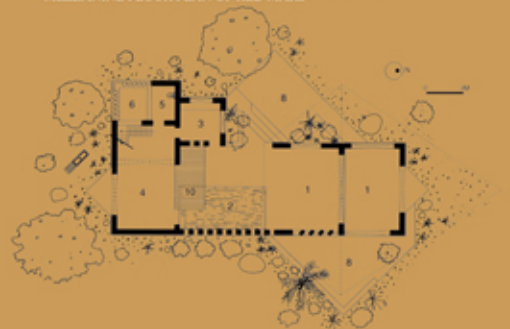


LONGITUDINAL SECTION OF RED MARS

1. PAVILION
2. SWIMMING POOL
3. KITCHEN
4. DINING
5. TOILET
6. BATHING AREA
7. MASTER BEDROOM
8. VERANDAH
9. BALCONY
10. DECK



MEZZANINE FLOOR PLAN OF RED MARS



GROUND FLOOR PLAN OF RED MARS

Fanik Ebrahim, who owns the furniture showroom in Mumbai, had a wish. He wanted a farmhouse in his seven acres of farm in Awaz, a half an-hour drive from Alibag, near Mumbai. He wanted a place which would offer him and his family a refuge from the chaos of city life. A shelter built with indigenous material, in harmony with the earth. Thus this dream was the cause of "Redmars".

He appointed me as an architect to transform his dream into reality. I believe that "the inspiration comes from the material itself, it will talk to you and tell you what to do" - so no drawing were made for this project. Only a conceptual layout plan and one elevation was produced to client before starting on the project. No working drawing were made. [The drawing were made after completion of project for documentation purpose]. The house evolved naturally, it was purely on-site work, a direct collaboration between architect, local mason & fabricator, without the involvement of any structural & civil engineers.

### PLANNING

The layout plan is a combination of a square and triangular grid. The complex [with a floor area of 4400 square feet] comprises a separate pavilion connected to the main house through an open courtyard with a swimming pool. The dining area, kitchenette, a toilet and an open-to-sky bathroom occupy the ground floor of the main house, with the master bedroom on the mezzanine level. A balcony projecting from the mezzanine floor affords panoramic views of the greenery of Awaz.

### RESPONSE TO CLIMATE

Since Alibag has a hot and humid climate with heavy rain, the major axis of the house is oriented in a north-south direction, with the mezzanine on the south, to protect the pavilion and courtyard from both the monsoon and the hot afternoon sun. The roof ridge is cantilevered more than five metres on each side, and this massive overhang provides ample shade to the verandah, along with the many trees.

Strategically placed open spaces and openings generate cross-ventilation, while the breeze passing over the central waterbody helps to lower the temperature. In addition, the huge volume of master bedroom on the mezzanine creates an air mass which provides thermal insulation. The pavilion roof tapers down almost to the ground, and provides privacy from passerby.

### PLAY OF LIGHT

The mood inside Redmars keeps changing as the sun traverses its path. Sunlight from the east and west is 'encouraged in the courtyard and pavilion area', while the intensity of south light is tempered by the huge mezzanine structure of the main house, which cast its shadows over the courtyard and verandah. At night, 5 volt bulbs provide diffused lighting and a sense of mystery. Inside, even in the daytime, it is dark and cool, inducing a feeling of solitude - 'a refuge from the outer world, a subconscious relating of the self as a part of the vast universe'.



1 Red Mars: the weekend retreat of Fanik Ebrahim and his family.

A house built around a dream, rising organically from the earth, surrounded by trees, enhancing the environment.



2 Entrance to the pavilion

Cantilevered roof from the ridge on both sides provides ample shade on verandah.

3 Mural of Turtle made out of waste coconut shells and waste shahabad tile strips.



# THE AGA KHAN AWARD FOR ARCHITECTURE 2007

## 3241 .IND- EBRAHIM FAMILY HOUSE "REDMARS"



4 & 5 The pavilion



6 Staircase to master bedroom at mezzanine floor  
The dim illumination creates a peculiar serenity and warmth that arrests one's sensitivity.



9, 10 & 11  
View from the south

The roof on the south side that cantilevers over seven meters acts as a strong shield against heat and rain. Its one-point converging support is sturdy and has withstood winds blowing at 160-km/hour speed. The nodes of the framework have been provided with conical shell lighting.

7 & 8 The master bedroom

The 5 1/2 feet high arched opening with butterfly-winged shutter leading to the master bedroom is a unique transition experience because of its low height.

### MATERIALS & CONSTRUCTION DETAIL

Red Mars draws its spirit from an honest use of local natural materials.

**Black Basalt:** The locally available, fine-grained basalt rock, an extrusive igneous rock found above the earth's surface, was used for the foundation, for its high compressive strength. **RCC Coping:** RCC Coping was used in the junction between the basalt foundation and brick wall to prevent cracks on the wall due to seismic movement. **Brick:** to add the required rustic element and also keep the budget low, locally available lake water brick was used. **Railway Sleepers:** Railway sleepers were chosen for the flooring of the mezzanine, due to their light weight, rustic look, and durability. **Long shabbad tiles** were chosen for their warm colour, rough texture and price, while china mosaic work was used for the swimming pool, bathing area, and above the RCC coping. Mangalore tiles, which are light weight and low in cost, were used to cover the roof. **Shuttering for Arches:** To cut down the cost of shuttering, 9-inch thick brick walls without mortar were constructed as shuttering for arches, the gaps between the bricks were filled with dry sand. Mortar was used for smoothing the top, creating a smooth curve which was then laid with arch-bricks. After an arch was complete, the shuttering bricks were removed and reused for the next. **Roofing Systems:** To create the massive roof overhang for protecting the exposed brick, low-cost, lightweight, 5' x 5' grids of hollow box M.S sections were constructed, with battens on top for the mangalore tiles. The grids are supported by a space-frame made of circular rods to transmit the load to the brick walls and prevent the roof from buckling. **Structure:** The structure is purely load-bearing, with an interrelationship between two dynamic forces - compression [the brick in the arches] and tension [the steel in the roof].

### LANDSCAPE

The landscape revolves around the existing trees, and has been kept as natural as possible, with mounds covered with shrubs to blend with the scale of the building.



12, 13 & 14

The open to sky bathing area, where fins placed for privacy add their own drama, creating a play of light and forms. To augment the rustic ambience, stop valves instead of taps, and a grid of water pipes with nine shower jets, which give the feel of bathing in the rain.



While designing Red Mars, no particular style or ism was followed - rather as far as possible its inspiration was drawn from the context of the cultural milieu of the area, using ancient construction methods and local materials, reinterpreted for current times. Red Mars will inspire others to build with 'Honesty of thought and sincerity'. It has been designed to be 'an extroverted space' that would help to extend and expand people's horizons.



15 The cantilevered balcony of the mezzanine floor initiates dynamism in form while subtly scaling down the super structure behind.

16 The swimming pool, with vibrant colour, is designed like a 'kand' and looks attractive even when it is not filled with water and balances the rustic nature of the villa.

17 The swimming pool creates an exotic ambience between the living and dining spaces while the master bedroom balcony that cantilevers over the pool is dynamically integrated with the lower level.

