

Barry Chinn Associates Limited

BOUYGUES E&S CONTRACTING UK LTD

# PRO LOGIS PARK Heathrow

BCA Standard Soft Landscape

19-10-2023

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## **Q30** **Seeding**

### **General information/requirements**

#### **105 Topsoiling**

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

#### **107 Suitability of topsoiling**

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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 to satisfy himself that after the specified preparation the topsoil will be suitable for seeding.
3. Seeding will be taken as further acceptance by the Contractor as to the suitability of the topsoil.

#### **115 Seeded areas**

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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.

#### **120 Climatic conditions**

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1. General: Carry out the work while soil and weather conditions are suitable.

#### **121 Climatic conditions**

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1. General: Carry out the work while soil and weather conditions are suitable.
2. Appropriate seasons: During the time of months below
  - 2.1. Grass seeding - : mid-August to mid-October and mid-April to mid-May.
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**

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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.

#### **150 Water restrictions**

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

#### **160 Notice**

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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: 1 week

## **170 Setting out**

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

## **Preparation**

### **205 Preparation materials:**

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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.

## **210 Herbicide**

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1. Description: FOR ALL GRASSED AREAS
2. Type: Suitable for suppressing perennial weeds.
3. Timing: Allow fallow period before cultivation.
  - 3.1. Duration: As manufacturer's recommendation

## **211 Herbicide for grassed areas**

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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.

## **250 Soil requirements**

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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.

## **260 Cultivation**

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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**

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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.

## 280 Final cultivation

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1. Timing: After grading.
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

### 312 Wildflower seed mixture

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1. Description: FOR ALL SEEDED AREAS
2. Supplier: DLF Trifolium Ltd, Thorn Farm, Inkberrow, Worcs, WR7 4LJ. Tel 01386 791102 or similar approved.
  - 2.1. Mixture reference: As specified on drawings and in schedules.
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: 3-5g/m<sup>2</sup> sown in accordance with manufacturer's recommendations.

## 330 Sowing

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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

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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.

### 336 Wildflower sowing season

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

## 340 Pre-emergent herbicide

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1. Description: FOR ALL GRASSED 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**

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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.

## **Turfing - Not Used**

### **Protecting/cutting**

## **540 First cut of**

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1. Description: ALL GRASSED 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**

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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**

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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**

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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**

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1. Duration: Carry out the maintenance operations identified in Section Q35 from completion of seeding 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**

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

Ω End of Section

## **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 native hedge 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**

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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**

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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.

## **130 Mechanical tools**

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

## **140 Approved chemicals**

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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**

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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**

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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**

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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**

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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: One week

## **200 Plants/ Trees – general**

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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, discolouration, 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**

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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).

## **235 Container grown plants/ Trees**

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1. Growing medium: With adequate nutrients for plants to thrive until permanently planted.
2. Plants: Centred in containers, firmed and well watered.
3. Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
4. Hardiness: Grown in the open for at least two months before being supplied.
5. Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

## **245 Labelling and information**

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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.

## **250 Supply of plants/trees**

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

## **251 Supply of plants, approved suppliers**

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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**

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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**

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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**

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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 placing 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 group of plants heeled-in separately and clearly labelled.
10. **Planting:** Upright or well balanced with best side to front.

## **280 Treatment of tree wounds**

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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**

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

### **Plant containers - Not Used**

### **Preparation of planting beds/ planting materials**

## **300 Herbicide**

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1. **Description:** TO CLEAR EXISTING VEGETATION
2. **Locations:** All planting areas as identified.
3. **Type:** Suitable for suppressing perennial weeds.
4. **Timing:** Allow fallow period before cultivation.
  - 4.1. **Duration (minimum):** As manufacturer's recommendation

## **350 Soil ameliorant/conditioner**

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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**

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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**

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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**

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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**

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1. Description: TO ALL 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**

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1. Description: TO NATIVE HEDGEROW PLANTS
2. Spacing: As drawing BCA 2345-23-02
3. Density: As specified on drawings

### **402 Planting generally**

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

### **407 Planting**

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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.

### **471 Naturalized hedges**

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

## **475 Backfilling material**

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

## **476 Shrub, herbaceous and bulb backfilling material**

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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**

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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.

## **481 Pruning after planting**

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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**

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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**

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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

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

### 505 Tree pits

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1. Sizes: As stated in key on drawing ref: BCA 2345-23-02
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 and in accordance with drawing ref:

### 512 Tree pit irrigation and ventilation accessories

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1. Locations: As drawing BCA 2345-23-02
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.

### 526 Underground guying for:

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1. Description: ALL SEMI-MATURE AND EXTRA HEAVY STANDARDS TREES AS IDENTIFIED ON DRAWINGS
2. Manufacturer: Platipus Anchors or similar approved.
  - 2.1. Product reference: As shown on tree pit detail drawings.
3. Anchoring system: 3 no timber dead-man anchors
4. Installation: Ensure tree is positioned correctly and vertically prior to tightening guy line tensioners.

### 550 Short double staking for

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1. Description: EXTRA HEAVY STANDARD TREES
2. Staking
  - 2.1. Position: Either side of tree position and perpendicular to wind direction.

- 2.2. Driving: Vertically at least 300 mm into bottom of pit before planting.
- 2.3. Backfilling: Consolidate material around stake.
- 2.4. Firming: Sufficiently firm to prevent movement of the rootball/ rootstock.
3. Height of stakes: Cut off to approximately 600 mm above ground level
4. Horizontal bracing: 900mm x 90mm x 40mm, fixed to timber stakes. Length of crossbar to allow stakes to be positioned outside rootball.
  - 4.1. Fixing: Firmly fix using nails on windward side of tree and as close as possible to the stem without making contact with the bark. Position cross bar horizontally and 25 mm from top of stakes
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.
8. Nails for fixing cross bars: 2no. galvanised nails (100mm x 4.5mm) per stake, nailed at opposing angles.

## **566 Rabbit protection to trees**

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

## **567 Rabbit protection to shrubs and transplants**

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

## **576 Tree pit surfacing – Bark mulch**

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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 Native Hedgerow Plants

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: All existing planting bed areas except where plant material is to be retained as part of the new proposals
2. Arisings: Remove.

### 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: As drawing BCA 2345-23-02
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**

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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**

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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**

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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**

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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**

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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.

## **723 Making good defects**

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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**

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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**

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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**

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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: By use of approved non-residual herbicides
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: At each scheduled maintenance visit
7. Watering: As required for healthy establishment, depending on weather conditions

## **760 Planting maintenance – pruning**

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1. General: Prune to promote healthy growth and natural shape.
  - 1.1. Dead, dying, diseased wood and suckers: Remove.
  - 1.2. Timing: In accordance with the agreed maintenance schedule
  - 1.3. Trees: Favour a single central leading shoot.
2. Arisings: Remove.

## **780 Maintenance instructions**

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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 a schedule of any ongoing maintenance problems experienced during the rectification period.

## **790 Final mulching**

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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.

Ω End of Section

## **Q35**

# **Landscape maintenance**

### **Generally**

#### **101 Maintenance period**

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

#### **103 Scope of maintenance**

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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**

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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**

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

#### **155 Watering**

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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**

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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**

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1. General: Unless specified or agreed otherwise, dispose of arisings as follows:
  - 1.1. Biodegradable arisings: Remove to recycling facility
  - 1.2. Grass cuttings: 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

## **190 Litter**

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

## **197 Cleanliness**

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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**

### **220 Grass cutting generally**

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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**

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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**

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

## **271 Mowing wildflower areas generally**

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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

## **309 Edges to seeded areas**

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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**

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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.

### **342 Removal of weeds in wildflower areas**

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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.

### **Flower beds/ seasonal beddings - Not Used**

### **Shrubs/trees/hedges**

### **500 Establishment of new planting**

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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**

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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**

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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.

### **515 Tree guy wires**

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1. Inspection/ Maintenance times: At each maintenance visit and immediately after strong winds.
2. Operations
  - 2.1. Replace or resecure loose or missing guy wires.
  - 2.2. Adjust to suit stem growth and to provide correct and uniform tension.
3. Removal: Only when instructed and when trees are sufficiently established.

### **520 Refirming of trees and shrubs**

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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**

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

## **530 Tree shelters**

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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

## **540 Pruning generally**

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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**

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

## **555 Pruning trees and shrubs**

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

## **570 Formative pruning of young trees**

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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**

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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.

## **620 Removal of dead plant material**

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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.

## **630 Dead and diseased plants**

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

## **635 Reinstatement of shrub/ herbaceous areas**

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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**

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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**

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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**

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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**

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

## **675 Digging over**

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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**

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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**

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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**

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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

## **700 Snow removal from shrubs/ trees**

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1. Standard: To BS 7370-4.
2. Plants subject to snow removal: All evergreens
3. Timing: Within 24 hours of snowfall

## **705 Winter leaf removal**

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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 - Not Used**

### **Water areas - Not Used**

### **Hard landscape areas/fencing**

## **910 Hard surfaces and gravel areas**

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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. Repairs to flexible bituminous pavings: In accordance with the original paving specification or BS 7370-2, clause 4.12.
7. Stain removal: In accordance with BS 7370-2, table 4.

Q End of Section





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