



## Income Tax Commissioners' Office

Location	: NOIDA
Site Area	: 2,215 m <sup>2</sup>
Built up Area	: 4,360 m <sup>2</sup>
Air-conditioned Area	: 3,071 mv
Non Air- conditioned Area	: 1,289 mv
Energy Consumption Reduction	: 43.2 % reduction in energy consumption compared to GRIHA benchmark
EPI	: 79.5 kWh/m <sup>2</sup> /year
Renewable Energy	: Rated capacity of solar PV installed on site is 2.88 kWp
GRIHA provisional rating	: 3 Stars
Year of completion	: 2014-15

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

### 🌱 Sustainable Site Planning

- This project is a plot in an urban area which was cleared before it was handed over to Income Tax. Area left beyond the building footprint is very less and is just sufficient for the mandatory 6 meter wide fire-tender access.
- With very little area left for landscaping, row of trees is planted along the boundary wall and the peripheral road is a combination of hard and soft surfaces.
- Necessary measures were adopted during construction to minimize soil erosion. Moreover, top soil from the project site was stored in a nursery and reused for landscaping in the project.

### 🌱 Reducing water consumption:

- Building water use has been reduced by 78% from the GRIHA benchmark by using low flow fixtures. The building water consumption in design case is 1.2 KLD as compared to the water consumption in base case which is 6.5 KLD.
- Pre-mixed concrete has been used in the project. Plasticizers were added to the composition to reduce concrete setting time which in turn leads to reduction in water demand for curing.

### 🌱 Reducing energy consumption (compared to GRIHA benchmarks) while maintaining occupant comfort:

- More than 51% of the regularly occupied spaces receive optimum daylight. Double Glazed Unit (DGU) with SHGC 0.18 is installed in all the windows to minimize heat gain and maximize daylight.
- EPI of the building is reduced to 79.5 kWh/m<sup>2</sup>/yr from the benchmark EPI of 140 kWh/m<sup>2</sup>/yr with the help of high efficiency façade, optimizing artificial lighting and using high efficiency VRV system for air-conditioning.

### 🌱 Renewable energy technologies installed on site:

- Solar photovoltaic of 2.88 kWp rated capacity has been installed on site which is equivalent to 2.28% connected load for lighting and air-conditioning. This will generate electricity equal to 7.4% lighting demand of the project.

### 🌱 Use of low energy materials

- Fly ash has been extensively used in the project in RCC, mortar plaster and in the form of AAC blocks.
- Low energy materials such as unpolished stone and ceramic tiles have been used.

## Integrated Design Team

Client	: Income Tax Department, NOIDA
Coordinator	: Mr S K Soni, AGM (ENGG) NBCC
Principal Architect	: RT & Associate Pvt. Ltd.
Landscape Architect	: RT & Associate Pvt. Ltd.
Project Management Consultant	: NBCC
Structural Consultant	: Structural Design Vetted by IIT Delhi
Electrical Consultant	: RT & Associate Pvt. Ltd.