

Over the Ridge, Within the Clutter of the City

The Ridge House

In this residential neighbourhood, building five-storeys on a foundation of pure rock was the first challenge. As hydraulic splitters and explosives could not be used due to the nature of the area, manual labour excavated large portions of the foundations.

Courtesy: Text: Sahiba Gulati
Drawings & Images:

Architect's Note:

An essential aspect of this project is the need for multi apartment projects in India to be more sustainable, both by consuming lesser energy and being more efficient in managing daylight, air quality and thermal comfort.



↑ Exterior - Front Façade



↑ Exterior Side Elevation

A small two-storey house stood on the ridge in the Kailash colony of Delhi. The ridge is a northern extension of the ancient Aravalli Mountain Range in North India, some 1500 million years old. Mostly rocky quartzite, it extends from the Southeast, branching out in places and tapering off in the north of the city on the west bank of the river Yamuna. Notoriously hard to build on, the ridge has an undulating topography, with higher points occupied by older religious structures and the low lying land used for row housing.

This house with its unique set of challenges was to be remade. It could be built up till five storeys according to bye-laws. The ground floor could be used for parking, services and storage, while the rest of the floors were permitted for residential use.

It shared its boundary with a large rocky outcrop at the rear that rises almost 25 feet above the front road. Surrounded by a 50 feet high party wall on the left, and another house on the right, the site was an example of the dearth of large spaces, the congestion in Delhi. However, on the right the house opened into the neighbours' garden. The garden was created by carving out a rectangular volume from the neighbours' house. This was a wonderful opportunity to bring in light into the house, and so, the new house was designed by mirroring this

carved out volume throughout, creating a double-shared courtyard to benefit both the parties mutually. This is a rare asset in the city.

In this residential neighbourhood, building five-storeys on a foundation of pure rock was the first challenge. As hydraulic splitters and explosives could not be used due to the nature of the area, manual labour excavated large portions of the foundations. However, this enabled the building of a basement without retaining walls as the sheer mass of the rock was enough. The stone surfaces were left exposed in the interior of the basement.

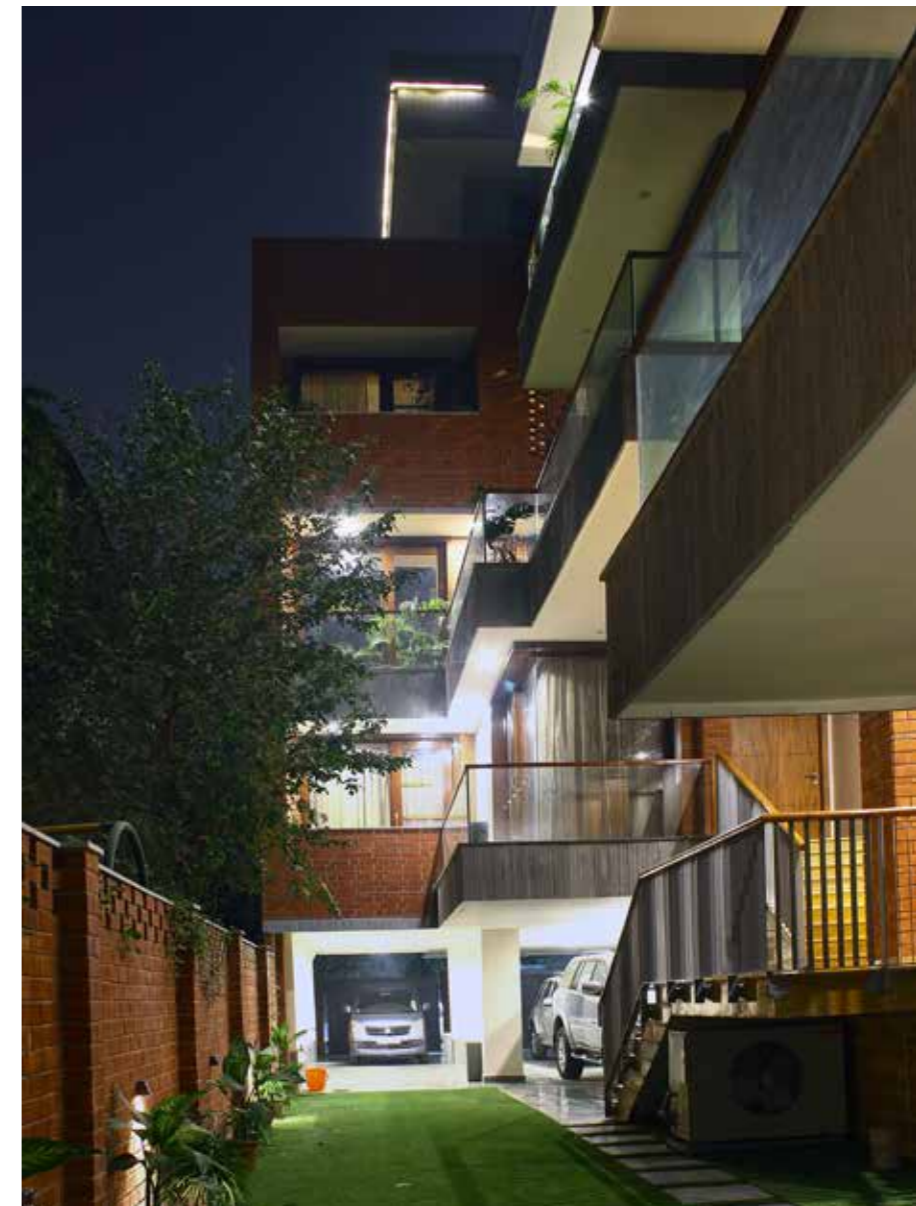
Each floor had to adhere to different requirements. The footprint of the ground floor was maximized as it determined the size of the subterranean level. Maximizing the built area, it was split into two apartments arranged around the courtyard with independent access from the parking level. This was designed specifically for the purpose of renting out. The next floor had been reduced in size since it was a single apartment for the grandparents. Thus, a large sun facing terrace resulted, a luxury unheard of in multi-storey housing. The third level was again designed with the intention of renting out to tenants, and the three-bedroom penthouse was for the client whenever he would be in the country. The penthouse opens up to a generous terrace to be used for entertaining.



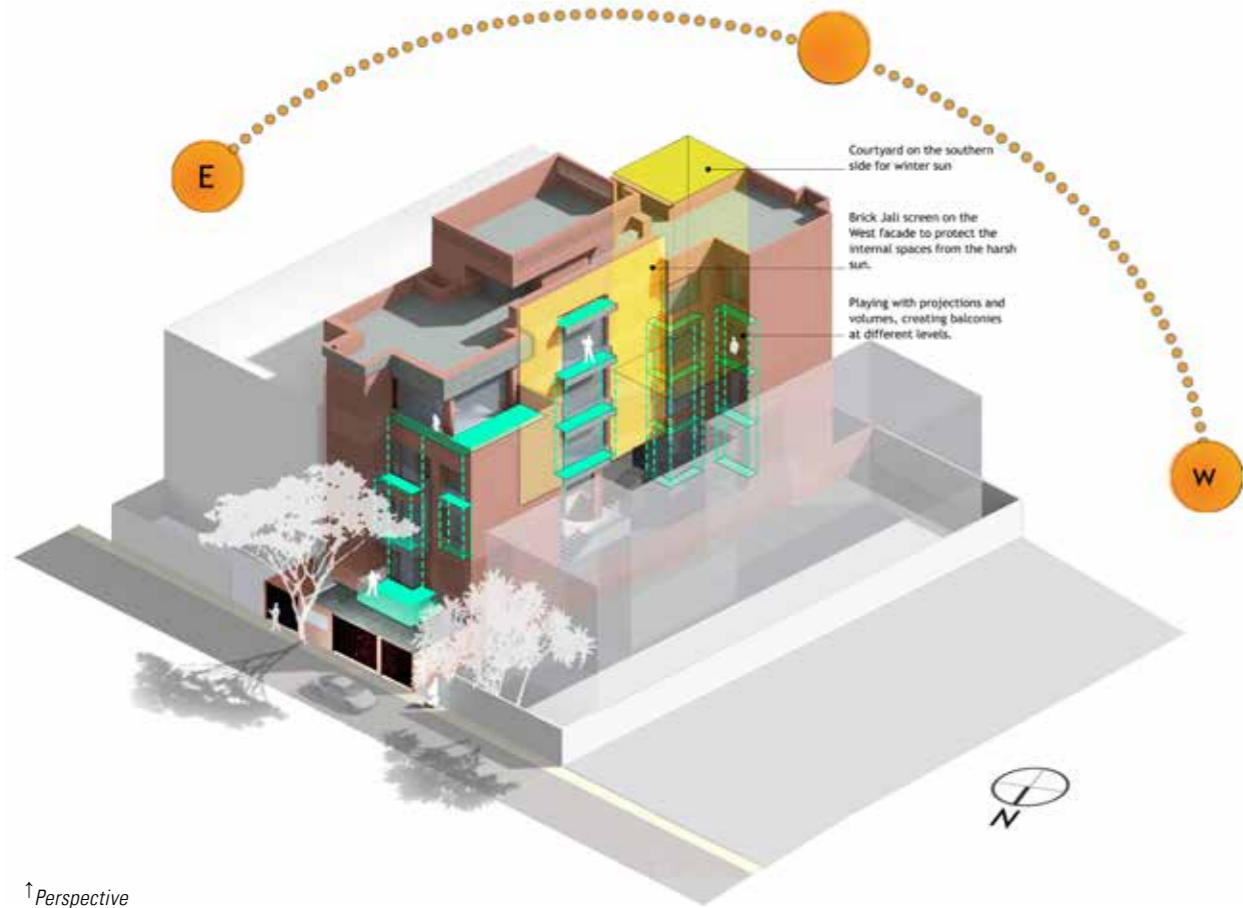
↑ Exterior Side Elevation



↑ Elevation



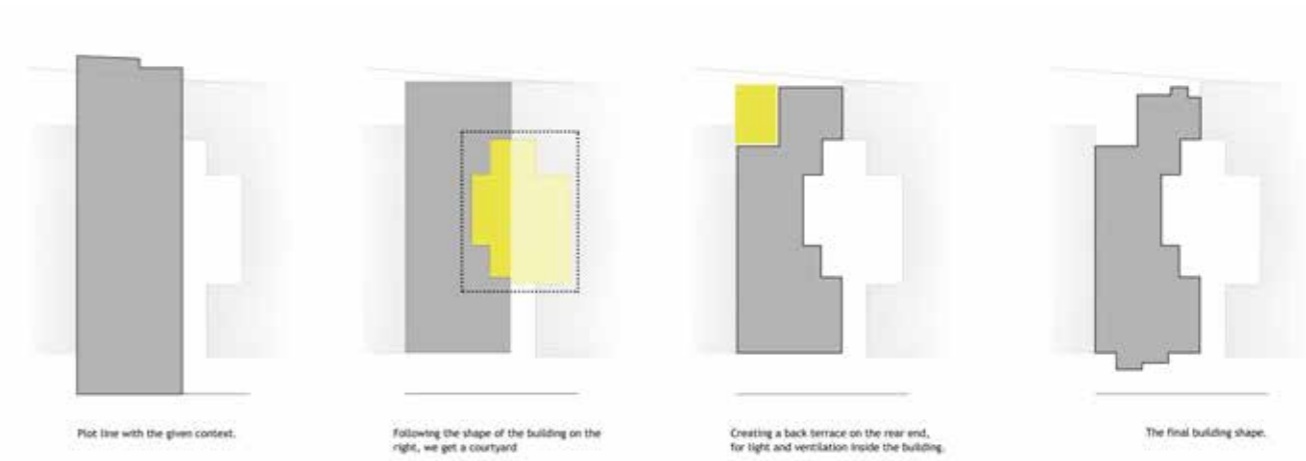
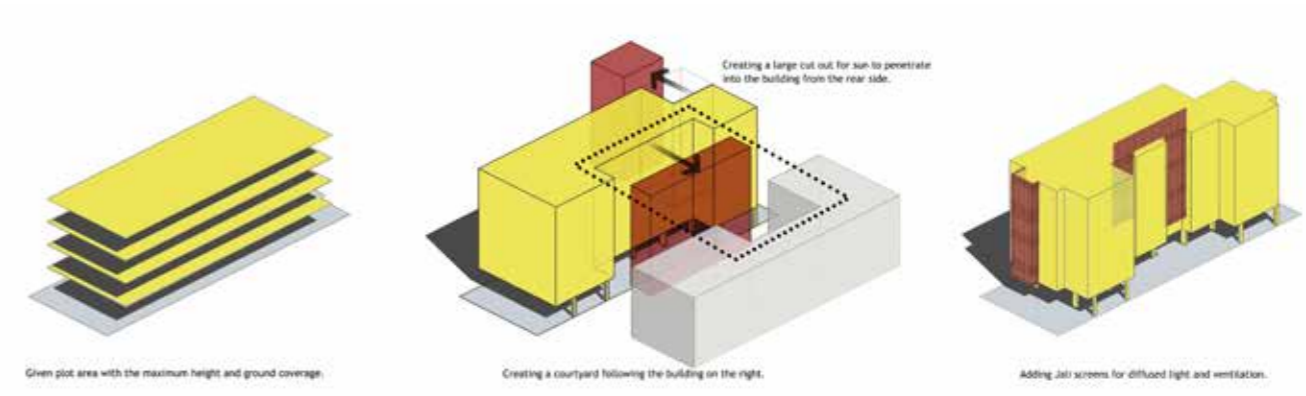
↑ Elevation



↑ Perspective

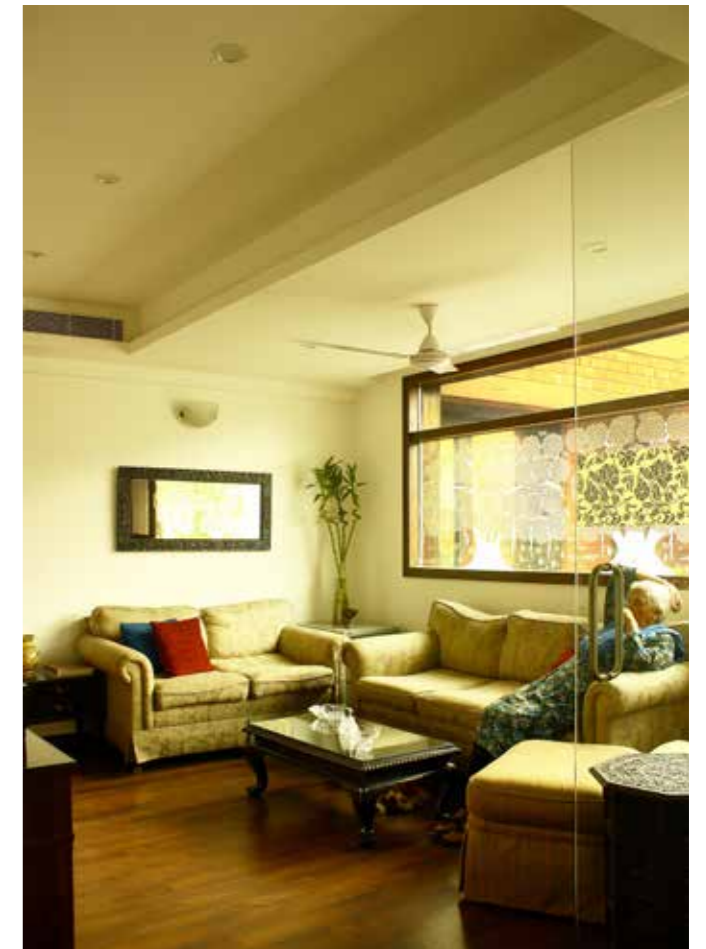


↑ Ground Floor & First floor plan





↑ Regular sized and thin bricks combined to create the jalis.





As each floor is different, so are their structural requirements. This proved a challenge to the architects as the basement required a large column free span to be used for religious congregations. The parking caters to both the owners and the tenants. This was achieved by creating two zones, one at the front and the other at the rear of the building.

The excavated stone is red in colour, and so it guided the aesthetic of the house. A red brick façade unifies the entire building. Brick jails filter the West sun and permit only glare free light within the double courtyard. They screen the individual floors especially at the rear of the house, marking their privacy. Regular sized bricks have been combined with thinner ones to create an irregular pattern of openings in the jails. Kota is also used on the façade with a grooved pattern in order to mask its inherent colour variation. On the floor is kota along with left over granite pieces saved from the wastage of countertops. Naturally well lit and ventilated, it consumes lesser energy. Care has been taken to ensure that the light fixtures and air conditioning system are energy efficient. Custom designed double glazed windows with

protective dust seals in the open able shutters are used throughout the building. Accompanying the brick jails in mitigating heat is the double insulation on the roof.

The project attempts to champion the cause of sustainability in a multi-storey apartment project with a myriad of challenges. ■

FACT FILE:

Project	: Ridge House
Location	: Kailash Colony, New Delhi
Architect	: Mr. Amit Khanna
Design team	: AKDA
Client	: Undisclosed
Built up Area	: 18000 Sq.Ft.
Site Area	: 20,200 sqm
Project Area	: 2,530s qm
Structural Engineer	: Space Consulting Engineers
Civil contractors	: Adhunik Infrastructure
Initiation of Project	: 2014
Completion of project	: 2016