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JK - AYA AWARDS ISSUE



TEMPLE IN STONE & LIGHT Barmer, Rajasthan

temples are the most visible form of public architecture that are ephemeral and which help shape society for centuries to come...

Project Cost : ₹. 2 Crores

Built-Up Area: 138 SqM



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Religious Architecture Award
- Temple in Stone & Light
Barmer, Rajasthan

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27th
Architect of
the Year
Awards

Amritha Ballal is an architect and urban planner, and a founding partner at Space Matters, a multidisciplinary, Delhi based design studio. The studio combines design projects with action-research initiatives that engage with emerging habitat challenges. These include developing one of the first Integrated Development Plans for an urban village in Delhi, mapping the spatiality of urban homelessness in Delhi, designing the memorial for the Bhopal Gas Tragedy and working on the revival of traditional rural building crafts in Kumaon. Amritha teaches at the School of Planning and Architecture, Delhi and is the co-editor of the international publication 'Bhopal 2011-Landscapes of Memory' which explores themes of spatial memory through the case of the Union Carbide tragedy site in Bhopal. Amritha has been nominated for the Rolex Arts Foundation Mentor Protégé Initiative in 2014 and named in the annual international shortlist of emerging woman architects Architecture Journal, UK in 2013. She has collaborated on urban research projects with the School of Planning and Architecture, Bhopal; Research Council of Norway, University of Tokyo and University of Gothenburg. Amritha's written works also include 'The city is our home' on urban homelessness. Her on-going research includes documentation and study of traditional wood carving techniques of Likhai in the Kumaon region of India.

Suditya Sinha, the core design management resource for SpaceMatters, his competence with the actual business of crafting built form and producing tangible and realistic solutions are his key assets. Projects he has led at SpaceMatters have won multiple awards and citations, including Design Today, IAB Young Architects and ArchiDesign Awards. He represented Space Matters as a Director on board Team India Infrastructure Advisory (TII) - an Indo Japanese joint venture and sits on the managing committee of Brisk Infrastructure. Suditya has served as Design Studio-Director at School of Planning and Architecture, Delhi, and was instrumental in drafting the interim architectural curriculum for the newly established SPA Vijayawada, Andhra Pradesh.



Fig #1: Transverse & Longitudinal sections

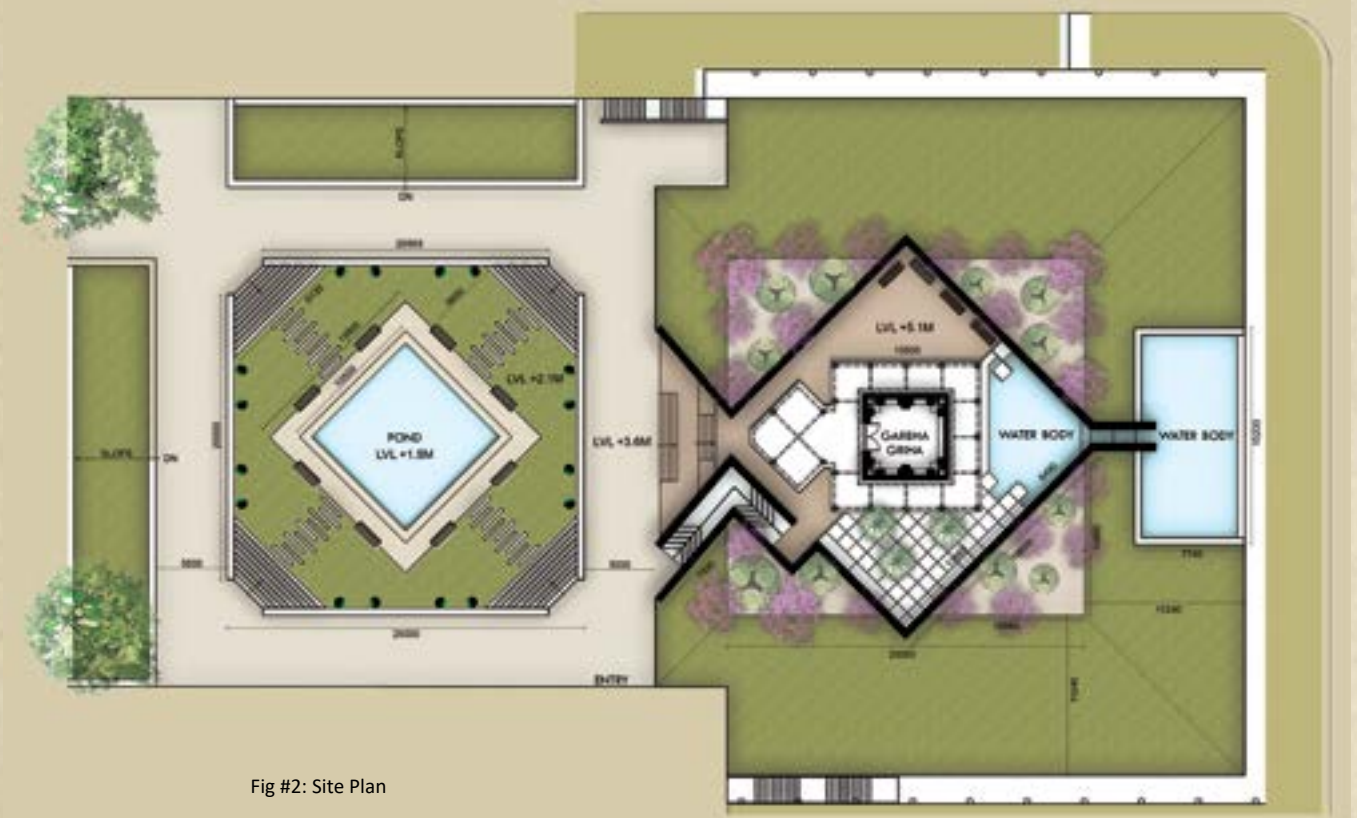


Fig #2: Site Plan

Description of Project:

The project was an opportunity to explore and establish contemporary interpretations of traditional typologies and building techniques. The project was aimed to cater the local community and employees of the industrial township in the village of Bhadresh. With prominent industrial structures as a backdrop, the brief was to evolve a form intended as a contemporary interpretation of the traditional temple; familiar and exciting at the same time.

Located in the culturally rich area of Rajasthan, the contextual response to the region's architecture rendered a design which sought to push the boundaries of modern temple architecture without compromising on the symbolic aspects of temple design.

The temple connects with the community through representation of the local culture, workmanship and

heritage. As a place of worship, it provides a deeper connection by redefining spaces of spiritual refuge in India.

The decision to use stone masonry was an attempt to pay homage to the region's building style and yet provide novelty in a temple of that region. Hence, though the region has traditional temples of stone, the Temple in Stone and Light would add value by bringing a new design and aesthetic to the region. The legacy of temples is taken forward by retaining the symbolic aspects and expanding the scope of temple design in the region.

The native flora was taken into account and landscaping was done envisioning the temple nestled in dense vegetation. Due to the reservoir for the power plant in the vicinity, the area has a very high water table, unusual in the desert. Though still saplings, the landscape has already started to create a local ecosystem.



Fig #3: Water from the nearby powerplant is used to landscape the complex creating green spaces

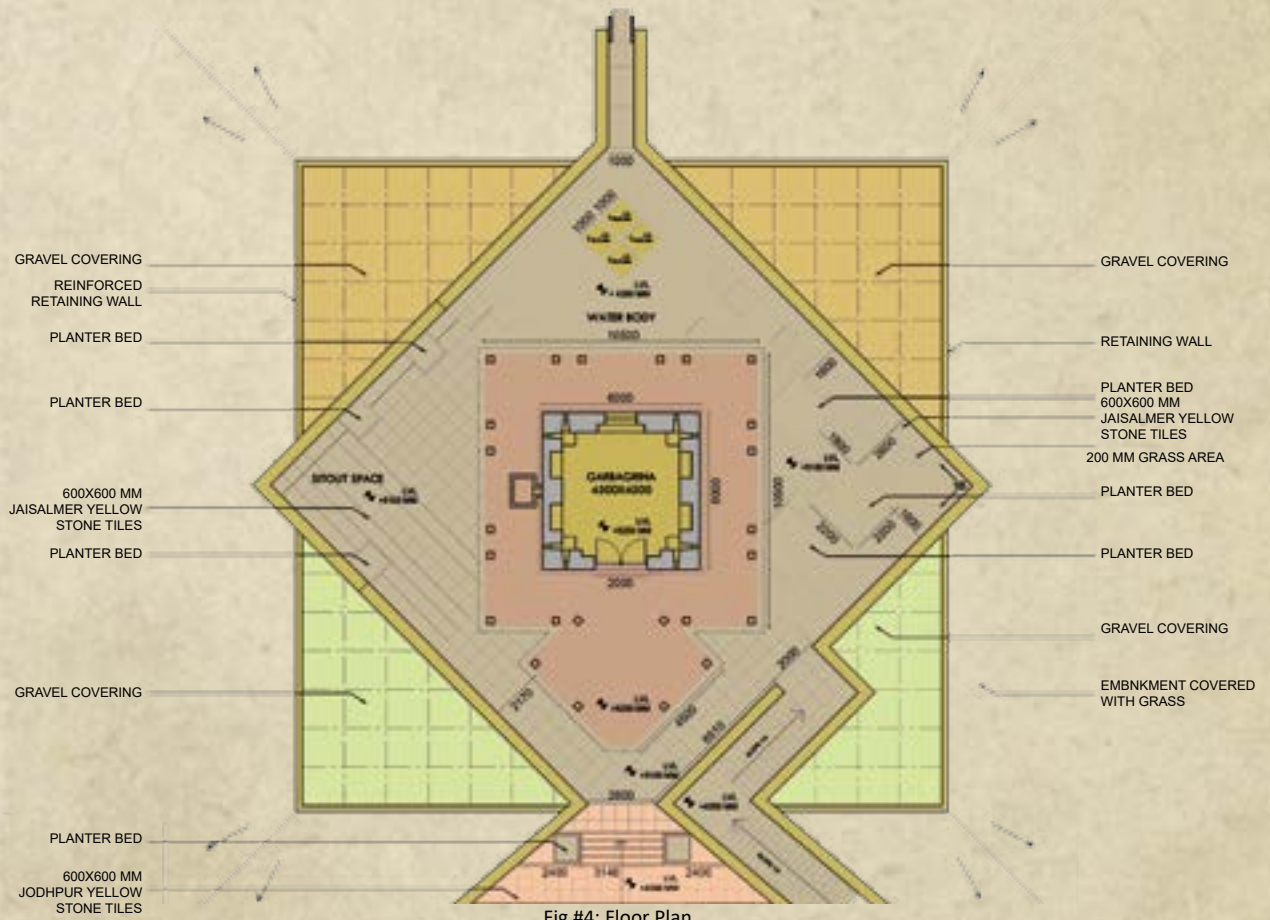


Fig #4: Floor Plan

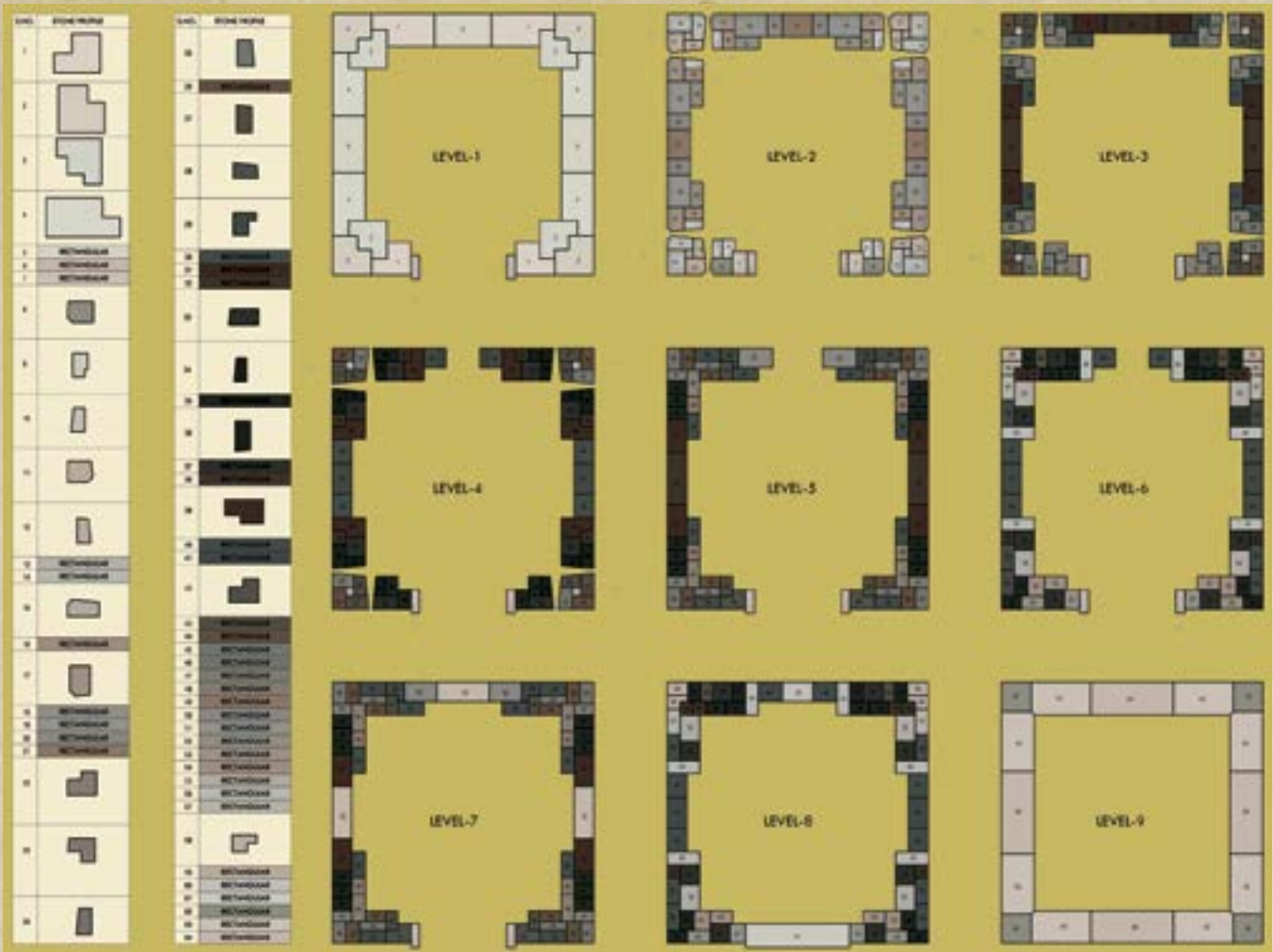


Fig #5: Schedule of Stone Masonry



Fig #6: The yellow stone reflects the desert sun

Since it is intended for the local people, the use of the temple was considered to be the most during the tolerable temperatures of mornings and evenings. Thus the design, along with the landscaping, provides spaces for individuals and families instead of built canopied areas for large gatherings.

Materials of Construction Details: The traditional Indian temple is strongly associated with stone - a testimony to the material's beauty, strength and timelessness. The availability of resources such as excellent quality of stone and depth

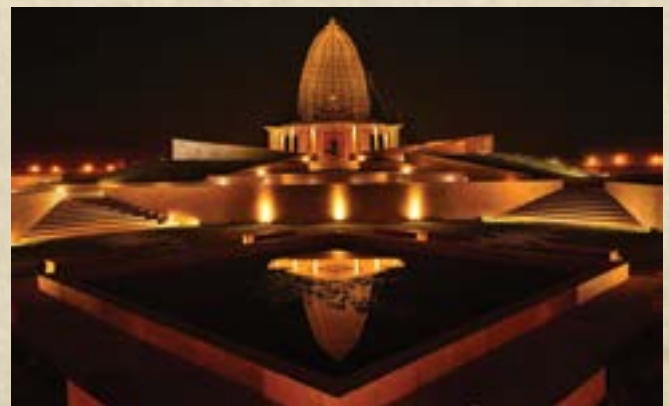


Fig #7: The temples exudes an ethereal yellow glow at night



Fig #8: View from below the finial, or the vedika

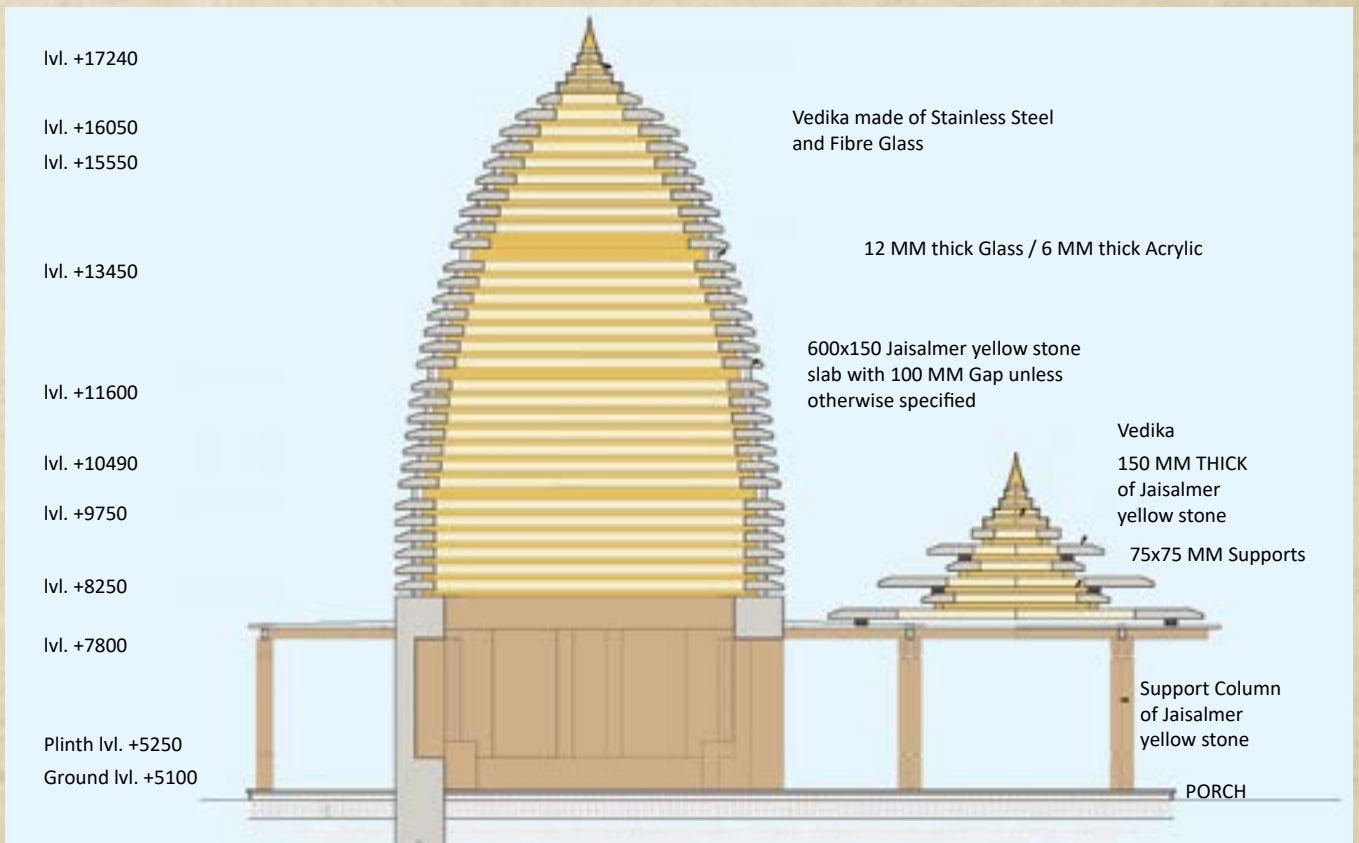


Fig #9: Section through Temple



Fig #10: Shikhara Details

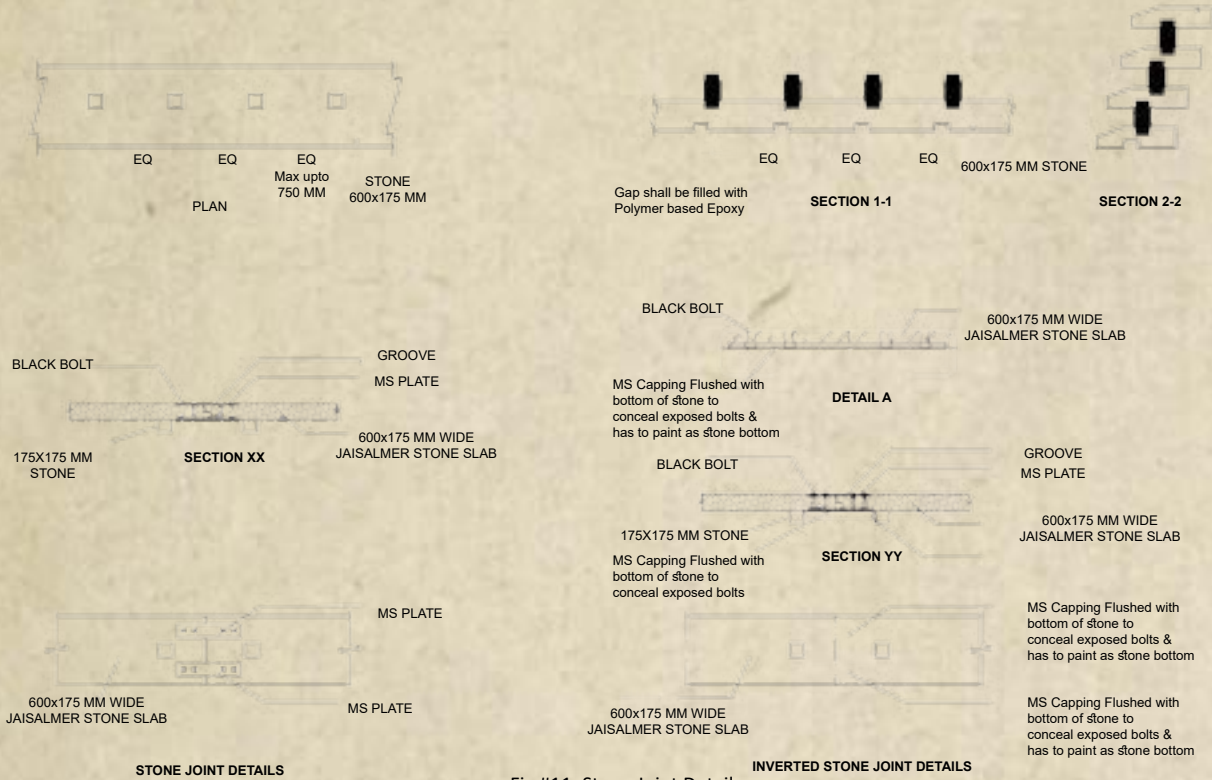


Fig #11: Stone Joint Details



Fig #12: The shikhara of the temple are formed from massive stone slabs on stone pegs



Fig #13: A circular opening forms a halo around the shivlinga idol



Fig #14: The temple becomes a glittering lantern in the desert at night

of knowledge of skilled traditional craftsmanship which we wanted to utilize, led to the consideration of stone as the only material to use.

Considering the setting of the temple in the wonderfully stark and alive canvas of the Thar Desert, the primary building material was the yellow, locally available Jaisalmer sandstone. The yellow sandstone gives the temple an appearance of having risen from the surrounding sands. Instead of hiding the details of structural construction, we decided to make them an integral part the temple aesthetic. The use of using stone structure is intended to achieve beauty not through ornamentation but through usage of stone in its pure form.

The main innovation is in the shikhar of the temple which is supported by solid dressed stone masonry. Rather than a solid block, the individual components of the shikhar of the temple are offset from each other using interlocking stone blocks with epoxy binder. The slabs in the shikhar with their interlocking blocks had to be designed in a manner that the structural stability was achieved and that symmetry was retained when the structure was strongly visible during the night. The stone slabs are held at their joints by steel plates and studs.

The massive stone masonry walls are designed to hold the stone shikhar. The placing of the blocks and workmanship are such that one sees only hairline joints between the blocks. Each massive stone component had to be placed precisely in place to balance the various requirements. As the stone was used for structural purposes and not just decorative, the density of the stone was specified and these were specially sourced to meet the requirements. The pure compression structure is revealed through each course and component that forms the superstructure. Low operational costs were achieved through usage of locally available stone and by employing local skilled labour.

Heaviness of stone was to be balanced with lightness. And it was done through introduction of light. Stone is carved out

to create porosity for natural light to get in, while retaining its solidity as a volume. LED lighting was used to transform the structure in the night-time such that it appears as a glittering lantern in the stark desert landscape.

The stainless steel vedika, or the peak atop the stone shikhar, catches the light during sunrise and sunset and also celebrates the industrial legacy of the organization that commissioned this building. In addition, marble was used for a finer finish and detailing on the landscaping wall cladding and flooring separate from the masonry structure.

Special Features: The temple, built of Jaisalmer stone, lets in air and light; water flows through and around it. The interlocking stone joinery is employed to let light into the inner sanctum or the garbhagriha of the temple during the day and let light out during the night, transforming the temple from day to night. Niches and stone screens provide an element of lightness to the structure. The architecture of the temple combines the heavy materiality of the stone with the lightness of the form; the solid looking stone exterior dissolves as the night dawns and transforms into a delicate lantern in the dunes. The light deepens the natural yellow of the Jaisalmer stone of the temple. A balance of opacity and transparency is achieved by play of stone and light as architectural elements.

While in the first appearance the form of the temple evokes the lines of a traditional Shiva Temple, at closer glance the temple reveals a reimagining of the fractal geometry of the traditional Indian temple structure. Through the design process, the brief was changed from being a Shakti to a Shiva temple, in other words from being a temple for a female deity to a male one. This resulted in an unusual juxtaposition of symbolically masculine and feminine elements of temple architecture in the design. Masculine and feminine are often approached as a continuum, rather than a binary in ancient Indian philosophy and mythology, and the architecture of this contemporary temple also came to symbolically represent the same.

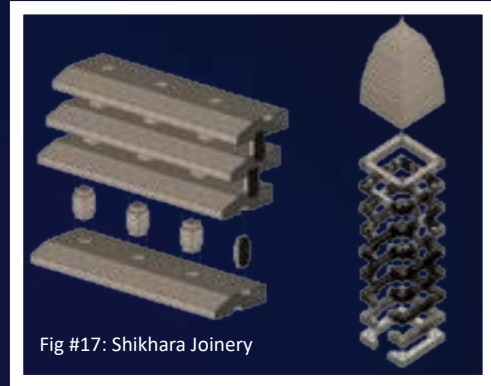


Fig #15: The light from the temple is reflected in the pool

As a result, Parikrama (circumambulatory) of Shakti temple is juxtaposed with symbolic structure of Shiva temple that emerges into a spiritual space with an androgynous sensitivity for this place of worship.

The design of the temple was intended to evoke timelessness; the traditional and still be rooted in its time and place. Through the research and design development process the structured symbolism of tradition based temple architecture was filtered to evolve the form. At different times of the day, from different directions, the temple is heavy and light, solid and translucent, valid and void, past and present. ■

PROJECT DETAILS

Built-Up Area	: 138 SqM
Site Area	: 4360 SqM
Project Cost	: ₹. 2 Crores
Project Duration	: 2014 to 2015
Associated Architects	: Anand Lakhani, Juhi Mehta, Rishi Suman, Adarsh, Sneha & Waseem
Structural Engineer	: Er Sanjeev Aggarwal - ACE Designs
Civil Contractor	: K S Constructions



TEMPLE IN STONE AND LIGHT