



# Educational nucleus in a natural setting

Jindal Vidya Mandir and Vocational Training Center, Ratnagiri

Designed by I M Kadri Architects, a collective learning experience has been created by incorporating indigenous characteristics, guided by natural contours to dispose an impactful climate responsive structure within a placid environment.

*Text and Drawings: courtesy I M Kadri Architects*

*Images: courtesy Priyamvada Patil for I M Kadri Architects*



The Jindal Vidya Mandir at the JSW power plant township at Ratnagiri has been planned as part of the town center along with a clubhouse and shopping facilities. A strong emphasis on 'walk to school' led to the planning of a wide tree shaded walkway to connect the school complex with the staff housing zone. The walkway runs along the edge of a picturesque valley encouraging the residents to walk instead of using their vehicles.

The school is strategically located on top of a cliff on the edge of the coastal regulatory zone line with excellent views of the valleys ending at the beaches below. It is currently planned for 400 students with a master plan in place for expanding it to thrice its capacity. The school offers the CBSE curriculum for primary education at the township with classes from kindergarten to eighth grade.

*"A composition of open courts and circulation spaces overlooking endless valley views offers inspiration and stimulation both in and out of the classrooms"*

The existing contours on site dictated the planning of the school. Using the natural undulations of the land as our guiding features, the school is designed along a curved profile, carefully positioned to optimize sea views. A curved circulation corridor - the central spine of the building with three radiating classroom wings forms the plan of the school building. Play courts between each wing defines external activity zones contained within the school extents.



↑ JSW Township - Towncentre Plan.

The central circulation corridor with classroom wings on one side has a stilted portico on the other, which opens out, onto a large, open to sky assembly court. The stilted portico forms a multipurpose zone - an instruction space for lessons, an extra curricular activity area or a sheltered recreation space during the monsoon months.

The classrooms are organized in the form of radiating wings oriented to maximize daylight. Rooted in the Kadri philosophy is the idea that natural light not only creates a vibrant and energized environment but also significantly improves the performance of a class— keeping

in sync with this idea all classroom wings are oriented so as to allow maximum glare free northern light into the teaching spaces. Shaded corridors on the south with smaller openings not only reduce heat gain but also offer protection from the heavy southwest Ratnagiri rains.

The tall windows of the library block too allow ample north light into the interiors. The library opens out into a semi enclosed landscaped courtyard for reading and reflection. A curved red wall punctuated with long playful openings creates sitouts for the library whilst connecting it to the outdoors.



↑ Minimal openings on the south shield the classrooms from heat gain.



↑ Every classroom adjoins a landscaped courtyard.



↑ Long playful openings in the entrance wall filter light into the library court beyond.



↑ Assembly court defined by the curved wall.



↑ Playcourts between the classroom wings.



↑ *The central circulation corridor in a vibrant hue.*



↑ *School staircases : A canvas for creativity.*

The classroom wings are designed as singly loaded corridors that allow free cross-ventilation. Spaces between the buildings are articulated as intimate courts, either as outdoor instruction spaces or play areas. Courts are carefully sized and scaled to create spaces that are activated and packed with energy. With flooring patterned with chess squares on one, a soft mud area or play equipment in the others, each court has a distinct identity. Students develop a sense of belonging to their classrooms by associating it with the adjoining courts and its character.

Laterite excavated from the site is used for landscaping internal courts – grounding the building to its local context. Wastewater generated from the school is treated by the Root Zone system, which purifies wastewater by passing them through the roots of specific plant species. The treated water is used for landscaping.

A striking design element is the playful use of colour in the interiors of the building. Walls are painted in bright primary hues of blue, yellow and red and green – the curvature of the walls is emphasized by the use of colour, adding a sense of drama and play to the teaching spaces. Bright colours peep through the windows exuding vibrancy and warmth.

Creatively designed murals and artwork on several walls of the school embody learning principals such as creativity, integrity, determination and more. Students too have started making the school spaces their own by adding to the play of colour through innovative artwork on the stairways, walls and landings.



*The Vocational Training Centre.*



↑ The central, open-to-sky courtyard.

The entire built environment incorporates learning experiences that range from games painted or carved into the floor, to murals depicting local culture on the walls, to incorporating the colours of the rainbow and the solar system, in the structure of the staircase. The idea of play spaces and teaching spaces to experience nature, sea and sunlight informed the design.

### VOCATIONAL TRAINING CENTRE

“The New Vocational Training Centre combines jaali work composed of local material and green stepped internal courts to allow a free mix of light, wind and people”

The New Vocational Training Centre was set up for the families of the labourers working in the JSW plant at Ratnagiri. The centre is an effort to inspire and enable residents to develop a new skill set and generate opportunities in the region.

A simple plan with a green, refreshing courtyard forms the center of the design.



↑ The entrance wall in locally available laterite stone.

The open to sky court welcomes you at the entrance with classrooms and offices adjoining it on three sides. Each classroom is further attached to a verandah on the outside - a spill out activity zone. Brick Jaalis are designed to screen off semi private areas whilst adding a play of shadow, detail and interest. A ground floor structure, the architecture of the building embodies local flavor and technique. The structure is composed of locally available exposed laterite stone and traditional tiled roofs. ■

### FACT FILE:

Location	: Jaigarh, Ratnagiri
Area of Jindal Vidyamandir	: 25000 sqft
Area of Vocational Training Centre	: 7700 sqft
Client	: JSW Energy Pvt Ltd and JSW Foundation
Cost	: ₹ 22 crore
Year of Completion	: 2015
Number Of Students	: 400