BREEAM MAN 9 – CASE STUDY

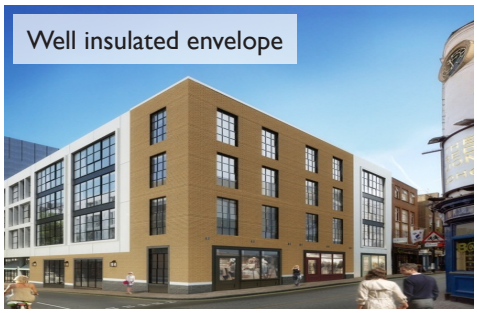
Ham Yard Hotel & Sustainability

Ham Yard Hotel is awarded BREEAM[1] Excellent rating. BREEAM is a methodology to assess the sustainability and environmental performance of buildings and it was launched by BRE in 1990. BREEAM is one of the first sustainability assessment tools established in the world and it was later used as a basis for LEED[2] green building certification programme. BREEAM reviews building performance in different categories and compare them with the established benchmarks.

Some of the main characteristic of the hotel you are staying in are as below:

Energy: Ham Yard has an Excellent Energy Performance Rating which exceeds the standards of its time by more than 40% - some of the strategies used in the building are:

- Building Envelope is well insulated and has excellent thermal performance
- There are three Combined Heat and Power (CHP) units in the plant room which generate both heating and electricity for the building- these work similar to power stations but in much smaller scale and installing them inside the buildings saves 160 tonnes of Carbon dioxide emissions which would otherwise have been polluted from the power stations.
- Air Source Heat Pumps are used for cooling and heating the building, these extract the heat (or Coolth) from the outside air and work similar to fridges; these systems could work very efficiently throughout the year, especially in a moderate climate like London
- Photovoltaic Panels are installed on the roof to generate additional electricity - and all this electricity is used inside the building


Well insulated envelope


Ham Yard CHP units


Ham Yard Air Source Heat Pumps

Water: The water consumption in Ham Yard is also reduced using following strategies:

- All toilets are dual flush toilets to reduce the water being used on flushing the toilets.
- The plants used for green roof and landscaping are native plant so they will not need regular irrigations after establishing
- A water consumption monitoring device is installed for the hotel which monitors and warns where there is any possibility of water leakage or excessive water use inside the hotel.

Waste: Sustainable waste management has been a priority throughout construction and will remain so during operation.

- Using the construction site waste management plan, the construction team was able to recycle almost all of the generated waste on site during construction, with very limited amount of waste sent to landfill.
- Recycling storage and facilities are provided for the hotel and the staff is trained to recycle any recyclable waste from the hotel operation; the recyclable waste is collected and managed by Westminster Council.

Land and Ecology: Ham Yard is built on a previously built land and the development did not result in removing any green land or plants. The land used for developing hotel, was of low ecological value.

- An Ecologist was appointed during design/development to recommend how native plants could be added to the site – the site has now higher ecological value than before, using green roofs and landscaping.
- The green roof has many environmental advantages, it brings plants and different native species back to the urban site; it reduces the heat island effects found in central cities and it has additional thermal performance properties for the roof..

[1]. Building Research Establishment Environmental Assessment Methodology

[2].Leadership in Energy & Environmental Design

Transport: Ham yard is located in central London, within walking distance from public transport stations - the hotel staff and guests can use the sustainable transport solutions, i.e. tubes and buses very easily - if you need any information on the available public transportation around the site, please contact the reception. The hotel also has cycle storage and cyclist facilities for the staff who cycle to work on daily basis.


Ham Yard one of the green roofs


Ham Yard Photovoltaic Panels

Reduction of Construction impact on Environment: During the construction of the Ham Yard Hotel the contractor took great steps to ensure that waste was kept to minimum. To this end, all waste was monitored and recorded from site with 100% of all waste being recycled off site.

Considerate Contractor Scheme (CCS): As part of the construction the contractor signed up to the Considerate Contractors Scheme which is the national initiative set up by the construction industry to improve its image. Construction sites and companies that register with the Scheme are monitored against a Code of Considerate Practice, designed to encourage best practice beyond statutory requirements. During the regular assessments throughout the construction phase the contractor achieved some of the highest scores and went on to win two national bronze awards for highest consideration towards the public, its workforce and the environment.

Energy Usage

- Predicted electricity consumption based on NCM methodology: 133 kWh/m2 (and displaced electricity of -30.6 kWh/m2 from CHP and PV) therefore electricity consumption of 102 kWh/m2
- Predicted fossil fuel consumption based on NCM methodology: 182 kWh/m2 (including gas consumption for CHP)
- Predicted renewable energy generation: 30.6 kWh/m2 (Including electricity from CHP)

Water Usage

- Predicted water usage based on BRE Calculation tools: 67 m3/annum

Usable Floor Area (m2)

Description	Area (m2)
Bedrooms	4015
Corridors/circulation	1362
FOH Areas	3087
BOH Areas	3815
Residences	3499
Retail (A1 & A3)	439
TOTAL	**16,217 m2**

Key Sustainable Costs

Photovoltaic Cells	£40,000.00
CHP Engines	£150,000.00
Green Roof	£130,000.00


CONSIDERATE CONSTRUCTORS
2014 BRONZE
National Site Award Winner
Presented to Ron Cheles
Firmdale Hotels plc
For Ham Yard Project, London
Client Firmdale Hotels
Improving the image of construction