

Q37 NBS Specification

Q37 GREEN ROOF COVERING

Specification: Sedum Plus Roof
Specification: Q37 Green Roof
Project: King Henry Road
Project Ref: PR6813
Issued By: Brett Townsend
Status: Tender

Rev: 0 Date: 07/12/20 Status: Tender Amendments:

Radmat Building Products Ltd,
Holland House,
Valley Way,
Rockingham Road,
Market Harborough,
Leicestershire,
LE16 7PS,

Tel: 01858 410372,
Fax 01858 410572

Q37 GREEN ROOFS

To be read with Preliminaries/ General conditions.

NBS SECTION Q37 DESCRIPTION OF WORKS

To be read with Preliminaries/General conditions.

Section Q37 deals with the installation of the MedO Green Roof System comprising drainage board, filter fleece, growing medium (substrate) and living plant materials. It includes where required, fire breaks and presumes the deck substrate and roof falls as stated within the specification below. Accessories are included where relevant.

It is intended for use on projects where the detailed design is completed by the specifier (architect or landscape architect) with technical assistance from the manufacturer as required and should be read in conjunction with any project specific drawings provided.

The details contained within this proposal are based on information available at the time of writing. It covers the installation of MedO green roofing materials and the preparation work necessary to provide a suitable substrate. Radmat Building Products Ltd cannot be held responsible for unknown site conditions or for the performance of materials within the system other than the MedO roofing products supplied.

A detailed method of work statement and programme of works should be agreed with the Radmat Approved Contractor before the commencement of the works.

The requirements of all relevant British Standards and Industry Codes of Practice should be complied with at all times. A bibliography is available upon request.

SCOPE OF WORKS

This section includes:

- The MedO green roof system
- Related system accessories

This section does not include:

- Construction of the structural deck.
- Proprietary rainwater drainage / plumbing – refer NBS Section R10
- Lightning protection – refer NBS Engineering Services, Section W60.
- Lead sheet coverings / flashings – See NBS Section H71.
- The waterproofing system – See NBS Section J31.
- Thermal insulation
- Internal rainwater outlets (but not the connected drainage/plumbing goods)
- Photovoltaic system
- Proprietary metal capping system – refer Section H72.

GENERAL**130 GREEN ROOFS: RADMAT SEDUM PLUS SEDUM BLANKET**

Roof type: Sedum Blanket: Radmat SedumPlus has been specially developed to provide a variety of different leaf types and flowers throughout the year whilst enhancing biodiversity. Colours range from greens through to vibrant reds, oranges, purples and browns at appropriate times of the Spring and Summer. Insulation: Radmat ProTherm PIR TORCH Insulation (see J41/110) with EshaFlex Total Roof Waterproofing system membranes.

Deck and structure to architects and structural engineers details.

- Waterproofing: EshaFlex Total Roof Waterproofing System membranes (see J41/110).
- Thermal insulation: 150mm ProTherm PIR Torch.
- Protection: EshaFlex 370 WS Mini slate Root Protection Sheet. (see J41/400).
- Moisture control layers:
Radmat D40 Drainage/Reservoir Board, 25mm deep with cusplate.
Radmat G11 Polyester geo-textile filter fleece 150g/m².
- Growing medium: Radmat GM20 Extensive growing medium.
Depth: Minimum 80mm deep after settlement. (Allow 12% Settlement). See architect's drawings.
- Vegetation: **RADMAT SEDUM PLUS SEDUM BLANKET**
- Accessories:
Vegetation breaks: 500mm wide, 20-40mm rounded pebble margin.
Gravel Stop:
Inspection Chambers:
PARA100 Aluminium Inspection Chamber as clause 430
If required: Fall restraint / abseiling anchor points, davit sockets etc. by others
System Manufacture: Radmat Building Products Ltd, Holland House, Valley Way, Rockingham Road, Market Harborough, Leicestershire, LE16 7PS, Tel: 01858 410372, Fax 01858 410572
- Email: techenquiries@radmat.com, Web: www.radmat.com

PERFORMANCE**210 GENERAL DESIGN**

- Green roof and associated features: Complete the detailed design.
- Proposals: Submit drawings, technical information, calculations and manufacturers' literature.
- Performance criteria:

255 MAXIMUM PERMITTED GREEN ROOF LOADS

- Dead loads:
Green roof layers: To be confirmed on receipt of landscape consultant details.
- Additional loads:
Activity:
Vegetation:
Waterproofing:
Insulation:
Allowance for additional loads during construction:
- Service loads:
- Requirement: Restrict site activities to ensure that design loads are not exceeded, or submit proposals for temporary supports.

PRODUCTS

310 WARM ROOF INSULATION:

Radmat Building Products Ltd, Holland House, Valley Way, Rockingham Road, Market Harborough, Leicestershire, LE16 7PS, Tel: 01858 410372, Fax 01858 410572

Product reference: 150mm ProTherm PIR TORCH warm roof insulation.

Type: Polyisocyanurate rigid urethane.

- Thickness: 150mm to achieve 0.15w/m² 'U' Value or better. To Comply with Building regulations Part L2A, the Services Engineer's performance requirements and any other stated requirements in conjunction with other components.

320 ROOT BARRIER

- Manufacturer: Radmat Building Products Ltd, Holland House, Valley Way, Rockingham Road, Market Harborough, Leicestershire, LE16 7PS
Tel: 01858 410372, Fax 01858 410572
- Product reference: EshaFlex 370 WS Mini Slate root inhibitor membrane.

350 DRAINAGE LAYER

- Manufacturer: Radmat Building Products Ltd, Holland House, Valley Way, Rockingham Road, Market Harborough, Leicestershire, LE16 7PS Tel: 01858 410372, Fax 01858 410572
- Product reference: Radmat D40 Drainage/Reservoir Board, 40mm deep recycled polystyrene Radmat D40 is chemically neutral, rotproof and resistant to mould and bacteria.
- Material: Recycled Polystyrene.
Depth: 40mm.
- Infill: None

360 FILTER MEMBRANE

- Manufacturer: Radmat Building Products Ltd, Holland House, Valley Way, Rockingham Road, Market Harborough, Leicestershire, LE16 7PS Tel: 01858 410372, Fax 01858 410572
Product reference: Radmat G11 filter fleece.
- Material: Polyester geo-textile.
Mass: 150g/m²

390 EXTENSIVE GROWING MEDIUM

- Manufacturer: Radmat Building Products Ltd, Holland House, Valley Way, Rockingham Road, Market Harborough, Leicestershire, LE16 7PS Tel: 01858 410372, Fax 01858 410572
Product reference: Radmat GM20 Extensive Growing Medium.
- Material: Radmat GM20 Extensive Growing Medium Consisting of a blend of water retaining aggregates, crushed brick and organic material, all composted material is from sustainable sources and the crushed brick element is a by-product or a second from the brick manufacturing industry and contains no demolition waste. Compliant with GRO substrate guidelines.
- Apply to a depth as specified according to plant type allowing 12% post installation settlement. Indicative substrate depths are given in the table below, however the specified depth will vary based on a variety of factors including design load, building location, building height, plant species etc. It is therefore important to consult the project specification.
- Minimum Depth after 12% Settlement: 80mm.

400 RADMAT SEDUM PLUS SEDUM BLANKET

- Manufacturer: Radmat Building Products Ltd, Holland House, Valley Way, Rockingham Road, Market Harborough, Leicestershire, LE16 7PS Tel: 01858 410372, Fax 01858 410572

Product reference: RADMAT SEDUM PLUS SEDUM BLANKET

Radmat SedumPlus sedum blanket is a low maintenance, drought resistant, ready to lay sedum vegetation blanket (Mat). Grown in the UK SedumPlus comprises sixteen varieties of sedum pre-grown in a strong biodegradable 450g/m² felt mat made from recycled British textiles. Providing a variety of colour and interest, Radmat SedumPlus has been specially developed to provide a variety of different leaf types and flowers throughout the year whilst enhancing biodiversity. Colours range from greens through to vibrant reds, oranges, purples and browns at appropriate times of the Spring and Summer

430 INSPECTION CHAMBERS

- Manufacturer: Radmat Building Products Ltd, Holland House, Valley Way, Rockingham Road, Market Harborough, Leicestershire, LE16 7PS Tel: 01858 410372, Fax 01858 410572

Product reference: PARA100 Aluminium Inspection Chamber as clause 430

- Material: Aluminium.
- Size: 300 x 300mm.
Depth: 100mm.
- Access Covers: fixed to frame and hinged.
- Features: security fastened.

440 VEGETATION BARRIER

- Material: 40-60mm rounded pebbles.
- Depth: minimum 50mm.
- Width: 500mm.

450 ROOF DRAINAGE OUTLETS

- Manufacturer: LEAD Chute outlets, as per architect's details and drawings.
- Material: LEAD
- Size: To M&E engineer's specification
- Fixing: As per the lead sheet association guidelines.

EXECUTION

710 INSTALLATION GENERALLY

- Preparation: Clear all surfaces of debris.
Timing: After certification of waterproof 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.

720 ADVERSE WEATHER

- Unfinished work: Secure from damage and wind uplift.

- Conditions: Do not install or work with frozen materials.
- 730 INSTALLATION OF WARM ROOF
- Preparation: Clear roof of other trades.
 - Condition of substrate: Clean.
 - Protection: Cover to prevent wind uplift.
- 770 DRAINAGE LAYER INSTALLATION
- Extent: Continuous over entire roof area.
 - Fitting: Loose-Laid.
 - Upstands: Fit closely around penetrations and outlets.
- 740 ROOT BARRIER
- Joints: Minimise.
Overlaps (minimum): 80mm.
 - Upstands: Extend to top of growing medium.
- 770 DRAINAGE LAYER INSTALLATION
- Extent: Continuous over entire roof area except where omitted locally in build-up to increase diversity of habitat created.
 - Fitting: Loose-laid, close-butted.
 - Upstands: Cut to fit closely against abutments, roof penetrations and where butt joints are required. Rainwater outlets must not be covered.
- 780 FILTER MEMBRANE INSTALLATION
- Joints: Minimise.
Overlaps (minimum):150mm
 - Fitting: Loose Laid
 - Upstands: Extend to top of growing medium.
- 790 GROWING MEDIUM INSTALLATION
- Handling: Minimise. Deliver to Roof in Bulk Bag, spreading the specified depth on filter sheet, allowing for a settlement factor of 12%.
 - Apply to a depth as specified according to plant type allowing 12% post installation settlement. Note the specified depth will vary based on a variety of factors including design load, building location, building height, plant species etc. It is therefore important to consult the project specification.
Conditions: Handle in the driest condition possible. Do not handle or install when wet or frozen.
 - Layers:
Depth: 80mm (minimum).
Sequence: Gently firm each layer before spreading the next.
- 800 SEDUM PLUS
- Timing: Plant within 36 hours.
 - Growing medium condition: Thoroughly watered.
Consolidation: Firm as installation proceeds to ensure full contact with the growing medium.
- 820 EDGE RETAINING PROFILE INSTALLATION
- Cutting: Neat, accurate and without spalling.
Junctions: vertical, secured using proprietary connectors.
 - Position: True to line and level. Smooth continuous lines.
 - Fixing: Loose-Laid.

830 INSPECTION CHAMBER INSTALLATION

- Location: Install centrally over drain outlet.
Orientation: Align parallel with adjacent features.
- Bedding: Position flanges on to crowns of drainage layer.
- Backfill: Ballast Flanges with pebbles.
- Surround: 300mm diameter circle/ square 20/40mm round washed pebbles.

COMPLETION

910 INSPECTION

- Timing: Before handover.
Give notice (minimum): 3 days.

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.

930 DOCUMENTATION

- Timing: Submit at handover.
- Contents:
Growing medium declaration of analysis.
Manufacturers' guarantees and warranties.
Procedures for maintenance of the green roof.
Record drawings showing the location of planting and associated features.
FLL Guidelines for the planning, execution and upkeep of green-roof sites page 59
paragraph 11.6 titled Readiness for Handover DIN 18916 DIN 18917
- Number of copies: Contractor to define.