

GreenRoofs

Now London planners preferred roofing option



Green Roofs perform a vital Role in helping cities adapt to the effects of climate change by reducing the need for artificial cooling in hot weather, improving air quality and capturing rainwater run off. In addition they provide a range of habitats for wildlife.


SKYLINE
ROOFING CENTRES

How can Skyline help you enter this valuable and growing market?



Skyline have partnered with Ecogreen roofs to bring to you what we firmly believe is one of the best systems available. Ensuring the system lasts and continues to look good is not just around the vegetation; even the very best will wither and look awful if the other component parts are inferior or not used properly and looked after...

Dr. Chloe Molneux whose PhD in Green Roofs is now an acknowledged authority in this technology. She has been involved in the design of the growing medium that we will supply. This medium and the depth to which it is used is often the cause of failure with some systems.

Initially, for our customers we are able to provide free training. We will help with site surveys and provide all the technical support and advice that you may need to create such a roof. We can advise on opportunities to provide on-going annual maintenance and on any irrigation requirements the roof might need.

Skyline will hold all you will need in stock including Turf cutters and organic fertilisers. The Sedum or other plants will be delivered by the grower when you are ready for them. Skyline can of course provide the Felts, Single Ply's, Liquid membranes and Insulation for a complete new roof or refurbishment.

This is a great opportunity with a client base generally looking for the best available and giving lasting value.

Speak to your Skyline branch now for further information.



THE 5 LAYERED SYSTEM

Vegetation Layer:

Eco Green Roofs are committed to providing individually tailored roofs that are suited to their natural surroundings and the clients' requests. We use hardy plant varieties that offer a diverse habitat and an appearance that is aesthetically pleasing. These include a combination of wild flowers, sedum and herbs for extensive roofs, and shrubs and deeper-rooted plant species for intensive projects.

Growing Medium:

We can offer a range of growing media for various habitat types including the typical extensive, semi-intensive and intensive greening systems. These substrates consist of lightweight recycled aggregates blended with a small organic component for essential plant nutrients. We can also offer exciting new mixes including biologically enhanced blends that have been formulated using the latest scientific research.

Filter Layer:

The filter layer is a geo-textile sheet that allows water to pass through to the drainage board below, but prevents the movement of particulate fines that could block drainage outlets. This also ensures that the organic component of the growing media remain within the vegetation layer.

Drainage Board:

Our drainage layer has been specifically designed to provide high tensile strength for both water retaining capacity and substrate loading.

Root Barrier:

The root barrier is a root-resistant layer that we place over the roof's waterproofing. This layer provides maximum protection for the waterproofing.

Ecological benefits of green roofs

- ✓ **Storm Water Run Off** - Vegetated roofs are able to retain on average 82% of rainfall compared to 27% on pure gravel rooftops; and this is even better on roofs with a 2% slope (up to 87% retention).
- ✓ **Habitat For Rare Wildlife** - Green roofs provide a stepping stone for many rare birds endangered by the lack of suitable habitats. They also provide a home for many rare insects, beetles, spiders and plant species.
- ✓ **Sound Insulation** - University of Sheffield research shows that a 20-100mm dry growing medium could achieve an extra SPL (Sound Pressure Level) attenuation of 10-40dB, depending on frequency.
- ✓ **Air Quality** - Studies have suggested a 37% reduction of sulphur dioxide (that causes acid rain) and a 21% reduction in nitrous acid can be achieved in the air above a green roof, when compared to other air samples taken nearby.
- ✓ **Water Quality** - Water is cleaned when passing through a green roof system. Research has found that 60% of cadmium, copper and lead, and approximately 16% of zinc, can be removed from rainwater on passing through a green roof.

Economical benefits of green roofs

- ✓ **Air Conditioning Bills** - Publications have indicated that the need for air conditioning in summer months can actually be reduced by 6% and, combined with a 1-2% reduction of the urban heat island effect; greened cities could see electrical demand come down by 5%.
- ✓ **Heating Bills** - Heating bills can also be reduced by a green roof, with an average saving of around 4%.
- ✓ **Roof Life Span** - Studies have proven that a green roof can increase a roof's lifespan by up to 3 times. There are a couple of examples where the green roof has not needed to be replaced for over 100 years! The green roof protects the waterproofing from UV rays, frost and ice.
- ✓ **Thermal Benefits** - Investigations into the thermal properties of green roofs have revealed that plants themselves significantly reduce air temperatures both inside the building and in the immediate environment.
- ✓ **Planning Permission** - In some cases a green roof factored into a new building's design can help you gain planning permission. If green roofs are for an existing building then planning permission for the green roof itself is very rarely needed.

Types of Green Roofs

Extensive green roofs - Extensive green roofs are the most common and can be categorised into two further sub-types. Firstly, Sedum matted, are those placed directly onto a moisture blanket or onto a thin substrate layer. These mats, planted with the stonecrop plant genus Sedum (up to 7 species) are like rolls of carpet, are simply laid out over the prepared roof. Secondly, substrate-based green roofs can be plug-planted with Sedum species (which are well known for being drought resistant) or can be seeded with wild flower mixes for more natural species rich meadows. These roofs are constructed with substrates that contain little soil components typically between 5-20% organic matter, and contain lightweight aggregates that make up the bulk of the substrate to between 5-10 cm in depth. *These roofs are extremely lightweight and so are perfect for sheds, garages and buildings with a very low roof loading capacity.

Non-Sedum extensive roofs - Substrate-based extensive roofs that are seeded with a wild flower mix or left to colonise naturally have recently been termed brown roofs or bio diverse roofs, as they are comparable to natural Brownfield land. These rapidly decreasing wastelands are mainly found abandoned in urban areas but are increasing being lost to planners and developers as the pressure for new housing for expanding cities mounts. These wasteland sites generally have a substrate that has the consistency of crushed brick aggregate with little soil nutrition or retention of water, however re-colonisation can lead from bare ground to grassland, scrub and woodland, allowing a wide range of wildlife to become established. Brownfield areas are home to such animals as the brown hare, skylark and lapwing (these birds nest on pen areas producing eggs that camouflage with the brick substrates), rare invertebrates (particularly spiders) and a variety of butterflies, reptiles and amphibians. These habitats also provide mitigation to the now very endangered Black Redstart. Red listed species could therefore be conserved by the green roof alternative that mimics these ever-decreasing natural habitats. The most species-rich site so far identified in the UK is a 27.5 hectares (55 acres) Brownfield site in Essex that has more recorded biodiversity per square foot than anywhere else in the country.

Intensive green roofs - intensive green roofs are those that are found in easily accessible private or public places; often these are parks or attractive gardens. Although many intensive types are not obvious as being on a roof, many have the underground train system running beneath them or are over underground carp parks. These green roofs have substrates that are extremely deep (above 20cm), enough in many cases for trees and large shrubs to grow well in. These types of roofs are aesthetically very pleasing but they require heavy maintenance and a complex irrigation system to keep healthy.

Semi-intensive green roofs - Semi-intensive green roofs are similar to the purely intensive variety but their substrate depths are significantly reduced, usually to between 10-20 cm. These types of green roofs are more obvious as being situated on rooftops, although they are also better described as roof gardens due to ornamental vegetation and their ability to sustain large shrubs. Lighter substrates are usually required for semi-intensives as the roof structure has a finite loading capacity; therefore the soil/organic components are often reduced to 20-30% (as this is where the main body of weight is coming from).



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