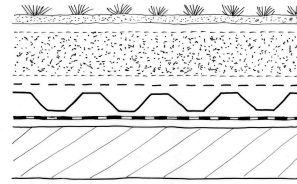
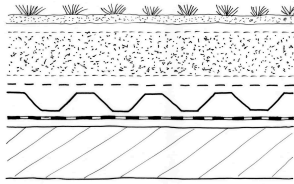
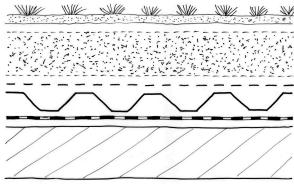


A GREEN ROOF FOR BARRACKS LANE COMMUNITY GARDEN



WHAT IS A GREEN ROOF?

A green roof is an intentionally vegetated surface. It is a living ecosystem which can help contribute to the formation of wildlife corridors, as well as insulating and protecting the building it covers. As a design feature it can be very attractive when properly constructed, planted, and maintained.

WHY CHOOSE A GREEN ROOF FOR THE BARRACKS LANE ECO SHELTER ?

A green roof will help the garden in several ways -

- it will provide an additional wildlife habitat for invertebrates
- it will help to absorb rainwater that would otherwise run off the concrete
- it will help to absorb atmospheric pollution
- it is a demonstration of a sustainable solutions that be used in a cost-effective and attractive way

WHAT TYPE OF GREEN ROOF ARE WE INSTALLING ?



There are different types of green roof - we have chosen a turf roof planted with a meadow grass and flower mix.

Turf roofs have a deeper substrate (soil mix) of around 100mm, and can be planted with grasses and flowers. If the planting is chosen carefully they can be a valuable contribution to wildlife, as well as providing water and pollution absorption, and insulation.

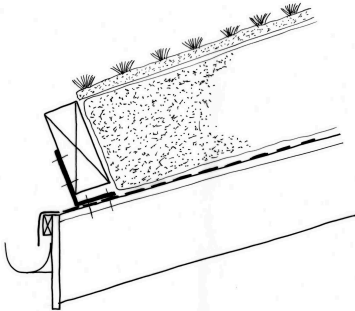
Sedum roofs use a very shallow substrate of c 40mm and are planted entirely with sedums - these have good insulating properties, and contribute to rainwater absorption, but they are not so good for all year round wildlife. Also, there are only four native varieties of sedum, so they don't support such a wide range of wildlife as native flowers and grasses. However, sedum roofs are very drought tolerant.



Green roofs can also be constructed from recycled rubble and soil, and left to be colonised by local flora. This is a good solution for commercial or industrial buildings looking to make a positive contribution to the environment.

HOW IS THE GREEN ROOF CONSTRUCTED?

On a pitched roof the slope should not exceed 35° to 40°.



All roofs need robust waterproof liner - we have used a butyl liner. This needs to be very carefully sealed around outlets such as pipes. With a butyl liner a root barrier is also needed.

On a pitched roof a restraining bracket is also essential around the edging, and it may be necessary to have a filter fleece around the edge. A filter fleece will prevent the soil washing away, but still allow water to drain.

On a pitched roof a drainage layer and filter fleece is not usually needed, but this would be essential on a flat roof.

For a meadow turf roof we will use a very nutrient poor substrate.



The meadow turf we use contains 34 species (30 flowers and four grasses) and is grown for purpose Wildflower Turf, www.wildflowerturf.co.uk based just outside Newbury. They use a hessian bag growing system which establishes a robust root mat which can be cut, transported, and rapidly regrows.

HOW IS THE GREEN ROOF MAINTAINED ?

We will need to make sure the turf is watered every day - either by rain or manually - for the first six weeks. This will help it establish. (Ideally we would have waited until later in the year or spring to install the roof). Once established the turf will not need watering - it may turn into a hay meadow in periods of severe drought, but it will regenerate each spring.

The turf will need an annual cut in Autumn, and the hay raked and removed.

HOW MUCH DOES IT COST?

As a rule of thumb allow between £100 and £300 per square meter - sedum roofs with a shallow substrate will cost less than meadow turf with a deep substrate. Other variables will be access, drainage, cost and type of waterproofing and filter fleece, cost and type of edging restraint.

Our roof has cost less because Oxford Green Roofs, www.oxfordgreenroofs.co.uk have donated their time and expertise free of charge, and you have donated your labour free of charge!

THANKS

To Kay and Gareth at OXFORD GREEN ROOFS for donating their time and expertise

To TRUST FOR THE OXFORDSHIRE ENVIRONMENT and OXFORD PRESERVATION TRUST for giving the grant to put the green roof and solar panels on the shelter

To WITHOUT WALLS for the grant to build the shelter, and BROOKES ARCHITECTURE STUDENTS for designing it

To all THE VOLUNTEERS today for donating their labour and enthusiasm