



Building location, orientation and footprint

Status	Implemented in 2010
Location	UK, East Sussex, St Leonhards on Sea
Spatial info	Building; Business/industrial park
Measure type(s)	Increase energy efficiency; Urban setting
Contact	sussexexchange.co.uk



Description and Aim

Combination of features for a new business building providing exchange facilities:

- Orientation of the building - glazed areas due south or north to optimise natural daylight and keep solar gain to a minimum (to minimise active cooling).
- Non flood plain location
- Depth and height controlled to promote natural ventilation; utilising exposed thermal mass and night time cooling to avoid active ventilation/air handling
- Below average U values keep heat inside a building through specific roof and wall construction
- Including green and brown roofs with ventilation advices (see specific Fact sheet) and rainwater harvesting/ use

Adaptation to climate change

To make the building more resilient during heat waves and extreme winters.

Problems addressed:

Heat wave, extreme cold, heavy precipitation/floods

Receptor(s):

Population, Built environment, economy

Experiences

Functionality:

Protection against extremes of temperature, heat wave and extreme cold. Helps the building be resilient to climatic extremes.

The implementation had to be planned carefully due to the sensitivity of the ground conditions and the links to the hydrology of the site.

Further synergies/benefits:

There are mitigation benefits to this project, and it is a demonstration of the technique that can be replicated elsewhere.

Drawing on good practice working with “enviro business”, the sector consortia for environment issues.

Increase opportunities for businesses of the surrounding business quarter and local residents.

Funding:

International, local; European INTERREG IV B-programme

Stakeholder involvement:

Client, investors, statutory authorities, local planning authority, local residents and businesses, local planning authority.

Acceptance:

Wider site promoted through a range of channels including, the highlighting of the various measures and the benefits of these for occupiers. E.g. printed media, website, presentations

Obstacles/restrictions:

Sensitivity of adjacent site of special scientific interest and the supply of water into the local water courses and the positioning of the building needed to be taken into account during the hydrology study.

Appropriate standards for water to be re-used in particular areas, complying to regulations and standards governing water usage in buildings