GREEN ROOF

Maintenance of Extensive Green Roofs

Contents

MOY Design Consultation

Moy has over 20 years of experience in the delivery of Intensive and Extensive Green Roofs throughout Ireland, the United Kingdom, and Europe. We have in-depth knowledge of local and national building codes, the requirements of insurers, and the many local authorities.

Design consultations are free of charge and available to members of the design team, general building contractors, roof and landscaping contractors, and building owners.

Book a design consultation with Moy Materials by sending an email to technical@moy.group.

Green Roof Standard Literature

At the time of writing, there is no harmonized EN standard for green roofing. There are, however, several useful resource documents, that are frequently referred to by designers, these include:

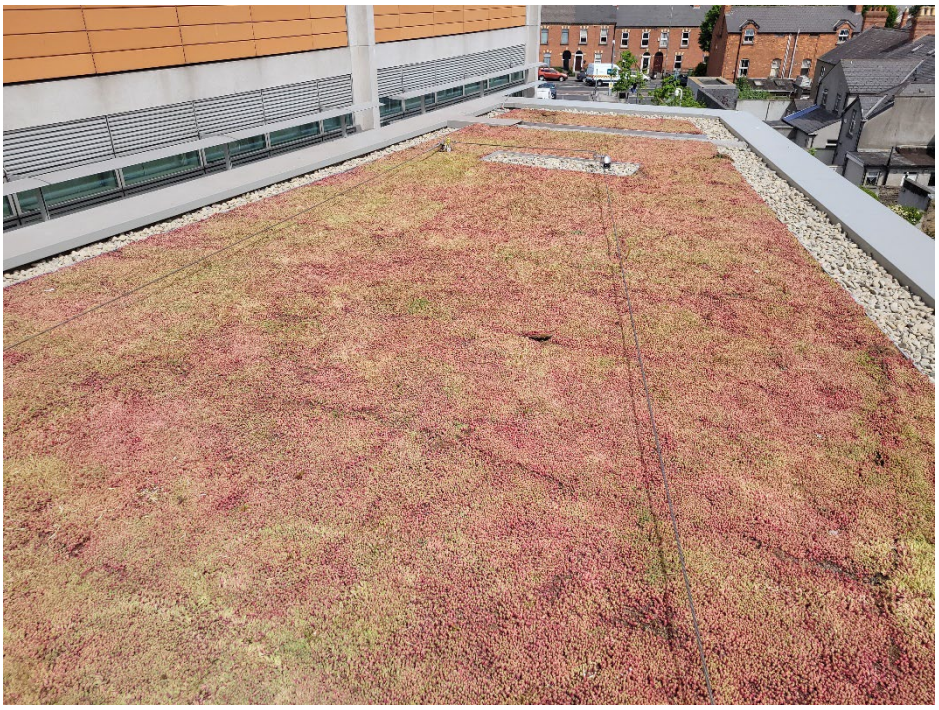
- *FLL (2018) Guidelines for Planning Construction and Maintenance of Green Roofing.* https://commons.bcit.ca/greenroof/files/2019/01/FLL_greenroofguidelines_2018.pdf
- *GRO Code of Best Practice 2021.* https://greenrooforganisation.org/wp-content/uploads/2021/06/GRO_Brochure_v5.pdf
- *GRO Fire Risk Guidance Document 2021.* https://www.greenrooforganisation.org/wp-content/uploads/2020/05/GRO-fire-risk-guidance-document.pdf
- *GRO Fire Performance of Green Roofs Best Practice Guide 2025.* *https://www.greenrooforganisation.org/wp-content/uploads/2025/07/GRO-Fire-Performance-Best-Practice-Guide-June-2025.pdf*
- *FM Global Loss Prevention Data Sheet 1-35.* https://www.fmglobal.com/research-and-resources/fm-global-data-sheets
- *Department for Communities & Local Govt. UK. Fire Performance of Green Roofs and Walls.* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/230510/130819_SW3529R_-_Issue_3_-_Green_Roofs_and_Walls_Project_web_version_v3.pdf
- *Dublin City Council. Green & Blue Roof Guide 2021*. https://www.dublincity.ie/sites/default/files/2021-12/dcc-green-blue-roof-guide-2021.pdf

1.0 Green Roof Maintenance

1.1 Maintenance immediately following installation (by authorized installing roofing contractor)

Sedum roofs require care and attention in the weeks following their installation. Each roof is subjected to various weathering conditions. Roofs do not wear uniformly since certain areas may be affected more severely than others. Unknown environmental factors may also affect the vegetation layer. To avoid an unsuccessful installation, irrigate vegetation layer as per guidance 1.6 Watering and Irrigation.

After a period of **6 to 8 weeks** during the growing season, the edges of the sedum blankets will knit together, and the roots of the sedum plants will extend into the growing media. Curling or retracting of the mat edges can indicate lack of irrigation.



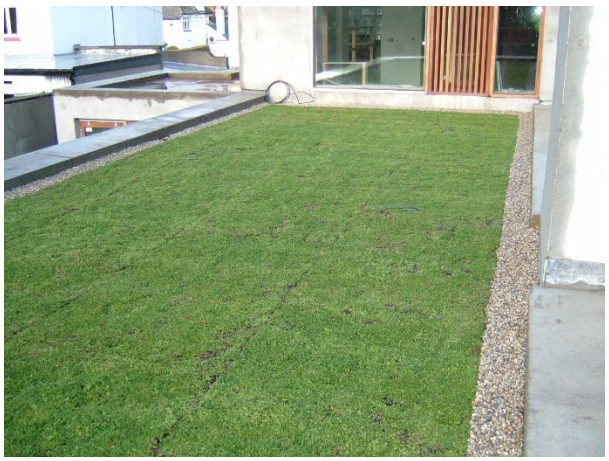
All living roofs must be carefully monitored through their first summer flowering cycle.

1.2 Maintenance post-establishment (by client/building owner)

Certain procedures are recommended, particularly in the first year, to ensure the long-term success of the plants.

As a general guide, it is recommended that maintenance be carried out **three times in the first year** and **twice per year in each subsequent year**, but this depends on the type of system installed and the rate of plant cover. Clients may engage the installing roofing contractor with suitable green roof experience to complete annual maintenance.

Inspect the roof at least twice yearly, in spring and autumn, and inspect all roofs after any severe storm. Make frequent inspections on buildings that house manufacturing facilities that evacuate exhaust debris onto the roof.



The following steps should be undertaken during each roof inspection:

- Clean roof drains of debris.
- Remove leaves, twigs, cans, balls, etc. which could plug roof drains.
- Bag and remove all debris from the roof as debris on the roof surface will be quickly swept into drains by heavy rains and drainage problems may occur.
- Notify the authorized installing roofing contractor immediately if there are significant changes to the appearance of the sedum finishes.
- Notify the authorized installing roofing contractor **immediately** if a roof leak occurs.

- If possible, note conditions resulting in leakage – Activity on the roof, heavy or light rain, wind direction, temperature, and the time of year that the leak occurs are all important clues to tracing roof leaks.
- Note whether the leaks stop shortly after each rain event or if they continue to drip until the roof is dry.

If the owner is prepared with facts, the diagnosis and repair of roof problems can proceed more rapidly.

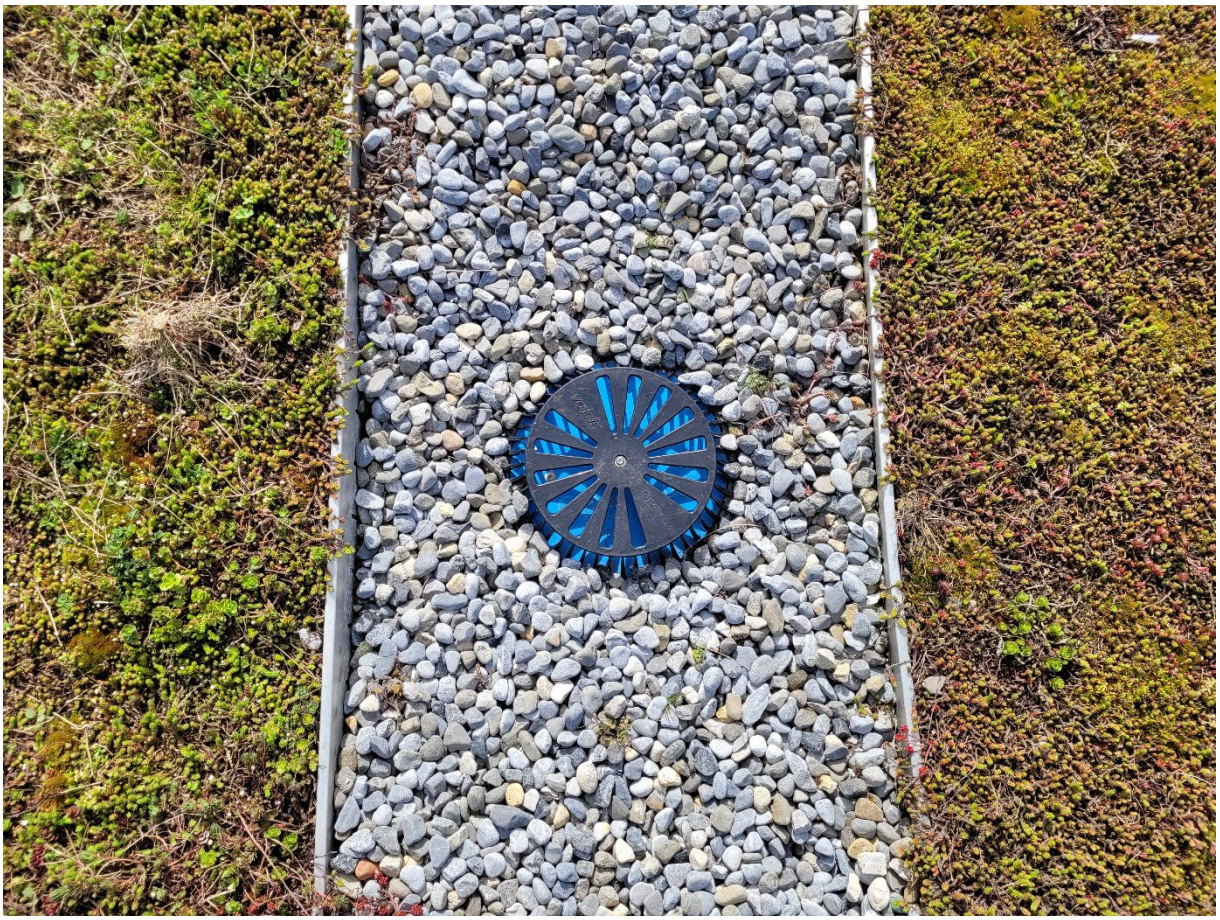
File all job records, plans, and specifications for future reference. Set up a maintenance schedule. Record maintenance procedures as they occur. Log all access times and parties working on the roof in case damage should occur.

1.3 Safe Access

Appropriate measures should be taken at both the design and installation stages to ensure safe access and passage over the planted roof areas for maintenance personnel. To facilitate this a proprietary ballasted safety system or similar safety/fall-arrest system should be installed as part of the roof works.

1.4 Gutters and Outlets

The checking of gutters and outlets should be carried out routinely during any maintenance check to ensure drainage is not impeded. All rainwater outlets should be protected within an outlet inspection box. Open the cover with a coin or screwdriver and ensure the leaf grate is in position and that no debris blocks the outlet. Lock the lid on completion and record this.



1.5 Trafficking of the Plant Layer

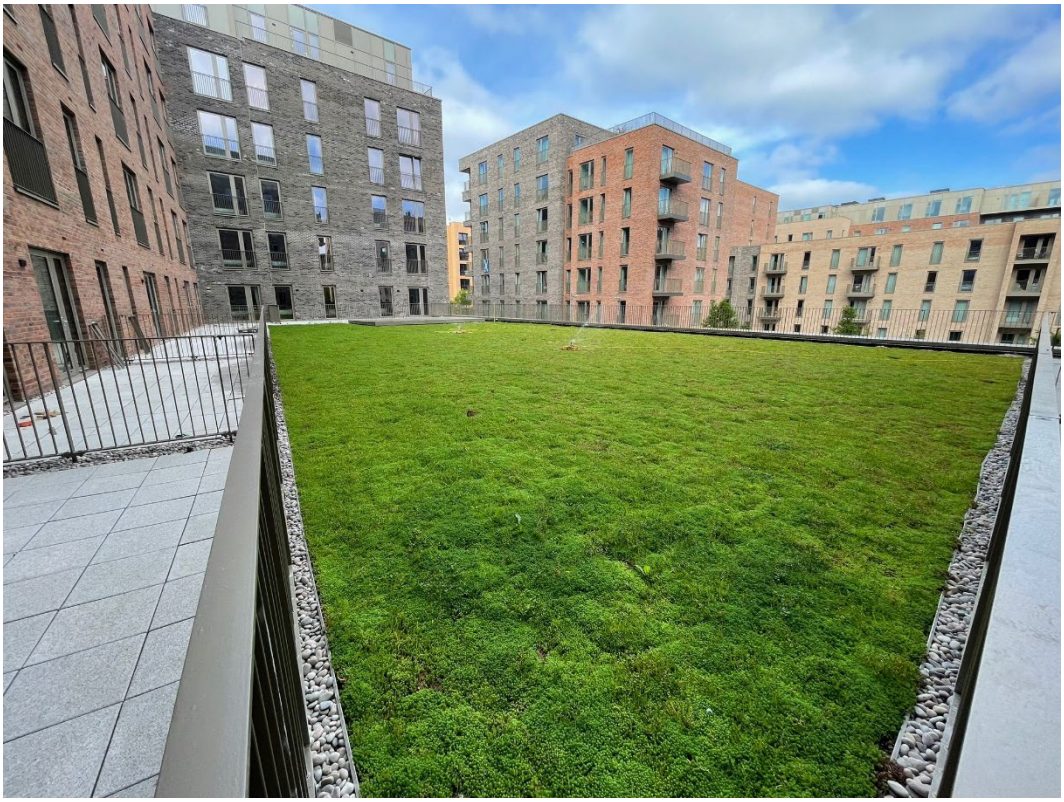
Trafficking of the planted roof for maintenance 2-3 times a year will have no detrimental effect on the plant layer. If works are to be carried out on the roof surface or to adjacent structures care should be taken to minimize damage to the plant layer resulting from repeated trafficking. We would advise that should this be required access routes to the works are closely defined to ensure damage is minimized. If the plant material is damaged regrowth normally occurs. However, the speed of recovery will be dependent upon the level of damage and the duration of the trafficking period.

Do not leave items such as boards or planks on the planting layer as this can permanently kill the sedum vegetation below.

1.6 Watering and Irrigation

Irrigate the plant layer at a minimum rate of **2 liters per M^2** 2-3 times weekly until fully established, during the growing season this may take 6-8 weeks. Apply water using a sprinkler attachment or a porous or perforated pipe until the substrate is thoroughly saturated and the reservoir cups are filled. Varying environmental conditions may extend the time for which the vegetation layer takes to establish, monitor and irrigate plants as needed. Do not use power hose or fire hose units as they may damage the plants.

The extensive green roof is quite resistant to drought once fully established. Irrigation rates will be dictated by the length of drought period. If an extended period of dry weather should occur, periodic checks should be made on the roof to examine the reservoir and drainage board to determine if all the water contained has been used by the plant layer.



1.7 Application of nutrient and soil conditioner

The correct level of nutrients in the growing medium is important.

The fertilization procedure is determined by the following:

- Levels of previously applied fertilizer.
- Condition of the plant material.
- Type of growing medium.
- Location and season.

Extensive Roofs Nutrient Guidelines ***(Example - 35g/M^2 Osmocote Exact)*** *in April / May. If the ambient daily temperatures are greater than 5° the application of nutrients may proceed. Application of nutrients during colder periods may result in that nutrients being washed out without effect.*

Fertilizer should be applied sparingly, several light applications will give a better outcome, compared to a single concentrated dose of fertilizer which can be toxic to plant layer. Other suitable fertilizer products should be applied following manufacturers' recommendations.

1.8 Planting

1.8.1 Removal of undesirable plant material

The Sedum blankets and other species planted at the time of installation are well adapted to life on the roof and quickly become established, however, a few other native species may intrude. Some people welcome the colonization of so-called 'weeds' to promote biodiversity. However, you may prefer them to be removed. Depending upon material and site requirements, this can be done by hand or by a careful point application of herbicide using a weed wipe device to target individual plants. The use of sprayers to apply herbicide is not advisable. Manufacturers guidance notes on the use of any chemicals or herbicides must be followed.

While biodiversity is important, the following plants are known to be invasive and should be removed once spotted; Field Penny-cress, Traveller's-Joy, Three-cornered Garlic, Two-spined Acaena, Russian-vine, Wild Parsnip, Narrow-leaved Ragwort, Japanese Rose, Himalayan Honeysuckle, Common Broomrape, Sea-buckthorn and Brazilian Giant-rhubarb.

New Zealand Pigmyweed, Giant Hogweed, Japanese Knotweed, Common Cord-grass, Himalayan Balsam, Butterfly-bush and Giant-rhubarb are highly invasive and pose a threat to Irish ecosystems. They must be removed once spotted.

1.8.2 Removal of flower heads after flowering

This depends on the individual aesthetic requirements of the client. Dead flowers will eventually biodegrade and act as fertilizer but the heads may be removed in late summer or early autumn if required by careful clipping.

1.8.3 Removal of leaf litter

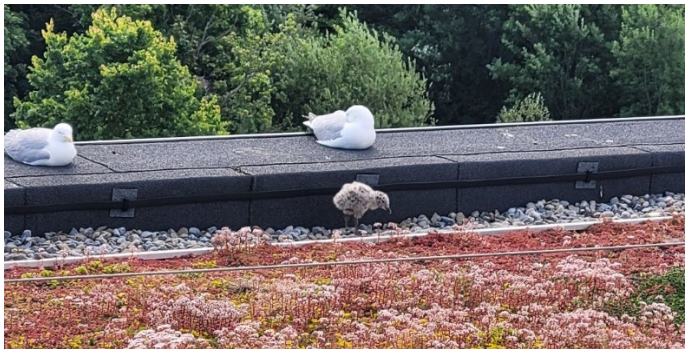
The ideal position for a green roof is in full sun. In certain situations, adjacent trees could shed leaves onto the roof surface resulting in sedum loss. Depending on quantity, these may need to be removed with a leaf-blowing machine used carefully to avoid damage or lifting of blankets. This would be a seasonal requirement.

1.8.4 Root Establishment

Roots develop only under ideal conditions; the vegetation will prioritize colonization and will go to seed without proper care. To promote root growth, regular irrigation can help the roots further anchor in the growing medium. Roots are generally fully established when blankets resist being pulled up and knit together with surrounding blankets.

1.9 Pests and diseases

Sedums are generally pest and disease-resistant but, like many plants, can suffer from aphids or vine weevils. The care our growers take in the production of our plants and the formulation of our Sedum Mat product discourages such problems but, if they occur, they can be controlled by environmentally friendly means. Advise Moy Materials Ltd. if an outbreak of pests or disease should occur. We can then advise on remedial measures appropriate to the problem. Please contact MOY technical@moy.group



1.10 Cutting back or altering the green roof

It should be noted that Extensive green roofs have a very shallow layer of growth media (soil). If alterations are made to the layout of the green roof, care must be taken not to damage the waterproofing membrane and the fleece layers. The Gravel trims must be reinstated properly. Where openings must be made to accommodate ducts or pipework from within the building, MOY Technical is to be consulted to confirm works. This includes the addition of openings and trims of green roof elements and the introduction of ballast margins.

Sedum Repairs: Please contact MOY technical@moy.group for information regarding sedum repairs.

1.11 Use of edged tools

The maintenance of the extensive green roof does not require the use of any sharp-edged tools. The use of shovels, spades, edging tools, rakes, hoes, etc. are not required and should not be used in the maintenance of the extensive green roof. Care should always be taken not to damage the underlying waterproofing.

1.12 Works conducted after Installation

Any Works of any trade that may need to use the roof should be consulted with MOY technical before the start of works. The vegetation blanket will have a higher likelihood to fail should third parties alter the conditions on the roof, especially before sedum has become established.

Notes

Roofing System Supplier

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Fax: 01 450 0033

Email: Info@moy.group

URL: Moy.group

Roofing Contractor

Date of Issue……..…….

Recipient…...…….

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Specifier / Designer

Date of Issue…….…….

Recipient…….

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Building Contractor

Date of Issue…….

Recipient...…….