

GREEN ROOF



Installation of Extensive Green Roofs

Contents

MOY Design Consultation	1
Green Roof Standard Literature	2
1.0 Green Roof Installation.....	3
1.1 Inspection of Waterproofing	3
1.2 Typical Extensive Green Roof	3
1.3 Blue-Green Roof.....	12
Notes	12

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 Installation

1.1 Inspection of Waterproofing

Before installing the extensive green roof finishes, the waterproofing system must be fully inspected and signed off by a Moy representative. Once the waterproofing has been inspected and signed off as completed, the installation of the green roof elements can commence.

Installation of the Vegetation Blanket should be completed between March and September to allow plants a chance to establish before frost.

1.2 Typical Extensive Green Roof

- **Clean the roof:** Sweep away any small debris or materials likely to cause damage to the waterproofing such as screws, sharp stones, wire, nails, etc.



- **Apply separation profile:** Position Moy Aluminium Edge Trims using a string line to ensure a straight line. Edge trims should be temporarily ballasted, bonded, or patched by the roofer while the green roof materials are installed on each side, and remove the ballast weight on completion. Alternatively, the edge trims can be permanently bonded by the authorised installing roofing contractor.

Installation Of Extensive Green Roofs [WORKING DOC]

- **Apply protection:** Moy Protection and water storage fleece (300g/m²), is rolled out, loosely laid, and overlapped by 100mm. Roll size is 2m x 50m.



- **Apply drainage layer:** Moy 25mm Reservoir and Drainage board is laid loose and butt joined at side and head laps. It may also be overlapped by one cup to prevent the boards from moving, particularly on sloping roofs. **NB:** For roofs over 10° use MOY PU adhesive and Consult with MOY Technical Services Dept.



- **Apply drainage layer to gutters:** Moy 40mm Reservoir and Drainage board is laid loose in the gutter channels, if present (later to be covered with pebble ballast). Cut a piece out of the drainage layer at the location of the rainwater outlets. **NB:** Moy 40mm Reservoir and Drainage board will give greater drainage clearance for the channel area.
- **Apply Filtration Fleece:** MOY Filtration Fleece 150g is rolled out, loosely laid, and overlapped by 100mm. Roll size 2x100m.



- **Apply inspection chambers:** Rainwater outlets should be covered with Moy roof outlet inspection chambers. The Inspection chamber is wrapped with a layer of fleece to reduce debris from entering drains. The inspection chamber is then surrounded by a 500mm wide band of pebble ballast to prevent the spread of fire.



- **Apply substrate:** Extensive green roof substrate is spread at a minimum depth of 60mm, this is supplied in slung bags of 1 M³ each, each bag shall cover approx. 16m² after some local settlement occurs. The substrate may be carefully spread evenly with rakes to the required depth. The depth of substrate may be increased at ballasted fall arrest posts or mounded for green roof features such as burrowing mounds and log pile habitat replacement. Avoid excessive foot traffic and do not permit following trades to walk on the growing media. Do not leave growing media exposed, ideally growing media and sedum blankets will be installed together.



- **Apply gravel:** Install round washed pebble to Architects Specification on the outside edge of the trim taking care to maintain the straight line. Pebble diameter should be 20– 40mm in diameter and must be rounded stone, free from fines and any cracked or sharp edges that may damage the waterproofing layers.



- **Apply vegetation blankets:** Sedum or Mixed Vegetation blanket is unrolled, tightly butt joined, and staggered over the prepared substrate. Install full blankets always at edges and perimeters where wind uplift is higher, smaller offcuts may be used to fill the center of the roof.



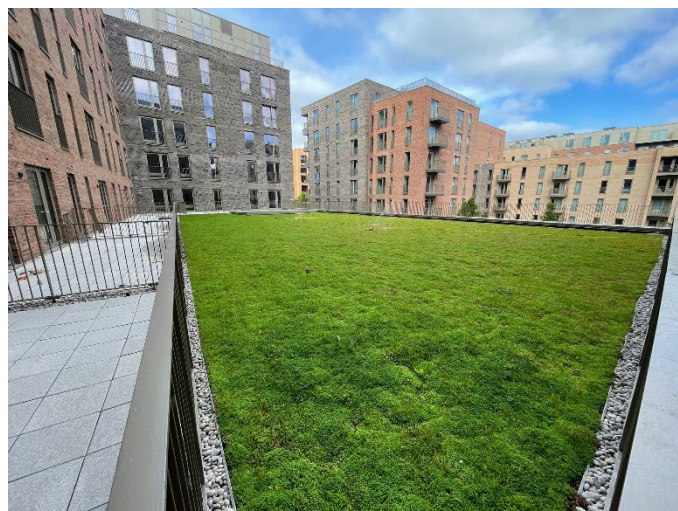
Note: The sedum blanket mustn't remain rolled up for over 24 hours, as it is a perishable material. Sedum delivery should be timed to arrive after the preparation of the bedding layers.



- At pathways and perimeter edges, paving flags may be used. Paving flags should be laid onto the clean and dry filter fleece layer, supported upon the reservoir & drainage board. Sedum and substrate are laid to butt to the side of slabs.



- **Irrigation:** Irrigate at 2 litres per m² three times a week using a gentle sprinkler until the extensive green roof has been fully established. The initial establishment of an extensive green roof may take 6 to 8 weeks during the growing season. Proper watering during this time can make the difference between a successful or unsuccessful green roof. Varying environmental conditions may extend or reduce the time needed for plant layer to properly establish. However, once plant cover is achieved, irrigation can be avoided for extensive roofs unless in cases of extreme drought (more than six weeks without any rain) where irrigation will be necessary. All roof greening sites should have provision for watering. Extensive green roofs require 2L/M² irrigation during maintenance including once established.



- **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.

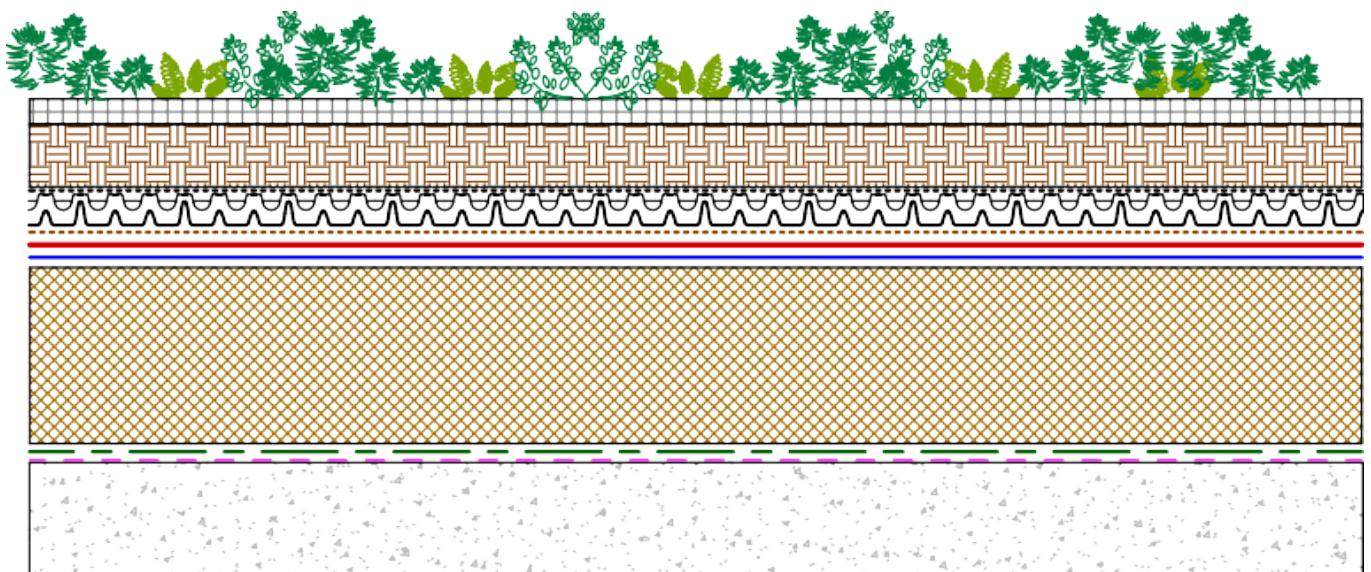


Figure 1 – Extensive Green Roof Detail

Bird and Wind Damage: Excessive bird activity and/or high wind may be detrimental to green roof establishment. Both hazards must be evaluated through project specific environmental assessment. Where the risk of bird damage or wind damage are present, netting or erosion control measures may be required. This should be discussed with the project Architect.

Feeding: 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/M² 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 nutrient washing out without effect.

Fertilizer should be applied sparingly; several light applications will give a better outcome. A single concentrated dose of fertilizer can be toxic to the vegetation layer. Other fertilizer products are applied following manufacturers' recommendations.

Weeding: The Sedum 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 building owners welcome the colonization of so-called 'weeds' to promote biodiversity. However, you may prefer them to be removed. Depending upon material and site requirements, it is recommended that weeding be done by hand. Take care when hand pulling weeds to take out as much of the root system of the weed as well as the vegetation. A dull spade can make this process easier if caution is taken to not damage the waterproofing system. If the waterproofing system is damaged, contact MOY technical for a site inspection. Remove all unwanted plant material from the roof, given the chance weeds will re-seed if left on growing material. Invasive plants (see section below) may not need

growing material to survive and should be removed from the site entirely with proper disposal. If these plants are noted, maintenance should be briefly increased to ensure that the plant has been properly removed.

Careful point application of herbicide using a weed wipe device to target individual plants can be used but are 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, Traveler'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; their roots are strong enough to damage structures.

While not invasive, the following plants will try to overtake Sedum and may want to be removed, Dandelion, Red or White Clover and any kind of Thistle. Sycamore Shoots should be removed as they can damage structures.

1.3 Blue-Green Roof

- **Clean roof:** Sweep away any small debris or materials likely to cause damage to the waterproofing such as screws, wire, nails, etc.
- **Apply protection:** Moy Protection and water storage fleece (300g/m²), is rolled out, loosely laid, and overlapped by 100mm. Roll size is 2m x 50m.
- **Apply drainage layer:** Moy 100mm Void Former is laid loose and butt joined at side and head laps. Moy 25mm and 40mm Drainage and reservoir boards can be used in areas too small for the 120mm void former. Cut a piece out of the drainage layer at the location of the rainwater outlets.
- **Blue roofs restrict the flow of water from a roof, the flow restrictor mustn't be installed until the roof is fully complete and all activity by other trades has ceased.**

Flow restriction outlets should be covered with Moy roof outlet inspection chambers. It is essential that there is a skirting piece of filter fleece wrapped around the inspection chamber to prevent particles from blocking the flow restrictor. The inspection chamber is then surrounded by a 350mm wide band of pebble ballast to prevent the spread of fire.

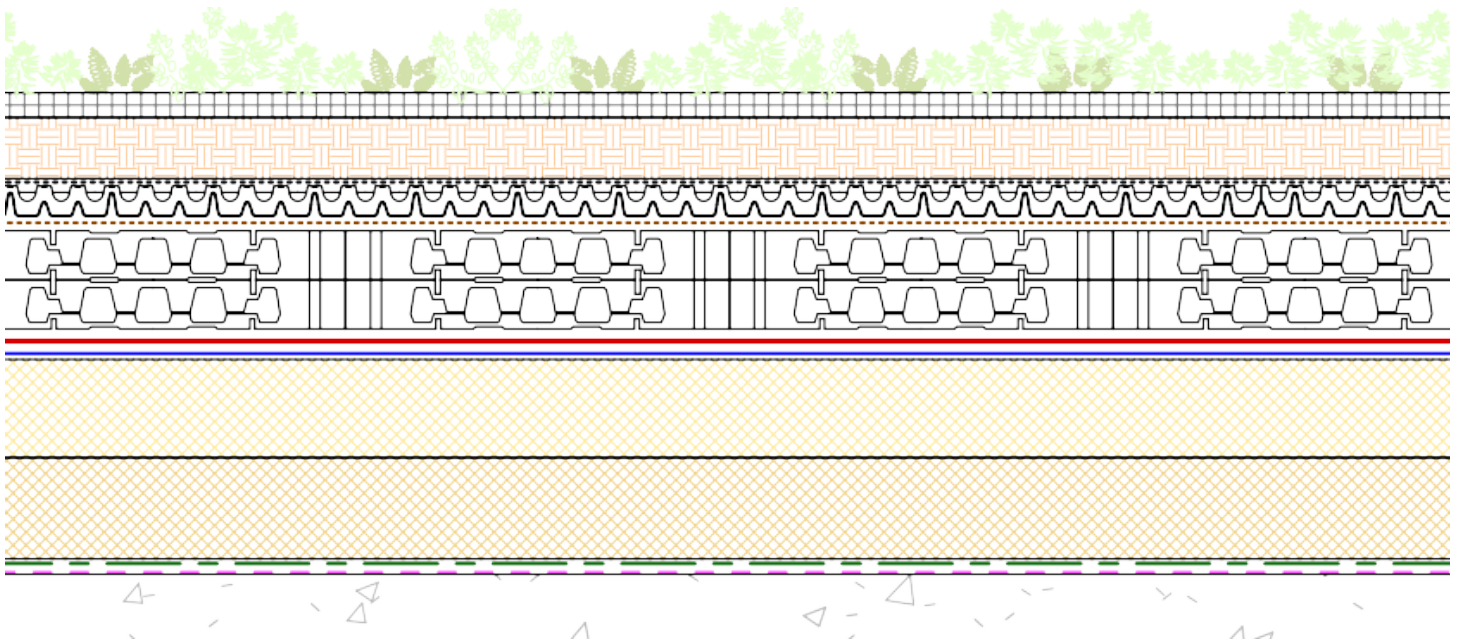


Figure 2 – Extensive Green/Blue roof system assembly

Notes

Roofing System Supplier

Moy Materials Ltd.

Columbia Mills, 14/15 Sir John Rogerson's Quay, Dublin 2, D02 E409.

Tel: (01) 463 3900

Fax: 01 450 0033

Email: Info@moy.group

URL: Moy.group

Roofing Contractor

Date of Issue.....

Recipient.....

.....

Specifier / Designer

Date of Issue.....

Recipient.....

.....

Building Contractor

Date of Issue.....

Recipient.....