

Lidlington Place - Green Roof (Addendum)

The green roof proposal for Lidlington Place are as follows;

1. Green roof Supplier;

Buying an off the shelf product from a proven supplier in Northern Ireland. They will supply and install the green roof as part of the package.

<https://www.greenroofsdirect.com>

The company full details can be found in the disclaimer section.

The product is called **EverMat**, consisting of: Protective Fleece, Drainage Layer, Growing Medium and Pre Grown Sedum Blanket.

The benefit's of using an off the shelved product is enormous and re-assuring. There is ongoing phone / webcam support and 2 years product warranty from a highly recommended supplier within the industry specialising in supplying to the UK residential and commercial market.



Refer to the attachments titled; Product - Evermat Core Specification and Core System Spec for greater specification of the product.

2. Product Specification;

Drainage Layer

Product Description

Drainage Layer is made of cross-linked, closed cell polyethylene (PE) foam flakes, which are connected together by thermal processing. The already applied/laminated filter fleece is made of polyester (PET) fibres.

Uses:

Drainage Layer is used as a drainage, protection, filter and root expansion layer for extensive green roof systems on flat roofs.

Characteristics / Advantages

- 4 in 1 product (drainage, protection, filter and root expansion layer)
- Light and easy to cut
- Suitable for low pitch roofs
- High porosity and very high water transmissibility
- Drainage Layer does not rot
- Compressive strength
- Recyclable

Tests Approvals / Standards

Quality management system EN ISO 9001/14001

Reaction to fire according to EN 13501-1, class E

Product Data:

Appearance Surface: structured

Colour Drainage layer: coloured Filter fleece: light grey Packaging,

Packing unit: 40 pieces per pallet (90 m²)

Storage Conditions Drainage Layer shall be stored at dry conditions.

Shelf-Life Drainage Layer does not expire during correct storage.

Technical Data

Material Bases

Drainage layer:	Polyethylene foam (PE)
Filter fleece:	Polyester fibres (PET)

Length	2.25 m ($\pm 3\%$)
Width:	1.00 m ($\pm 3\%$)
Thickness:	25 mm (- 0 mm / + 3 mm)

Mass per unit area

EN 9864

Drainage layer:	2100 g/m ² (- 120 g / + 100 g)
Filter fleece:	145 g/m ² (- 3 g / + 5 g)

Static puncture

EN 12236

Drainage layer:	1800 N
Filter fleece:	1600 N

Water permeability normal to the plane (V H50)

EN 11058

0.11 m/s (± 0.01)

Application Conditions / Limits:

Temperature

The use of Drainage Layer 30 is limited to geographical locations with average monthly minimum temperatures of -50 °C. Permanent ambient temperature during use is limited to +50 °C.

Growing Medium:

Install	50mm multi-layer extensive roof substrate composed of mineral bulk mixture with a proportion of mineral and organic matter.
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Total pore volume	> 60-70 Vol %
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Max water capacity	≥ 35% Vol
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Key data

Dry weight approx.	≤ .75 g/cm ³
Water saturated	≤ 1.4g/cm ³

Organic content	≥65 g/L
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pH value	5.8-7.9
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Water permeability	≥ 0.6 mm/min
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Compression factor	1,2
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Vegetation Layer:

Please see data sheet for information

Ecology, Health and Safety Information

The product does not fall within the EC-regulation of hazardous goods. As a result, a material safety data sheet following EC-Guideline 91/155 EWG is not needed to bring the product to the market, transport or use it. The product does not damage the environment when used as specified.

3. Sedum Blanket details;

Sedum Blanket Datasheet:

Carrier	Predominately rotttable Cocomat with geo textile weave
Substate	Locally produced mix containing at least 25% recycled green waste
Vegetation composition	Sedum Acre Aureum, Sedum Album Coral Carpet, Sedum Album mini, Sedum Album Athoum, Sedum Hispanicum, Sedum Summer Glory, Sedum Reflexum, Sedum Weihenstephaner Gold, Sedum Voodoo
Vegetation coverage	Vegetation coverage
Thickness	2.5cm -4.5cm
Water saturation weight	18-22 kg /m ²
Standard Size	1 m x 1.5 m

4. Sedum Selection;

The ***Sedum Album Coral Carpet*** was selected for its evergreen qualities and is fully hardy to survive the harsh London weather. The red flushing leaves adds to the visual drama will full colour all year round for the over looking residents / properties to enjoy a small aspect of nature from their windows.



Sedum Album Coral Carpet

Coral Carpet is a mat-forming, evergreen Sedum with small, fleshy, red-flushed leaves come alive in late spring to early summer with pink tinted, white star-shaped flowers. Coral Carpet foliage is green, flushed red in all seasons. The use of this in our sedum blanket means vibrant and full colour all year round.

Height: 5cm

Spread: 25cm

Hardiness: Fully hardy

Conditions: Rain / Sun

An ***alternative***, is the Sedum Relexum, also evergreen and is fully hardy. While it has a better height, it was felt the colour wasn't pleasing or dramatic enough to the Album Coral Carpet option. Colour and its visual impact was a factor in the sedum selection process.



Sedum Relexum

The low-growing evergreen, spruce-like, succulent foliage stands out beautifully in our sedum blankets. Yellow flowers appear in July right through until mid October. To get this variety to reach maturity in time for sale we propagate Reflexum in plug form in our nursery and insert into the blanket. A time consuming job but we feel worth the extra effort.

Height: 25cm

Spread: 20cm

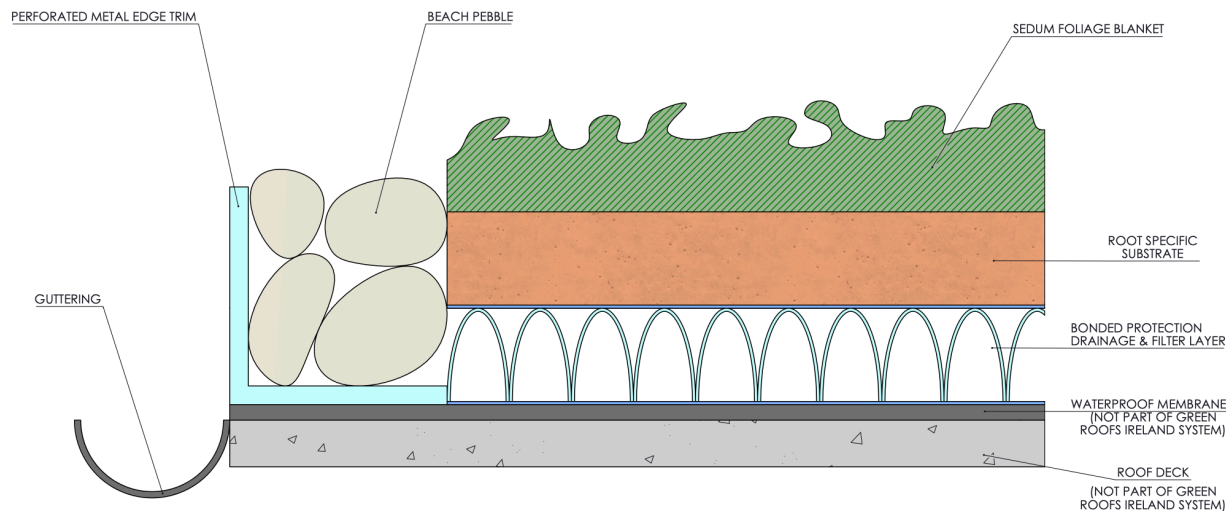
Hardiness: Fully hardy

Conditions: Rain / Sun

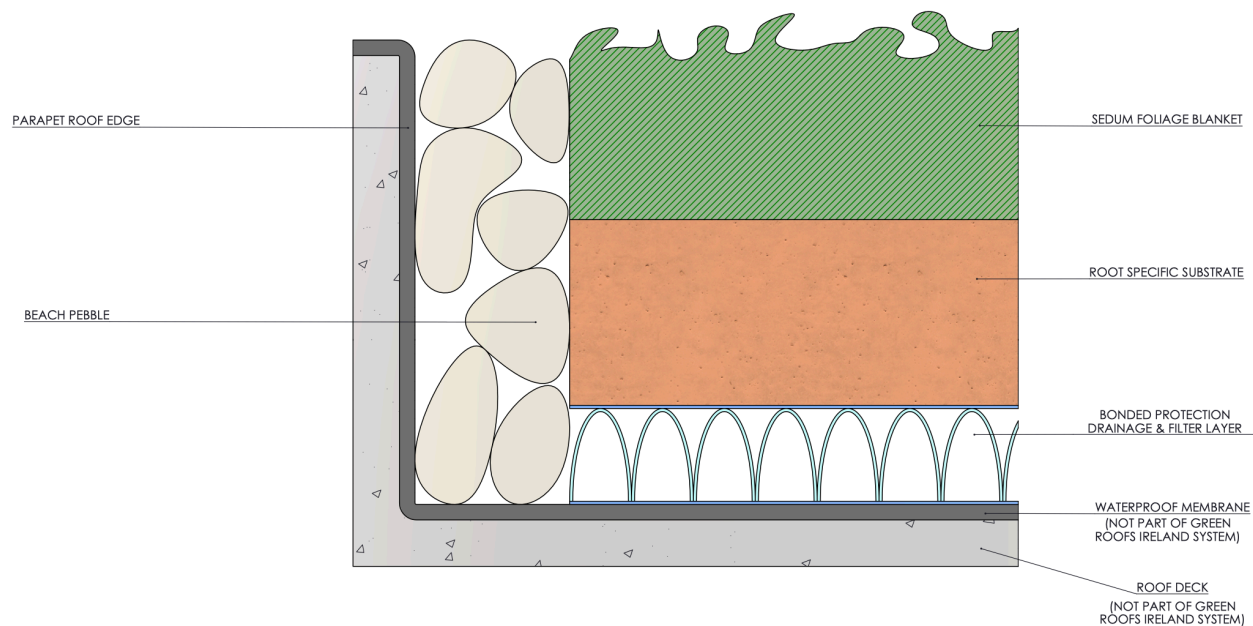
5. Installation techical specification

The basic installation illustrations, with minor adjustment on the actual installation day.

METAL EDGE TRIM DETAIL



PARAPET DETAIL



5. The Maintenance Schedule

As part of the purchase package, the Supplier, Green Roof Direct will tailor a management plan specifically for Lidlington Place on the day of installation. However, accordingly to the company for a vast majority of UK household green roof the maintenance schedule basics does apply.

THE BASICS

- Liquid seaweed fertilizer
- Apply 10ml per 5 litres. A handheld sprayer is ideal for this and can be purchased in any hardware or DIY store. Spray as a fine mist until it drips off the plants' surfaces.
- Cut the flowers off and remove them in August.
- Program should commence once The Green Roof is installed.

Week 1

Watering in the first week is crucially important. If the Blanket is rolled out in very dry conditions it must be watered every other day during this first week. A quick establishment is very important for the plants to cope with the harsh conditions on a roof.

Week 3

By this stage the Sedum should be showing new signs of growth with mostly bright green, new foliage this will be in contrast to the darker shades of the more hardened foliage. This will indicate the Sedum has travelled well and is beginning to establish. From this point Green Roofs Ireland Sedum Blankets are low in maintenance. Mainly because of the beginning of the growing season, weeds will instantly start to move into any areas of bare substrate and a spot weed will be required. Due to our coverage of Sedum and intense weeding program during propagation weeds find it very difficult to establish themselves in the blankets.

Week 6

At this stage a walk of each roof is required to check for any weeds. Pulling weeds, whilst they are very small will cause less damage to the Sedum and also before they are allowed to seed. This is paramount as a simple grass weed will turn into a small lawn if a roof is not properly cared for during the first year. A thorough inspection and spot weed at this stage could save weeks of labour in weeding or replacing sections of Blanket.

Week 12

The roof will be well established and by this time a simple check on each roof is all that is required. The comprehensive care plan during the Spring months will mean weeds will not be seeding and spreading. The Roof will also be flowering soon so it is important that foot traffic is kept to a minimum.

Week 24

As the growing season will soon be ending a simple inspection and spot weed is required. At this time fertiliser is used to brighten up the foliage before the winter.

Week 36-48

This will be a winter inspection to check on the health of the Sedum. As our winters are changing we are experiencing more and more extreme weather conditions. The most Northerly Location in the United Kingdom is going to face the worst of this therefore, a winter visit is vital to monitor its performance.

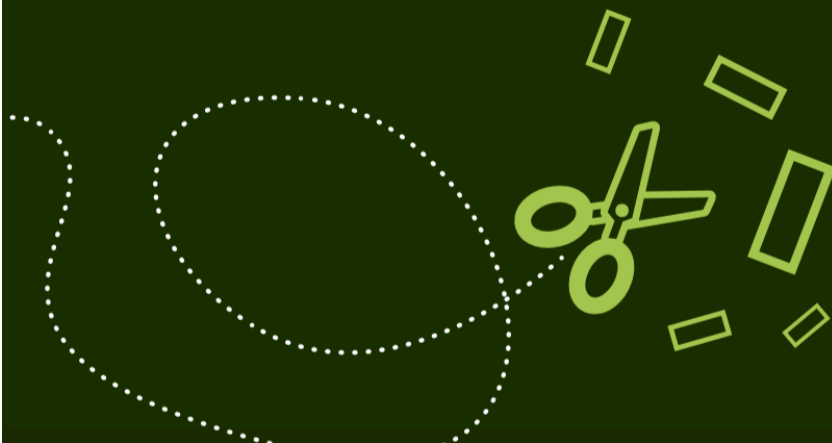
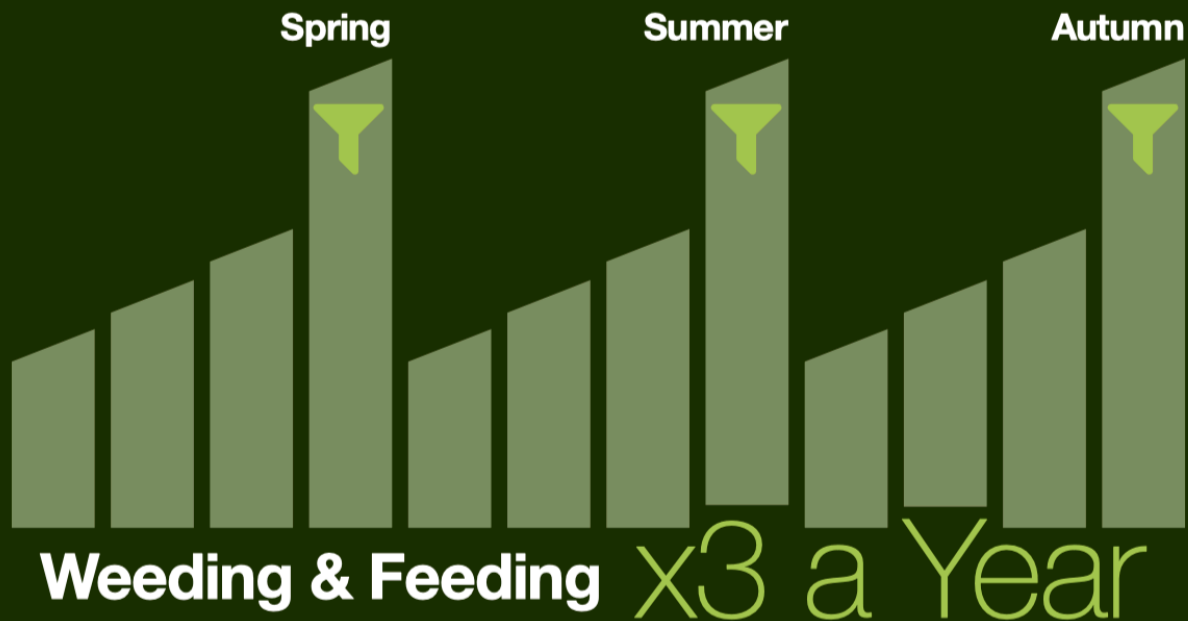
Year 2

Four scheduled visits to align with the growing season and throughout with one visit in the winter.

A Green Roof is a living organism it is changing on a daily basis and is highly dependent on the weather. Therefore it is difficult to quantify exact amount of water or labour required. A good relationship with excellent communication between the client and the grower is required and combined with a maintenance schedule tailored for the application this will create a healthy and low maintenance Green Roof.

GREEN ROOFS DIRECT

Extensive Sedum Green Roof Maintenance Schedule



**then flower
removal late
summer
once a year**

Disclaimer;

All the material and literature conveyed in this Addendum is with permission from the company Green Roof Direct (Ireland) for the purpose of planning. The company has advised there could be some minor discrepancy from the installation spec literature to the actual installation approach taken on site on the installation day as every site is slightly different.



Green Roofs Ireland Ltd
146 Shore Road
Magheramourne
Larne
Co. Antrim
Northern Ireland
BT40 3HY

Tel: 0800 774 7650
Email: info@greenroofsireland.co.uk