

Specification for Soft Landscape Works and 5 Year Management Plan

Proposed Development at:

**300-306 West Green Road
London
N15 3QR**

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Open Spaces
Landscape Architects
LANDSCAPE ARCHITECTURE – TREES – ECOLOGY

Specification for Soft Landscape Works and 5 Year Management Plan

For

Proposed Development at

300-306 West Green Road, London, N15 3QR

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1.0 SPECIFICATION FOR SOFT LANDSCAPE WORKS

1.1 Setting Out

The Contractor is responsible for setting out of all plants in accordance with the contract drawings. The Contractor should ensure that his work will not interfere with, or damage any part of existing cables, pipes or other services, above or below ground level. Any damage to existing services caused by the Contractor must be rectified at his own expense.

1.2 Delivery of Plants

The Contractor shall ensure that adequate protection is given to all plants and their root systems to preclude failure due to lack of moisture or exposure during transportation to the site. Where plants cannot be planted immediately upon arrival, they shall be stored safely until required. Representatives of each plant species delivered to site shall be tagged with labels with the botanical name clearly printed thereon. Labels shall be removed after planting.

1.3 Plants – Generally

- i) Plants to be in accordance with BS 3936-1:1992 'Specification for trees and shrubs' for nursery stock.
- ii) Plants shall be well branched and symmetrically shaped, of normal habit for particular species. All plants shall conform to the measurements and requirements in the plant list or within this Specification and shall be the minimum acceptable size for each species. All necessary pruning shall be carried out at the time of planting. All container grown plants must be well established in order that, on removal, the root ball remains intact through the planting operation.
- iii) Any stock which subsequently deteriorates in quality through mishandling or maltreatment shall be replaced by the Contractor at his own expense.
- iv) The Contractor shall be held fully responsible for the condition of all trees under his possession at all times.

1.4 Planting Generally

- i) Plants shall be planted at the same depth at which they were previously growing. Care should be taken to avoid damage to the root system and stems when planting and the root ball around pot grown plants.
- ii) All plastic and other imperishable containers shall be removed before planting.
- iii) Any broken or damaged roots shall be cut cleanly back to sound growth. Backfill should be firmed as filling proceeds, layer by layer, care being taken to avoid damaging the roots.

- iv) Soil is to be firmed around plants to ensure that no voids are left.
- v) Backfill once placed should not form an obvious mound around the base of any shrub or transplant. Any excess backfill, after planting shall be evenly distributed around the immediate vicinity of the plant.
- vi) Planting is to be carried out in suitable weather. On no account, shall stock be planted in conditions of frost, frozen ground, strong winds or heavy rainfall that renders the soil water logged or in a “sticky” condition. All plants lifted during frosts should be re-firmed.

1.5 Trees – Generally

Generally, trees will be procured, handled, planted and maintained in accordance with BS 8545:2014 ‘Trees: from nursery to independence in the landscape – Recommendations’.

1.6 Planting of Trees

- i) Trees should be well-branched trees with symmetrical crowns and straight stems and leaders. Trees of the same species shall be uniform in size, shape and in good condition. All trees to be supplied in ‘air pots’, or as pot grown, unless otherwise stated.
- ii) All trees to be pit planted in accordance with BS 8545:2014 to suit 8-10cm girth trees and the requirements of this Specification. Topsoil is to be used for backfill, firmed thoroughly during the planting operation. Remove all arisings.
- iii) Any dead, damaged or diseased branches or roots to be removed prior to planting using a sharp knife or secateurs. Pruning is to be carried out in such a manner as not to change the natural habit or shape of the trees. All tree work shall comply with the recommendations set down in BS 3998: 2010 ‘Tree work. Recommendations’. Arisings from tree works shall be carted off site to tip at the Contractors own expense.

1.6.1 Containerised Trees (below ground guying)

- i) Trees to be secured with a ‘deadman’ below-ground/soil guying system, GreenBlue Urban ‘Arborguy’ anchor system or similar.
- ii) Installation of guying system to conform to manufacturer’s specifications.

1.7 Planting of Shrubs Including Herbaceous Plants

- i) Plants are to be positioned in the locations and numbers shown on the drawings and placed to achieve even spacing and proper matching of shapes.
- ii) Pits for shrubs shall be of a sufficient size to take rootlets without breaking them or roots without bending or cramping. Planting pits shall be excavated 100 mm wider than the root spread.

1.8 Containerised planting

- i) Minimum of 100 (150) mm of polystyrene crocks to be covered with porous geotextile and planters to be back-filled with 500mm of topsoil over, in accordance with architects specification. To allow for a minimum of 30-50mm of semi-composted bark chip to be laid as a mulch.

1.9 Green Roof Systems (Bauder or similar/comparable)

- i) Green roof areas to the building are to be constructed using a Bauder Flatroof Solutions system to Bauder's recommendation and engineer's approval or similar. BauderGREEN Flora 3 Seedmix and BauderGREEN WB (Wildflower Blanket) is to be applied to a Bauder recommended extensive substrate and additional suitable plug planting is to be added.
- ii) Installation of all green roof areas including associated irrigation systems (recommended during periods of prolonged hot, dry weather and if vegetation is in distress) to conform to manufacturer's specifications and recommendations and to be carried out by approved contractors.
- iii) During hot weather conditions, living products such as plants, turf, sedum blankets etc. must be laid on the day of delivery to site.
- iv) Initial watering should be by surface sprinklers to ensure that the plants are kept moist until established. Adequate provision for watering the installed planting must be in place on site before the product is installed. Irrigation systems if fitted should be operational. Surface sprinklers should be used to water in the fertiliser. All watering should be carried out in strict accordance with the Bauder watering requirements and guidance.
- v) Bauder Extensive or Biodiverse soft landscaped green roof installations require an inspection and it is the responsibility of the installing contractor to inform Bauder Ltd when the installation has been completed.
- vi) No landscaping should be installed while the roof area is subject to other site traffic. Bauder will carry out an inspection of the completed roof 4-6 weeks following installation and any site related damage by others will be reported to the client.

- vii) Post installation maintenance for a minimum period of 1 year is required to ensure the handover of a flourishing soft landscaped roof.
- viii) Should adverse weather conditions occur any unfinished work should be secure from damage and wind uplift. Do not install or work with frozen materials.
- ix) BauderGREEN Flora Seed Mixes require that the substrate will have been watered prior to application of the seed mix. Please note that the seed mix should only then be lightly watered in during the summer or where activation of the adhesive element is required in exposed locations. Please avoid over-watering to prevent seed washout.
- x) Once the seeds have germinated, it is essential that the growing medium is kept moist for a further 10 week period until planting is established. It is the responsibility of the roofing contractor to liaise with the main contractor/ building owner to provide water and ensure that the necessary watering programme (as indicated above) is instigated following installation.
- xi) An adequate mains water supply of sufficient pressure must be available and operational prior to the plants being delivered and installed. Initial watering must be by surface mounted sprinklers.
- xii) For BauderGREEN WB native wildflower blankets, it will be necessary to keep the blanket substrate damp for a period of at least 10 weeks during the period of vegetation establishment.
- xiii) An adequate mains water supply of sufficient pressure must be available and operational prior to the planting being delivered and installed. Initial watering must be by surface mounted sprinklers. For larger roofs this may entail more than one watering point at roof level.
- xiv) Green roof drainage to be in accordance with Bauder/manufacture's specifications and to engineer's approval.

1.10 Mulching with Chipped Bark

- i) A 75mm deep trench, 100 - 150mm wide will be formed at the edges of planting beds abutting paved areas prior to mulching so as to prevent mulch spilling off the plant beds. 75mm of semi-composted chipped bark to be laid.

1.11 Plant Maintenance Prior to Practical Completion

Prior to the date of Certificate of Practical Completion, the Contractor shall maintain the works to the standards specified at no additional cost.

2.0 PREPARATION OF PLANTING BED

For preparatory works within the Root Protection Areas (RPAs) of retained trees, all preparation work will be in accordance with paragraph 2.1 below, or, if Arboricultural Method Statements are in place for the site, in accordance with such method statements.

2.1 Preparatory works for new landscaping within the RPA of retained trees

- i) Cultivation of any proposed shrub bed within the RPA of any tree to be retained will be carried out using hand tools only (ie. cultivators and rotovators shall not be used).
- ii) All planting works within the RPA of retained trees will be carried out by hand.
- iii) Sub-soil areas will be broken up to a depth of 100mm by hand, prior to spreading of top soil.
- iv) Top soil may be spread over proposed soft landscape areas previously covered by the concrete or other hard surface, and be graded to adjacent levels.

For preparatory works outside of the Root Protection Areas of retained trees, work will be in accordance with paragraph 2.2 - 2.5 below.

2.2 Site Clearance

- i) Existing areas to receive soft landscape to be cleared of all hard landscape materials, including any surface layer, sub base and sub soil to a depth of 400mm to allow for a minimum depth of 400mm topsoil (after settlement) for bed formation in proposed planted areas, and a minimum depth of 150mm for proposed grassed areas. Sub soil to be ripped and graded to a generally even surface prior to the laying of topsoil.

2.3 Topsoil – Imported

- i) Generally, imported topsoil will conform to BS 3882: 2015 'Specification for topsoil'.
- ii) Topsoil shall be of medium texture with a high proportion of loamy material. It shall not be "sticky" or leave a polished surface when smeared. It shall be free from subsoil, rubbish, roots or perennial weeds and other material injurious to plant growth. It shall be easily moulded when moist and have a neutral reaction with a pH 6.0-7.5. The topsoil shall contain less than 20 percent by dry weight stones which shall be less than 38mm in any one dimension.

2.4 Topsoil – Placement

- i) Once all pernicious weeds and all stones in excess of 38mm in any one dimension have been removed, topsoil is to be laid in layers not exceeding 150mm thick where so described in the specification. Care must be taken that the subsoil and topsoil

are not contaminated by any other deleterious material. If any subsoil or topsoil which was suitable become contaminated it shall be replaced at the Contractor's expense.

- ii) The Contractor must not carry out this operation if the subsoil is in a saturated or "sticky" condition.
- iii) Topsoil which becomes compacted shall have compaction relieved by ripping or cultivation.

2.5 Topsoil – Cultivation and Grading

- i) Final grading of the top 150mm is to be carried out to ensure a true specified level and slope to avoid any dishing or other depression where water may collect. The level of the topsoil, at the time of spreading is to be at least 50mm above adjacent paved areas and kerbs etc. to allow for shrinkage and/or settlement. Slopes and banks shall, where space allows, be slightly concave in section and with well-rounded shoulders and even transitions into adjacent levels and existing soiled or grass areas. Where possible, slopes are to even out into a flat area adjacent to kerbs, paved areas etc. in order to prevent soil washing onto areas of hard standing.
- ii) Cultivation of the top 50mm of topsoil should be carried out in accordance with BS 4428: 1989 'Code of Practice for general landscape operations (excluding hard surfaces)' to obtain a fine crumb size.

3.0 SOFT LANDSCAPE IMPLEMENTATION WORKS

3.1 Implementation for Soft Landscape Works

- i) Generally, the works will be implemented at the earliest opportunity after the completion of all construction works.
- ii) All planting works shall be in accordance with the Specification.

4.0 MAINTENANCE SCHEDULES

4.1 Establishment Period - Year 1

4.1.1 General Maintenance of Soft Landscape Works

- i) General maintenance shall include regular watering, weeding, pruning, removal of litter from planted areas, repair of minor washouts and other horticultural operations necessary for the proper growth of the plants and for keeping the landscape areas neat in appearance.
- ii) No chemical weed killer, insecticide or fungicide shall be allowed in the first year, or subsequent 4 years of maintenance.

4.1.2 Maintenance Schedule for Planted Areas

- i) Items to be carried out as required.
- ii) Keep planted areas free from rubbish and weed growth. No chemical weed killer shall be allowed.
- iii) Water sufficiently to allow water to fully penetrate the rooting zone.
- iv) Fork over panned down soil in areas covered with chipped bark.
- v) Maintain mulched areas at specified depth, topping up as necessary to maintain a 75 mm cover of chipped bark.
- vi) Check that each plant is growing healthily and remove all dead wood, damaged or diseased branches, water shoots and reversion growth. Pruning's to be removed off site to tip.
- vii) Re-firm plants which have been loosened by wind or frost.

4.1.3 Maintenance Schedule for Green Roof Areas

- i) Items to be carried out as required.
- ii) Keep planted areas free from rubbish and weed growth. No chemical weed killer shall be allowed.
- iii) Water sufficiently to allow water to fully penetrate the rooting zone.
- iv) Green roof maintenance to be carried out in accordance with manufacturer's recommendations.

4.2 Maintenance in Years 2 – 5

- i) Maintenance operations for the following four years are as shown in the Maintenance Table for years 2-5.

4.2.1 Maintenance Schedule Years 2-5

Description	Operation
Newly planted trees	Remove stakes and tie(s) at the end of year 2
Shrubs and herbaceous	Trim shrub species to keep within bounds of planting beds. <i>Hebe pinguifolia</i> 'Pagei' – Only prune if necessary in spring, cutting back old or damaged branches. <i>Osmanthus heterophyllus</i> 'Goshiki' – Minimal pruning is required. Defensive plant – Pruning should be carried out to maintain compact shape and size preventing the plant from exceeding the footprint of the planter. Pruning should be carried out in late spring to remove misplaced, dead or diseased branches. <i>Sasa veitchii</i> – Renew canes by cutting back down to the ground in the early spring before growth starts. Should be retained within a planter or root barrier system. <i>Euonymus fortune</i> 'Emerald 'n' Gold' – Minimal pruning required. If necessary, pruning should be carried out early spring before any growth. Minimal trimming can be carried out mid-July. <i>Choisya x dewitteana</i> 'White Dazzler' – Prune established plants in spring immediately after flowering, removing 25-30cm (10-12in) of the flowered stems to encourage further flowering. Damaged stems can be removed to the base at the same time. <i>Cistus x obtusifolius</i> 'Thrive' – Plants do not respond well to pruning and it is unlikely to be required. Leading tips can be pinched out to encourage density in foliage. <i>Geum</i> 'Lady Strathden' – Dead head plants after flowering and divide plant every three years. <i>Hebe</i> 'Emerald Green' – Needs little pruning. Prune lightly removing unsightly shoots as required in mid to late spring. <i>Santolina chamaecyparissus</i> 'nana' – Reduce plant growth in mid spring to where new shoots are emerging. After flowering the plant can be trimmed removing flower heads to retain shape and size.
Mulched areas	Top up chipped bark mulch to 75mm as required.
Watering	Water to fully penetrate the rooting zone in times of drought or as prevailing weather conditions require.

Green Roofs	Replace plants as required. Biannual visits to seeded or plug plant roof to clear any weed infestation, and one application of fertiliser in the early spring, in time for the growing season. Drainage outlets and inspection chambers cleared of vegetation. Ensure pebble perimeters are clear of dead and live plants. Sedum roofs should maintain their lush, and healthy sedum coverage. Infestations of grass and other weeds will soon die off due to insufficient substrate depth and become unsightly. Ensure drainage system is in full working order, Replace components as required, by approved contractor only <u>OR</u> carry out maintenance procedures as recommended by manufacturer and by approved contractor
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