

The design is based on sustainable living with elements ensuring that the impact to the environment and the running cost are kept low. The floor plan is split into two and the swimming pool moved upstairs to reduce the building footprint on the ground by 57% keeping the site as natural as possible. To reduce energy use, energy efficient devices, solar water heaters and lights and L.E.D. lights are used.

Material

Solar tiles are used on the roof taking advantage of Zimbabwe's sunny days. These only require daylight not direct sunshine thus can generate electricity even on the cloudiest of days. Large triple glazed sealed windows on ground allow the living spaces to be naturally lit and ventilated. The building is finished with materials that do not release or contain volatile organic compounds. The finishes are light coloured to allow the reflection of light further into the internal spaces. This combined with thermal mass of the wall and concrete floor eliminate the need for artificial heating systems. Renewable sources are used for the building materials for example, certified wood taken from responsibly managed forests and materials, components, and systems found locally or regionally saving energy and resources in transportation to the project site.

Environmental Influences and Solutions

Vertical gardens and planters are used to be able to add more spaces covered by nature. Storm water and grey water are filtered and reused for irrigation.

Spatial Configuration

The site is configured to allow the users space to live work and play freely. Large openings and double volume spaces allow interaction with one another from most spaces. The acrylic pool and deck allows visual interaction between the two levels.

Merits

- Easier maintenance
- Energy and Water efficiency
- Waste reduction
- Material choice promotes improved health