



# ASHAKIRAN MAHILA HOSTEL, Karad Pune Division

GRIHA EB



4 STAR



Location	: Karad, Satara District, Maharashtra
Site Area	: 6,321 sq.m.
Built up Area	: 993.04 sq.m.
Typology	: Hospitality
Rating Category	: GRIHA for Existing Buildings (EB)
Version	: 1
Date of Award	: 30th April, 2019
Client	: Government of Maharashtra
Integrated Design Team	: Public Works Department (PWD), Maharashtra
Green Building Consultant	: Beratung Consultants Pvt. Ltd.

The following strategies were adopted by the project team to reduce the impact of the existing building on the environment:

#### Site Parameters:

- Preferred parking was provided for electric vehicles .
- Strategies were implemented over 5,193 sq.m. of site area to reduce the Urban Heat Island Area.

#### Energy:

- Replacement of old lighting fixtures with LEDs, installation of efficient fans have reduced the annual energy consumption from 8,856 kWh/year to 7,872 kWh/year. demonstrating a reduction of 11% from the total energy consumption.
- Solar photovoltaic system of 5 kWp was proposed to generate 7,865 kWh of renewable energy.

#### Water Efficiency:

- Building water consumption was reduced from 780.73 kL/year to 239.44 kL/year demonstrating a reduction of 69.33% from the total energy consumption.
- Provision of rainwater harvesting system to cater to 100% of the roof water run-off on site.

#### Human Health and Comfort:

- Indoor comfort conditions measured in summer months;  
Dry bulb temperature= 29 - 30°C, Relative humidity= 34% - 41%,  
Daylight levels= 282 – 767 lux, Artificial lighting levels= 220 - 593 lux and Indoor noise levels: 36 – 40 dB; were compliant with benchmarks of the Indian Model for Adaptive comfort, SP41 and NBC 2005.

Total energy offset  
by renewables  
= **99.91%**

Total reduction in  
building water demand  
= **69.33%**

#### TOTAL CARBON OFFSET BY THE PROJECT:

By planting native saplings & preserving existing trees: **0.04 ton/year**

By conservation of conventional energy: **9.64 ton/year**