



THE PLASSEY

LANDSCAPE SPECIFICATION (ENTRANCE ROAD / RECYCLING CENTRE)

August 2017

Our Ref: JSL2868_561

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APPENDICES:

- I. Landscape Schedule (JSL2868_560)
- II. Tree Pit Details (JSL2868_450)
- III. Temporary Tree and Vegetation Protective Fencing (Fig 2 - BS5837:2012)

1 LANDSCAPE SUB-CONTRACTOR

- 1.1 The works described in this specification shall be carried out by a suitably qualified and experienced Landscape Contractor either employed as a domestic sub-contractor by the Main Contractor, or as a direct Contractor.
- 1.2 The proposed Landscape Contractor shall (unless otherwise agreed) be agreed with the client / Landscape Architect.
- 1.3 The works described in this specification shall be carried out under supervision by a suitably qualified Member of the Landscape Institute or other approved supervisor.

2 SCOPE OF WORKS

- 2.1 As part of the main Contract, the preliminary and base external site works will include:
1. Carry out the initial site clearance.
 2. Remove and cart away existing post and rail fencing.
 3. Clear existing vegetation to be removed and complete formative management arboricultural works.
 4. Erect temporary protective fencing for existing vegetation and grassland to be retained
 5. Strip soil, store soil and/or remove soil from site
 6. Remove surplus subsoil from site
 7. Prepare sub-grade, and excavate to depths stated
 8. Spread / re-spread topsoil to required depths for the landscape planting and grass works
 9. Any works relating to the protection and management of Protected Species and Trees
- 2.2 Amenity grade turf, any grass seed and all other landscape sundries required to complete the soft landscape works will be sourced and procured by the Soft Landscape Contractor as part of this Contract. The specification and quality of all materials shall comply with the details included within this specification.
- 2.3 The Soft Landscape Contractor will carry out the following works as listed within this Soft Landscape Specification:-
- Supply and deliver specified plants, as listed in the Plant Schedule.
 - Prepare, cultivate and grade topsoil to grass areas, planting beds and tree pits
 - Provide drainage medium and irrigation systems to tree pits
 - Carry out all planting works including associated works
 - Carry out all grass seeding or turf laying works including topsoil grading and cultivation
 - Provide maintenance to all planting and grass areas up to Hand Over to the Client, or on a Practical Completion date agreed mutually between the Soft Landscape Contractor and Client.
 - Provide 12 months maintenance and defects period post Practical Completion for shrubs and trees.
- 2.4 During the works the Main Contractor (and their Sub-Contractors) shall ensure protection for the following:

2.4.1 Existing Topsoil / Subsoil

Protect existing topsoil and subsoil from over-compaction in those areas which may be damaged by construction traffic, parking of vehicles, temporary site accommodation or storage of materials and which will require reinstatement prior to completion of the Works. Agree extent of reinstatement with the CA and bear any costs arising.

2.4.2 Retained Trees / Woodlands / Hedges / Shrubs / Grassed Areas

- Adequately protect and preserve, except those which are to be removed.
- Replace to the approval of the CA or treat as instructed any species or areas damaged or removed without approval.
- Trees and shrubs which, due to the Contractor's negligence, are uprooted, destroyed, or in the opinion of the CA, damaged beyond reasonable chance of survival in their original shape, must be replaced with those of a similar type and age at the Contractor's expense.

2.4.3 Trees and Woodland Areas to be Retained

Unless agreed otherwise by the CA, **do not**:

- Remove or cut existing trees or vegetation without specific instructions.
- Dump spoil or rubbish, excavate or disturb topsoil, park vehicles or plant, store materials or place temporary accommodation within the branch spread.
- Sever roots exceeding 50 mm in diameter or branches from growing trees, without express prior permission.
- Change level of ground within an area 2m beyond the branch spread.

2.4.4 Protection of Existing Trees & Woodland Areas

The contractor shall maintain existing protective fencing or where necessary erect a temporary protective barrier in accordance with Figure 2 of BS 5837:2005 Trees in relation to construction (see Appendix II). The barrier shall consist of either a 2.3m high vertical and horizontal scaffold framework, well braced to resist impacts with vertical tubes driven into the ground at a maximum interval of 3m. Secure weldmesh panels onto framework and apply sign stating 'NO ENTRY: TREE PROTECTION FENCE' to provide areas of general protection / warning.

The contractor shall take all necessary precautions to protect in the course of his work all existing trees or vegetation from malicious or accidental damage.

The temporary protective fencing maybe installed on a phased basis to follow the general programme of the construction works. The fence will be erected prior to active works commencing in any given construction area, including the commencement of site clearance and enabling works.

The temporary fence will be retained intact for the whole duration of the works unless otherwise instructed by the Contract Administrator. On issue of the practical completion certificate the

protective fencing shall be removed and the ground made good and post holes filled with soil and lightly compacted.

3 SUBSOIL AND TOPSOIL

- 3.1 All excavations, cultivations and grading required beneath the canopy of retained trees or within 3m of a hedge line or woodland area shall be carried out by hand using hand tools taking extreme care to avoid ground compaction and not to damage or disturb any tree roots.

3.2 Subsoil

- 3.2.1 Subsoil grading of the site shall leave landscape areas with smooth flowing contours to achieve the specified finished levels when topsoiled.

Prior to placing topsoil subsoil formation should be loosened and/or ripped to a depth of 300mm.

The contractor shall satisfy himself as to the presence of any (above and below ground) services prior to any ripping or cultivation operations – if in doubt advise CA and seek further instruction.

Any areas compacted during construction works shall be ripped and de-compacted to ensure surface water drainage.

Any areas found to be wet or waterlogged shall be alleviated by positive land and/or tree pit drainage as necessary to ensure all tree and shrub planting areas are free draining.

3.3 Topsoil

3.3.1 Topsoil amelioration / Handling

The Soft Landscape Contractor shall carry out any recommendations from the soil analyst for soil amelioration and / or soil handling to the approval of the CA. Such costs shall be borne by the soft landscape contractor.

At all times, soils shall not be overly compacted or trafficked.

Soils shall be used in a friable, non-plastic state, and not spread during heavy, prolonged periods of rain.

In advance of reusing site-won soils, stockpiles may need to be reduced / subdivided to allow natural drying processes of the soils to take place.

3.3.2 **Site won topsoil: Amelioration requirements for ornamental planting areas ONLY**

Site stripped topsoil shall be ameliorated in-situ (in location of each planting plot), or ex-situ (off site in a larger batching location for carting to plot separately).

To sufficiently raise the quality of the site won topsoil to meet the minimum requirements of the British Standard for Topsoil (Multipurpose Topsoil) it will be necessary to increase the organic matter content and fertility status through the use of a previously agreed soil ameliorant such as spent mushroom compost or proprietary green waste compost or similar approved, at a moderately high mixing ratio as outlined below. Composted green compost would also inoculate the soil with beneficial soil microbes. Submit proposals to the CA for approval, including proposed source and analysis details.

Soil drying and aeration

Soil stored in a large stockpile has a small surface area relative to the volume of soil and will tend to stay in a moist and potentially anaerobic condition if left as it is. Therefore, to encourage drying and the creation of aerobic conditions, the soil needs to be excavated and reformed into a series of 'loose-tipped' low windrows (max. 2m high). This would give the soil a much larger surface area and promote efficient drying. This operation does require good weather conditions and would normally be timed during the summer months (April to September). Drying and aeration may be assisted by turning the soil once or twice to expose the wetter lower parts to the air. It is difficult to judge how long the soil would take to dry sufficiently and the period required would be largely dependent on prevailing weather conditions.

Soil blending

Once suitably dry and aerated the soil shall be thoroughly mixed with the previously agreed compost using a loading shovel or mechanical excavator.

To raise the organic matter content of the soil and address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2011 /Landscape Institute/WRAP grade (10mm screened) green waste compost, spent mushroom compost or similar approved) at a provisional application rate of 25% by volume.

3.3.3 Fertiliser requirements

All shrub, hedgerow, woodland planting areas and tree pits shall receive the following fertiliser prior to planting. AT NO TIME SHALL MARGINAL OR AQUATIC PLANTED AREAS RECEIVE FERTILISER, NOR SHOULD FERTILISERS BE USED WITHIN 5m OF ANY WATERCOURSE. Application should take place before final cultivation and three to five days before planting.

- Everris Enmag CRF at a rate of 70g/m², cultivated into the topsoil to a depth of 200mm. (see <https://www.amenity.co.uk/landscaping-fertilisers/scotts-enmag-crf-11-21-9-6mg-planting-fertiliser-25kg.html>, or similar and approved supplier)

All amenity grass areas shall receive the following prior to laying turf. NO FERTILISERS TO BE USED WITHIN 5m OF ANY WATERCOURSE. Application should take place before final cultivation and three to five days before turfing.

- Everris Sportsmaster Pre-Seed at a rate of 35g/m², cultivated into the topsoil to a depth of 100mm. (see <https://www.amenity.co.uk/pre-seed-fertilisers/everris-sportsmaster-pre-seeder-8-12-8-3mgo-seaweed.html>, or similar and approved supplier)

3.3.4 Imported Topsoil (if required)

It is anticipated that the landscape contractor may need to import topsoil to make up deficiencies on site. However if the main contractor so chooses, any existing topsoil may be removed from the site and either returned or replaced in accordance with this specification, at no additional cost.

Provide as necessary to make up any deficiency of existing topsoil available on site to complete the work to BS 3882: 2007, grade: General Amenity.

Soil shall be free from aggressive weeds, debris or other potentially hazardous foreign matter.

3.3.5 Spreading Topsoil

IN ALL CASES THE CONTRACTOR SHALL ENSURE THAT THE SUBSOIL / FORMATION LAYER IS FREE DRAINING PRIOR TO PLACING TOPSOIL. ADVISE THE CA IF THIS CANNOT BE ACHIEVED AND SEEK INSTRUCTION BEFORE PROCEEDING.

Remove temporary surfaces before spreading topsoil.

Spread over prepared subsoil in layers not exceeding 150mm and gently firm each layer before spreading the next.

Do not compact topsoil. Preserve a friable texture of separate visible crumbs whenever possible.

Overall minimum depths after firming and settlement to be:

- | | |
|-------------------------------------|--|
| - Amenity turfed/grass seeded areas | 100mm |
| - Amenity shrub areas | 350mm |
| - Native mix planted areas | 250mm (or existing soil where present) |
| - Tree pits as specified | varies (see Section 6 below) |

3.3.6 Finished Levels of Topsoil after settlement, unless otherwise stated, to be:

- 20mm above adjoining paving or kerbs
- unchanged within the root spread of existing trees
- not less than 150mm below dpc of adjoining buildings
- where mulch is specified, topsoil is to be neatly pulled back at edges minimum 75mm deep to allow retention of mulch and married in with adjoining soil areas

4 PLANTING

4.1 Generally planting should be carried out in accordance with the following British Standards:

BS 4043: 1989 Recommendation for Transplanting Root Balled Trees

BS 4428: 1989 Code of Practice for General Landscape Operations

4.1.1 Times of Year for Planting

- Seeding – mid March to the end of April or late August to mid October.
- Root balled / Bare root Deciduous trees and Shrubs – late November to Mid March.
- Root balled Conifers and evergreens – September - November or March - May.
- Turf, Container grown shrubs and trees (including spring ringed) – At any time if ground and weather conditions are favourable. Ensure that adequate watering, drainage and weed control is provided.

Waterlogging shall be avoided through proper ground preparation and tree pit excavation.

4.1.2 Watering

- Quantity – where required to field capacity
- Application – Even and without displacing seeds, seedlings or soil.
- Frequency – As necessary to ensure the establishment and continued thriving of all seed / turf areas, trees and planting.

4.1.3 Setting Out

Clearly mark boundaries of seeding / turfing and planting areas and location of trees and obtain approval before starting work.

4.1.4 Tree Surgery to Existing Trees (Where required / instructed)

Where scheduled, or as instructed, existing trees shall have all dead, dangerous or damaged branches removed. Only where scheduled, or as instructed, lower branches shall be removed to a clear stem height of 2.0m. Ivy shall be severed at the base and removed to a minimum height of 1.5m.

All tree surgery shall be carried out by an approved tree surgeon in accordance with BS 3998: 2010.

Branches to be removed should be cut in accordance with BS 3889:2010, where suitable “target” prune, without exaggerating the size of the wound. This will usually coincide with the limit of branch buttressing. The size of the wound shall be as small as practicable, therefore flush

pruning should be avoided; pruning which leaves a small collar at the base of the branch is preferred.

All pruning works should seek to maintain an even, balanced crown form.

All works should consider carefully their potential affect on protected species and their habitat, including species such as Dormice, Bats and Red Squirrels. If in doubt consult an Ecologist prior to commencing any tree works.

4.2 **Preparation Generally**

4.2.1 Peat

Do not use peat or products containing peat.

4.2.2 Cultivation

Compacted topsoil: Break up to full depth.

Incorporate specified compost and fertiliser.

Tilth: Within a few days before seeding / turfing or planting cultivate topsoil using a suitable mechanical cultivator until a fine tilth is achieved to a depth of:

- 350mm – Shrub planting areas
- 300mm – Hedgerow areas
- 150mm – Turf / grass seeded areas

Remove from site undesirable material brought to the surface including rubble, stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass, rubbish and debris and foreign matter.

Any areas which remain waterlogged after cultivation, shall receive additional remediation or positive drainage to maintain suitable aerobic growing conditions.

5 TURFING

5.1.1 Final Cultivation

- Timing – After grading and fertilising.
- Seed bed - Lightly rake to a true, even surface. Remove surface stones/earth clods exceeding 50 mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
- The contractor should allow for all cultivation operations to achieve a good seedbed, including hand raking and hand digging on slopes and banks inaccessible to machinery, and against the backs of kerbs and paths.

5.1.2 Turf for all areas: Soft Landscape Contractor to provide supplier details for CA confirmation.

And/or, use the following specification:-

- Supplier: Rolawn Ltd, Tel: 0845 6046050 or similar and approved.
- Type: 'Medallion'
- Rolawn Medallion® turf to BS3936. See also Rolawn STRI testing programme. To be obtained from Rolawn Limited, Elvington York YO41 4XR

5.1.3 Grass seed for Amenity Grass Edges and Areas to be Made good.

Amenity grass areas

- Supplier: British Seed House Tel: 01179 823 691, or similar to approval.
- Type: Mixture reference: BSH A22 – Low maintenance grass mix
- Application rate: 35g/m².

Laying all turf

Lay turf, preferably along a straight side in a row, butting closely end to end. On subsequent rows, stagger the joints in brickwork fashion. Do not leave gaps between the turfs.

Joints between different specifications of turf to be seamless with sweeping, smooth curves where appropriate to provide an informal character.

Other laying details include:-

- Time of year: [November - March. Works carried out outside this period; to be agreed with CA.
- Weather conditions: Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.

- Working access: Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.
- Jointing: Lay with broken joints, well butted up. Do not stretch turf.
- Edges: Whole turfs, trimmed to a true line.
- Adjusting levels: Remove high spots and fill hollows with fine soil.
- Consolidating: Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.
- Dressing, Minimal, spread in to completely fill all joints as required: [Finely sifted topsoil].
- Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.
- Laying turf on banks greater than 45° slope: Turf configuration shall be diagonal or horizontal. Secure turfs with small pegs / stakes, at top of slope and throughout the turf as required to secure the turf in place without ripping.
- Removal of fixings: On establishment of the turf such that it cannot be lifted by hand.

5.1.4 Seed Quality

- Freshness: Produced for the current growing season.
- Certification: Blue label certified varieties.
 - Standard: EC purity and germination regulations
 - Official Seed Testing Station certificate of germination, purity and composition:

5.1.5 Seed sowing

- General: Establish good seed contact with the root zone.
- Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
- Distribution: Seed shall be evenly distributed at the rates specified and shall be immediately followed by lightly raking the soil surface to cover the seeds, by use of a chain harrow or other suitable plant.

5.1.6 Seedbed germination

- Seeding shall be repeated as necessary until an evenly distributed dense sward is established over the seeded area to the satisfaction of the CA. The Contractor / Supplier shall allow for maintenance of all grass areas (as specified below) until this is achieved.

5.2 **Protecting / Cutting**

5.2.1 Protective Fencing

- Protect newly turfed / seeded areas with 1.5m high chestnut pale fencing if required. Maintain fencing until grass is well established then remove and reinstate ground.

5.2.2 Watering

- During establishment of grass areas ensure that sufficient water is applied using a fine rose sprinkler to maintain healthy growth.

5.2.3 First Cut of Amenity Grassed Areas

- Timing: When amenity grass reaches 75 mm and meadow reaches 150mm high and is reasonably dry. Meadow grass to be cut toward late summer / early autumn, amenity grade turf can be cut at any time during the growing season.
- Before cutting, remove debris, litter, and stones and earth clods larger than 25 mm in any dimension and roll with a light roller.
- Method: 48 hours later cut with a suitable cylinder box mower, or suitable rotary mower on slopes and banks.
- Height of first cut:

Amenity grass and turfed areas - 50 mm
- Arisings: Remove and dispose of all arisings to a suitable composting facility.

5.3 Maintenance

Between the first cut and Handover the height of growth for amenity grass areas must not exceed the maximum height prior to first cutting. Cut as many times as necessary with machinery and to heights as specified for the first cut.

5.3.1 Failures of turf

Bare areas and areas of dead grass which become apparent before the end of the Defects Liability Period or Handover (whichever comes first) will be regarded as defects due to materials or workmanship not in accordance with the Contract.

5.3.2 Maintaining Grassed Areas: Maximum height of growth at any time: 60mm

5.4 Preparation: Before each cut remove all litter and debris.

- Cutting: Cut at two weekly intervals as required through the growing season
- Arisings: Remove and dispose of all arisings
- Trimming: At the time of each cut, trim all grass edges, including round the base of trees, manholes, etc and remove arisings
- Weed control: Keep the sward substantially free of broad-leaved weeds by applying an approved selective herbicide

Where excessive annual weed growth threatens to smother new grass areas, cut back growth to a height of 50mm with a scythe or rotary cutter and carefully rake off cuttings. Spot treat coarse perennial weeds with a suitable herbicide such as Glyphosate gel.

Watering: To be undertaken at the frequency necessary to ensure establishment and survival of the grass sward.

- Further fertiliser for Turfed & Amenity Grass Areas

March application: 11:6:9 Spring / summer turf fertiliser at 35 - 50 g/m² or equivalent.

6 TREES AND SHRUBS

6.1 Supply and Storage

Trees and Plants Generally:

- Condition: Materially undamaged, sturdy, healthy and vigorous. Soft Landscape Contractor to confirm quality of stock upon delivery, reviewing samples of all material from a number of batches / pallets on each lorry. Checks should include reviewing stock for being overly dry, sweating or heat damage, dead / dying, lack of bushiness (i.e. patchy or falling apart) and completeness of batch (i.e. correct amount / species on lorry).
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
- Root system and condition: To requirements of the relevant parts of BS 3936 and balanced with branch system.
- Species: True to name.

Plant / Tree Substitution

- Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives stating proposed substitutions.
- Obtain approval before making any substitution.

6.1.1 Plant / Tree Handling, Storage and Transport

To CPSE 'Handling and establishing landscape plants' (obtainable from the Horticultural Trades Association) Part I, Part II and Part III, paragraphs 1.3.3 to 1.3.6, 3.0, and 4.0.

6.1.2 Planting Generally

To CPSE 'Handling and establishing landscape plants' (obtainable from the Horticultural Trades Association) Part III, paragraphs 6.2 to 6.6. Plant upright or well balanced with best side to front.

6.2 Preparation of Planting Beds / Planting Materials

See Section 3

6.3 Planting Shrubs/ Groundcover and Native Shrub Mix areas

6.3.1 Plant Layout

Spacing: Evenly as scheduled – See Appendix I

Density: As scheduled, single species blocks of amenity shrubs and herbaceous species. Native Shrub mixes to be randomly mixed; and shrub mixes arranged in informal single species of 3 – 5 number.

Edging row of amenity shrubs to each species to be set out to clearly define single species areas.

6.3.2 Planting Pits - Amenity Shrub & Herbaceous planting, and Native Shrub/Tree Planting.

To BS 3936: Part 1: 1980 (1992)

Timing: Excavate immediately prior to planting.

Sizes: 150 mm wider than roots when fully spread and 400 mm deep

Additional requirements: Increase dimensions where necessary to ensure that pits are at least 75 mm deeper than root system and wide enough to accommodate roots when fully spread

Finished level to be at original soil mark on shrubs

6.3.3 Antidesiccant for Conifers/ Evergreens

Dip in or thoroughly spray with approved antidessicant.

Application: Dip before delivering to site. Spray again soon after planting. Do not apply in wet or frosty weather. Ensure full coverage of underside of foliage.

6.3.4 Herbaceous Plants

Well rooted, healthy, hardy and not less than one year of full growth.

Evenly space at the rate stated over the allocated area avoiding straight lines. Plant carefully in generously sized holes with finely broken soil returned around the roots. Lightly firm the soil.

6.3.5 Drainage to Planting Beds

Any areas which are not free draining the Soft Landscape Contractor shall supply and install land drainage to ensure plant areas are not waterlogged. Where necessary after planting lightly fork over the soil to alleviate any surface compaction.

6.3.6 Backfilling Material

Composition: Previously prepared mixture of topsoil and additives excavated from pit and additional topsoil as required.

6.3.7 After Planting

Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.

Firming: Lightly firm soil around plants and fork and / or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.

Immediately after planting shrubs carefully cut back any damaged, dead or diseased branches and remove any weak, thin or malformed growth.

When directed and to the extent appropriate for the species cut back to encourage growth.

6.3.8 Mulching Planting Beds: Amenity shrub and all planted mix areas (including woodland, structural shrub & groundcover mixes)

'Amenity Bark Mulch' (5 - 75mm) as supplied by Melcourt Industries Tel: 01763 502711 or equal approved. Fire resistance to BS 4790 - 1987.

Sample to be provided and approved by LA before delivery to site.

Coverage: settled depth of 75mm

6.3.9 Plant Protection: Native Shrub Mixes

- All trees and shrubs within native shrub/tree mixes to be protected from rabbit damage with the installation of 1No. spiral shelter (colour 'green', 44mm diameter x 60cm high) shelter and 20mm cane per shrub.

Spiral guards available from Tubex Tel 01621 874299 (or similar and approved supplier).

- Native screen planting to be protected from rabbit damage with the installation of 1No. spiral shelter (colour 'green', 44mm diameter x 60cm high) shelter and 20mm cane per shrub.

All Holly within shrub mix to be protected with the installation of 1No. shrub shelter and 25mm softwood stake per shrub / tree. Type 'Treeguard Mesh' for shrubs, 170-200mm diameter x 60cm high shelter, colour 'green'.

Spiral guards & 'Treeguard Mesh' available from Tubex Tel 01621 874299 (or similar and approved supplier).

6.4 **Planting Trees: See also Appendix II**

6.4.1 Antidesiccant for Conifers / Evergreens

- Dip in or thoroughly spray with approved antidesiccant.
- Application: Dip before delivering to site. Spray again soon after planting. Do not apply in wet or frosty weather.

6.4.2 Tree Pits

Sizes and location as scheduled below:

B) Extra Heavy Standard Trees = 1200 x 1200 x 750mm deep

C) Standard Tree = 800 x 800 x 550mm deep

*Tree pit sides to be scarified prior to planting of tree and backfilling

6.4.3 Tree Pit Aeration / Irrigation Pipe

Locations: All trees 8cm girth and above.

- Type: PVC pipe, black, 60mm diameter x 2500mm maximum length with associated end cap. Irrigation System to be Green Blue Urban Roottrain Urban or equal approved.
- Insert during backfill around the rootball; one end shall be placed in the drainage layer and the top end shall be cut off at a height of not more than 25mm above finished ground level and capped.

6.4.4 Tree Pit Drainage

- Aggregate layer: Clean gravel or broken stone, with no fines, graded 50 to 20 mm. Depth: 200mm.

6.4.5 Deciduous and Coniferous Advanced Nursery Stock Trees

- Rootballed stock shall be supported by straps, frames or wire mesh baskets and shall be protected against drying out by wrapping firmly with hessian, plastic film or other recommended material. Wrapping shall be firmly tied over the top of the rootball.
- Air pot / spring ringed stock shall be suitably protected with hessian to prevent damage and drying out as soon as the air pot has been removed.

6.4.6 Tree Support: Refer to Tree pit construction detail in Appendix III (JSL2868_400) for all tree pit construction and support details.

B) Extra Heavy standard / Heavy Standard trees: Double staking with cross brace

Staking: Untreated softwood stakes, 75mm dia, including 75mm dia half round cross brace. Drive stakes in opposite arrangement vertically at least 300 mm into bottom of pit on either side of tree position before planting. Consolidate material around stakes during backfilling.

Cross brace to be positioned on windward side of tree.

Height of stakes: Cut to approximately 800mm above ground level or 1/3 the height of the tree whichever is the lowest.

Tree ties: Buckled belt tree tie including rubber spacer. Available from Toms Tree Ties 01233 770066 (or similar and approved supplier)

C) Standard trees: Short single staking

Staking: Untreated, machined softwood stakes, 75mm dia. Drive stake diagonally at least 300 mm into bottom of pit on before planting. Consolidate material around stake during backfilling.

Position stake on windward side of tree.

Height of stake: Cut to approximately 800mm above ground level or 1/3 whichever is the lowest.

Cross-ties: Buckled belt tree tie including rubber spacer. Available from Toms Tree Ties 01233 770066 (or similar and approved supplier)

6.4.7 Backfilling Material

Ensure that all tree pits are free draining prior to backfilling. Do not back fill pits that are not free draining – notify Landscape Architect and CA of any pits retaining water.

Topsoil shall NOT be used at a depth greater than 500mm unless agreed with the landscape architect.

Backfill prepared tree pit with 150mm free draining stone aggregate as 6.4.4. Backfill remainder of pit with previously prepared mixture of topsoil excavated from pit and additional topsoil as required, together with ameliorant (see below).

Ameliorant/ Conditioner: Planting Compost: See Section 3.

6.4.8 Mulching Trees

Material: Generally as planting beds.

Trees in grass: Amenity Bark mulch as supplied by Melcourt Industries or similar and approved.

- Fire resistance to BS 4790 – 1987
- Purity: Free of pests, disease, fungus and weeds
- Preparation: Clear all weeds. Apply pre-emergent herbicide
- Coverage: 75mm depth, in a circular area of 500mm radius measured from the tree stem.

6.4.9 Tree Protection:

All trees to be protected from rabbit damage with the installation of 1No. Clear spiral guard per tree (63mm diameter x 75cm high) from Tubex Tel 01621 874299 (or similar and approved supplier).

6.4.10 Instant Hedging:

- Pregrown Hedging to be provided in 1m long troughs and to be Hornbeam (*Carpinus betulus*).
- To be 'Readyhedge' or equal approved.
- Hedging to be dense and must be in a condition to form suitable to form an instant screen.

7 PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

7.1 Maintenance Works

7.1.1 Maintenance

Duration: Carry out the operations in the following clauses from completion of planting / turfing until the end of the defects liability period or handover (where the latter is agreed with the client).

Frequency of maintenance visits: fortnightly during growing season.

7.1.2 Failures of Planting

General: Plants / trees / shrubs that have failed to thrive (unless due to theft or malicious damage after completion) during period stated, will be regarded as defects due to materials or workmanship not in accordance with the Contract. Replace with equivalent plants/ trees/ shrubs.

Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.

COSTS OF REPLACING FAILED PLANT STOCK AND ITS IMPLEMENTATION, WITH LOSS ATTRIBUTED TO QUALITY OF IMPLEMENTATION / MAINTENANCE SHALL BE INCURRED BY THE SOFT LANDSCAPE CONTRACTOR, NOT THE CLIENT.

Timing of making good: In the earliest appropriate planting season.

Landscape contractor shall seek approval of any substitutions with CA / LPA prior to implementation.

7.1.3 Planting Maintenance Generally

Weed control: Maintain weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of original planting pit.

Keep planting beds clear of weeds, by cultivation, use of approved herbicides and maintaining full thickness of mulch.

Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch.

Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.

Staking: 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.

Frequency of checks: 3 months.

Trees: Spray crown when in leaf during warm weather. Carry out in the evening.

Standard Trees: Maintain the clear stem of standard trees by pruning away any new growth which may appear along the trunk or basal areas of the tree.

7.1.4 Re-firm Planting

7.1.5 Re-firm plants that have been disturbed by wind rock or frost, particularly after heavy winds or storms.

7.1.6 Pest Control

Allow for pest control by spaying with a suitable approved pesticide in cases of severe insect and pest infestation. All spraying must be carried out in accordance with manufacturers written recommendations.

All damage that occurs, as a result of spraying, shall be made good at the Contractor's own cost.

7.1.7 Planting Maintenance: Fertiliser

Time of year: March or April.

Fertiliser to planting beds: Manufacturer: Fisons Ficote. Product reference: 180 16:10:10.

Application: Evenly spread, carefully incorporating below mulch materials.

Coverage: 112 grms/m2.

Year 3 slow release fertiliser application to trees and shrubs in March or April.

7.1.8 Planting Maintenance: Pruning

General: Prune at appropriate times, to remove dead or dying and diseased wood and suckers, to promote healthy growth and natural shape.

Prune trees to favour a single central leading shoot.

7.1.9 Planting Maintenance: Watering

Ensure that sufficient water is applied to maintain healthy growth. Carry out as and when necessary using a fine rose or sprinkler until full depth of topsoil is saturated. Regularly water plants in shadow of roof overhangs.

Spray crown of trees when in leaf during warm weather. Carry out in the evening.

Water trees from above ensuring root ball is sufficiently saturated to maintain healthy growth – do not rely on watering pipe alone.

Where applicable carry out regular inspections of the 'vertical inspection pipe' to monitor conditions within the pits. Should standing water appear and not dissipate quickly allow for pumping out as necessary to the satisfaction of the landscape architect.

7.1.10 Final Mulching

Timing: At end of the maintenance period stated.

Watering: Ensure that soil is thoroughly moistened prior to re-mulching, applying water where necessary.

Planting beds: Re-mulch as specified. Coverage: minimum 75mm depth required at handover.

Trees: Re-mulch as specified.

- 7.1.11 All maintenance works should consider carefully there potential affect on protected species and their habitat, including species such as Dormice, Bats and Red Squirrels. If in doubt consult an Ecologist prior to commencing any tree works.

APPENDIX I

Landscape Schedule (JSL2868_560)



Tree and Shrub Schedule: Entrance Road and Recycling Centre

Site: The Plassey, Eyton, Wrexham, LL13 0SP

Client: John Brookshaw

Dwg Ref: JSL2868_510

Schedule ref: JSL2868_560

Status: Tender

Date: Aug 2017

Revision:

No	Abbr	Botanical name	Common name	Girth / size	Stock	Mix % / Container	Density
<u>A. Trees</u>							
<u>i. Extra Heavy Standard Trees</u>							
1	Acr cm	Acer campestre	Field Maple	10 - 12cm	C / SR / RB		
<u>ii. Heavy Standard trees</u>							
2	Prns av	Prunus avium 'Plena'	Wild Cherry	12 - 14cm	C / SR / RB		
<u>iii. Feathered Trees</u>							
12	Be pnd	Betula pendula	Silver Birch	300-350cm	C / RB		
9	Crp bt	Carpinus betulus	Hornbeam	300-350cm	C / RB		
<u>B. Amenity Shrub Planting</u>							
72	Lnc pl	Lonicera pileata		Bushy / 5	20-30cm	C - 3L	4/m2
101	Prns lauro OL	Prunus laurocerasus 'Otto Luyken'		Bushy / 5	60-80cm	C - 5L	4/m2
31	Rsm of P	Rosmarinus officinalis 'Miss Jessops Upright'		Bushy / 5	60-80cm	C - 5L	6/m2
<u>C. Native Shrub Screen Planting</u>							
<u>Native Shrub Planting Mix 1 (1/m2, 1m centres)</u>							
67	Crtg mn	Crataegus monogyna	Hawthorn	60 - 80cm	B	50%	
20	Cryls av	Corylus avellana	Hazel	60 - 80cm	B	15%	
27	Il aq	Ilex aquifolium	Holly	2L	C	20%	
20	Prns sp	Prunus spinosa	Blackthorn	40-60cm	B	15%	
							100%
<u>C. Instant Hedging</u>							
*45	Crp bt	Carpinus betulus	Hornbeam	2 years	90-120cm	1m(l) x 0.2m(w) trough	100%
		<i>Planted in troughs as 'Readyhedge' stock</i>					
		<i>1 no. trough per linear metre</i>					
<u>D. Herbaceous Planting</u>							
58	Clmg ac KF	Calamagrostis acutiflora 'Karl Foerster'		Clump	40-60cm	C - 5L	6/m2
23	Mscn sn LK	Miscanthus sinensis 'Little Kitten'		Clump	40-60cm	C - 5L	1.5/m2
29	Prsc am F	Persicaria amplexicaulis 'Firetails'		Bushy / 5	60-80cm	C - 5L	3/m2
<u>E. Grass areas</u>							
i. Amenity grass areas - Mix A22 by BSH (or similar and approved)							

Notes:-

BR = Bare root

C = Container grown

Bl = Bulb

RB = Root balled

B = bagged

SR = Spring ringed

Pl = Plug plant

Cr = Corm

APPENDIX II

Tree Pit Details (JSL2868_450)



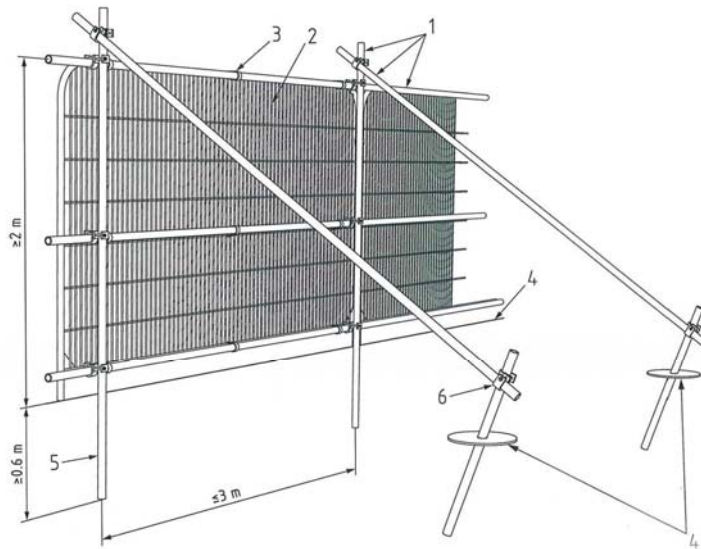
Rev	Description	Date	Initial	Checked
				
Lakesbury House, Hillingbury Road, Chandlers Ford, Hampshire. SO53 5SS T: +44(0)2380 810 440 E: rpsso@rpsgroup.com F: +44(0)2380 810 449				
Client	John Brookshaw			
Project	The Plassey Eyton Entrance Road / Recycling Centre			
Title	Landscape Construction Details Tree Pits			
Status	Drawn By	PM/Checked by		
Tender	CP	DC		
Job Ref	Scale @ A2	Date Created		
JSL2868	1:20	August 2017		
Drawing Number		Rev		
450		-		
rpsgroup.com				

APPENDIX III

Temporary Tree and Vegetation Protective Fencing

Fig 2 – BS 5837:2012

Figure 2 Default specification for protective barrier



Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps