



new Leaf
STUDIO

Former bowls club, Ellerslie, Gravesend

SPECIFICATION FOR PLANTING & SOFT LANDSCAPE WORKS

For

McCarthy & Stone

29th August 2024

LSE-2821-05-LA-MCS781-Doc 01 – C1

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C H A R T E R E D
L A N D S C A P E
A R C H I T E C T S

SECTION A – PRELIMINARIES / PREAMBLE

A1. PROJECT PARTICULARS

A1.1 LOCATION OF THE WORKS/THE SITE:

- Retirement housing development at: Former bowls club, Ellerslie, Gravesend

A1.2 THE EMPLOYER (& PRINCIPAL DESIGNER (CDM)):

- McCarthy and Stone Retirement Lifestyles Ltd,
- London and south east division, Prospect Place, 85 Great North Road, Hatfield, AL9 5DA2

A1.3 MAIN CONTRACTOR & PRINCIPAL CONTRACTOR (CDM):

- McCarthy & Stone Retirement Lifestyles Limited
- Address as above for employer

A1.4 TENDER AND CONTRACT DOCUMENTS

- New Leaf Studio "Specification for Soft Landscape works" (This document)
- New Leaf Studio drawings:
 - LSE-2821-05-LA-MCS781-Drg 02 Landscape Gen Arrangement – Sheet 1 of 4
 - LSE-2821-05-LA-MCS781-Drg 03 Landscape Gen Arrangement – Sheet 2 of 4
 - LSE-2821-05-LA-MCS781-Drg 04 Landscape Gen Arrangement – Sheet 3 of 4
 - LSE-2821-05-LA-MCS781-Drg 05 Landscape Gen Arrangement – Sheet 4 of 4
 - LSE-2821-05-LA-MCS781-Drg 12 Detailed Planting – Sheet 1 of 3
 - LSE-2821-05-LA-MCS781-Drg 13 Detailed Planting – Sheet 2 of 3
 - LSE-2821-05-LA-MCS781-Drg 14 Detailed Planting – Sheet 3 of 3

A2. THE SITE

A2.1 NATURE OF THE SITE

- At the time of commencement of these works the site will be a building construction site, with works nearing completion.
- Specific site risks: None other than normal building site risks managed by appropriate good practice. Refer to main contractors health and safety plan
- Site Hazards arising from concurrent operations by others, may vary depending on the precise timing of the works or phases of work. Before commencing any phase of work verify with the Contractors Health and Safety Advisor or Site Manager what hazards may be present and ensure that any associated risks are properly managed.

A2.2 INSPECTION OF SITE

Access to the site for the purposes of tendering shall be at any time during normal working hours and by prior appointment with the client

A3. THE WORKS

A3.1 The works comprise ground preparation, soil amelioration, cultivation, planting, turfing and landscape maintenance works. Supply and spreading of topsoil will have already been undertaken by others.

A3.2 All works to be completed in accordance with the contract drawings and requirements set out within the Contract and landscape specification.

A3.3 The works themselves do not involve any hazards or hazardous operations other than those normally encountered in work of this nature and managed by good health and safety procedures

A3.4 TIMING AND PROGRAMME:

- The anticipated start date and programme for completion of the works is to be advised by the employer / main contractor.
- Allowance should be made for works being carried out as areas become available, with landscape works being completed in 2-4 phases.

A4. HEALTH AND SAFETY AND CDM REGULATIONS

- A4.1 The contractor shall co-operate and co-ordinate with McCarthy & Stone site management over all health and safety issues, where appropriate providing method statements and input into the Contract Stage Health & Safety Plan.
- A4.2 Comply with all requirements of McCarthy & Stone "Subcontractors Health & Safety Responsibilities" document and the Construction (Design & Management) Regulations 2015.

A5. WATER SUPPLY – DROUGHT RESTRICTIONS

- A5.1 Water will be provided by the main contractor/employer up to practical completion of the works, always subject to the availability of supply. If water supply is likely to be restricted by emergency or local legislation, inform the contractor/employer without delay and ascertain the availability and additional cost for second class water from a sewage works or other appropriate sources.
- A5.2 If turfing or planting has not been carried out, do not do so until instructed. If turfing or planting has been carried out, obtain the contractor/employer's approval to the use of alternative water supplies.

A6. CLEANLINESS AND DISPOSAL OF WASTE

- A6.1 All waste and rubbish arising from the works shall be cleared away as it accumulates. At completion of every visit to the site, it shall be left clean, tidy and in good order, to include clearing / sweeping any hard surfaces clean of any deposits, including areas of highway soiled by deliveries or otherwise during the works.
- A6.2 The contractor is to comply with the Site Waste Management plan, to be advised by the Employer / Main Contractor.
- A6.3 FIRES are not permitted

A7. WORKS ON ADJOINING LAND

If any work necessitates entering adjoining land, the sub-contractor will make his own arrangements for access, in consultation with the Contractor's Site Manager. The sub-contractor will not allow his workmen to trespass onto adjoining property

A8. USE OF CHEMICALS / PESTICIDES:

- Use only where specified or approved, and then only suitable products as authorised by the Chemicals Regulation Directorate
- Used only in accord with Plant Protection Products Sustainable Use Regulations (2012)
- Chemicals shall not be toxic to human beings, birds or animals once applied and the contractor shall fully comply with the manufacturers guidelines for application
- Where work is near water, drainage ditches or land drains, comply with the MAFF guidelines for the use of herbicides on weeds in or near water courses and lakes.
- Observe all precautions recommended by the manufacturer and remove containers from site immediately they have been emptied or are no longer required.
- Operatives must hold a BASIS Certificate of Competence, or work under the supervision of a Certificate holder.
- The landscape contractor shall, prior to applying any chemical or herbicide, submit a copy of the user certificate to each person undertaking chemical or herbicide application.

- The landscape contractor shall be responsible for the reinstatement of any damage caused by use of chemicals, both within the area of work and any surrounding areas.

A9. QUALITY CONTROL AND MANAGEMENT OF THE WORKS

A9.1 QUALITY GENERALLY

Materials, goods and workmanship shall be of the best quality of their respective kinds, and for those for which there is a British standard or code of practice shall comply therewith, unless otherwise stated.

A9.2 ACCEPTANCE OF WORK BY OTHERS

Where work by others has potential to affect the quality of work by the sub-Contractor or their ability to comply with other requirements of the contract, in commencing work, the Sub-Contractor will be deemed to have inspected and accepted in so far as can reasonably be determined, that these works by others have been completed to an adequate standard.

Where such works have not been completed to the Sub-Contractor's satisfaction: Before commencing work, or as soon as such deficiency becomes evident during the works or a section of work, the Sub-Contractor shall, notify the Contractor giving details of the inadequacy and how this will affect the Sub-Contractors ability to reach specified standards or to accept responsibility for future defects. The Sub-Contractor shall seek instruction from the Contractor whether to:

- Proceed as things are, with acceptance that the notified standards or liabilities cannot be met.
- Delay commencement in order for remedial works to be undertaken by others.
- Undertake necessary remedial works themselves, subject to agreement of additional costs.

If the Sub-contractor fails to notify and seek instruction as above, the Sub-contractor will be liable to remove and re-do their work at their own cost in order to facilitate remedial works by others.

A9.3 QUALITY OF PLANT MATERIAL

A particularly high level of attention shall be paid to ensuring quality of plant material (see specific requirements in materials and works section).

The Sub-Contractor is entirely responsible for supplying plant material that is true to type and conforms to all requirements set out in this specification and on the drawings / in the schedules. Experience has shown that it is not sufficient for the Sub-Contractor to rely blindly that their nursery suppliers will deliver material that meets these requirements and so they should thoroughly inspect and check all material before delivery and / or before planting.

To secure supply of plant material that will comply with requirements, the Sub-contractor is to place orders as early as possible. Where lack of timely order or instruction from the Contractor may cause problems in securing supply of plant material, the Sub-Contractor is to notify the Contractor in advance and seek appropriate instruction.

A9.4 PLANT SUBSTITUTIONS

All plant material is to fully comply with all requirements of the contract contained in the drawings, schedule and specification. This is to include plants being true to type and of specified sizes and quality as a minimum. At tender stage the Sub-Contractor is to check availability of all plant material, and shall allow in their price for meeting all requirements of the contract.

Substitutions will only be acceptable with the Landscape Architects prior approval. Substitutions are less likely to be acceptable after tender, and may require an increase in size or quantity to achieve the same effect. This will be at no extra cost to the contract.

A9.5 SAMPLES AND INSPECTION

The Landscape Architect and Site manager are to be given at least 3 working-days' notice to allow them the opportunity to inspect at the following:

- Completion of preparation / cultivation of topsoil prior to planting / turfing
- Setting out of grass / planting beds
- Plant material upon delivery to site (prior to planting)
- Setting out of plant material
- Completed planting, prior to spreading mulch
- A sample of bark mulch (a small sample may be required delivered to the Landscape Architect and to the Site Manager, to be held on site for comparison with delivered material)
- Completion of each phase / at Practical completion
- Each maintenance visit

A9.6 SETTING OUT / APPEARANCE AND FIT

The sub-contractor is to take particular care in setting out the works and apply best practice for all matters affecting appearance and fit. In particular, attention to be given to the following as shown or implied on the drawings:

- Overall shape of grass areas and edges to beds
- That straight lines shown on the drawing(s) are set out straight using a string line, and where shown are parallel or perpendicular to adjacent built elements
- That corners align as shown on drawings
- That lines of symmetrically arranged spaces are set out symmetrically, with straight lines following through and correct centre lines.
- Curves follow a true radii, set out with a string-line and centre-point, or follow smooth, broadly sweeping curves.
- That finished levels follow smooth flowing, gentle contours, unless specifically indicated otherwise.

A9.7 MANAGEMENT / SUPERVISION OF THE WORKS

The Sub-Contractor shall accept responsibility for co-ordination, supervision and administration of the Works, including coordination of programme with the main contractor/site manager.

Persons undertaking the works are to be **supervised at all times by an appropriately qualified and experienced foreman** and/or site manager. The landscape contractor shall check all work as it progresses to ensure that it is being completed to a high standard and complies fully with the contract documents.

All works are to be fully **inspected by a suitably qualified and experienced** member of the sub-contractors' staff and any **snags/defects (including plants that are not true to type or specification) rectified BEFORE being offered as having reached Practical Completion** (see also 10.8 below).

A9.8 ABORTIVE VISITS / INSPECTIONS

If the Sub-Contractor gives notice of Practical Completion, or completion of any particular phase or item of work and the Landscape Architect attends site to make an inspection on the strength of this, and if at this visit, an excessive number of defects or snags become evident, that have not been previously notified by the Sub-Contractor, but which could have reasonably been identified as part of their own checking procedure as required by clause A9.7 above, then the Landscape Architect may refuse to undertake a fully detailed inspection, instead notifying the Sub-Contractor of the generalities of deficiencies only. Furthermore, the cost of the Landscape Architects abortive visit will be deducted by the Contractor, from any sum due to the Sub-Contractor to cover the cost of a subsequent re-inspection.

A9.9 CONSTRUCTION SKILLS CERTIFICATION SCHEME:

All operatives will be required to hold a current CSCS card. Alternatively the contractor will be required to provide details of equivalent levels of training and health & safety competence.

A10. PRACTICAL COMPLETION

Practical completion is deemed to mean that the works are fully complete, with any snagging items (including plant specification issues) rectified, site personnel have vacated the site and any information required by the main contractor with respect to the maintenance manuals has been prepared and handed over.

A11. MAINTENANCE AND DEFECTS LIABILITY PERIOD

- A11.1 The Sub-Contractor shall undertake maintenance of the landscape works for a period to be determined by the employer, but typically 12 months from date of Practical Completion of the last phase of landscape works .

A12. DEFECTS LIABILITY

- A12.1 Any trees/shrubs/plants that have failed to thrive, are dead or are otherwise defective due to the effects of weather, including late frosts, lack of water, or any other cause other than theft or vandalism, which become apparent during 12 Months from date of Practical Completion for the last phase of soft landscape works must be replaced by approved equivalent trees/shrubs/plants.
- A12.2 Any replacements to match the size of adjacent plants of the same species or should match the original specification, whichever is the greater. Plants are to be replaced as soon as practicable, subject to ideal weather conditions, giving time to become established prior to the end of the rectification/defects liability period
- A12.3 Any area of grass/lawn found to be failing to thrive, dead or otherwise defective in the same period shall be lifted and re-laid.
- A12.4 At the end of the rectification/defects liability period, make arrangements with the Employer and give notice of the precise dates for access to the various parts of the Works, for purposes of making good defects. Inform CA when all defects have been rectified.
- A12.5 In the event of loss or damage to landscape works due to theft or vandalism, notify the employer as soon as discovered. Provide a price for making good / replacement and seek instruction.

SECTION B

SPECIFICATION - MATERIALS AND WORKMANSHIP

B1 WORK IN VICINITY OF EXISTING TREES TO BE RETAINED

- B1.1 EXCAVATIONS AND CULTIVATION carried out within the root zone of existing trees shall be carried out in a manner to minimize risk of damage to the roots of the tree. For these purposes the root zone should be deemed to be the greater of the following:
- Equal to the canopy spread of the tree or
 - An area extending from the base of the tree to a radius of 12x the diameter of the trunk measured at 1.5m above ground level (or 10x the diameter of the base for multi-stemmed trees).
 - Root Protection Zone shown on the detailed planting plans
- B1.2 WITHIN ANY PROTECTED ROOT ZONE:
- All cultivation is to be carried out by hand, retaining any fibrous roots or larger roots encountered.
 - Excavation should only be undertaken to form planting pits for specified plants. This is to be carried out by hand, with any roots in excess of 25mm diameter being carefully retained.
 - If roots in excess of 25mm diameter are encountered, which will affect the sub-contractors ability to install the proposed planting – notify the Contractor and Landscape Architect immediately and seek instruction.

B2 SITE CLEARANCE, WORKS TO EXISTING VEGETATION AND WEED CONTROL IN AREAS TO BE PLANTED

- B2.1 SITE CLEARANCE will normally have been completed by others in advance of commencement of landscape works, however the landscape contractor shall check this against the proposals and seek advice from the main contractor /employer as some site clearance may be necessary before preparation and planting can take place. See B2.3 below.
- B2.2 DEBRIS AND RUBBISH: Before carrying out any ground preparation or cultivation, clear any remnant rubbish or debris or deleterious material to avoid incorporation into topsoil during cultivation.
- B2.3 EXISTING WOODY VEGETATION / SCRUB TO BE REMOVED
Where woody vegetation has been retained, that is not shown on the landscape drawings and in an area where new planting / grass is shown, the Sub-Contractor shall immediately notify the Contractor and Landscape Architect and seek instruction.
- B2.4 REMEDIAL WORKS TO EXISTING VEGETATION Where specified on the drawings, undertake remedial pruning works to existing vegetation.
- All work to be undertaken by operatives with appropriate horticultural / Arboricultural training and experience
 - All pruning of shrubs and trees to be in accord with good horticultural practice for the species / type of plant involved
 - All tree works to be undertaken in accordance with BS3998:2010 and good arboricultural practice
- B2.5 WEED CONTROL:
- Areas of recently spread topsoil, which may have developed a population of largely annual weeds: Treat with herbicide at least 3-days in advance of cultivation works, using a contact, foliar acting, non-persistent herbicide. Once herbicide has taken effect tall dense weeds should be cut down and dead vegetation removed. Small or sparser dead annual weeds may be cultivated into the top-soil.
 - Areas of original, undisturbed topsoil with perennial weeds: Treat with herbicide at least 3-weeks before commencing other operations using a foliar acting, translocated herbicide (e.g. containing Glyphosate). Allow a period of at least three weeks for weed growth to

take in the herbicide to ensure that perennial weeds are killed including the roots. If necessary a second application is to be applied to control any re-growth and ensure that ground is thoroughly weed free.

Herbicide to be applied by a suitably certified (BASIS) operative and in accordance with relevant health and safety requirements and any requirements of the Environment Agency with respect to application near watercourses, including compliance with Plant Protection Products Sustainable Use Regulations (2012). Use only products authorised by the Chemicals Regulation Directorate

B3 TOPSOIL, CULTIVATION AND GRADING

- B3.1 Supply and spreading of topsoil will have previously been undertaken by others. Ensure that topsoil has been laid to adequate depth and is sufficiently firmed to prevent excessive settlement and to ensure that specified levels in relation to adjacent surfaces can be achieved. See clause A9.2 regarding acceptance of work by others.

Any deficiency in the quality or quantity of topsoil is to be notified to the Landscape Architect and employer's site manager so that remedial action may be taken before commencing any other works.

- B3.2 WEATHER CONDITIONS AND SOIL MOISTURE CONTENT; All work to soil, including spreading, final grading, cultivation and planting is to be carried out in suitable weather conditions and when soil is in a suitably dry friable state. Topsoil must not be worked when high moisture content could result in a breakdown of the soil crumb structure or when frozen.

B4 PREPARATION OF PLANTING BEDS

- B4.1 SOIL IMPROVEMENT: EXISTING UNDISTURBED TOPSOIL WHERE NEW PLANTING IS SHOWN

Supply and incorporate sanitized and stabilized composted organic material certified to PAS 100:

- Mushroom compost: spent mushroom beds containing only well-rotted manure, peat free compost, chalk and residual mushroom growth. Use only well weathered compost, matured for at least 12-months to avoid excessive levels of potassium salts
- Composted bark, cocoa shell or coir fibre.
- Composted green waste
- Other well-rotted organic material subject to approval.
- Do not use peat or products containing peat.
- Horticultural parameters:
 - pH (1:5 water extract): 7.0-8.7
 - Electrical conductivity (maximum, 1:5 water extract): 200mS/m
 - Moisture content (m/m of fresh weight): 35-55%
 - Organic matter content (minimum): 25%
 - Grading (air dried samples): 99% passing 25mm screen, and 90% passing 10mm screen mesh aperture.
 - Carbon:Nitrogen ratio (maximum): 20:1
 - Texture: Friable
 - Odour: No objectionable odour
 - Free from weed seeds and other propagules
 - Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life

Apply to surface prior to cultivation at a rate of 1m³ of material per 10m² (100mm depth)

- B4.2 GENERAL FERTILIZER: ALL PLANTING AREAS

- NPK – 10-7.5-10.2 with slow release nitrogen and balanced trace elements.
- E.g. Manufacturer and reference: Vitax Q4 HN or Vitax Conifer & Shrub Fertilizer
- Apply evenly over all planting areas at a rate of 60g/sq m.

B4.3 INITIAL CULTIVATION – WITHIN PROTECTED ROOT ZONES

- These areas will be either undisturbed ground or topped up with a shallow layer of new topsoil to achieve required finished levels.
- After spreading compost or (see section B4.1) over the areas at the stated rate, carefully loosen, aerate and break up topsoil, lightly incorporating the compost into the ground by hand using a hand fork, taking great care not to damage tree roots. The intention is to loosen the existing ground rather than cultivate to a full depth.
- Remove any weeds, perennial weed roots and undesirable material brought to surface, including stones and clods larger than 50mm in any dimension, roots or other foreign matter.
- Grade out surface to fill any hollows /remove ridges and leave bed with smooth and even flowing contours, and in accordance with the requirement of clause B4.5 below

B4.4 INITIAL CULTIVATION – REMAINING PLANTING BEDS

- These areas should contain 300-450mm depth of new topsoil.
- Using suitable equipment, loosen, aerate and break up topsoil to its full depth / 300mm whichever is the greater, breaking soil down to particles 2-8mm in size.
- Remove any weeds, perennial weed roots and undesirable material brought to surface, including stones and clods larger than 50mm in any dimension, roots or other foreign matter
- Grade out surface to fill any hollows /remove ridges and leave bed with smooth flowing contours,

B4.5 FINISHED LEVELS AND GRADE – PLANTING BEDS: Finished levels of topsoil **after firming, planting and settlement to be:**

- Within 20mm of spot levels specified on drawings (if provided).
- Generally at least 150mm below damp proof courses of buildings
- <75mm below top of any retaining wall / raised bed
- 50mm below adjacent hard surfaces / grass areas, mounding within the first 1.5m to 100mm above level of adjacent hard surfaces
- Smooth even gradients across any area, avoiding sharp banks and falls, unless shown on the drawings.
- Level with any inspection cover within planting beds. Where covers have been set too low or too high, seek instruction.

B5 PLANT MATERIAL, PLANT HANDLING AND PLANTING GENERALLY

B5.1 Quality of all plant material: In respect of qualitative measures not specified by this document, the plant schedule or the drawings, plant material is to be in accordance with relevant British Standards and the National Plant Specification published by the Horticultural Trades Association. In particular:

- Trees & Shrubs to BS 3936: Pt. 1: 1992
- Ground cover plants to BS 3936: Pt. 10: 1989

Where this specification, the plant schedule or the drawings contradict, the higher standard / larger size shall apply.

B5.2 TREES/PLANTS GENERALLY TO BE:

- Materially undamaged, sturdy, healthy, vigorous, of good shape and without elongated shoots.
- Grown in a suitable environment and fully hardened off
- Free from pests, diseases, discoloration, weeds and physiological disorders
- Budded or grafted plants to be bottom worked, unless otherwise specified or approved.
- With balanced root and branch systems, root system and condition in accordance with the relevant part of the National Plant Specification unless otherwise specified..
- True to specified name.
- Plant material shall conform to the pot sizes and heights as scheduled. Where height cannot be obtained at the pot size specified a larger pot size shall be supplied instead to provide the required height.

B5.3 QUALITY OF PLANT MATERIAL

All plant material shall be of the best **“garden centre” quality**, being healthy, bushy and **where appropriate for the season in bud or in flower**. Herbaceous plants supplied during the growing season are to be supplied with **full, undamaged top growth – not cut back**. In some cases this will dictate delivery by Danish Trolley rather than bulk crates. The Sub-contractor is to ensure that their suppliers are aware of this requirement and that all packaging and delivery costs are allowed for.

B5.4 CONTAINER GROWN PLANTS TO BE:

- Supplied in a growing medium with adequate nutrients for plant to thrive until planted
- Centered in container, firmed and well watered.
- With root growth substantially filling container, but not root bound and in condition conducive to successful transplanting.
- Grown in containers with holes adequate for drainage
- Grown in the open for at least 2 months before being supplied.

B5.5 Clause not used

B5.6 SUBSTITUTES:

- If specified plants are unobtainable or known to be likely to be unobtainable at the time of ordering, submit alternatives to the CA/Landscape Architect, giving reasons for each proposed substitution, stating price and how they differ from the specification. Such substitutions may not be acceptable and submission of further alternatives may be required. Obtain approval before making any substitution. **N.B. SUBSTITUTIONS AFTER TENDER MAY NOT BE ACCEPTABLE**

B5.7 All plants to be handled in accordance with the recommendations of 'Handling and Establishing Landscape Plants' Revised edition November 1995 published by The Committee for Plant Supply and Establishment and contained in Appendix 1 of the National Plant Specification or obtainable from the Joint Council for Landscape Industries: J.C.L.I, 19 High Street, Theale, Reading, Berkshire RG7 5AH, Tel: 01189 303 132 or at www.gohelios.co.uk
Particular attention is to be paid to the following:

- Part I – Recommendations for plant handling from lifting until dispatch
- Part II – Specification for packing and transporting nursery stock
- Part III – Recommendations for plant handling from delivery to site to successful establishment.

The landscape contractor shall ensure that all requirements pre-delivery to site, have been complied with by their supplier.

In addition:

- Protect plants/trees from frost.
- Handle plants/trees with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.

B5.8 STORAGE OF PLANT MATERIAL PRIOR TO PLANTING

- The contractor should be aware that due to phasing of the works it may not be possible to store all plant material on site prior to planting.
- Plant material not planted on day of delivery and kept on site, must be stored in a suitable location to ensure no damage can occur and kept watered to maintain healthy growth and appearance.

B5.9 All landscape works to be carried out in accordance with British Standard 4428: 1989 & AMD 'Code of practice for general landscape operations' unless otherwise stated in this document.

B5.10 CLIMATIC CONDITIONS:

Carry out the work while soil and weather conditions are suitable for the relevant operations.

B5.11 MACHINES AND TOOLS: Use only machinery and tools suitable for the site conditions and the work to be carried out. Use **hand tools around trees**, plants and in confined spaces where it is impracticable to use machinery. Avoid damage to roots of retained trees.

B5.12 WATERING GENERALLY:

- Ensure the full depth of topsoil is thoroughly wetted.
- Use a fine rose where appropriate to avoid damaging or loosening plants.
- Water as necessary to ensure the establishment and continued thriving of all planting.

B6 TREE PLANTING

B6.1 TREE PLANTING PITS GENERALLY:

- Tree pits will have been dug and backfilled with topsoil by others in advance of the planting works.
- Pits will be roughly square rather than circular.
- Minimum Size(s):

	Across (mm)	Depth (mm)
Whips/Fthd Whips	500	450
Standard / Fthd Std. (8-10cm)	750	600
Selected Standard (10-12cm)	900	700
Heavy standard (12-14cm)	1000	750
Extra heavy standard (14-16cm & above)	1000	750

Or at least 10% bigger than the root ball, whichever is the greater

- Backfilled with topsoil.
- Refer to Preliminaries clause A9.2 Acceptance of work by others.

B6.2 TREE PLANTING PITS IN HARD LANDSCAPE AREAS WITH STRUCTURAL SOIL TREE PITS:

Clause not applicable to this project.....

B6.3 TREE PLANTING:

- Unless otherwise specified, plant upright / vertically.
- Remove any temporary ties or wrapping of the crown and encourage branches to spread naturally.
- Orientate so that best side of the crown faces the main viewpoint
- Ensure tree is planted at original nursery soil level.
- Back fill with excavated topsoil, firming as work proceeds and ensuring there are no voids.
- Firm soil well around the tree, leaving surface with a very slight dishing of soil levels to facilitate watering.

B6.4 STAKING / SUPPORT TREES IN GRASS AND PLANTING BEDS:

- Except where indicated otherwise, support as follows:
 - 18-20cm standard and larger: Underground guy using proprietary "duck bill" type anchors driven into sides / base of pit, or similar system but using concrete "deadmen" (do NOT use timber)
 - 12-14 up to 16-18cm standards: Double short stake with crossbar.
 - 10-12cm standards and smaller: Short diagonal stake.
- Stakes: Treated softwood, peeled chestnut, larch or oak, free from projections and large or edge knots and with pointed lower end, 90mm diameter
- Drive stakes vertically / diagonally as appropriate, at least 400 mm into bottom / side of pit, avoiding the root ball, preferably before placing the tree.
- Consolidate material round stakes during backfilling.
- Neatly cut stakes to finish 500-600mm above ground

- For double stakes, firmly fix a softwood cross bar (approx. dimensions 100x50mm) on windward side of tree and as close as possible to stem. All fixings to be neat and tidy with no sharp ends left protruding
- Secure tree firmly but not rigidly to cross bar / stake with proprietary adjustable rubber tie, fixed to avoid chafing of the tree, but with sufficient slack to allow expansion of the trunk over first 6-months growth:
 - Diagonal stakes: Adjustable buckle type tie with spacer block
 - Double stake and crossbar: Rubber strap threaded through rubber spacer block fixed to crossbar.
- Where trees are in a line or group ensure all stakes and bars are orientated the same way and look neat.

B6.5 STAKING / SUPPORT FOR TREES IN HARD LANDSCAPE AREAS WITH STRUCTURAL SOILTREE PITS:

Clause not applicable to this project.....

B6.6 AFTER PLANTING

- Water trees thoroughly immediately after planting to ensure ground is well soaked.
- Carefully prune back/remove any damaged shoots or branches from crown of tree.
- Remove any nursery tags, ties or labels.

B7 ORNAMENTAL SHRUBS, HERBACEOUS PLANTS, HEDGES and CLIMBERS

B7.1 SHRUB PLANTING PITS:

- Excavate not more than 24 hours before planting and retain topsoil for re-use where specified.
- Size(s): a minimum of 20% bigger than required to take rootball / full root spread.
- Break up bottoms of pits to a depth of 200mm
- Backfilling material: excavated topsoil supplemented with soil ameliorant / compost as clause B4.1

B7.2 HERBACEOUS PERENNIAL PLANTS:

- Pay particular attention to the requirements of clause B5.8
- Where there is no detailed planting plan, evenly space plants over the allocated area, avoiding straight lines unless indicated otherwise on drawings or schedules.

B7.3 GROUND COVER PLANTS: When using climbing plants as ground cover, remove canes or other supports and ties and spread stems, pinning to ground where appropriate to ensure good contact to encourage rooting and early establishment.

B7.4 HEDGES:

- Shrubs for hedges: As specified, consistent in species, cultivar and clone to ensure a uniform hedge.
- Plant shrubs in trenches large enough to take full spread of roots. Set out plants evenly as scheduled on the drawings.

B7.5 CLIMBING PLANTS / WALL TRAINED SHRUBS AND WIRE SUPPORTS:

- Where climbers are not planted on a trellis fence or similar structure, supply and fix vine eyes and wires.
- Where self-clinging climbers are specified no wire supports will be required.
- Where *Jasminum nudiflorum* is planted at the top of walls, these are intended to hang down the wall and no wire supports are required.

B7.5.1 ON WALLS AND FENCES

- 3mm galvanized wires to be set horizontally, the first 550mm above ground level and subsequent rows at 300mm vertical spacing up the wall / fence. (Exact spacing may be adjusted to suit coursing of masonry or the structure of the fence).
- Top wire to be at a height of 2.3m above ground, or just below top of supporting

- structure if this is lower
 - Each wire to be 2m long, centered on climber. Where adjacent climbers are closer than 3m apart, continuous wires should run between them.
 - Secure with 100mm long galvanized vine eyes, one at each end and at max. 660mm horizontal centers, ensuring that vine eyes align vertically forming a regular grid. Vine eyes screwed into neatly drilled holes with appropriate fixing plug (e.g. Rawl Plug for fixing into masonry)
 - Wires to pass through each vine eye, pulled taught, neatly and tightly twisted back on itself at each end (at least 2no. turns close to vine eye)
- B7.5.2 ON POSTS / PERGOLAS / PIERS
- Wires to be set running vertically up each side of the post, secured with screw in galvanized vine eyes located at top bottom and max. 660mm vertical centres.
- B7.6 PLANTING CLIMBERS
- Plant the climbers / wall trained shrubs 200mm clear of wall / fence etc. with roots spread outward.
 - Remove nursery canes or frames and train plant onto the wire supports (or trellis), lightly tying stems using soft twine. Retain canes of plants too small to reach first horizontal wire, but angle cane to wall.
- B7.7 BACKFILLING MATERIAL: A previously prepared mixture of topsoil excavated from the pit and additional topsoil as required.
- B7.8 AFTER PLANTING:
- Water plants thoroughly immediately after planting, using a fine rose or sprinkler where necessary to avoid damaging plants.
 - Lightly firm soil around plants and fork and/or rake soil, without damaging roots, to a fine tilth with approved gentle cambers and no hollows.
 - Carefully prune back/remove any damaged shoots or branches from shrubs and broken stems of herbaceous material.
 - Remove all tags, ties and labels.
- B7.9 MATURED BARK MULCH FOR PLANTING BEDS:
- Pine, Spruce, Douglas Fir or Larch bark mulch from an FSC certified sustainable source.
 - Particle size 5-35mm
 - Wood content: less than 5%
 - pH between 4.5 and 5.5
 - Free of any pests, disease, fungus, weeds or other contamination
 - Tested in accordance with BS 4790:1987 for fire resistance and classified as having "low" potential to burn.
 - Matured through natural heat treatment to ensure that excess volatile substances are driven off, involving temperatures within the heap exceeding 50°C for a minimum 14 day period, followed by a further period of stabilization.
 - Sample to be provided for approval
- E.g.: "Ornamental Bark Mulch" from Melcourt Industries Ltd
After planting clear any weeds, water areas thoroughly and mulch/cover surface of all planting beds, spreading evenly to a finished depth of 75mm.
- B7.10 PEBBLE/ GRAVEL / OTHER MULCH:
Clause not used.....
- B7.11 FAILURES OF PLANTING:
- Any trees/shrubs/plants that have failed to thrive, which are apparent prior to Practical Completion or during the defects liability/rectification period must be replaced by approved equivalent trees/shrubs/plants
 - Replacements must match the size of adjacent or nearby plants of the same species or should match the original specification, whichever is the greater.

B8 BULB PLANTING

Spring flowering bulbs as specified, to be supplied pre-grown in 1L pots, with each pot containing 3-4 bulbs. Pots of bulbs to be planted roughly in locations where indicated, the Narcissus in loose drifts within areas of grass and the Camassia between / amongst other plants in loose groups of 5 or 7.

B9 SEASONAL BEDDING PLANTS FOR CONTAINERS P1 & P2

Seasonal bedding to be planted in containers around the base of specimen shrubs. Material supplied shall be of best Garden Centre Quality for instant Impact/ effect.

The seasonal bedding may require three refreshments over an approximate 18 month Sales period. (Check with client)

Choice of plants to be determined by landscape contractor depending upon time of year when installed, however as a guide please refer to the following options for planting within planters;

- Winter/Spring colour: Primula, Wallflower, Forget-me-nots, Hedera helix Silver trailing Ivy and miniature pot grown Narcissus.
- Late Spring/ Summer colour: Surfinia type Petunias, Lobelia(trailing) and pelargonium, In a simple & complementary colour palette.
- Autumn/Winter colour: Pansies/ Violas/ Cyclamen & Primulas in a simple & complementary colour palette.

B10 PLANTED CONTAINERS P1 & P2

B10.1 PLANTERS/ POTS/ CONTAINERS REQUIRED:

Drawing reference(s): LSE-2821-05-LA-MCS781-Drg 12 - 14 by New leaf Studio

- "Harrod square metal planters" (Code MRB -005) 600x600x700(h) from www.harrodhorticultural.com

B10.2 INSTALLATION AND PLANTING:

- Planter/pot to be installed in locations shown on drawings,
- Prior to filling, ensure container has sufficient drainage holes to allow free drainage. If necessary drill additional drainage holes, min 15mm dia.
- Fill bottom with 100mm deep layer of clean gravel across base and cover with a layer of geotextile filter fabric.
- Fill container when planting using John Innes no.3 soil based compost, up to 50mm below top rim after settlement/firming. Ensure compost is well firmed to minimize settlement.
- After planting cover surface of soil with a 50mm deep layer of cocoa shell/chip as a mulch.

B11 GRASS SEEDING / TURFING

B11.1 CULTIVATION:

- Break up any compacted topsoil to full depth.
- Reduce top 100 mm of all topsoil to a tilth suitable for blade grading (10 mm down particles).
- Remove undesirable material brought to the surface including stones and clay balls larger than 30 mm in any dimension, roots, tufts of grass and any other foreign matter.

B11.2 GRADING:

- When topsoil is reasonably dry and workable grade to smooth, flowing contours, with falls for adequate drainage, removing all minor hollows and ridges.
- Unless otherwise stated, finished levels after settlement to be 25 mm above adjoining paving, kerbs, manholes etc.
- Topsoil levels may be adjusted by blade grading ensuring that there is nowhere less than depth of topsoil specified.

- B11.3 FINISHED LEVELS AND GRADE – GRASS AREAS: Finished levels **after turfing / seeding, firming, planting and settlement** to be:
- Within 20mm of spot levels specified on drawings (if provided).
 - Generally at least 150mm below damp proof courses of buildings
 - 25mm above top of any adjoining kerb, edging, paving, manhole or retaining wall.
 - With smooth even gradients across any area, avoiding sharp banks and falls, unless shown on the drawings.
 - Lawn areas, especially those with a simple circular, oval or geometric shape to be on a single plane, avoiding any obvious rise and fall between adjacent paved areas
 - If the required levels and grades cannot be achieved by movement of the existing soil, obtain instructions. – See also preliminaries clause A9.7 – acceptance of work by others.

B11.4 FERTILIZER: **ONLY TO BE USED IN AREAS THAT WILL BE FINE LAWN**

Three to five days before seeding/turfing and before final cultivation apply both the following fertilizers evenly over all areas to be seeded and turfed each at 70 g/sq m, in transverse directions:

- Superphosphate with a minimum of 18% water-soluble phosphoric acid.
- A sulfate of ammonia with a minimum of 20% nitrogen.
- Do not apply fertilizer to areas to be sown with wildflower / grass seed mix.

B11.5 FINAL CULTIVATION:

- After grading and fertilizing carry out further cultivation to reduce top 25 mm to a fine firm seed bed with good crumb structure.
- Rake with chain harrow, drag mat or hand rake to a true, even surface, thoroughly but lightly firmed, to minimize settlement, but avoiding over compaction. Remove all stones and earth clods more than 25 mm in any dimension
- Extend cultivation into any adjacent existing grass areas where present to ensure full marrying in of levels.
- Obtain approval of appearance of prepared soil areas before seeding/turfing.

B11.6 SEEDING:

Whilst there are no areas shown on the detailed planting plans to be seeded with grass there may be some locations where this may be requested as part of making good. If instructed to undertake grass seeding the landscape contractor should comply with the following clauses.

B11.6.1 GRASS SEED FOR GENERAL AMENITY AREAS:

- Good quality general-purpose amenity / lawn seed mix.
- Applied at a rate of 50g per m² to thoroughly cultivated and evenly graded ground.
- Purchase fresh seed for each growing season. Do not use seed purchased for previous seasons.
- Use blue label certified seed varieties complying with EC regulations for purity and germination.

B11.6.2 WILD FLOWER GRASS SEED:

Clause not applicable to this project

B11.6.3 SOWING GRASS SEED GENERALLY:

- Spread seed evenly at the specified rate(s) applied in two equal sowings in transverse directions.
- Lightly harrow or rake.
- On light soils roll and cross roll after seeding using a lightweight roller.

B11.7 TURFING

B11.7.1 CULTIVATED TURF TO BS 3969:

- Standard: To BS 3969, free from undesirable grasses and weeds.
- Grade: General purpose utility turf with perennial ryegrass
- Supplier and reference: A good quality cultivated turf such as Rolawn Medallion or equivalent.

B11.7.2 SPECIES RICH LAWN TURF

- WFT – Species Rich-26 from www.wildflowerturf.co.uk

B11.7.3 DELIVERY AND STORAGE OF TURF:

- Take all necessary precautions to avoid drying out and deterioration of turf.
- Arrange supply of turf to avoid excessive stacking.
- Do not stack to a height of more than 1 m.
- Use turf that shows any signs of deterioration without delay or lay out on topsoil and keep moist.

B11.7.4 TURFING GENERALLY:

- Lay turf during suitable weather, ideally in September / October. If outside this period arrangements to be made for watering until established.
- Lay turf within 18 hours of delivery in spring or summer and within 24 hours of delivery in autumn or winter.
- Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.
- Lay turf with broken joints, well butted up, working from planks laid on previously laid turf. Do not stretch turf.
- Use whole turfs at edges. Trim to a true line.
- Adjust levels by raking out or infilling with fine soil, and ensuring full contact with the substrate.
- Consolidate by lightly and evenly firming with wooden beaters as the laying proceeds. Do not use rollers.
- Dress turf with finely sifted topsoil/sand and brush well in to completely fill all joints.
- Thoroughly water the completed turf immediately after laying. Check by lifting a corner of turf that water has penetrated to the soil below.
- On steep gradients use pegs to hold turf in place.

B11.8 ESTABLISHMENT WATERING & FIRST CUT

B11.8.1 WATERING: During establishment of grass areas ensure that sufficient water is applied using a fine sprinkler or oscillating spray to maintain healthy growth and to avoid shrinkage of turf.

B11.8.2 FIRST CUT OF SEEDED / TURFED GRASS

- For areas of fine lawn and when grass is 100mm high, remove debris, leaves, other litter and all stones and earth clods larger than 25 mm in any dimension, and when grass is reasonably dry, cut to approximately 50mm high, using rotary mower with roller or cylinder mower.
- For areas laid with species rich lawn turf and when grass is 100-125mm high, remove any debris, leaves, other litter and all stones and earth clods larger than 25 mm in any dimension, and when grass is reasonably dry, cut to approximately 75mm high, using rotary mower. In areas planted with Narcissus bulbs, cut around the drifts of bulbs and leave until 2 weeks after flowering and then cut.
- Arisings: to be boxed off in all areas.

B12 LANDSCAPE MAINTENANCE

The landscape contractor shall be responsible for undertaking maintenance of all turfed/ grass seeded and planted areas up until award of Practical Completion for all works or until such time when any defects identified at PC have been rectified, whichever is the later date.

B12.1 PLANTING MAINTENANCE

B12.1.1 WEED CONTROL:

- Keep planting beds clear of weeds by hand pulling, easing removal with a fork or trowel as appropriate
- Ensure that root of weeds are removed, not just top growth.
- For larger more sparsely planted areas, careful use of selective herbicides may be permitted.
- Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows, taking care not to reduce depth or effect of mulch.
- While weeding / tidying beds collect and remove any litter or accumulated debris.

B12.1.2 PRUNING:

- Prune at appropriate times and in accord with good horticultural practice
- Avoid routine "hedge trimmer" pruning of anything other than hedges
- Remove only any dead or dying and diseased wood and suckers or to promote healthy growth and natural shape.
- Where excessive growth overhangs paths or lawns or obstructs windows, prune back individual growths, maintaining a natural form, again avoiding "hedge trimmer" treatment.
- Dead flower heads on roses and herbaceous material to be removed.

B12.1.3 CLIMBING PLANTS:

- Remove excess growth by pruning, to ensure that (in addition to the requirements above) signs, light fittings, doors and windows are kept clear at all times.
- Tie in any insecure growth to supporting wires or structures using soft twine

B12.1.4 WATERING:

- Water as and when required to maintain the health and vigor of all planting. For each area watered, ensure full depth of topsoil is saturated – i.e., infrequent thorough watering being preferred to frequent light watering.
- Determining frequency of watering is the responsibility of the Landscape Contractor. At time of tender the contractor is to allow for adequate watering based on the then stated timing of the contract and normal weather conditions for that time of year.
- If there are changes to the timing of the contract or in the event of unseasonably dry weather that result in a need for additional watering the contractor is to notify the employer with a quotation for additional watering, and seek instruction.

B12.2 FINAL MULCHING:

At the end of the maintenance and defects liability period:

- Ensure that the soil is thoroughly moistened prior to re-mulching, applying water where necessary.
- Re-mulch the whole surface of planting beds as specified in clause B7.9 ensuring that nowhere has less than the 75mm depth of mulch.

B12.3 HEDGE MAINTENANCE

B12.3.1 NEWLY PLANTED HEDGES

- After planting lightly trim outside face of hedges to encourage dense bushy growth
- Do not trim tops of hedges before they have reached a height of 1.5m /top of adjacent fence or height as specified on the drawings.
- In early March lightly trim sides again and cut top to maintain a consistent height, typically 1.5m. repeat trimming in September.
- Where planted adjacent to fence line, allow sides to grow out to fence and thereafter trim

back to face of fence on the outside

B12.3.2 EXISTING MATURE HEDGES

- The existing Privet hedge along northern boundary will have been cut back hard early during the construction period (late February) on this site to encourage rejuvenation.
- In September lightly trim sides to help encourage development of bushy growth. Reduce top to a consistent height of 1.5m. Repeat process in early March. Allow sides to grow out to fence line and thereafter trim back to face of fence on outside.

B12.4 TREE MAINTENANCE

B12.4.1 NEWLY PLANTED TREES:

- Prune trees to favor a single central leading shoot, unless contrary to the normal growth form of the species
- Ensure that trees and shrubs are not damaged by the use of mowers, nylon filament rotary cutters and similar powered tools.
- Check condition of stakes, ties, guys and guards. Replace broken or missing items. Adjust if necessary to allow for growth and prevent rubbing of bark. Cut back any damaged bark.

B12.4.2 EXISTING MATURE TREES:

Maintenance of existing mature trees does not form part of this contract, however should the Sub-contractor notice any defects, safety issues or other problems with existing trees, then they should notify the employer immediately. The Employer may give the Sub-Contractor the opportunity to quote for any works required.

B12.4.3 TREE GRILLES:

Clause not used as not applicable

B12.5 GRASS MAINTENANCE

B12.5.1 MOWING:

- AREAS OF FINE LAWN: height of growth must not exceed 75mm at any time. Cut as and when necessary through growing season to a height of 30mm, using a suitable and correctly adjusted mower.
- Before each cut remove all litter any fallen leaves or debris.
- All arisings to be boxed off or raked up and removed after cutting.
- AREAS LAID WITH SPECIES RICH LAWN TURF: height of growth not to exceed 125mm. Cut at regular intervals throughout growing season approximately every 2 weeks (early spring – late autumn) to a height of 75mm. Use a suitable and correctly adjusted mower for this. In spring when leaves of Narcissus bulbs start to appear, mow around the groups of bulbs and allow to flower. 2 weeks after last flower has faded these areas can be cut as part of wider space.
- Before each cut remove all litter, any fallen leaves or debris.
- All arisings to be boxed off or raked up and removed after cutting.

B12.5.2 TRIMMING GRASS EDGES:

- At the time of each cut, trim all grass edges.
- Edges grass : planting bed - trim to line with edging shears
- Edges grass: hard surface – trim with edging shears or half-moon edging tool
- Tim to maintain a grass free area around any tree planted within grass areas
- Use suitable edging tools, to form clean straight lines or smooth curves. Draw back soil from edges of planting beds to permit use of edging shears and remove all arisings.

B12.5.3 RE-FORMING GRASS EDGES

Towards the end of the defects period / annually, re-form grass edges, trimming any excess spread of turf to maintain true lines / even curves as appropriate.

B12.5.4 WATERING

Grass to be routinely watered as required to maintain healthy growth until established, ensuring full germination and establishment of seeded lawns, and full rooting in and establishment of turfed lawns, avoiding shrinkage of turfs.

Routine watering of well-established lawns is not required unless agreed as an extra requirement with the Contractor.

B12.6 CLEANLINESS REMOVAL OF ARISINGS

B12.6.1 ARISINGS

- All arisings are to be removed from site to contractors tip
- All green waste is to be removed for composting to a green water recycling facility

B12.6.2 CLEANLINESS

- Keep site in as clean tidy condition, clearing up any soil or debris from hard surfaces and lawns

B12.7 PLANTING IN POTS / CONTAINERS

- The Sub-contractor is responsible for keeping and pots or containers watered up to handover of the site.
- After handover and any pots or containers are to be watered by others. During this time, the Sub-contractor should check all planting in pots and containers at each maintenance visit and notify the employer if they feel that they are not being kept sufficiently well watered.
- Apart from watering the Sub-Contractor will be responsible for all other maintenance of planting in pots and planters, as set out in other clauses for planting generally.

B12.8 PLANT REPLACEMENTS

Remove and replace dead or dying plants as soon as possible to ensure the site is looking its best at all times

At the end of the maintenance and defects liability period, thoroughly check through all planting, comparing with the original planting plans and replace any dead or missing plants before offering the site for final inspection.