



KONERU LAKSHMAIAH EDUCATION FOUNDATION, CENTRAL RESEARCH BLOCK

Location	: Vijayawada, Andhra Pradesh
Site Area	: 11,285 m ²
Built-up Area	: 30,236.60 m ²
Typology	: Institutional building
Energy Consumption Reduction	: 74.69% reduction in Energy Consumption compared to GRIHA benchmark
EPI	: 35.44 kWh/ m ² /year
GRIHA Provisional Rating	: 5 Star Rating (Version: 3.1)
Year of Completion	: 2021

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

📍 Sustainable Site Planning:

- Air pollution control measures such as site barricading, wheel washing facility and other appropriate measures were strictly adhered to during construction.
- Out of 130 existing mature trees on site, 20 trees were cut. 1000 new trees were planted on site.
- 750 m³ of fertile top soil was preserved on site.

📍 Water Management:

- Reduction of 52.58% from the GRIHA base case has been demonstrated in the building water demand by installing efficient low-flow fixtures.
- Reduction of 44.3% from the GRIHA base case has been demonstrated in the landscape water demand by installing efficient irrigation systems.
- Gunny bags were used for curing of columns and ponding technique was used for curing of slabs

📍 Energy Optimization and Occupant Comfort:

- For achieving visual comfort:
 - » 76.58% of the regularly occupied spaces are day-lit and meet the daylight factor as prescribed by NBC 2005.
 - » Digital timer control has been provided for 100% of the outdoor lighting system.
- For achieving thermal comfort:
 - » EPI reduction of 74.69% from the GRIHA base case has been demonstrated through the integration of high performance systems.

📍 Renewable Energy Technology installed on site:

- Solar photovoltaic system of capacity 151.2 kWp has been installed.

📍 Sustainable Building Materials:

- AAC blocks have been used for walling in the project.
- Vitrified tiles, granite and LVT flooring have been used as flooring materials in the project.
- Gypsum boards and MR grade boards have been used as false ceiling materials in the project.

📍 Waste Management:

- Multi-colored bins have been provided for segregation of biodegradable, non-biodegradable and hazardous/electronic waste.
- Central waste collection area has been provided for storage of segregated waste on site.
- Moving Bed Biofilm Reactor (MBBR) type STP of 300 kLD capacity has been installed in the project.

Integrated Design Team:

Client	: KL University, Vijayawada
Principal Architect	: Design Haaus Solution Pvt. Ltd
Landscape Architect	: AP Nurseries and Garden Consultants
Green Building Design and Certification	: Terra Viridis Consultants LLP