



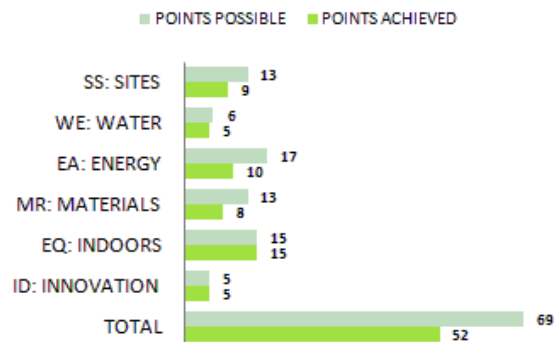
## CASE STUDY: GREAT LAKES INSTITUTE OF MANAGEMENT



### KEY PARAMETERS

<b>Occupancy Type</b>	Institute
<b>Built up area</b>	200000 sq. ft
<b>Completed</b>	August 2010
<b>Location</b>	Manamai Village, Tamilnadu.
<b>Green consultant</b>	En3 Sustainability Solutions
<b>Rating System</b>	LEED India NC version 1.0
<b>Rating Achieved</b>	Platinum

### LEED SCORES



Great Lakes Institute of Management is the first educational institute in India to have achieved LEED PLATINUM certification under LEED India NC version 1.0. Great Lakes Institute Campus sports many green features that directly contribute to the environment in terms of reduced energy consumption, greenhouse gas emissions, impact on the local environment and usage of natural resources. En3 has been working closely with the Great Lakes team to make their new institute campus near Chennai a green building.



**SITE SUSTAINABILITY FEATURES**

- The project is located in close proximity to public transportation and campus buses for the staff have been provided for commute from the city to the campus thereby minimizing transportation pollution and strain on local infrastructure
- Provision of battery charging stations for **12.5%** of the total car parking capacity in an effort to promote use of alternative and low emitting vehicles and to reduce transportation pollution.
- Provision of carpooling spaces for **31.25%** of the total car parking capacity within the premises in an effort to promote share-rides to reduce transportation pollution as well as strain on the local infrastructure.
- **50%** of its car parks in the basement to create more open spaces on the ground and also reduce the local heat island effect.
- Rain water harvesting tanks have been provided to harvest **4130 cum** per day of rain water and this is to ensure post-construction runoff is less than pre-construction runoff.
- 100% of roof area is covered with a highly reflective material to reduce heat islands and to minimize impact on microclimate and human and wildlife habitat.



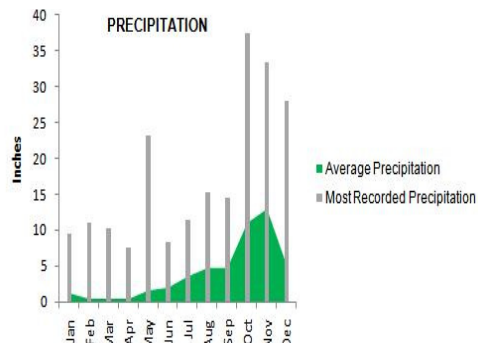
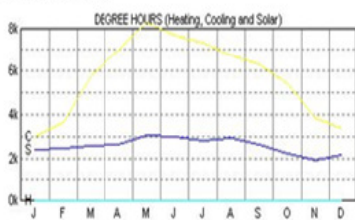
**WATER EFFICIENCY**

- Water is an integral part of “Great Lakes” Campus and every effort is been taken to minimize water use by installing water efficient fixtures. 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 32.52 %.
- Specialized selection of landscaping design and species to reduce overall landscaping water requirement by 100%.
- 100% of wastewater is being treated onsite to tertiary standards.

**ENERGISING THE BUILDING**

- Energy efficiency measures such as Hi albedo paint on roof, high performance glazing, efficient lighting design, efficient HVAC design, VAV systems, AHU's with VFD and Heat recovery wheels for saving more energy than the conventional systems
- Selection of CFC free and HCFC free refrigerants thereby avoiding global warming and ozone depletion.
- Measures incorporated in the building that contribute to energy efficiency include reduced overall conductance of walls and roof, high performance glass with optimum shading coefficient and visual transmittance, overhangs and shading to reduce solar gains, efficient lighting, amply daylight spaces and energy recovery.

NAME: Chennai-Madras      LATITUDE: 13.0°  
 LOCATION: IND              LONGITUDE: 80.2°  
 DESIGN SKY: not available      TIME ZONE: +5.5hrs  
 ALTITUDE: 16.0m





## RESOURCE MANAGEMENT

- The project has ensured up to 95.87% 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 12.63% of total material by cost thereby reducing virgin material exploitation.
- About 45% of the project's material and products by cost was extracted, harvested and recovered within 800 km of project site and 60% of the total material cost was manufactured locally/regionally thereby reducing the pollution associated with transportation.
- About 5.19% of the total materials by cost used in the project are from rapidly renewable sources.

## INDOOR ENVIRONMENTAL QUALITY

- In order to support enhanced IAQ and long-term well-being of all occupants, 30% more than the minimum ventilation rates as per ASHRAE standards is provided.
- The entire building is a non-smoking building thereby ensuring the health and safety of all its occupants.
- Permanent monitoring systems that provide feedback on ventilation system performance to ensure that ventilation systems maintain design minimum ventilation requirements.
- Low emitting paints, carpets and composite wood products have been used to enhance the indoor environment and provide superior workplace for all employees.
- After completion of all interior activities, the project has done proper building flush out in line with LEED requirement to enhance their staff working spaces.
- Provision of a thermally comfortable environment that supports productivity and well-being of all building occupants
- About 75% of the regularly occupied areas are designed to get day light provision as per the LEED compliance.
- About 90% of the project's regularly occupied spaces gets direct line of sight to vision glazing. Thereby the occupants can view outside.



## NOVELTIES

- Great Lakes Institute of Management is the first educational institute in India to have achieved LEED PLATINUM certification under LEED India NC version 1.0
- The Great Lakes Institute of Management is introducing a curriculum for global energy and environmental management degree in India.
- The institute has also taken Initiatives to educate the staff, students, building occupants, visitors and the clients on the various sustainability measures that can be taken to create more environmental friendly energy efficient spaces.
- Housekeeping by biodegradable materials to address health, hygiene and well being of staff make them eco-friendly. The building has been designed by En3 to showcase various green and sustainability measures and practices to ensure great amount of awareness is created by the buildings to promote green awareness to all the 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](mailto:info@en3online.com) and for more information about us and our work visit [www.en3online.com](http://www.en3online.com)