



NORTH TEHSIL OFFICE, Solapur Pune Division

GRIHA EB



4 STAR



Location	: Solapur District, Maharashtra
Site Area	: 3,700 sq.m.
Built up Area	: 950 sq.m.
Typology Rating	: Commercial
Category	: GRIHA for Existing Buildings (EB)
Version	: 1
Date of Award	: 31 March, 2019
Client	: Government of Maharashtra
Integrated Design Team	: Public Works Department (PWD), Maharashtra
Green Building Consultant	: Gadin Consultancy & Co.

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

Site Parameters:

- Availability of amenities such as bus stop, bank, pharmacy, restaurant, grocery shop are within 500 meters of walking distance from the main entrance of the project.
- Preferred parking was provided for electric vehicles .
- Strategies were implemented over 1,400 sq.m. of site area to reduce the Urban Heat Island Effect.

Energy:

- Replacement of old lighting fixtures with LEDs, installations of efficient fans have reduced the annual energy consumption from 19,788 kWh/year to 19,344 kWh/year.
- Solar photovoltaic system of 3 kWp was proposed to generate 4,686 kWh of renewable energy.

Water Efficiency:

- Building water consumption was reduced from 172.46 kiloliters/year to 104.02 kiloliters/year demonstrating a reduction of 39.68% from the total water consumption.

Human Health and Comfort:

- Indoor comfort conditions measured in summer months;
Dry bulb temperature= 30 - 31°C, Relative humidity= 44% - 48%,
Daylight levels= 77 – 112 lux, Artificial lighting levels= 156 - 234 lux and Indoor noise levels: 48 – 50 dB; were compliant with benchmarks of the Indian Model for Adaptive comfort, SP 41 and NBC 2005.

Total energy offset
by renewables
= **30.54%**

Total reduction in
building water demand
= **39.68%**

TOTAL CARBON OFFSET BY THE PROJECT:

By planting native saplings & preserving existing trees: **0.18 ton/year**

By conservation of conventional energy: **9.94 ton/year**