Panedas Residence

Location : Guatemala City  
Site Area : 1907.87 sq.m. 
Built up area : 473.6 sq.m. 
Typology : Residential 
SVA GRIHA rating : 4 star 

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

**Landscape**
- Over 59% of the total open area on site is soft paved and/or shaded under trees.
- 5 new trees, of native species, have been planted on site.

**Energy**
- Over 83% of total living area falls under daylit zone.
- Lighting power density is 2.19 W/sq.m which is lower than the ASHRAE 90.1 specified LPD limit of 7.8 W/sq.m.
- Solar photovoltaic panels of size 2 kWp and solar water heater of 600 lpd capacity have been installed on the roof of the residence.
- As the local climatic conditions provide good indoor thermal comfort, therefore the house has no air-conditioning or fans installed.

**Water and waste**
- Use of low-flow fixtures reduces the building water demand by almost 56% compared to SVAGRIHA base case.
- Rainwater storage tank of 12000 litre capacity has been installed on site to capture and utilize rainwater.
- The project has planned to compost the organic waste on site.

**Materials**
- Use of low-VOC paints have been used to maintain good indoor air quality.

**Lifestyle**
- A dedicated bedroom and toilet facility has been provided for the service staff.
- The built up area per capita is 47.36 sq.m, which lies within the prescribed limits.
- A book on the green measures of the project is being published to create more awareness on green buildings.
- Waste water generated from the project is being recycled and reused.

**Integrated Design Team:**

Client : Mr. Daniel Panedas, Guatemala  
Architect : Mr. Geoffrey Hess, Guatemala  
Green Building Design and Certification : Ambiente arquitectura sostenible, Guatemala