Specification for Soft Landscape Works and 10 Year Management Plan

Proposed Development at:

Hart Road, Thundersley, Essex

OS 2244-21-Doc4

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Specification for Soft Landscape Works and 5 Year Management Plan

For

Proposed Development at

Hart Road, Thundersley, Essex

Written by:

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Contents

1.0	SPECIFICATION FOR SOFT LANDSCAPE WORKS	3
2.0	PREPARATION OF PLANTING BED	7
3.0	LAWN AREAS	9
4.0	SOFT LANDSCAPE IMPLEMENTATION WORKS	12
5.0	MANAGEMENT REGIMES	13

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

- 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 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 Trees up to 12cm Girth

- i) Trees should be staked with one stout, round straight, pressure impregnated softwood stake of approx. 1.5m length and 75mm diameter pointed at one end. The stake is to be driven at a 45 degree angle to ensure that the stake penetrates no part of the root ball and in such a way as to hold the tree securely vertical.
- ii) The tree shall be secured to the stake using 1 No. bio-degradable tie and one biodegradable spacer per tie. Ties to be fixed to stake with a minimum of 1 No. 50mm flat head galvanised nail.

iii) Stakes must not chafe against any part of the tree or damage the roots during planting. Any excess length to the top of the stake should be removed to within 50mm above the tie.

1.6.2 Trees 12-14cm Girth

- i) Trees should be staked with two stout, round straight, pressure impregnated softwood stakes of approx. 1.5m length and 75mm diameter pointed at one end. The stakes are to be driven in vertically and to ensure that the stake penetrates no part of the root ball and in such a way as to hold the tree securely vertical. On completion, the top of the stake to be no more than 500mm above ground level and held firmly within the ground with no lateral movement when firm pressure is applied.
- ii) The tree shall be secured to the stakes using 2 No. bio-degradable elastic ties. Ties to be fixed to stake with a minimum of 1 No. 50mm flat head galvanised nail.
- iii) Stakes must not chafe against any part of the tree or damage the roots during planting. Any excess length to the top of the stake should be removed to within 50mm above the tie.

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 Planting of Bare-root Whips/Transplants (Hedging/'Tiny Forest)

- i) The planting of whips and transplants are to conform to the mix, siting and spacing in accordance with planting plans.
- ii) The roots of all plants shall be kept moist at all times by heeling into a temporary storage area and regular watering prior to planting. In any event, temporary storage on site shall be limited to a maximum of 3 No. days.
- iii) Plants shall be notch planted into prepared ground and shall be firmed in and planted so as to adopt a truly vertical position. All plants shall withstand a firm but gentle pull and be planted at the same depth as their original growing position. Damaged or broken plants will be rejected from site and require immediate replacement with matching species.
- iv) Any surplus soil arising from planting operations shall be evenly distributed throughout the planted area.

- v) Whips and transplants are to be protected with a biodegradable spiral guard, or a single plastic shelter-guard, 0.4m high, supported and secured in an upright position by the use of a single bamboo cane and tie.
- vi) Upper 1/3rd of transplants/whips to be removed after planting to promote branched growth.

1.9 Planting of Bulbs

- i) Bulbs are to be planted, according to species and in the areas shown on the soft landscape plan. Where planting is required 'in drifts', bulbs are to be scattered randomly over the allocated area and planted where they fall.
- ii) All bulbs are to be planted at the correct depth, according to species, with the base of the bulb in contact with the soil and the tip pointing up. Topsoil is to be used to back-fill.
- i) If bulbs are to be planted into existing turf areas, turf it to be neatly removed and replaced after planting and re-firmed.

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

- 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 LAWN AREAS

3.1 Amenity Grade Garden Turf

- i) All turfing operations to conform with British Standard 3969:1998 + A1: 2013 'Recommendations for Turf for General Purposes'. Areas to be turfed to be rotovated to a depth of 150mm and all grass sods, stones greater than 38mm in any one dimension and any other item of rubbish to be carted off site to tip.
- ii) Additional top soil to be supplied and spread to make up levels and to create even falls, as required. Prior to the laying of turf, the area to be turfed shall be cultivated to a depth of 25mm to form a fine tilth and be dressed with 'Growmore' N7:P7:K7 fertiliser at a rate of 50g/m2.
- iii) Turf to be supplied in rolls, not dried out or yellowed. Turf will be laid on the day of delivery. Turf rolls are to be undamaged without holes or torn or ripped edges. Turf grown on any nylon matting will not be accepted and turf will be weed free and of a uniform size and thickness.
- iv) Turf must be laid from suitably sized running boards. Walking over or standing on the turfs or prepared ground will not be allowed until fully established.
- v) Final surface (after settlement) is to be 25mm above any adjacent hard surface.

3.2 Amenity Grass Seeded Areas

- i) Grass seed mix to be Amenity grade, containing not less than 60% perennial rye grass.
- ii) Areas to be grass seeded shall be rotovated to a depth of 150mm. All grass sods, stones greater than 38mm in any one dimension and any other item of rubbish to be carted off site to tip.
- iii) Areas to have a 100mm minimum depth of topsoil. Areas to be raked and rolled to produce a firm and level seed bed. Final levels after settlement are to be 25mm above any adjacent paving, kerb, or other hard landscape edge.
- iv) Areas shall be cultivated to a depth of 25mm to a fine tilth.
- v) Grass seeded areas to be dressed with a 'Growmore' N7:P7:K7 fertiliser at a rate of 50g/m2 and worked into the top 25mm of tilth 7 days prior to seeding and watered in well.
- vi) Grass seed is to be spread in two directions at the rate specified by the manufacturer of the seed mix used. Grass seed areas to be lightly raked to ensure seed is evenly incorporated into the upper 10mm or soil and lightly raked.

3.3 Amenity Grass Maintenance Prior to Practical Completion

- i) Grass seeded areas to receive a first cut when grasses are 100mm in height. The same area is to be lightly rolled during this operation.
- ii) Turfed areas to be inspected regularly for shrinkage in the first 4 weeks following laying. Any areas of shrinkage to be filled with a mix of clean sharp sand, compost and topsoil, cultivated to a fine tilth and spread with grass seed at a rate specified by the manufacturer of the seed mix used. Turfed areas to receive a first cut when fully established and growing strongly and at such intervals as required to maintain a 75-100mm high sward until Practical Completion. At no time, will turf areas be allowed to grow above 150mm in height.
- iii) Grass seeded and turfed areas to be watered using a fine spray whenever required to ensure continuing healthy growth until Practical Completion.

3.4 Emorsgate Flowering Lawn Mixture EL1 (Emorsgate)

3.4.1 Ground preparation

- i) Areas to be sown to be cleared of all existing vegetation, including weeds, stones greater than 40mm in any one dimension and any other item of rubbish, all to be carted off site to tip.
- ii) Cleared ground to be raked to produce a medium tilth, and rolled to produce a level firm surface.

3.4.2 Emorsgate Flowering Lawn Mixture – Sowing

i) Seed to be surface sown by machine or broadcast by hand, and evenly distributed by sowing in overlapping sections, at a rate of 4g per m². Sown seed to be firmed in with a roller to ensure good contact with soil. On no account is seed to be covered or raked in.

3.4.3 Emorsgate Flowering Lawn Maintenance Prior to Practical Completion

- i) Flowering Lawn seeded areas to receive a first cut when lawn is greater than 50mm in height or when weed growth requires controlling. At no time prior to Practical Completion will flowering lawn areas be allowed to grow greater than 150mm in height. At no time, will the lawn be cut below 35mm in height. To permit flowering, mowing may be suspended between July to beginning of September.
- i) Cuttings to be collected and removed from site.
- iii) Seeded areas to be watered using a fine spray whenever required to ensure continuing healthy growth until Practical Completion.

3.5 Emorsgate Tussock Grass Mixture EG10 (long meadow areas)

3.5.1 Ground preparation

- Areas to be sown to be cleared of all existing vegetation, including weeds, stones greater than 40mm in any one dimension and any other item of rubbish, all to be carted off site to tip.
- ii) Cleared ground to be raked to produce a medium tilth, and rolled to produce a level firm surface.

3.5.2 Emorsgate Tussock Grass Mixture - Sowing

i) Seed to be surface sown by machine or broadcast by hand, and evenly distributed by sowing in overlapping sections, at a rate of 4g per m². Sown seed to be firmed in with a roller to ensure good contact with soil. On no account is seed to be covered or raked in. Firm or roll.

3.5.3 Emorsgate Tussock Grass Mixture – Maintenance Prior to Practical Completion

i) Seeded areas to be watered using a fine spray wherever required to ensure continuing healthy growth until Practical Completion.

4.0 SOFT LANDSCAPE IMPLEMENTATION WORKS

4.1 Implementation for Soft Landscape Works

- i) Generally, the works will be implemented at the earliest opportunity after the completion of all construction works.
- ii) Bare root whips and transplants, will be planted in the first dormant season following the completion of all construction works.
- iii) Emorsgate Flowering lawn mixture to be sown in first autumn or spring following completion of all construction works.
- iv) All planting works shall be in accordance with the Specification.

5.0 MANAGEMENT REGIMES – COMMUNAL SOFT LANDSCAPE

5.1 Management responsibilities

The agreed Management Company will be responsible for ensuring that the management requirements are strictly adhered to. The management requirements refer to all communal soft landscape areas.

5.2 Trees

Location: Throughout landscape areas

Watering:

Year 1-5: 30 litres per tree 2x per week (minimum) during dry periods.

Year 6-10: N/A unless drought occurs.

Weed Control:

Year 1+2: 5x per year. Year-5: 3x per year. Year 6-10: 2x per year.

Pest Disease Control:

Year 1-5: Visual check during each visit during growing season. Year 6-10: Visual check during each visit during growing season.

Firmness:

Year 1-5: 2x per year (Spring and Autumn)

Year 6-10: As necessary.

Removing/Checking Guying and Ties:

Year 1-3: Check trees 3x per year. Year 2-3 Remove if tree is stable.

Pruning:

Year 1-5: Check 2x per year and carry out corrective pruning as required (outside of nesting season).

Year 6-10: Check 1x per year and carry out corrective pruning as required (outside of nesting season).

Replacement Planting:

As necessary but only within the planting season within suitably prepared ground.

5.3 Tiny Forest

Location: South -western corner of site

Years 1-2

Replace trees which have failed No further management work required

Years 3-10

No management work required unless for reducing hazards.

5.4 Shrubs and herbaceous

Location: Throughout landscape areas

Years 1-5

General

Weeding – Maintain totally weed free each visit. (5x per year -Years 1-2) (3x per year-Years 3-5).

Watering – Water as necessary during dry periods when plants are in active growth.

Spring:

Litter and arisings – remove as soon as they occur or at maintenance visit.

Re-firm plants as necessary 1x.

Surface cultivation by hand between plants to relieve compaction as necessary.

Fertiliser – Apply organic fertiliser on a bi-annual cycle.

Summer:

Weeding – As Spring Litter and arisings – As Spring Surface cultivation – As Spring

Autumn:

Weeding – As Spring Surface cultivation – As Spring Litter and arisings – As Spring

Winter:

Litter and arisings - As Spring

Top up with semi-composted mulch as necessary.

Replacement planting like for like. 1x per year – Years 1-3.

Prune any shrub, branch etc. growing over or obscuring any footpath, roadway, light or sign.

Years 6-10

General

Weeding – Maintain totally weed free each visit. (2x per year - Years 6-10)

Watering – as necessary during dry periods.

Spring:

Litter and arisings – remove as soon as they occur or at maintenance visit.

Re-firm plants as necessary 1x per year.

Surface cultivation by hand between plants to relieve compaction as necessary. Fertiliser – Apply organic fertiliser on a bi-annual cycle.

Summer:

Weeding – As Spring Litter and arisings – As Spring Surface cultivation – As Spring

Autumn:

Weeding – As Spring Surface cultivation – As Spring Litter and arisings – As Spring

Winter:

Litter and arisings - As Spring

Thin understory plants and bare rooted whips as required after year 5.

Top up with semi-composted mulch as necessary – years 6-10.

Replace plants as necessary.

Prune any shrub, branch etc. growing over or obscuring any footpath, roadway, light or sign.

5.5 Native hedgerow

Location: Various locations throughout landscape areas

General

Weeding – Maintain totally weed free each visit. (2x per year - Years 6-10). Watering – as necessary during dry periods.

Spring:

Weeding - Maintain totally weed free each visit.

Litter and arisings - remove as soon as they occur or at maintenance visit.

Replacements – Replace failed or failing plants as necessary.

Surface cultivation by hand at base of plants to relieve compaction Years 1-3.

Fertiliser – Apply organic fertiliser on a bi-annual cycle.

Watering- Water during dry periods when plants are in active growth.

Clipping/pruning – 1x per year – Years 2-10 (outside of nesting season).

Re-firm – as necessary.

Summer:

Weeding – As Spring Litter and arisings – As Spring Surface cultivation – As Spring Watering– As Spring

Autumn:

Weeding – As Spring Surface cultivation – As Spring Litter and arisings – As Spring

Winter:

Litter and arisings - As Spring

5.6 Mown grass areas (amenity lawns)

Location: Throughout landscape areas

January:

Remove fallen leaves and other debris.

February:

Remove fallen leaves and other debris.

March:

Remove leaf litter and any other surface debris (only in dry conditions) 1x prior to first cut of the season.

Rolling: if there have been any heavy winter frosts, settle the turf by light rolling 1x, 3 days prior to first season's cut.

Mowing: — First season's cut should be to slightly top the grass sward. Do not close cut.

Weed control: - Apply a moss killer if necessary 1x or as manufacturer's requirements.

Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x Mid-March.

April:

Mowing: Maintain a 25-40 mm height 2-3x (Note, height specification shall take precedence over frequency).

Seeding; Over-seed any sparsely growing areas of lawn. – Lightly prepare lawn surface first, 1x.

May:

Watering: Water as necessary during dry periods to fully saturate the ground. Mowing: Maintain a 25-40 mm height 3-4x (Note, height specification shall take precedence over frequency).

Weed control: If broadleaf weeds are growing, treat with a suitable weed killer 1x. Apply a moss killer if necessary 1x.

Fertiliser: Apply a nitrogen-based lawn fertiliser once lawn is actively growing 1x Mid-April.

June:

Watering: As per May. Mowing: As per May. Weed control: As per May.

Spike, lightly top-dress areas subject to heavy wear.

Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x.

July:

Watering: As per May. Mowing: As per May. Weed control: As per May.

Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x.

August:

Watering: As per May. Mowing: As per May. Weed control: As per May.

Fertiliser: Apply a nitrogen-based lawn fertiliser 1x.

Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x.

September:

Watering: As per May. Mowing: As per May. Remove any fallen leaves.

Lawn edges: Tidy up (neaten) lawn edges with half-moon edging tool /handheld shears 1x.

October:

Watering: Only as required if the ground remains dry.

Mowing: Only as required to maintain a 50-75 mm height.

Scarify, spike and top-dress. Over-seed bare patches or areas where grass is growing

thinly.

Remove fallen leaves and other debris.

November:

Mowing: Only as required to maintain a 50-75 mm height – Do not mow after heavy frost or if the ground is saturated after rainfall.

Remove fallen leaves.

December:

Remove fallen leaves and other debris.

5.7 Long grass meadow

Location: Eastern edge, southern edge, western edge

October

Cut grass once annually.

5.8 Wildflower meadow

Location: Throughout landscape areas

General:

All arisings to be removed from site

No fertiliser to be used

The proposed wildflower meadow will be cut in August of each year.

The arisings will be left to dry on the ground for a maximum of two weeks to allow invertebrates and seeds to fall back into the sward.

A second cut will take place in the Autumn, usually October.

Further cuts may take place up to March to reduce the sward.

5.9 Ditches

Location: Southern edge of site

General:

Do not allow ditches to clog up with debris. This includes, leaves, branches, trees, litter etc. Ensure that water can flow at all times.