



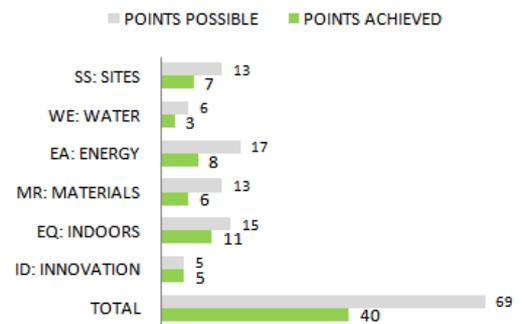
CASE STUDY: YCH LOGISTICS PRIVATE LIMITED, CHENNAI



KEY PARAMETERS

Occupancy Type	Ware housing space
Built up area	48562 Sq. m.
Completed	May, 2010
Location	Sriperambudur, Chennai
Owner	YCH Logistics
Green consultant	En3 Sustainability Solutions
Rating System	LEED India NC version 1.0
Rating Achieved	GOLD

LEED SCORES



YCH India, the Indian subsidiary of the Singapore-based logistics and supply chain management company YCH Group, is an integrated end-to-end supply chain management and logistics partner to some of the world's largest companies in the hi-tech/ electronics, chemicals/ healthcare and consumer goods sectors. Its services include warehousing and inventory management, transportation and distribution, and freight management. En3 has done innovative work to help YCH Logistics become the first green warehouse in India and one of the few in the world to achieve LEED certification as it was awarded LEED Gold certification from the Indian Green Building Council



SITE SUSTAINABILITY FEATURES

- Stacking and protection of top soil onsite and reusing the same for landscaping.
- Detention basins for storm water Channel.
- Provision of battery charging stations in an effort to promote use of alternative & low emitting vehicles.
- Car pooling spaces provided on site to promote ridesharing thereby reducing transportation pollution.
- Provision of bus lines to all the employees.
- Covered parking, open grid pavements and areas shaded by trees for non roof surfaces reduce urban heat island effects.

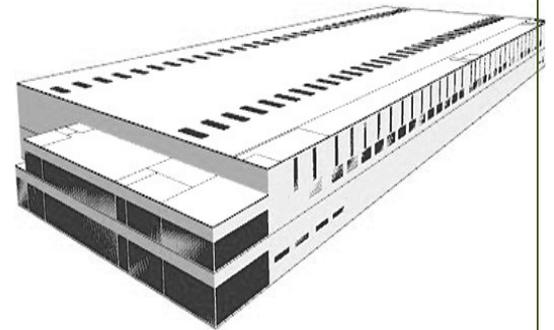


WATER EFFICIENCY

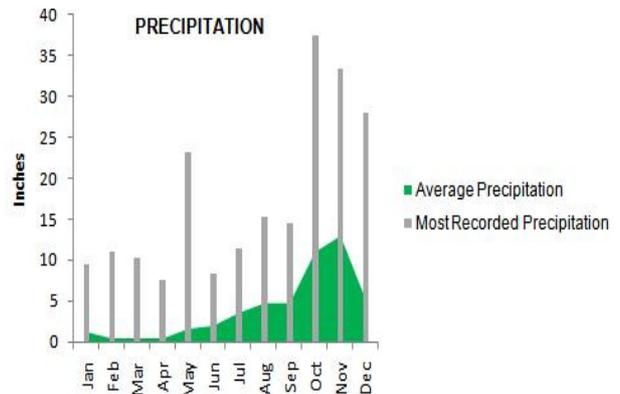
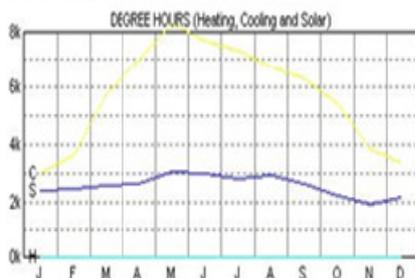
- Water efficiency is an integral part of the sustainability initiatives. Special efforts have been taken to minimize water use by installing water efficient fixtures, effective rainwater harvesting and sewage treatment plant(15 KLD) to treat 100% of onsite waste water for reuse
- The entire rain water on-site is captured and stored in huge rain water harvesting ponds with capacity over 12 lakhs liters per day.
- 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 35%.

ENERGISING THE BUILDING

- The warehousing space is designed in such a way that it does not require any artificial lighting in day time.
- 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.
- Incorporates energy efficient T5 and CFL lighting with sensors and is an excellent example of how sustainability can be adopted to non-conventional buildings and operations.
- A detailed metering system ensures adequate measurement and monitoring of all building systems to continuously monitor the building post-occupancy as well.
- A detailed energy analysis and modeling has been done to ascertain various options for energy savings with cost-benefit/payback analysis including high performance glazing, low u-value walls and roof, energy efficient HVAC systems and CFL, T5 and LED based low energy lighting systems.



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





RESOURCE MANAGEMENT

- The project has ensured up to 95.97% 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 12.73% 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
- The composite wood products used have been purchased to ensure that they do not contain urea formaldehyde that can be potentially harmful for occupant health
- Majority of the occupants of the building will have control over their lighting and air conditioning set points thereby giving them the flexibility to control their own environment
- The entire building has been planned to harvest 77.67% of natural day light and provide connection to the exteriors for as many occupants as possible

NOVELTIES

The project achievement exceeds the threshold of 95% for exemplary performance in Construction Waste Management. 66.38% of the total project's materials, based on cost, were manufactured regionally. The project Achievement is higher than the next incremental percentage threshold of 40%. 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.

KEY DISTINCTIONS

- YCH Logistics is the first green warehouse in India.

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.