



Pavna Residence

Location	: Aligarh, Uttar Pradesh
Site Area	: 9,012 sq.m.
Built up area	: 2,406 sq.m.
Typology	: Residential
SVA GRIHA rating	: 3 star

The following strategies were adopted to reduce the building impact on the natural environment:



Landscape

- 61 new native trees have been planted; there were no existing matured trees on site.
- 84.2% of the total paved area is shaded with trees.



Energy

- Over 83% of the total living area falls under daylight zone.
- Overall 63.2% reduction in insolation has been achieved by the project against the SVAGRIHA benchmark.
- The LPD of the project is 6.02 W/sqm which is lower than the ECBC specified LPD limit of 7.5 W/sqm for multifamily buildings.
- All the fans and geysers installed in the residence are BEE 5 star rated.
- VRF system has been installed in the building.



Water and waste

- Use of low-flow fixtures reduces the building water demand by about 36.21% compared to SVAGRIHA base case.
- The project has reduced its landscape water demand by 64.22% as compared to the SVA GRIHA base case.
- Rainwater storage tank of 5,610 litres capacity has been installed on site to capture and utilize rainwater. This is more than 75% of the two day building water demand of the project which is 2100 litres.



Materials

- Low-VOC and lead free paints have been used to maintain good indoor air quality.
- PPC is used for 100% structural and plaster masonry work.
- The project has demonstrated 43.84% reduction in the total embodied energy of the building against the SVA GRIHA base case by using AAC blocks in the internal and external masonry walls.



Lifestyle

- There is provision for basic amenities like park, grocery store, ATM/bank, restaurant, school, place of worship, theatre, community center and pharmacy within 1 km radius of the residence.
- Dedicated toilets & resting rooms are provided on site for service staff.
- Green features of the building have been displayed to create awareness on environmental issues.
- Electrical charging points have been provided to encourage the use of electric vehicles.
- Automatic controls are installed for all the electrical fixtures in the building to achieve energy savings.

Integrated Design Team

Client	: Ms. Aasha Jain and Ms. Priya Jain
Architect	: SPACE I DESIGN
Green building consultant	: GreenTree Building Energy Pvt. Ltd.