

Roof Type	Approx. Area
Barren Roof	1,190 sq m
Intensive Green Roof	120 sq m
Biodiverse Green Roof	366 sq m

NOTES
For confirmation of roof construction, roof level finishes and planting types refer to Architects details.

EXTENSIVE GREEN ROOF (OCCASIONAL MAINTENANCE ACCESS ONLY)
Extensive Green Roof to consist of the following elements:
1. Planting.
2. Irrigation System and/or Bib Taps.
3. Lightweight Growing Medium.
4. Filter Layer - 110g polypropylene filter sheet to Architects details.
5. Drainage Layer - 40mm single cuspatation HDPE to Architects details.
6. Protection Fleece - 300g polypropylene protection fleece to Architects details.
7. Insulation Layer to Architects details.
8. Waterproofing layer to Architects details.
9. Structural Slab to Engineers details.

IRRIGATION OF EXTENSIVE GREEN ROOFS
All green roofs will require a post installation irrigation period. The extensive green roofs must not be allowed to dry out during establishment.
- Post installation irrigation period for Sedum Blankets & Planting = 4 weeks.
- Post installation irrigation period for Wildflower Blankets & Planting = 10 weeks.
Following establishment extensive green roofs will require occasional irrigation.
Contractor to allow for the inclusion of 1no. Bib Tap Watering Points within each Green Roof. Exact location to be co-ordinated with M&E Engineer and Employer to ensure that all areas of planting are accessible to 20m hose or an appropriate 'leaky pipe' irrigation system.

LIGHTWEIGHT GROWING MEDIUM (EXTENSIVE SUBSTRATE)
- Lightweight Growing Medium to be a blend of subsoil with the addition of water retaining aggregates and organic material. Extensive substrate growing medium to be suitable for the planting of vegetation on extensive roof types. Extensive substrate to incorporate locally sourced materials where possible.
- Extensive substrates for green roofs to be 'Bauder Extensive Substrate' or similar as approved by Landscape Architect.
Extensive substrate to consist of 80% recycled crushed brick and expanded clay shale with 10% organic matter content (composted pine bark).
pH value to be 6.0 - 8.5.
Possible supplier:
Bauder Ltd
70 Landseer Road, Ipswich, Suffolk IP3 0DH Tel: 01473 257 671
info@bauder.co.uk
http://www.bauder.co.uk/green-roofs
Representative sample of all extensive and semi-intensive substrate growing mediums to be provided to Landscape Architect for approval a minimum of 4 weeks in advance of bulk delivery to site.
At time of ordering Contractor to assume an additional 30% allowance for compaction / settlement rate.

- Any additional topsoil to comply with BS 3882 and to be a well structured sandy loam and free from stones or any other contaminants. Topsoil must never be installed to a greater depth than 300mm. Below 300mm depth organic matter content of growing medium must not exceed 1.5%.
- Any additional manufactured topsoil to comply with BS 3882.
- Any additional subsoil to comply with BS 8601.
- Any additional subsoil to comply with BS 8601.
- Growing medium to have a maximum aggregate size of 25mm.
- Any imported topsoil and subsoil to be sourced from a reputable source and to be friable, free-draining and uncompacted with a maximum aggregate size of 25-50mm.
- Any Subsoil Based Lightweight Growing Medium to include nominal 30% Expanded Clay Lightweight Aggregate (10-20mm aggregate size) or similar.

MEAN SATURATED CUBIC DENSITY OF GREEN ROOFS
Structural Engineer to assume the following:
- Saturated mean cubic density of Extensive Substrate is 1200kg per CuM.
- Water storage capacity is 35% Vol.
Exact saturated cubic density of lightweight growing medium must be confirmed with Contractors selected specialist supplier of green roofs. See tables for indicative total saturated total weights of each roof type.

FILTER LAYER, DRAINAGE LAYER, PROTECTION FLEECE INSULATION & WATERPROOFING LAYER
Refer to Architects and Structural Engineers details for confirmation.
Possible supplier:
Bauder Ltd
70 Landseer Road, Ipswich, Suffolk IP3 0DH Tel: 01473 257 671
info@bauder.co.uk
http://www.bauder.co.uk/green-roofs

EXTENSIVE GREEN ROOF MAINTENANCE & ACCESS
All green roof types require a minimum of two maintenance inspections a year. The following maintenance operations are to be undertaken:
- inspection of drainage outlets, gutters and downpipes to ensure that they are not blocked.
- the replenishment of any areas of substrate that has been subject to settlement or other disturbance.
- the removal of invasive woody weed species by hand (weed species include couch grass Elytrigia repens, butterfly bush Buddleja davidii, fleabane species Conyza spp, creeping thistle Cirsium arvense).
- the removal and replacement of any failed plant species (within the specified mix).
Exact maintenance requirements to be agreed with Specialist Green Roof Supplier.

Biodiverse Green Roof (mix of wildflower and sedum species)
Seed mix focussed on wildflower planting and containing no more than 25% sedum. Each roof to be planted with a minimum 21 species. Exact details to be agreed with Specialist Green Roof Supplier.

- Biodiverse Green Roof Species List:**
- Sedum acre
 - Sedum album 'Bella d Inverno'
 - Sedum album 'Coral Carpet'
 - Sedum ewersii
 - Sedum floriferum
 - Sedum hybridum
 - Sedum kamschaticum 'Elacombianum'
 - Sedum kamschaticum 'Weinstephaner Gold'
 - Sedum montanum orientale
 - Sedum pulchellum
 - Sedum ruprestri (reflexum)
 - Sedum sexangulare
 - Sedum spurium 'Mesemlanthemum Delosferma'
 - Sedum spurium 'Mesemlanthemum Hallii'
 - Sedum verticillatum

- Yarrow
- Common Knapweed
- Lady's Bedstraw
- Meadow Cranesbill
- Cat's Ear
- Ox Eye Daisy
- Birds Foot Trefoil
- Ragged Robin
- Cowslip
- Sailfheat
- Meadow Buttercup
- Salad Burnet
- Red Campion
- Betony
- Tufted Vetch
- Common Vetch
- Kidney Vetch
- Wild Carrot
- Muck Mallow
- Ribwort Plantain
- White Campion
- Autumn Hawkbit
- Wild Red Clover
- Bladder Campion
- Common Sorrel
- Meadowsweet
- Rough Hawkbit
- Common Toadflax
- Wild Marjoram
- Perforate St John's Wort
- Black Medick
- Clustered Bellflower
- Hoary Plantain
- Small Scabious
- Vipers Bugloss
- Wild Pansy
- Thrift
- Sheep's Fescue
- Crested Dog's Tail

NOTES

- All dimensions in millimetres unless otherwise shown.
- All levels in metres above Ordinance Datum (m.AOD) unless otherwise shown.
- All dimensions to be checked on site and any discrepancies reported to Landscape Architect or Employer before pricing / work starts.
- Any ambiguities or discrepancies within this drawing and any other information given elsewhere must be reported to the Landscape Architect or the Employer for clarification before pricing or construction works commence.
- All drawings to be read in conjunction with other drawings and specification information as appropriate.
- Refer to relevant Engineer's and Architect's information as appropriate for confirmation of all engineering and architectural details (including base and sub-base formation layers).
- All works to be carried out in accordance with the latest British Standards and appropriate codes of practice as a minimum.

KEY
GIA Planning Boundary

KEY - TYPE OF ROOF

A	Paved / Hard Finish Roof (Barren Roof)
B	Balcony (Barren Roof)
C	Paved Amenity Roof (Barren Roof)
D	Raised Planters with Ornamental Planting (Intensive Roof)
E	Biodiverse Green Roof (mix of wildflower and sedum species) An Extensive Green Roof system with wildflower and sedum species 100mm depth substrate Seed mix focussed on wildflower planting and containing no more than 25% sedum

KEY - ACCESS OF ROOF

1	Private roof space accessible to residents Accessible to residents only direct from single private dwelling. Maintenance access via habitable space
2	Communal roof space accessible to residents Accessible via internal communal circulation. Maintenance access via internal communal circulation
3	Maintenance access only Roofs accessible from secure doors via internal communal / servicing circulation. Generally no full parapet, appropriate fall restraint system provided for maintenance
4	Maintenance access only Roofs accessible from secure hatches via internal communal / servicing circulation. Generally no full parapet, appropriate fall restraint system provided for maintenance
5	Maintenance access only Roof accessible via adjacent single private dwelling. Generally no full parapet, appropriate fall restraint system provided for maintenance
6	Maintenance access only Roof accessible by other means (ladder, mechanical platform, scaffold, etc.). Access to be assessed according to specific needs

Condition 21 - Green/Brown Roofs
Notwithstanding the approved plans, full details in respect of the green/brown roofs should be submitted to and approved by the Local Planning Authority before the relevant Section of the development commences. The biodiversity (green/brown) roof(s) shall be:
a) biodiversity based with extensive substrate base (depth 80-150mm);
b) laid out in accordance with the plans hereby approved; and
c) planted/seeded with an agreed mix of species within the first planting season following the practical completion of the building works (the seed mix shall be focused on wildflower planting, and shall contain no more than a maximum of 25% sedum).
The biodiversity (green/brown) roof shall not be used as an amenity or sitting out space of any kind whatsoever and shall only be used in the case of essential maintenance or repair, or escape in case of emergency. The buildings shall not be occupied until the approved details have been implemented and these works shall be permanently retained and maintained thereafter.
This condition can be discharged on a Section by Section basis.

Tri Ref: 3021 Mount Pleasant Phase 2/1/1 Work Drawings/ [Ref: MPP2-TR1-ZZ-RF-PL-L-3021REF2D-MP2-LANDSCAPE BASE P00]

Rev: Date: Description: Revised by: Checked by:
P00 05.05.2021 - Work in Progress SWR DWJ

Tri External Landscape Design LLP
www.3Tri.co.uk

Postmark (Phoenix Place Site), Phases 2, London
Taylor Wimpey Central London

General Arrangement - Biodiverse Roofs & Roof Types (Planning Issue)

Status: (S0) Work in Progress
Drawing Number: MPP2-TR1-ZZ-RF-PL-L-1001
Revision: P00
Scale: 1:250@A1
Date: 05.05.2021

