NBS Specification : Q37

BIODIVERSE ROOF SPECIFIATION
Contractor Design Element; subject to equal & approved spefication
Products

Drainage Layer
Material: Thermoformed recycled polypropylene TBC by specialist contructor design / consultant civil engineer
- Depth:
- Retention Volume:
- Horizontal Flow Rate:
- Vertical Flow Rate:
- Compressive Strength: 150kPa

Filter Membrane
Material: Thermally strengthened non-woven polypropylene
- Mass: 0.120 kg/m2
- Thickness: 2mm

Extensive Biodiverse Substrate
Material: Lightweight crushed brick & expanded clay substrate. Inorganic and organic growing medium consisting of crushed brick, expanded clay and organic matter of composted bark fines
- **Depth: 80-150mm**
- Porosity: 63%
- Water Holding Capacity: 25-30%
- Bulk Density DIN EN 1097-3: 1 T/m3
- Density at Max Water Holding Capacity: 1.25 T/m3

PH Value: 7.0 8.0Vegetation
Planting Mix: Various wildflower species in plug plant trays and seed form
Root Ball Size (plugs): 50mm
Coverage Rate (seeds): Varies; up to 5g/m2
Coverage Rate (Plugs): 10 per m2
Vegetation Coverage: 5% minimum

Habitat Creation / Biodiversity Enhancements
Log / Sand Piles

Edge Retaining/Separating Profile
Material: Aluminium
- Description/Profile: Slotted; 3m length
- Height: 100mm (subject to system build-up/depth)

Inspection/Access Chambers
Material: Plastic coated steel
- Dimensions: 250x250mm
- Height: 80mm
- Colour: Black
- Access Covers: Black, plastic coated steel with handle
- Features: 300x 300mm flange attached for stability and to lap filter sheet

Vegetation Barrier
Material: Rounded washed pebbles (20-40mm)
- Depth: 70mm (subject to system build-up/depth)

Width: 300mm minimumExecution

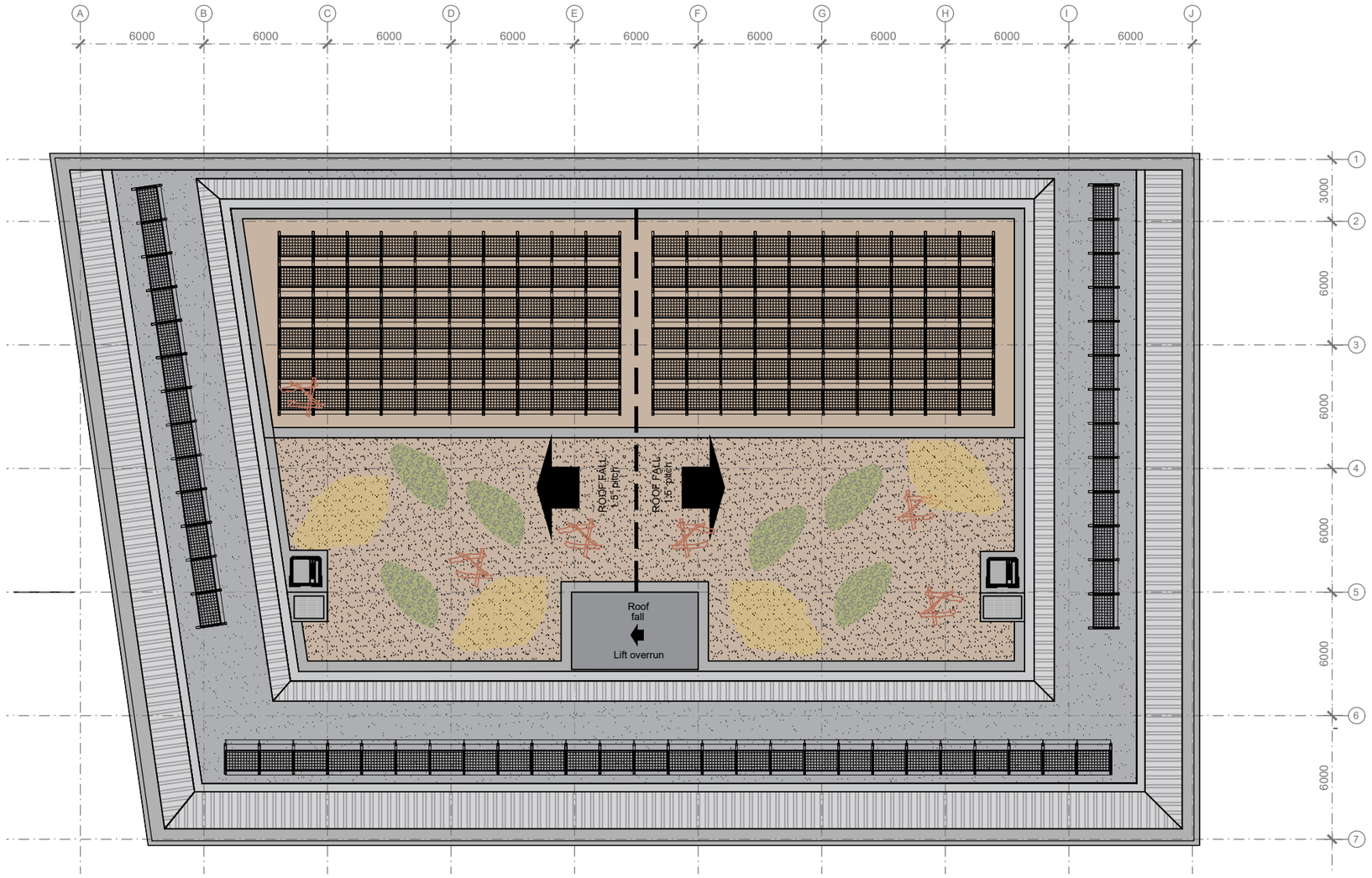
Installation Generally
- Preparation: Clear all surfaces of debris
- Timing: After certification of waterproof membrane integrity
- Surface condition: Visually inspect waterproof membrane, report any damage
- Faults in waterproof membrane: Report prior to commencement of works
- Contamination: Do not use materials detrimental to healthy growth of plants
- Storage: Do not overload - point loads avoided
- Outlets: Do not block
- Outlet grilles: Installed

Adverse Weather
- Unfinished work: Secure for damage and wind uplift
- Conditions: Do not install or work with frozen materials

Drainage Layer Installation

- Extent: Loose lay continuously over entire roof area
- Fitting: Close butt-joint boards or rolls; staggering joints if applicable
- Upstands: Cut to fit 300mm from penetrations and outlets, using a heavy duty knife or smooth-toothed saw

Filter Membrane Installation
- Extent: Loose lay continuously over entire roof area
- Fitting: Loose laid (bonded to drainage board)
- Joints: Minimize
- Overlaps (minimum): 150mm overlap excess on drainage roll



Growing Medium Installation
Handling: Minimize handling. Deliver to roof in small sacks, bulk bag or pump,spreading the specified depth on to filter sheet, allowing the settlement factor of 20%

Conditions: Handle in the driest condition possible. Do not handle or install when wet or frozen

Layers:
- Depth: 80-150 mm settled
- Sequence: Gently firm each layer before spreading the next.Vegetation Installation

Handling Seeds:
- Extent: Continuous and even across area to be planted
- Timing: Not to be installed if temperature is below 0C
- Storage: Must be stored in a cool and shaded area; not to be stacked excessively

Application
- Wildflower seeds to be installed within 48 hours of delivery. Irrigate to saturation.
- Watering: Thoroughly, after laying and account for climatic variation and seasonality.

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 onto fleece, ballasted by weight on foot plate, or secured to waterproof membrane using proprietary fixing system
- Suitable for pitched roofs of 5 degrees or less

Inspection Chamber Installation
Location: Install centrally over rainwater 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 of 20-40 rounded pebbles

COMPLETION
Inspection
Timing: Prior to handover
Notice period (minimum): 3 working days
Completion
General: Leave the works in a clean and tidy condition
Surfaces: Clean immediately prior to handover
Outlets: Clean and clear of any obstructions
Completed green roofs: Protect from adjacent or high level working as best as possible.

Documentation
Timing: Submit at handover
Contents:
- Growing Medium declaration of analysis
- Manufacturers guarantees and warranties
- Maintenance Procedures
- Record Drawings showing the location of planting and associated features
- Number of copies: 1

Green Roofs Maintenance Procedure

This set of procedures is a guide outlining the minimum maintenance measures required to keep a green roof in its designed state.

The plant selection includes a species mix which will provide a balanced plant community on the roof. This will require basic maintenance to ensure a sustainable system for the long term.

Living roof maintenance is best carried out twice to four times annually, during springtime and in late autumn, or as required. Monitoring/controlling the effect of leaf litter to the vegetation is important; this can be deemed to be beneficial to biodiversity, but may need to be removed if this begins to affect plant life.

EGR SPECIES MIX
[subject to specialist contractor design]

Wildflower Species Flower
Birdsfoot Trefoil - Lotus corniculatus
Black Medick - Medicago lupulina
Common Knapweed - Centaurea nigra
Corn Chamomile - Anthemis arvensis
Corn Cockle - Agrostemma githago
Corn Marigold - Chrysanthemum segetum
Cornflower- Centaurea cyanus
Cowslip- Primula veris
Field Forget-Me-Not - Myosotis arvensis
Field Poppy - Papaver rhoeas
Foxglove- Digitalis purpurea
Goatsbeard - Tragopogon
Greater Knapweed- Centaurea scabiosa
Hoary Plantain- Plantago media
Ladys Bedstraw- Galium verum
Meadow Buttercup- Ranunculus acris
Musk Mallow - Malva moschata
Night-flowering Catchfly Silene noctiflora
Ox-eye Daisy- Leucanthermum vulgare
Red Campion- Silene dioica
Ribwort Plantain- Plantago lanceolata White/pink
Salad Burnet- Sanguisorba minor ssp minor
Self Heal Prunella- vulgaris
Sorrel- Rumex acetosa
White Campion- Silene alba
Wild Carrot- Daucus carota
Wild Clary- Agrimonia
Yarrow- Achillea millefolium

Companion grasses:
Common Bentgrass- Agrostis castellana
Crested Dogstail- Cynosurus cristatus
Sheep's Fescue- Festuca ovina
Smooth Stalked Meadow Grass- Poa pratensis
Strong Creeping Red Fescue- Festca rubra rubra

Sedum species:
Sedum Acre Aureum
Sedum Album Athoum
Sedum Reflexum
Sedum Voodoo
Sedum Album Coral Carpet

NOTES ORIGINAL A3

All levels and dimensions to be checked on site prior to construction / fabrication; report discrepancies immediately.
Do not scale dimensions from this drawings.

REVISION

A	200324	PV provision increased	AF

Material Key:

- Biodiverse Roof with 500mm gravel strip to perimeter
- Photovoltaic panels on proprietary feet system Brown roof below PV Panels. 170Nr panels - Area circa 300sqm.
- Kingspan - Topdeck. Single ply membrane
- Lift Overrun, insulated panel lined in single ply membrane
- Mansard Roof
- Smoke vent & access hatch
- Smoke Vent shaft louvres

SCALE 1:250

0 2 4 6 8 10m

N

PLANNING

SCALE	DATE	DRAWN	CHECKED
1:250@A3	MAR'24	AF	DA

PROJECT
Shurgard
Oldfield Road
Hampton: TW12 2HR

DRAWING
Roof Plan
As Proposed

Threesixty Architecture
10 MONTROSE STREET
GLASGOW
G1 1RE
t 0141 229 7575
www.360architecture.com

DRAWING No.
23053GA-D-006A