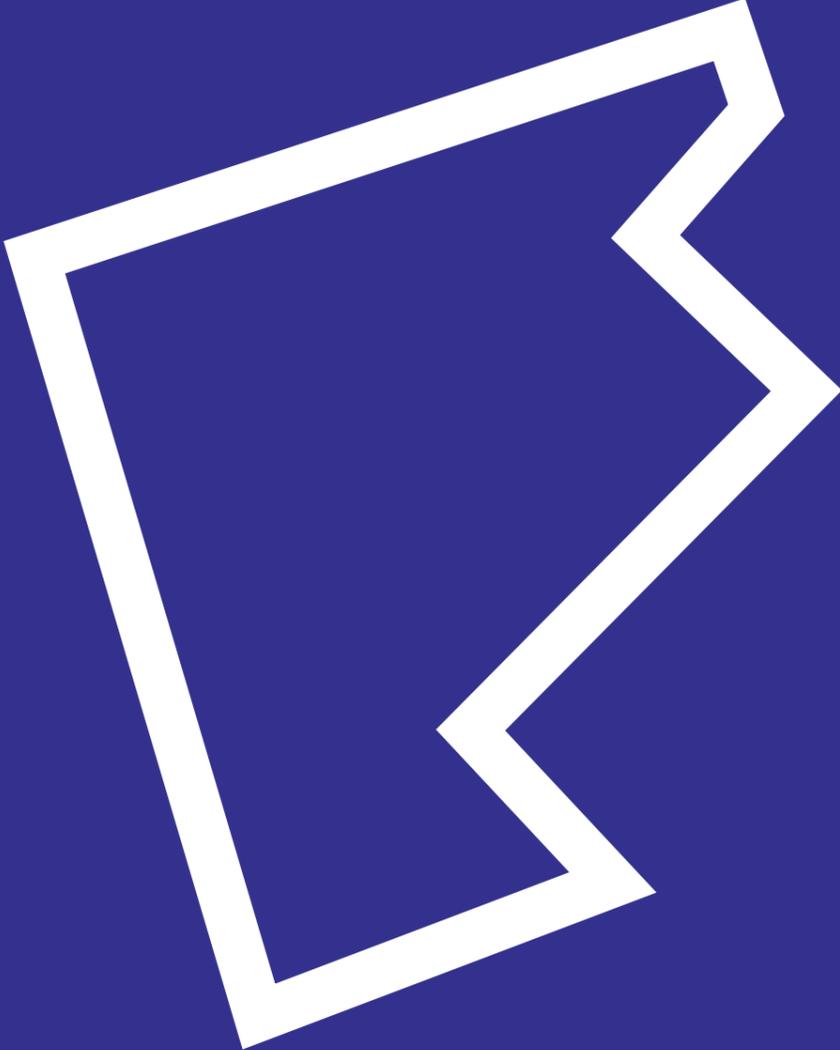


**LYNAS
SMITH**





Introduction

Condition 8:

Prior to the first occupation of the building a plan showing details of the green roof including species, planting density, substrate and a section at scale 1:20 showing that adequate depth is available in terms of the construction and long term viability of the green roof, and a programme for a scheme of maintenance shall be submitted to and approved in writing by the local planning authority. The green roof shall be fully provided in accordance with the approved details prior to first occupation and thereafter retained and maintained in accordance with the approved scheme of maintenance.

Reason: To ensure that the green roof is suitably designed and maintained in accordance with the requirements of policies CS13, CS14, CS15 and CS16 of the London Borough of Camden Local Development Framework Core Strategy and policies DP22, DP23, DP24 and DP32 of the London Borough of Camden Page 4 of 8 2015/3131/P Local Development Framework Development Policies.

Plan

Scale: 1:100 @ A3

Statement of Design Objective

The proposed seeded roof has been chosen for both its environmental credentials in terms of helping with drainage and biodiversity as well as its aesthetic appearance.

The wildflower seed mix roof is intended to control storm water run-off and thus helping to mitigate flooding through water retention in the recycled water storage and drainage layer, which will also help with improving water quality. It will also provide valuable ecological habitats which will attract foraging bees and other wildlife and the species mix will be tailored to be native species which will further enhance the provenance of the green roof.

The architectural quality and appearance of this roof type allows for an attractive piece of landscape in an existing hard-standing environment which is advantageous for both the new residents at 45 Holmes Road and the neighbouring properties which overlook this roof level. In providing this roof it is also intended to mitigate/reduce urban heat-island effects and conserve energy internally.



Roof Section & Build Up

The Bauder KS PLUS seed mix is a carefully balanced blend of 27 stonecrop, wildflower and herb species, which provide a healthy plant community that will give good ground cover in a broad range of green roof applications. The seeds are mixed with fine bulking aggregate, seed adhesive, organic nutrients and mycorrhizal fungi to encourage water and nutrient uptake by the plant. The seeds are pre-mixed with nutrients, fertiliser and a tackifying carrier which bulks out the volume to aid installation whilst also providing the ideal nutritional background to support initial establishment.

The mix of species has been developed to ensure that the stonecrops will provide a good level of ground cover, which will both stabilise the growing medium and give shelter to the herbs and wildflowers to grow through and give the appearance of a wild grass and flower meadow.

Key features

- Provides valuable ecological habitats
- Plant selection is bespoke to the project and can incorporate native species
- Storm water management capacity

Environmental credentials

- Substrates include a high proportion of recycled crushed brick and aggregate
- Protection, filtration and isolation layers manufactured from recycled materials
- DSE40 is manufactured from recycled polyethylene

KS PLUS SEED MIXTURE

The seeds are pre-mixed with nutrients, fertiliser and a tackifying carrier which bulks out the volume to aid installation whilst also providing the ideal nutritional background to support initial establishment.

Substrate Requirements

The seeds require sufficient depth of Bauder extensive substrate to support the roots of the plants once they are fully established (varies between 80-150mm). This is a lightweight growing medium that is manufactured to FLL standards which is then topped with Bauder Seed Bed Substrate, which has a finer consistency and higher level of organic matter to enable the seeds to germinate.

The substrate is watered sufficiently, almost to saturation, before the seed mix is broadcast on the roof.

Sowing Rate

The seed mix has a coverage rate of 1Kg to 10m² of roof area and is provided in either 2Kg or 5Kg bags. The seeds will only be sown in fair weather, as strong winds will disperse the seeds before they reach the substrate. Even coverage is gained by sowing 50% of the mix longitudinally down the roof, and then over-sown at 90° with the remainder of the seed mix. Best results are achieved from spring and autumn sowings; however the mix can be sown throughout the year.

Seeded plants a blend of 27 species of stonecrop, wildflower and herbs for a varied plant community.

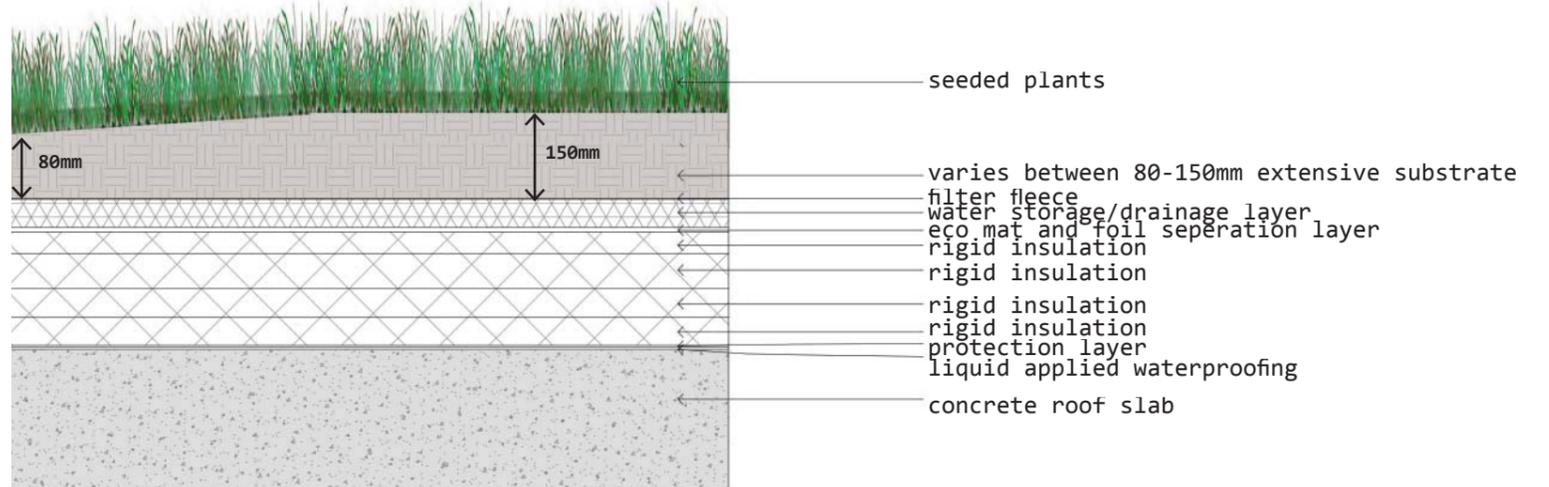
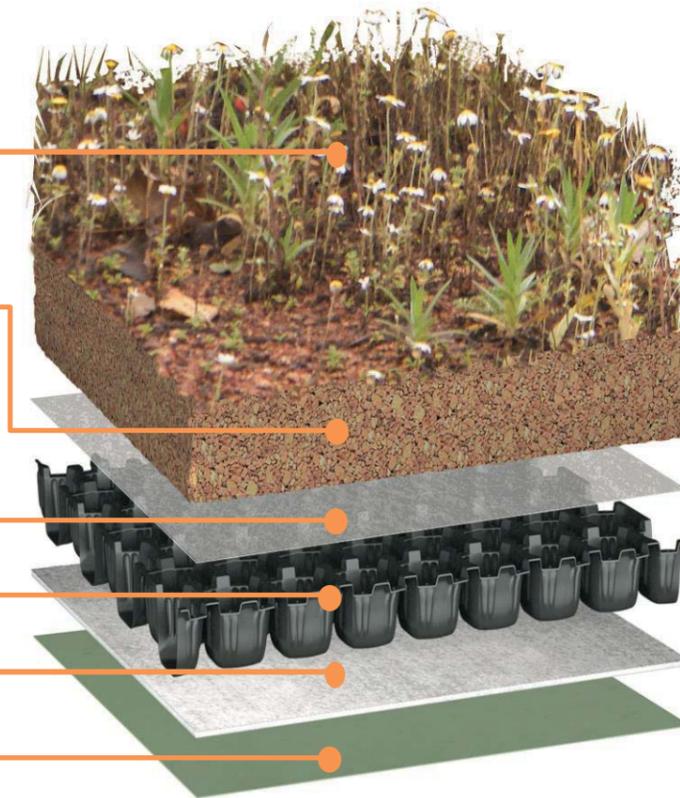
Bauder Extensive Substrate is a lightweight growing material that is formulated to meet FLL guidelines.

Bauder Filter Fleece is a filtration layer that prevents substrate fines from washing into the drainage and water storage layer.

DSE 40 is a lightweight water storage and drainage layer made of HDPE, 40mm thick.

Bauder Eco Mat is a polyester and polypropylene fibre mix protection layer

Bauder PE Foil Separation Layer is a polyethylene foil separation and slip layer manufactured from recycled granules.



Roof Build-Up 1:10



Wildflower Seed Mix Species List

Latin Name	Common Name	Exposure (sun - shade)	Origin
<i>Achillea millefolium</i>	Yarrow	☀️☀️	H
<i>Anthemis tinctoria</i>	Yellow Chamomile	☀️	H
<i>Campanula rotundifolia</i>	Harebell	☀️☀️	H
<i>Dianthus carthusianorum</i>	Carthusian pink	☀️☀️	H
<i>Dianthus deltoides</i>	Maiden pink	☀️☀️	H
<i>Fragaria vesca</i>	Woodland strawberry	☀️☀️	H
<i>Geranium sanguineum</i>	Bloody cranesbill	☀️☀️	H
<i>Hieracium pilosella</i>	Mouse-ear hawkweed	☀️☀️	H
<i>Leucanthemum vulgare</i>	Ox-eye daisy	☀️☀️	H
<i>Linum perenne</i>	Blue flax	☀️☀️	H
<i>Muscari comosum</i>	Tufted grape hyacinth	☀️	H
<i>Origanum vulgare</i>	Wild marjoram	☀️☀️	H
<i>Papaver rhoeas</i>	Corn poppy	☀️	H
<i>Petrorhagia saxifraga</i>	Saxifrage pink	☀️	H
<i>Potentilla argentea</i>	Silver cinquefoil	☀️☀️	H
<i>Salvia pratensis</i>	Meadow sage	☀️☀️	H
<i>Sedum acre</i>	Biting stonecrop	☀️☀️	S
<i>Sedum album</i>	White stonecrop	☀️☀️	S
<i>Sedum ellacombianum/ (selskianum hort.)</i>	Orange stonecrop	☀️☀️	S
<i>Sedum hispanicum</i>	Spanish stonecrop	☀️	S
<i>Sedum montanum</i>	Stonecrop	☀️	S
<i>Sedum sexangulare</i>	Tasteless stonecrop	☀️	S
<i>Sedum spurium</i>	Two-row stonecrop	☀️	S
<i>Teucrium chamaedrys</i>	Common germander	☀️	H
<i>Thymus pulegioides</i>	Large thyme	☀️	H
<i>Verbascum nigrum</i>	Dark mullein	☀️☀️	H
<i>Veronica spicata</i>	Spiked speedwell	☀️☀️	H

H = Herbaceous
S = Stonecrop

Maintenance

The green roof will have a minimum of two inspections a year to ensure that the rainwater outlets are maintained. The term “extensive” is applied to lightweight, low maintenance installations where access is generally required for maintenance purposes only. An extensive green roof will only need minimal maintenance to ensure that any unwanted species do not become established.

During these inspections, leaves, debris and other unwanted vegetation will be removed, enabling water to flow freely through rainwater pipes. If needs be, organic slow release granular fertiliser will be applied to encourage growth and help restore any areas which need repaired.

A vegetation barrier is created using washed round pebbles and is primarily incorporated to prevent vegetation encroaching on elements such as rainwater outlets, provide wind uplift resistance at roof perimeters.



