STUDENTHOUSING-WARDHA, MAHARASHTRA

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Indian Architecture,Commendation Award-GroupHousing

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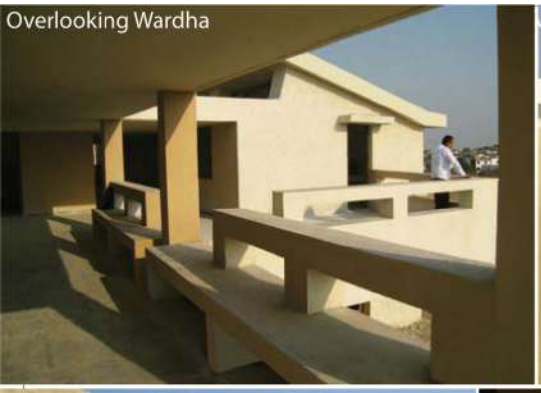
View from internal stree

Description of Project.

Culture, evolves and develops over a period of time. The design of the student housing hence had to be flexible to be able to accommodate and evolve along with these cultural developments. Our emphasis is on envisioning ' the culture of the campus' that evolves from the social construct of communities.

The competition brief required for dedicated hostels for men, women, married scholar and transit scholars. This typology was questioned and further challenged as the hostel typology works, as a mechanism for social control and surveillance.

'We envisioned a social construct based on community interaction'.


Overlooking Wardha


Void


Vista


Assemblage


Connectors


Outside- Inside


Shade - Shadow

The built form is fragmented in nature and essentially comprises of basic units of different scales that take on an organic form. The organization and orientation of the units is primarily determined by the undulating nature of the site. This makes the relationship of each unit to a neighboring unit unique and specific. The sloping site gives rise to various interconnecting levels, where the terraces of some units overlook courtyard spaces of others.

Three different types of units exist – single, twin and married scholars rooms function individually as a personal space and is physically disconnected from neighboring units, but programmatically connected by a common area, which is shared by 10-12 students. The common area includes the kitchen, small dining area and living area. The common room and a toilet block with 'n' number of units forms a basic cluster.

Terraces, courtyards connect, extend and animate movement and interaction. The units are constant and the relationship between the units is the variable. This allows a high level of flexibility in the design.


Shaded corridors

An individual spending a minimum of 2 yrs to a maximum of 5 yrs in this campus as a student would find such a space extremely interactive and non-restrictive as opposed to a typical dormitory or hostel block which is extremely uniform, impersonal and constricting. A basic cluster would have students not only from the different schools of the institution but also from different academic years. The density of the units in combination with elements like trellises gives rise to interesting shade and lighting conditions throughout the year.

Materials of construction details

All materials used are available or manufactured with a 100 km radius making them local. The project tendered cost is estimated at Rs.800 per square feet. Use of Flyash bricks creates a symbiotic relationship between the nearby thermal power plant and the university campus to foster a clean environment. As the flyash bricks have shown better compressive strengths while tested, it was prudent to work with a load bearing structure which works as the building envelop as well as the load carrier. This brings the cost down by 15% as against a frame structure.

The traditional mud bricks have been strongly prohibited on the campus site as they have eroded the valuable soil of the region.

Special Features

Sustainibility has always been a 'Gandhian concept' whose value and significance today cannot be stressed enough.The environmental effects of this include cycles of land, water and air, as well as those of energy and waste management which are of primordial importance in creating a sustainable environment.

Builtform:

The lower floors of the buildings are looked at as a day space that are tucked into the hill with thick retaining walls that sheild the spaces from thermal gain (summer day temperatures range from 40 degree centigrade to 45 degree centigrade). The

fenestrations are minimized to avoid the solar radiation and there is also minimum use of glass in the fenestrations. The sloping of the roofs allows for a larger volume with a clerestory opening for hot air to rise and exit on the higher floors. Deep verandahs with large roof overhangs create shadows and reduce thermal gain.

Site development:

- Using minimum cut and fill, as the site is contoured.
- Rain water harvesting and collection in catchment areas
- Contour bunding to minimize erosion of top soil and creating green areas on the slopes
- Effluent treatment of the waste generated root zone treatment and recycling the water for gardening purposes
- Afforestation by planting trees/multiple textures: soft paving, hard paving, gravel pits, lawns, flower beds
- Use of trees to provide natural shade to south & west facing structures and to harness wind for proper ventilation of structures.
- Landscape & Circulation elements weave themselves into the textures of the 'programmed' & 'non-programmed' spaces.

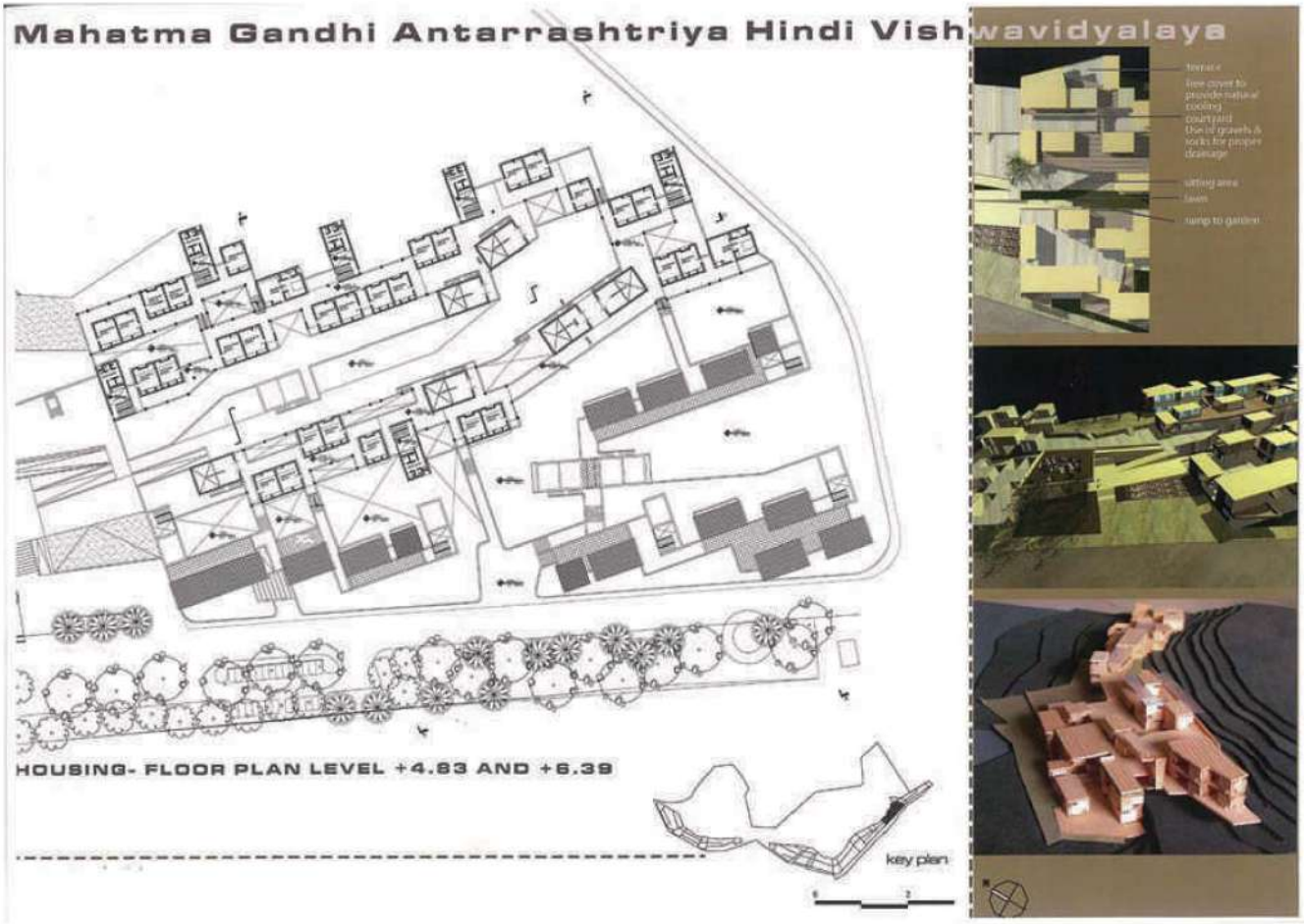

Multiple connectors overlap


Terrace overlooking courtyard


Skylights


View through room

Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya



Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya

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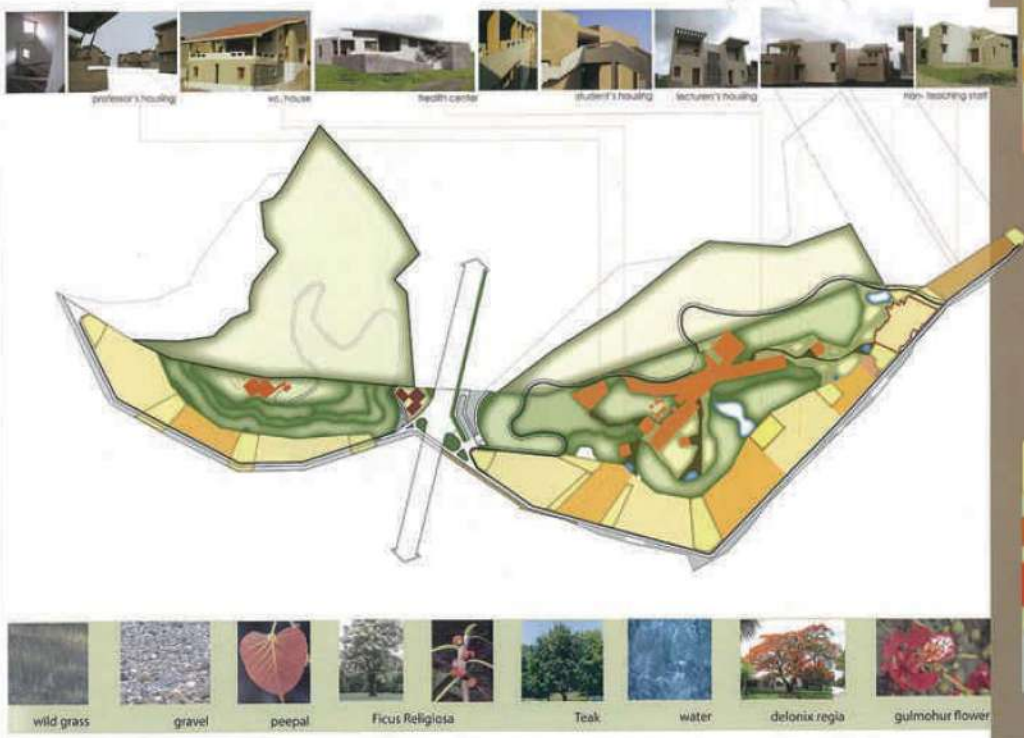


Institution

Student — Single Room; Twin Room; Married Scholars Room; Transit Students

Faculty — Vice Chancellor; Pro Vice chancellor; Deans and professors; Readers and lecturers; Non teaching Staff

Guest House

- a three-tiered vegetative cover approach is suggested

- a forest like cover at the base of the hill

- shrub plantation on the steeper slope

- wild grass cover on the crest of the hill

indigenous vegetation is to be strategically planted to redress ecological issues such as erosion over periods of time in scale with these issues.

Common areas — Includes Dining Areas, Plazas, Terraces, Amphitheatres, informal meeting spaces, mandir

Clubhouse — Club House, recreational facilities, sports areas

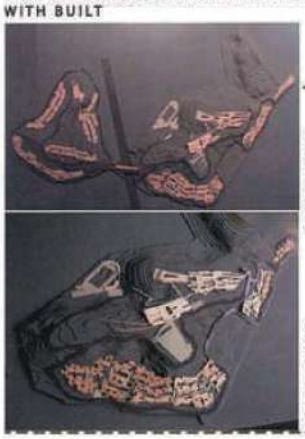
Shop/Gate — Includes bank, post office, commercial facilities, health centre, public toilets

Service Strip — Includes parking, underground water tanks, borewells, effluent treatment, roof tanks, landscaped areas

MASTER PLAN- LAND USE

Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya

VIEW OF LANDSCAPE INTWERWOVEN WITH BUILT



STUDY MODELS

interaction among students is facilitated by the shared open non-programmatic spaces
- courtyards
- terraces
- staircases
- ramps
- green spaces

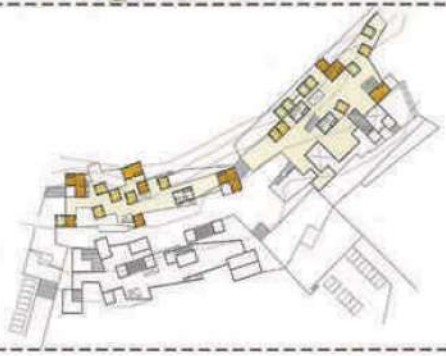
The built form is fragmented in nature and essentially comprises of basic units of different scales that take on an organic form.

The organisation and orientation of the units is primarily determined by the undulating nature of the site.

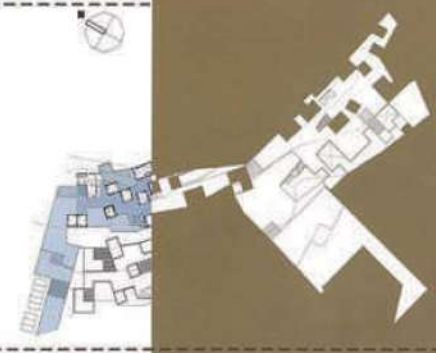
This makes the relationship of each unit to a neighbouring unit unique and specific. The sloping site gives rise to various interconnecting levels where the terraces of some units overlook courtyard spaces of others.

Apart from staircases, landscaped ramps serve as transitions elements between these units, hence integrating the landscape as an essential part of the design in relation to the built form.

PROGRAM SPACE



NON-PROGRAM



HOUSING- LANDSCAPE AND ROOFSCAPE

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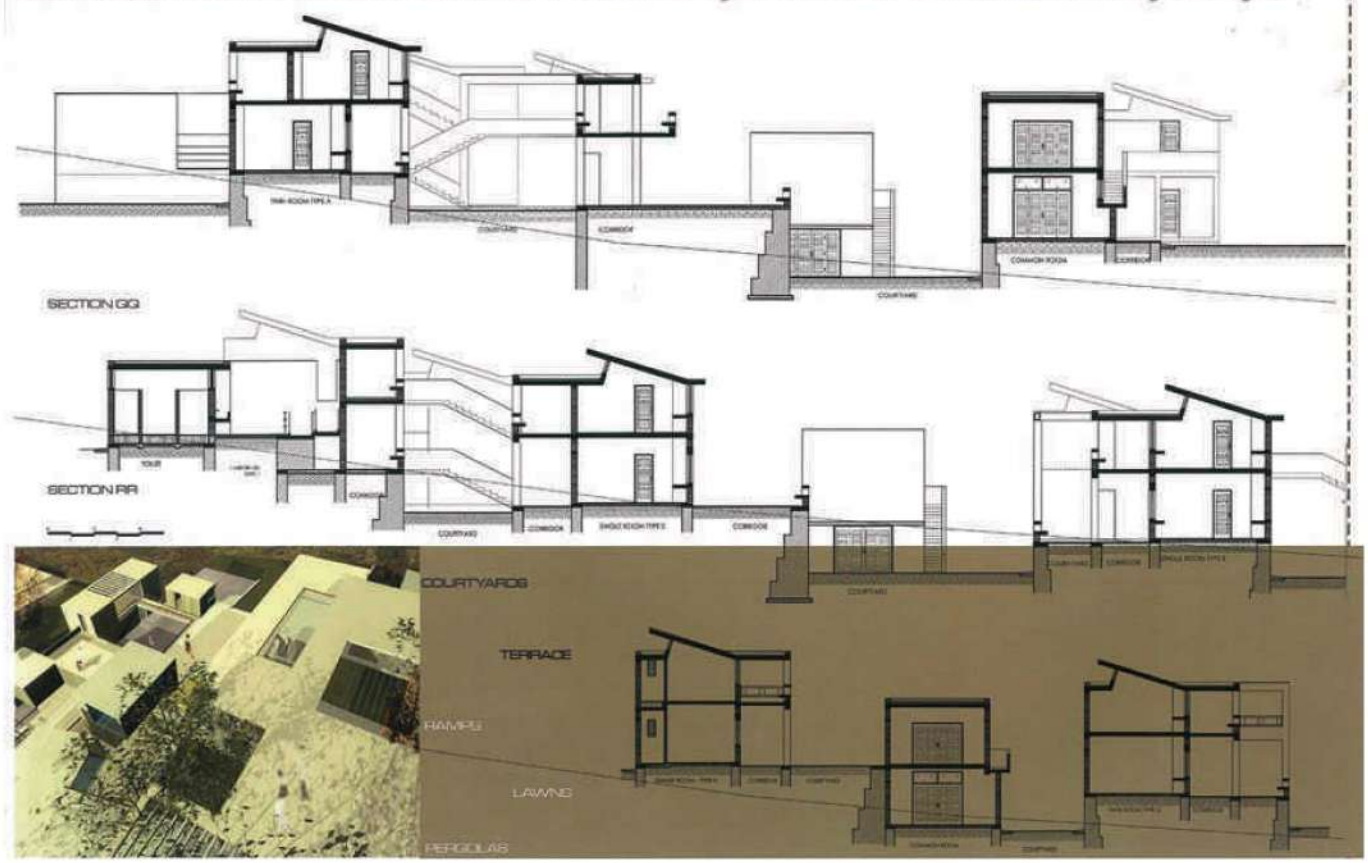

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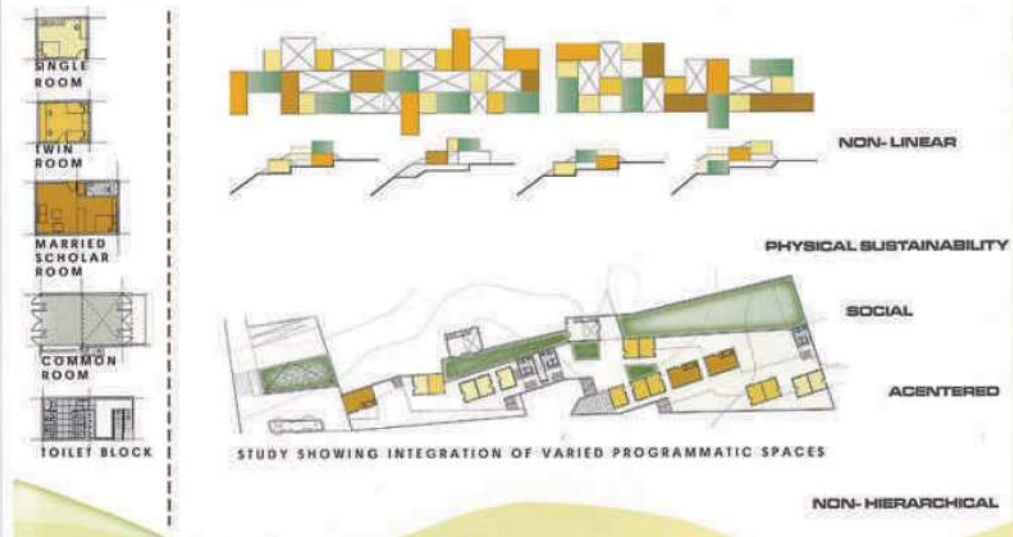
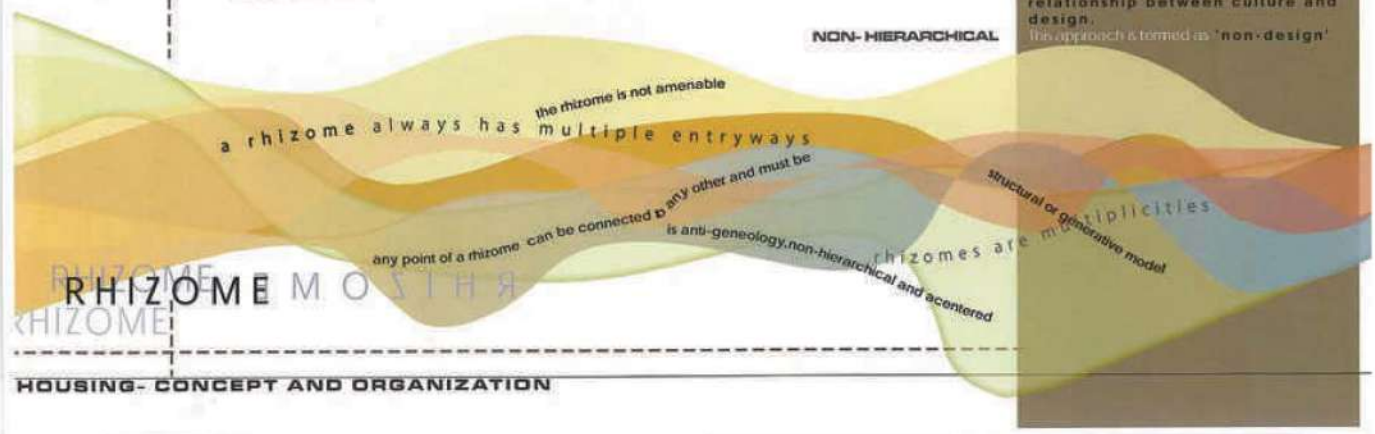


The project consists of Institutional, Residential & Recreational programs organized over a 212 acre site located in Central India. The concept stems from an interest in developing what we termed "New Culture" in which faculty, students & visitors would participate in a non hierarchical and rhizomatic organizational structure.

This becomes evident both in the way the institutional & residential programs provide for variation, non-linearity, change & flexibility through the integration of non-programmatic spaces such as courtyards, terraces, gardens, walkways, etc... with the required programmatic elements.

In the residential zone, the system is built up of units which work like biological neurons rather than mechanical components. One such unit, the student housing has been detailed here.

For the residential zone, an attempt has been made to understand the cultural systems that are generated in the given context and to provide for spaces that enhance these systems. This approach hence has been to build a **relationship between culture and design.**
This approach is termed as **'non-design'**



HOUSING- CONCEPT AND ORGANIZATION