

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

REVISION			
A	200324	PV provision increased	AF
B	030724	Roof layout amended	AF
C	130724	Building footprint updated	AF

**NBS Specification : Q37**

**BIODIVERSE ROOF SPECIFICATION**  
Contractor Design Element; subject to equal & approved specification Products

**Drainage Layer**  
Material: Thermoformed recycled polypropylene  
TBC by specialist contractor 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/m<sup>2</sup>
- 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/m<sup>3</sup>
- Density at Max Water Holding Capacity: 1.25 T/m<sup>3</sup>

PH Value: 7.0 - 8.0  
Vegetation Planting Mix: Various wildflower species in plug plant trays and seed form  
Root Ball Size (plugs): 50mm  
Coverage Rate (seeds): Varies; up to 5g/m<sup>2</sup>  
Coverage Rate (Plugs): 10 per m<sup>2</sup>  
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 minimum

**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**

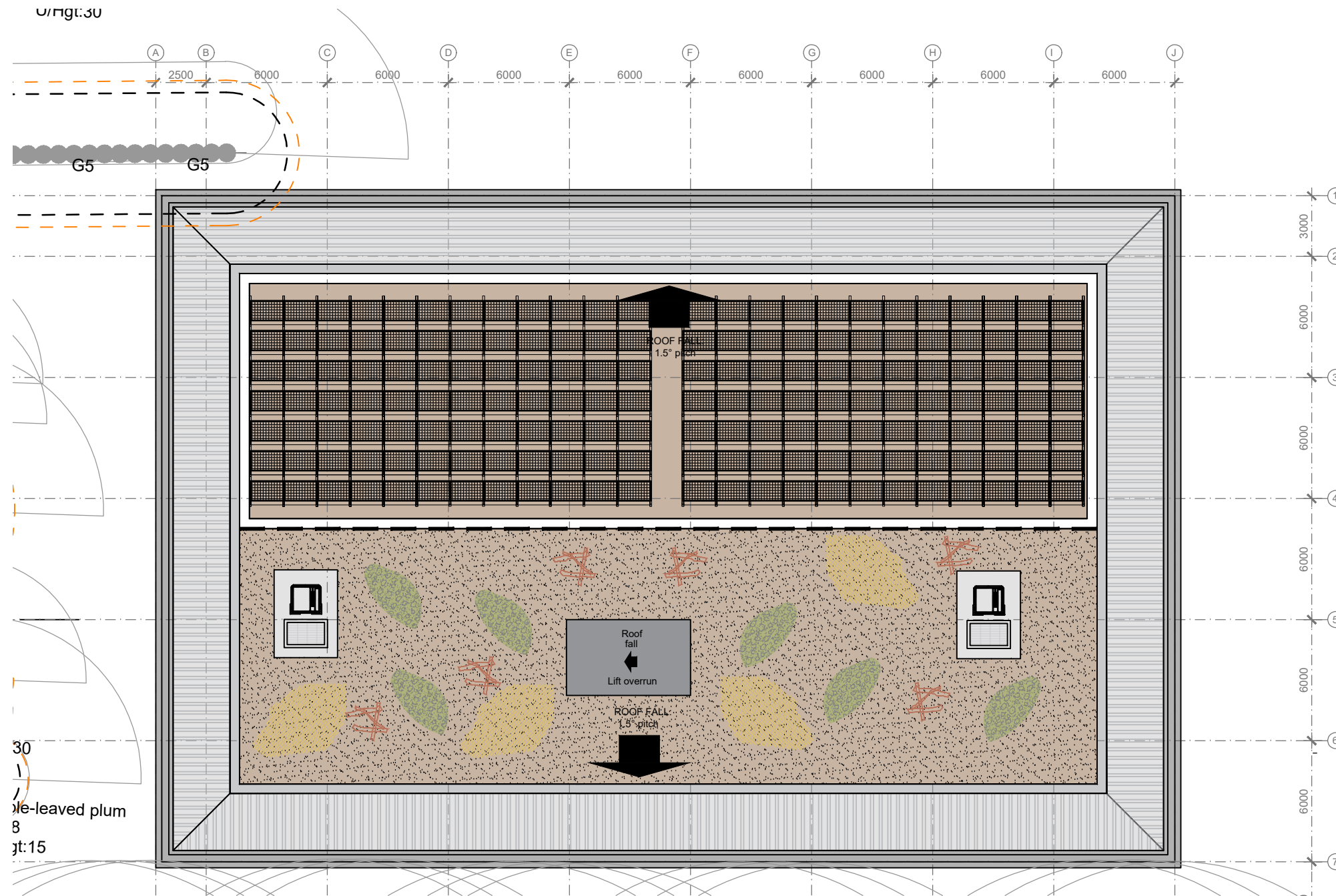
- Unfinished work: Secure for damage and wind uplift
- Conditions: Do not install or work with frozen materials

**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



**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

**PLANNING**

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

**PROJECT**  
Shurgard  
Oldfield Road  
Hampton: TW12 2HR

**DRAWING**  
Roof Plan  
As Proposed

10 MONTROSE STREET  
GLASGOW  
G1 1RE

t 0141 229 7575  
www.360architecture.com

DRAWING No.  
**23053GA-D-006C**

**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 Trefol - Lotus corniculatus  
Black Medick - Medicago lupulina  
Common Knapweed - Centaurea nigra  
Corn Chamomile - Anthemis arvensis  
Corn Cockle - Agrostemma githago  
Corn Marigold - Chrysanthemum segetum  
Comflower- Centaurea cyanus  
Cowslip- Primula veris  
Field Forget-Me-Not - Myosotis arvensis  
Field Poppy - Papaver rhoas  
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- Leucantherum vulgare  
Red Campion- Silene dioica  
Ribwort Plantain- Plantago lanceolata  
White/peck 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 Dogtail- Cynosurus cristatus  
Sheep's Fescue- Festuca ovina  
Smooth Stalked Meadow Grass- Poa pratensis  
Strong Creeping Red Fescue- Festuca rubra rubra

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