



## Ganga Cypress, Pune

|                              |                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------|
| Location                     | : Ganga Cypress, Sr No 58, Hissa No 1, 2/2, behind Indira Institute, Tathawade, Pune |
| Site Area                    | : 12104.36 m <sup>2</sup>                                                            |
| Built up Area                | : 19768.52 m <sup>2</sup>                                                            |
| Typology                     | : Residential                                                                        |
| Air-conditioned Area         | : 4942.13 m <sup>2</sup>                                                             |
| Non Air- conditioned Area    | : 14826.39 m <sup>2</sup>                                                            |
| Energy Consumption Reduction | : 80.64% reduction in energy consumption compared to benchmark EPI                   |
| EPI                          | : 20.45 kWh/m <sup>2</sup> /year                                                     |
| Renewable Energy             | : Rated capacity of solar PV installed on site is 16 kWp                             |
| GRIHA provisional rating     | : 3 Stars                                                                            |
| Year of completion           | : 2014                                                                               |

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

### 📍 Sustainable Site Planning

- The site planning has been done in a manner to maximize the cross ventilation within the buildings.
- Drainage has been planned according to the site topography for gravity flow.
- 810 new trees have been planted on site.
- Utility corridors have been designed along roads and pathways on site.
- 865.45 m<sup>3</sup> of top soil which was excavated from the site was stored and later used for landscaping on site.

### 📍 Reducing water consumption:

- Use of low-flow fixtures and fittings help reduce building water use by 51% from GRIHA base case.
- Reduction in landscape water demand by 37% against GRIHA benchmark using less lawn area and more native trees.
- By use of RMC and ponding techniques reduction in water consumption during construction.

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

- For achieving visual comfort: More than 75% of the total living area is day-lit in all the blocks and meets daylight factor as prescribed by NBC 2005 SP41.
- Glass installed has an effective SHGC value less than 0.45 which in combination with the shading devices has reduced the heat gain into the building.
- ECBC compliant motors, transformers and pumps have been installed in the project.

### 📍 Renewable energy technologies installed on site:

- 16% of internal lighting requirement of the project is met by solar PV installed on the roof top of the project.
- Renewable energy based hot water system is installed on site, which helps in saving of 34% of electrical energy.

### 📍 Use of low energy materials:

- Flyash bricks were used for improving concrete performance.
- PPC with a content of more than 25% flyash has been used for structural, plastering and mortar.
- Low VOC paints, adhesives & sealants are used in the project.

### Integrated Design Team

|                           |                                                                          |
|---------------------------|--------------------------------------------------------------------------|
| Client                    | : Goel Ganga Development                                                 |
| Coordinator               | : Mr. Sagar Kumbhar                                                      |
| Principal Architect       | : Ar. Parvez Jamadar & Associates and Ar. Jagdish Deshpande & Associates |
| Landscape Architect       | : Ar. Mahesh Chinchalkar                                                 |
| Green Building Consultant | : Eco solutions, Pune                                                    |

Building performance as per audit report

#### Energy

- Final EPI achieved - 17 KWh/sqm/year.
- Reduction in EPI from proposed case - 16.87%.
- Thermal comfort is met as per NBC 2005.
- Lighting lux levels are met as recommended by NBC 2005.

#### Water and waste:

- Water test report indicates conformity to IS codes.
- Water consumption in building - 34,273.5 kL/ annum

#### Noise level

- Outdoor noise levels are within acceptable limits as per CPCB.
- Indoor noise levels are within acceptable limits as per NBC 2005.