



Green Roofs at Museum of London

March 2015

Strategic context

Creating sustainable cities is a major issue and we are committed to playing our part to improve London's environment. We acknowledge our environmental challenges in our Strategic Plan (2013-2018) and we will challenge ourselves to work more sustainably across all that we do. Working in line with initiatives by the GLA and City of London, projects have included the installation of green roofs and energy efficient lighting in areas of our buildings.

What are green roofs?

- They are roofs that are covered with specially selected plants and recycled soil, placed over a waterproof membrane. They can also be referred to as 'living roofs.' The Museum's original design incorporated green roofs in the Rotunda and Central Courtyard as well as a 'ribbon' planter around the upper level of the building.

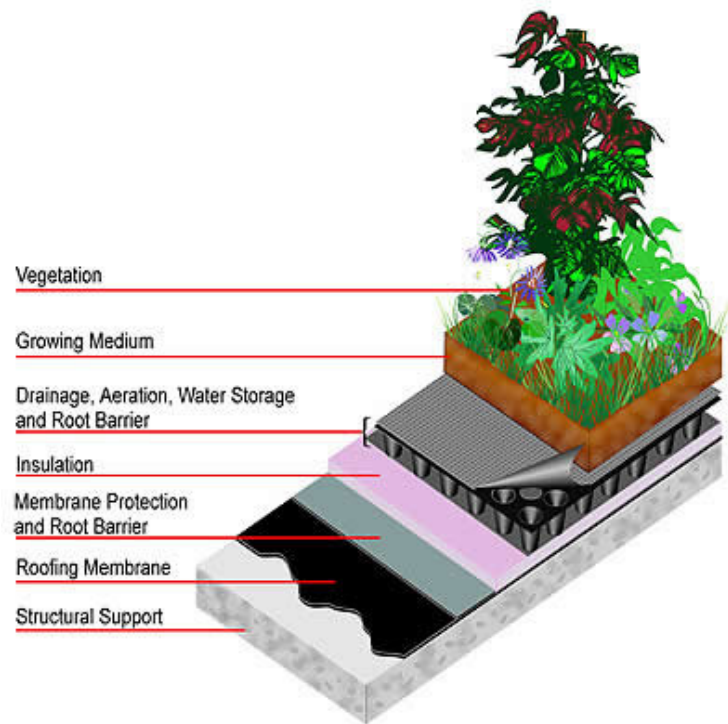
Why are the benefits of green roofs?

Green roofs:

- can help keep spaces cooler during summer months whilst providing additional insulation during the winter months. This leads to improved energy efficiency due to reduced air conditioning or heating requirements.
- do not store heat in the same way as other roofs thereby helping to reduce the urban heat island effect that will see temperatures in London rise significantly during summer months due to climate change.
- reduce storm water run-off that reduces pressure on storm water drainage in the urban area which in turn reduces the risk from surface water flooding.
- support biodiversity through provision of a suitable habitat for wildlife, including rare invertebrates including certain beetles, spiders and bees.
- provide an opportunity for the Museum to share information with and educate visitors on the benefits of green roofs. The Museum has been developing an 'Object in Focus' tour which incorporates looking at the green roofs.

What happens at Museum of London?

- In 2010/11 the Museum undertook a major project to replace its existing flat roof which dated from the 1970s and is 4000m². The original roof was a 'built-up insulated asphalt roof with a latter single-ply roof covering'. A root resistant cap sheet was specified for the new roof covering as this allows for the retrofitting of green roofs. See the diagram on the following page that indicates the various layers involved in a green roof.
- The first area to be selected for green roofing was the Rotunda roof. This was an asphalt roof and the incorporation of a green roof led to the Mastic Asphalt Councils Green Roof of the Year award in 2010.
- A roof top planter that runs around the edge of the building has been relined and planted out incorporating British wildflowers and hedges.



The above diagram demonstrates the different levels in a green roof

What types of plants have been planted?

- The complexity of the Museum's roof layout in levels, shade and aspect give different micro climates suitable for bio-diverse planting which has included; sedum plugs to give a particular design colour, wild flower plug plants, wildflower blanket and bee friendly plants.

Evaluation

- Through the GLA, Drain London have funded a number of green roofs at the Museum. The University of East London carry out evaluation of these roofs in storm water attenuation.

Sources of more information:

- www.uel.ac.uk/erg/index.htm
- www.livingroofs.org/
- www.youtube.com/user/BauderLtd