

**NOTE I. - EXTENSIVE BIODIVERSE GREEN ROOF**

1. Roof structure, waterproofing and protection to be specified by engineer.
2. Drainage layer - 25mm deep-water retaining drainage layer manufactured out of either recycled polypropylene or polystyrene. Profiles to permit excess water to drain in any direction beneath, with a minimum flow rate of 0.3l/m<sup>2</sup>/sec. Boards to be close butted to form a continuous drainage layer over the deck.
3. Filter Sheet - Specified filter fleece type 200, better suited for extensive green roofs, roll out filter sheet over the drainage layer. Laps to be minimum 100mm. Filter sheet to be taken up around all up stands, protrusions etc. to substrate surface level.
4. Main substrate: Extensive crushed brick substrate, consisting of 80% crushed clay brick and 20% organic matter (Locally sourced Green waste), to be installed at a depth of 150mm, but taking into account compaction rates associated with the substrate supplied by the contractor. Assuming a 15% compaction rate, laid depths will be 175mm (for a finished depth of 150mm). Estimated pH value of 8.4. Estimated weight of 130kg per sqm at 150mm deep when dry, 216kg per sqm at 150mm deep when fully saturated.
5. Seed - The seed mix for the substrate will consist of all the wildflowers listed in the table below. These will be sourced from certified native seed stock such as from Emorsgate (or alternative approved by the green roof consultant) and be hydro-seeded at a rate of 2g/m<sup>2</sup>.

**Wildflower seed list for main substrate**

Agrimony (*Agrimonia eupatoria*), Kidney Vetch (*Anthyllus vulneraria*), Common Knapweed (*Centaurea nigra*), Wild basil (*Clinocephalum vulgare*), Viper's-bugloss (*Echium vulgare*), Lady's Bedstraw (*Galium verum*), Perforate St John's-wort (*Hypericum perforatum*), Field Scabious (*Knautia arvensis*), Autumn Hawkbit (*Leontodon autumnalis*), Rough Hawkbit (*Leontodon hispidus*), Oxeye Daisy (*Leucanthemum vulgare*), Common Toadflax (*Linaria vulgaris*), Bird's-foot-trefoil (*Lotus corniculatus*), Musk-mallow (*Malva moschata*), Wild Marjoram (*Origanum vulgare*), Hoary Plantain (*Plantago media*), Cowslip (*Primula veris*), Selfheal (*Prunella vulgaris*), Meadow Buttercup (*Ranunculus acris*), Bulbous Buttercup (*Ranunculus bulbosus*), Wild Mignonette (*Reseda lutea*), Salad Burnet (*Poterium sanguisorba*), Bladder Campion (*Silene vulgaris*)

**Plug-planted sedum list for main substrate**

White stonecrop (*Sedum album*), Biting stonecrop (*Sedum acre*), White stonecrop (*Sedum anglicum*)

**Plug-planted wildflower list for main substrate**

Kidney Vetch (*Anthyllus vulneraria*), Oxeye Daisy (*Leucanthemum vulgare*), Bird's-foot-trefoil (*Lotus corniculatus*), Bulbous Buttercup (*Ranunculus bulbosus*), Salad Burnet (*Sanguisorba minor*), Autumn Hawkbit (*Leontodon autumnalis*), Viper's-bugloss (*Echium vulgare*), Rough Hawkbit (*Leontodon hispidus*), Common Toadflax (*Linaria vulgaris*), Musk-mallow (*Malva moschata*), Hoary Plantain (*Plantago media*), Selfheal (*Prunella vulgaris*), Meadow Buttercup (*Ranunculus acris*), Wild Mignonette (*Reseda lutea*), Bladder Campion (*Silene vulgaris*), Hare's Foot Clover (*Trifolium arvense*)

**NOTE II. - SEDUM MINIMUM MAINTENANCE GREEN ROOF**

1. Topsoil Substrate typically 150-200mm deep.
2. Geotextile membrane
3. Drainage Layer (Eggbox type) typically 40/60mm deep. TBC by Engineer
4. Insulation Layer TBC by Architect
5. Waterproof Membrane. E.g. Hydrotech
6. Concrete Bench to Engineers and Architect details

**Enviromat - Species**

White Stone Crop (*Sedum album*), Stonecrop-Russian (*Sedum kamtschaticum*), Widow's Cross (*Sedum pulchellum*), Sedum Reflexum (*Sedum reflexum*), Caucasian Stonecrop (*Sedum spurium*), Tasteless Stonecrop (*Sedum saxangulare*), Golden Stonecrop (*Sedum acre*)

**Sedum - Plugs**

White Stone Crop (*Sedum album*), Biting Stonecrop (*Sedum acre*), Corsican stonecrop (*Sedum dasyphyllum*), Spanish Stonecrop (*Sedum hispanicum*), Stone orpine (*Sedum rupestre*)

**NOTES**

1. This drawing is copyright of Camlins and may not be reproduced in whole or in part without the written permission of Camlins.
2. Do not scale from this drawing.
3. All dimensions in millimetres unless otherwise shown.
4. All levels in metres above Ordinance Datum (mAOD) unless otherwise shown.
5. All dimensions to be checked on site and any discrepancies reported to CA before pricing / work starts.
6. Any ambiguities or discrepancies within this drawing or between this drawing and any other information given elsewhere must be reported to Camlins and the CA for clarification before pricing / work proceeds.
7. All drawings to be read in conjunction with other Camlins drawings and specification and relevant Engineer's and Architect's work packages as appropriate.
8. All works carried out in accordance with the latest British Standards and appropriate codes of practice as a minimum.

**KEY**

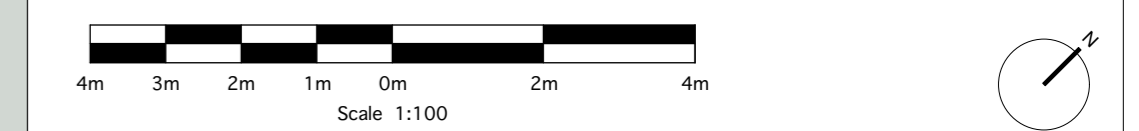
- Boundary
- Existing Tree To Be Retained
- Root Protection Areas of Existing Trees
- Proposed Trees
- Tree Pit Minimum 9m<sup>2</sup>/15m<sup>3</sup> Refer to Tree Pit Details Drg. No.'s LL489-400-0274.
- New Areas Of Shrub Planting Areas of hedge, shrub, climbers & groundcover planting. 400mm depth of topsoil to BS 3882. Topsoil to be well structured sandy-loam and free from stones or any other contaminants. Representative sample to be provided to Employer for approval a minimum of 4 weeks in advance of bulk delivery to site. Contractor to ensure topsoil areas are free draining. Refer to Tree Pit Details Drg. No.'s LL489-400-0261.
- New Areas Of Large Shrub & Tree Planting Areas where specified planting requires a greater than 400mm depth of growing medium. Large shrubs / trees to be planted within 400mm depth of topsoil and 400mm depth of subsoil.
  - Topsoil to comply with BS 3882.
  - Topsoil to be well structured sandy-loam and free from stones or any other contaminants. Representative sample to be provided to Employer for approval a minimum of 4 weeks in advance of bulk delivery to site.
  - Subsoil to comply with BS 8601.
  - Topsoil must not be installed to a greater depth than 400mm.
  - Soil must never be contaminated with other material, including hardcore.
  - Soil must never be laid over standing water or sodden ground.
  - Soil must never be overcompacted.
 Contractor to ensure planting areas are free draining. Refer to Tree Pit Details Drg. No.'s LL489-400-0261.
- Extensive biodiverse green roof (Note I.)
- Sedum minimum maintenance green roof (Note II.)

Architectural and Structural information shown is indicative only. Contractor external designer to co-ordinate with current Architectural and Structural information.

All growing medium, drainage and planting on roof are to be part of contractor design for roof system. Contractor design for roof system to determine future maintenance. For exact details on foundations / Build-ups / Structural information etc please refer to Engineers and Architects details.

**Revisions**

Rev.	Date:	Description:	Revised by:	Checked by:
1	14/04/2016	General update of Architectural information, including building layout, lightwell removal and reduction to break out panel and P1 paving.	LC	PSS



**EMPLOYERS REQUIREMENTS**

**FITZJOHNS AVENUE**  
PEGASUS LIFE

**General Arrangement - Growing Medium Formation**

Drawing No.	Revision:	Scale:	Date:
LL489-400-0061	1	1:100@A1	18.03.2016

Drawn by: JT Checked by: PSS

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