



HOW GREEN IS THEIR VALLEY

NOT FAR FROM PUNE IS THE AVASARA ACADEMY, AN ECO-CONSCIOUS SANCTUARY OF LEARNING CONCEPTUALISED BY CASE DESIGN

BY CAROL FERRAO

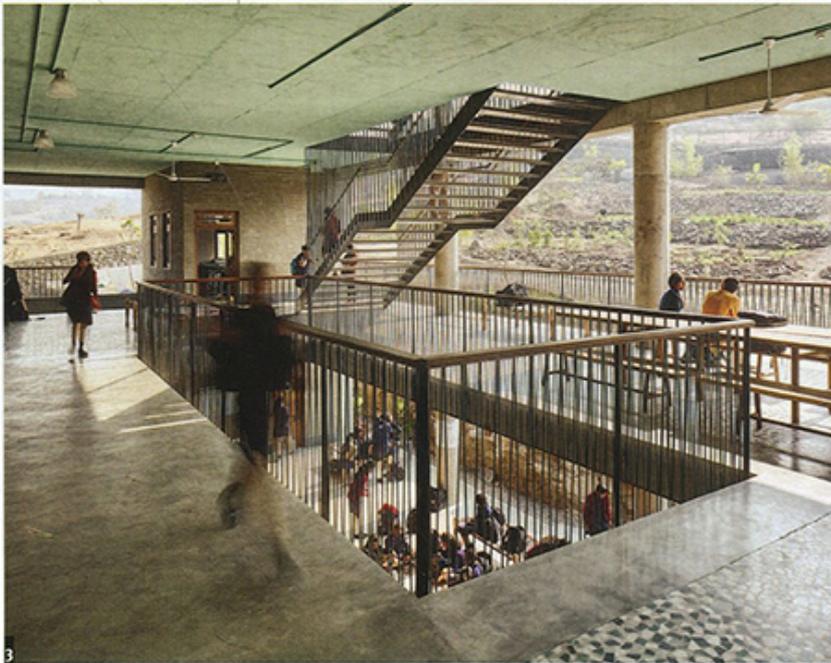
As a school building, the Avasara Academy is familiar in its design, yet it holds a distinct character of its own – just like the academy's unique curriculum and vision. This progressive secondary school, meant exclusively for girls, is settled in the valley slope above the village of Lavale, located 10kms west of Pune. Here, young girls are empowered to be future leaders through a "specialised curriculum designed to couple academic excellence with leadership, entrepreneurship and India studies." The academy enjoys a 4.3 acre campus – which is part of the growing township of Knowledge City, with its first building block completed earlier last year.

Building this educational haven through the lens of sustainability, is Mumbai-based Case Design. Samuel Barclay, principal architect of Case Design, shares, "The school is uniquely positioned to take advantage of locally shared

resources while establishing its own identity as a leader in the education and development of young women in India. Growing out of the agrarian hillside, the campus is a collection of simple structures arranged around an informal series of walkways, courtyards, gardens and terraces. Culled from local and universal examples of academic, domestic, public and sacred spaces, the architecture responds to site, programme and climate, addressing the needs of the community to provide a sanctuary for learning."

Shaping this sanctuary from the initial brief – which Barclay calls "a living document that had to evolve over time" – meant dealing with limitations in the form of the inclined site, budget and FSI (floor space index). These challenges invariably determined how spaces were allocated, but that didn't deter the design team from carving out a learning space that encouraged creativity and exchange of ideas – while still ensuring a climate-sensitive building.

1. Simple in form and material, the academy imbibes numerous sustainable principles.



ABOUT CASE DESIGN

With projects that exude artistic simplicity and passionate understanding of sustainability, Case Design is an architecture and design practice "committed to exploring the design process through acts of making." Based in Mumbai with projects in India, South-East Asia, the Middle East and Africa, the practice was established by principal architects Samuel Barclay and Anne Geenen, who believe that "regardless of method or medium, the greatest form of sustainability is to produce work of lasting value." Their goal is to create things that are simple, beautiful and functional. This thought process is also evident in Casegoods — the product design extension of the practice — that brings forth a collection of furniture, lights and objects born out of a passion for materials. The products are rooted in the Indian tradition of craft while remaining considerate to contemporary living and universal human interaction. As a collection of people with diverse backgrounds, they strongly believe that collaboration lies at the core of all good work.

MATERIAL SPECIFICATIONS

Structure: RCC

Lighting: LED

Flooring: Recycled broken stone mosaic

Furniture: Case Design, Paul Michelon (design) with Mondial Furniture System (manufacture)

2-4. The campus is a collection of simple structures arranged around an informal series of walkways and courtyards overlooking the landscape.

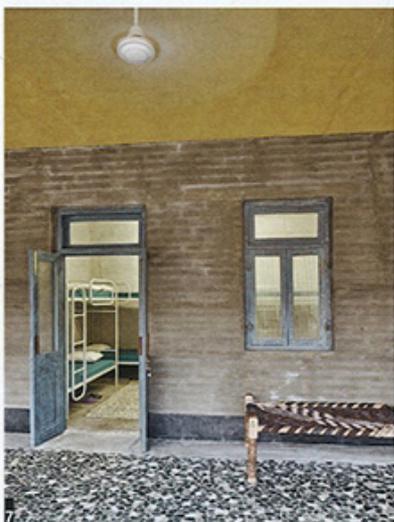
When the site's 27m slope, which stretches from one end to the other, posed a challenge, the team found a way to make it work to their advantage. "The slope would make the buildings more expensive because of the foundations and excavation, but we offset this by utilising some of the space below for water harvesting tanks and earth ducts — which help with the passive cooling system," explains Barclay.

Working closely with climate engineer Pratik Raval of Transsolar — an international climate engineering firm in New York, the architects developed a system to naturally maintain ambient temperatures inside the building. Strategically

placed solar chimneys and earth ducts passively cool the interiors; and each of the upcoming buildings is also carefully programmed to take advantage of sun angles and wind direction to maximise shade and natural cooling.

In this conducive atmosphere to learning, the design doesn't box in the requirements of the academy between rigid walls — but rather sets them free, so to speak, in generously proportioned rooms that often overlook the picturesque landscape. "In the end, the design had to be a balance of learning and residential spaces while utilising as much of the allowable FSI as possible. Once the campus is complete, we hope that the verandahs and green spaces become the heart of the school," discloses Barclay.

The exposed concrete structure holds together classrooms on the first two floors, and a student dormitory and faculty residences on the upper two floors. Wooden doors, patterned floor-to-ceiling glass fenestrations, bamboo screens, *charpoy* seating and ample daylight soften the stark concrete building. When it comes to energy consumption, the academy is mostly self-reliant with solar water heaters providing



5&7. The building includes both learning and residential spaces.

6. Earth ducts and solar chimneys passively cool the interiors.

8. Charpoy and other local references are prominent in the design.

9. 85% of the electrical needs are met through solar panels.

hot water, and solar photovoltaic panels – that were received as donations from Tata Power – powering more than 85% of the buildings.

Packed with these thought-out sustainable measures, the building is functioning exceptionally well post-occupancy. “This will be the first monsoon that the building will be occupied by teachers and students, so it will be a good test for us. The dry season has gone well so far, with significant differences between the internal temperature and the heat outside. This will be helped considerably once the landscape develops further and the construction on the other buildings finishes,” points out Barclay.

– The Avasara Academy is not your conventional ‘global’ school building in appearance. It is a ‘glocal’ endeavour – both in design and otherwise – where collaboration and an appreciation for local context is steering the future towards something exemplary.

When asked about specific challenges in building a sustainable structure in comparison to a conventional building, Barclay notes, “All buildings have challenges. I believe it is simply a matter of making it a priority. This requires a commitment – not just from the design team, but especially from the client as well. In this case, we have been very lucky

PROJECT DETAILS

The project: Avasara Academy

The location: Pune, Maharashtra

The client: Avasara Academy (Roopa Purushotaman, Joseph Cubas)

The firm: Case Design

The architects: Samuel Barclay, Anne Geenen

Design team: Ami Matthan, Dhvani Mehta, Ketakai Raut, Paul

Michelon, Simone Picano, Ji Min An, Tofan Rafati

Project duration: 2015-2019

Completion date: 2016 (first building) 2019 (full campus)

Structural consultants: Nikhil Inamdar, Strudcom

Landscape consultants: Hemali Samant

Electrical consultants: MEP System Solutions

Colour consultants: Malene Bach

Climate engineering: Pratik Raval, Transsolar

Photo credit: Ariel Huber and Case Design

to have such an amazing team led by Roopa Purushotaman and Joseph Cubas, the founders of the school. We were only able to achieve what we’ve done because their vision for the campus aligned so closely with ours.” **ABD**