



## Palladio

Location	: Tathawade, Pune
Site Area	: 15994.32 m <sup>2</sup>
Built up Area	: 14,223.61 m <sup>2</sup>
Air-conditioned Area	: 150 m <sup>2</sup>
Non Air- conditioned Area	: 14073.61 m <sup>2</sup>
Energy Consumption Reduction:	: 72.47% reduction in energy consumption compared to GRIHA benchmark
EPI	: 27.53 KWh/m <sup>2</sup> /year
GRIHA provisional rating	: 4 Stars
Year of completion	: 2014

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

### 📍 Sustainable Site Planning:

- Adoption of appropriate measures for soil erosion control, preservation of fertile top soil, protection and preservation of existing mature trees on site
- Planning of services with minimum site disturbance

### 🌿 Reducing water consumption:

- Reduction in landscape water demand by 55.74% by provision of STP treated water through drip irrigation and selecting mainly native and naturalized plant species for landscaping
- Reduction in building water demand by 25.93% by provision of low-flow plumbing fixtures and use of STP treated water for flushing through dual plumbing system
- Rainwater harvesting by provision of recharge pits to collect 100% run-off from roof for ground water recharge

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

- For achieving visual comfort:
  - » Design of landscaping at the centre of the layout on podium connecting residential buildings
  - » Provision of appropriate openings for adequate daylighting inside more than 85% habitable spaces
- For achieving thermal comfort:
  - » Provision of terraces, balconies and horizontal shading devices and appropriate glazing which will reduce 45% of direct solar heat gain
  - » Use of fly ash bricks in construction of building envelope and application of heat reflective paint on roof
  - » Provision for naturally ventilated and adequately daylighted habitable spaces

### 🔌 Renewable energy technologies installed on site:

- Installation of solar hot water system to suffice 100% hot water requirement, thus reducing the consumption of energy generated from non-renewable sources

### 🏠 Use of low energy materials:

- Structural applications: addition of fly ash in OPC and RMC, use of fly ash bricks and steel having recycled contents
- Non-structural applications: use of fly ash based PPC and mortar and plaster containing industrial wastes
- Interiors: Use of wooden flush doors, Aluminum window frames and vitrified tiles having recycled contents, use of low-VOC paints, adhesives and sealants

## Integrated Design Team:

Client	: Vilas Javdekar Eco Developers Pvt. Ltd.
Principal Architect	: VK:a architecture
Landscape Architect	: Ar. Kshitija Kolhatkar
Project Management Consultant	: Vilas Javdekar Eco Developers Pvt. Ltd.
Structural Consultant	: Strudcom Consultants Pvt. Ltd.
Electrical Consultant	: MEP System Solutions Pvt. Ltd.
Green Building Design and Certification	: VK:e environmental LLP

### Building performance as per audit report

#### Energy

- Final EPI achieved - 15.80 KWh/sqm/year.
- Reduction in EPI from proposed case - 42.16%.
- 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 - 17,37,653 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.