

The New Green Building for Air Pollution Control Division at CSIR-NEERI

Location	: Nagpur, Maharashtra
Site Area	: 2024 sqm
Built up area	: 1518 sqm
Typology	: Office
SVA GRIHA rating	: 4 star

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

- 🌳 **Landscape**
 - 58 new trees (including 25 exotic trees) have been planted on site.
 - Out of 45 existing mature trees on site, 16 were cut during construction. All trees in the perimeter zone were preserved.
 - Over 50% of the paved area is soft paved and shaded with trees.
- ⚡ **Energy**
 - Over 87% of total living area falls under daylight zone.
 - The LPD of the project is 4.62 W/sqm which is lower than the ECBC specified LPD limit of 10.80 W/sqm for offices.
 - The thermal efficiency of the building envelope is 106 W/sq.m.
 - 3 kWp solar photovoltaic panels have been installed on the site.
 - All fans installed in the office are BEE 5 star rated.
 - VRF system has been installed in the project.
- ♻️ **Water and waste**
 - The project has reduced building water demand by almost 66% below the SVAGRIHA base case through the use of low-flow fixtures.
 - The project has reduced its landscape water demand by 29.34% as compared to the SVA GRIHA base case.
 - To recharge the surplus rainwater, rainwater recharge pit has been created on site, along with filtration systems.
- 🏠 **Materials**
 - Use of low-VOC and lead free paints has been used to maintain good indoor air quality.
 - 100% of the flooring is done with low energy material (vitrified tiles with recycled content).
 - The project has demonstrated a reduction in embodied energy by 25.31% by using fly ash bricks for walling.
- 👤 **Lifestyle**
 - All basic amenities like park, grocery store, convenience store, pharmacy etc. are in close proximity to the site.
 - There is a provision of dedicated rest room and toilet for the service staff within the campus.
 - Environmental awareness is enhanced through posters and Technology Park by the project team.
 - The project has dedicated toilets and barrier free access for physically disabled people.
 - Air quality monitoring system has been installed on the roof of the building to monitor the air quality of the campus.

Integrated Design Team

Client	: CSIR- National Environmental Engineering Research Institute, Nagpur
Architect	: Mr. Bhooshan Kotwal, Mr. Shon Kotwal

