



## Plot No. 25, Zed Earth Villa

<b>Location</b>	: Bengaluru, Karnataka
<b>Site Area</b>	: 270 Sq.m.
<b>Built up area</b>	: 290 sq m
<b>Typology</b>	: Residential
<b>SVA GRIHA rating</b>	: 5 star

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

### Landscape

- Almost 70% of the total open area on site is soft paved and/or shaded under trees.
- Native trees have been planted on site.

### Energy

- Fenestrations and floor plan layouts have been designed to facilitate natural ventilation through all spaces.
- About 88% of total living area falls under daylight zone.
- Fenestration design of the villa reduces the direct incident heat penetration by about 38%, compared to SVAGRIHA base case for Bengaluru
- Lighting power density is 4.78 W/sq.m and thermal efficiency of the project is 289.82 sq.ft./TR (26.93 sq.m./TR), which is 5% better than the SVAGRIHA base case for Bengaluru.
- Solar photovoltaic panels of size 1.4 kWp and solar water heater of 150 lpd capacity have been installed on the villa.
- All air-conditioning systems, fans and geysers comply with BEE 5-star efficiencies.

### Water and waste

- Use of low-flow fixtures reduces the building water demand by almost 74% compared to SVAGRIHA base case.
- Rainwater storage tank of 1500 litre capacity has been installed on site to capture and utilize rainwater.
- Organic Kitchen waste is converted into manure through the use of "Dailydump's Khamba".

### Materials

- Use of hollow concrete blocks helps in reducing the embodied energy of the building by about 40% compared to SVAGRIHA base case.
- Use of low-VOC and lead free paints helps in maintaining good indoor air quality.
- Over 70% of interior finishes are low-energy like bamboo flooring, rough local granite etc.

### Lifestyle

- There is provision for basic amenities like grocery store, pharmacy etc. within the campus.
- Each Villa has a Retainer's room for accommodation of service staff.
- Each Villa has a kitchen garden and brochures to promote environmental awareness.

## Integrated Design Team:

<b>Client</b>	: Biodiversity Conservation India Ltd., Bengaluru
<b>Architect</b>	: Biodiversity Conservation India Ltd., Bengaluru
<b>Green Building Design and Certification</b>	: Biodiversity Conservation India Ltd., Bengaluru