Resilient Building Toolkit Adaptation Measures Factsheet

Name and description of measure: Drought resistant planting, green roofs & green walls

This involves choosing trees, plants and grass which can survive with less rain fall, thereby mitigating the need for watering, whilst maintaining attractive landscaping.

A **green roof** is a living roof that is either partially or completely covered with vegetation grown over a waterproofing membrane and other additional layers. This can be put on existing or new buildings. Roof structures will need to be looked at as some may need reinforcing, due to the additional weight of the green roof.

A **green wall** can be a free standing or fix wall placed inside and outside of a building. This can be partially or completely covered and normally has its own water system.

Cost of measure (high, medium or low):

Drought resistant planting

Initial cost can be high, but low maintenance costs.

Green roofs

The cost of putting on a green roof is dependant on specification, although indicative costs are between* £60m² and £100m² for extensive roofs and £100m² to £140m² for semi intensive or intensive roofs. *Source – the green roof centre

Pros and Cons:

Drought resistant planting

Pros

Saves water.
Provides shade to people and buildings.
Increases biodiversity.
Makes a positive sustainability statement.
Improving occupier satisfaction and wellbeing.

Cons

May require a different maintenance regime from more traditional planting.

Green roofs

Pros

Reduces storm water runoff.
Helps reduce urban heat island effect.
Increase roof lifespan.
Absorbs rain water.
Create an ecosystem and new biodiversity for wildlife.
Better regulation of the buildings temperature / creates insulation.
Help to improve air quality.

Cons

Higher cost to build than traditional roofs.
Roof beams need to be strong enough to hold the green roof.
Repairs to the green roof can be costly.
Plants might not take/last long due to weather conditions.

Green walls/ living walls

Pros

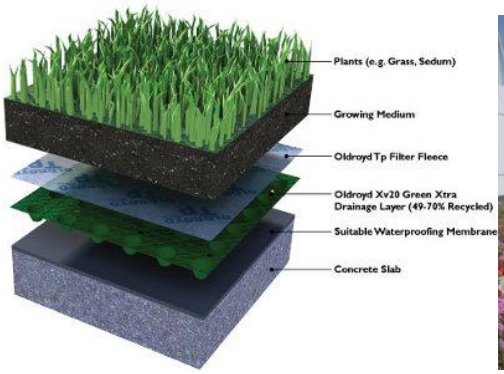
Low environmental impact.
Helps improve environment.
Helps to improve air quality.
Help mitigate heat gain and loss.
Comes in a variety of sizes.

Cons
Larger walls will require lots of maintenance.
The weight of the green wall.

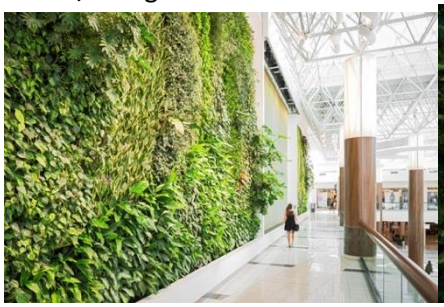
Photos:
Examples of drought tolerant plants and flowers



Green roofs



Green/ living walls




Product review site:
The Royal Horticultural Society: http://www.rhs.org.uk/advice/profile?PID=397

Link to case study and contact:
Portsmouth Water: http://www.portsmouthwater.co.uk/environment/default2.aspx?id=2362 The University of Winchester has installed a green roof, contact Mat Jane, Energy and Environment Manager.

Additional information;
Water Supply (Water Fittings) Regulations 1999:
http://www.legislation.gov.uk/uksi/1999/1148/contents/made
Green roof guide: http://www.greenroofguide.co.uk/
The Royal Horticultural Society provides advice on drought resistant plants and planting:
http://www.rhs.org.uk/advice/profile?PID=397
Drought resistant turf is also available across the UK.