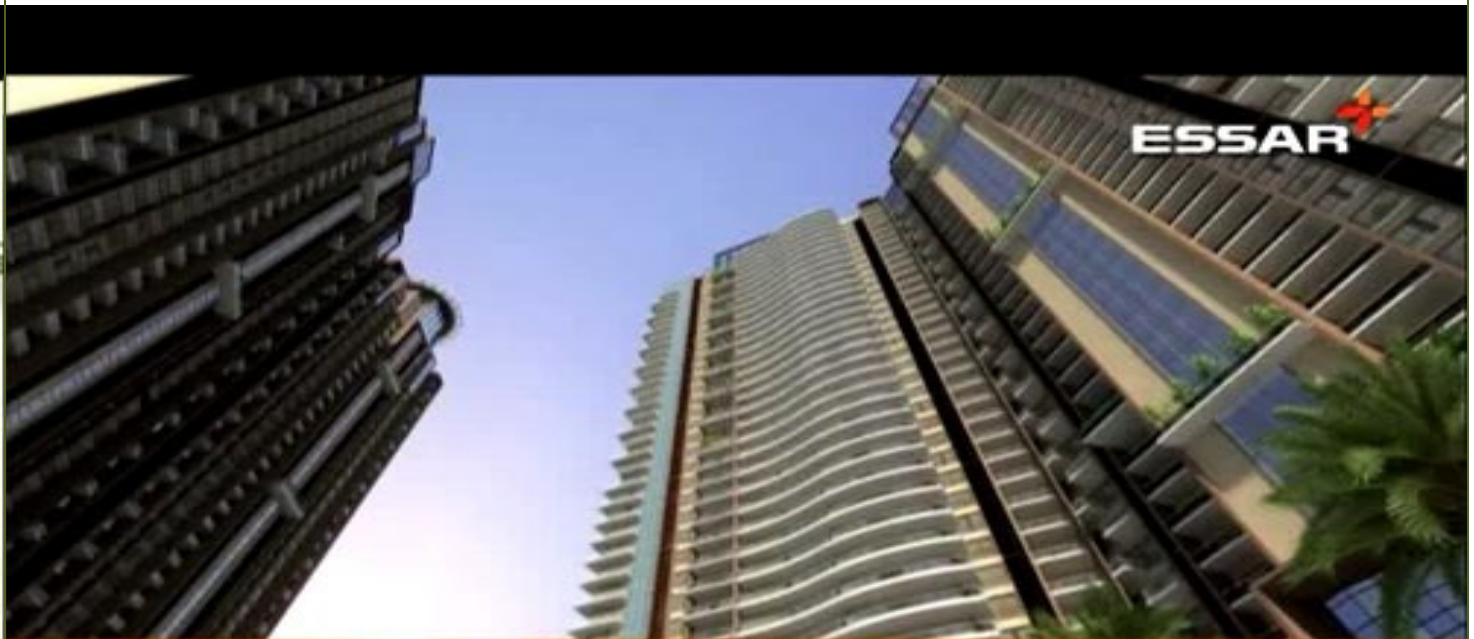




CASE STUDY: ESSAR WATERS EDGE

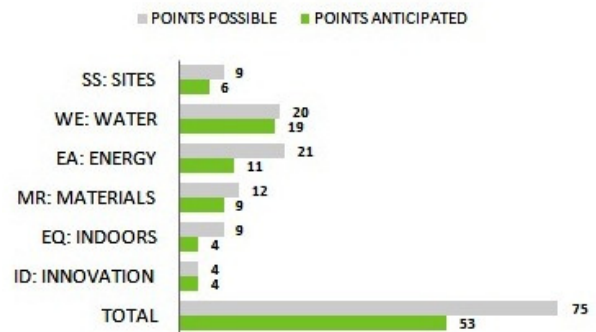


**Equinox Realty's maiden venture,
Water's Edge in Bangalore**

KEY PARAMETERS

Occupancy Type	Residential Apartments
Built up area	1860163 Sq. ft
Completed	April 2013
Location	Bangalore
Green consultant	En3 Sustainability Solutions
Rating System	GREEN HOMES
Rating Achieved	Pre-Certified GOLD

LEED SCORES



Essar Waters Edge, Bangalore, is an environment friendly apartment complex, which not only saves energy and cooling costs but also gives more lung space and natural light for all residents. En3 has done innovative work to help the project get greener and achieve its **LEED GOLD** pre-certification from the Indian Green Building Council.



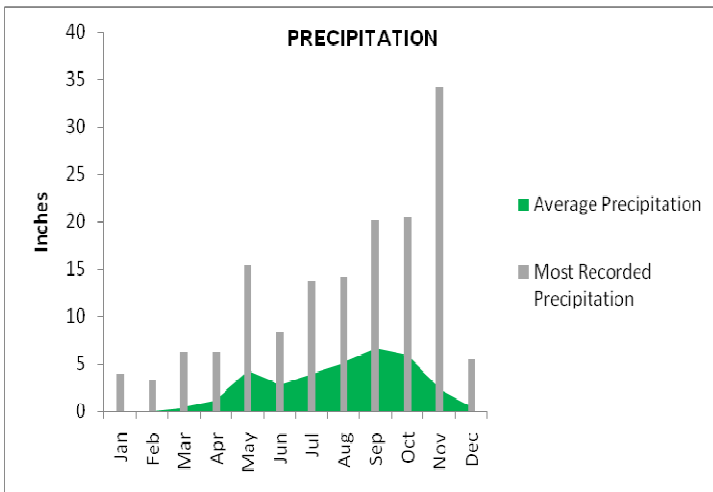
SITE SUSTAINABILITY FEATURES

- The project is in an ideal location with close proximity to public transportation thereby minimizing transportation pollution and strain on local infrastructure.
- The project will provide electric charging facility for 10% of total parking, thereby, encouraging the use of alternative fuel vehicles.
- The project will use high SRI material over an area of 4118.2 Sq m and vegetated roof for 439.64 sqm thereby reducing the heat island effect
- The project will incorporate certain design provisions for differently abled persons like providing preferred parking, uniformity in flooring levels, ramps for easy access, toilets in common areas designed for differently abled
- A copy of home user guidelines covering the sustainable green design features incorporated in the project will be provided to residents which helps users to implement green ideas



WATER EFFICIENCY

- The rainwater harvesting designed for the project will capture 100% of runoff volumes from roof surfaces.
- The project will install flush fixtures, having a flow rate of 4/ 2 Liters per Flush (LPF) and all flow fixtures (Toilet taps, kitchen taps & showers) having a flow rate of 12 Liters per Minute (LPM).



- The project has reduced the use of turf for 33% of the total landscape area.
- The project will plant drought tolerant species as a part of landscape design for 25% of the total landscape area.
- The project will incorporate water efficient management techniques for irrigation purpose. The techniques implemented includes providing central shut off valve, pressure regulating devices, moisture sensor controller, drip irrigation system for the landscape planting areas and the segregation of the trees & shrubs as independent zones depending on watering needs.
- The project has provided on-site grey water treatment plant to treat 100% of grey water generated.

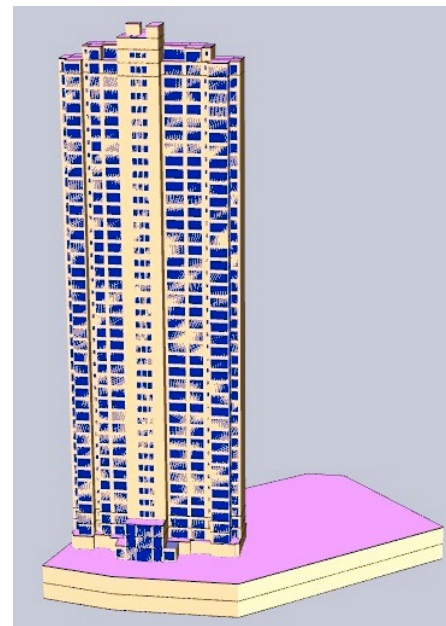
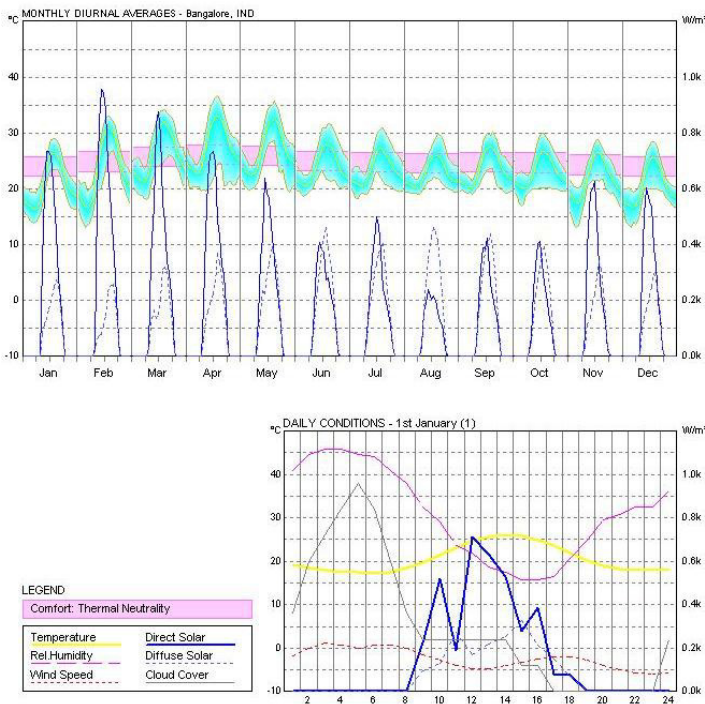
- The project reduces 97% of potable water consumption for landscaping by using treated grey water generated within the site.
- The project will provide water meter for the continuous monitoring of treated grey water consumption, Rain water usage and consumption of water for swimming pools.



ENERGISING THE BUILDING

- The project used CFC-free HVAC equipments.
- The energy efficient measures implemented in the project to optimize energy performance are efficient lighting design and solar energy utilization for hot water generation. The project will provide energy meters for external lighting, grey water pumping, landscape water pumping and municipal water pumping
- The project will install energy efficient lighting systems to reduce the energy consumption; providing energy efficient internal and external lighting luminaires which are at least three star rated under BEE labeling programme or luminaire which are more efficient.
- The project will use CPCB certified diesel generator (DG) set. The total connected load will be 20846.57 kW and the DG sets installed will cater to 30.2% of the connected load
- The project will adopt energy saving measures in other appliances and equipment. The measures includes level controllers in the overhead water tank, energy efficient lifts with group control, LED lamps in all display boards and dimmer controls for lighting.

MONTHLY AVERAGE WEATHER DATA FOR BANGALORE



RESOURCE MANAGEMENT

- The project will reduce 98% of the waste generated during construction from being sent to landfills. Waste diverted from landfills includes steel, solid block debris, tiles and empty cement bags.
- The project will provide on-site treatment facility to treat 100% of organic waste generated
- The project will use materials with recycled content which constitutes 25.78 % of the total cost of the materials used. The recycled content materials used in the project are steel, cement & glass.
- The project will use 97.8% of the building materials by cost from within a distance of 500km from the project site. The locally manufactured/sourced construction materials include steel, cement, ordinary sand and crusher sand.
- The project will use FSC certified or local Forest Department certified wood for 75% of the new wood requirement.



INDOOR ENVIRONMENTAL QUALITY

- At least 50% of the regularly occupied areas within the dwelling units will have a daylight factor of more than 2%.
- Smoking will be prohibited in all common areas of the building
- Provision of more than 30% breathing zone outdoor ventilation rate to all occupied spaces.
- Low emitting adhesives, paints and sealants have been used to enhance the indoor environment for its residents.

NOVELTIES

- Housekeeping of common and external areas will be done an agency appointed by the developer and they will ensure the use of green cleaning chemical. The project will use a list of Green Seal certified chemicals, suppliers, cleaning equipments and tools.
- The developer plans to provide a detailed handout document highlighting the green features implemented; do's & don'ts for occupants; tips to conserve water, energy & natural resources and signages showing green features implemented on-site and building tours to visitors by facility manager.

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.