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# **MURPHY + SHEANON**

Horticulture & Landscape Architecture

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## **LANDSCAPE SPECIFICATIONS & MAINTENANCE PLAN**

**FOR**

**GRIFFEEN COMMUNITY COLLEGE  
LUCAN  
CO. DUBLIN**

142-GCC-LS-01

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## 1.1.0.0 PRELIMINARIES

### 1.1.1.0 Supervision

The documents for the landscape works have been prepared by the Landscape Architect. The works will be supervised by the Landscape Architect. The Landscape Architect will inspect and advise upon and sign off on the project upon completion.

### 1.1.2.0 Period of Liability for Defects

The defects liability period shall continue for twelve months after certified practical completion. The Contractor will be responsible for the aftercare of the planting for this period. Any of the works found to be defective within this period due to materials or workmanship not in accordance with the specification shall be replaced by the Contractor at his own cost. Any plantings which within a five-year period following completion die, are removed, become seriously damaged or diseased, shall be replaced with similar size and species unless the planning authority gives written consent to otherwise.

### 1.1.3.0 Substitution

Substitution of specified products or materials will not be accepted at any stage in the project without approval of the Landscape Architect prior to purchase or delivery.

### 1.1.4.0 Work Programme

The Contractor shall prepare for the landscape architect a bar-chart programme indicating the order in which he proposes to carry out the work for each work day of the contract.

The following are requirements of the landscape contract programme: -

Seeding shall be carried out only between 1<sup>st</sup> April and 30<sup>th</sup> September.

Planting of root balled material shall be carried out only between 1<sup>st</sup> November and March 17<sup>th</sup>. Container grown plants may be planted outside this period but shall be watered as often as necessary to ensure their establishment. Refer to maintenance and aftercare specifications.

### 1.1.5.0 Sub-Letting

The Contractor shall not be permitted to sub-let any part of the work without the prior written agreement of the Landscape Architect. Such consent shall not be unreasonably withheld.

## 1.2.0.0 HARD LANDSCAPE SPECIFICATIONS

### 1.2.1.1 Concrete

Concrete works to be constructed under Engineer's specifications.

#### E10 MIXING/ CASTING/ CURING IN SITU CONCRETE SPECIFICATION

E10.15 Concrete generally: To BS 8500-2

Exchange of information: Provide concrete producer with information required by BS 8500-1, clauses 4 and 5.

#### E10.45 PROPERTIES OF FRESH CONCRETE

Adjustments to suit construction process: Determine with concrete producer. Maintain conformity to the specification.

#### E10.50 PREMATURE WATER LOSS

Requirement: Prevent water loss from concrete laid on absorbent substrates.

Underlay: Polyethylene sheet 250 micrometres thick.

Installation: Lap edges 150 mm.

#### E10.60 PLACING AND COMPACTING

Surfaces to receive concrete: Clean, with no debris, tying wire clippings, fastenings or free water.

Timing: Place as soon as practicable after mixing and while sufficiently plastic for full compaction.

Temperature limitations for concrete: 30°C (maximum) and 5°C (minimum). Do not place against frozen or frost covered surfaces.

Compaction: Fully compact depth to remove entrapped air especially around reinforcement, cast-in accessories, into corners of formwork and at joints. Continue until air bubbles cease to appear on the top surface.

Methods of compaction: To suit consistence class and use of concrete.

#### E10.70 CURING AND PROTECTING

Evaporation from surfaces of concrete: Prevent throughout curing period.

Surfaces covered by formwork: Retain formwork in position and, where necessary to satisfy curing period, cover surfaces immediately after striking.

Top surfaces: Cover immediately after placing and compacting. Replace cover immediately after any finishing operations.

Curing periods: Surfaces which in the finished building will be exposed to the elements and wearing surfaces of floors and pavements: 10 days (minimum). - Other structural concrete surfaces: 5 days (minimum).

Protection: Protect concrete from shock, indentation and physical damage.

### 1.2.1.2 E41 WORKED FINISHES TO IN SITU CONCRETE 10 FINISHING

#### E41.10 TIMING

Carry out at optimum times in relation to setting and hardening of concrete.

Prohibited treatments to surfaces: - Wetting to assist surface working. Sprinkling cement.

#### E41.20 SMOOTH FLOATED FINISH

Surface on completion: Even, with no ridges or steps.

#### E41.30 TROWELLED FINISH

Surface on completion: Uniform, smooth but not polished, free from trowel marks and blemishes, and suitable to receive specified flooring material.

#### E41.40 TROWELLED FINISH FOR WEARING SURFACES

Surface on completion: Uniform and smooth, free from trowel marks and blemishes.

## **Q20 GRANULAR SUB-BASES TO ROADS/ PAVINGS**

All Sub-base works to be constructed under Engineer's specifications.

### **Q20.10 THICKNESSES OF SUB-BASES**

As specified by Engineer to the relevant paving section.

### **Q20.20 HERBICIDES**

Application: To subgrade of footpaths.

### **Q20.30 EXCAVATION AND COMPACTION OF SUBGRADES**

Final excavation to formation level: Carry out immediately before compaction of subgrade.

Soft spots and voids: Give notice to engineer and landscape architect.

Old drainage and service trenches: Give notice to engineer and landscape architect.

Wet conditions: Do not excavate or compact when the subgrade may be damaged or destabilized.

Compaction: Thoroughly, by roller or other suitable means, adequate to resist subsidence or deformation of the subgrade during construction and of the completed roads/ pavings when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

### **Q20.40 SUB-BASES**

Granular material: Of a known suitability for use in sub-bases, free from ice, harmful matter and excessive dust or clay, well graded, all pieces less than 75 mm in any direction, and selected from one of the following:

Crushed rock (other than argillaceous rock) or quarry waste.

Crushed concrete, crushed brick or tile, free from plaster, timber and metal.

Gravel or hoggin with not more clay content than is required to bind the material together, and with no large lumps of clay, natural sand or gravel.

### **Q20.45 LAYING AND COMPACTING SUB-BASES**

Subgrade: Not frozen and free from loose soil, rubbish and standing water.

Structures, membranes and buried services: Ensure stability and avoid damage.

General: Spread and level in layers.

Timing: As soon as possible after laying.

Method: By roller or other suitable means, adequate to resist subsidence or deformation of the sub-base during construction and of the completed paving when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

### **Q20.50 ACCURACY**

Permissible deviation from required levels, falls and cambers (maximum):

Subgrade:  $\pm 20$  mm.

Sub-base:  $\pm 12$  mm.

### **Q20.60 SURFACES TO RECEIVE SAND BEDDING FOR PAVING**

Blind surface: As necessary before compaction to ensure that surface is tight and dense enough to prevent laying course sand being lost into it during construction or use.

Material: Sand or PFA.

### **Q20.70 PROTECTION**

Sub-bases: As soon as practicable, cover with subsequent layers, specified elsewhere.

Subgrades and sub-bases: Prevent degradation by construction traffic, construction operations and inclement weather.

## **Q22 ASPHALT ROADS/PAVINGS**

**All Macadam surfaces to be constructed to Engineer's specifications.**

### **Q22.220 BITUMINOUS MATERIALS GENERALLY**

Suppliers' names: Submit.

Timing (minimum): 2 weeks before starting work.

Test certificates: At the time of delivery for each manufacturing batch submit certificate: Confirming compliance with this specification and the relevant standard. - Stating full details of composition of mix.

### **Q22.240 ACCEPTANCE OF SURFACES**

Surface: Sound, clean and suitably close textured.

Level tolerances: To BS 594987.

Kerbs and edgings: Complete, adequately bedded and haunched and to the required levels.

### **Q22.250A ABUTMENTS**

Vertical edges of manholes, gullies, kerbs, edge of existing tarmac and other abutments: Clean and paint with a thin uniform coating of hot applied 40/60 paving grade bitumen.

Finishing: Tamp surface around projections. - Level: Flush or not more than 3 mm above projections.

Preparation: Remove all loose material, rubbish and standing water.

Adjacent work: Form neat junctions. Do not damage.

Channels, kerbs, inspection covers etc: Keep clean.

New paving: Keep traffic free until it has cooled to prevailing atmospheric temperature.

- Do not allow rollers to stand at any time.
- Prevent damage.
- Lines and levels: With regular falls to prevent ponding.
- Overall texture: Smooth, even and free from dragging, tearing or segregation.
- State on completion: Clean.

### **Q22.320 ADVERSE WEATHER**

Frozen materials: Do not use.

Suspend laying: During freezing conditions

If the air temperature reaches 0°C

In calm dry conditions -3°C, on a falling thermometer.

Hot rolled asphalt: During periods of continuous or heavy rain or if there is standing water on the base.



## **Q24 INTERLOCKING BRICK/BLOCK ROADS/PAVINGS**

### **TYPES OF PAVING**

#### **Q24.110 CONVENTIONAL CONCRETE BLOCK PAVING TO TERTIRAY STREETS**

Granular sub-base: To engineer's specification.

Geotextile: To engineer's specification.

Material: In accordance with BS 7533-3.

Method of screeding, in accordance with BS 7533-3: To engineer's specification.

Nominal thickness after compaction: To engineer's specification.

Blocks: To BS EN 1338.

Manufacturer: Samples to be provided

Special blocks: Edgings.

Colour/ Finish: Silver/Black Granite, Natural, charcoal

Jointing Material: In accordance with BS 7533-3.

Joint width: 2-5 mm.

Sealer/ Stabilizer: To manufacturers recommendations

### **EXECUTION**

#### **Q24.200 EXECUTION GENERALLY - CONCRETE BLOCK AND CLAY PAVER PAVING**

Standard: In accordance with BS 7533-3.

#### **Q24.211 COLOUR BANDING**

General: Unless premixed by manufacturer, select blocks/ pavers/ setts vertically from at least 3-5 separate packs in rotation to avoid colour banding.

#### **Q24.220 SAMPLES**

General: Before ordering, submit samples of all blocks that are representative of colour and appearance.

#### **Q24.230 CONTROL SAMPLES**

General: Carry out sample area of finished work:

Location: To be agreed with client.

Size (minimum): 1.5 x 1.5 m.

Features to be included: To be agreed.

Give notice: When ready for inspection.

Timing: Obtain approval of appearance before proceeding.

#### **Q24.240 ADVERSE WEATHER**

General: Do not use frozen materials or lay bedding on frozen or frost covered sub-bases.

#### **Q24.485 LAYING BLOCKS/ PAVERS/ SETTS**

Setting out: Start from an edge restraint.

Cutting: Cleanly, accurately and vertically, without spalling. Do not mark or damage visible surfaces.

Cut edges: Turn inwards where possible; do not position against edge restraints or other features.

In situ mortar or concrete infill: 1:3 cement:sand as section Z21, coloured to match pavers, in areas up to 65 cm<sup>2</sup>.

Compaction: Vibrate to produce thoroughly interlocked paving of even overall appearance with regular joints and accurate to line, level and profile. Do not mark or damage paving units, kerbs and adjacent work.

### **COMPLETION**

#### **Q24.615 COMPLETION OF PAVING**

Final compaction of the surface course: In accordance with BS 7533-3.

Vacuum cleaning machines: Not allowed.

## **Q26 SPECIAL SURFACINGS/ PAVINGS FOR SPORT/ GENERAL AMENITY**

### **Q26.110 INFORMATION TO BE PROVIDED BY THE CONTRACTOR**

Submit: - Sports surface and shock pad  
Essential Information: Polymeric surfacing specification

### **Q26.310 EXTENT OF SURFACING**

General: To be laid where indicated on the drawings.

### **Q26.360 IN SITU SYNTHETIC SURFACING**

Sub-base: As per engineers' detail. Thickness: as per engineers' details.

Base: Coated macadam as section Q22. Thickness: 80mm.

Surface Course: Wet pour, in situ laid polyurethane bound EPDM rubber crumb surface.

Standard: To BS 7188.

Manufacturer: Submit proposals. Product reference: Submit Proposals.

Colour: To be decided when product has been finalised.

Critical fall height when tested to BS EN 11777: as per manufacturers' recommendation for each piece.

Health and Safety: Substances known to be toxic or carcinogenic on skin contact or released as vapour or dust during normal use not permitted.

Submit: Resistance to abrasive wear, slip resistance, resistance to indentation and ease of ignition. Evidence of testing to BS 7188.

Critical fall height: Evidence of testing to BS EN 1177.

### **Q26.420 LINE MARKINGS TO SURFACING**

Method of application: Painted

Colour: White for primary sport then others on request

Width: 50mm unless requested otherwise

### **Q26.430 EDGES**

Finish: Flush. Edge details: Concrete edging as per section Q10.

### **Q26.920 PLAY SURFACE TESTING**

Standard: to BS EN 1177 and BS 7188 where applicable.

Testing body: A United Kingdom Accreditation Service (UKAS) independent laboratory.

Timing: Within 10 days of completing the surface works Test Results: Submit.

### **Q26.930 DOCUMENTATION**

General: For all types of surfacing, provide the following:

- Name and contact details of installer.
- Date of installation.
- Name and contact details of manufacturer.
- Type/ description/ reference of products used.
- Manufacturer's recommended inspection/ maintenance procedures to maintain performance.
- Manufacturer's recommended cleaning and maintenance methods, where relevant.

### **Q26.940 LABELLING**

Signs: Provide permanent labelling in approved locations on all types of surfacing stating:

- Critical height
- Date of installation.
- Manufacturers name and contact details.
- Product name.



## **Q28 TOPSOIL, GROWING MEDIA AND AMELIORANTS**

**Sample to be supplied prior to delivery to site.** From EPA LICENSED suppliers only.

### **Q28.300 PREPARATION MATERIALS GENERALLY**

**Purity:** Free of pests, disease, and fungus and odour.

**Foreign matter:** On visual inspection, free of aggressive weeds/sticks/straw/subsoil, debris, and the like.

**Contamination:** Do not use topsoil contaminated with subsoil, rubbish or other materials that are:

Corrosive, explosive or flammable./ Hazardous to human or animal life. / Detrimental to healthy plant growth.

**Give notice:** If any evidence of soil contamination are discovered on the site/in planting media to be imported.

### **Q28.305 PERMITTED MATERIALS**

**Materials:** composted animal manures / composted bark and composted green waste certified to PAS 100.

**Give notice:** before ordering or using.

**Declaration of compliance in accordance with BS EN 13650:** Required.

### **28.310 MATERIALS NOT PERMITTED**

**Materials:** Peat, products containing peat and river and canal dredgings.

### **Q28.315 IMPORTED TOPSOIL TO BS 3882**

**Quantity:** Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.

**Standard:** To BS 3882. General purpose.

### **Q28.380 CONTAMINATION**

**General:** Do not use topsoil contaminated with subsoil, rubbish or other materials that are:

Corrosive, explosive or flammable. / Hazardous to human or animal life. / Detrimental to healthy plant growth.

**Subsoil:** In areas to receive topsoil, do not use subsoil contaminated with the above materials.

**Give notice:** If any evidence or symptoms of soil contamination are discovered on site or in topsoil to be imported.

### **Q28.610 TOPSOIL ANALYSIS**

**Samples:** Collect in accordance with BS 3882.

**Submit:** Report detailing soil analyst's recommendations.

### **Q28.620 IMPORTING TOPSOIL**

**Give notice:** Seven days before stripping topsoil for transfer to site.

### **Q28.625 SAMPLE LOAD OF IMPORTED TOPSOIL**

**General:** Deliver to site a sample load of not less than 5m<sup>3</sup>.

**Give notice:** Allow inspection before making further deliveries to site.

**Retain for comparison with subsequent loads.** - Notice period: 5 days.

### **Q28.630 DOCUMENTATION FOR IMPORTED TOPSOIL**

**Timing:** Submit at handover.

**Contents:** Full description of all soil components.

Record of source for all soil components.

Record drawings showing the location and depth of all soils by type and grade.

Declaration of analysis: in accordance with BS 3882, Annex E.

### **Q28.635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALS**

**Timing:** Submit at handover.

**Contents:** Full description of all compost components.

Record of source for all compost components.

Analyst's report for each test carried out.

Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.

### **Q28.650 NOTICE**

**Give notice:** Setting out. / Spreading topsoil. / Applying herbicide/fertilizer. / Visiting site during maintenance period.

- Q28.655 MECHANICAL TOOLS**  
Restrictions: Do not use within 100 mm of tree and plant stems.
- Q28.660 GRADING SUBSOIL**  
General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.  
Light and non-cohesive subsoils: When ground conditions are dry, loosen thoroughly to a depth of 300mm.  
Stiff clay and cohesive subsoils: When ground conditions are dry, loosen thoroughly to a depth of 450mm.  
Rock and chalk subgrades: Lightly scarify to promote free drainage.  
Areas of thicker topsoil: Excavate locally.
- Q28.665 SUBSOIL SURFACE PREPARATION**  
General: Excavate and/ or place fill to required profiles and levels, as section D20.  
Light and non-cohesive subsoils: When conditions are reasonably dry, loosen thoroughly to a depth of 300 mm.  
Stiff clay and cohesive subsoils: When conditions are reasonably dry, loosen thoroughly to a depth of 450 mm.  
Rock and chalk subgrades: Lightly scarify to promote free drainage.  
Stones: Immediately before spreading topsoil, remove stones larger than 40mm  
Remove from site: Arisings, contaminants and debris.
- Q28.675 PREPARATION OF UNDISTURBED TOPSOIL**  
Standard: In accordance with BS 4428.  
Grading and Cultivation: Category B.  
Hard ground: Break up thoroughly.  
Clearing: Remove visible roots and large stones with a diameter greater than 25mm  
Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil.  
Weed control: Allow a period of 7-10 days for the herbicide to have full effect before proceeding with the works.
- Q28.685 SURPLUS MATERIALS TO BE REMOVED**  
Subsoil, stones, debris, wrapping material, canes, ties, labelling, rubbish, prunings and other arisings.
- Q28.690 TOPSOIL STORAGE HEAPS**  
Location: To be agreed  
Height (maximum): 2m. / Width (maximum): 3m  
Protection: Do not place any other material on top of storage heaps.  
Do not allow construction plant to pass over storage heaps.  
Prevent compaction and contamination, by fencing and covering as appropriate.
- Q28.695 CULTIVATION**  
Compacted topsoil: Break up to full depth.  
Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.  
Depth: 300mm. - Particle size (maximum): 20mm.  
Timing: Within a few days before planting.  
Weather and ground conditions: Suitably dry.  
Surface: Leave regular and even.  
Undesirable material brought to the surface: Remove weeds, roots and stones with a dimension exceeding 25mm.  
Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.
- Q28.700 GRADING OF TOPSOIL**  
Topsoil condition: Reasonably dry and workable.  
Contours: Smooth and flowing, with falls for adequate drainage.  
Finished levels after settlement: 20mm above adjoining paving, kerbs, manholes etc. - Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150mm.  
Give notice: If required levels cannot be achieved by movement of existing soil.
- Q28.705 HANDLING TOPSOIL**  
Plant: Select and use plant to minimize disturbance, trafficking and compaction.  
Contamination: Do not mix topsoil with: Subsoil, stone, hardcore, rubbish or material from demolition work.  
Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.  
Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit as defined by BS 3882, Annex N2.

- Q28.710 SPREADING TOPSOIL**  
Layers: Depth (maximum): 150 mm. Gently firm each layer before spreading the next.  
Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.
- Q28.720 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT**  
Above adjoining paving or kerbs: 20mm.  
Below dpc of adjoining buildings: Not less than 150mm.  
Planting areas: Higher than adjoining grass areas by 20mm.  
Within root spread of existing trees: Unchanged.  
Seeded areas and adjoining soil areas: Extend cultivation into adjacent areas sufficiently to tie in the new surface.
- Q28.820 APPLYING GENERAL FERTILIZER**  
Application: Spread evenly, carefully incorporating below mulch materials. –  
Timing: Immediately before cultivation.  
Application rate: 350kg per hectare / as per manufacturers' recommendations
- Q28.825 APPLYING FERTILIZER TO PROPOSED GRASS AREAS**  
Application: Before final cultivation and three to five days before seeding/ turfing.  
Coverage: Spread evenly, in transverse directions. Rate: 350kg per hectare.
- Q28.845 APPLYING LOOSE MULCH ALL PLANTING.**  
Timing: Immediately after planting.  
Preparation: Ensure that the soil is moist, apply water if necessary and clear all weeds prior to application.  
Coverage (minimum): Planting beds: 75mm depth.  
Trees: circular area 500mm radius measured from the stem – 75mm depth.  
Finished Level: 50mm below adjacent grassed or paved areas after settlement.
- Q28.905A APPLYING MAINTENANCE FERTILIZER TO PLANTING AREAS**  
Time of year: February/March  
Application: Evenly spread, carefully incorporating below mulch materials.  
Rate: 50g/m<sup>2</sup> / as per manufacturers recommendations.
- Q28.910 APPLYING MAINTENANCE FERTILIZER TO AMENITY GRASSED AREAS**  
Time of year: March or April.  
Application: Evenly spread, carefully incorporating below mulch materials.  
Rate: 350kg per hectare / as per manufacturers' recommendations.
- Q28.920 APPLYING MULCH**  
Timing: At the end of the maintenance period.  
Preparation: Ensure that the soil is moist, apply water if necessary and clear all weeds prior to application.  
Coverage (minimum): Planting beds (re-mulch): 50mm depth.  
Trees (re-mulch): circular area 500mm radius measured from the stem  
Finished Level: 50mm below adjacent grassed or paved areas after settlement.

## **Q30 SEEDING/ TURFING**

### **GENERAL INFORMATION/ REQUIREMENTS**

#### **Q30.115 SEEDED AND TURFED AREAS**

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

#### **Q30.120 CLIMATIC CONDITIONS**

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

#### **Q30.145 WATERING**

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

#### **Q30.150 WATER RESTRICTIONS**

Timing: If water supply is likely to be restricted do not carry out seeding/ turfing until instructed. If seeding/ turfing has been carried out, it shall be the responsibility of the contractor to ensure that sufficient water is being supplied until the end of the maintenance period (12 months following practical completion).

#### **Q30.160 NOTICE**

Give notice before:

Setting out. - Applying herbicide. - Applying fertilizer. - Preparing seed bed. - Seeding or turfing. - Visiting site during maintenance period. - Period of notice: 5 working days.

#### **Q30.170 SETTING OUT**

Boundaries: Mark clearly.

Delineation: In straight lines or smoothly flowing curves as shown on drawings.

### **PREPARATION**

#### **Q30.205 PREPARATION MATERIALS**

General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.  
Certification of source, analysis, suitability for purpose and absence of harmful substances: Submit.  
Certified materials: Sanitised and stabilised compost. - Give notice: before ordering or using.

#### **Q30.210 HERBICIDE FOR ALL GRASSED AREAS**

Type: Suitable for suppressing perennial weeds.

Timing: Allow a fallow period before cultivation.

Duration: As per manufacturers' recommendations.

#### **Q30.260 GRADING**

Topsoil condition: Reasonably dry and workable.

Contours: Smooth and flowing, with falls for adequate drainage. Hollows and ridges: Not permitted.

Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.

Give notice: If required levels cannot be achieved by movement of existing soil.

#### **Q30.280 FINAL CULTIVATION**

Timing: After grading and fertilizing.

Seed bed: Reduce to fine, firm tilth with good crumb structure. Depth: 25 mm.

Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.

Remove surface stones/ earth clods exceeding: General areas: Archers Hall garden Fine lawn areas: 10 mm.

Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.



## GRASS SEEDING

- Q30.311 GRASS SEED FOR ALL GRASSED AREAS  
Supplier: Submit proposals.  
Application rate: 35-50g/m<sup>2</sup>.
- Q30.319 QUALITY OF SEED FOR ALL GRASSED AREAS  
Freshness: Produced for the current growing season.  
Certification: Blue label certified varieties.  
Standard: EC purity and germination regulations.  
Samples of mixtures: Submit when requested.
- Q30.330 SOWING  
General: Establish good seed contact with the root zone.  
Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
- Q30.335 GRASS SOWING SEASON  
Grass seed generally: April to October.
- Q30.340 PRE-EMERGENT HERBICIDE FOR ALL GRASSED AREAS  
Standard: Pesticide safety directorate approved.  
Application rate: In accordance with manufacturers written recommendations.  
Timing: Immediately after sowing.

## GRASS CUTTING

- Q30.530 FIRST CUT OF GRASSED AREAS  
Timing: When grass is reasonable dry.  
Height of initial growth: 50mm  
Remove: Debris and litter, stones and earth clods larger than 25mm in any dimension, arisings.  
Height of first cut: 40mm. Mower type: Rotary.
- Q30.590 CLEANLINES  
Soil and arisings: Remove from hard surfaces.  
General: Leave the works in a clean, tidy condition at Completion and after any maintenance operations.

## GRASS MAINTENANCE

- Q30.610 FAILURES OF SEEDING / TURFING  
Duration: Carry out the following operations from completion of seeding / turfing until practical completion.  
Defective materials or workmanship: Areas that have failed to thrive.  
Exclusions: Theft or malicious damage.  
Method of making good: Re-cultivation and reseeded / turfing.  
Timing of making good: The next suitable planting season.
- Q30.629 MAINTAINING GENERAL GRASSED AREAS  
Duration: Until end of 12-month maintenance period.  
Cutting: As and when necessary to a height of 35mm.  
Remove: Litter and debris, stones brought to the surface exceeding 25mm, arisings,  
Bulb planting areas: Do not cut until bulb foliage has died down.  
Trimming: All edges.  
Weed Control: Substantially free of broad-leaved weeds.  
Areas of settlement: Make good.  
Watering: When required to ensure a healthy sward of grass.

## **Q31 EXTERNAL PLANTING**

### **Q31.112 SITE CLEARANCE GENERALLY**

General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.  
Stones: Remove those with any dimension exceeding 35mm.  
Contamination: Remove material containing toxins/ extraneous substances harmful to plant/animal/human life.  
Vegetation: Clear surface vegetation in areas shown on drawings using suitable non-residual herbicide, retain and protect trees identified on the landscape drawings.  
Large Roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.  
Additional requirements: Remove trees and stumps identified on the landscape drawings.

### **Q31.118 SOIL CONDITIONS**

Soil for cultivating and planting: See specification Q28 Moist, friable and not waterlogged.  
Frozen or snow-covered soil: Do not plant. Provide additional root protection.

### **Q31.120 CLIMATIC CONDITIONS**

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

### **Q31.125 TIMES OF YEAR FOR PLANTING**

Deciduous trees and shrubs: Late October to late March.  
Conifers and evergreens: September/ October or April/ May.  
Herbaceous plants (including marginal): September/ October or March/ April.  
Container grown plants: At any time if ground and weather conditions are favourable.  
Watering and weed control: Provide as necessary.  
Dried bulbs, corms and tubers (Spring flowering): September/ October. (Summer/Autumn flowering): July/August.  
Wildflower seed mixes and plugs: Spring and/or Autumn.

### **Q31.130 MECHANICAL TOOLS**

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

### **Q31.145 WATERING**

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

### **Q31.160 NOTICE**

Give 2 weeks' notice before: Setting out. / Applying herbicide. / Applying fertilizer. / Delivery of plants/ trees. / Planting of shrubs. / Planting of trees into previously dug pits. / Watering. / Visiting site during maintenance period.

### **Q31.170 SOIL REQUIREMENTS**

Planted beds: Planting bed soil system, as per section Q28.  
Tree pits, shrub pits and other back filling: Plant pit backfilling system, as per section Q28.

### **Q31.200 PLANTS/ TREES - GENERAL**

Condition: Materially undamaged, sturdy, healthy and vigorous.  
Appearance: Of good shape and without elongated shoots.  
Hardiness: Grown in a suitable environment and hardened off.  
Health: Free from pests, diseases, discoloration, weeds and physiological disorders.  
Root system and condition: Balanced with branch system.  
Standard: The National Plant Specification.  
Species: True to name.

### **Q31.215 PLANTS/ TREES - SPECIFICATION CRITERIA**

Name/form/dimension/provenance/other criteria: Per planting schedule/ defined in the National Plant Specification.

### **Q31.225 BULBS / CORMS / TUBERS**

Condition: Firm, entire, not dried or shriveled.  
Health: Free from pests, diseases and fungus.  
Storage: Not permitted.



- Q31.235 CONTAINER GROWN PLANTS/ TREES**  
Growing medium: With adequate nutrients for plants to thrive until permanently planted.  
Plants: Centered in containers, firmed and well-watered.  
Root growth: Substantially filling containers, not root bound, in a condition conducive to successful transplanting.  
Hardiness: Grown in the open for at least two months before being supplied.  
Containers: With holes adequate for drainage on any substrate commonly used under irrigation systems.
- Q31.240 WILDFLOWER SEED MIXES AND PLUGS**  
Ensure that commercial wildflower seed mixes and plugs are comprised of native species collected and grown on the island of Ireland. Examples of suppliers that meet these specifications include EcoSeeds, Design by Nature and Irish Seed Savers.
- Q31.245 LABELLING AND INFORMATION**  
General: Provide groups of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing: Full botanical name / Total number / Number of full / part bundles / Supplier's name / Employer's name and project reference / Plant specification, in accordance with scheduled National Plant Specification categories / Country of Origin / Date supplied and consignment details / Type of container.
- Q31.260 PLANT/ TREE SUBSTITUTION**  
Submit alternatives stating: Full plant name, specification, and price.  
Approval: Obtain before making any substitution.
- Q31.265 PLANT HANDLING, STORAGE TRANSPORT AND PLANTING**  
Standard: To HTA 'Handling and establishing landscape plants'.  
Frost: Protect plants from frost.  
Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping.
- Q31.280 TREATMENT OF TREE WOUNDS**  
Cutting: Keep wounds as small as possible. Cut cleanly back to sound wood using sharp, clean tools. Leave branch collars. Do not cut flush with stem or trunk. Set cuts so that water will not collect on cut area.  
Fungicide/ Sealant: Do not apply unless instructed.
- Q31.285 PROTECTION OF EXISTING GRASS**  
General: Protect areas affected by planting operations using boards / tarpaulins.  
Excavated or imported material: Do not place directly on grass.  
Duration: Construction and maintenance period.
- Q31.290 SURPLUS MATERIAL**  
Subsoil, stones, debris, wrapping material, canes, ties, labelling, rubbish, prunings and other arisings: Remove.
- PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS**
- Q31.300 HERBICIDE TO CLEAR OVERGROWN BEDS**  
Type: Suitable for suppressing perennial weeds. As approved by LA  
Timing: Allow fallow period before cultivation (minimum) 2 weeks.
- Q31.305 WEED CONTROL**  
Retain all planted areas weed free during construction period.
- Q31.361 COMPOST**  
Type: Sanitized and stabilized compost. As per Q28.  
Rate: Shrub beds - Depth of 150mm to be cultivated in with plants. Tree pit - As per Q31/586
- Q31.375 CULTIVATION**  
Compacted topsoil: Break up to full depth.  
Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.  
Depth: 750mm in shrub beds and 1200mm in tree pits.  
Timing: Within a few days before planting.  
Remove: visible weeds, roots and large stones with any dimension exceeding 35mm.

## GROUND PREPARATION – WILDFLOWER MEADOWS

### Q31.380 GROUND PREPARATION - GENERAL

Ground preparation should be done as early as possible (March/April for spring sowing and July/August for Autumn sowing). Beware of doing damage to the soil if the site is too wet.

### Q31.385 GROUND PREPARATION – ORGANIC METHOD

(do not use this method if the site is generally waterlogged).

1. Cut existing vegetation to ground level (as low as possible) using a strimmer or lawnmower
2. Remove turves by hand (with appropriate health and safety) or using a turf-stripping machine
3. Fork over or rotovate area to loosen soil to a depth of 10cm and then rake to achieve a fine tilth
4. Use a hand rake to break up the soil particles and open up the soil so it will accept seed. Remove stones greater than 5cm to create fine tilth.
5. Sow the seed mixture immediately afterwards as detailed in section Q31.600.

### Q31.390 GROUND PREPARATION – NON-ORGANIC METHOD

1. Cut existing vegetation to ground level (as low as possible) using a strimmer or lawnmower
2. Spray area using a suitable herbicide. Always follow the manufacturer's instructions
3. Wait 3-4 weeks, then rotovate or fork to a depth of 10 cm. Remove stones greater than 5 cm
4. Wait 3-4 weeks or when there is re growth, then re-spray all growth with suitable herbicide
5. Wait until herbicide has worked then prepare the seed bed by very lightly raking to achieve a fine tilth (but not deep enough to bring more seed to the surface)
6. Sow immediately afterwards as detailed in section Q31.600.

## PLANTING SHRUBS/ HERBACEOUS PLANTS/

- Q31.400 PLANT LAYOUT  
As per the planting schedule and the landscape plan.
- Q31.405 SHRUB PLANTING PITS  
Timing: Excavate 2 days (maximum) before planting.  
Sizes: 150mm wider than the plants roots when fully spread and 200mm deep.  
Pit bottom improvement: Reduce any base compaction to depth of 300mm
- Q31.445 PLANTING BULBS/ CORMS/ TUBERS  
Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.  
Backfilling: Finely broken soil. Lightly firm to existing ground level.  
Scattering: Plant bulbs/ corms/ tubers where they fall. Neatly remove a plug of turf and replace after planting.
- Q31.476 SHRUB, HERBACEOUS AND BULB BACKFILLING MATERIAL  
Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required.  
Application rate: Spread 150mm compost over topsoil prior to planting and mix into topsoil to be used as above.
- Q31.470 FORMAL HEDGES  
Shrubs for hedges: Consistent in species, cultivar, and appearance to ensure a uniform hedge.  
Planting: In trenches large enough to take the full spread of roots. Set out plants evenly.
- Q31.471 NATURALISED HEDGES  
Planting: In trenches large enough to take the full spread of roots. Set out plants evenly.
- Q31.480 AFTER PLANTING  
Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.  
Firming: Lightly firm soil, rake surface, without damaging roots, to a fine tilth with gentle cambers and no hollows.  
Top dressing: 50mm back mulch topdressing as per Q28.
- Q31.485 MULCHING PLANTING BEDS  
Material: Submit proposals Purity: Free of pests, disease, fungus and weeds.  
Preparation: Clear all weeds. Water soil thoroughly.  
Coverage: Depth of 50mm. Finished level of mulch: As agreed.

## PLANTING TREES

- Q31.505 TREE PITS  
Sizes: 1200mm x 1200mm x 1200mm deep. 16 cubic metre min. in paving.  
Pit bottoms: With slightly raised centre. Break up to a depth of 300mm  
Treatment: Soil ameliorant worked in to pit base.  
Backfilling material: Plant pit backfilling soil system, as per section Q28.  
Accessories: Perforated irrigation pipes and caps. / Tree grilles and guards.
- Q31.512A TREE PIT ACCESSORIES  
Locations: In hard paved areas. See landscape drawings.  
Type: Tree grille Material: Cast iron (grey) Dimensions: 1190 mm Square 450 mm Diameter Bore.
- Q31.512B TREE PIT ACCESSORIES  
Locations: All tree pits. See landscape drawings.  
Type: Perforated plastic irrigation pipe, 100 mm dia, wrapped above and around sides of rootball, with cap.
- Q31.515 TREE PIT DRAINAGE  
Depth of excavation: Allow for aggregate layer, with base slightly falling to outlet.  
Aggregate layer: Clean gravel or broken stone, with no fines, graded 40 to 20 mm. Depth: 1000mm  
Position: Lay around perimeter of pit within aggregate layer.  
Manufacturer: Submit Proposals.  
Completed pits: Test for free drainage before planting.

**Q31.525 SEMI MATURE TREES**

Standard: Prepare roots and transplant to BS 4043.  
Backfilling material: As clause 586.  
Support: Short double staking / underground guys. See landscape drawings.

**Q31.535 STAKING GENERALLY**

Stakes: Peeled chestnut, larch or oak, straight free from projections and large knots, with a pointed lower end.  
Preservative treatment: To provide a 20-year life service.  
Nails: To BS 1202-1, galvenised, minimum 25mm long and with 10mm diameter heads.  
Stake size: 150mm diameter.

**Q31.575 SHORT DOUBLE STAKING FOR TREES**

Staking: Before planting drive stakes vertically 300mm into the base of the planting pit at either side of the tree.  
Backfilling: Consolidate approved material in layers around stakes.  
Height of stakes: Cut to 600mm above ground level.  
Crossbar: Timber, as per stake, firmly fixed on windward side of tree as close as possible to the stem.  
Ties: Adjustable rubber straps.  
Tying: Secure tree firmly but not rigidly to the bar.

**Q31.586 TREE BACKFILLING MATERIAL**

Composition: Previously prepared mixture of topsoil. See topsoil specification in Q28.  
Application rate: Backfill with approved material in layers.

**PLANTING WILDFLOWER MEADOWS**

**Q31.600 SOWING WILDFLOWER SEED**

Please refer to Landscape Plan for details of the specified wildflower mix.  
Wildflower mixtures can be sown in the Autumn or Spring.  
The latest date for autumn sowing is usually the end of October  
The latest date for spring sowing is early June.  
Check the weather. It is best to sow on a calm day when rain is not going to happen during sowing.  
Mix the seed thoroughly before application.  
Divide the seed mixture into smaller equal amounts (e.g. 4, 6 or 8 parts), and divide the site area into equivalent smaller sections to ensure even distribution of the seed  
Scatter mix evenly, stirring constantly to mix seed throughout the sowing process  
Firm the soil by rolling.  
Do NOT use a roller if the soil is wet as it will stick to the roller. A flat plank of wood pressed on the soil may also be used to ensure good contact between the seed and the soil. Again do not use this method if the soil is wet.

**Q31.610 SOWING WILDFLOWER PLUGS**

Please refer to Landscape Plan for details of the specified wildflower plants.  
Wildflower plugs can be sown in the Autumn or Spring.  
The latest date for autumn planting is usually the end of October  
The latest date for spring planting is early June.  
Unless specified differently on the Landscape Plan, plugs shall be 25mm sized cells planted to a density of between 10-12 plants per sqm of 3-5 species. The plant spacing should be varied and in drifts or clusters to create a naturalistic effect.



## PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

- Q31.710 MAINTENANCE  
Duration: Carry out the following operations from completion until the end of the defect liability period (12 months).
- Q31.720 FAILURES OF PLANTING  
Defects due to materials/workmanship not in accordance with the contract: Plants that have failed to thrive.  
Exclusions: Theft or malicious damage after completion.  
Rectification: Replace with equivalent plants/ trees/ shrubs.  
Replacements: To match size of nearby plants of same species or original specification, whichever is the greater.  
Timing of making good: During the next suitable planting season.
- Q31.740 CLEANLINESS  
Soil and arisings: Remove from hard surfaces and grassed areas.  
General: Leave the works in a clean tidy condition at completion and after any maintenance operations.
- Q31.750 PLANTING MAINTENANCE GENERALLY  
Weed control: Maintain weed free area around each tree and shrub.  
Diameter (minimum): The larger of 1 m or the surface of original planting pit.  
Keep planting beds clear of weeds. Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch.  
Precautions: Ensure that plants are not damaged by mowers/nylon filament rotary cutters/ similar powered tools.  
Staking: Check condition of stakes, ties, guys and guards.  
- Broken or missing items: Replace.  
- Rubbing: Prevent.  
- Ties: Adjust to accommodate growth.  
- Damage to bark: Cut back neatly with sharp knife. Prevent further damage.  
- Frequency of checks: At each scheduled maintenance visit.  
Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.  
Trees: Spray crown when in leaf during warm weather.  
Watering: As required in order to maintain health plants.
- Q31.755 PLANTING MAINTENANCE - FERTILIZER  
Time of year: March or April/Autumn  
Fertilizer: Slow release.  
Manufacturer: Submit proposals.  
Application: Evenly spread, carefully incorporating below mulch materials.  
Application rate: As per manufacturers' recommendations.
- Q31.760 PLANTING MAINTENANCE - PRUNING  
General: Prune as required to promote healthy growth and natural shape.  
Dead, dying, diseased wood and suckers: Remove.  
Trees: Favour a single central leading shoot.
- Q31.780 MAINTENANCE INSTRUCTIONS  
Before end of the maintenance period, submit printed instructions recommending procedures to be established by the Employer for maintenance for one full year: Provide details of any special procedures to be carried out.
- Q31.790 FINAL MULCHING  
Timing: At end of the maintenance period.  
Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.  
Planting beds: Remulch. Depth (minimum): 75mm.  
Trees: Remulch. Depth (minimum): 75mm

## PROTECTING TREES

### Arboricultural Method Statement

All tree works are to be carried out in accordance with BS 3998:2010 'Tree Work - Recommendations'.

Tree protection must be installed prior to the commencement of any building activities/plant movement/materials storage on site and must remain in situ for the duration of works unless otherwise agreed to by the arboricultural consultant.

Care shall be taken when planning site operations in proximity to trees to ensure that wide, tall loads or plant with booms, jibs and counterweights can operate without contacting retained trees. A banksman/supervisor should be used to ensure that adequate clearance from retained trees is maintained during these processes. In the event that additional pruning is required to facilitate access, the advice of an Arborist should be sought.

The following activities are not permitted within the Root Protection Zone of retained trees:

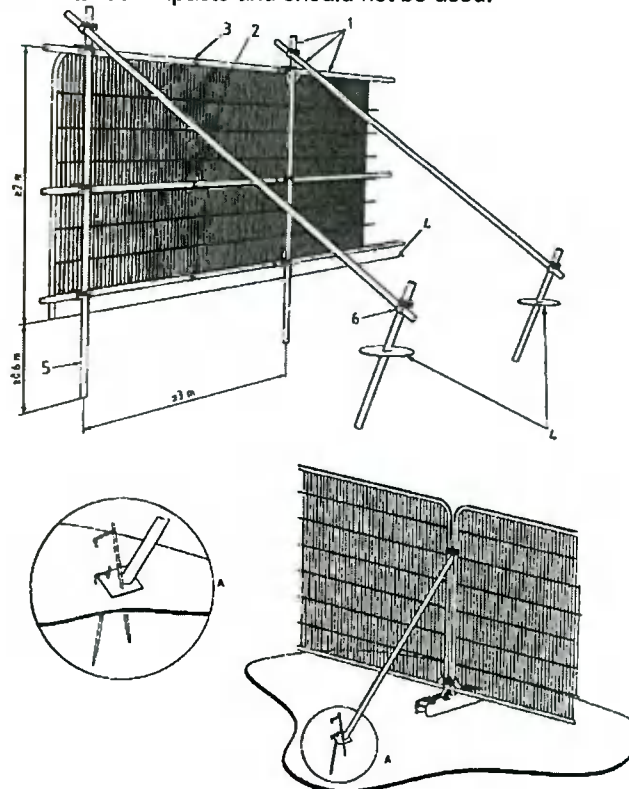
- No soil disturbance, compaction, raising or lowering of soil levels;
- No linear mechanical excavation whatsoever;
- No change in soil level by stripping or filling;
- No storage of plant or building material;
- No vehicle/plant machinery parking;
- No temporary buildings, sheds or offices;
- No fires within 10m of tree canopies;
- No Storage, handling or mixing of chemicals (including cement) or washing down of vehicles.

Hard surfaced areas within RPA's should be left in situ for the duration of construction works. Only following construction completion should resurfacing take place.

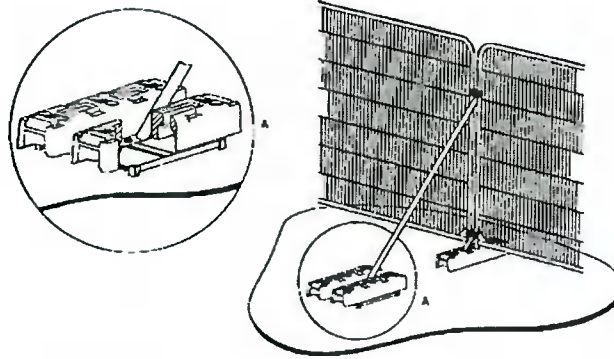
### Protective Barrier Fencing Specification

Tree protection fencing to remain in situ for the duration of construction works on site. TPF is to be constructed in accordance with BS 5837 section 9.2.2, namely-

"A scaffold structure comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at maximum intervals of 3m. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps. Weldmesh panels on rubber or concrete feet are not resistant to impacts and should not be used."







Should TPF become damaged, impairing its ability to protect retained trees, all work shall cease within the vicinity of the damaged TPF until it has been repaired or replaced.

If any tree damage is sustained during the interim period, notification should be given to an Arborist so prescription of remedial tree works can be given.

#### Cellular Confinement System Specification

New hard surfacing within retained trees RPZ's is to be installed using a cellular confinement system.

This must be implemented in accordance with manufacturer's instructions whilst also observing the principles set out in BS5837:2012 (section 11.3 'Principles for avoiding tree root damage during construction'). The principals set out within the manufacturers instructions can be summarised as follows-

- All soft landscaping currently observed within trees RPZ's is to be lifted sensitively using hand tools only.
- No heavy machinery to be used to facilitate this process.
- A geotextile separation, filtration layer is to be placed onto the prepared ground.
- System to be placed on top of the geotextile and pinned in place with metal pins.
- System to be backfilled with a no fines aggregate.
- A second geotextile separation, filtration layer is to be placed on top of the system.
- Porous surface treatment to be used.

## Q35 LANDSCAPE MAINTENANCE

### GENERALLY

#### Q35.105 MAINTENANCE OBJECTIVES

Location: All softworks included in this contract.

Duration: 12 months commencing from the practical completion date.

Aims: Enhanced landscape quality and improved landscape visual amenity.

Restrictions: use of mechanical tools after 7pm and before 7am.

#### Q35.130 REINSTATEMENT

Damage or disturbance to soil structure/planting/grass/hard landscaping/ buildings: Reinstate to original condition.

#### Q35.155 WATERING

Supply: It is the contractors responsibility to ensure that there is an adequate water supply to supply water as required to all plants throughout the maintenance period.

Quantity: Wet full depth of topsoil.

Application: Do not damage or loosen plants.

Compacted soil: Loosen or scoop out, to direct water to rootzone.

Frequency: As necessary to ensure establishment and continued thriving of all planting.

#### Q35.170 DISPOSAL OF ARISING

General: Unless specified otherwise, dispose of arisings as follows:

- Biodegradable arisings: Remove to recycling facility.
- Tree roots and stumps: Remove from site.
- Litter and non-biodegradable arisings: Remove and recycle if practicable.

#### Q35.190 LITTER

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

#### Q35.195 PROTECTION OF EXISTING GRASS

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

### GRASSED AREAS

#### Q35.210 MAINTENANCE OF GRASSED AREAS

General: Maintain turf in a manner appropriate to the intended use.

Condition: Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.

Waterlogging and compaction: Prevent.

Damage: Repair trampling, abrasion or scalping.

Edges: Neat and well defined, in clean straight lines or smooth flowing curves.

Litter and fallen leaves: Remove regularly to maintain a neat appearance.

#### Q35.225 TREE STEMS

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.

#### Q35.235 BULBS AND CORMS IN GRASSED AREAS

Do not cut before flowering. Allow min. 6 weeks after flowering before grass cutting commences.

#### Q35.250 LEAF REMOVAL

Collect fallen leaves. Remove from site for recycling.

#### Q35.285 TOP DRESSING

Timing: Following scarification and aeration. Material: Compost / sand / loam mix.

#### Q35.290 ROLLING

Timing: February/March, after first mowing.  
Roller: 150kg (3 cwt) Operations: Consolidate turf and reduce frost heave.

Q35.309 EDGES TO SEEDED AREAS

Timing: After seeded areas are well established.  
Edges: Cut to clean straight lines or smooth curves. Draw back soil to permit edging.

Q35.330 SELECTIVE HERBICIDE

Herbicide: Combined weed and feed mix.  
Areas not to be sprayed: Bulb and corm planted areas when in leaf.

**WILDFLOWER AREAS**

Q35.400 MAINTENANCE OF ANNUAL WILDFLOWER MEADOW

Meadow will have to be cut and the ground will need to be disturbed (rotovated) at the end of the season. Annual species must be re-sown each year.

When to cut the meadow: When flowering has finished.

Cutting height: Ground level.

What to do with cuttings: Remove all cut vegetation immediately.

Q35.410 MAINTENANCE OF PERENNIAL WILDFLOWER MEADOW

First year: In the first year, it is important to keep the area cut short. This is first to keep "weeds" down but also to provide light to seedlings to help them grow. Cut the sward to a height of 75 mm whenever the vegetation reaches 150mm, and remove the cut vegetation if possible.

Over the first season, perennial weeds should be treated (removed by mechanical means or by careful spot spraying) after cutting. Cut the meadow no later than mid-November to a height of 30 mm and remove all vegetation.

Second and third years: After year one, the meadow is cut just once annually. The goal in years 2 and 3 is to encourage germination the following year. Cut the sward just once, after the seed has set (or no later than mid-November), to a height of 30 mm. Leave the cut vegetation for 3 days then remove. After cutting, perennial weeds should continue to be treated through mechanical removal or careful spot spraying.

Fourth year and beyond: The area can be left to settle into its own natural state and cutting/maintenance continued in the same fashion.

Q35.420 MAINTENANCE OF ANNUAL AND PERENNIAL WILDFLOWER MEADOW

First year: After the first year's flowers fade, cutting should be carried out (no later than mid-October). This provides light and helps the germination of slower-growing perennial seedlings in the second year.

Cut to a height of 30 mm, and remove all cut vegetation immediately. After cutting, treat perennial weeds (mechanically remove or carefully spot spray).

Second and third years: In the second and third year, cut when seed has set (no later than mid-November) to a height of 30 mm. This time, leave cut vegetation for 3 days, then remove. Continue to treat for perennial weeds after cutting each year.

Fourth year: Cutting is exactly the same in the fourth year (cut to a height of 30 mm no later than mid-November, leave for 3 days then remove vegetation).

Fifth year and beyond: The area can be left to settle into its own natural state and cutting/maintenance continued in the same fashion.

Q35.430 MACHINERY TO BE USED FOR MAINTENANCE OF WILDFLOWER AREAS

Cutting cannot be achieved using a typical lawn mower. The following options include appropriate machinery:

- Strimmer: suitable for areas < 1500 sq metres
- "Allen" or Power scythe: suitable for areas < 3000 sq metres
- Hand scythe: suitable for areas < 1000 sq metres (if person proficient)

- For larger areas, tractor flail; tractor with a "drum" mower; Allen scythe (finger bar) to cut; "hay bob" to rake grass; and round or square baler.

## SHRUBS/ TREES/ HEDGES

- Q35.500 ESTABLISHMENT OF NEW PLANTING**  
Duration: Two growing seasons from date of planting.  
Weed control: Keep planting beds clear of weeds by maintaining full thickness of mulch as specified.  
Area: Maintain a weed free area around each tree, min diameter of 1 m.  
Soil condition: Fork over to keep soil loose, gentle cambers/no hollows. Do not reduce depth or effect of mulch.  
Watering: As required.
- Q35.510 TREE STAKES AND TIES**  
Inspection/ Maintenance times: Every two months and immediately after strong winds.  
Stakes: Replace loose, broken or decayed stakes to original specification.  
Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.  
Removal of stakes/ ties: During spring when no longer required to support tree. Fill stake holes with soil.
- Q35.520 REFIRMING OF TREES AND SHRUBS**  
Timing: After strong winds, frost heave and other disturbances.  
Refirming: Tread around the base until firmly bedded.
- Q35.540 PRUNING GENERALLY**  
Pruning: In accordance with good horticultural and arboricultural practice.  
Removing branches: Do not damage or tear the stem or bark.  
Wounds: Keep as small as possible and cut cleanly back to sound wood.  
Cutting: Cut above and sloping away from an outward facing bud, angled so that water will not collect on cut area.  
Larger branches: Use the branch bark ridge or branch collar as a pruning guide.  
Appearance: Shape appropriately to species/location/season/ stage of growth.  
Tools: Use clean sharp secateurs, hand saws or other approved tools.  
Disease or infection: Give notice if detected.
- Q35.545 PRUNING OF EXCESSIVE OVERHANG**  
Timing: Annually between November and February.  
Operations: Remove growth encroaching onto paths, roads, signs, sightlines and road lighting luminaires.
- Q35.570 FORMATIVE PRUNING OF YOUNG TREES**  
Standard: Type and timing of pruning operations to suit the plant species.  
Time of year: Do not prune during the late winter/ early spring sap flow period.  
Young trees up to 4 m high: Crown prune: Remove dead branches / reduce side branches by one third. / Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.  
Operatives: Surgery to larger trees must be carried out by an approved member of the Arboricultural Association.
- Q35.575 PRUNING ORNAMENTAL SHRUBS**  
General: Prune to encourage healthy and bushy growth and desirable ornamental features.  
Suckers: Remove by cutting back level with the source stem or root.
- Q35.605 TRIMMING HEDGES**  
Operations and Timing: Cut back hard in June and September to encourage bushy growth.  
Form: Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.
- Q35.620 REMOVAL OF DEAD PLANT MATERIAL**  
Operations: At the end of the growing season, check shrubs and remove all dead wood, and damaged branches.
- Q35.630 DEAD AND DISEASED PLANTS**  
Removal: In the next scheduled round of replacement planting.



**Q35.635 REINSTATEMENT OF SHRUB/HERBACEOUS AREAS**  
Remove dead/ damaged plants. Carefully move mulch to one side. Dig over the soil. Do not disturb roots of adjacent plants. Replacement plants to original spec/ to match the size of adjacent plants of the same, whichever is greater. Replacement planting should be done during the appropriate time of year for successful establishment.

**Q35.645 WEED CONTROL GENERALLY**  
Clear ground in a 500mm radius from newly planted trees and immediately around shrubs, so weed cover is less than 5% and no weeds exceed 40mm high.

**Q35.650 HAND WEEDING**  
General: Remove weeds entirely, including roots. Remove the minimum quantity of soil and disturb plants and mulched surfaces as little as possible. Rake area to a neat, clean condition. Reinstate mulch to original depth.

**Q35.690 MAINTENANCE OF LOOSE MULCH**  
Thickness (minimum): 75mm.  
Mulch spill on adjacent areas: Remove.  
Weeding: Remove weeds growing on or in mulch by hand weeding.

### **TREE WORK**

**Q35.810 TREE WORK GENERALLY**  
Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.  
Protection: Avoid damage to neighbouring trees, plants and property.  
Standards: To BS 3998 and Health Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.  
Cut branches with no more slope on the cut surface than is necessary to shed rainwater.  
Appearance: Leave trees with a well-balanced natural appearance.  
Chain saw work: Operatives must hold a Certificate of Competence.  
Tree work: To be carried out by an approved member of the Arboricultural Association.

**Q35.815 ADDITIONAL WORK**  
Defective/diseased/unsafe parts of trees additional to those scheduled for attention: Give notice if detected.

**Q35.835 CUTTING AND PRUNING GENERALLY**  
Tools: Appropriate, well maintained and sharp.  
Removing branches: Do not damage or tear the stem.  
Wounds: As small as possible, cut cleanly back to sound wood angled so that water will not collect on the cut area.  
Large branches: Remove in small sections and lower to ground with ropes and slings.  
Dead branches and stubs: When removing, do not cut into live wood.  
Unsafe branches: Remove epicormic shoots and weak forks that could fail in adverse weather conditions.  
Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

**Q35.840 CROWN REDUCTION/ SHAPING**  
General: Cut back selectively to lateral/ sublateral buds/ branches to retain flowing without leaving stumps.

**Q35.845 CROWN LIFTING**  
Height: 2.5m above footpaths.  
Removing branches: Remove whole branches back to the stem or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.

**Q35.850 CROWN THINNING**  
Removing branches: Remove inward growing, crossing, rubbing, dead and damaged branches.  
Thinning: Selectively remove secondary and small live branch growth evenly throughout the crown.  
Cutting: Make no cuts of more than 25mm diameter.  
Branches: Cut back to lateral or sublateral buds or branches without leaving stumps.  
Appearance: Leave a uniform and well-balanced structure of branches and foliage.

**Q35.855 CUTTING TREE ROOTS**  
Excavating: Use hand tools only.  
Protected area: Do not cut roots within a radius of half the tree's height, measured from the trunk.

Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.  
Cutting: Make clean smooth cuts with a hand saw.  
Wounds: Minimize. Avoid ragged edges. Pare cut surfaces smooth with a sharp knife.  
Backfilling: Protection: Cover cut roots with clean sharp sand. Backfill with original topsoil.

**Q35.865 BARK DAMAGE**

Wounds: Do not attempt to stop sap bleeding.  
Bark: Remove ragged edges using a sharp knife.  
Wood: Remove splintered wood from deep wounds.  
Size: Keep wounds as small as possible.

**Q35.870 CAVITIES IN TREES**

Investigation: Remove rubbish and rotten wood. Probe the cavity to find the extent of any decay and give notice.  
Water filled cavities: Do not drain.  
Sound wood inside cavities: Do not remove.  
Cavity openings: Do not cover.

**HARD LANDSCAPE AREAS**

**Q35.900 SNOW CLEARANCE**

De-icing: To all roads and footpaths  
Material: Grit and Salt, spread evenly at a rate of 25-50g/m<sup>2</sup>

**Q35.910 HARD SURFACES**

Herbicide: Apply a suitable foliar acting or residual herbicide.  
Hard surfaces: Remove litter, leaves and other debris.  
Surface gutters and channels: Remove mud, silt and debris.  
Drainage gullies: Empty traps and flush clean.  
Repairs to flexible bituminous pavings: In accordance with paving specifications or BS 7370-2, clause 4.12.  
Stain removal: In accordance with BS 7370-2, table 4.

**Q35.920 FENCING**

Fences: Inspect monthly. Ensure all fixtures/fittings/paintwork are in good condition, secure and rust-free.



## Q40 FENCING

- Q40.115 LIFESPAN FOR ALL FENCING  
To provide a min 25-year service life
- Q40.125 OPEN MESH STEEL PANEL GENERAL PURPOSE FENCING AND GATES (boundary to ball court)  
Manufacturer: Contactor to submit proposals.  
Product reference: open mesh steel fencing. To BS 1722-14.  
Height: 2000mm / Nominal Panel Width: 3034mm.  
Mesh and wire: Welded mesh spacing 200mm vertical x 50mm horizontal x 45mm vertical gap.  
Finish: Galvanised and polyester powder coated green RAL 6005.  
Posts: 60 x 40mm, rectangular hollow section steel hot dip galvanised inside and out to BS EN 1461 as standard and polyester powder coated green RAL 6005. Supplied with flat post caps in black polypropylene  
Method of setting posts: As specified by manufacturers technical specifications for this category of fence.
- Q40.340 STEEL VERTICAL BAR FENCING (boundary to SNU garden)  
Manufacturer: Contactor to submit proposals.  
Product reference: Vertical bar fencing. To BS EN 1176 for children play fencing.  
Height: 1200mm. / Verticals: 19mm pales with domed top caps. / Centres of verticals: 2737mm.  
Posts: circular, hollow, 60.3mm dia. hot dip galvanised inside and out to BS EN ISO 1461 as standard and polyester powder coated green RAL 6005. Supplied with domed post caps in black polypropylene  
Finish: Hot dip galvanised to BS EN ISO1461 and Polyester powder coated.  
Method of setting posts: As specified by manufacturers technical specifications for this category of fence.

## GATES, POSTS AND STILES

- Q40.511 WELDMESH GATES (boundary to ball courts)  
Manufacturer: Contactor to submit proposals.  
Product reference: Single leaf manual swing gate. To BS EN 1461.  
Height: 2000mm / Nominal Panel Width: 1000mm.  
Finish: Galvanised and polyester powder coated green RAL 6005.  
Method of fixing: As specified by manufacturers technical specifications for this category of fence.
- Q40.570 STEEL GATES (boundary to SNU garden)  
Manufacturer: Contactor to submit proposals.  
Product reference: Single leaf manual swing gate. To BS EN 1176 for children play fencing.  
Height: 1200mm. / Nominal Panel Width: 1000mm.  
Finish: Galvanised and polyester powder coated green RAL 6005.  
Method of fixing: As specified by manufacturers technical specifications for this category of fence.

## Q50 SITE FURNITURE/ STREET FURNITURE/ EQUIPMENT

- Q50.210 CYCLE SHELTER/STANDS  
Manufacturer: Contactor to submit proposals.  
Method of fixing: As per manufacturer's recommendations
- Q50.220 SEATS/BENCHES  
Manufacturer: Contactor to submit proposals.  
Material: recycled polyethylene.  
Method of fixing: As per manufacturer's recommendations.
- Q50.230 PICNIC BENCHES  
Manufacturer: Contactor to submit proposals.  
Material: recycled plastic.  
Method of fixing: As per manufacturer's recommendations.

