



CASE STUDY: BCIL TZED HOMES



KEY PARAMETERS

Occupancy Type	Residential Apartments
Built up area	490,000 Sq. ft
Completed	September 2009
Location	Bangalore
Green consultant	En3 Sustainability Solutions
Rating System	GREEN HOMES
Rating Achieved	PLATINUM

LEED SCORES



BCIL's Tzed Homes is a Residential campus located in East Bangalore with 76 apartments, 15 independent homes on 5 Acres of Site Area. Tzed Homes sports a number of green features like utilization of Soil stabilized blocks in the residential sector, Reduction of plastered surfaces within each home, Largest possible utilization of Rubber wood for doors, No import of water, no export of waste, no industrial floors, no toxic paints, Capital savings of approx 20,000 tonnes of Carbon emissions and Operational savings of approx 1500 tonnes of Carbon emissions. This is the first residential project to have sought CER credits



SITE SUSTAINABILITY FEATURES

- Well connected with public facilities in terms of transportation
- The project retains natural topography up to 39.94% of site area.
- Provision of high solar reflectance & thermal emittance products and vegetation on roof for 77% of roof area.
- Car parking spaces for the visitors with electric charging facilities.



WATER EFFICIENCY

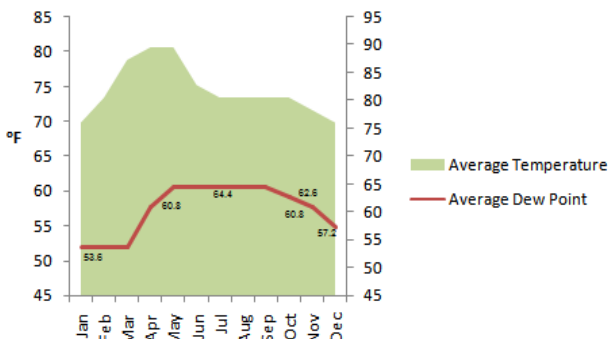
- The project achieved 18% usage of turf for landscape and drought tolerance of 87%.
- Efficient water management techniques for rain water harvesting, grey water treatment for landscaping and flushing.
- 95% of the waste water generated at site is reused.
- Low flow dual-flush toilets, sensor based urinals and other low flow fixtures have been selected to install at site to reduce water consumption by over 20%.
- Provision of water meters for continuous monitoring of water usage in the homes.

ENERGISING THE BUILDING

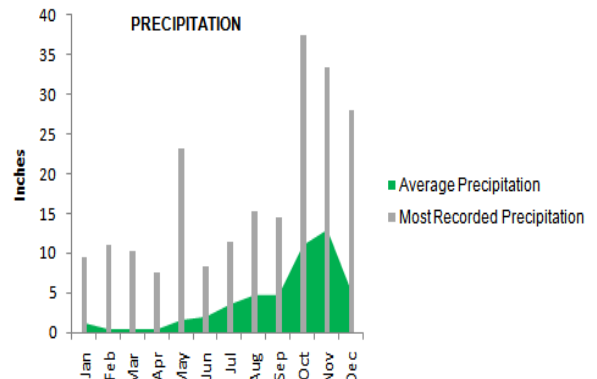


- The building has been provided with double glazed glass and wall assembly using rat trap bond masonry.
- Usage of BEE 5 star rated air conditioners and LED lighting fixtures for external and internal lighting are installed
- Solar water heater that fulfils 100% hot water requirement of the building.
- The project has installed renewable energy systems for 4.65% of the annual consumption of the building.
- Provision of energy meters for continuous energy monitoring.

TEMPERATURES AND DEW POINTS



PRECIPITATION





RESOURCE MANAGEMENT

- The project has ensured up to 75.2% of total construction waste of debris has been recycled or reused thereby diverting Waste from landfills.
- The project has achieved a combined recyclable content value of 17% of total material by cost thereby reducing virgin material exploitation
- About 82% of the total material cost of the building was manufactured and extracted regionally thereby reducing the pollution due to transportation
- 30% of the wood based materials by cost used in the project were FSC certified products.

INDOOR ENVIRONMENTAL QUALITY



- 87% of regularly occupied spaces have necessary daylight. Good airflow circulation is made by providing exhausting systems in bathrooms and kitchen.
- Enhanced air ventilations using inverter air conditioners.
- Provision of more than 30% breathing zone outdoor ventilation rate to all occupied spaces.
- Low emitting adhesives, paints and carpets have been used to enhance the indoor environment for its residents.
- After completion of all interior activities, the project has done proper building flush out in line with LEED requirement.

NOVELTIES

- BCIL Tzed Homes was the **first** project under multi dwelling category to bag the IGBC Platinum rating.
- The project bagged an exemplary performance in water usage efficiency for chemical free treatment of swimming pool water using ozone.

En3 would be glad to answer any queries or questions you have on any green or sustainability related topics. Feel free to contact us at info@en3online.com and for more information visit us at www.en3online.com.