

Houghton Main,  
Grimethorpe  
Specification for Horticultural  
Works and Maintenance

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## **SPECIFICATION**

### **1.0 GENERAL**

#### **1.1 The Landscape Architect:**

**Smeeden Foreman Partnership**

8 East Parade,

Harrogate

HG1 5LT

Tel. 01423 520222

Fax. 01423 565515

#### **1.2 The Landscape Contract Drawings are:-**

Drawing No.	Title	Revision	Scale	Size
SF1512 LL01	Landscape Proposals	-	1:250	A0
SF1512 LL02	Landscape Proposals	-	1:250	A0

#### **1.3 Contract Conditions**

The landscape contractor should note that the works will be a sub-contract to and that he should allow for compliance with all main contract preliminaries and conditions including all Health and Safety requirements.

#### **1.4 Preparatory Work by Others**

Topsoil will have been placed by others to the following minimum depths:-

Ornamental Shrub planting areas	450mm
Shrub Mix planting areas	300mm
Hedgerows – Native hedge planting (min. width of hedge trench 700mm)	450mm
Other hedges (min. width of hedge trench 500mm)	450mm
Grass seeded areas	150mm

Note however that the Landscape Contractor shall allow for the preparation of planting pits for trees. This should include for additional excavation below the topsoil depths provided by others where required and backfilling as specified.

#### **1.5 Scope of Work/Phasing and Programming**

Fine grading of soil levels, cultivation, planting pit preparation, planting, seeding, and maintenance.

The Contractor is to provide a programme for the works with his tender submission.

The landscape sub-contractor must allow for interfacing with other site operations, liaison with the Main Contractor for area availability and should adopt a flexible sequence of working as necessary.

It is anticipated that the works are likely to take place in the Nov 2009 - March 2010 season.

## **1.6 Materials Generally**

The term 'material' shall mean all materials, goods and articles of every kind whether raw, processed or manufactured and equipment and plant of every kind to be supplied by the Landscape Contractor for incorporation in the works.

All materials shall be new and of the kinds and qualities described in the Contract and shall be at least equal to approved samples.

As soon as practicable after receiving the order to commence the Works, the Landscape Contractor shall inform the Landscape Architect of the names of the suppliers from whom he proposes to obtain any materials but he shall not place any order without the approval of the Landscape Architect which may be withheld until samples have been submitted and satisfactorily tested.

## **1.7 Standards**

*Materials are to be of the best quality consistent with the character of the work, and all materials and components are to be suitable for the purpose for which they are to be used.*

The following standards are referred to and the abbreviations shown have been used:

British Standards (BS) and British Standard Codes of Practice (CP).

Published by: -                    British Standards Institution,  
   British Standards House,  
   2 Park Street,  
   LONDON, W1.

Materials and workmanship shall comply with the relevant current standard (with up to date amendments) or with the requirements of any other authoritative standard approved by the Landscape Architect which shall be no less exacting in the opinion of the Landscape Architect than the corresponding standard quoted herein.

If no standard is indicated, then the relevant British Standard, if any, shall apply.

## **1.8 Branded Materials and Proprietary Articles**

The specification of branded materials and of proprietary articles is intended as a guide to the type of article or quality of material. If approval is obtained, the Landscape Contractor may order from other sources supplying articles or materials of equal quality. He shall submit full details of alternatives and/or samples when so requested, but the Landscape Architect's decision as to the acceptability or otherwise of alternatives shall be final. The Landscape Contractor will be deemed to have priced the items in the specification not his proposed alternatives.

The Landscape Contractor shall obtain the manufacturer's printed instructions relating to all branded materials and proprietary systems employed in the Works and he shall take strict precautions to ensure that their recommendations are followed.

## **1.9 Samples and Tests of Materials**

The Landscape Contractor shall submit samples of such materials as may be required by the Landscape Architect.



### **1.10 Standard of Workmanship Generally**

Except where otherwise stated or contraindicated workmanship shall comply with British Standard Codes of Practice where applicable, whether or not specifically referred to hereafter. All work people are to be competent and experienced in all aspects of work on which they are engaged.

Workmanship shall be of a high standard throughout, commensurate with the nature of the works, particularly with regard to the accuracy of dimensions, lines, plans, levels and the quality of surface textures. The Landscape Contractor shall do everything necessary to ensure that the standard of finish which is hereby demanded by this contract is achieved.

### **1.11 Supervision**

The Landscape Contractor shall arrange for the necessary supervision by a competent foreman at all times.

### **1.12 Pricing**

The landscape contractor shall include for providing at his own expense all labour materials, carriage, implements, plant matters and things of every description that may be required for properly executing the work whether specifically described or not.

## **2.0 SOFT LANDSCAPING/HORTICULTURAL WORKS**

### **2.1 Standard of Workmanship**

Where an appropriate British Standards Specification or British Standard Code of Practice is applicable, the Landscape Contractor is required to ensure that all workmanship shall at least be in accordance with that standard. In all cases, the standard of workmanship shall conform to recognised good horticultural practice and shall be to the satisfaction of the Landscape Architect.

### **2.2 Notice of Intentions**

The Landscape Contractor shall give 48 hours notice to the Landscape Architect of his intention to commence any of the following operations:- setting out, cultivation, planting, seeding, fertilising and maintenance visits.

### **2.3 Topsoil**

The Landscape Contractor should **check** that the topsoil depths specified have been achieved and bring any inconsistencies to the attention of the Landscape Architect.

Topsoil will have been placed by others to the following, minimum depths:-

Ornamental Shrub planting areas and hedge lines	450mm
Shrub Mix planting areas	300mm
Grassed areas	150mm

The Landscape Contractor shall allow for the preparation of planting pits for trees. This is to include additional excavation below the formation level provided by others where required and backfilling as specified

### **2.4 Clearance of Weeds and Rubbish**

Prior to any surface operations, the site, including areas of existing retained vegetation, shall be cleared of surface debris, rubbish and other deleterious matter and removed from the site.

The site shall be kept free of weeds and debris, throughout the whole Contract Period, and shall be kept in a neat condition to be taken over at any one time.

### **2.5 Approved Chemicals**

All chemicals used shall be on the Agricultural Chemicals Approved Scheme's current list.

## 2.6 Minor Grading of Topsoil

Break up any compacted areas to full depth of topsoil by cultivation.

Cultivate topsoil by approved mechanical means to form a tilth suitable for blade grading or raking.

Adjust levels as necessary by a give and take movement of topsoil to correct finished levels, ensuring topsoil depths are not reduced below those specified.

Remove from site all stones exceeding 50mm in any dimension in planting areas and 20mm in any dimension in grass areas and all other deleterious matter brought to the surface.

Allow for all finished levels to be graded down at edges to prevent mulch spillage.

All grass areas to be 25mm proud of adjacent hard surfacing.

## 2.7 Tree and Transplant Pits

Landscape Contractor shall excavate planting pits to the following dimensions:-

Heavy standard trees	1000 x 1000 x 900mm deep
Shrubs and hedges	300 x 300 x 350mm deep

The bottom of each pit is to be thoroughly broken up to a further depth of 150mm and any extraneous matter including non-topsoil material, broken brick, large stones, concrete, etc., is to be loaded up and carted off site.

## 2.8 Ameliorants to Planting Beds

Backfilling to planting pits shall comprise shrub planting compost, or approved equivalent, mixed thoroughly with topsoil at a rate of 2 parts topsoil to 1 part planting compost. The pit shall be thoroughly wetted prior to planting.

The compost shall be a previously approved nutrient enriched planting compost which is peat free. Full analytical information on macro and micro nutrient status, conductivity, and any physical or chemical contamination shall be provided. This information shall demonstrate that the product is comparable with reputable market-leader planting composts which, in general, should suit the following requirements and BS 4156 1990.

Requirements for Shrub Planting Compost

Particle size	0-15mm	
pH	5.5-7.5	
Organic matter content	>60% on dry matter basis	(Higher levels preferred)
Dry matter	50%	
Bulk density	450 g/litre	
Contaminants	Pest, weed and pathogen free	
	Glass and plastics free	
Cation exchange capacity	Medium	
Electrical conductivity	Up to 600 micro-siemens/cm*	
Nitrogen	2%	
Phosphorous	1%	
Potash	1%	

\*1:6 water extraction method. Reference BS 4156 *Peat for Horticultural and Landscape use*.

Apply 50mm deep layer of compost to all planting areas and cultivate to mix well with the top 200mm of soil.

### **2.9 Cultivation of Planting Beds**

Shrub beds shall be completely cleared of all weeds by suitable means and carted to the Landscape Contractor's tip prior to planting. If a herbicide is used for this purpose it shall be to the approval of the Landscape Architect and applied strictly in accordance with the manufacturer's instructions, particularly with regard to the required fallow period prior to planting. All dead weeds shall be removed from the site.

All cultivations are to be carried out in suitable weather conditions to avoid deterioration of the soil structure.

Prior to planting, all shrub areas shall be cultivated to a minimum depth of 225mm to produce a medium tilth, removing all stones above 50mm diameter, and any general debris brought to the surface during this operation.

All arisings to be carted to a tip off site.

### **2.10 Tree and Shrub Planting Season**

All works shall be carried out in the appropriate season and in weather conditions suitable for the operation. In particular, tree and shrub planting shall be carried out between the months of November to March.

All planting shall be carried out in suitable weather conditions which shall be taken to mean open weather, i.e., mild, dull and moist even in winter, when the ground is moist and workable. Planting operations shall be suspended in periods of drought, when soil is frost bound or waterlogged, and in periods of persistent drying cold winds.

### **2.11 Supply of Plant Material**

All trees and shrubs to be supplied from an approved UK nursery. Imported stock will only be considered if the source of supply abroad meets with the approval of the Landscape Architect and must have been grown on for at least twelve months in the Landscape Contractor's or Supplier's United Kingdom Nursery.

All plant material is to be transplanted nursery stock on healthy vigorous and sound roots with well formed heads, and to have been grown or grown on at the supply nursery.

### **2.12 Substitution**

No substitution to the plant schedule may be made without the written approval of the Landscape Architect. Any plant material which does not meet with this specification will be rejected.

### **2.13 Delivery, Plant Handling and Temporary Storage**

Delivery, plant handling and temporary storage is to be in accordance with CPSE Plant Handling Guide.

### **2.14 Trees**

All hardwood trees shall comply to BS 3936 Pt. 1.

### **2.15 Shrubs and Transplants**

Shrubs shall be healthy, vigorous and well proportioned to sizes as shown on contract drawing schedules.



### **2.16 Tree, Transplant and Shrub Planting**

The trees and shrubs are to be planted in accordance with the practice as set out in the appropriate British Standards Specification.

The tree/shrub pit shall be excavated as necessary to provide adequate room for the full spread of the root ball and so that once the tree is placed in the hole it will not need further adjustment.

After planting the topsoil backfill mixture specified shall, be backfilled in layers of 150-230mm depth, at each stage consolidating each layer and well packing around the roots. A proprietary irrigation tube shall be installed into each pit on planting.

The Landscape Contractor shall, before the final layer of soil is backfilled, thoroughly water the plant, allowing the water to drain away freely before completing the filling. Allowance shall be made for due settlement.

### **2.17 Tree Stakes and Guying**

Heavy standards trees are to be planted at their natural depth with tree stakes on the windward side. Supply and fix 2No stakes 1.4m long and 75mm in diameter, to be well driven into the ground to approximately 1.0m depth with crossbar.

### **2.18 Tree Ties**

Supply and secure trees to stakes with Rainbow tree ties and spacers obtainable from Messrs. S. H. Rainbow, 71 Quorn Gardens, Leigh on Sea, Essex, or approved equivalent.

Tie in accordance with manufacturer's instructions using one tie per tree.

### **2.19 Tree and Shrub protection**

All trees are to be planted with a 600mm high brown plastic spiral guards. All shrub mixes are to be protected using Netlon tree guards. All native hedge plants are to be protected with 450mm high brown spiral shrub guard to be supported by a single bamboo cane supplied by Acorn Planting Products ([www.acorn-p-p.co.uk](http://www.acorn-p-p.co.uk)) or similar approved.

### **2.20 Bark Mulch**

Bark mulch to be composted medium grade softwood bark chips with 90% within the range 50-100mm. Free from all extraneous matter, no wood chips, branches, roots, sawdust or the like will be accepted. The contractor shall obtain approval of a sample from the Landscape Architect and retain a sample for comparison with subsequent loads.

Immediately after planting apply 50mm depth of mulch to all tree, hedge and shrub planting areas. All trees within grass are to be ring mulched to a diameter of 1000mm.

### **2.21 Plant Replacements**

Any plant material which dies or fails to thrive due to the Landscape Contractor's failure to comply with this specification or as a result of negligence, which is brought to his notice during the contract or maintenance period, shall be replaced by him at his own cost.

**2.22 Cultivations for Grassed areas**

When in a reasonably dry and crumbly condition the topsoil for grassed areas shall be raked and cross raked or spike and chain harrowed to a depth of 50mm to produce a firm even seed bed. Any depressions or high spots are to be regraded as necessary to remove and re-raked to produce an area with evenly running falls. Stones exceeding 20mm size are to be collected and carted away.

**2.23 Fertiliser to Grass Areas**

The Landscape Contractor shall 9 to 10 days before sowing, supply and distribute an approved granular fertiliser at a rate of 60 gms/m<sup>2</sup>, or as recommended by the manufacturer. The fertiliser is to contain the following in a 10:15:10 ratio:-

Nitrogen : Phosphate : Potash

Lightly rake in to produce a fine tilth before seeding.

**2.24 Grass Seeding Period**

The seed shall be sown in suitable weather in the appropriate season. Operations must be suspended in periods of drought, when soil is frost bound or waterlogged, and in periods of persistent or drying winds. The Landscape Contractor shall provide a formal notification of the date when the grass seeding was carried out.

**2.25 Grass Seed**

The Landscape Contractor shall supply and sow over the areas to be seeded, the following seed mixtures, or equivalent to be approved by the Landscape Architect. Prior to seeding the area should be tine harrowed to disturb the surface.

'BS Ecosward Environmental Mix with Clover' supplied by Boston Seeds Ltd (Tel: 0800 883 0169), [www.bostonseeds.co.uk](http://www.bostonseeds.co.uk).

SPECIES	%
Chewings Fescue	25
Slender Creeping Red Fescue	20
Strong Creeping Red Fescue	40
Smooth Stalked Meadow Grass	10
Microclover	5

Grass areas to be seeded at a rate of 25g/m<sup>2</sup>

'BS No 10 - Field Corners and Buffer Strips' supplied by Boston Seeds Ltd (Tel: 0800 883 0169), [www.bostonseeds.co.uk](http://www.bostonseeds.co.uk).

Grasses		Wildflowers	
20%	Tall fescue 5%	Sainfoin	
15%	Creeping red fescue	2%	Birdsfoot trefoil
12.5%	Sheeps fescue	2%	Red clover
10%	Cocksfoot	1.5%	Black medic



10%	Common bent	1%	Black knapweed
10%	Crested dogstail	1%	Ox-eye daisy
5%	Tall oat grass	1%	Self heal
2.5%	Meadow foxtail	1%	Yarrow
		0.5%	Ladys bedstraw

Grass areas to be seeded at a rate of 10g/m<sup>2</sup>

### **2.26 Sowing**

Sowing shall be carried out at the previously specified rates in two sowings in transverse directions. The seed shall be lightly raked in and rolled and the Landscape Contractor shall provide a formal notification of the date when the grass seeding is carried out. Grass seeding is to be carried out adjacent to drainage ponds up to any existing water level as far as is physically safe to do so.

### **2.27 Initial Cut to Grass Areas**

When the grass has grown to 100mm it shall be cut, avoiding root pulling, to half the original height.

## **3.0 DEFECTS LIABILITY AND MAINTENANCE WORKS**

### **3.1 Maintenance and Defects Liability Period**

The Maintenance and Defects Liability Periods shall be as follows:-

Tree and shrub planting and grass seeding areas, 12 months (one year) from the date of Practical Completion of that part of the works.

The Contractor shall carry out maintenance work at suitable intervals and in suitable weather conditions, with a minimum of one visit per month (a visit being of such duration as to enable all works required at that time to be completed).

The Landscape Contractor shall be responsible for the upkeep of any part of the work which he completes prior to the day on which the work is accepted by the Landscape Architect as specified and shall include for this in his rates.

### **3.2 Programme**

The Landscape Contractor is required to produce a detailed programme of maintenance work for approval within 7 days of the date of the Practical Completion Certificate for either part of the works.

### **3.3 Plant Replacement**

At the end of the year following Practical Completion material shall be inspected, in late summer or autumn, and a schedule of replacements, for plants which have died or failed to thrive, prepared and agreed with the Landscape Architect.

The replacement planting shall be carried out by the Landscape Contractor during the planting season immediately following the inspection. The Landscape Contractor shall notify the Landscape Architect when this work is complete and ready for inspection.

The procedure specified for the initial planting shall be followed by the Landscape Contractor when re-planting.



### **3.4 Notification of Maintenance Operations**

The Landscape Contractor shall notify the Landscape Architect before his intention to carry out any of the maintenance operations in order that the work can be checked and approved.

### **3.5 General Maintenance of Trees and Planted Areas**

Maintenance shall cover the following operations:-

Pruning; removing epicormic growth; cultivation and weeding of the planting areas; annual application of mulch; tightening and repairing of ties; re-setting plants to proper grades or upright positions; control of weed, insects, fungi or other diseases by means of spraying with an approved herbicide, insecticide, or fungicide and other establishment of, and proper growth of the plants, and for keeping the contract area neat in appearance and free from weeds.

### **3.6 Fertiliser application**

At the end of the maintenance period, supply and spread SAI Enmag, slow release fertiliser as follows:-

Ornamental Shrub beds	at a rate of 50 gms/m <sup>2</sup>
Hedge plants	at a rate of 40 gms/m <sup>2</sup>
Trees	at a rate of 60 gms/plant
Shrub Mix planting stations	at a rate of 10 gms/plant

### **3.7 Hand Weeding and Herbicide Spray**

All shrub beds shall be hand weeded to ensure that the ground remains weed free. The hand weeding shall consist of pulling out all weed growth excepting that left to allow herbicide to act. Weeds shall be removed from site.

All ornamental shrub beds and shrub mix areas shall be treated with a suitable translocated herbicide to remove and prevent establishment of perennial weeds. All dead material to be collected up and removed from site.

### **3.8 Mulch Application**

The 50mm depth of mulch over all areas and to each individual planting station shall be maintained and must be fully reinstated at the end of the maintenance period.

### **3.9 Grass Cut**

Edges to grass areas shall be cut twice and edged twice during the Maintenance Period. Amenity grass areas shall be cut 22 times to a height of 25mm. All grass cuttings shall be collected up and removed from site. Areas of 'Field Corner and Buffer Strip' seed mix are to be cut twice a year in spring and at the end of August to a height of 150mm.

### **3.10 Fertiliser to Grass Areas**

Provide and evenly apply under suitable weather conditions in spring and autumn, a fertiliser dressing consisting of granular fertiliser containing:-

<u>Spring Application</u>		<u>Autumn Application</u>	
N	6.5%	N	3.2%



P	7.7% insoluble at 1.7%	P	11.25%
K	5.0%	K	6.0%
at a rate of 70 gm/m <sup>2</sup>		at a rate of 70 gm/m <sup>2</sup>	

### 3.11 Watering (PROVISIONAL)

The Landscape Contractor shall seek an instruction to expend provisional sums to water as necessary to ensure satisfactory growth and shall allow for watering in dry periods on four separate occasions. Water shall be applied slowly by hose with spray sufficient to soak the ground to field capacity.

The Landscape Contractor is to supply water in the following quantities per watering:-

Ornamental Shrub planting areas	40 litres per m <sup>2</sup>
Hedges	20 litres per plant
Extra Heavy Standard trees	60 litres per tree
Shrub Mix planting stations	20 litres per plant
Grassed areas	20 litres per m <sup>2</sup>

### 3.12 Litter Collection

All planting areas and areas of existing vegetation on site shall be kept clear of litter and rubbish and maintained to the highest possible standard.

