

## Q37 GREEN ROOFS SYSTEM RG4

Extensive Green Roof with 5 - 25 degree Pitch, Approx 50kg/m2 Saturated weight

Project:

To be read with Preliminaries / General conditions.

### DRAINAGE LAYER AND FILTER FLEECE ROOFGREEN UK TYPE 1B DRAINAGE/RESERVOIR BOARD

Roofgreen type 1B – A 11mm high drainage composite, consisting of a dimpled perforated sheet of high impact polystyrene (HIPS) with a non-woven filter fabric bonded over dimpled surface. The drainage composite is also provided with a pressure dividing moisture diffusion filter fabric on the back. The core is perforated to allow the excess rainwater to flow through to the underside and drain away beneath to the outlets. Type 1B is designed to provide roof garden drainage and a water reservoir to sustain plant growth.

Roofgreen type 1B is supplied in a roll 32m long x 1.25m wide with an overlap in the geotextile layer.

### ROOFGREEN FILTER FLEECE

Roofgreen UK Filter Fleece is a 110g/m2 polyester filter layer, preventing the flow of fine particles to penetrate the drainage system. Roll Size: 50m x 0.5m.

### ROOFGREEN GROWING SUBSTRATES PLATES s50

Lightweight alternative to extensive substrate made up of reconstituted rockwool plates which are 50mm thick. These contain little nutrients and a poor water-holding capacity and as such require an integrated irrigation system and two applications of fertilizer annually.

Supply Sizes:-Mineral Wool Plates – 100cm x 60cm x 5cm

Average Dry Weight	Approximately 4kg/m <sup>2</sup>
Maximum Saturated Weight	Approximately 35kg/m <sup>2</sup>
Typical pH	6.5 – 8.0

NB. Please use the above figures as guidelines only, as values may vary slightly from batch to batch.

Typical Substrate Depths:-

Sedum Finishes	LAIID 50 mm
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## HORTICULTURAL FINISHES

### ROOFGREEN SEDUM BLANKETS Type R

Sedum (vegetation) blankets are supplied with a selection of sedum plants including Lydium, Hybrium, Album, Acre, Refexum, Sexangulare and Spurium, already grown on to a root retention/substrate layer. The varieties are carefully selected to provide colour and interest throughout the year and offer an ‘instant greening’ of the roof finish. The root retention/substrate comprises a coir-backed membrane, crushed lava rock and specially formulated soil compound. NB. Sedum blankets require the maximum of long-term maintenance and are the most popular approach to the construction of an extensive green roof. Sedum Blankets are supplied in rolls 1.2 m wide x 2 m long.

Thickness (including root zone) is 25 mm. Excludes vertical sedum growth, which could be up to 100mm. Typical saturated weight 25kg/m<sup>2</sup>.

Plug plants are also available and be grown to order to include herbs, wild flowers and grasses.

## ACCESSORIES

### Roofgreen UK DRAINAGE AND EDGE RETENTION TRIM

Roofgreen UK Drainage and Edge Retention Trim comprises perforated galvanized angle section 100mm (base) x 60mm (perforated upstand) x 2.5m (long). It is specifically designed to retain the extensive landscaping system at roof edges and at intermediate positions on the roof, whilst allowing full drainage to external rainwater systems.

## VEGETATION BARRIER

Vegetation Barrier comprises 20/40mm rounded washed stones approximately 300mm wide, to the depth of the growing medium and sedum blanket. Used around all perimeter upstands, rooflights vents, and outlets etc, to aid drainage, provide resistance to wind uplift, and restrict the spread of vegetation to unwanted areas.

## GENERAL

- Q37/130 EXTENSIVE GREEN ROOF
- Roof type:
  - Substrate: Concrete
  - Slope: not exceeding 25° pitch
  - Waterproofing: As per J31
  - Thermal insulation: As per J31
  - Protection: As per J31
  - Moisture control layers: As per 355
  - Growing medium: As per 390
  - Depth: 50mm
  - Vegetation: As per 400
  - Accessories: As per 420 & 430

## PRODUCTS

- Q37/355 COMBINED LAYERS  
Manufacturer: Roofgreen UK  
Product reference: Type 1B  
Depth: 11mm
- Q37/360 FILTER MEMBRANE  
Manufacturer: Roofgreen UK  
Product reference: Roofgreen UK filter fleece
- Q37/390 SUBSTRATE PLATES
- Manufacturer: Roofgreen UK
  - Product reference: Substrate Plates s50
  - Depth: 50mm
- Q37/400 VEGETATION BLANKET to specifiers instructions
- Manufacture: Roofgreen UK
  - Product reference: Roofgreen UK Pre Grown Sedum Blankets Type R
  - Planting Mix: Type R – UK mix (6 – 8 varieties)
  - Thickness: 30mm
  - Vegetation coverage (minimum): 75%
- Q37/420 EDGE RETAINING PROFILE
- Manufacturer: Roofgreen UK
  - Product reference: RG UK Gravel Edge Strip
- Q37/430 INSPECTION CHAMBERS
- Manufacturer: Roofgreen UK

- Product reference: Extensive Inspection Chambers
- Size: 300mm x 300mm
- Depth: 80mm
- Access covers: Allow for grids where required.

Q37/440 VEGETATION BARRIER

- Material: 20mm / 40mm rounded washed stones
- Depth: min50mm
- Width: min 300mm

INSTALLATION

Q37/710 INSTALLATION GENERALLY

- Preparation: Clear all surfaces of debris.
- Timing: After certification of waterproofing membrane integrity.
- Surface condition: Visually inspect waterproof membrane, report any damage.
- Faults in waterproof membrane: Report
- Contamination: Do not use materials detrimental to healthy plant growth.
- Storage: Do not overload
- Point loads: Avoid
- Outlets: Do not block
- Outlet grilles: Installed

Q37/720 ADVERSE WEATHER

- Unfinished work: Secure from damage and wind uplift.
- Conditions: Do not install or work with frozen materials.

Q37/770 DRAINAGE LAYER INSTALLATION

Extent: Continuous over entire roof area.

Install Roofgreen Type 1B unrolled and loose laid directly over the Waterproofing System abutting drainage and edge retention system and outlet protection grilles. Rolls should be laid overlapping the geotextile layer on to the previously laid roll. Install material under all green roof areas (including the vegetation barrier). In windy conditions, it may be necessary to temporarily weight down areas installed, prior to the surface finishes being applied.

Q37/780 FILTER MEMBRANE INSTALLATION (if applicable)

Roofgreen Filter Fleece should be laid, where the selvedge of the Roofgreen Type 1B is sufficient to provide continuity of the filter layer. It should be installed at perimeter details and penetration upstands, with 100mm lap joints dressing 100mm on to the type 1B drainage layer.

Q37/790 GROWING MEDIUM INSTALLATION

- Handling: Minimize
- Conditions: Handle in the driest condition possible. Do not handle or install when wet or frozen.
- Lay Roofgreen UK Substrate Plates (Inorganic), directly on the surface of the Type 1B to a depth of 50mm and includes the application of slow release fertilizer.
- Sequence: Gently firm each layer before spreading the next.

Q37/800 VEGETATION BLANKET INSTALLATION

- Handling blankets:-
- Timing: Lay within 24 hours of lifting from growing position.
- Excessive stacking: Not permitted.
- Material loss (maximum): 3% of total surface area.
- Growing medium condition: Thoroughly watered.
- Laying blankets:-
- Dry, damaged, frosty or waterlogged blankets: do not lay
- Orientation: Diagonal or perpendicular to slope of roof.
- Joints: Stagger. Butt together or slightly overlap to prevent gaps. Do not stretch blankets.
- Edges: Finish with whole blankets
- Consolidation: Firm as laying proceeds to ensure full contact with the growing medium. Do not use rollers.
- Watering: Thorough, immediately after laying and dressing

Q37/820 EDGE RETAINING PROFILE INSTALLATION

- Cutting: Neat, accurate and without spalling.
- Position: True to line and level. Smooth continuous lines.
- Fixing: Install at open roof edges and at intermediate positions on the roof as specified. Drainage and Edge Retention Trim, including connector and corner sections as applicable. The retention trim is to be banded with compatible waterproofing material as per main roof area.

Q37/830 INSPECTION CHAMBER INSTALLATION

Location: Install centrally over drain outlet.

Orientation: Align parallel with adjacent feature

Allow for installation of additional extension elements as required to bring the inspection up to at least the height of the planting build up.

- Surround: Install vegetation barrier as per 440

COMPLETION

- Q37/910      INSPECTION
- Timing: Before handover
  - Give notice (minimum): 3 days
- Q37/920      COMPLETION
- General: Leave the works in a clean, tidy condition
  - Surfaces: Clean immediately before handover
  - Outlets: Clean and clear of obstructions.
  - Completed green roof: Protect from adjacent or high level working.
- Q37/930      DOCUMENTATION
- Timing: Submit at handover
  - Contents:-
  - Manufacturers' guarantees and warranties
  - Procedures for maintenance of the green roof.
  - Record drawings showing the location of planting and associated features.

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