



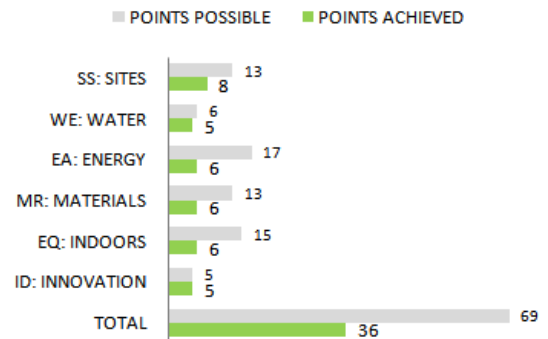
CASE STUDY: WIPRO TECHNOLOGIES S3 BUILDING, SARJAPUR



KEY PARAMETERS

Occupancy Type	Office space
Built up area	350,000 sq. ft
Completed	January, 2010
Location	Sarjapur, Bangalore
Owner	WIPRO TECHNOLOGIES
Green consultant	En3 Sustainability Solutions
Rating System	LEED India NC version 1.0
Rating Achieved	SILVER

LEED SCORES



WIPRO is one of the leading provider of integrated business, technology and process solutions on a global delivery platform. It includes Consulting, Business Solutions, System Integration, Infrastructure and Application Management and Total Outsourcing services where we service all IT needs of a customer, end-to-end. This unit offers a 360 degree service portfolio spanning the entire IT life cycle. Wipro Technologies, the global IT services division of Wipro Limited (NYSE:WIT) is a member in The Green Grid, a global consortium dedicated to advancing energy efficiency in data centers and business computing ecosystems. Wipro's green IT initiatives extend from energy efficient data centers to eco-friendly product engineering designs and PC ranges. En3 has worked very closely with Wipro for several projects in the past as well and in this instance worked very closely to assist the Tower 17 and Sarjapur projects achieve LEED silver certification by incorporating several energy, water and materials efficiency measures in addition to providing a superior indoor air quality and overall environment for all its employees.



SITE SUSTAINABILITY FEATURES

- Erosion and sedimentation controls like Mulching, permanent seeding, soak pits/wells, drainage structure, filtration and detention basins were undertaken.
- Provision of battery charging stations in an effort to promote use of alternative & low emitting vehicles.
- Provision of bus lines to all the employees.
- Covered parking, reflective roofing and areas shaded by trees for non roof surfaces reduce urban heat island effects.



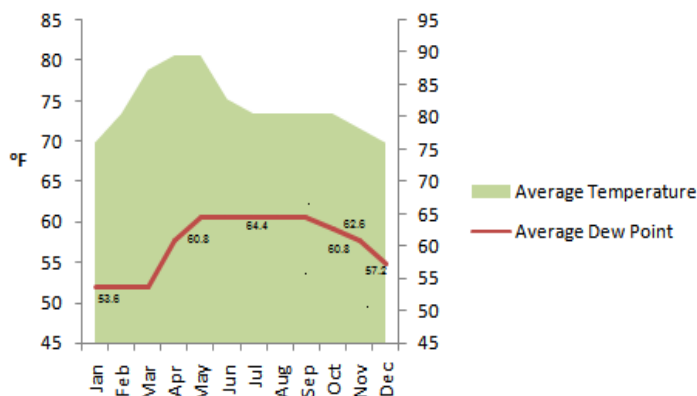
WATER EFFICIENCY

- Water efficiency is an integral part of the sustainability initiatives. Special efforts have been taken to minimize water use by installing water efficient fixtures and 2 sewage treatment plant(200KLD+250KLD) to treat 100% of onsite waste water for reuse
- 100% of the treated water on-site shall be reused for landscaping and toilet flushing thereby minimizing the use of potable water for all these applications
- Low flow dual-flush toilets, sensor based urinals and other low flow fixtures have been installed to reduce potable water consumption by over 55.36%.

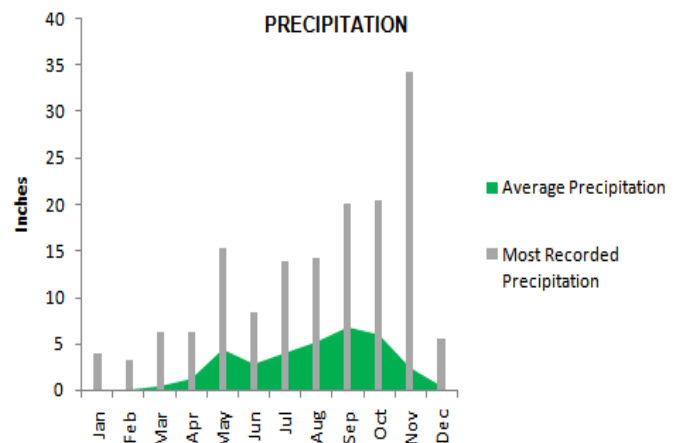
ENERGISING THE BUILDING

- Wall construction using solid blocks of high fly ash content helps the building to address environmental concerns and providing thermal mass to enhance the effect of night cooling.
- Incorporates reduced overall conductance of the envelope, high performance glass with optimum visual light transmittance, exterior light shelves and overhangs for all the window, efficient chillers, efficient lighting using T5 lamps and day lit spaces.
- Occupancy sensors have been provided to conserve light energy. The building saves over 28.7% of lighting energy over the budget building using space by space approach.
- In line with international standards, the refrigerants used in the air conditioning system are environmentally friendly and have very low ozone depleting and global warming potential.
- A detailed metering system ensures adequate measurement and monitoring of all building systems to continuously monitor the building post-occupancy as well

TEMPERATURES AND DEW POINTS



PRECIPITATION





RESOURCE MANAGEMENT

- The project has ensured up to 96.88% of total construction waste of debris has been recycled or reused thereby diverting them from landfills.
- The project has achieved a combined recyclable content value of 7.7% of total material by cost thereby reducing virgin material exploitation.
- A number of materials have been extracted and manufactured locally/regionally thereby reducing the pollution associated with transportation.

INDOOR ENVIRONMENTAL QUALITY



- In order to support enhanced IAQ and long-term well-being of all occupants, adequate fresh air has been planned in line with international ASHRAE standards
- The entire building interior is a non-smoking space thereby ensuring the health and safety of all its occupants
- Adhesives, sealants, paints and coatings used in the building are low VOC (volatile organic compounds) thereby having minimum organic emissions that are harmful to humans
- 3M mats are provided to avoid exposure of building occupants to potentially hazardous chemicals that adversely impact air quality
- The building has visual access of 95% for all regularly occupied spaces to enhance the comfort level of the occupants.

NOVELTIES

The project seeks an innovation credit for implementation of GREEN CLEANING PROGRAM. 55.36% of water usage reduction has been recorded by the project. The building has been designed by En3 to showcase various green and sustainability measures and practices and the effort is to use this building 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.