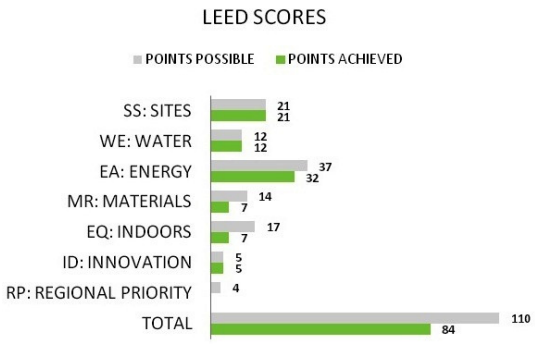
En3
Engineering | Environment | Energy

CASE STUDY: HSBC

KEY PARAMETERS

Occupancy Type	Office Space
Built up area	136872 Sq ft
Completed	April 2012
Location	Chennai
Green consultant	En3 Sustainability Solutions
Rating System	LEED USGBC ID+C
Rating Achieved	PLATINUM



The HSBC Office space in Chennai has been awarded Platinum certification under USGBC's LEED ID+C rating system. It is a beautiful example of how green and sustainable measures can be incorporated in really small spaces as well and a standing proof for the fact that even small spaces can go green.

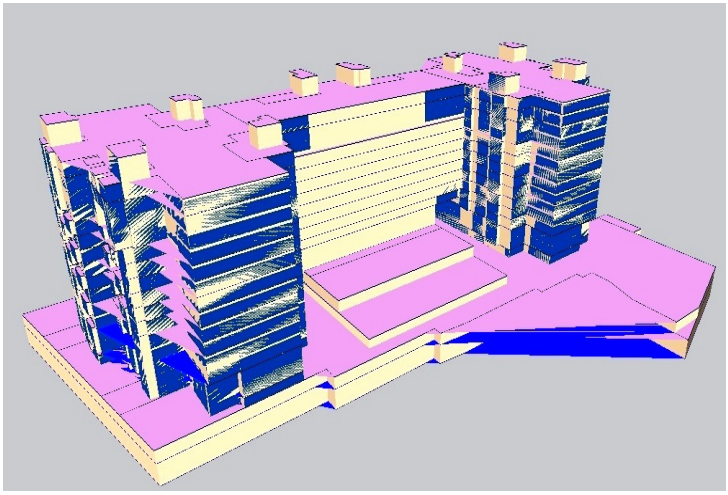
SITE SUSTAINABILITY FEATURES

- The project is in ideal location with close proximity to public transportation thereby minimizing transportation pollution and strain on local infrastructure, protects green-field site and preserve habitat and natural resources.
- Provision of Bicycle and Shower facility for their staff reduces pollution and land development impacts from automobile use.
- Project has installed a recharging station serving 33.33% of the total vehicle parking capacity of the project.
- Carpooling spaces within the premises in an effort to promote and ride sharing to reduce transportation pollution as well as strain on the local infrastructure.
- The project provides alternative-fuel fueling stations for 3.92% of the total parking capacity

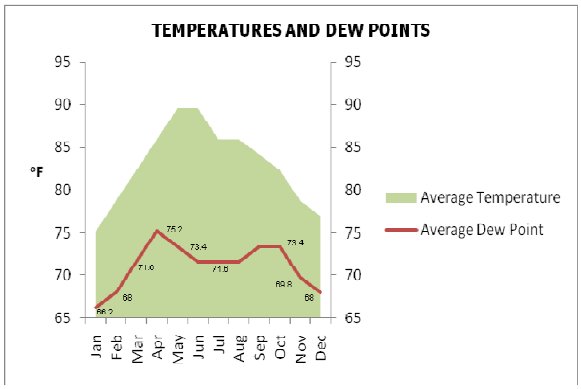
WATER EFFICIENCY

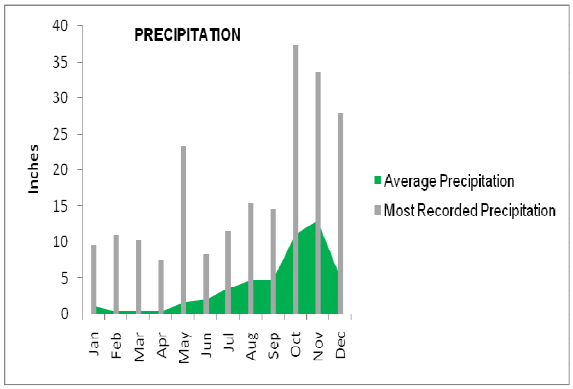
- Low flow dual-flush toilets, sensor based urinals and other low flow fixtures have installed reduced potable water consumption by **48%.**

ENERGISING THE BUILDING



- Provision of high performance glazing, energy efficient HVAC design and lighting has contributed to energy savings of about **45.7%** over conventional building and HVAC systems.
- Selection of CFC free and HCFC free refrigerants avoids global warming and ozone depletion.
- Light fixtures and efficient lighting design contribute to **43.2%** of reduction in connected lighting power density over the base case of ASHRAE standards.
- Daylight responsive controls have been installed in 100% of all regularly occupied spaces within 15 feet of windows or under skylights.
- ENERGY STAR-rated equipment and appliances equal to **86.3%**, by rated power, have been installed on the project. A
- Metering equipments have been installed for monitoring the energy use in the building such as EB and DG energy monitoring, individual meters for common area lighting, lifts, chillers, pumps, office area lighting, power and AHUs independently for each tenant, measuring chilled water consumption for each tenant using BTU meters for the ongoing accountability and optimization of building energy and water consumption performance over time.





RESOURCE MANAGEMENT

- The project has diverted 96.81% of the on-site generated construction waste from landfill.
- Rapidly Renewable materials account for 6.39% of the project's material cost.
- 10.46% of the total building materials, by value, have been manufactured using recycled materials.
- 42.38% of the total building materials value includes building materials and products that have been manufactured within 500 miles of the project site and that 40.52% of the total building materials value includes building materials and products that have been extracted within 500 miles of the project site.
- Use of materials with recycled content and materials manufactured locally/regionally as much as possible to reduce virgin material exploitation

INDOOR ENVIRONMENTAL QUALITY

- Better air quality and additional fresh air by 30% have been provided for enhanced indoor environment
- Indoor air quality management has been done both during construction as well as post occupancy in an effort to provide a more superior environment
- The project conducted a flush-out prior to occupancy by supplying a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60 degrees F and relative humidity no higher than 60%
- Low emitting adhesives, paints, carpets and composite wood products have been used to enhance the indoor environment and provide superior workplace for all employees.
- Lighting controls are provided to enable 97.64% of occupants to make adjustments to suit individual task needs and preferences
- The project has provided direct line of sight views from 95.35% of all regularly occupied seated spaces.
- All system seating and furniture used in the project reduce indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants

NOVELTIES

The building has been designed by En3 to showcase various green and sustainability measures and practices and the effort is to create greater awareness on green concepts and sustainability to all its visitors and occupants & spearhead the green movement in the state and the country.

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.