

Green and brown roofs

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



John Williams, Sea Space

Description and Aim

Green and brown roofs were constructed on a new business building providing exchange services complementing an existing business site. Within the brown roof parts the environmentally diverse brown field sites was replicated and thus, vegetation associated with such sites can colonise a range of low-fertility substrates, i.e. sand, rotting timber, etc. The roofs are part of the integrated concept for ventilation and infiltration of rain water.

Aims are to prevent flash flooding, to reduce the need for active energy using services and to add to the overall robustness of the roof.

Adaptation to climate change

The measures taken make the building more resilient during heat waves and heavy precipitation.

Problems addressed:

Heat wave, heavy precipitation / flooding

Receptor(s):

Built Environment

Experiences

Functionality:

Contribution to protection against flash flooding and heat wave. Helps the building be resilient to climatic extremes. The implementation of the roofs was straightforward. This measure is integral to the sustainability strategy for the wider site.

Further synergies/benefits:

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

The site exposure is exploited in terms of wind profile to promote wind assisted natural ventilation including the use of roof mounted structures or cows to harness the wind.

Costs:

The cost of maintenance of the cows is comparable with that of an active system.

Funding:

International (Interreg IVB-project Future Cities) and local.

Stakeholder involvement:

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

Acceptance:

The site and its sustainable features was promoted through a range of communication channels including, the benefits for occupiers. By this high acceptance was created.

Obstacles/restrictions:

Sensitivity of adjacent site of special scientific interest and the supply of water into the local water courses. These needed to be taken into account during the hydrology study of the site. Planning regulations restricted the extent of roof mounted structures.