



## Grand Chola, ITC Hotels Limited

<b>Location</b>	: Chennai
<b>Site Area</b>	: 32330 SqM
<b>Total Built up Area</b>	: 132598 SqM
<b>Air- conditioned Area</b>	: 132598 SqM
<b>Non Air- conditioned Area</b>	: NA
<b>Energy Consumption Reduction</b>	: 41.5% reduction from GRIHA benchmark
<b>Water consumption reduction</b>	: 50.7% reduction from GRIHA benchmark
<b>EPI</b>	: 186 kWh/SqM/year
<b>Occupancy hours</b>	: 24 hours/day (24x7)
<b>Renewable energy installed on site</b>	: 12600 KWp
<b>GRIHA rating</b>	: 5 Stars

The following strategies were adopted to reduce the impact of the proposed building on natural environment:

- 📍 **Sustainable Site Planning:**
  - Existing trees were preserved and transplanted along the periphery of the site
  - Excavation and construction started after the monsoon season to prevent soil erosion and soil run off from the site
  - Top soil was preserved and re-used to raise the ground level along the periphery
  - Service corridors are planned to cause minimum damage to the site and natural topography
  - Orientation of the building is east west but zoning of the building has been appropriately done to reduce negative impact of bad orientation
- 📍 **Reduction in water consumption (compared to GRIHA benchmark):**
  - Reduction in building water consumption by use of low-flow fixtures : 50.7%
  - Water recycled and reused within the complex : 90%
  - Reduction in landscape water consumption by planting native species of trees and shrubs and by using efficient irrigation systems : 62.3%
- 📍 **Passive architectural design strategies adopted in the building:**
  - Thick stone and AAC block walls to reduce solar heat gain
  - Recessed windows to cut direct sun rays and glare inside the building
  - 99% of living areas are day-lit and window to wall ratio restricted to 25% to reduce solar heat gain inside the building
- 📍 **Reduction in energy consumption (compared to GRIHA benchmark) while maintaining occupant comfort:**
  - For achieving visual comfort
    - Energy efficient artificial lighting design is compliant with ECBC recommendations
    - Occupancy sensors in rooms to reduce energy consumption
    - All electrical fixtures (lights, space conditioners, appliances) controlled by i-pad to reduce energy consumption
    - External shading and efficient glazing to reduce solar heat gain and have glare-free daylight have been installed.
  - For achieving thermal comfort
    - Building envelope is ECBC compliant, which helps reduce cooling loads in AC spaces and meets thermal comfort levels in non AC spaces.
    - Centralized air conditioning through variable refrigerant flow technology is installed. Facility of controlling each indoor unit centrally as well as individually based on occupancy sensor is provided.
- 📍 **Renewable energy technologies installed on site:**
  - Installed capacity of wind energy : 12600 KWp
  - Units of electricity generated annually : 27900000 KWh
- 📍 **Use of low-energy/green materials:**
  - Use of Plywood and MDF boards manufactured by Uniply, Greenply and Centuryply certified by SGS and recyclable fabric
  - Use of high density composite wood panels
  - Use of AAC blocks in the infill wall system.

### Integrated Team:

<b>Project Owner</b>	: M/S ITC LTD
<b>Project Coordinator</b>	: M/S Larsen & Toubro
<b>Principal Architect</b>	: M/S Smallwood Reynold Stewart Stewart, Singapore
<b>Landscape Architect</b>	: M/S Belt Collins, Singapore
<b>Project Management Consultant</b>	: M/S ITC LTD
<b>Civil Contractors</b>	: M/S Larsen & Toubro
<b>Structural Consultant</b>	: M/S Sterling Engineering Consultants
<b>Electrical Consultant</b>	: M/S Spectral Consultants
<b>Green Facilitation</b>	: Green Dimensions
<b>Green Building Design and Energy Consultant</b>	: The Energy and Resources Institute