ITC Residents Park

Location: Guntur, Andhra Pradesh
Site Area: 44,500 m²
Built-up Area: 57,208 m²
Typology: Residential
Energy Consumption Reduction: 56.7% reduction in energy consumption compared to GRIHA benchmark
EPI: 44.18 kWh/m²/year
Renewable Energy: Rated capacity of solar PV installed on site is 14 kWp
GRIHA Provisional Rating: 5 Star Rating (Version: 3.1)
Year of Completion: 2019

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

- **Sustainable Site Planning:**
  - More than 63.9% of hardscape area has been shaded by trees, pervious paving, vegetated roof and High SRI coating.
  - Air pollution control measures such as site barricading, wheel washing and water sprinkling were implemented during construction.

- **Water Management:**
  - Reduction of 51.04% from the GRIHA base case has been demonstrated in the building water demand by installing water efficient fixtures.
  - Reduction of 48.6% from the GRIHA base case has been demonstrated in the landscape water demand.
  - Hessian cloth was used for curing of columns and ponding technique was used for curing of slabs.

- **Energy Optimization & Occupant Comfort:**
  - For achieving visual comfort:
    - 75.43% of total living area is daylit and meets the daylight factor as prescribed by NBC 2005.
  - For achieving thermal comfort:
    - EPI reduction of 55.82% from the GRIHA base case has been demonstrated through the integration of high-performance systems.

- **Renewable Energy Technologies Installed on Site:**
  - Solar Photovoltaic system of capacity 14 kWp is installed on-site in the project for complying with the mandatory clause.
  - 46 MW of wind energy has been installed.

- **Sustainable Building Materials:**
  - Pozzolana Portland cement with 30% fly-ash content by weight has been used in plaster and masonry mortar.
  - Vitrified tiles with recycled content and granite have been used in the project.

- **Waste Management:**
  - Multi-colored bins have been provided on each floor level to collect and segregate waste at source.
  - A dedicated place has been provided on site to store segregated waste prior to disposal.
  - Organic waste converter of 249 kg/day has been installed to treat bio-degradable waste.

**Integrated Design Team:**
- **Client:** ITC Limited
- **Principal Architect:** Edifice Consultants Pvt Ltd
- **Landscape Architect:** Integrated Design
- **Structural Consultant:** Neilsoft Ltd
- **Electrical Consultant:** Neilsoft Ltd
- **Green Building Design and Certification:** The Energy and Resources Institute