HABITAT DESIGN

International Workshop 2010
14th February, Sunday - 14th April, Wednesday, 2010
Vastu-Shilpa Foundation for Studies and Research in Environmental Design (VSF)
+ Center for Environmental Planning and Technology (CEPT University)
Ahmedabad, India

ABSTRACT

The question often asked is how will the environmental issues affect us? The question might better be how will we, as a profession, affect them, understanding the context and our responsibilities to it? A place is an alchemy of social, cultural, economic, political and environmental factors. It is a living organism that sustains through a dynamic and comprehensive balance of all these factors. As an architect, we alter this balance through an act of building and therefore become an active and responsible player in the larger system. The environmental issues are real and require that we address them. The current status of sustainable design in architecture is that of an ethic rather than a science. While a change of lifestyles and attitudes toward the local and global environments is important, the development of scientific knowledge-bases that provide skills, techniques, and methods of implementing specific environmental design goals is urgent. In addition to resolving economic, social and cultural dimensions of the building, to enhance environmental sustainability, a building must holistically balance and integrate three principles
1) Economy of resources
2) Life cycle design
3) Humane and contextual design.

The students of the proposed habitat design workshop are to address these principles in their project development in the context of India. The Indian context is characterized by two fundamental attributes. One of which is its historicity implying the challenges of tradition vs. modernity and the multiplicity of value systems. The other attribute is frugality of resources implying creativity of design through their effective management.
The purpose of the proposed project is to illustrate and encompass a range of issues from the reflection of socio-cultural structures, changes and developments in built form, the climatic influences that impact on orientation to the selection of materials which have minimum impact on the environment; from processes which facilitate energy conservation through alternative energy sources, to the integration of the natural and built environment.

OBJECTIVE

The objective of the habitat design project is threefold:
- Involve the students in the research and understanding of environmental issues as they relate to architecture
- Afford an opportunity to illustrate a broad range of alternative design methods available for professional use
- Illustrate within the constraints, how they interact with the environment to the benefit of society and support the needs of the place.

PROJECT

The workshop is devised to be a fine balance of exposure and information input to application and analytical understanding. The project will involve planning and designing of between 100 to 150 houses with building/s representing community facilities.. The project alternatives will be developed by the groups consisting of 3-5 students. Ideally combining students from different country/university in each group.

PREREQUISITE FOR AQUIRING THE CREDITS

In addition to the general final submission requirements devised by VSF, following are the list of drawings/documents that each student from Europe must deliver

A) Typical dwelling unit illustrating its construction system and sustainable design

- Floor plans Scale 1:50
- Sections Scale 1:50

B) Construction details, materials and finishes

- Typical section (wall with openings, floors, roof) Scale 1:20

C) Schematic illustrations: Economy of resources, Humane and contextual design

- Site plan Scale 1:500 / 1:1000 / 1:2000
- Building unit Scale 1:100 / 1:200

Illustrating:

Economy of resources (Precise list of aspects to be illustrated, refer guideline)

- Energy conservation (including climate concept – day/night, summer, monsoon, winter..)
- Water conservation (concept for the reuse of water on the site, reduction in consumption..)
- Materials conservation

Humane and contextual design (Precise list of aspects to be illustrated, refer guideline)

- Preservation of natural conditions
- Urban design and site planning (Including reflection of socio-cultural structures, changes and developments in built form)
- Design for human comfort and needs (Including reflection of socio-cultural structures, changes and developments in built form; sketches comparing the living, dining, cooking, etc. space requirements)

D) List of building materials and the brief description of their life cycle

Wall, floor, roof, openings, finishes, finishes, etc..

Life cycle design (Precise list of aspects to be illustrated, refer guideline)

- Pre-Building Phase (including production process)
- Building Phase
- Post building phase

SUSTAINABLE DESIGN GUIDELINE

This framework of principles and their aspects, is intended to help the students to seek solutions rather than giving them a set of solutions. Specific design solutions compatible with a given design problem will emanate from these principles and the framework shall act as a benchmark for the project alternatives developed by the students. The design should reflect the aspects listed below and illustrate the possible solutions through sketches, precise drawings and models.

1) ECONOMY OF RESOURCES

1.1 Energy Conservation

- Energy-conscious urban planning
- Energy-conscious site planning
- Passive heating and cooling
- Insulation / Avoidance of heat gain or heat loss
- Alternative sources of energy
- Day-lighting
- Use of energy efficient appliances
- Use of low embodied-energy materials

1.2 Water Conservation

Reuse water on site:

- Rainwater collection
- Gray-water collection

Reduction in consumption:

- Indigenous landscaping
- Low-flow water supply
- Water requirement in sanitation facilities

1.3 Materials Conservation

- Adapt existing buildings to new uses / Rehabilitation of existing structures
- Use of reclaimed or recycled materials and components
- Use materials that can be recycled
- Proper sizing of building and systems
- Material conserving design and construction
- Use of non-conventional building materials
- Reduction in consumer goods

2) LIFE CYCLE DESIGN

2.1 Pre-Building Phase

Use materials that are ...

- made of renewable resources
- harvested or extracted without ecological damage
- recycled
- recyclable
- long-lasting and low maintenance

Minimize energy needed to distribute materials.

2.2 Building Phase

- Schedule construction to minimize site impact.
- Use non-toxic materials to protect construction workers as well as end users.
- Provide waste separation facilities.
- Specify regular maintenance with non-toxic cleaners.

2.3 Post-Building Phase
- Reuse the building / Adapt existing structures to new users and programmes.
- Reuse building components and materials.
- Recycle building components and materials.
- Reuse the land and existing infrastructure.

3) HUMANE AND CONTEXTUAL DESIGN

3.1 Preservation of Natural Condition
- Respect topographical contours
- Do not disturb the water table
- Preserve existing flora and fauna
- Understand the impact of design on nature

3.2 Urban Design and Site Planning
- Reflection of socio-cultural structures, changes and development in built form
- Integrate design with public transportation
- Promote mixed use development
- Avoid pollution contribution
- Create pedestrian pockets
- Provide for human-powered transportation

3.3 Design for Human Comfort and needs
- Reflection of socio-cultural structures, changes and developments in built form
- Provide thermal, visual, and acoustic comfort
- Provide harmonious connection between exterior and interior
- Provide clean, fresh air
- Use non-toxic, non-outgassing materials
- Accommodate persons with differing physical abilities

CONDUCT OF THE WORKSHOP

The workshop will provide input in three aspects
- Information and interpretation
- Analysis and understanding
- Design and development

Information and Interpretation
Lecture and slide talks are arranged to provide information on the context and to expose students to diverse points of views and interpretation.

Lecture Themes
- Indian Context:
  - India - spatial narratives in traditional Indian architecture
  - Indian architectural evolution (history)
- Urban Context:
  - Indian cities- Morphology and Planning
  - Interface (built/unbuilt)
  - Civic nodes
- Mass Housing:
  - Evolution of houseform
  - Housing types
  - Open spaces
  - Site planning
  - Participatory designs
- Environment:
  - Sustainable architecture and resource management
- Construction
  - Alternative technologies
- Law - Building byelaws and development codes

Site visits
Ahmedabad City
Mass Housing projects in Ahmedabad and nearby centres
Classical architectural examples from the region (Ahmedabad, Patan, Sidhpur, Modhera, Adalaj)

Programme

Week 1	Orientation and familiarizing with context
	Site visits in and around city on urban structure
Week 2	Project site analysis
	Design direction/concepts
Week 3	Idea level resolution
Week 4-7	Design development
Week 8	Presentation and final jury
Week 9	Documentation

Participant's eligibility qualification
Fourth or fifth year student or graduate of Architecture.
Knowledge of English language (oral communication and comprehension).
Keen learner and hard working.
Accommodative to work in a team.

Workshop Charges (per student)
Euro 1000 (Charges for the tuition, lodging and course related expenses)
+ Euro 50 (Non refundable/non transferable registration charges for enrolment)
Registration fee is non refundable and non transferable if student decides to cancel his/her registration.
The faculty accompanying the students will bear their own expenses.

Facilities Provided by Vastu-Shilpa Foundation to the Student Participants

- Accommodation in furnished non air-conditioned apartments on twin sharing basis (Furnishing per apartment includes basic furniture, cooking range, fridge, television and telephone line - incoming calls only)
- Work space at studio
- Course material and handouts
- Computer per group
- Parallel bars for manual drafting, if any
- Access to Vastu-Shilpa Foundation's library
- Site visits and lectures as per studio program schedule
- Limited Internet access

Expenses to be Borne by Participants

- Food (Tea, snacks, breakfast, meals etc.)
- Laundry charges
- Local conveyance
- Stay before 14th February, 2010 and after 14th April, 2010
- Stationery and model/photography materials
- Floppy/CD and printing stationary
- Any additional visits or photography/camera charges during site visits – monuments/museums

Registration Procedure and Schedule

- **16th October (Friday), 2009**

Representative of each institute to select 12 students (from higher semesters, 7th or above) plus 5-10 students in waiting list from respective universities and inform hpandya@web.de latest by this date with contact details (name, email, tel. nrs…).

- **23rd October (Friday), 2009**

Final list of participants to be decided in coordination with Haresh Pandya and the vacant seat/s if any remaining, to be offered to deserving student/s from other institutes and finalise the process latest by this date.

- **27th October (Tuesday) 2009**

Representative of each institute to collect from students the registration fees of 50 EUR latest by this date. Non-payment of registration fees would be construed as non-registration.

- **30th October (Friday), 2009**

Representative of each institute to collect (**in DIGITAL form in WORD format**) from students the registration forms (attached) and send them to hpandya@web.de latest by this date.

- **27th November (Friday), 2009**

Charges for the International Workshop (1000 EUR), to reach directly to VSF Ahmedabad latest by this date (transfer details to be communicated later)

Participating Institutions and Faculty in charge

Balkrishna Doshi (Founder Director, VSF)
Rajeev Kathpalia (Director – Workshop Incharge – VSF India)
Vastu Shilpa Foundation for Studies and Research in Environmental Design
Sangath, Thaltej road, Ahmedabad 380014, India
Tel. 0091-(0)79-27451555 Fax. 0091-(0)79-27452006
E-Mail: vsf@sangath.org Web: www.vastushilpa.org

Prof. Neelkanth Chhaya (Dean, Faculty of Architecture)
CEPT University (Center for Environmental Planning and Technology)
Kasturbhai Lalbhai Campus, University Road,
Ahmedbabd 380009, India
Tel. 0091-(0)79-26302470, Fax. 0091-(0)79-26302075
E-Mail: sa@cept.ac.in Web: www.cept.ac.in

Haresh Pandya
Coordinator - Europe
Habitat Design International Workshop
Avenida Ciudad de Barcelona 124, 3 D, 28007 Madrid, Spain
Tel. 0034-(0)91-5513518 (home)
E.Mail. hpandya@web.de

1) Prof. Claus Steffan
Fachgebiet Gebäudetechnik und Entwerfen, Fakultät VI
Technische Universität Berlin, Strasse des 17. Juni 152, 10623 Berlin, Germany
Tel. 0049-(0)30-31423301 Fax. 0049-(0)30-31426079
E-Mail. gte@tu-berlin.de, michael.prytula@tu-berlin.de (Michael Prytula)

2) Prof. Wim van den Bergh
Lehrstuhl und Institut für Wohnbau und Grundlagen des Entwerfens
Schinkelstrasse 1, 52056 Aachen, Germany
Tel. 0049-(0)241-8095009, Fax. 0049-(0)241-8092208,
E-Mail. bergh@wohnbau.arch.rwth-aachen.de, martenson@wohnbau.arch.rwth-aachen.de
(Bjoen Martenson), kraemer@wohnbau.arch.rwth-aachen.de (Karen Kraemer)

3) Prof. Ignacio Vicens
Departamento de Proyectos Arquitectónicos
Escuela Técnica Superior de Arquitectura de Madrid (ETSAM), Universidad Politécnica de Madrid
Avda. Juan de Herrera nº 2, 28040 Madrid, Spain
Tel. 0034-(0)91-….. Fax: +34.91.3366537,
E-Mail. vicensramos@arquired.es, luisbasabe@gmx.net (Luis Basabe)