GREEN ROOFERS

Green Roofers Ltd. 1st Floor, 2 Woodberry Grove, Finchley, London, N12 0DR

Q37 | GR WildMat

STANDARD WILDFLOWER BLANKET, GREEN ROOF SYSTEM

NBS SPECIFICATION

Wildflower Blanket System

OVERVIEW

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GUARANTEE PERIOD:

10 years with approved **Maintenance Contract**

GREEN ROOF SYSTEM COMPONENTS:

ROOF SUBSTRATE	Unknown
SLOPE	Flat
PROTECTION LAYER	GRP300u under layer, 300g/m² supplied by Green Roofers Ltd (if required by waterproofing contractor).
DRAINAGE / RETENTION LAYER	GRD8 nominal 8mm rigid compression cell multi-flow drainage/water retention layer with mechanically fixed 105g/m² filtration layer supplied by Green Roofers Ltd.
GROWING MEDIUM	GRi Green Roofers Ltd engineered intensive green roof substrate. The material will contain a mixture of pumice, expanded clay, topsoil and crushed brick amongst other ingredients such as fillers of coarse sand. It will contain organic peat free compost and have a bulk dry weight of 872kg/m³. Installed to a finally settled depth averaging 100mm including an allowance for 20% settlement in accordance with the GRO Code of Best Practice.
VEGETATION LAYER	**GR WildMat Wildflower Blanket** *Species List:* Autumn Hawkbit | Birdsfoot Trefoil | Bladder Campion | Betony | Cats Ear | Common Knapweed | Common Sorrel | Common St John's Wort | Common Toadflax | Common Vetch | Cowslip | Field Scabious | Hay Rattle | Lady's Bedstraw | Meadow Buttercup | Meadow Cranesbill | Meadowsweet | Musk Mallow | Oxeye Daisy | Red Campion | Red Clover | Ribwort Plantain | Salad Burnet | Selfheal | Tufted Vetch | Vipers Bugloss | Wild Carrot | Wild Marjoram | White Campion | Yarrow | Sheep's Fescue | Slender Creeping Red Fescue | Crested Dogstail | Small Leaved Timothy
VEGETATION BREAK	300mm wide, Coastal 20, 20/40mm washed rounded pebble margin, free from sharp edges and contaminants
PERIMETER TRIM	120mm high aluminum slotted trim, mechanically fixed to underlayer to serves as a separation barrier to perimeters.

HABITAT SPACES	Not Required

210. ROOF PERFORMANCE

- General: Firmly adhered, free draining and completely weather tight
- Will have limited access for annual maintenance, be low maintenance and/or self-sustaining
- All vegetation be suitable for the location and climate
- May form part of the SUDs strategy within the scheme

355. MOISTURE RETENTION & DRAINAGE LAYER

- Green Roofers *GR300u* underlayer with 300g/m²
- *GRD8* rigid compression cell multi-flow drainage layer, with mechanically bonded 105g/m² filtration fleece
- Manufactured containing recycled plastics
- 8mm nominal thickness
- Inflow system storage of circa 1.65l/m²

390. INTENSIVE GROWING MEDIUM

- ***GRi*** Green Roofers Ltd engineered intensive green roof substrate.
- The material will contain a mixture of pumice, expanded clay, topsoil and crushed brick amongst other ingredients such as fillers of coarse sand.
- It will contain organic peat free compost and have a
- bulk dry weight of 872kg/m³.
- Installed to a finally settled depth averaging **100mm** including an allowance for 20% settlement in accordance with the GRO Code of Best Practice.

400. VEGETATION

- GR WildMat Wildflower Blanket
- 25mm thick pre-grown mat containing a minimum of 15 species of wildflower (sourced from 23 different varieties) at 90% coverage upon delivery and harvest
- Supplied as a system by Green Roofers Ltd.

420. STONE BALLAST / WHERE REQUIRED AS A VEGETATION BARRIER.

- Green Roofers Ltd Coastal 20 Washed, rounded aggregate graded 20/40mm free from fines and sharp angles
- Ensure that aluminium gravel guards are fitted to all outlets
- Spread evenly to a minimum depth of 50 mm

It is assumed that the building owner or his advisors have satisfied themselves that the roof structure and deck are suitable to receive the dead load of the above-described system and any associated loadings.

EXECUTION

710. INSTALLATION GENERALLY

- Once waterproofing is complete, clear all surfaces of debris
- Visually inspect waterproofing and report any apparent defects or damage
- Do not use material which is detrimental to healthy plant growth
- Protect drainage outlets
- Do not store materials which may be too heavy for the anticipated roof loadings

720. ADVERSE WEATHER

- Secure all unfinished work and protect from wind uplift
- Do not install frozen materials
- Take care during a period of dry weather to ensure that any planting structure is kept sufficiently moist to all it to be worked with

730. INSTALLATION OF INSULATION

- Clear areas from debris
- Clean the substrate and inspect for damage
- Loose lay sheets as per manufacturer's recommendations
- Stagger end joints
- Keep cutting to a minimum
- Protect against wind uplift
- Cover with permeability layer, only when there will be sufficient time to protect the permeability layer from wind uplift

770. INSTALLATION OF THE COMBINED ATTENUATION AND DRAINAGE LAYER

- Loose lay drainage board in a stagger bond fashion over the entire roof
- Keep cuts to a minimum

790. INSTALLATION OF THE SUBSTRATE

- Lay in layers not exceeding 150mm
- Gently compact layers to achieve a level area
- Thoroughly water substrate and drainage board after completing this stage to ensure retained moisture within this system

800. VEGETATION INSTALLATION

- Lay within 24 hours of harvesting
- Do not stack on site
- Do not use excessively dry, frozen or waterlogged mats
- Stagger the blankets
- Finish the edges with whole blankets and do not roller

COMPLETION

910. INSPECTION

- Give a minimum of 3 days notice prior to handover

920. COMPLETION

- Leave area clean and tidy and free of obstacles and debris

930. DOCUMENTATION

- Growing medium declaration of analysis
- Maintenance procedures
- Roof map of planting and features

NOTES

(a) It is essential that the supporting build-up of the drainage layer, filter sheet, substrate and any hard landscaping is completed before installing the wildflower blanket.

(b) Thoroughly water the substrate prior to laying the wildflower blanket.

(c) Lay wildflower blanket perpendicular to the direction of the drainage panels.

(d) Gently tamp blanket as laying proceeds to ensure contact with the drainage protection board.

(e) After handover gently water the wildflower blanket for a period of 12 weeks, or more as necessary, to ensure that the planting structure is allowed to adhere fully to the drainage board. Water and labour to be supplied by others unless agreed with Green Roofers as part of the agreed contract.

(f) Fertilise slow release nutrient fertilizer at a rate of 25 grams per square metre.

INSTALLATION NOTES

Our Wildflower roofs can be cut at a number of times in the year, depending on the vigour of the meadow and which types of flowers wish to be encouraged. The key cuts of the season fall roughly into three times of year and a perennial meadow can be managed effectively with one or more of these cuts;

Spring Cut - this is useful for roofs where grass growth is very lush. Cut back to a height of 7.5cm (3in) only and complete this cut no later than the end of April.

Main Summer Cut - this is also referred to as the 'hay cut' and removes the bulk of the material, allowing it to be composted. This cut is done between late June and the end of August; the earlier cutting favours spring flowers such as cowslips, fritillary, lady's smock, selfheal and bugle; the later cutting favours summer flowers such as knapweed, devil's bit scabious and lady's bedstraw.

Autumn Cut - particularly useful for fertile sites, one or two cuts between the end of August and late November removes the surplus growth and helps keep grasses at bay to allow the wildflowers to persist.

Any cut that produces substantial clippings should have the clippings removed and composted.

GENERAL

Provision must be made to carry out a leak test before the landscape is installed. The method and responsibility for carrying out the test must be decided on and written into the tender documents.

It is assumed that the building owner or his advisors have satisfied themselves that the roof structure and deck are suitable to receive the dead load of the proposed green roof system and landscape both during construction and on completion of the works.

Provision should be made to estimate the number of site visits required of the green roof contractor to enable them to complete the contract. The number of visits estimated should be entered into the tender documents in order to facilitate accurate pricing.

Although the system is designed to withstand drought conditions and is not an irrigated system, it is advisable to allow for a water point to be installed in case of extreme conditions.

The waterproofing should be taken up all upstands, protrusions etc. a minimum of 150mm above substrate level.

Ideally, a maintenance contract should be included with the Green Roof to ensure that the roof flourishes and performs as expected at the outset of the project. Alternatively, all tendering contractors should allow for a 2-year period of on-going maintenance to allow the roof to fully establish itself. This should be priced accordingly and should not be less than at least two visits per year to remove unwanted material and to inspect the performance and growth of the roof.

An on-going minimum annual inspection after this 2-year period will be required to ensure the continued performance and any changes to the maintenance regime.