SPECIFICATION FOR SOFT LANDSCAPE WORKS

BRIDGE POINT

UXBRIDGE

BRRIDGE INDUSTRIAL

Barry Chinn Associated Limited
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INDEX TO SPECIFICATION

APPENDICES

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SECTION 1

PREAMBLES

Q28

TOPSOILING

Q28
Topsoil and soil ameliorants

System outline

110 Grass soil system

1. Description: For all grassed areas
2. Composition
    2.1. Topsoil:: 150mm depth of imported topsoil or site sourced topsoil (if available) as clause Q28/316.
    2.2. Subsoil:: 300mm depth of imported subsoil or site sourced subsoil (if available) as clause Q28/317.

135 Planting bed soil system

1. Description: For shrub planted areas
2. Composition
    2.1. Topsoil: 300mm depth of imported topsoil or site sourced topsoil (if available) as clause Q28/316.
    2.2. Subsoil:: 300mm depth of imported subsoil or site sourced subsoil (if available) as clause Q28/317.

136 Planting bed soil system

1. Description: For woodland and thicket planted areas
2. Composition
    2.1. Topsoil: 300mm depth of imported topsoil or site sourced topsoil (if available) as clause Q28/316.
    2.2. Subsoil:: 600mm depth of imported subsoil or site sourced subsoil (if available) as clause Q28/317.

145 Plant pit backfilling soil system

1. Description: For tree pits
2. Drawing:: Refer to typical section through tree pit in Appendix for detail
3. Composition
    3.1. Topsoil: 300mm depth of imported topsoil or site sourced topsoil (if available) as clause Q28/316.
    3.2. Subsoil: Imported or site sourced subsoil (if available) as Q28/317,
    3.3. Drainage layer: 150mm depth of 10-20 mm gravel with geotextile layer
    3.4. Ameliorants: To be confirmed by topsoil testing.
    3.5. Accessories: Connection to surface water drainage system if required.

Products

300 Preparation materials generally

1. Purity: Free of pests and disease
2. Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
3. Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
    3.1. Corrosive, explosive or flammable.

3.2. Hazardous to human or animal life.

3.3. Detrimental to healthy plant growth.

4. Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
5. Objectionable odour: None.
6. Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

310 Materials not permitted

1. Materials: Products containing peat

311 Imported topsoil assessment

1. Each potential source of soil offered by the Contractor is to be initially assessed for approval and testing prior to delivery.
2. Each source shall be analysed by an approved soil science consultancy as clause Q28/614. A copy of this document, together with details of the proposed landscape design (drawing, planting list, etc), shall be provided with the samples for review by the soil scientist and for reference within the topsoil assessment report.
3. Each sample shall be truly representative of the topsoil/subsoil being offered. A composite sample shall be taken for every 250m3 of topsoil being offered, with a minimum of 3 No. samples per source. Each composite sample is to be made up of 10 No. sub-samples taken from evenly spaced locations across the field / stockpile. The sub-samples shall be mixed together to form a 2kg composite sample.
4. The Contractor shall obtain a sample load of each approved topsoil source of not less than five cubic metres for inspection by the Contract Administrator. The accepted sample is to be retained on site for comparison with the subsequent loads.
5. Prior to inspection by the Contract Administrator the sample must have been analysed in accordance with the requirements of the topsoil analysis clause above and approved.

316 Imported topsoil (if required)

1. Description: For tree pits, grass areas, shrub and woodland planted areas
2. Quantity: provide as necessary to make up any deficiency of suitable topsoil existing on site to complete the work.
3. Imported topsoil shall have the following characteristics:

3.1. Texture:
Sand (0.063-2.00mm) - maximum 85%, minimum 50%
Silt (0.002-0.063mm) - maximum 45%, minimum 5%
Clay (< 0.002mm) - maximum 27%, minimum 5%

3.2. Stone content:
Stone content to be not more than 35% by dry weight of which the fraction 2 mm - 5 mm must not exceed 20% by dry weight. Maximum particle size in any dimension 50mm for trees and shrubs, and 20mm for turfing or seeding.

3.3. Organic matter:
Organic content to be 4-15% by dry weight to BS3882:2015 method.

3.4. Soil Reaction:
PH to be between 5.5 and 8.5.

3.5. Electrical Conductivity Values:
Conductivity to be between 100-1500 microsiemens per cm when expressed on a 1:2.5 (w/v) soil/water extract.
Conductivity to be below 3300 microsiemens per cm when expressed on a 1:2 (w/v) soil/CaSO4 extract.

3.6. Nitrogen:
Nitrogen (N) content to be not less than 0.15% by the Dumas method.

3.7. Potassium:
Extractable potassium (K) content to be between 240 – 1200 mg/kg by the MAFF Handbook RB 427method.

3.8. Magnesium:
Extractable magnesium (Mg) content to be not less than 50 mg/kg by the MAFF Handbook RB 427 method.

3.9. Foreign Matter:
Soil to be free from non-soil material, brick and other building materials and wastes, potential sharps, hydrocarbons, plant matter, roots of perennial weeds and any other foreign matter.

3.10. Structure:
Soil to have a clearly defined crumb, granular or blocky structure and not to be waterlogged, anaerobic or over compacted.

3.11. Topsoil analysis:
Testing certificate shall be provided in accordance with the requirements of clause Q28/611.

3.12. Potential Contaminants:
The suite of tests specified in clause Q28/611 includes commonly occurring potential contaminants.
In accordance with BS8601:2013 Clause 4.2, Notes 2 and 3: " *concentrations of contaminants shall not present excessive risk to human health or the environment*" .
The contaminants analysed should reflect the intended end use of the site where the topsoil is to be used, for example Commercial or Residential use. See Clause Q28/318 for list of trigger levels for commercial and residential criteria.
Exceedance of relevant criteria should be reviewed by soil consultancy through quantitative risk assessment relating to site end use.

317 Imported subsoil (if required)

1. Imported subsoil shall have the following characteristics:

1.1. Texture
Sand (0.063-2.00mm) - maximum 90%, minimum 65%
Silt (0.002-0.063mm) - maximum 35%, minimum 5%
Clay (< 0.002mm) - maximum 20%, minimum 5%

1.2. Stone Content
Stone content to be not more than 35% by dry weight. Maximum particle size in any dimension 75mm.

1.3. Organic Matter
Organic content to be less than 1.5% by dry weight to BS8601:2013 method.

1.4. Soil Reaction
pH to be between 5.5 and 8.5.

1.5. Electrical Conductivity Values
Conductivity to be below 1500 microSeimens per cm when expressed on a 1:2.5 (w/v) soil/water extract.
Conductivity to be below 3300 microSeimens per cm when expressed on a 1:2 (w/v) soil/$CaSO_4$ extract.

1.6. Foreign Matter
Soil to be free from non-soil material, brick and other building materials and wastes, potential sharps, hydrocarbons, plant matter, roots of perennial weeds and any other foreign matter.

1.7. Structure
Soil to have a clearly defined crumb, granular or blocky structure and not to be waterlogged, anaerobic or over compacted.

1.8. Potential Contaminants
The Soil Analysis suite specified in Clause Q28/611 includes commonly occurring potential

contaminants. In accordance with BS8601:2013 Clause 4.2, Notes 2 and 3: *concentrations of contaminants shall not present excessive risk to human health or the environment.* The contaminants analysed should reflect the intended end use of the site where the subsoil is to be used, for example residential or commercial use.
See Clause Q28/318 for a list of trigger levels for commercial and residential criteria.
Exceedance of relevant criteria should be reviewed by soil consultancy through quantitative risk assessment relating to site end use.

318 Potential contaminants

1. Imported or existing topsoil & subsoil shall be tested for potential contaminants as Clause Q28/611.
2. The following Generic Assessment Criteria (GAC) should be used as Tier 1 screening values for the assessment of topsoil and subsoil, unless Site-Specific Assessment Criteria (SSAC) are available for the site where the soil(s) is to be used. In circumstances where any of these values are exceeded, further risk assessment and/or testing should be undertaken to confirm the significance of the non-compliance.
3. **Contaminants**

Commercial	Residential	
Inorganic Arsenic	<640	<37 mg/kg
Cadmium	<190	<11 mg/kg
Chromium III	<8600	<910 mg/kg
Chromium VI	<33	<6 mg/kg
Lead	<2330	<200 mg/kg
Inorganic Mercury	<58	<1.2 mg/kg
Selenium	<12000	<250 mg/kg
Copper	<100	<100 mg/kg
Nickel	<60	<60 mg/kg
Zinc	<200	<200 mg/kg
Soluble Boron	<3	<3 mg/kg
Total Cyanide	<20	<20 mg/kg
Phenol	<760	<550 mg/kg
Acenaphthene	<84000	<210 mg/kg
Acenaphthylene	<83000	<170 mg/kg
Anthracene	<520000	<2400 mg/kg
Benz[a]anthracene	<170	<7.2 mg/kg
Benzo[a]pyrene	<35	<2.2 mg/kg
Benzo[b]fluoranthene	<44	<2.6 mg/kg
Benzo[ghi]perylene	<3900	<320 mg/kg
Benzo[k] fluoranthene	<1200	<77 mg/kg
Chrysene	<350	<15 mg/kg
Dibenzo[ah]anthracene	<3.5	<0.24 mg/kg
Fluoranthene	<23000	<280 mg/kg
Fluorene	<63000	<170 mg/kg
Indeno[123-cd]pyrene	<500	<27 mg/kg
Naphthalene	<190	<2.3 mg/kg
Phenanthrene	<22000	<95 mg/kg
Pyrene	<54000	<620 mg/kg

4. ***Petroleum Hydrocarbons**

Commercial	Residential	
Aliphatics	mg/kg	mg/kg
EC 5-6	<3200	<42
EC >6-8	<7800	<100
EC >8-10	<2000	<27
EC >10-12	<9700	<130
EC >12-16	<59000	<1100
EC >16-35	<1600000	<65000

5. Aromatic Commercial Residential

EC 5-7 (benzene)	<26000	<70

EC >7-8 (toluene)	<56000	<130
EC >8-10	<3500	<34
EC >10-12	<16000	<74
EC >12-16	<36000	<140
EC >16-21	< 28000	<260
EC >21-35	<28000	<1100

319 Source of topsoil or subsoil

1. The Main Contractor shall advise the Landscape Contractor/Contract Administrator of the supply source and existing use of the topsoil and subsoil. If requested the Main Contractor shall take the Landscape Contractor/Contract Administrator to view the proposed topsoil/subsoil at source.

Execution

607 Soil resource survey

1. If a soil resource survey is not available:
   The Main Contractor shall appoint an approved soil science consultancy to carry out a soil resource survey of the site at the earliest opportunity and preferably prior to the topsoil strip.
2. The survey shall provide the necessary information to establish the locations and depths of existing site topsoil prior to stripping or excavating for reuse. The survey shall include chemical and physical soil analysis of topsoil and subsoil in accordance with the list of parameters given in clause ref 611 ‘Soil Analysis’ below. A copy of this specification and where available the proposed planting list / drawings of the scheme shall be provided for reference within the soil survey report.
3. The results of the survey and laboratory analysis shall be presented in an interpretive report. The report shall comment on the suitability of the site topsoil and subsoil for the proposed landscape scheme, with reference the sizes and species of plants, turf, seed mixes chosen.
4. The report will take into account the implications that extensive earthworks and soil handling will have on soil quality, and shall identify the best quality soils for re-use where applicable. The report shall also provide recommendations to improve the soils, where necessary and if practically possible, including cultivation techniques and fertiliser, lime, compost application types and rates.

611 Soil Analysis

1. Soil to be analysed: All existing and imported topsoil or subsoil to be used in landscape areas.
2. The Main Contractor shall provide a topsoil/subsoil analysis report from an approved soil science consultancy. Each composite topsoil/subsoil sample shall be placed in a plastic bag, labelled with name and details of origin and sent to the soil science consultancy with a request for the following tests to be carried out:
   - 2.1. Visual examination to record: Munsell colour, structure, consistency, stone size and shape, presence of any deleterious materials
   - 2.2. pH Value
   - 2.3. Electrical Conductivity (water and calcium sulphate extracts)
   - 2.4. Mechanical Analysis (clay, silt, sand)
   - 2.5. Stone Content (>2mm, >20mm, >50mm)
   - 2.6. Total Nitrogen (topsoil only)
   - 2.7. Extractable Phosphorus, Potassium & Magnesium (topsoil only)
   - 2.8. Organic Matter
   - 2.9. Heavy Metals - As Cd Cr Pb Hg Se Cu Ni Zn B
   - 2.10. Total Cyanide
   - 2.11. Phenol
   - 2.12. PAHs (speciated US EPA 16)
   - 2.13. Aliphatic and aromatic TPH banding (C5-C35)

3. The results shall be presented in an interpretive report which shall comment on the suitability of the topsoil/subsoil for the proposed landscape design. The report shall also provide recommendations to improve the topsoil/subsoil, where necessary, including compost, fertiliser and lime applications.
4. The Landscape Contractor/Contract Administrator may ask for additional tests (eg. permeability, detailed sand analysis, porosity), should it be considered necessary.

614 Approved soil science consultancies

1. Approved soil consultants are:
   1.1. **Tim O'Hare Associates LLP**
   Howbery Park
   Wallingford
   Oxon
   OX10 8BA
   T: 01491 822653
   E: tim.ohare@toha.co.uk
   W: www.timohare-associates.com
   Contact: Tim O'Hare

   1.2. **Land Research Associates Ltd.**
   Lockington Hall
   Lockington
   Derby
   DE74 2RH
   T: 01509 670570
   E: mike.palmer@lra.co.uk or laura.thomas@lra.co.uk
   W: www.lra.co.uk
   Contact: Mike Palmer or Laura Thomas

620 Importing topsoil

1. Give notice: Before stripping topsoil for transfer to site.
   1.1. Notice period: 7 days

625 Sample loads

1. Description: For imported topsoil
2. Deliver to site a sample load: of not less than 5 m^3
3. Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
   3.1. Notice period: 2 days

630 Documentation for imported topsoil

1. Description: For planted areas
2. Timing: Submit at handover.
3. Contents
   3.1. Full description of all soil components.
   3.2. Record of source for all soil components.
   3.3. Record drawings showing the location and depth of all soils by type and grade.
   3.4. Declaration of analysis: in accordance with BS 3882, clause 6 and Table 1.
4. Number of copies: Two.

642 Existing soil handling and preparation

1. Where a soil resource survey report has been prepared the Contractor/Landscape Contractor shall follow the recommendations in the report with regard to preparation, stripping, handling and storage of any existing topsoil approved for re-use on the site.

645 Existing vegetation

1. The Landscape Contractor/Contractor shall take the necessary measures to prevent damage to existing vegetation, and unless otherwise instructed by the Contract Administrator, retain existing levels beneath the canopy of existing trees.
2. Where so instructed by the Contract Administrator the Landscape Contractor/Contractor shall protect existing vegetation by the erection of protective fencing in accordance with BS 5837 2012 Trees in relation to design, demolition and construction – Recommendations.
3. Refer to drawing nos. for detail of tree removal, retention and protection.

646 Herbicide treatment

1. Where subsoil or topsoil areas require weed clearance to be carried out.
2. Use of chemicals shall comply with the Plant Protection Products (Sustainable Use) Regulations 2012 and Codes of Practice prepared jointly by the Department for Environment, Food and Rural Affairs (DEFRA), the Health and Safety Commission (HSC) and the National Assembly for Wales Environment, Planning and Countryside Department. All herbicides shall be on current list of approved products.
3. Storage, handling and application of chemicals shall be in accordance with the manufacturers' instructions. The Contractor shall be responsible for any damage caused by spray drift and will make good at own expense.
4. Sufficient time for herbicide to be effective shall be allowed to elapse between application of herbicide and the commencement of any stripping or grading works.

647 Topsoil strip

1. The site topsoil which is to be retained for later use shall be stripped and stock piled. The following method shall be used:
    1.1. During suitable dry weather conditions the existing vegetation shall be treated with herbicide in accordance with the clause for herbicide treatment below.
    1.2. Clear site of foreign materials.
    1.3. During suitable dry weather conditions (ie when the topsoil is friable and not plastic) strip topsoil down to its full natural depth, taking care to avoid contamination with subsoil or foreign materials.

648 Topsoil storage

1. Storage Period
   Topsoil for use on the site shall be stored for as short a period as practicable. Existing topsoil shall not be stored for more than 18 months.
2. Stockpile
   Topsoil stockpiles shall be graded to shallow falls over as large an area as practical, to a maximum height (depth) of 2 metres, unless otherwise instructed by the Soil Scientist.
3. Weed Control
   The Main Contractor shall carry out broad-leaved weed control to the topsoil storage mound using a suitable selective, translocated, non-residual herbicide spray. Herbicide spray to be carried out 3 no times during early May, early July and early September. Refer to clause Q28/646 for herbicide treatment.

650 Notice

1. Give notice before

1.1. Setting out.

1.2. Spreading topsoil.

1.3. Applying herbicide.

2. Period of notice: 2 weeks

652 Formation level and subsoil preparation

1. Prior to preparation of formation level, the subsoil shall be completely cleared of all weed growth by the main contractor using an approved herbicide in accordance with the clause for herbicide treatment below.
2. The site shall be brought to formation level by the main contractor using an approved subsoil material. All soil handling should be carried out when the soil is sufficiently dry and not plastic.
3. The subsoil shall be decompacted to a depth of at least 300mm in grass and ornamental shrub areas and 300mm in woodland/thicket/hedge planting areas (increased to 600mm for heavy/ clay soils) to ensure the areas are free draining and be completely free of all rubbish, bricks and concrete.
4. For small planting beds and areas of restricted access, decompaction may be carried out by hand or a small (1-5 tonne) to medium sized (13 tonne) tracked excavator, fitted with a ripper tine attachment, shall be used. On larger, open areas a tractor mounted rigid tine harrow (300mm depth) or subsoiler (600mm depth) shall be used.
5. The base of tree pits should be decompacted to a depth of at least 300mm and checked to ensure that they are free draining.
6. The Main Contractor shall obtain the Contract Administrator's /Landscape Contractor's acceptance of formation levels and subsoil preparation prior to the commencement of topsoiling.

655 Mechanical tools

1. Restrictions: Do not use within 100 mm of tree and plant stems.

665 Subsoil surface preparation for:

1. Description: Grassed areas
2. Standard: In accordance with BS 3882.
3. Depth: Subsoil depth for grassed areas to be 300mm
4. General: Excavate and/ or place fill to required profiles and levels, as shown on earthworks drawings
5. Loosening
   5.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth
      5.1.1. Light and noncohesive subsoils: 150 mm
      5.1.2. Stiff clay and cohesive subsoils: 300 mm
      5.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.
   5.2. Wet conditions: Do not loosen subsoils.
6. Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
7. Remove from site: Arisings, contaminants debris and builders rubble

666 Subsoil surface preparation for:

1. Description: Shrub planted areas
2. Standard: In accordance with BS 3882.
3. Depth: Subsoil depth for shrub planteded areas to be 300mm
4. General: Excavate and/ or place fill to required profiles and levels, as shown on earthworks drawings

5. Loosening
    5.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth
        5.1.1. Light and noncohesive subsoils: 150 mm
        5.1.2. Stiff clay and cohesive subsoils: 300 mm
        5.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.
    5.2. Wet conditions: Do not loosen subsoils.
6. Stones: Immediately before spreading topsoil, remove stones larger than 75 mm.
7. Remove from site: Arisings, contaminants debris and builders rubble

667 Subsoil surface preparation for:

1. Description: Woodland and thicket planted areas
2. Standard: In accordance with BS 3882.
3. Depth: Subsoil depth for thicket planted areas to be 600mm
4. General: Excavate and/ or place fill to required profiles and levels, as shown on earthworks drawings
5. Loosening
    5.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth
        5.1.1. Light and noncohesive subsoils: 300 mm
        5.1.2. Stiff clay and cohesive subsoils: 300 mm
        5.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.
    5.2. Wet conditions: Do not loosen subsoils.
6. Stones: Immediately before spreading topsoil, remove stones larger than 75 mm.
7. Remove from site: Arisings, contaminants debris and builders rubble

668 Subsoil surface preparation for:

1. Description: Wildflower areas
2. Standard: In accordance with BS 3882.
3. Material: well graded selected low fertility material which shall be suitable for the cultivation operations proposed, to achieve a fine tilth for seeding.
4. Testing: Proposed material may be tested to confirm that it is suitable for use for the specified seed mixes and free from contamination and injurious, notifiable or noxious weeds.
5. Depth: Subsoil depth for willdflower seeded areas to be 300mm
6. General: Excavate and/ or place fill to required profiles and levels, as shown on earthworks drawings
7. Loosening
    7.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth
        7.1.1. Light and noncohesive subsoils: 200 mm
        7.1.2. Stiff clay and cohesive subsoils: 200 mm
        7.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.
    7.2. Wet conditions: Do not loosen subsoils.
8. Stones: Subsoil finished surface for cultivation and seeding. Remove stones larger than 50 mm and ensure that levels of areas marry neatly with adjacent topsoiled areas. Subsoil areas shall be completely free of all large lumps of clay, rubbish, bricks and concrete.
9. Remove from site: Arisings, contaminants debris and builders rubble

669 Pits for trees

1. The Contractor shall provide short stakes to mark the exact positions of tree pits for acceptance by the Contract Administrator, prior to pit excavation, and retain in the same position after topsoiling.

670 Inspecting formations

1. Give notice: Before spreading topsoil for all areas.
2. Notice period: 7 days

675 Preparation of undisturbed topsoil

1. Standard: In accordance with BS 4428.
    1.1. Grading and cultivation: To suit cultivation operations specified in Q30 and Q31
2. Hard ground: Break up thoroughly.
3. Retained trees:: Around existing retained trees care should be taken to avoid disturbance within the Root Protection Zone and cultivation depth and extent adjusted accordingly.
4. Clearing: Remove visible roots and large stones with a diameter greater than 50 mm.
5. Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil.
6. Fallow period (minimum): One month
    6.1. Weed control: At appropriate times treat with a suitable translocated nonresidual herbicide.

680 Surplus topsoil to be retained

1. Generally: Spread and level on site:
    1.1. Locations: To be confirmed on site
    1.2. Protected areas: Do not raise soil level within root spread of trees that are to be retained.

690 Topsoil storage heaps

1. Location: Submit proposals
2. Height (maximum): 2.0 m
3. Width (maximum): to suit recommendations of soil scientist
    3.1. Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
4. Protection
    4.1. Do not place any other material on top of storage heaps.
    4.2. Do not allow construction plant to pass over storage heaps.
    4.3. Prevent compaction and contamination, by fencing and covering as appropriate.

695 Cultivation

1. Compacted topsoil: Break up to full depth.
2. Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
    2.1. Depth: 300mm.
    2.2. Particle size (maximum): 20mm.
    2.3. Timing: Within a few days before planting.
    2.4. Weather and ground conditions: Suitably dry.
3. Surface: Leave regular and even.
4. Levels: 50mm above adjoining lawns
5. Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 50mm.

6. Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

700 Grading of topsoil

1. Topsoil condition: Reasonably dry and workable.
2. Contours: Smooth and flowing, with falls for adequate drainage.
   2.1. Hollows and ridges: Not permitted.
3. Finished levels after settlement:: 25mm above adjoining paving, kerbs, manholes etc.
4. Give notice: If required levels cannot be achieved by movement of existing soil.

704 Spreading topsoil

1. Soil Handling and Weather:
   Soil handling operations should be carried out when soil is reasonably dry and non-plastic (friable) in consistency (at least 5% below the Lower Plastic Limit).
2. Topsoil shall not be unnecessarily compacted by trampling or trafficking by site machinery. Topsoil handling shall be stopped during and after heavy rainfall, and not continued until the soil is again non-plastic in consistency.
3. Depths
   Topsoil depths and finished levels are to be as indicated on the Earthworks Layout and Sections drawings.
4. Ground Modelling
   (Refer to Appendix B; Typical Section Through Ground Modelling). There shall be no ponding hollows within ground modelling.
5. Gradients
   Finished gradients are to be smooth, flowing, free of minor hollows and high spots and marry in neatly with paving, kerbs, edgings, manhole covers and existing levels. Refer to Earthworks Layout and Sections drawings for landform levels and profiles.

705 Handling topsoil

1. Standard: In accordance with BS 3882.
2. Aggressive weeds: Give notice and obtain instructions before moving topsoil.
3. Plant: Select and use plant to minimize disturbance, trafficking and compaction.
4. Contamination: Do not mix topsoil with:
   4.1. Subsoil, stone, hardcore, rubbish or material from demolition work.
   4.2. Other grades of topsoil.
5. Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
6. Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall, or when the moisture content is greater than the plastic limit.

706 Topsoil and subsoil depths

1. Minimum subsoil depths are to be as follows:
   1.1. in shrub bed areas 300mm
   1.2. in thicket areas 600mm
   1.3. in grassed areas 300mm
2. Minimum topsoil depths are to be as follows:
   2.1. in tree pits 300mm
   2.2. in shrub bed areas 300mm
   2.3. in thicket areas 300mm
   2.4. in grassed areas 150mm

708 Tree pits

1. The Main Contractor shall provide short stakes to mark the exact positions of tree pits for acceptance by the Contract Administrator/Landscape Contractor prior to pit excavation and retain in the same position after topsoiling.
2. Refer to typical tree pit detail in Appendix C
3. Tree pits are to be:
    3.1. 1500 x 1500 x 900 overall depth; (18-20cm girth)
4. Depths: All tree pits to have 300mm depth of topsoil
    4.1. 900mm depth: to have 300mm depth topsoil and 450mm depth sandy subsoil or quarried sand and 150mm depth 10-20mm gravel.
5. Drainage: Bottom of tree pits is to be broken up to a depth of 300mm to ensure free drainage. Additional depth of 10-20mm gravel or positive connection to drainage system may be required dependent on permeability of ground.

710 Spreading topsoil on:

1. Description: Grassed, shrub and thicket planted areas
2. Standard: In accordance with BS 3882.
3. Temporary roads/ surfacing: Remove before spreading topsoil.
4. Layers
    4.1. Depth (maximum): 150 mm.
    4.2. Gently firm each layer before spreading the next.
5. Depth after firming and settlement: As clause Q28/706
6. Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 Loose tipping of topsoil

1. Standard: In accordance with BS 3882.
2. General: Do not firm, consolidate or compact topsoil when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

720 Finished levels of topsoil after settlement

1. In relation to adjoining paving, kerbs or hard surfaces: 25 mm above
2. In relation to dpc of adjoining buildings: Not less than 150 mm below.
3. In relation to adjacent grass areas: 25 mm above
4. Seeded areas: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
5. Sportsfields: To even levels and within the following permitted deviations:
    5.1. From levels or gradients shown on drawings: ±75 mm.
    5.2. From line between boning rods 30 m apart: ±25 mm.
6. Within root spread of existing trees and shrubs to be retained: Do not dig or cultivate.
7. Adjoining soil areas: Marry in neatly.
8. Thickness of turf or mulch: Included.

721 Inspection covers

1. Inspection covers to be inclined to marry with adjacent earthworks profiles and levels.
2. The minimum topsoil depth to be achieved over concrete manhole slabs (where constructed) shall be 300mm depth in shrub areas and 150mm depth in grass areas. This should be achieved by raising covers on brickwork (refer to typical section through ground modelling).

3. Inspection covers should be located in either shrub or grass areas a minimum of 750mm from the edge of either finish.
4. If the covers are square or rectangular they should be positioned so they are parallel to the adjacent edge (grass edge, kerb edge, footpath edge, building line, etc.). If distant from edges covers shall be parallel to the contours.

Completion

900 Completion of topsoiling

1. Contamination
   Any areas of topsoiling that are contaminated with subsoil, rubbish, bricks, concrete, tarmac and other deleterious material shall be removed by the Main Contractor in the course of carrying out the earthworks.
2. The Main Contractor shall be required to carry out stone picking to all topsoiling to ensure it is free from all stones greater than 50mm.
3. Compaction
   Topsoiled areas shall be in an uncompacted and uncontaminated state prior to setting out of shrub and grass areas.

911 Handover inspection

1. At handover of the landscape earthworks the Main Contractor must confirm to the Landscape Contractor/Contract Administrator that the landscape earthworks have been prepared and carried out in accordance with the earthworks drawings and specification.
2. The Landscape Contractor shall inspect and satisfy himself that landscape earthworks have been properly prepared prior to commencement of soft landscape operations.
3. Topsoiled areas shall be in an uncompacted and uncontaminated state prior to setting out of shrub and grass areas.

Ω End of Section

Q30

SEEDING

Q30
Seeding

General information/requirements

105 Topsoiling

1. At the time of starting the seeding/turfing works all areas to be seeded or turfed will be covered by:
   Either 150mm depth topsoil or undisturbed topsoil prepared as necessary by others.

107 Suitability of topsoiling

1. The Landscape Contractor shall liaise with the Main Contractor during preparation of formation level and topsoiling.
2. Prior to starting work the Contractor shall inspect areas to be seeded or turfed to satisfy himself that after the specified preparation the topsoil will be suitable for seeding/turfing.
3. Seeding/turfing will be taken as further acceptance by the Contractor as to the suitability of the topsoil.

115 Seeded and turfed areas

1. Growth and development: Healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.
2. Appearance: A closely knit, continuous ground cover of even density, height and colour.

121 Climatic conditions

1. General: Carry out the work while soil and weather conditions are suitable.
2. Appropriate seasons::
   2.1. Grass seeding - : mid-August to mid-October and mid-April to mid-May.
   2.2. Turfing - : mid-September to mid-April.
3. The above periods : may be subject to modification according to the prevailing weather conditions. However, the Contractor may not carry out works other than during the above seasons without written authorisation from the Contract Administrator.

145 Watering

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without displacing seed, seedlings or soil.
3. Frequency: As necessary to ensure the establishment and continued thriving of all seeding/turfing.

150 Water restrictions

1. Timing: If water supply is or is likely to be restricted by emergency legislation do not carry out seeding/turfing until instructed. If seeding/turfing has been carried out, obtain instructions on watering.

160 Notice

1. Give notice before
   1.1. Setting out.
   1.2. Applying herbicide.
   1.3. Applying fertilizer.
   1.4. Preparing seed bed.

1.5. Seeding or turfing.

1.6. Visiting site during maintenance period.

2. Period of notice: 3 working days

170 Setting out

1. Boundaries: Mark clearly.
2. Delineation: In straight lines or smoothly flowing curves as shown on drawings.

Preparation

205 Preparation materials:

1. General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
2. Certification of source, analysis, suitability for purpose and absence of harmful substances: Submit.

2.1. Certified materials: For each of the following materials submit a certificate giving supply source, content analysis, confirmation of suitability for purpose and confirmation of absence of harmful substances: herbicides, fertiliser, compost and grass seed.

2.2. Give notice: before ordering or using.

211 Herbicide for seeded areas

1. Type: Suitable herbicide for suppressing of perennial weeds.
2. Timing: Allow a period of time to elapse, as recommended by the manufacturer, before commencing cultivation.
3. Notify the Contract Administrator of the type of herbicide to be used and when application is to be carried out.

212 Seed bed cleaning before sowing all seeded areas

1. Operations: Kill pernicious weeds with selective contact herbicide.

230 Peat

1. Peat or products containing peat: Do not use.

250 Soil requirements

1. Type

1.1. Seeded areas: 150mm depth topsoil or existing soil as section Q28 or landscape earthworks specification.

1.2. Turfed areas: 150mm depth topsoil or existing soil as section Q28 or landscape earthworks specification.

1.3. Reinforced grass areas: Manufactured soil as per reinforced grass system supplier's recommendations.

260 Cultivation

1. Compacted topsoil: Break up to full depth.
2. Tilth: Reduce top 100mm of topsoil to a tilth suitable for blade grading, particle size 10mm (maximum) and remove all weed growth.
3. Material brought to the surface: Remove stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass, rubbish and debris.

270 Grading

1. Topsoil condition: Reasonably dry and workable.
2. Contours: Smooth and flowing, with falls for adequate drainage.
    - Hollows and ridges: not permitted.
3. Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
4. Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150mm.
5. Give notice: If required levels cannot be achieved by movement of existing soil.

275 Fertilizer seeded and turfed areas

1. Type: Pre-seeding fertilizer
2. Manufacturer: DLF Trifolium Ltd, Thorn Farm, Inkberrow, Worcs, WR7 4LJ. Tel 01386 791102, or similar approved.
3. Product reference: Pro Fert 1 Pre-seeder fertiliser, 6+9+6, pre- seeding fertiliser or equivalent.
4. Application: Before final cultivation and three to five days before seeding/ turfing.
5. Rate: Spread evenly at 35-70 gms/m² in accordance with manufacturer's recommendations.

280 Final cultivation

1. Timing: After grading and fertilizing.
2. Seed bed: Reduce to fine, firm tilth with good crumb structure.
    2.1. Depth: 25 mm.
    2.2. Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
    2.3. Remove surface stones/earth clods exceeding:
        - General areas: 30mm
        - Fine lawn areas: 10mm
3. Adjacent levels: Extend cultivation into existing adjacent grassed or wildflower areas sufficiently to ensure full marrying in of levels.

Seeding

310 Grass seed

1. Description: For close mown grass areas
2. Supplier:: DLF Trifolium Ltd, Thorn Farm, Inkberrow, Worcs, WR7 4LJ. Tel 01386 791102 or similar approved.
    2.1. Mixture reference:: DLF Trifolium Promaster 120 Slowgrowth
3. Application rate: 35-50g/m² sown in accordance with manufacturer's recommendations.

312 Wildflower seed mixture

1. Description: For species-rich grassland / wildflower areas
2. Supplier: Emorsgate Seeds, Limes Farm, Tilney All Saints, King's Lynn, Norfolk, PE34 4RT. Tel 01553 829028 or similar approved.
    2.1. Mixture reference: EM1 Standard General Purpose Meadow Mix
3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): UK origin
4. Application rate: 4g/m² sown in accordance with manufacturer's recommendations.

319 Quality of seed

1. Description: For all seeded areas
2. Freshness: Produced for the current growing season.
3. Certification: Blue label certified varieties.
    3.1. Standard: EC purity and germination regulations.
    3.2. Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
4. Samples of mixtures: Submit when requested.

330 Sowing

1. General: Establish good seed contact with the root zone.
2. Method: To suit soil type, proposed usage, location and weather conditions during and after sowing
    2.1. Distribution: 2 equal sowings at right angles to each other and diagonally to main axis at the overall rate per square metre specified in the Schedule of Work..
3. Finish:: Lightly harrow or rake after seeding.

333 Sowing season

1. Sow seed in calm weather during April to October.
2. Sowing of seed shall take place during suitable calm weather conditions as soon as areas become available between the specified dates.
3. Seeding shall not be carried out when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.

335 Grass sowing season

1. Grass seed generally: April to October

336 Wildflower sowing season

1. Wildflower seed generally: March to May or August to October

340 Pre-emergent herbicide

1. Description: For all seeded areas
2. Standard: Pesticide Safety Directorate approved.
3. Application rate: In accordance with manufacturer's written recommendation.
    3.1. Timing: Immediately after sowing.

352 Edges to seeded areas

1. Description: Adjacent to planting beds and tree pits
2. Timing: After seeded areas are well established.
3. Edges: Clean straight lines or smooth curves.
    3.1. Mulch and soil: Draw back to permit edging.
4. Arisings: Remove.
5. Completion: Respread soil and mulch.

Protecting/cutting

530 First cut of grassed areas

1. Timing: When grass is reasonably dry.

1.1. Height of initial growth: 50-75 mm

2. Preparation
   2.1. Debris and litter: Remove.
   2.2. Stones and earth clods larger than 25 mm in any dimension: Remove
3. Height of first cut: 30mm
4. Mower type: Contractor's choice
5. Arisings: Spread evenly over cut areas unless there are excessive arisings in which case remove from site.

540 First cut of

1. Description: Species-rich grassland / wildflower areas
2. Height of initial growth: 40-75 mm
3. Preparation:
4. Debris and litter: Remove.
   4.1. Stones and earth clods larger than 25 mm in any dimension: Remove
5. Height of first cut: 50 mm
6. Mower type: Contractor's choice
7. Arisings: Remove from site
8. Timing:: Exact timing of cut to be confirmed with the ecologist and in accordance with supplier's recommendations.

590 Cleanliness

1. Soil and arisings: Remove from hard surfaces.
2. General: Leave the works in a clean, tidy condition at Completion and after any maintenance operations.

Maintenance

601 Maintenance Generally

1. The Contractor shall physically maintain the whole of the soft landscape works within the contract boundaries in accordance with the Contract Documentation. The period of maintenance will be twelve months following Practical Completion. **REFER TO SECTION Q35 FOR DETAILS OF MAINTENANCE**

605 Maintenance up to Practical Completion

1. Duration: From the completion of seeding and turfing until the date of Practical Completion.
2. All turfed and seeded areas shall be maintained in accordance with the requirements of section Q35 entirely at the contractor's expense until accepted for handover.

611 Failures of seeding/turfing

1. Duration: Carry out the maintenance operations identified in Section Q35 from completion of seeding/ turfing until:the end of the rectification period.
2. Defective materials or workmanship: Areas that have failed to thrive.
   2.1. Exclusions: Theft or malicious damage.
3. Method of making good: Re-cultivation and reseeding/returfing in accordance with original specification.
4. Timing of making good: The next available planting season.

615 Maintenance

1. Duration: Carry out the operations in section Q35 from completion of seeding/turfing for twelve months from Practical Completion of the works.

Q31

EXTERNAL PLANTING

Q31
External planting

General information/ requirements

112 Site clearance generally

1. General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
2. Stones: Remove those with any dimension exceeding 50 mm.
3. Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
4. Vegetation: Clear surface vegetation in areas shown on drawings using suitable nonresidual herbicide
5. Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
6. Additional requirements: Apply a suitable non-residual herbicide to all areas to be planted if necessary. Notify Contract Administrator of the herbicide prior to application.

113 Clearance of vegetation

1. Where trees or shrubs are to be removed, felling shall be the complete removal of the tree, including the mechanical removal of the stump. In confined or restricted spaces, trees to be felled shall be dismantled.
2. The Contractor shall produce his Insurance Policy covering such operations for inspection by the Contract Administrator.

116 Topsoil

1. At the time of starting the subcontract work, the areas to be planted will be covered by either:
   1.1. Undisturbed topsoil prepared as necessary by others so that it is in a suitable state for the cultivation operations specified in this section, or
   1.2. 300mm depth topsoil on:
      - 300mm depth decompacted subsoil to shrub planted areas;
      - 600mm depth decompacted subsoil to woodland and thicket planted areas;

      Supplied and spread by others prior to commencement of the soft landscape works.

117 Suitability of topsoiling

1. Prior to starting the work the Landscape Contractor shall inspect areas to be planted to satisfy himself that after the specified preparation the topsoil will be suitable for planting.
2. Commencement of planting will be taken as further acceptance by the Landscape Contractor as to the suitability of the topsoiling.

118 Soil conditions

1. Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
2. Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

119 Setting out of works

1. The Contractor shall set out tree positions, specimen shrub positions and shrub areas in accordance with the soft landscape layout. Where not dimensioned on plan scaled dimensions may be used.
2. Setting out shall be agreed with the Contract Administrator prior to planting.

3. The Contract Administrator reserves the right to request minor adjustments to the setting out at no extra cost.
4. Any planting carried out without the Contract Administrator's agreement of the setting out may have to be repositioned and no additional payment will be allowed.

120 Climatic conditions

1. General: Carry out the work while soil and weather conditions are suitable.
    1.1. Strong winds: Do not plant.

124 Times of the year for planting

1. Carry out the work while soil and weather conditions are suitable for the relevant operations. Do not plant during periods of frost or strong winds. Plant during appropriate seasons which will be considered as follows:
2. Deciduous trees and shrubs: Late October to late March.
3. Conifers and evergreens: September/ October or April/ May.
4. Herbaceous plants (including aquatic and marginal): September/ October or March/ April.
5. Container grown plants: At any time if ground and weather conditions are favourable.
6. Ensure that adequate watering and weed control is provided.

125 Times of year for planting

1. Deciduous trees and shrubs: Late October to late March.
2. Conifers and evergreens: September/ October or April/ May.
3. Herbaceous plants (including marginal): September/ October or March/ April.
4. Container grown plants: At any time if ground and weather conditions are favourable.
    4.1. Watering and weed control: Provide as necessary.

130 Mechanical tools

1. Restrictions: Do not use within 100 mm of tree and plant stems.

140 Approved chemicals

1. Use of chemicals shall comply with the Plant Protection Products (Sustainable Use) Regulations 2012 and Codes of Practice prepared jointly by the Department for Environment, Food and Rural Affairs (DEFRA), the Health and Safety Commission (HSC) and the National Assembly for Wales Environment, Planning and Countryside Department.
2. All herbicides shall be on the current list of approved products. Storage, handling and application of chemicals shall be in accordance with the manufacturers instructions.
3. The Contractor shall be responsible for any damage caused by spray drift and will make good at own expense.

145 Watering

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without damaging or displacing plants or soil.
3. Frequency: As necessary to ensure establishment and continued thriving of planting.

150 Water restrictions

1. General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering.

151 Water supply

1. A supply of water will be available on the site or from points surrounding the site, but not necessarily within the reach of a hosepipe.
2. The Contractor shall provide all equipment necessary for watering the landscape areas and shall make all necessary arrangements with local water authority, tenant or landlord for use and payment.

160 Notice

1. Give notice before
    1.1. Setting out.
    1.2. Applying herbicide.
    1.3. Applying fertilizer.
    1.4. Delivery of plants/ trees.
    1.5. Planting shrubs.
    1.6. Planting trees into previously dug pits.
    1.7. Watering.
    1.8. Visiting site during maintenance period.
2. Period of notice: 3 working days

200 Plants/ Trees – general

1. Condition: Materially undamaged, sturdy, healthy and vigorous.
2. Appearance: Of good shape and without elongated shoots.
3. Hardiness: Grown in a suitable environment and hardened off.
4. Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
5. Budded or grafted plants: Bottom worked.
6. Root system and condition: Balanced with branch system.
    6.1. Standard: The relevant parts of BS 3936
7. Species: True to name.
8. Origin/ Provenance: Grown in the United Kingdom for at least one growing season, unless otherwise approved
9. Definition: Origin and Provenance have the meaning given in the National Plant Specification.

215 Plants/ Trees – specification criteria

1. Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification (available on CS Design Software Limited’s website).

216 Plants/ Trees – specification criteria

1. Name, forms, dimensions and other criteria: To the relevant part of BS 3936.

245 Labelling and information

1. General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:
    1.1. Full botanical name.
    1.2. Total number.
    1.3. Number of bundles.
    1.4. Part bundles.
    1.5. Supplier's name.

1.6. Employer's name and project reference.

1.7. Plant specification, in accordance with scheduled National Plant Specification categories.

2. Additional information: Submit on request: Country of origin.

246 Labelling and information

1. Standard: To BS 3936.

250 Supply of plants/trees

1. Suppliers: Members of the Horticultural Trades Association Nursery Certification Scheme.

251 Supply of plants, approved suppliers

1. All trees, shrubs and transplants shall be obtained from the following approved suppliers unless stated otherwise:
2. Extra Heavy Standard, Heavy Standard, Standard and Feathered Trees shall be obtained from:
   2.1. Deepdale Trees Ltd., Stable Block, Hazel Hall Farm, Everton, Sandy, Bedford, SG19 2LU (Tel. No. 01767 262636);
   2.2. Wyevale Nurseries Ltd., Kings Acre, Hereford, HR4 7AY (Tel. No. 01432 845200);
   2.3. Hillier Nurseries (Winchester) Ltd., Ampfield House, Ampfield, Romsey, Hants. SO51 9PA (Tel. No.01794 368733);
3. Shrubs, Hedging, Climbers, Herbaceous Plants and Transplants shall be obtained from:
   3.1. Johnsons of Whixley Ltd., Whixley, York, Yorkshire, YO5 8AQ (Tel. No. 01423 330234) or
   3.2. Crowders Nurseries, Lincoln Road, Horncastle, Lincolnshire, LN9 5LZ (Tel. no. 01507 525000).
4. Other requirements: Contractor is to provide notification of which supplier is to be used for all stock.

255 Plants/ Trees reserved at supplier’s premises

1. Types/ Species: As plant schedule
2. Predelivery inspection: Give notice.
3. Labelling: Identify inspected plants/ trees as reserved for use on this project.

260 Plant/ Tree substitution

1. Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:
   1.1. Price.
   1.2. Difference from specified plants/ trees.
2. Further alternatives: : Proposed substitutions may not be acceptable and submission of further alternatives may be required.
3. Approval: Obtain before making any substitution.
4. Defects liability:: Any plant found during the maintenance/defects liability period to be of the wrong variety shall be replaced with the correct variety at the Contractor's expense.

265 Plant handling, storage transport and planting

1. Standard: To CPSE 'Handling and establishing landscape plants'.
2. Frost: Protect plants from frost.
3. Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
4. Plant packaging: Black polyethylene bags

5. Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped
6. Damage:: If plants suffer slight damage, they are to be carefully pruned. If major damage has occurred the plant shall be rejected and replaced at the Contractor's expense.
7. After delivery:: If planting is not carried out immediately, root balled shrubs should be placed cheek to cheek and the root ball covered with sand, peat or straw and watered to prevent drying out.
8. Bare rooted plants:: Should be heeled-in by pacing the roots in a prepared trench and covering them with top-soil, which should be watered thoroughly to eliminate air pockets around the roots.
9. The security and tidiness: of the area set aside for heeling in shall be the responsibility of the Contractor. If planting is delayed for more than a week after delivery, packaged plants shall be unpacked, the bundles opened up and each groups of plants heeled-in separately and clearly labelled.
10. Planting: Upright or well balanced with best side to front.

280 Treatment of tree wounds

1. Cutting: Keep wounds as small as possible.
    1.1. Cut cleanly back to sound wood using sharp, clean tools.
    1.2. Leave branch collars. Do not cut flush with stem or trunk.
    1.3. Set cuts so that water will not collect on cut area.
2. Fungicide/ Sealant: Do not apply unless instructed.

290 Surplus material

1. Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

Preparation of planting beds/ planting materials

300 Herbicide

1. Description: To clear existing vegetation
2. Locations: All planting areas as identified.
3. Type: Suitable for supressing perennial weeds.
4. Timing: Allow fallow period before cultivation.
    4.1. Duration (minimum): As manufacturer's recommendation

340 Peat

1. Peat or products containing peat: Do not use.

350 Soil ameliorant/conditioner

1. Locations: All ornamental shrub planted areas as identified in schedule of work.
2. Type: Mushroom Compost or similar approved.
3. Reference/ Description/ Grading: sample to be provided for approval.
4. Application: Spread evenly.
    4.1. Timing: Apply prior to cultivation.
    4.2. Rate: 25-50mm thick layer.

360 Cultivation

1. Compacted topsoil: Break up to full depth.
2. Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
    2.1. Depth: 300 mm.

2.2. Timing: Within a few days before planting.

2.3. Weather and ground conditions: Suitably dry.

3. Surface: Leave regular and even.
4. Levels: In accordance with drawing ref: .
5. Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 50 mm in any dimension.
6. Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

370 Topsoil

1. During cultivation operations the Contractor shall take all precautions necessary to prevent topsoil becoming mixed with subsoil or any other deleterious material.

371 Final grading

1. When topsoil is reasonably dry and workable it shall be graded to smooth, flowing contours, with falls, for adequate drainage, removing all minor hollows and ridges.

Planting shrubs/ herbaceous plants/ bulbs

400 Random plant layout

1. Description: To all planting beds
2. Spacing: Evenly, avoiding straight lines, making allowances for the overlapping of adjacent groups and avoiding geometric patterns unless specifically instructed to the contrary.
3. Density: as indicated on the drawings.

401 Regular plant layout

1. Description: To thicket planting
2. Spacing: 1 metre grid
3. Density: As specified on drawings

402 Planting generally

1. All plants shall be pit planted in accordance with BS 4428:1989 in existing topsoil concurrently with cultivation.

405 Shrub planting pits

1. Timing: Excavate 1-2 days (maximum) before planting.
2. Sizes: 150 mm wider than roots when fully spread and 200 mm deep
3. Pit bottom improvement Break up to a depth of 150 mm, incorporating soil ameliorant/ conditioner as specified.

407 Planting

1. Before planting non-perishable containers shall be removed and badly damaged roots shall be carefully pruned.
2. Plants shall be planted upright or well balanced with best side to the front. Topsoil shall be carefully returned to the planting pit, packing around evenly spread roots or root-ball and heeled firmly but gently in. The finished level shall be at the original soil mark on shrubs and 30mm above surrounding levels to allow for settlement.
3. Shrubs which are not self-supporting shall be supported using sawn or riven timber stakes 1500mm long and not less than 25mm square in section pressure treated with non-injurious timber preservative to BS 4072:

3.1. The stake shall be driven at least 600mm into the ground below the planting pit and shall be upright.

3.2. Suitable Toms ties and spacers shall be used, positioned to suit the individual shrub.

3.3. The stake will terminate some 75mm below the total height of the shrub and will be cut off neatly and square.

470 Formal hedges

1. Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge.
2. Planting: In trenches large enough to take full spread of roots. Set out plants evenly.

471 Naturalized hedges

1. Planting: In trenches large enough to take full spread of roots. Set out plants evenly.

475 Backfilling material

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

476 Shrub, herbaceous and bulb backfilling material

1. Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required:
2. Ameliorant/ Conditioner: Eco Tree and Shrub Compost supplied by Eco Sustainable Solutions Ltd, Chapel Lane, Parley, Christchurch, Dorset, BH23 6BG. Tel: 01202 593601 or similar approved

   2.1. Application rate: To suit soil report recommendations.
3. Fertilizer: Slow release - ICL Enmag CRF or similar approved.

   3.1. Application rate: To manufacturer's/ supplier's and soil report recommendations.

478 Tree backfilling mixture

1. Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required.
2. Ameliorant/ Conditioner: Eco Tree and Shrub Compost supplied by Eco Sustainable Solutions Ltd, Chapel Lane, Parley, Christchurch, Dorset, BH23 6BG. Tel: 01202 593601 or similar approved.

   2.1. Application rate: To manufacturer's/ supplier's recommendations.
3. Fertilizer: ICL Enmag CRF, Slow release fertiliser or similar approved in accordance with manufacturer's recommendations.

   3.1. Application rate: To suit soil report recommendations.

480 After planting

1. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
2. 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.

481 Pruning after planting

1. Upon completion of planting work, all plants shall be inspected for damage and pruning shall be carried out.
2. The pruning shall be limited to the minimum necessary to remove dead or damaged twigs or branches or to compensate for the loss of roots and the results of transplanting operations.

3. Pruning shall be carried out in such a manner so as not to change the natural habit or shape of the plant. All cuts shall be made flush leaving no stubs.

484 Mulching planting beds

1. Material: Ornamental bark mulch as specified in the schedule of work.
   1.1. Purity: Free of pests, disease, fungus and weeds.
   1.2. Recycled content: Submit proposals
2. Preparation: Clear all weeds. Water soil thoroughly.
3. Coverage: 50 mm depth.
4. Mulch depth to be reduced as appropriate for areas of low ground cover/herbaceous planting - foliage of plants must not be covered with mulch.
5. Finished level of mulch: 30 mm below adjacent grassed or paved areas.

486 Shrub protection

1. Plants to be protected:: Rabbit protection as identified in schedule of works.
2. Manufacturer: Amenity Land Solutions (or similar approved).
   2.1. Product reference: Product reference: Treeguard 710GUARD0715.
3. Type: Plastic Mesh Tree Guard 0.6 x 50.
4. Material: Polyethylene plastic mesh, fixed to timber stake using galvanised staples.
5. Size: 0.6 m high x 300 mm diameter or greater to suit size of shrub.
6. Colour: Brown
7. Support: Stake: 900x32x32mm (400mm below ground level).
8. General: Ensure that protection methods do not impede natural movement of shrubs or restrict growth.

Planting trees

500 Tree planting

1. Standard: Prepare trees and transplant in accordance with BS 8545

505 Tree pits

1. Sizes: As shown on drawing ref:
   2212-21-06
2. Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
3. Excavated material: Separate topsoil and subsoil material and stockpile for backfilling.
4. Pit bottoms: Excavate with slightly raised centre: Break up base to a depth of 300 mm.
   4.1. Treatment: Gravel drainage layer if required as drawing ref: .
5. Pit sides: Scarify.
6. Backfilling material: Topsoil and subsoil material as section Q28/Landscape earthworks specification document.

509 Protection of tree pits

1. All excavated tree pits must be rendered safe whether close to public thoroughfares or not and must not be left open and unmarked.

512 Tree pit irrigation and ventilation accessories

1. Locations: As drawing 2212-21-07

2. Manufacturer: GreenBlue Urban Ltd or similar approved.
    2.1. Product reference: RootRain Urban or similar approved.
3. Type: Perforated plastics irrigation and ventilation pipe with inlet.
4. Pipe diameter: 50mm
5. Ring diameter: around rootball as shown.
6. Inlet: Black plastics, with cap
7. Installation
    7.1. Pipe: Lay in loop above root ball with slight fall away from inlet pipe. Trim length to ensure a close fit in the tree pit. Connect both ends of pipe securely into plastics tee junction on inlet.
    7.2. Top cap of inlet: Protruding slightly above finished surround level.
    7.3. Backfill material: Carefully compact in layers.

515 Tree pit drainage

1. Locations: As shown on drawing ref:
2212-21-07
2. Depth of excavation: Increase from specified size to allow for aggregate layer, with base slightly falling to outlet.
3. Aggregate layer: Clean gravel or broken stone, with no fines, graded 40 to 20 mm.
    3.1. Depth: 200 mm
4. Drainage pipes
    4.1. Type: Perforated plastics
    4.2. Diameter: 80 mm
    4.3. Position: Lay around perimeter of pit within aggregate layer.
5. Geotextile filter
    5.1. Manufacturer: Submit proposals
        5.1.1. Product reference: Submit proposals
    5.2. Position: Lay over aggregate before installing tree or backfill.
6. Completed pits: Test for free drainage before planting.

521 Tree lifting and delivery

1. Trees will be lifted and transplanted using an appropriate mechanical method.
2. Trees delivered to site with rootballs which have become broken, or which have become unprotected during transit from drying out, pollution or exposure to frost will be rejected.
3. The canopies of trees will be securely tied and protected from damage during transit.
4. Trees which have been damaged during lifting and delivery so that the balanced shape of the canopy of branches, the leading shoot or a large area of bark is lost will be rejected.
5. Any slight damage shall be carefully pruned in accordance with good arboricultural practice.
6. The Contractor will be required to remove all rejected material from site and to replace this with semi-mature stock of equivalent quality to that originally selected in the nursery, at no extra cost.

522 Planting trees

1. Trees are to be planted without delay following arrival on site. Branches shall be untied and the location of each individual tree shall be directed on site by the Contract Administrator, according to the shape of individual trees and groupings.
2. The method of unloading and planting the trees must include the use of all necessary guards, protective padding, etc., to ensure that trees are not damaged by this operation.

523 Watering of trees

1. Each tree shall be thoroughly watered in after planting. Any settlement of soil caused by the watering operation is to be made up with the addition of further backfill material.
2. After watering a 75mm layer of bark mulch shall be spread around each trees to a 2000mm diameter.

535 Tree stakes

1. Drawing:: All staking to be in accordance with illustrations on drawing ref: 2212-21-07
2. Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
    2.1. Preservative treatment: To provide a 20 year service life
3. Stake size (minimum): 75 mm diameter 75 mm diameter
4. Stake length (minimum): sufficiently long to allow 600mm of the stake to be driven into undisturbed ground at the bottom of the pit.

550 Short double staking for

1. Description: Extra-heavy standard trees
2. Drawing:: Refer to detail on drawing ref:
   2212-21-07
3. Staking
    3.1. Position: Either side of tree position and perpendicular to wind direction.
    3.2. Driving: Vertically at least 300 mm into bottom of pit before planting.
    3.3. Backfilling: Consolidate material around stake.
    3.4. Firming: Sufficiently firm to prevent movement of the rootball/ rootstock.
4. Height of stakes: Cut off to approximately 600 mm above ground level
5. Ties: Tree to be secured to rail with Toms expanding rubber belt Ref: B10 (37.5mm width) attached to Extra Large Pad Ref:L1 nailed to cross bar. Belt secured to rail with 2no. galvanised clout nails. Belt and pads as supplied by Toms Tree Ties, 7 Marley Farm Headcorn Road, Smarden, Ashford, Kent TN27 8PJ Tel: 01233 770066 or similar approved.
6. Tying: Secure rubber belting around tree stem firmly without causing constriction or chafing
7. Nails for fixing ties, belts and webbing: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.

566 Rabbit protection to trees

1. Drawing:: Refer to schedule of works
2. Manufacturer: Acorn Planting Products (or similar approved).
    2.1. Product reference: Spiral guard
3. Type: Spiral
4. Material: HDPE
5. Size: 0.6 m high x 50 mm diameter
6. Colour: Brown
7. Support: Single bamboo cane
8. General: Ensure that protection methods do not impede natural movement of trees or restrict growth.

567 Rabbit protection to shrubs and transplants

1. Drawing:: Refer to drawing no:
   2212-21-06 and schedule of works

2. Manufacturer: Amenity Land Solutions (or similar approved).
    2.1. Product reference: Treeguard 710GUARD0715
3. Type: Plastic Mesh Tree Guard 0.6 x 50.
4. Material: Polyethylene plastic mesh, fixed to stake using galvanised staples.
5. Size: 0.6 m high x 300 mm diameter or greater to suit size of shrub.
6. Colour: Brown
7. Support: 900x32x32mm (400mm below ground level).
8. General: Ensure that protection methods do not impede natural movement of trees or restrict growth.

576 Tree pit surfacing – Bark mulch

1. Surfacing material: Coarse bark mulch, as Q31/483 and schedule of work.
2. Area: 600 mm radius circle
3. Depth: 50 mm
4. Watering: Water soil thoroughly before laying.
5. Installation: Ensure the base of the tree stem is kept free from loose filled material.
6. Finished level of mulch:: 30 mm below adjacent grassed or paved areas.

Woodland/ matrix/ buffer zone planting

600 Woodland work generally

1. Services: Check for below and above ground services, including land drainage, in the vicinity. Give notice if they may be affected and obtain instructions before proceeding.
2. Safety: Comply with Arboriculture and Forestry Advisory Group Safety leaflets.

605 Existing vegetation/ Weed clearance

1. Surface vegetation clearance: To all areas on the site. Areas marked as containing Japanese Knotweed to be left and cleared under a separate management regime
2. Arisings: Remove.

617 Removing trees and hedges

1. Identification: Clearly mark trees and hedges to be removed.
2. Work near retained trees: Where canopies overlap, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
3. Arisings: Remove.
4. Tree stumps: Remove mechanically to a minimum depth of 300mm below ground level.

625 Cultivation

1. General: Plough to full depth of topsoil.
2. Consolidation: Leave for one month.
3. Soil within root spread of trees to be retained: Do not plough or cultivate.

630 Prior to planting

1. All bare root plant material shall be immersed in Broadleaf Root Dip solution (or similar approved) to manufacturer's recommendations immediately prior to planting.

631 Pit planting of whips and transplants

1. Excavate not more than 1day before planting and retain topsoil for re-use where specified.

2. Sizes: Planting hole shall be 150mm wider than root spread and 200mm greater than the depth of the root system.
3. Break up bottoms of tree pits to a depth of 150mm at planting.
4. Backfilling material: as clause Q31/475

635 Notch planting in uncultivated ground

1. Notching: Make a vertical 'I', 'L', 'T' or 'H' notch.
    1.1. Depth: To accommodate full depth of roots.
2. Planting: Plant tree, close notch with root collar at ground level and firm the soil.

680 Setting out

1. Planting density: 1 metre grid.
2. Layout: Random groups of no less than 3 or more than 7 of the same species, ensuring that no three plants are aligned in any one direction.

Protecting/ maintaining/ making good defects

700 Maintenance

1. The Contractor shall physically maintain the whole of the soft landscape works within the contract boundaries in accordance with the Contract Documentation. The period of maintenance will be twelve months following Practical Completion.
2. REFER TO SECTION Q35 FOR DETAILS OF MAINTENANCE

705 Maintenance works

1. Maintenance works to External Planting are specified in: Section Q35 and the schedule of works.
2. The contractor should refer to this for all operations that are to be carried out during the specified maintenance period.

707 Maintenance prior to Practical Completion

1. The Contractor shall physically maintain the planted areas prior to completion at his own expense unless otherwise agreed with the Contract Administrator.
2. Maintenance shall include all of the works that are specified in section Q35 and the Schedule of Work to keep areas in an acceptable condition prior to being accepted for handover at Practical Completion.
3. The Contractor shall be responsible for any watering of planted areas prior to completion.
4. Frequency of maintenance visits: In accordance with the schedule of work and as dictated by the season.

711 Maintenance

1. Duration: Carry out the operations in Section Q35 from practical completion until the end of the 12 months rectification period.
2. Frequency of maintenance visits: In accordance with the schedule of work and as dictated by the season

720 Failures of planting

1. Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
    1.1. Exclusions: Theft or malicious damage after completion.
    1.2. Rectification: Replace with equivalent plants/ trees/ shrubs.

2. Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
3. Timing of making good: During the next suitable planting season in accordance with an agreed defects rectification programme

721 Defects liability

1. Any defects which appear within the Defects Liability Period and which are due to materials and workmanship not in accordance with the Contract Documentation shall be made good or replaced by the Contractor at his own cost.

722 Defects inspection by Contractor

1. The Contractor shall independently make an inspection to ascertain works required under Defects Liability.
2. These works shall be carried out:
    2.1. just prior to twelve months after the Date of Practical Completion for planted and grassed areas.
    2.2. just prior to twenty-four months after the Date of Practical Completion for semi-mature tree planting.

723 Making good defects

1. The Contractor shall arrange a Making Good of Defects inspection with the Contract Administrator to take place immediately after the completion of these works.
2. At the Making Good of Defects inspection, all areas shall be complete, in good order and in a tidy condition; grass shall be mown and edges edged; planted areas and areas at the base of trees shall be weed free, tidy and in a friable state.

725 Final inspection

1. Should the Contract Administrator deem further work is required under Defects Liability the Contractor shall be responsible for maintenance and defects liability until these works are completed and a Certificate of Making Good Defects issued.

740 Cleanliness

1. Soil and arisings: Remove from hard surfaces and grassed areas.
2. General: Leave the works in a clean tidy condition at completion and after any maintenance operations.

750 Planting maintenance generally

1. Weed control: Maintain weed free area around each tree and shrub.
    1.1. Diameter (minimum): The larger of 1 m or the surface of original planting pit.
    1.2. Keep planting beds clear of weeds:
2. 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.
3. Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
4. Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
5. Trees: Spray crown when in leaf during warm weather.
    5.1. Timing: After dusk.
6. Tree accessories: Check condition of stakes, ties, guys, guards and irrigation and ventilation systems.
    6.1. Broken or missing items: Replace.

6.2. Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
6.3. Loose guys: Re-firm anchor points and adjust as necessary to provide support to the tree.
6.4. Ties: Adjust to accommodate growth and prevent constriction or abrasion.
6.5. Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
6.6. Frequency of checks:

7. Watering:

760 Planting maintenance – pruning

1. General: Prune to promote healthy growth and natural shape.
   1.1. Dead, dying, diseased wood and suckers: Remove.
   1.2. Timing: As appropriate to the species
   1.3. Trees: Favour a single central leading shoot.
2. Arisings: Remove.

770 Woodland planting maintenance

1. Watering: Only as necessary to prevent plants wilting.
2. Loose plants: Refirm surrounding soil, without compacting.
3. Weed control: Cut down and remove weeds prior to setting seed in a 1 m diameter area around each tree.
4. Vegetation except trees and coppice shoots to be retained: Cut within the plantation area.
   4.1. Arisings: Leave between rows.
5. Mechanical, chemical or mulching methods of vegetation control: Submit proposals.
6. Ditches and drains: Keep clear.

780 Maintenance instructions

1. General: Before end of the maintenance period, submit printed instructions recommending procedures to be established by the Employer for maintenance of the planting work for one full year: Provide details of any special procedures to be carried out.

790 Final mulching

1. Timing: At end of the maintenance period.
2. Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
3. Planting beds: Remulch.
4. Depth (minimum): 50 mm.
5. Trees: Remulch.
6. Depth (minimum): 50 mm.

Q35

MAINTENANCE

Q35
Landscape maintenance

Generally

101 Maintenance period

1. The whole of the works are to be maintained for a period of twelve months from the date of Practical Completion.

103 Scope of maintenance

1. Maintenance shall include all operations to keep the works in good order and in tidy condition until areas are inspected, authorised and handed over.
2. The number of maintenance visits and operations will be as stated in the Schedule of Work but must be sufficient to ensure that all of the specified operations are carried out.
3. Allow for a minimum of 21 maintenance visits during the twelve month period.
4. A visit will be defined as the period of time required by the Contractor to carry out all of the maintenance items specified in the Schedule of Work and below.

110 Notice

1. Give notice before
    1.1. Application of herbicide.
    1.2. Application of fertilizer.
    1.3. Watering.
    1.4. Each site maintenance visit.
2. Period of notice: 7 days

130 Reinstatement

1. Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstate to original condition.

155 Watering

1. Supply: to be confirmed.
2. Quantity: Wet full depth of topsoil
3. Application: Do not damage or loosen plants.
4. Compacted soil: Loosen or scoop out, to direct water to rootzone.
5. Frequency: As necessary for the continued thriving of all planting.

160 Water restrictions

1. General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.

170 Disposal of arisings

1. General: Unless specified or agreed otherwise, dispose of arisings as follows:
    1.1. Biodegradable arisings: Remove to recycling facility
    1.2. Grass cuttings: Spread evenly but if excessive arisings occur remove to recycling facility
    1.3. Tree roots and stumps: Remove from site
    1.4. Shrub and tree prunings: Remove to recycling facility
    1.5. Litter and nonbiodegradable arisings: Remove from site

180 Chipping or shredding

1. General: Not permitted on site.

190 Litter

1. Extraneous rubbish not arising from the contract work: Collect and remove from site.

195 Protection of existing grass

1. General: Protect areas affected by maintenance operations using boards/tarpaulins. Do not place excavated or imported materials directly on grass.

197 Cleanliness

1. Soil and arisings: Remove from hard surfaces.
2. General: Leave the works in a clean, tidy condition at completion and after any maintenance operations.

Grassed areas

210 Maintenance of grassed areas

1. General: Maintain turf in a manner appropriate to the intended use.
2. Soil and grass
    2.1. Condition: Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.
    2.2. Waterlogging and compaction: Prevent.
    2.3. Damage: Repair trampling, abrasion or scalping.
3. Ornamental lawns: Maintain reasonably free from moss, excessive thatch, weeds, frost heave, worm casts and mole hills.
    3.1. Edges: Neat and well defined, in clean straight lines or smooth flowing curves.
4. Litter and fallen leaves: Remove regularly to maintain a neat appearance.
5. Fertiliser:: Apply fertiliser to grass sward during spring and autumn, in accordance with the requirements stated in the schedule of work.
6. Moss:: Apply moss killer to grass sward, as instructed by the Contract Administrator.

220 Grass cutting generally

1. Before mowing: Remove litter, rubbish and debris.
2. Finish: Neat and even, without surface rutting, compaction or damage to grass.
3. Edges: Leave neat and well defined. Neatly trim around obstructions.
4. Adjoining hard areas: Sweep clear and remove arisings.
5. Drought or wet conditions: Obtain instructions.

225 Tree stems

1. Precautions: Do not use mowing machinery closer than 100 mm to tree stems. Use nylon filament rotary cutters and other hand held mechanical tools carefully to avoid damage to bark.

250 Leaf removal

1. Operations: Collect fallen leaves.
2. Special requirements: None
3. Disposal: Remove from site for recycling

255 First cut of

1. Description: All grassed areas
2. Height of initial growth: 40-75 mm
3. Preparation
    3.1. Debris and litter: Remove.
    3.2. Stones and earth clods larger than 25 mm in any dimension: Remove
4. Height of first cut: 30mm
5. Mower type: Contractor's choice
6. Arisings: Remove

260 Mowing lawns

1. Grass height: Maintain between 19 and 30 mm
2. Arisings: Remove

271 Mowing wildflower areas generally

1. The exact frequency and timing of cutting of all wildflower areas is to be reviewed on site and will be dependent on the following:
    1.1. Timing of sowing and initial growth rates.
    1.2. Project ecologist's recommendations.
    1.3. Specification of seed mixes.
    1.4. Supplier's recommendations.
    1.5. Condition of topsoil/subsoil material used for sowing.
2. Refer to schedule of work for specific seed mixes and expected frequency and timing of cutting

275 Cutting summer flowering wild flower meadows

1. Times of year/ Frequency of cutting: As schedule and seed supplier's and ecologist's recommendations.
2. Height of cut: 75 mm or as specified.
3. Arisings: Remove

280 Cutting spring flowering wild flower meadows

1. Times of year/ Frequency of cutting: As schedule and seed supplier's recommendations.
2. Height of cut: 75 mm or as specified.
3. Arisings: Remove

285 Top dressing

1. Location: Where required.
2. Timing: In autumn following scarification and aeration
3. Material: Compost/ sand/ loam mix.
4. Supplier: Contractor's choice.
    4.1. Product reference: Contractor's choice.
5. Declaration of analysis: Submit.
6. Additional analyses: Not required
7. Samples: Not required
8. Application rate: as supplier's recommendations.

309 Edges to seeded areas

1. Location: Adjacent to planting beds and around trees
2. Timing: After seeded areas are well established.
3. Method: Cut to clean straight lines or smooth curves. Draw back soil to permit edging.
4. Arisings: Remove.

310 Re-forming grass edges

1. Location: All edges
2. Method: Draw back soil and re-form edges to clean straight lines or smooth flowing curves, sloping slightly back from vertical.

320 Levelling hollows and bumps in turf

1. Standard: To BS 7370-3, clauses 12.4 and 12.5.

330 Selective herbicide

1. Location: All lawns
2. Herbicide: Contractor's choice
3. Areas not to be sprayed: Wildflower areas

342 Removal of weeds in wildflower areas

1. Undesirable weeds identified in wildflower seeded areas are to be removed.
2. Undesirable weeds include: Nettles, ragwort, docks, thistles and willow herb. Should these species or other injurious species, occur they shall be removed.
3. Method of removal: is to be discussed with the Ecologist and Contract Administrator and shall be by hand removal (digging out) or herbicide spot treatment as appropriate.

350 Fertilizer – spring application

1. Type: Scotts Professional, Spring/summer fertiliser 9+7+7 or similar approved
2. Application rate: as manufacturer's recommendations.

360 Fertilizer – autumn application

1. Type: Scotts Professional, Autumn fertiliser 4+12+12 or similar approved.
2. Application rate: as manufacturer's recommendations.

380 Reinstatement of damaged lawns

1. Damaged turf: Remove to a depth of 30 mm.
2. Preparation: Cultivate substrate to a fine tilth.
3. Reinstatement: Contractor's choice of returfing or topsoiling and reseeding:
    3.1. Returfing: Quality and appearance to match existing.
    3.2. Reseeding: Fill with fine topsoil to BS 3882 multipurpose class, free from stones, debris and weeds. Reseed with a seed mix to match existing grass in quality and appearance.
4. Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

381 Reinstatement of worn or damaged lawns

1. Worn or damaged areas: Make good by returfing or reseeding:
    1.1. Returfing standard: To BS 7370-3, Clause 12.2.
    1.2. Reseeding standard: To BS 7370-3, Clause 12.6.

2. Turf or seed: To match existing in appearance and quality.
3. Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

Shrubs/trees/hedges

500 Establishment of new planting

1. Duration: 1 year
2. Weed control
    2.1. Method: Keep planting beds clear of weeds by hand weeding unless otherwise stated.
    2.2. Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
3. Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
4. Watering: Contractor's choice to maintain healthy growth.

502 Establishment of new planting – fertilizer

1. Time of year: March or April.
2. Type: Slow release
3. Spreading: Spread evenly.
    3.1. Application rate: As manufacturer's recommendations

510 Tree stakes and ties

1. Inspection/ Maintenance times: At each maintenance visit and immediately after strong winds.
2. Stakes
    2.1. Replace loose, broken or decayed stakes to original specification.
    2.2. If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.
3. Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
    3.1. Where chafing has occurred, reposition or replace ties to prevent further chafing.
4. Removal of stakes and ties: only when instructed when trees are sufficiently established.
    4.1. Fill stake holes with lightly compacted soil.

520 Refirming of trees and shrubs

1. Timing: After strong winds, frost heave and other disturbances.
2. Refirming: Tread around the base until firmly bedded.
3. Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.

525 Tree guards

1. Loose or defective guards: Adjust, refix or replace to original specification and to prevent chafing.

530 Tree shelters

1. Loose or defective shelters: Adjust, refix or replace to original specification and to prevent chafing.
2. Removal: During spring when no longer required to protect the tree

537 Nesting wild birds

1. Survey: Before starting hedge or tree work during the period of February to August (inclusive), carry out a survey by a qualified ecologist and submit report.
2. Accidental disturbance: Report immediately.

540 Pruning generally

1. Pruning: In accordance with good horticultural and arboricultural practice.
    1.1. Removing branches: Do not damage or tear the stem or bark.
    1.2. Wounds: Keep as small as possible and cut cleanly back to sound wood.
    1.3. Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
    1.4. Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
2. Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well-balanced natural appearance.
3. Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
4. Disease or infection: Give notice if detected.
5. Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

545 Pruning of excessive overhang

1. Timing: Annually
2. Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
3. Special requirements: None

550 Pruning of excessive height

1. Timing: Annually
2. Operations: Remove excessive height if required.

555 Pruning trees and shrubs

1. Standard: To BS 7370-4.
2. Special requirements: None

570 Formative pruning of young trees

1. Standard: Type and timing of pruning operations to suit the plant species.
2. Time of year: Do not prune during the late winter/ early spring sap flow period.
3. Young trees up to 4 m high
    3.1. Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well-balanced head and ensure the development of a single strong leader.
    3.2. Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
4. Whips or feathered trees: Do not prune.
5. Operatives: Approved specialist contractor

575 Pruning ornamental shrubs

1. General: Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.

2. Suckers: Remove by cutting back level with the source stem or root.

580 Pruning flowering species of shrubs and roses

1. Time of year
    1.1. Winter flowering shrubs: Spring.
    1.2. Shrubs flowering between March and July: Immediately after the flowering period.
    1.3. Shrubs flowering between July and October: Back to old wood in winter.
    1.4. Rose bushes: Early spring to encourage basal growths and a balanced, compact habit.

605 Trimming slowly establishing hedges

1. Operations
    1.1. Timing: Cut back hard in June and September to encourage bushy growth down to ground level.
    1.2. Form: Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.

620 Removal of dead plant material

1. Operations: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

625 Climbing plants

1. Pruning: Remove excess growth, to ensure that signs, light fittings, doors and windows are kept clear at all times.
2. Insecure growth: Attach to supporting wires or structures using 1 mm diameter black plastics-coated steel wire.
3. Supporting structures: Check and repair as necessary.

630 Dead and diseased plants

1. Removal: Within 1 week of notification
2. Replacement: In the next suitable planting season

635 Reinstatement of shrub/ Herbaceous areas

1. Dead and damaged plants: Remove.
2. Mulch/ matting materials
    2.1. Carefully move to one side and dig over the soil, leaving it fit for replanting.
3. Do not disturb roots of adjacent plants.
4. Replacement plants
    4.1. Use pits and plants: To original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
    4.2. Additional requirements: Obtain approval from Contract Administrator of alternatives if original species are unavailable. Proposed substitutions may not be acceptable and submission of further alternatives may be required.
5. Dressing: Slow release fertilizer:
    5.1. Type: Enmag CRF or similar approved.
    5.2. Application rate: As manufacturer's recommendations.

645 Weed control generally

1. Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high
2. Adjacent plants, trees and grass: Do not damage.

650 Hand weeding

1. General: Remove weeds entirely, including roots.
2. Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.
3. Completion: Rake area to a neat, clean condition.
4. Mulch: Reinstate to original depth.

657 Herbicide to kill regrowth

1. Type: Suitable foliar acting herbicide to kill regrowth.
2. Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

670 Weed control with summer herbicide

1. Type: Suitable foliar acting herbicide.
2. Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

675 Digging over

1. General: Dig over beds. Do not damage existing plants, bulbs and roots.
    1.1. Depth of dig (minimum): 75 mm

685 Soil level adjustment

1. Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.
    1.1. Arisings (if any): Spread evenly over the bed.

690 Maintenance of loose mulch

1. Thickness (minimum): 50 mm
    1.1. Top up: Annually where specified in schedule of work.
2. Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
3. Weeding: Remove weeds growing on or in mulch by hand weeding.

695 Fertilizing established trees and shrubs

1. Time of year: During February or March
2. Type of fertilizer: Slow release
3. Application: Spread evenly.
    3.1. Rate: As manufacturer's recommendations

705 Winter leaf removal

1. Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
2. Arisings: Remove to recycling facility

Tree work

810 Tree work generally

1. Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
2. Standard: To BS 3998.
3. Removing branches: Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.

4. Appearance: Leave trees with a well-balanced natural appearance.
5. Chain saw work: Operatives must hold a Certificate of Competence.
6. Tree work: To be carried out by an approved member of the Arboricultural Association.

815 Additional work

1. Defective, diseased, unsafe or weak parts of trees additional to those scheduled for attention: Give notice if detected.

820 Prevention of wound bleeding

1. Standard: To BS 3998.

835 Cutting and pruning generally

1. Tools: Appropriate, well maintained and sharp.
2. Final pruning cuts
    2.1. Chainsaws: Do not use on branches of less than 50 mm diameter.
    2.2. Hand saws: Form a smooth cut surface.
    2.3. Anvil type secateurs: Do not use.
3. Removing branches: Do not damage or tear the stem.
4. Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
5. Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
6. Large branches:
    6.1. Remove in small sections and lower to ground with ropes and slings.
7. Dead branches and stubs: When removing, do not cut into live wood.
8. Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
9. Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

860 Removing trees, shrubs and hedges

1. Standard: To BS 3998.
2. Existing services: Check for below and above ground services. Give notice if they may be affected.
3. Shrubs and smaller trees: Cut down and grub up roots.
4. Tree stumps
    4.1. Treatment:
    4.2. Removal by winching: Give notice. Do not use other trees as supports or anchors.
5. Protection:
6. Work near retained trees: Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
7. Filling holes
    7.1. Material: Use as-dug material and/ or imported soil as required.
    7.2. Finishing: Consolidate and grade to marry in with surrounding ground level.

865 Bark damage

1. Wounds
    1.1. Do not attempt to stop sap bleeding.
    1.2. Bark: Remove ragged edges using a sharp knife.

1.3. Wood: Remove splintered wood from deep wounds.

1.4. Size: Keep wounds as small as possible.

2. Liquid or flux oozing from apparently healthy bark: Give notice.

Water areas - Not Used

Hard landscape areas/fencing

910 Hard surfaces and gravel areas

1. Herbicide: Apply a suitable foliar acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arisings.
2. Hard surfaces: Remove litter, leaves and other debris.
3. Surface gutters and channels: Remove mud, silt and debris.
4. Drainage gullies: Empty traps and flush clean.
5. Gravel areas: Rake over. Remove weeds, litter, leaves and debris, and level off.
6. Stain removal: In accordance with BS 7370-2, table 4.

SECTION 2

SCHEDULE OF WORK

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	GROUND PREPARATION & SEEDING *BCA drawing reference:2212-21-06 - Detailed Planting Plan* **GENERAL NOTE** The areas stated are measured on plan. The contractor's prices are deemed to include any additional labour/ materials necessary to accommodate the contours of the site.				
	A Ornamental Planting	**171**	m²		
	B Formal Native Hedge	**73**	lin.m		
	C Native Hedgerow	**297**	lin.m		
	D Thicket planting (1m grid)	**346**	m²		
	E Grass Seed (Close mown)	**70**	m²		
	F Wildflower Seed	**428**	m²		
a	PROVISIONAL Clear all areas to be seeded or planted of all weed growth, including roots and rhizomes, by application of herbicide or by hand to be approved by the Landscape Architect. All arising to be collected and removed from site. (**A, B, C, D, E, F**)	1,385	m²		
b	Cultivate areas to be planted to a depth of 300mm in accordance with the specification. (**A, B, C, D**)	887	m²		
c	Cultivate areas to be seeded to a depth of 100mm in accordance with the specification. (**E,F**)	498	m²		
d	Carry out minor grading of all areas to be seeded or planted, bringing the soil to an even grade, free from minor hollows and ridges at correct finished levels. (**A, B, C, D, E, F**)	1,385	m²		
e	Supply, spread and incorporate at time of cultivation a 50mm depth of spent mushroom compost to all ornamental planted areas. (**A, B**)	244	m²		
f	Lightly and uniformly reduce to a fine tilth 25mm deep, areas to be grass or wildflower seeded by harrowing and raking. Remove stones over 30mm in any dimension. (**E, F**)	498	m²		
	Carried forward			**£**	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	GROUND PREPARATION & SEEDING				
	Brought forward from previous page			**£**	
a	Supply and spread Pro Fert1 Pre-seeder fertilizer (6:9:6) as supplied by DLF Trifolium Ltd or similar approved at a rate of 35-70gms/m^2 in accordance with the manufacturer's recommendations, to all seeded areas. (**E**)	70	m²		
b	Supply and sow DLF Trifolium grass seed mixture Promaster 120 Slowgrowth at a rate of 35-50g/m^2 (**E**)	70	m²		
c	Supply and sow Emorsgate EM1 General Purpose seed mixture at a rate of 4/m² in accordance with manufacturer's recommendations. (**F**)	428	m²		
d	Carry out initial cut of seeded areas when grass is 50-75mm high. Cut to 25-50mm. (**E**)	70	m²		
e	Carry out initial cut to wildflower seeded areas. Timing and height of cut to be as recommended by seed supplier dependent on establishment. (**F**)	428	m²		
	Ground preparation & Seeding to Schedule of Works Summary			**£**	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	RABBIT PROTECTION				
	Supply and fix to hedging and transplants, 600mm x 200mm diameter Plant Care Treeguard Mesh No. 5. To be secured with galvanised staples to supporting 32mm square sawn timber stakes to be 90cm long in accordance with manufacturer's recommendations. Shelter colour to be brown.				
a	Thicket / Woodland plants	346	no.		
b	Native Hedging	1,736	no.		
c	Supply and fix to trees 600mm x 50mm diameter (or greater dependent on tree girth) Acorn Planting Product HDPE Spiral Guard supported by 900mm long bamboo cane. Guard colour to be brown.	3	no.		
	Rabbit Protection to Schedule of Works Summary			**£**	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	TREE PLANTING				
	Supply and plant the following trees including backfill material, immersion of open ground roots in Broadleaf root dip, staking and tying, all in accordance with the Specification.				
	All trees to have a central leader. Circumference of stem at one metre above ground level indicated in centimetres.				
	EXTRA HEAVY STANDARD 18-20cm stem girth 4.5-5.0m height 1.8-2.1m clear stem Rootballed				
a	Liquidambar styraciflua	3	no.		
	Tree Planting to Schedule of Works Summary			**£**	

ITEM	DESCRIPTION		QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	SHRUB & CLIMBER PLANTING					
	Supply and plant the following plant material including the incorporation of compost and fertilizer with backfill as specified. Roots of open ground plants shall be immersed in Broadleaf root dip prior to planting. The planted area shall be cultivated and brought to a tidy condition at planting. Plant material which is not self-supported shall be staked in accordance with the Specification.					
	Height or Spread indicated in mm. OG = open ground plants. (P) = prune at planting in accordance with instructions from the Landscape Architect (S) = Specimen Shrubs					
		Supply size/Pot Size				
a	Cornus alba 'Sibirica'	400-600mm 3L	37	no.		
b	Choisya 'Aztec Pearl'	300-400mm 3L	136	no.		
c	Escallonia 'Apple Blossom'	400-600mm 3L	164	no.		
d	Lonicera nitida 'Lemon Beauty'	300-400mm 3L	44	no.		
e	Potentilla dahurica 'Abbotswood'	200-300mm 3L	75	no.		
f	Prunus laurocerasus 'Cherry Brandy'	300-400mm 3L	21	no.		
g	Viburnum x burkwoodii	400-600mm 3L	39	no.		
	CLIMBING PLANTS					
h	Hedera helix 'Hibernica'	800-1000mm 3L	32	no.		
i	Lonicera periclymenum	800-1000mm 3L	32	no.		
	SPECIMEN SHRUBS					
j	Amelanchier canadensis	1200-1500mm 15L	1	no.		
k	Mahonia x media 'Winter Sun'	1200-1500mm 15L	2	no.		
	Shrub and Climber Planting to Schedule of Works Summary				**£**	

ITEM	DESCRIPTION		QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	SHRUB & CLIMBER PLANTING					
	Brought forward from previous page				£	
	FORMAL HEDGE PLANTING Supply and plant ornamental hedging species to layouts as					
		Supply size & Pot Size				
a	Carpinus betulus	1000-1250mm 5L	324	no.		
	BARK MULCH					
b	Supply and spread a 50mm thick layer of Contract ornamental 5-35mm bark mulch supplied by Amenity & Horticultural Services, Coppards Lane, Northiam, East Sussex, TN31 6QP. Bark to be thoroughly watered down at spreading (**A, B**)		244	m²		
	Shrub, Climber & Herbaceous Planting to Schedule of Works Summary				£	

ITEM	DESCRIPTION		QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	NATIVE TRANSPLANT & HEDGE PLANTING					
	Supply and plant the following plant material including the incorporation of compost and fertilizer with backfill as specified. Roots of open ground plants shall be immersed in Broadleaf root dip prior to planting. The planted area shall be cultivated and brought to a tidy condition at planting.					
	Plant material which is not self-supported shall be staked in accordance with the Specification					
	Height or Spread indicated in mm.					
	OG = open ground plants.					
	(P) = prune at planting in accordance with instructions from the Landscape Architect					
	WHIP AND TRANSPLANT PLANTING					
		Size/Age/Pot Size or Root				
a	Corylus avellana	600-800mm 1+1 OG	53	no.		
b	Crataegus mongyna	600-800mm 1+1 OG	84	no.		
c	Ilex aquifolium	600-800mm 2L	35	no.		
d	Ligustrum vulgare	600-800mm 1+1 OG	53	no.		
e	Prunus spinosa	600-800mm 1+1 OG	35	no.		
f	Salix caprea	600-800mm 1+0 OG	34	no.		
g	Taxus baccarta	600-800mm 2L	35	no.		
h	Viburnum opulus	600-800mm 1+1 OG	17	no.		
		Carried forward			**£**	

ITEM	DESCRIPTION		QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	NATIVE TRANSPLANT & HEDGE PLANTING					
	Brought forward from previous page				£	
	NATIVE HEDGE PLANTING					
		Size/Age/Pot Size or Root				
a	Acer campestre	600-800mm 1+1 OG	141	no.		
b	Corylus avellana	600-800mm 1+1 OG	141	no.		
c	Crataegus mongyna	600-800mm 1+1 OG	635	no.		
d	Ilex aquifolium	600-800mm 2L	141	no.		
e	Prunus spinosa	600-800mm 1+1 OG	141	no.		
f	Rosa canina	600-800mm 1+1 OG	72	no.		
g	Taxus baccarta	600-800mm 2L	141	no.		
	Native Transplant & Hedge Planting to Schedule of Works Summary				£	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	MAINTENANCE				
	During the twelve months period after completion.				
	Note: Allow for twenty-one maintenance visits. A visit is defined as the period of time required by the Contractor to carry out all maintenance items specified in the Schedule of work below.				
	GENERAL TO ALL AREAS				
	Tidy up areas removing rubbish, litter, etc., from planted and grassed areas. Repeat at each maintenance visit.		Item		
	PROVISIONAL				
a	Supply and apply a translocated herbicide to weed growth on car park and footpath surfaces. Once only.		Item		
b	Treat pests and diseases as necessary. Pesticide use is to be considered only as a last resort. If used pesticides are to be applied strictly in accordance with current approved codes and statutory requirements.		Item		
c	Allow for watering all grass and plant material as necessary to ensure establishment and maintain healthy growth.		Item		
d	Check that the plant material is firmly planted and firm in where required. Repeat at each maintenance visit.		Item		
e	Prune dead, dying or diseased wood from plant material.		Item		
	ORNAMENTAL SHRUB PLANTING (**A, B**)				
f	Keep ornamental shrub areas clear of weed growth by hand weeding or spot herbicide treatment as appropriate. Twelve times.	244	m^2		
g	Apply a slow release fertilizer, Enmag CRF or similar approved, composition NPK 11 + 22 + 9 + 6.0% Mg, to shrub areas at a rate of 30 gms / m^2. Once only.	244	m^2		
h	Edge up planted areas to maintain soil level 25mm below adjacent hard surfaces and kerbs. Any soil washed on to hard surfaces to be cleaned off. Repeat at each maintenance visit.		Item		
	Carried forward			**£**	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	MAINTENANCE				
	Brought forward from previous page			**£**	
	ORNAMENTAL SHRUB PLANTING (CONTINUED)				
a	Prune shrubs if required to prevent invasive species smothering less aggressive species and to prevent shrubs overhanging footpaths or other areas of hard paving		Item		
	TREE PLANTING Check adjust and replace, guards, stakes and ties as necessary. Prune, water and feed as necessary.				
b	Extra heavy standard trees	3	no.		
g	Keep stem at the base of all trees planted including in grass or wildflower areas free of all weed growth to a diameter of 800mm	3	no.		
	NATIVE HEDGE AND THICKET PLANTING (C, D)				
h	Keep thicket planted areas clear of weed growth by herbicide treatment. Remove weed growth within shelterguards by hand. Four times.	643	m²		
i	Check and repair damage to rabbit protection. Four times during the maintenance period.		Item		
	Carried forward			**£**	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	MAINTENANCE				
	Brought forward from previous page			**£**	
	GRASS AREAS (E)				
	March to mid-April				
a	One grass cut down to 30mm and one edge trimming.	70	m^2		
b	Supply and spread Pro Fert 3 spring/summer lawn fertilizer (12-6-6) as supplied by DLF Trifolium Ltd. at a rate of 50gms/m^2	70	m^2		
	Mid-April to mid-May				
c	Three grass cuts down to 19mm and three edge trimmings.	70 x 3	m^2		
	Mid-May to September				
d	Thirteen grass cuts down to 19mm and thirteen edge trimmings.	70 x 13	m^2		
	October, November				
e	Two grass cuts down to 30mm and two edge trimmings.	70 x 2	m^2		
f	Supply and spread Pro Fert 6 autumn/winter lawn fertilizer (4-12-12) as supplied by DLF Trifolium Ltd. at a rate of 50gms/m^2 during early October.	70	m^2		
g	Shape grass edge with half moon spade. Twice only. Timing to be agreed with Landscape Architect. *Note: At each grass cut excessive arisings shall be removed from site.*		Item		
h	Apply selective herbicide to all grass areas in accordance with manufacturer's specification.	70	m^2		
	Carried forward			**£**	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST £	TOTAL COST £
	MAINTENANCE				
	Brought forward from previous page			**£**	
	WILDFLOWER AREAS (**F**) *NB The maintenance regime for Wildflower areas will depend on the species used and should be in accordance with seed supplier's and ecologist's recommendations.*				
	Late April PROVISIONAL				
a	One cut down to 100mm	428	m^2		
	Early September				
b	One cut down to 100mm	428	m^2		
	Late October PROVISIONAL				
c	One cut down to 100mm	428	m^2		
d	Spot herbicide treat aggressive perennial weeds in Wildflower areas as necessary *Note: At each wildflower cut excessive arisings shall be removed from site.*		Item		
	Initial 12 Maintenance to Schedule of Works Summary			**£**	

	SCHEDULE OF WORK SUMMARY	**SECTION/ TOTAL PAGES**	**TOTAL COST £**
a	GROUND PREPARATION AND SEEDING	3/ 2	
b	RABBIT PROTECTION	3/ 3	
c	TREE PLANTING	3/ 4	
d	SHRUB AND CLIMBER PLANTING	3/ 6	
e	NATIVE TRANSPLANT AND HEDGE PLANTING	3/ 8	
f	MAINTENANCE	3/ 12	
	Sub total	**£**	
	SECTION 3 **SCHEDULE OF WORKS TO GENERAL SUMMARY**	**£**	

APPENDIX A

DRAWINGS

Barry Chinn Associates Drawings:

- 2212/21-06 'Detailed Planting Plan'

KEY

EXISTING HEDGEROW AND TREES TO BE RETAINED AND PROTECTED
Refer to BCA drawing 2212-21-01 + 03 'Tree Constraints & Tree Protection Plans' for further detail of existing vegetation.

EXISTING HEDGEROW AND TREES TO BE REMOVED
Refer to BCA drawing 2212-21-01 + 03 'Tree Constraints & Tree Protection Plans' for further detail of existing vegetation.

EXTRA HEAVY STANDARD TREES
(*Tree pit size: 1500x1500x900mm*)
18-20cm stem girth
4.5-5.0m height
1.8-2.1m clear stem
Rootballed
Species
Liquidambar styraciflua

SPECIMEN SHRUBS
(*300mm depth of topsoil*)

Species	Supply Size	Pot Size
Amelanchier canadensis	1200-1500mm	15L
Mahonia x media 'Winter Sun'	1200-1500mm	15L

CLIMBING SHRUBS
(*300mm depth of topsoil*)
Species to alternate every 600mm. Stakes to be angled towards fenceline on installation & tied back to encourage growth. New growth to be fastened as required.

Species	Supply Size	Pot	Spacing
Hedera helix 'Hibernica'	400-600mm	2L	600mm cts
Lonicera periclymenum	400-600mm	3L	600mm cts

THICKET (WOODLAND EDGE) MIX PLANTING
(*300mm depth of topsoil + minimum 600mm depth subsoil*)
Where woodland or thicket is planted next to a hard surface/kerb/fence, it should be positioned 1m from the edge. Whips/ Transplants planted in groups of 3-9 of the same species on a 1.0m grid.

Whip/Transplants

%	Species	Common Name	Size	Age	Root/Pot Size
15%	Corylus avellana	Hazel	600-800mm	1+1	OG
25%	Crataegus monogyna	Hawthorn	600-800mm	1+1	OG
10%	Ilex aquifolium	Holly	600-800mm		2L
15%	Ligustrum vulgare	Privet	600-800mm	1+1	OG
10%	Prunus spinosa	Blackthorn	600-800mm	1+1	OG
10%	Salix caprea	Goat willow	600-800mm	1+0	OG
10%	Taxus baccata	Yew	600-800mm		2L
5%	Viburnum opulus	Guelder Rose	600-800mm	1+1	OG

MIXED SPECIES NATIVE HEDGEROW
(*300mm depth of topsoil + minimum 600mm depth subsoil*)
Planted at 450mm centres in a double staggered row. Rows to be 500mm apart.

%	Species	Common Name	Size	Age	Root
10%	Acer camprestre	Field Maple	600-800mm	1+1	OG
45%	Crataegus monogyna	Hawthorn	600-800mm	1+1	OG
10%	Corylus avellana	Hazel	600-800mm	1+1	OG
10%	Ilex aquifolium	Holly	600-800mm		2L
10%	Prunus spinosa	Blackthorn	600-800mm	1+1	OG
5%	Rosa canina	Dog Rose	600-800mm	1+1	OG
10%	Taxus baccata	Yew	600-800mm		2L

MIXED SPECIES NATIVE HEDGEROW
(*300mm depth of topsoil + minimum 600mm depth subsoil*)
Planted at 450mm centres in a double staggered row. Rows to be 500mm apart.

%	Species	Common Name	Size	Root
100%	Carpinus betulus	Hornbeam	1000-1250mm	5L

TALL ORNAMENTAL SHRUB PLANTING
(*300mm depth of topsoil + minimum 300mm depth subsoil*)
Ultimate plant height is above 1m.

Species	Supply Size	Pot	Spacing
Cornus alba 'Sibirica'	*400-600mm*	*3L*	*600mm c/s*
Viburnum x burkwoodii	*400-600mm*	*3L*	*600mm c/s*

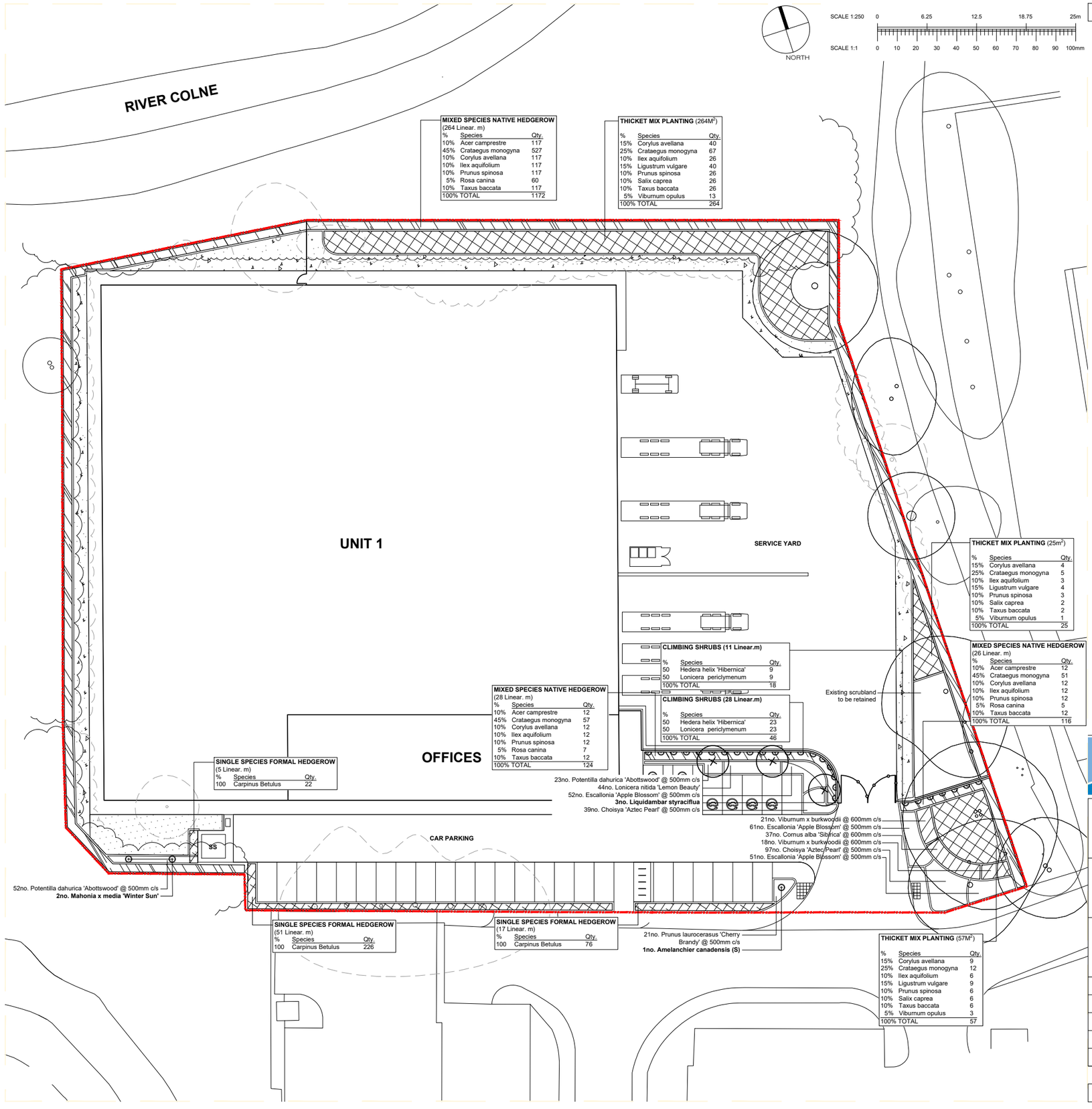
LOW ORNAMENTAL SHRUB/HERBACEOUS PLANTING
(*300mm depth of topsoil + minimum 300mm depth subsoil*)
Ultimate plant height is below 1m.

Species	Supply Size	Pot	Spacing
Choisya 'Aztec Pearl'	300-400mm	3L	500mm c/s
Escallonia 'Apple Blossom'	400-600mm	3L	500mm c/s
Lonicera nitida 'Lemon Beauty'	300-400mm	2L	600mm c/s
Potentilla dahurnica 'Abbotswood'	200-300mm	3L	500mm c/s
Prunus laurocerasus 'Cherry Brandy'	300-400mm	3L	500mm c/s

GRASS SEEDED AREAS
(*150mm depth of topsoil + minimum 150mm depth subsoil*)
To be sown with DLF PM 120 'Slowgrowth' or similar approved
Sown at a rate of 35-50g/m²

SPECIES RICH GRASSLAND/WILDFLOWER SEEDED AREAS
(Cultivated subsoil to a depth of *300mm*)
To be sown with Emorsgate EM1 General Purpose mix or similar approved
Sown at a rate of 4 g/m²

SITE BOUNDARY



NOTES

Layout is based on AJA architects 'Proposed Site Layout Plan' (Drawing no. 6844 - 020 Rev B)
Refer to BCA drawing 2212-21-01 + 03 'Tree Constraints & Tree Protection Plans' for detail of existing vegetation.

REV NOTE DATE AUTH

BCA BARRY CHINN associates Landscape Architects

CLIENT
BRIDGE INDUSTRIAL

PROJECT
BRIDGE POINT, UXBRIDGE

DRAWING
DETAILED PLANTING PLAN

CONTRACT	2212-21		DRG NO. 06
DATE	28-04-22	DRAWN HC	
ISSUE	Planning	CHECKED MB	
SCALE	1:250	ORIG SHEET A1	REV -
CAD FILE	2212-21-04 - Detailed Planting Plan.dwg		

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