

3.0 SOFT LANDSCAPE AND RELATED WORKS.

The Contractor will ensure that all site staff have read and understand the Contract Specification and Drawings and that copies are retained by the staff on site.

3.1 Existing Landscape Features.

The Contractor shall be responsible for protecting all existing site features including pavement works, kerbs and edgings, and below-ground services. The Contractor shall allow to plan and implement protection to all paths where trafficking across paths with machines may be required by the Contractors tools or delivery vehicles. Any damage to paths, edgings, services and the like shall be made good at the Contractors own expense and to the satisfaction of the Contract Administrator (CA). If damage appears to be present at the outset it is recommended that these items are brought to the attention of the CA, or photographed with a date camera before works commence. Where excavations shall take place near existing trees or other vegetation the Contractor shall take special care to avoid damage to roots.

3.2 The Contractor shall request information regarding below ground services, such as exist, before works on site commence. Note that all service information supplied should be treated as approximate only and if the Contractor considers that services might be affected by proposed works (eg tree planting), he shall accurately locate services before commencing the work. If the design appears to need modification before works can commence the Contractor shall immediately consult the Landscape Architect to agree revised details.

3.3 The Contractor shall be deemed to have included for the following tasks and activities in the tender price:

- All liaison and coordinating requirements to ensure a successful outcome to the project.
- Working with hand tools or small machinery adjacent to kerbs, features and services and the like and ensuring that these features are not damaged by the works.
- Consulting with the CA about services and undertaking further checks on site.
- Supplying and maintaining temporary fencing, signage, covers and other elements that may be required to ensure required health and safety standards for all parties.

3.4 Weather Conditions

The Contractor shall not undertake ground preparation or planting works when the ground is saturated or frozen or when, in the opinion of the landscape architect, works are likely to have detrimental long-term impacts on soil structure. If landscape works are to take place in very dry weather, when the ground is hard or baked, the Contractor will be required to provide irrigation facilities in order to ensure that plants can be properly watered in.

SOFT LANDSCAPE WORKS – PREPARATION AND LAWNS

3.5 Existing topsoil

The site is likely to have usable soil on site – pending construction disturbances. This specification assumes it will be reused – with soil conditioner added. Soil stripped for re-use on site shall be stored away from construction areas and protected from contamination, run off and potential waterlogging during the construction period. If additional topsoil imports are required – refer to specification below. The Landscape Contractor shall liaise with the Main Contractor and ensure soil conditions are suitable for planting and soft landscape establishment before work commences. All parties will ensure that subsoil is free draining and free of compaction, building waste and contaminants before topsoil is imported and spread.

3.6 Imported topsoil (Provisional)

If there are topsoil shortfalls the Landscape Contractor shall allow to supply and spread approved topsoil as necessary to make up levels if required. Soil shall conform to BS 3882 (2007) for the grade of topsoil specified and match as near as possible the topsoil presently found on site.

The Contractor shall arrange for the CA to inspect a representative sample of the soil before making further deliveries to site. The CA will retain this for comparison with subsequent loads. The soil shall conform to the following requirements:

- Texture: Medium loam
- pH 5.0 – 8.0
- Organic matter: minimum 5%
- Nutrient content: Nitrogen, phosphorus, potassium and magnesium minimum index values to be as for general purpose grade of BS 3882
- The soil shall have a discernible crumbly structure. Finely sieved or graded soils with no structure are not recommended.
- Maximum stone size: 50mm in any dimension
- Maximum stone content: 5% by dry weight

3.7 Herbicide Treatment. (Provisional)

If planting beds are left open before planting and weeds have established - apply a glyphosate based herbicide to all areas as directed by the CA. Ensure that sprays are applied in dry, still weather conditions, using a spray guard. All spraying shall be as per the manufacturers instructions and best practice guidelines and at least 2 weeks before planting works commence. Avoid contact with trees and other vegetation that is to be retained including existing meadow areas and especially vegetation near the watercourse. Ensure areas to be sprayed out are carefully marked out and agreed by the CA before spraying commences.

3.8 Cultivation.

All proposed planting areas shall be cultivated to ensure that soil compaction is relieved and a fine tilth is prepared suitable for planting. It is recommended that a small tractor or large rotovator scale of machine may be the most appropriate sized equipment for this site. Use a small tractor mounted harrow or similar implement to ensure free draining soils and compaction relief to a depth of at least 250mm. The Contractor shall allow to separate out any building waste or other deleterious material that might arise during the cultivation works and remove to the Contractors off site tip.

3.9 Soil Conditioner – Planting beds. (Provisional)

The Contractor shall supply and spread 50mm of approved soil conditioner to all planting beds and incorporate into the topsoil. This equates to a rate of 5 cubic metres of conditioner per 100sqm of planting bed. The conditioner shall be free of perennial weed seeds, bulbs or rhizomes or any deleterious material larger than 25mm in any dimension. The conditioner will be a peat free, well composted organic material, with a nominal pH of between 6.0 and 7.0 and free of detrimentally high salt or other chemical properties. The conditioner shall be free of odours. The Contractor shall ensure the conditioner is free of plant pathogens and should produce a representative sample and evidence of origin for consideration by the CA prior to bulk deliveries to site. (Note – soil conditioner will not be required where 150mm or more of imported topsoil has been imported as specified as per clause 3.6 above).

3.10 Fine Grading.

Work-in the soil conditioner and bring the soil to a fine tilth. The Contractor shall ensure that there are no mounds or hollows across lawn areas and that any required falls are even and will not result in surface water ponding in future. The Contractor shall ensure finished levels marry appropriately with adjoining surfaces and edges and clear away all surplus soil.

Finished soil levels should be left slightly proud of adjacent edges and paths to allow for settlement.

PLANTING WORKS:

3.11 Plants Quality.

Material to be sturdy, healthy, vigorous, of good shape and without elongated shoots.
Grown in suitable environment and properly hardened off.
Free from pests diseases, discoloration, weeds and physiological disorders.

Budded or grafted plants to be bottom worked unless otherwise specified or approved.
 All plants to have balanced root and branch systems and all in accordance with relevant parts of the National Plant Specification and BS 3936.
 True to name origin and provenance: UK grown where possible or otherwise to be stated.
 Name, forms, dimensions and other criteria as scheduled and defined in the National Plant Specification and BS 3936.

3.12 Pre-selection / Substitutes.

If specified plants are unobtainable or known to be likely to be unobtainable at the time of ordering, submit alternatives to the CA stating the price and how they differ from the specification. Such substitutions may not be acceptable and submission of further alternatives may be required. Obtain approval from CA before making any substitution on site.

3.13 Tree Handling.

Comply with CPSE 'Handling and Establishing Landscape Plants' (obtainable from the Horticultural Trades Association) Parts I, II and III.

3.14 Hedge and Tree Planting.

Planting works shall take place in the period November to March. The Contractor shall ensure that the ground is cleared to provide access for planting the transplants and trees as specified. Plant the mixed native hedge transplants in a random mix in a double row (or other as specified on the drawings), with each plant at 400mm centres. Plant the hedging as located on the plans. Provide a 1m width of bark mulch (50mm deep) along the hedgerow.

3.15 Planting Pits and Fertiliser.

The Contractor shall ensure that the ground is cultivated, friable and suitable for easy planting. The Contractor shall supply blood and bonemeal for all planting at the following rates:

Fertilise during maintenance period only. (See Establishment maintenance).

Pit sizes shall be at least one and a half times bigger than rootballs, with friable, free-draining soil to the walls and floor of each planting pit. On bare root stock carefully arrange roots in the pit before backfilling and firming down the soil.

3.16 Spiral guards for hedge (Provisional)

Clear plastic biodegradable spiral guards, 600x50mm with bamboo cane (e.g from Tom's Tree Ties (01233 770066) or similar approved. Guards can be removed after 3 years at the discretion of the landscape manager. Top up bark mulch until hedge well established.

3.17 Stakes and Ties.

Staking of trees shall utilise the following stakes and ties unless otherwise specified in the drawings. Stakes will be softwood or other approved, and free from all cracks, shakes or bends. A sample of adjustable tree ties should be submitted for comment prior to site commencement.

Tree Size	Staking	Ties
45-85 litres	2 x 75 x 1400mm round section stakes 600mm above grd. and 50x25mm cross bar.	Adjustable plastic ties fixed to cross bar

3.18 Watering System. (Provisional)

Provide each tree with a 75 litre 'hydration bag' by Barcham Trees Ltd of Ely (01353 720950) or similar approved.

3.19 Pruning.

After planting and mulching, the Contractor shall allow to lightly prune trees, shrubs, and perennials to improve crown proportions and encourage vigorous healthy growth. Discuss the extent of pruning with the CA before commencing. (See also the specification for maintenance).

3.20 Replacements.

The Contractor will replace at his own expense any trees or shrubs that, in the opinion of the CA, fail to thrive within the 12 months establishment / defects liability period. The CA will make a decision based on the considered quality of tree stock at the time of planting; tree pit preparation and plant handling and subsequent maintenance. Plants lost through obvious vandalism or theft shall be recorded and photographed by the Contractor for consideration by the CA.

3.21 Mulch.

The Contractor shall supply and spread 50mm of coarse bark mulch to all planting beds at completion of the planting works and after approval to proceed from the CA. The Contractor shall provide a sample of mulch for approval before commencing these works.

3.22 Completion Works/Practical Completion

Allow to clear the site and ensure the removal of all waste materials after each planting operation on site. Remove or cultivate temporary access pathways, brush or wash earth from paved areas and make good any damage to existing surfaces to the satisfaction of the CA. Remove any signage or temporary boundary markers. Clean all surfaces and remove rubbish and contract arisings. When the CA is satisfied that contract works have reached practical completion stage, the Contractor will be permitted to invoice for works completed.

ADDITIONAL WORKS:**3.23 Hedge Planting.**

The Contractor shall ensure that the ground is cultivated to provide a deep free-draining tilth prior to planting. Plant the mixed native hedge transplants in a random mix in a double row, each plant at 500mm centres. Spread a 50mm deep, 1000mm wide strip of coarse bark mulch around the planted hedge at completion.

3.24 Closeboard Fence / Post and wire Fencing.

Supply and erect 1800mm and 1200mm closeboard fencing as per drawings and details. Confirm concrete or timber posts with client. Supply and erect boundary post and wire fencing as per drawings and details. Provide sample or example of fencing at tendering.

3.25 Landscape Paving.

The contractor shall supply and lay concrete pavers to patio and path areas as shown on the plan. Pavers shall be Marshalls Argent (colour tbc) provisional size 600x600 – or similar approved. Pavements shall be laid on 50mm sharp sand and a minimum of 100mm compacted sub-base material (provisional). Allow for mortar haunching at edging. Lay fall away from buildings. Provide 150mm wide, 50mm deep gravel drainage trim around buildings. (20mm nom agg).

4.0 LANDSCAPE MAINTENANCE: 12 month Establishment Period**4.1 Period of Maintenance.**

The Landscape Contractor shall provide a 12 month period of establishment maintenance to the planting and boundary areas, commencing at the date of practical completion as confirmed in writing by the CA.

4.2 Payment Certification.

The Contractor shall be paid for maintenance works in three instalments, the last one coinciding with the Final Completion certificate. The CA shall provide a site progress report at 4 month intervals, outlining any areas that need the Contractors attention and a valuation certificate recommending payment by the Client on presentation of the Contractors invoice. Payment shall only be recommended on completion of the tasks and duties outlined below.

4.3 Normal Maintenance Duties.

The Contractor shall visit regularly to:

- Remove weeds and maintain the planting areas in a clean and tidy state
- Prune and trim trees and shrubs and perennials.
- Remove litter and other detritus.
- Remove plants that fail to thrive and replace with new stock.
- Adjust stakes and ties on trees to minimise chafing and prevent damage.
- Maintain mulch levels and top up as to maintain a 50mm layer
- Mow lawn areas as specified
- Other works and items as identified by the CA.

4.4 Site visits / Notices to the CA.

The Contractor shall be expected to visit the site every 2-4 weeks to undertake the maintenance duties. He shall provide 2 days notice of the visits to give the CA the opportunity of being present.

4.5 Litter collection.

Collect and remove all extraneous rubbish and remove to the contractors tip.

4.6 Weed control.

Maintain the planting areas in a weed free state generally by hand hoeing and weeding. Only use spot treatment of a translocated herbicide after prior permission from the CA. The Contractor will not use pre-emergent or hormonal herbicides on the site.

4.7 General Pruning.

Except where specified otherwise, prune as recommended by BS7370: Part 4, clauses 3.6.2 to 3.6.5. Prune in accordance with good horticultural practice. Prune larger branches and woody stems in accordance with good arboricultural practice.

Thin, trim and shape appropriately to each species, location, season and stage of growth, leaving a well balanced natural appearance.

Do not prune spring flowering plants in the winter/early spring period, unless specified otherwise, but prune them lightly after the flowering period. Avoid the nesting season, flowering periods or other 'display' times where possible.

When using handsaws cut in one continuous operation to form a smooth cut surface. Remove branches without damaging or tearing the stem.

4.8 Failures of planting.

Excepting theft or malicious damage after practical completion any trees/shrubs/plants that have failed to thrive during the defects liability period will be regarded as defects due to materials or workmanship not in accordance with the contract. Unless otherwise instructed they must be replaced by approved equivalent trees/shrubs/plants during the next suitable planting season. Replacements must match the size of adjacent or nearby plants of the same species, or should match the original specification, whichever is the greater.

4.9 Theft or Malicious damage.

Where the Contractor believes that theft or malicious damage has resulted in plant losses or damage to other contract works he shall record all damage and losses along with the date and location in the site maintenance record. He shall then submit all details to the CA for further consideration.

4.10 Mulch.

The Contractor shall monitor mulch levels and allow in his price to supply and spread additional mulch to beds at the end of the maintenance period to ensure that there is a 50mm layer of mulch to beds at the time of handover.

4.11 Fertilising.

The Landscape Contractor shall allow to fertilise shrubs and planting areas towards the end of the first growing season (eg September). Allow for one application of a general slow release fertiliser, blood and bone or a manure as per manufacturers instructions, best practice guidelines and BS7370: Part 4, clause 3.5.11. Confirm the fertiliser to be used with the CA prior to spreading.

4.12 Disposal of arisings / Cleanliness

Dispose of all weeds, prunings, trimmings and non bio-degradable materials (litter etc) at the Contractors off - site tip. At each maintenance visit remove soil and other debris from all hard surfaces and grassed areas and leave the works in a clean tidy condition.

4.13 Additional work.

Note any damage to planting, pavements, fences and the like and include in the four monthly report. Remove tree stakes once trees established (normally after third or fourth growing season).

4.14 Final Completion.

At the end of the 12 month maintenance period the Contractor shall arrange a date for a Final Completion meeting. After all outstanding items have been completed to the satisfaction of the CA, the CA shall issue a Final Completion certificate and a final payment certificate which shall include release of any retention monies.