

The Aravallis 'rock' Ridge House!



Exemplifies the use of passive building system as a sustainable strategy.

'The simplicity and honesty of post-independence architecture has had a large impact on our approach to design. We continue to inhabit an environment where we should be frugal with our resources. Learning is an ongoing process, especially from those who build our buildings. The craftsman is at the heart of Indian design ingenuity and we like to keep that thinking alive in our projects,' says Amit Khanna, Design Principal, Amit Khanna Design Associates, New Delhi.

TEXT: AMITA SARWAL

PHOTOGRAPHS: LOKESH PAWAR, NAVANEETH KRISHNAN, AMIT KHANNA COURTESY AKDA, NEW DELHI



The conversational piece of the building is certainly the existing rock being retained as a wall and also forming part of the building foundation.

A conversational piece for visitors is the large, natural, rocky outcrop that the Ridge House is abatts at the rear, rising almost 25 feet above the front road! The undulating ridge is a northern extension of the ancient, 1500-million-year-old Aravalli mountain range in north India. Mostly rocky quartzite, it is notoriously hard to build on, and yet, interestingly, has its higher points occupied by old religious structures – while the lower lying land has been used for row housing.

Located in one of New Delhi's prime residential areas, an old single storey house was demolished to be replaced by this multi-family apartment. While the left side of the site was hedged in with a 50 ft. high party wall, the right side

opened up into a central garden carved out by the neighbours who also happened to be architects. Driven by the client's design brief to preserve the quality of light in the six-storey house, the building outline closely follows that of the neighbours, inverting it to create a double-shared courtyard. This mutually beneficial communal open space has the possibility of growing trees in the future.

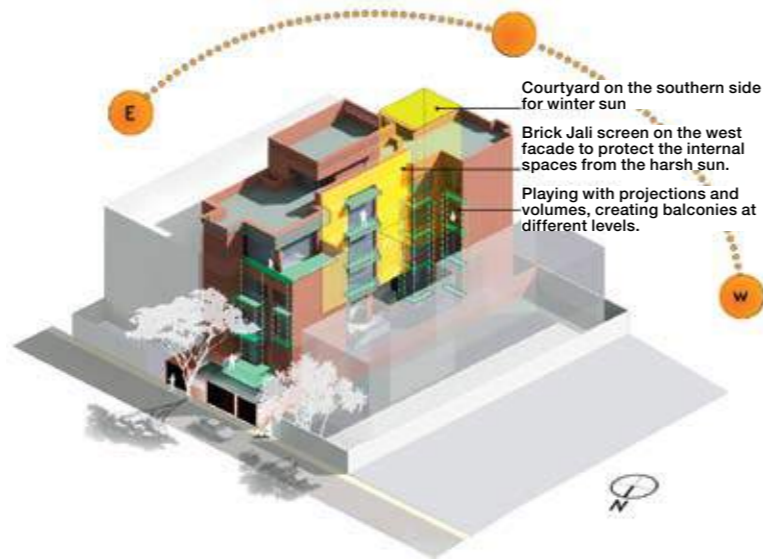
'Creating a five-storey building on a foundation of pure rock was one of the immediate challenges of this project. Unable to use hydraulic splitters or explosives due to the residential neighbourhood, we were forced to rely on manual labour to excavate the foundations. The sheer mass of the rock was beneficial



Exteriors designed in bricks unify the otherwise complex volumetric nature of the building.



Amit Khanna, Design Principal,
Amit Khanna Design Associates.



Ground Floor Plan

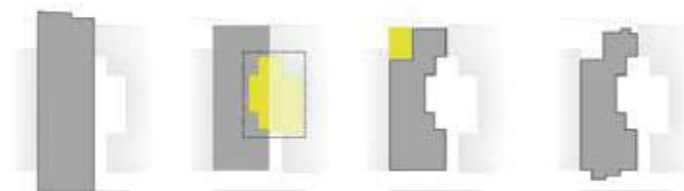


1. Living room
2. Dining
3. Bedroom
4. Toilet
5. Balcony
6. Kitchen
7. Shaft
8. Lift

Third Floor Plan



1. Living room
2. Dining
3. Bedroom
4. Toilet
5. Balcony
6. Kitchen
7. Shaft
8. Lift
9. Study



Plot line with the given context. Following the shape of the building on the right, we get a courtyard. Creating a back terrace on the rear end, for light and ventilation inside the building. The final building shape.

FACT FILE	
TYPOLGY	Multifamily Residence
NAME OF PROJECT	Ridge House
LOCATION	Vasant Vihar, New Delhi
SITE AREA	600 sq mt
BUILT-UP AREA	1800 sq mt
COMPLETION	2016
ARCHITECTURAL FIRM	Amit Khanna Design Associates, New Delhi
ARCHITECT	Amit Khanna
DESIGN TEAM	Shirin Qazi, Anisha Prakash
STRUCTURAL CONSULTANT	Ramesh Kumar Singh/ Space Link Engineers
CONTRACTOR	Adhunik Infrastructure
SITE CONTRACTOR	Adhunik Infrastructure
LIGHTING	Philips



as it meant dispensing with retaining walls and warranting the stone surfaces remaining exposed in the basement, simultaneously being lit through the stilts above. Aligning the needs of multiple floors each following different floor plans from a structural perspective was also challenging, since the basement needed a large column-free space for religious congregations,' describes Khanna.

Since the footprint of the ground floor determined the size of the subterranean level, it was maximised and split into two apartments arranged around the courtyard with independent access from the parking level, hence designed specifically for tenants. The floor above it reduces in size and being a single apartment

meant for the grandparents, it benefited by getting a large sun-facing terrace at the rear. This opened up to the generous outdoor entertainment terrace, complete with a bar counter and water landscaping.

'The true value of any architecture lies in its longevity of use. Good buildings survive by preservation, while others are replaced. With this building, we wanted to create an object that endures – and when we looked to the site for inspiration, there it was! The Aravallis have endured for millennia, we just needed to respect that and the building revealed itself,' sums up the architect.

Enjoying Architecture
'While I was growing up in Kenya, among the close knit

The residential floors have been treated differently to extract the maximum buildable volume while assuring plenty of open space, light and ventilation.



The corridor which joins two parts of the house also eliminates the need for decorative light fixtures.



The living-cum-dining room opens on to the terrace. Lined by custom designed double glazed French windows with protective dust seals, these increase thermal comfort, reduce dust - and allow natural light.



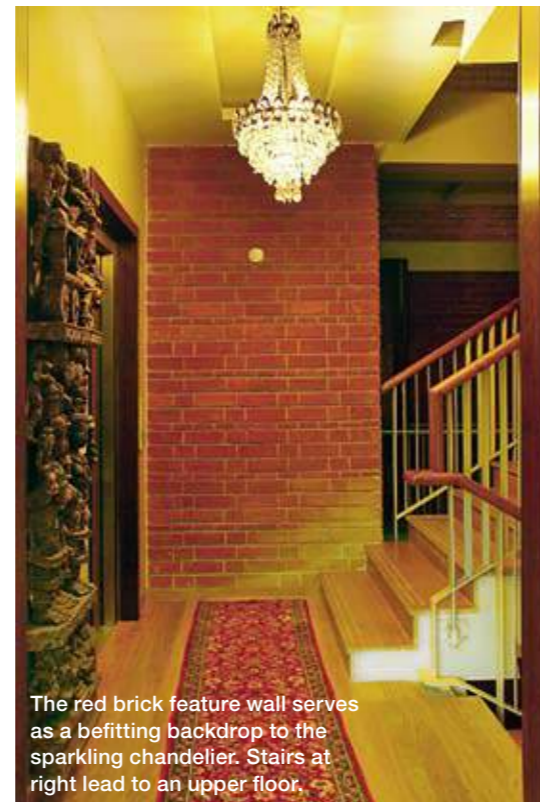
Guided by the brick-red shade of the excavated ridge stone, the exterior brick walls, some designed as "jaalis", carry this colour forward.

expatriate Indian community were my parents' friends, Shraavan Uncle, an architect. He was extremely enthusiastic about his work, and it was very inspiring to see him enjoy architecture, and still have enough time to take all the kids swimming!

Graduating in 2002 with a first class from the School of Planning & Architecture, New Delhi, I then pursued a Masters in Sustainable Urban Development from the University of Oxford, UK. While my undergraduate course gave me a deep sense of first-principle design conditioning, my masters helped ground that passion in the reality of global urban issues, tempering it with a sense of greater responsibility" recalls Amit Khanna.

Khanna's first job after graduating was with Abhimanyu Dalal Architects, working in Urban Design, Residential & Housing Projects. Soon after he founded AKDA | Amit Khanna Design Associates in 2004. Concurrently he spent a year as consultant to the Architectural Heritage Division at Indian National Trust for Art & Cultural Heritage (INTACH).

'AKDA has since grown and settled down into a boutique size firm, since that is where we can tread the balance between being fastidious in design thinking and executing large commercial projects. We are a collaborative office and each of our employees fundamentally contributes to the end product,' affirms the Design



The red brick feature wall serves as a befitting backdrop to the sparkling chandelier. Stairs at right lead to an upper floor.

Principal. Coupled with a recognition that indigenous craftsmanship is an asset, not a challenge, our practice brings together the people who build our buildings on-board during the design process as active contributors.

Perhaps it was the first project Khanna handled after starting AKDA that had a role in moulding his future thinking. 'It was not just a design job. I managed the accounts, bought the material and coordinated with the contractors. Essentially, I built what I designed. That experience made the firm's outlook highly pragmatic both in the sense of working with materials and with people. It further affirmed our thinking - we like to design things that don't waste material, don't

have too many imported or plastic components and are fundamentally Indian in their conceptualisation'.

'The studio philosophy is governed by a regional specificity and sustainability intrinsic to the design process and product. Every object we produce - ranging from a 100,000 sq ft office building to a 1 sq ft light fixture, undergoes the same scrutiny of process and exactitude - a process founded in suitable materiality and innovation, irrespective of appearance. Further, AKDA's quest for absolute quality implies following a unique system of design development, one in which we allow ourselves to learn and imbibe from the skills and experience of people who actually craft



Ivory tinged spacious corridors have brown-toned wooden beams to add warmth.




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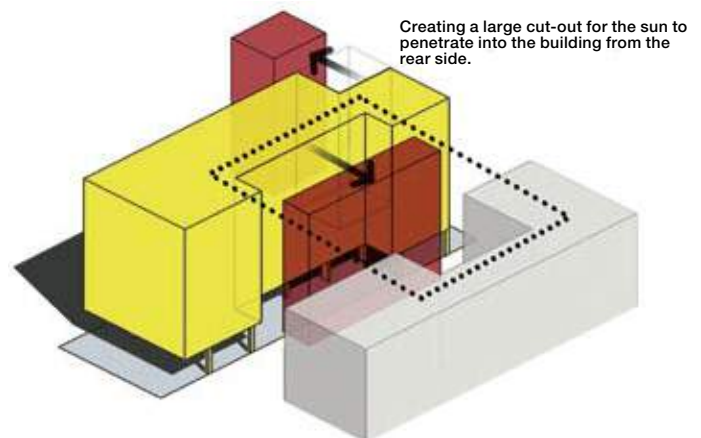
residence



The greenery of the terrace visually doubles in size with the one-way mirrored glass wall which also offers privacy to the interior.

the buildings and objects that we design. Their early involvement acknowledges them as equal stakeholders in the process, and allows us as a studio to better predict construction outcomes and quality control,' Khanna says.

'Going ahead from here, we are very keen to design and build a net zero building at some point in the next few years. Traditional Indian buildings were always climate responsive and relied very little on mechanical ventilation. While it is difficult to revert to older building technologies, newer building methods and materials are beginning to make the possibility of an energy-neutral building possible,' confirms Khanna. 

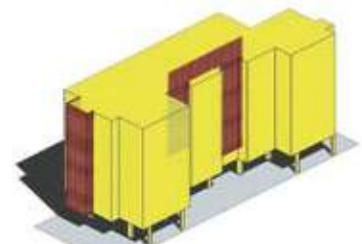


Creating a large cut-out for the sun to penetrate into the building from the rear side.

Creating a courtyard following the building on the right.



Given plot area with the maximum height and ground coverage.



Adding jali screens for diffused light and ventilation.