ITC Residents Park

Location	:	Guntur, Andhra Pradesh
Site Area	:	44,500 m^2
Built-up Area	:	57,208 m^2
Typology	:	Residential
Energy Consumption Reduction	:	56.7% reduction in energy consumption compared to GRIHA benchmark
EPI	:	44.18 kWh/m^2/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