



CASE STUDY: EQUINOX BUSINESS PARK – TOWER 3



KEY PARAMETERS

Occupancy Type	Technology Park
Built up area	340320 Sq Ft
Completed	May 2012
Location	Mumbai
Green consultant	En3 Sustainability Solutions
Rating System	LEED India CS version 1.0
Rating Achieved	GOLD

LEED SCORES



Equinox Business Park – Tower 3, Mumbai is an environment friendly green Tech Park which not only saves energy and cooling costs but also gives more lung space and natural light for employees working there. En3 has done sustainability design work to help the project get greener and achieve its LEED GOLD Core and Shell Certification from the Indian Green Building Council.



SITE SUSTAINABILITY FEATURES

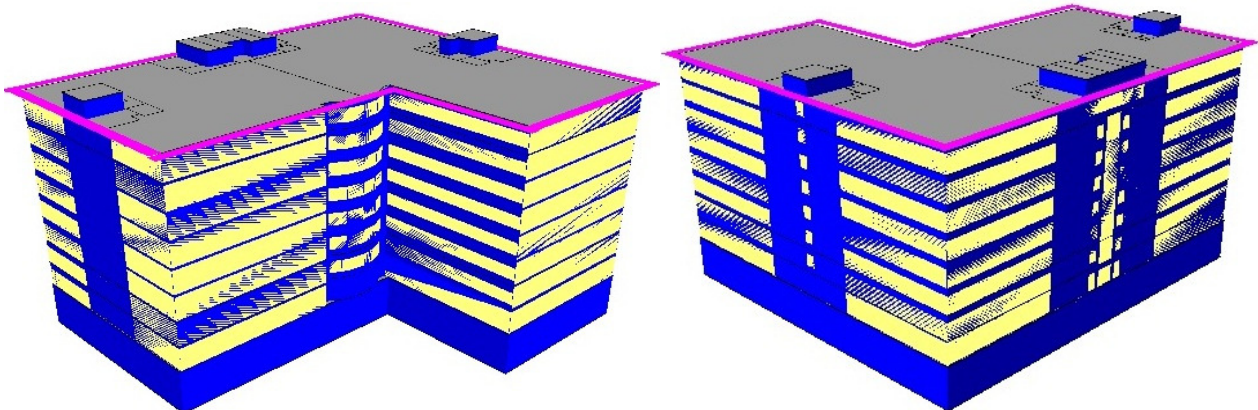
- The project is in an ideal location with close proximity to public transportation thereby minimizing transportation pollution and strain on local infrastructure.
- Alternate Refueling stations have been provided for 3.27% of total vehicle parking spaces which promotes the usage of alternate fuel vehicles thus reducing pollution due to transportation as well as strain on local infrastructure
- 26 preferred carpool/ vanpool parking spaces have been provided accounting for 5.23% of the total parking capacity.
- The project has rainwater collection tanks of capacity 180 cu m to store run-off. The stormwater design will ensure removal of 80% of the average annual post-development total suspended solids
- Most car parks are in the basement to create more open spaces on the ground and also reduce the local heat island effects
- Provision of high reflective tiles on the roof surface thus reducing urban heat island effects. 76.40% of the roof area has been covered with white reflective tiles.

WATER EFFICIENCY

- Water plays an integral part in the greening process of the facility
- The project is treating 100% of the waste water onsite through the 240 KLD STP plant and this treated water is reused for 100% of the irrigation requirements for plants.
- Native and Adaptive species have been planted to further minimize the irrigation water requirements.
- Special efforts have 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 reduce water consumption by over 74.24%.

ENERGISING THE BUILDING

- In line with international standards, the refrigerants used in the air conditioning system and fire suppression systems are environmentally friendly and have very low ozone depleting and global warming potential
- A detailed energy analysis and modeling has been done to ascertain various options for energy savings with cost-benefit/payback analysis and based on the same the project has selected high performance glazing, Energy efficient Air Conditioning System (HVAC) using high COP Water Cooled Chillers, Variable frequency drives for Pumps and Air Handling Units (AHUs) and energy efficient exterior and common area lighting
- The project has achieved 14.5% energy cost reduction compared to the stringent ASHRAE 90.1-2004 baselines thereby ensuring that the building operates efficiently while not compromising on occupant comfort.
- A detailed metering system ensures adequate measurement and monitoring of all building systems to continuously monitor the building post-occupancy as well





RESOURCE MANAGEMENT

- The project has ensured up to 97.83% 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 16.6% of total material by cost thereby reducing virgin material exploitation.
- About 90.68% of the total material cost was manufactured within 800 km thereby reducing the pollution due to transportation
- 74.6% of the total project's materials by cost were extracted, harvested or recovered within 800 km of the project site
- 75.62% of the total wood based building materials are harvested from FSC certified forests

INDOOR ENVIRONMENTAL QUALITY

- Ventilation System is designed to provide 30% more fresh air than ASHRAE 62.1 2004 requirements.
- 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
- Low emitting adhesives, paints and carpets have been used to enhance the indoor environment and provide superior workplace for all employees.
- Provision of a thermally comfortable environment that supports productivity and well-being of all building occupants.
- The project has provided direct line of sight views for 99% of all regularly occupied areas.

NOVELTIES

- 90.68% of the total project's materials by cost were manufactured within 800 km of the project site
- Water use has been reduced by 74% through no grey water reuse and the use of efficient plumbing fixtures such as low flow water closet, low flow urinals and faucets
- The project has provided direct line of sight views for 99.92% of all regularly occupied areas.

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.