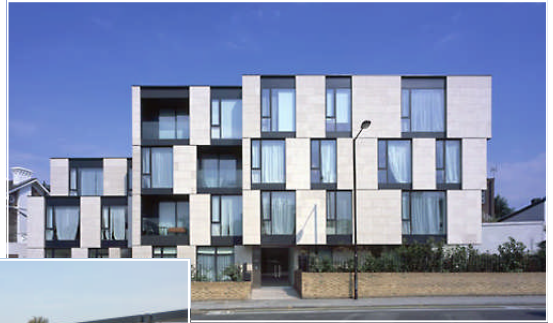




POLISYSTEM UK LTD.®

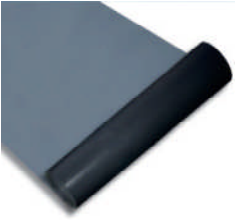


Polisystem TPO
waterproofing
membranes for

***PoliVerde* ROOF GARDENS**



POLISYSTEM ROOF GARDENS



Over the last 15 years the European market has seen a trend towards consolidation in the area of TPO-based water-proofing products.

For years designers and installers alike have benefitted from the technical properties and the environmental advantages offered by these waterproofing sheets.

As one of the first manufacturers to see the possibilities offered by TPO (especially its environmentally friendly properties), Italiana Membrane developed the range of **Polisystem** TPO products, now part of **Polisystem Roof Gardens**.

Polisystem products have proved highly successful in **roofing, reservoirs, tanks, tunnels, underground works, swimming pools** and now **roof gardens**.

Roof gardens, common throughout much of mainland Europe, were originally designed to help improve the natural absorption and dispersal of rain water, especially in urban areas.

The momentum to specify 'green' is now growing in the UK with building owners looking to be environmentally friendly and architects willing to provide a design edge to industrial and commercial projects. Climate change is going to have a huge impact on all our lives and green roofing can help lessen the impact.



Roof gardens have seen a surge in popularity in recent years. Not only do they look good on industrial, commercial and domestic buildings, but they also protect the environment.

The **Polisystem Roof Garden** is supported by unbeatable technical and design resources that few can match. The system has been carefully developed to give a real, truly high performance alternative to traditional industrial and commercial roofing materials. Building owners and architects can now choose the environmentally friendly option without compromising on performance.

Polisystem UK Ltd. can provide all three major types of **roof garden** in accordance with your requirements. Choose from an **extensive, semi-intensive or intensive roof garden** - you decide how you want to transform your view.



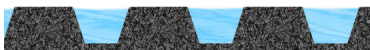
*PoliVerde sedum / plug plants /
vegetation mat / native
wildflowers, etc.*



*System substrate
(according to system design
& specification)*



Filter sheet



Drainage mat



*Polisystem TPO
Single-Ply Membrane*

These elements work in harmony enabling the natural needs of a **roof garden** (drainage, air, water and nutrients) to be met.

Polisystem UK Ltd. have great expertise in providing the correct build-up for your unique **roof garden** and will assist you with every step of the design process.

Polisystem TPO membranes are root resistant and meet the EN 13948 standard.

"Results of root resistance tests on the membranes indicate that they are suitable for use as a root barrier" (see BBA Certificate 04/4109, Section 9)



...ecologically beneficial, flourishing & permanently functioning

Advantages of a PoliVerde Roof Garden:

✓ IMPROVED ENVIRONMENT AND AIR QUALITY

Reduction of self-generated hydrocarbons in city areas, natural carbon dioxide absorption and removal system, and increased wildlife habitat.

Green roofs reduce the 'Heat island' effect: the difference in temperature between urban areas and surrounding countryside and the main cause of ozone production.

They humidify and cool the surrounding air creating a microclimate which has beneficial effects within the immediate area.

✓ AMENITY GAINS

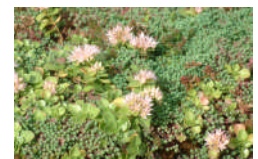
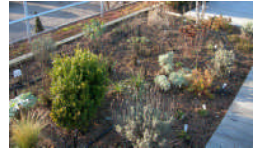
An otherwise barren roof is put to good use, for example recreational in urban areas. The roof is an attractive, extended living space and proven investment in price of property. Also saving any costs of purchasing additional land.

✓ PROTECTS THE WATERPROOFING MEMBRANE

Through reduction in temperature extremes, protection from UV light, reduced risk of damage, the already high lifespan of the BBA certified membrane is almost doubled. This eliminates future replacement costs.

✓ THERMAL INSULATION

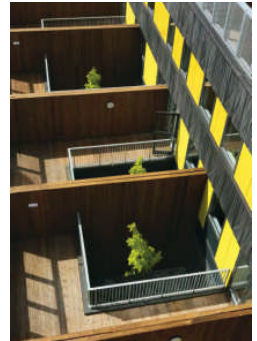
The substrate depth increases thermal insulation values. Warmer temperatures will be experienced in winter, and cooler in summer, ultimately resulting in fuel savings.



✓ AESTHETICALLY PLEASING

The landscaped areas enhance the surroundings, visually softening built areas; this is often referred to as 'environmental masking'. A variety of textures and colours will be introduced.

They provide both visually accessible and physically accessible green space; proven to be good for peoples' mental health. People working in offices overlooking green roofs are more productive than people looking onto hard buildings. Green roofs are also being installed on hospital roof areas that patients look upon as it has been shown to speed up their recovery.



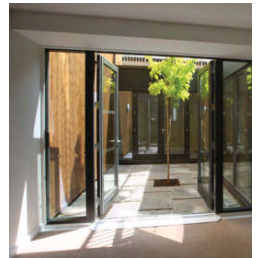
✓ RETAINS WATER

Reduction in the impact of rainwater removal and flood risk. Responsibility for drainage is also reduced. Moisture in the substrate evaporates slowly back into the atmosphere. Less strain is subsequently put on older and sometimes inadequate sewage systems. Over the course of a year, a green roof will retain 40-90% of the average rainfall.



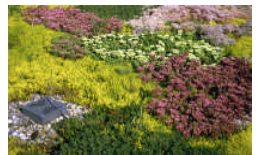
✓ AIDS PLANNING CONSENT

Proposals incorporating green roofs tend to be favoured by local authorities. This can speed up the initial stages of construction planning.



✓ HORIZONTAL ROOFS POSSIBLE

Screed to falls is an expensive element of the construction. As a green roof can be installed on a horizontal deck, the cost of this can be offset by the savings made on the screed.



✓ ACOUSTIC INSULATION

The system can act as a sound barrier; it is an ideal acoustic insulant, particularly beneficial in buildings near airports, industrial developments and nightclubs.



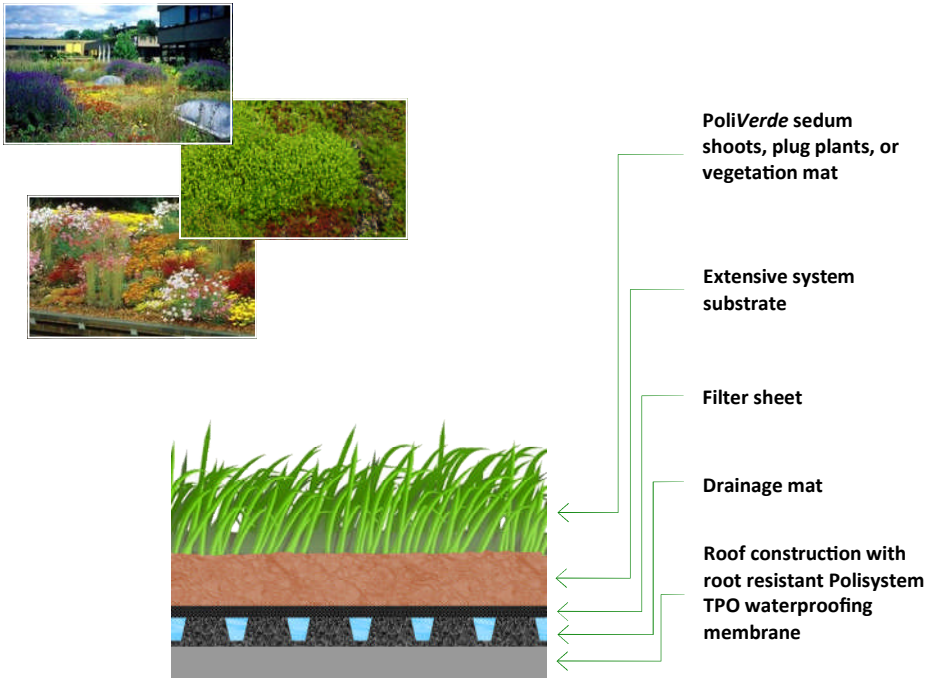
Extensive Roofs

Extensive roof gardens are an attractive addition to many types and sizes of building, including extensions, garages and even sheds. They are the most common type of **roof garden**.

Extensive roof gardens with PoliVerde sedum:

- Are the most lightweight roof garden available
- Are ideal for refurbishment projects
- Provide instant greening of the roof - with sedum and other species, specially selected to flourish in the climate
- Cultivated by leading specialists
- Require minimal maintenance
- Are highly cost effective
- Can be installed with great efficiency
- Are the ideal solution when a roof garden needs to be specified to meet planning requirements





Extensive roof gardens with PoliVerde extensive substrate:

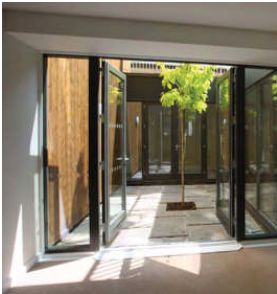
- Provide greater depth of growing medium, enabling a broader range of species to be incorporated within the scheme
- Are cost effective on larger projects
- Increase the rainwater attenuation capacity
- Can be installed by **plug planting** individual, specially selected plants which will grow to provide excellent cover, in the precise layout designed at the outset
- Can be installed as a **vegetation mat**, delivered in rolls and instantly greening the roof with various species; requires a three week establishment period
- Can be swiftly installed by **hydro-planting** a mix of seed and plant cuttings to a lightweight substrate, which has been raked and levelled, fertiliser and mulch can then be sprayed to assist growth

Intensive Roofs

Generally designed for recreational use, **intensive roof gardens** can resemble a traditional ground-level garden. **Intensive green roof gardens** are ideal if you would like a wide variety of perennial and herbaceous plants, shrubs, bushes, hedges and small trees.

Intensive roof gardens with PoliVerde planting schemes:

- Provide valuable recreational space, maximising the building's potential
- Increase the value of the property
- Provide storm water management benefits due to the substrate depth
- Require maintenance and irrigation throughout the year
- Have practically unlimited design opportunities
- Can even include trees - speak to our Technical Department about mechanical tree fixing
- Can be designed around permeable paving and patio areas
- Can be installed in raised planter beds



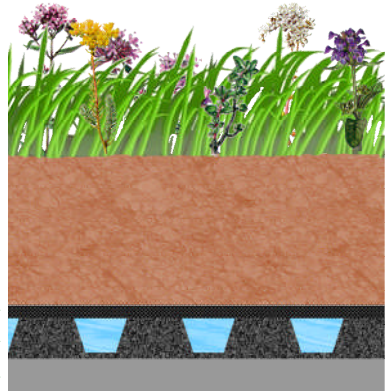
Bespoke PoliVerde planting scheme, can include wildflowers, plants, shrubs & small hedges or trees

Intensive system substrate (deep)

Filter sheet

Drainage mat

Roof construction with root resistant Polysystem TPO waterproofing membrane



Semi-intensive roof gardens with PoliVerde planting schemes:

- Are similar to intensive roof gardens, however special care is taken to minimise the maintenance required
- Can also refer to an intensive roof garden with minimal foot traffic, i.e. with specialised patio areas where the garden can be readily viewed from



Design and Construction

The prime objective in the design and construction of any green roof system is that the established planted roof will be aesthetically pleasing, environmentally beneficial and will not compromise the essential function of the roof: waterproofing.

The designer needs to take the following into account:

- Safe roof access
- Position of the building
- Orientation of the roof
- Upstand and perimeter details
- Wind uplift
- Roof pitch
- Structural loading
- Preferred planting
- Sustainability of components
- Insulation
- Levels of maintenance and irrigation
- Performance of required plant layer
- Drainage control

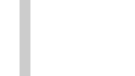


The **PoliVerde green roof system** is comprehensive; it incorporates absolutely every component for the ultimate high specification **roof garden**.

Installation is carried out by **Polisystem** approved contractors in partnership with specialist **roof garden** contractors with horticultural expertise.

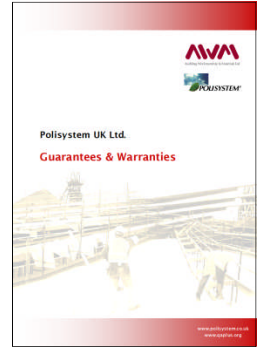
Polisystem will provide on-site support at key stages of the contract. A long-term maintenance regime will be put in place to include every aspect, from fertilising, to the clearing of debris, to simple general weeding.

Please contact our Sales Department with your requirements on **01788 555941** or email **info@polisystem.co.uk**. We look forward to creating and maintaining your vision.



Please refer to the **Polisystem UK Ltd. Guarantees & Warranties** brochure for full details of the following options.

This can be downloaded from our website www.polisystem.co.uk or emailed or posted on request.



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