

Smeeden Foreman Ltd

Barnsley Borough Council

# Market Street, Goldthorpe, Barnsley

Landscape specification

16-06-2022

## Contents

<b>Q10 Kerbs/ edgings/ channels/ paving accessories .....</b>	<b>1</b>
<b>Q22 Asphalt roads/ pavings .....</b>	<b>4</b>
<b>Q23 Gravel/ hoggin/ woodchip/ resin bound roads/ pavings/ overlays .....</b>	<b>6</b>
<b>Q28 Topsoil and soil ameliorants .....</b>	<b>8</b>
<b>Q30 Seeding/ turfing.....</b>	<b>13</b>
<b>Q31 External planting.....</b>	<b>16</b>
<b>Q35 Landscape maintenance .....</b>	<b>21</b>
<b>Q50 Site/ street furniture/ equipment.....</b>	<b>29</b>
<b>Z21 Mortars .....</b>	<b>31</b>

## Q10

### Kerbs/ edgings/ channels/ paving accessories

#### Types of kerbs/edgings and channels

##### 114 Proprietary concrete kerb

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1. Description: Centre stone to dropped kerbs
2. Standard: To BS EN 1340
3. Manufacturer: Tobermore [www.tobermore.co.uk](http://www.tobermore.co.uk)
  - 3.1. Product reference: Fusion Kerb Dropper Centre Kerb
4. Recycled content: Tobermore to submit
5. Designations: EF Edgings, Flat top
6. Size: (width x height x length) 125 x 150 x 915mm
7. Special shapes: -
8. Finish: Exposed aggregate
9. Colour: Silver
10. Bedding: Fresh concrete races to engineer's design
11. Joints generally: Dry, 2-3mm gap
12. Sealant movement joints: To engineer's design
13. Accessories: None required

##### 117 Proprietary precast concrete

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1. Description: Edgings to bitmac footpath
2. Standard: To BS EN 1340.
3. Manufacturer: Marshalls- [www.marshalls.co.uk](http://www.marshalls.co.uk)
  - 3.1. Product reference: Flat top edging
4. Recycled content: Marshalls to submit
5. Designations: EF Edging, flat top
6. Size (width x height x length): 50 x 150 x 914mm
7. Special shapes: -
8. Finish: Pimple surface
9. Colour: Standard grey
10. Bedding: Fresh concrete races
11. Joints generally: Dry, 2-3 mm gap
12. Sealant movement joints: To engineer's design
13. Accessories: None

##### 200 Special

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1. Description: Edging to self binding gravel area
2. Manufacturer: Kinley- [www.kinley.co.uk](http://www.kinley.co.uk)
  - 2.1. Product reference: Alu-Excel Flexible
3. Size: 100 x 3mm
4. Type/ Material: Mill Aluminium
  - 4.1. Finish: As supplied
  - 4.2. Colour: Silver/grey

5. Accessories: Kinley spiral fixing stakes
6. Bedding: 10mm depth, 4:1 Dry mix race just wider than base width of edging. Depth can vary to suit levels.
7. Joints: Close butted

## Roads/paving accessories/ marking/ demarcation - Not Used

### Laying

#### 510 Laying kerbs, edgings and channels

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1. Cutting: Neat, accurate and without spalling. Form neat junctions.
  - 1.1. Long units (450 mm and over) minimum length after cutting: 300 mm.
  - 1.2. Short units minimum length after cutting: The lower of one third of their original length or 50 mm.
2. Bedding of units: Positioned true to line and levelled along top and front faces, in a mortar bed on accurately cast foundations or on a race of fresh concrete.
3. Securing of units: After bedding has set, secured with a continuous haunching of concrete or on a race of fresh concrete with backing concrete cast monolithically.

#### 520 Adverse weather

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1. Conditions: Do not construct if the temperature is below 3°C on a falling thermometer or 1°C on a rising thermometer. Adequately protect foundations, bedding and haunching against frost and rapid drying by sun and wind.

#### 530 Concrete for foundations, races and haunching

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1. Standard: To BS 8500-2.
2. Designated mix: To engineer's design
3. Workability: Very low.

#### 540 Cement mortar bedding

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1. General: To section Z21.
2. Mix (Portland cement:sand): 1:3.
  - 2.1. Portland cement: Class CEM I 42.5 to BS EN 197-1.
  - 2.2. Sand: to BS EN 12620, grade 0/4 or 0/2 (MP).
3. Bed thickness: 12-40 mm.

#### 547 Bedding/ Backing of units on fresh concrete races

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1. Standard: To BS 7533-6.

#### 620 Accuracy

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1. Deviations (maximum)
  - 1.1. Level:  $\pm 6$  mm.
  - 1.2. Horizontal and vertical alignment: 3 mm in 3 m.

#### 625 Regularity of paved surfaces

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1. Maximum undulation of (non-tactile) paving surface: 3 mm.
  - 1.1. Method of measurement: Under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface).
2. Difference in level between adjacent units (maximum)

- 2.1. Joints flush with the surface: Twice the joint width (with 5 mm max difference in level).
- 2.2. Recessed, filled joints: 2 mm.
  - 2.2.1. Recess depth (maximum): 5 mm.
- 2.3. Unfilled joints: 2 mm.
- 3. Sudden irregularities: Not permitted.

### **630 Narrow mortar joints**

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- 1. **Jointing:** Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled, tightly butted and surplus mortar removed immediately.
  - 1.1. Joint width: 3 mm.

### **640 Tooled mortar joints**

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- 1. **Jointing:** Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and tooled to a neat flush profile.
  - 1.1. Joint width: 6 mm.

Ω End of Section

## Q22

# Asphalt roads/ pavings

### Types of paving

#### 115 Asphalt concrete paving

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1. Description: For footpath
2. Standard: To BS EN 13108-1
3. Granular sub-base:
4. Surface course: To engineer's design

### Preparatory work/ requirements

#### 220 Bituminous materials generally

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1. Suppliers' names: Submit.
  - 1.1. Timing (minimum): Two weeks before starting work.
2. Test certificates: At the time of delivery for each manufacturing batch submit certificate:
  - 2.1. Confirming compliance with this specification and the relevant standard.
  - 2.2. Stating full details of composition of mix.

#### 240 Acceptance of surfaces

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1. Surface: Sound, clean and suitably close textured.
2. Level tolerances: To BS 594987.
3. Kerbs and edgings: Complete, adequately bedded and haunched and to the required levels.

#### 250 Abutments

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1. Vertical edges of manholes, gullies, kerbs and other abutments: Clean and paint with a thin uniform coating of hot applied 40/60 paving grade bitumen.
2. Finishing: Tamp surface around projections.
  - 2.1. Level: Flush or not more than 3 mm above projections.

### Laying

#### 310 Laying generally

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1. Preparation: Remove all loose material, rubbish and standing water.
2. Adjacent work: Form neat junctions. Do not damage.
3. Channels, kerbs, inspection covers etc: Keep clean.
4. New paving
  - 4.1. Keep traffic free until it has cooled to prevailing atmospheric temperature.
  - 4.2. Do not allow rollers to stand at any time.
  - 4.3. Prevent damage.
  - 4.4. Lines and levels: With regular falls to prevent ponding.
  - 4.5. Overall texture: Smooth, even and free from dragging, tearing or segregation.
  - 4.6. State on completion: Clean.

#### 320 Adverse weather

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1. Frozen materials: Do not use.

2. Suspend laying
  - 2.1. During freezing conditions
  - 2.2. If the air temperature reaches 0°C, or in calm dry conditions -3°C, on a falling thermometer.
  - 2.3. Hot rolled asphalt: During periods of continuous or heavy rain or if there is standing water on the base.

### 330 Levels

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1. Permissible deviation from the required levels, falls and cambers (maximum): In accordance with BS 594987, clause 5.2.

### 340 Flatness/ Surface regularity

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1. Deviation of surface: Where appropriate in relation to the geometry of the surface, the variation in gap under a 3 m straightedge placed anywhere on the surface to be not more than:
  - 1.1. Surface course: To engineer's design

### Completion - Not Used

Ω End of Section

## Q23

# Gravel/ hoggin/ woodchip/ resin bound roads/ pavings/ overlays

## Types of surfacing

### 110 Hard binding gravel

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1. Description: For area to the south side of the footpath
2. Blinding to sub-base: Required
3. Surface course: Angular gravel, free from clay, with sufficient grit to enable compaction.
  - 3.1. Type: IMAG Ltd [www.imag.co.uk](http://www.imag.co.uk)
  - 3.2. Source: IMAG's quarries
  - 3.3. Colour: Golden Amber
  - 3.4. Size: As supplied
  - 3.5. Compacted thickness: 50mm
4. Completion: Compact to produce a firm, regular surface, stable in use.

## Laying

### 340 Laying generally

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1. Channels, gullies, etc: Keep clear.
2. Finished surfaces
  - 2.1. Lines and levels: To prevent ponding.
  - 2.2. Overall texture: Even.
  - 2.3. State at completion: Clean.

### 350 Cold weather working

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1. Frozen materials: Do not use.
2. Freezing conditions: Do not lay pavings.
3. Cold bituminous surface dressings: Do not apply when ambient temperature is below 10°C.
4. Other dressings or overlays: As manufacturers' recommendations.

### 360 Drainage falls

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1. Sealed surfaces
  - 1.1. Falls and cross falls (minimum): 1:40.
  - 1.2. Camber (minimum): 1:50.
2. Unsealed surfaces (minimum): 1:30.

### 380 Laying granular surfaces in pedestrian areas and cycle tracks

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1. Permissible deviation from required levels, falls and cambers (maximum):  $\pm 12$  mm.
2. General: Spread and level in 100 mm maximum layers. As soon as possible, compact each layer.
3. Dry weather: Lightly water layers during compaction.

### 390 Protection from traffic and plant

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1. Paved areas: Restrict access to prevent damage.



**Completion - Not Used**

Ω End of Section

## Q28

# Topsoil and soil ameliorants

## System outline

### 145 Planting pit backfilling topsoil system

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1. Description: FOR ALL TREE PITS
2. Composition
  - 2.1. Topsoil: Imported topsoil to BS 3882
  - 2.2. Ameliorants: Tree and shrub compost
  - 2.3. Accessories: -

## Products

### 300 Preparation materials generally

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1. Purity: Free of pests and disease.
2. Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
3. Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
  - 3.1. Corrosive, explosive or flammable.
  - 3.2. Hazardous to human or animal life.
  - 3.3. Detrimental to healthy plant growth.
4. Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
5. Objectionable odour: None.
6. Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

### 310 Materials not permitted

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1. Materials: Peat

### 315 Imported topsoil to BS 3882

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1. Description: For all new planting areas
2. Quantity: Provide as necessary to complete the work.
3. Standard: To BS 3882.
4. Classification: Multipurpose
  - 4.1. Soil textural class to BS 3882, Figure 1: Sandy loam
5. Source: Contractor's choice
  - 5.1. Product reference: -

## Execution

### 610 Topsoil analysis

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1. Soil to be analysed: Imported topsoil
2. Soil analyst: Tim O'Hare- [www.toha.co.uk](http://www.toha.co.uk)
3. Samples: Collect in accordance with BS 3882.

4. Submit

- 4.1. Declaration of analysis: In accordance with BS 3882, clause 6 and Table 1.
- 4.2. Additional analysis: Not required
- 4.3. Report detailing soil analyst's recommendations.

## 620 Importing topsoil

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- 1. Give notice: Before stripping topsoil for transfer to site.
  - 1.1. Notice period: 2 days

## 625 Sample loads

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- 1. Description: FOR IMPORTED TOPSOIL
- 2. Deliver to site a sample load: 1 tonne bag
- 3. Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
  - 3.1. Notice period: 5 days

## 630 Documentation for imported topsoil

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- 1. Description: FOR ALL PLANTING BEDS
- 2. Timing: Submit at time of sample delivery.
- 3. Contents
  - 3.1. Full description of all soil components.
  - 3.2. Record of source for all soil components.
  - 3.3. Record drawings showing the location and depth of all soils by type and grade.
  - 3.4. Declaration of analysis: in accordance with BS 3882, clause 6 and Table 1.
- 4. Number of copies: 2

## 650 Notice

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- 1. Give notice before
  - 1.1. Setting out.
  - 1.2. Spreading topsoil.
  - 1.3. Applying herbicide.
  - 1.4. Applying fertilizer.
  - 1.5. Visiting site during maintenance period.
- 2. Period of notice: 2 working days

## 655 Mechanical tools

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- 1. Restrictions: Do not use within 100 mm of tree and plant stems. Do not damage adjacent planting.

## 665 Subsoil surface preparation for:

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- 1. Description: Lightly scarify surface
- 2. Standard: In accordance with BS 3882.
- 3. General: Excavate and/ or place fill to required profiles and levels, as section D20.
- 4. Loosening
  - 4.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth
    - 4.1.1. Light and noncohesive subsoils: Not applicable

4.1.2. Stiff clay and cohesive subsoils: 450 mm

4.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.

4.2. Wet conditions: Do not loosen subsoils.

5. Stones: Immediately before spreading topsoil, remove stones larger than 75 mm.
6. Remove from site: Arisings, contaminants and debris, builder's rubble

## 670 Inspecting formations

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1. Give notice: Before spreading topsoil for Imported topsoil.
2. Notice period: 3 Days

## 685 Surplus materials to be removed

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1. Topsoil removal from site: Topsoil remaining after completion of all landscaping work
2. Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

## 700 Grading of topsoil

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1. Topsoil condition: Reasonably dry and workable.
2. Contours: Smooth and flowing, with falls for adequate drainage.
  - 2.1. Hollows and ridges: Not permitted.
3. Give notice: If required levels cannot be achieved by movement of existing soil.

## 705 Handling topsoil

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

## 710 Spreading topsoil on:

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1. Description: Grass, wildflower and shrub planted areas
2. Standard: In accordance with BS 3882.
3. Temporary roads/ surfacing: Remove before spreading topsoil.
4. Layers
  - 4.1. Depth (maximum): 150mm for grass areas, 100mm for wildflower areas and 450 mm for shrub planted areas.
  - 4.2. Gently firm each layer before spreading the next.
5. Depth after firming and settlement: 100- 450 mm as for areas above
6. Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

## 718 Final cultivation

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1. Description: Of all planted areas
2. Compacted topsoil: Break up to full depth.

3. **Tilth:** Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
4. **Depth:** 150 mm
5. **Particle size (maximum):** 5 mm
6. **Timing:** Within a few days before planting
7. **Weather and ground conditions:** Suitably dry.
8. **Surface:** Leave regular and even.
9. **Levels:** 25 mm above adjoining paving or kerbs
10. **Undesirable material brought to the surface**
  - 10.1. Remove visible weeds.
  - 10.2. Remove roots and large stones with any dimension exceeding 30 mm.

## **720 Finished levels of topsoil after settlement**

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1. In relation to adjoining paving, kerbs or hard surfaces: 50 mm below
2. In relation to dpc of adjoining buildings: Not less than 150 mm below.
3. In relation to adjacent grass areas: -
4. Seeded areas: -
5. Sportsfields: -
  - 5.1. From levels or gradients shown on drawings: -
  - 5.2. From line between boning rods 30 m apart: -
6. Within root spread of existing trees and shrubs to be retained: -
7. Adjoining soil areas: -
8. Thickness of turf or mulch: -

## **809 Compost**

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1. Description: Tree and shrub general purpose without peat
2. -
3. -

## **810 Applying compost**

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1. Description: TO ALL PLANTING AREAS
2. Application rate for trees and shrubs: 50 mm thick
  - 2.1. Timing: Apply prior to cultivation.
3. Application rate for grass: -
  - 3.1. Timing: -
4. Application rate for planters: -
  - 4.1. Timing: -
5. Other requirements: -

## **844 Bark mulch**

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1. Description: Composted fine bark mulch
2. Supplier: Melcourt [www.melcourt.co.uk](http://www.melcourt.co.uk) or similar approved
3. -

## **845 Applying loose mulch**

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1. Description: TO ALL PLANTING BEDS

2. Timing: Immediately after planting
3. Preparation: Water soil thoroughly prior to applying
4. Coverage of mulch (minimum)
  - 4.1. Planting beds (depth): 50 mm depth
  - 4.2. Trees: 50mm depth
  - 4.3. Container planting: -
5. Finished level of mulch: 30 mm below adjacent paved areas

**Completion - Not Used**

Ω End of Section

## Q30

### Seeding/ turfing

#### General information/requirements

##### 115 Seeded and turfed 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.

##### 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/turfing.

##### 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/turfing until instructed. If seeding/turfing 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: 3 working days

##### 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 - Not Used

#### Seeding - Not Used

#### Turfing

##### 400 Cultivated turf

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1. **Description:** FOR ALL GRASSED AREAS
2. **Supplier:** Rowlawn
  - 2.1. **Product reference:** Turfmaster

3. Properties of soil used for turf production: Well drained sandy loam

#### **420 Delivery and storage**

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1. **Timing:** Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist.
2. **Frosty weather or waterlogged ground:** Do not lift turf.
3. **Delivery:** Arrange to avoid need for excessive stacking.
4. **Stacking height (maximum):** 1 m.
5. **Dried out or deteriorated turf:** Do not use.
6. **Certification**
  - 6.1. **Standard:** To BS 3969.
  - 6.2. **Declaration:** Sward species composition

#### **430 Turfing generally**

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1. **Time of year:** To suit work program
2. **Timing of laying**
  - 2.1. **Spring and summer:** Within 18 hours of delivery.
  - 2.2. **Autumn and winter:** Within 24 hours of delivery.
3. **Weather conditions:** Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.
4. **Working access:** Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.
5. **Jointing:** Laid with broken joints, well butted up. Do not stretch turf.
6. **Edges:** Whole turfs, trimmed to a true line.
7. **Adjusting levels:** Remove high spots and fill hollows with fine soil.
8. **Consolidating:** Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.
9. **Dressing, brushed well in to completely fill all joints:** sandy loam
10. **Watering:** Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.

#### **Protecting/cutting**

#### **530 First cut of grassed areas**

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1. **Timing:** When grass is reasonably dry.
  - 1.1. **Height of initial growth:** 75mm
2. **Preparation**
  - 2.1. **Debris and litter:** Remove.
  - 2.2. **Stones and earth clods larger than 25 mm in any dimension:** Remove
3. **Height of first cut:** 40mm
4. **Mower type:** Contractor's choice
5. **Arisings:** Spread evenly over cut areas

#### **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

### 610 Failures of seeding/ turfing

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1. **Duration:** Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
2. **Defective materials or workmanship:** Areas that have failed to thrive.
  - 2.1. **Exclusions:** Theft or malicious damage.
3. **Method of making good:** Recultivation and reseeding/ returfing.
4. **Timing of making good:** The next suitable planting season

### 620 Maintaining

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1. **Description:** General turf areas
2. **Duration:** Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
3. **Maximum height of growth at any time:** 75 mm
4. **Preparation:** Before each cut remove all litter and debris.
5. **Cutting:** As and when necessary to a height of 35 mm.
  - 5.1. **Arisings:** Spread evenly over cut areas
6. **Bulb planting areas:** Do not cut until bulb foliage has died down.
7. **Trimming:** All edges.
  - 7.1. **Arisings:** Remove.
8. **Weed control:** Substantially free of broad leaved weeds.
  - 8.1. **Method:** Application of a suitable selective herbicide.
9. **Stones brought to the surface:** Remove regularly.
  - 9.1. **Size:** Exceeding 25 mm in any dimension.
10. **Areas of settlement:** Make good.
11. **Watering:** When instructed

### 650 Maintaining grassed areas with perennial wildflowers

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1. **Duration:** Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
2. **Preparation:** Before each cut remove all litter and debris.
3. **Height and frequency of cut in first growing season**
  - 3.1. **Time of first cut:** October
  - 3.2. **Height of first cut:** 50 mm
  - 3.3. **Frequency of subsequent cutting (minimum):** Twice a year
  - 3.4. **Height of growth permitted (maximum):** 150 mm
4. **Height and frequency of cut in second growing season**
  - 4.1. **Time of cut:** March/ April
  - 4.2. **Height of cut:** 100 mm
5. **Trimming:** All edges.
  - 5.1. **Arisings:** Remove.
6. **Watering:** When instructed

Ω End of Section

## Q31

### External planting

#### General information/ requirements

##### 118 Soil conditions

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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.

##### 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.

##### 125 Times of year for planting

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1. Deciduous trees and shrubs: Late October to late March.
2. Conifers and evergreens: September/ October or April/ May.
3. Herbaceous plants (including marginal): September/ October or March/ April.
4. Container grown plants: At any time if ground and weather conditions are favourable.
  - 4.1. Watering and weed control: Provide as necessary.
5. Dried bulbs, corms and tubers: September/ October.
6. Colchicum (crocus): July/ August.
7. Green bulbs: After flowering in spring.
8. Wildflower plugs: Late August to mid November or March/ April.
9. Aquatic plants: May/ June or September/ October.

##### 130 Mechanical tools

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

##### 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.

##### 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

## **170 Soil requirements**

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1. Type
  - 1.1. Planted beds: Planting bed soil system, as section Q28
  - 1.2. Tree pits, shrub pits and other backfilling: Plant pit backfilling soil system, as section Q28
  - 1.3. External container planting: -
  - 1.4. Mulch applied after planting: Mulching and top dressing system, as section Q28

## **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, discoloration, weeds and physiological disorders.
5. Budded or grafted plants: Bottom worked.
6. Root system and condition: Balanced with branch system.
  - 6.1. Standard: The National Plant Specification
7. Species: True to name.
8. Origin/ Provenance: Contractor's choice
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).

## **225 Bulbs/ Corms/ Tubers**

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1. Condition: Firm, entire, not dried out or shrivelled.
2. Health: Free from pests, diseases and fungus.
3. Handling: Remove from packaging immediately.
4. Storage: Permitted only when necessary.
  - 4.1. Location: Well ventilated, dark, covered, rodent proof container, away from exhausts and fruit.
  - 4.2. Duration: Minimum period.
  - 4.3. Temperature: 18-21°C.

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

---

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**

---

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: .....

## **255 Plants/ Trees reserved at supplier's premises**

---

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

## **260 Plant/ Tree substitution**

---

1. **Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering:** Submit alternatives, stating:
  - 1.1. Price.
  - 1.2. Difference from specified plants/ trees.
2. **Approval:** Obtain before making any substitution.

## **265 Plant handling, storage transport and planting**

---

1. **Standard:** To CPSE 'Handling and establishing landscape plants'.
2. **Frost:** Protect plants from frost.
3. **Handling:** Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
4. **Plant packaging:** Coextruded polyethylene bags with black interior and white exterior
5. **Packaging of bulk quantities:** Pallets or bins sealed with polyethylene and shrink wrapped
6. **Planting:** Upright or well balanced with best side to front.

## **290 Surplus material**

---

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**

## **305 Weed control**

---

1. **Description:** FOR INVASIVE NON-NATIVE WEEDS
2. **Locations:** All planting areas
3. **General:** Prevent weeds from seeding and perennial weeds from becoming established, by handweeding, hoeing, burying.

## Planting shrubs/ herbaceous plants/ bulbs

### 401 Regular plant layout

---

1. Description: TO ALL BEDS
2. Spacing: As drawing
3. Density: As plant schedule

### 405 Shrub planting pits

---

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

### 445 Planting bulbs/ Corms/ Tubers

---

1. Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.
2. Backfilling: Finely broken soil. Lightly firm to existing ground level.
3. Naturalized planting in existing grassed areas
  - 3.1. Scattering: Random. Plant bulbs/ corms/ tubers where they fall.
  - 3.2. Planting: Neatly remove a plug of turf and replace after planting.

### 480 After planting

---

1. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
2. Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
3. Top dressing: Not required
  - 3.1. Depth: -

## Planting trees

### 500 Tree planting

---

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

### 505 Tree pits

---

1. Sizes: 1200 mm diameter x 750 mm deep
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 200 mm.
  - 4.1. Treatment: Soil ameliorant worked into pit bottoms
5. Pit sides: Scarify.
6. Backfilling material: Topsoil, as section Q28

### 512 Tree pit irrigation and ventilation accessories

---

1. Locations: To all trees
2. Manufacturer: Mona
  - 2.1. Product reference: [www.green-tech.co.uk](http://www.green-tech.co.uk)

3. Type: Relief Grande
4. Pipe diameter: 60mm
5. Ring diameter: 1530mm
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.

### 535 Tree stakes

---

1. Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
  - 1.1. Preservative treatment: Not required
2. Stake size (minimum): 50 mm diameter
3. Stake length (minimum): 1500 mm

### 556 Triple staking for

---

1. Description: Tree in planter at bottom of ramp
2. Staking
  - 2.1. Position: Equidistantly around the tree position.
  - 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: 3No. Spacer sleeves
5. Tying: Secure rubber belting around tree stem firmly without causing constriction or chafing. Ensure tree is supported from all directions
6. Nails for fixing belts and webbing: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads

## Woodland/ matrix/ buffer zone planting

### 680 Setting out

---

1. Planting density: As drawing SF 3334 LL01
2. Layout: As drawing SF 3334 LL01

## Protecting/ maintaining/ making good defects

### 740 Cleanliness

---

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

Ω End of Section

## Q35

# Landscape maintenance

### Generally

#### 105 Maintenance objectives

---

1. **Location:** Grassed areas to north of footpath, shrub and tree planted areas to the south
2. **Aims:** For the full establishment of the proposed planting
3. **Results:** Full established beds of planting with no gaps, weak, dead or diseased plants

#### 110 Notice

---

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

#### 130 Reinstatement

---

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

#### 155 Watering

---

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

#### 160 Water restrictions

---

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

#### 175 Disposal of arisings

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1. **General:** Unless specified otherwise, dispose of arisings as follows: Remove to recycling facility.

#### 180 Chipping or shredding

---

1. **General:** Not permitted on site.

#### 181 Mechanical equipment

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1. **General:** Minimize.
2. **Prohibited equipment:** Leaf blowers
3. **Timing:** As directed by the trust

#### 190 Litter

---

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

## 197 Cleanliness

---

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

## Grassed areas

### 210 Maintenance of grassed areas

---

1. **General:** Maintain turf in a manner appropriate to the intended use.
2. **Soil and grass**
  - 2.1. **Condition:** Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.
  - 2.2. **Waterlogging and compaction:** Prevent.
  - 2.3. **Damage:** Repair trampling, abrasion or scalping.
3. **Ornamental lawns:** Maintain reasonably free from moss, excessive thatch, weeds, frost heave, worm casts and mole hills.
  - 3.1. **Edges:** Neat and well defined, in clean straight lines or smooth flowing curves.
4. **Litter and fallen leaves:** Remove regularly to maintain a neat appearance.

### 220 Grass cutting generally

---

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

### 225 Tree stems

---

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

### 226 Tree stems

---

1. **Precautions:** Do not allow nylon filament rotary cutters and other mechanical tools closer than 100 mm to the stem of any tree.
  - 1.1. **Operations close to stems:** Complete using hand tools.

### 235 Bulbs and corms in grassed areas

---

1. **Before flowering:** Do not cut.
2. **Interval between end of flowering and start of grass cutting (minimum):** Approximately 6 weeks

### 240 Mowing strips

---

1. **Location:** Running parallel to footpaths and other hard edges
2. **Width (approximate):** 1200mm
3. **Operations:** Maintain within the mowing regime

### 250 Leaf removal

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1. **Operations:** Collect fallen leaves.
2. **Special requirements:** Using leaf blower



3. Disposal: Remove from site for recycling

---

### **265 Mowing general areas**

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1. Grass height: 100mm
2. Arisings: Spread evenly over cut areas

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### **270 Mowing rough grassed areas**

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1. Grass height: Maintain between 50 and 75 mm
2. Arisings: Spread evenly over cut areas

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### **272 Maintaining grassed areas with perennial wild flowers**

---

1. Preparation: Before each cut remove litter and debris.
2. Height and frequency of cut in first growing season
  - 2.1. Time of first cut: Mid September
  - 2.2. Height of first cut: 70-100mm, leaving approximately one fifth of area uncut for nesting birds and overwintering invertebrates
  - 2.3. Frequency of subsequent cutting (minimum): Lightly mow the sward as required throughout winter months until March and collect the arisings.
  - 2.4. Height of growth permitted (maximum): 70-100mm
3. Height and frequency of cut in second growing season
  - 3.1. Time of cut: October
  - 3.2. Height of cut: 70-100mm
4. Trimming: All edges.
  - 4.1. Arisings: Remove
5. Watering: When instructed

---

### **310 Re-forming grass edges**

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

---

### **320 Levelling hollows and bumps in turf**

---

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

---

### **340 Spot weedkilling in rough grass areas**

---

1. Herbicide: Selective systemic type
2. Operations: Spot treat all broad leaved weeds.

---

### **350 Fertilizer – spring application**

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1. Type: Contractor's choice
2. Application rate: To manufacturer's recommendation

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### **360 Fertilizer – autumn application**

---

1. Type: Contractor's choice
2. Application rate: To manufacturer's recommendation

## Flower beds/ seasonal beddings - Not Used

## Shrubs/trees/hedges

### 500 Establishment of new planting

---

1. Duration: 1 year
2. Weed control
  - 2.1. Method: Keep planting beds clear of weeds by hoeing and screefing and full thickness of mulch.
  - 2.2. Area: Maintain all planting beds weed free.
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: Clause 155

### 502 Establishment of new planting – fertilizer

---

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

### 510 Tree stakes and ties

---

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

### 520 Refirming of trees and shrubs

---

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

### 530 Tree shelters

---

1. Loose or defective shelters: Adjust, refix or replace to original specification and to prevent chafing.
2. Removal: 3 years after planting

### 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**

---

1. **Timing:** As identified
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**

---

1. **Standard:** To BS 7370-4.
2. **Special requirements:** -

### **575 Pruning ornamental shrubs**

---

1. **General:** Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
2. **Suckers:** Remove by cutting back level with the source stem or root.

### **605 Trimming slowly establishing hedges**

---

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

### **610 Trimming tapering established hedges**

---

1. **Time of year:** September
2. **Operations**
  - 2.1. **Form:** Trim carefully and neatly to regular line and shape, with the width at the top less than that at the base.
  - 2.2. **Trim:** Remove current growth rather than old wood.
3. **Tools/ Cutting:** Suitable mechanical cutters

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

---

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

### **630 Dead and diseased plants**

---

1. **Removal:** As soon as possible
2. **Replacement:** In the next suitable planting season

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

---

1. Dead and damaged plants: Remove.
2. Mulch/ matting materials
  - 2.1. Carefully move to one side and dig over the soil, leaving it fit for replanting.
3. Do not disturb roots of adjacent plants.
4. Replacement plants
  - 4.1. Use pits and plants: To original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
  - 4.2. Additional requirements: -
5. Dressing: Slow release fertilizer:
  - 5.1. Type: Organic
  - 5.2. Application rate: 70 g/m<sup>2</sup>

### **640 Thinning by removal of surplus plants**

---

1. Plants to be thinned: Any crowded beds
2. Standard: BS 7370-4.
3. Timing: In September or when identified
4. Roots
  - 4.1. Disturbance to adjacent plants: Minimize.
  - 4.2. Soil: Refill holes with topsoil to leave an even graded surface.
  - 4.3. Mulch: Maintain mulch as original specification.
  - 4.4. Adjacent plants: Make good any minor damage immediately.
5. Plants for retention: Select plants with a strong healthy habit.
6. Mature planting density: Relative to species growth characteristics

### **642 Thinning by transplanting surplus plants**

---

1. Plants to be thinned: Any crowded beds
2. Standard: BS 7370-4.
3. Timing: In September or when identified
4. Roots
  - 4.1. Disturbance to adjacent plants: Minimize.
  - 4.2. Soil: Refill holes with topsoil to leave an even graded surface.
  - 4.3. Mulch: Maintain mulch as original specification.
  - 4.4. Adjacent plants: Make good any minor damage immediately.
5. Plants for retention: Select plants with a strong healthy habit.
6. Mature planting density: Relative to the species growth characteristics

### **645 Weed control generally**

---

1. Weed tolerance: Weed to clear ground at every visit
2. Adjacent plants, trees and grass: Do not damage.

### **650 Hand weeding**

---

1. General: Remove weeds entirely, including roots.
2. Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.

3. **Completion:** Rake area to a neat, clean condition.
4. **Mulch:** Reinstate to original depth.

### **655 Weed cutting by hand or machine**

---

1. **Undesirable grass, brambles and herbaceous growth:** Cut down cleanly to a maximum height of ground level and remove roots.
2. **Herbicides:** Give notice before use

### **680 Soil aeration**

---

1. **Compacted soil surfaces**
  - 1.1. **Prick up:** To aerate the soil of root areas and break surface crust.
  - 1.2. **Size of lumps:** Reduce to crumb and level off.
  - 1.3. **Damage:** Do not damage plants and their roots.

### **685 Soil level adjustment**

---

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

### **690 Maintenance of loose mulch**

---

1. **Thickness (minimum):** 50 mm
  - 1.1. **Top up:** Twice per year
2. **Mulch spill on adjacent areas:** Remove weeds and rubbish and return to planted area.
3. **Weeding:** Remove weeds growing on or in mulch by hand weeding.

### **695 Fertilizing established trees and shrubs**

---

1. **Time of year:** In spring
2. **Type of fertilizer:** Slow release
3. **Application:** Spread evenly.
  - 3.1. **Rate:** 60 g/m<sup>2</sup>

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

---

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

### **705 Winter leaf removal**

---

1. **Operations:** Collect accumulations of drifted leaves from the vicinity and from planting beds.
2. **Arisings:** Remove to recycling facility

## **Tree work**

### **835 Cutting and pruning generally**

---

1. **Tools:** Appropriate, well maintained and sharp.
2. **Final pruning cuts**
  - 2.1. **Chainsaws:** Do not use on branches of less than 50 mm diameter.
  - 2.2. **Hand saws:** Form a smooth cut surface.
  - 2.3. **Anvil type secateurs:** Do not use.

3. **Removing branches:** Do not damage or tear the stem.
4. **Wounds:** Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
5. **Cutting:** Cut at a fork or at the main stem to avoid stumps wherever possible.
6. **Large branches:**
  - 6.1. Remove in small sections and lower to ground with ropes and slings.
7. **Dead branches and stubs:** When removing, do not cut into live wood.
8. **Unsafe branches:** Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
9. **Disease or fungus:** Give notice if detected. Do not apply fungicide or sealant unless instructed.

## Water areas - Not Used

## Hard landscape areas/fencing

### 910 Hard surfaces and gravel areas

---

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

Ω End of Section

## **Q50**

### **Site/ street furniture/ equipment**

#### **Gates, barriers and parking controls - Not Used**

#### **Site and street furniture**

##### **215 Motorcycle barrier**

---

1. Manufacturer: K Barriers [www.kbarriers.co.uk](http://www.kbarriers.co.uk)
2. Product reference: Dual Adjustment K Barrier
3. Material: Galvanised steel with stainless steel squeeze plates
4. Finish: Powder coated
5. Colour: Jet Black RAL 9005
6. Accessories: Range of squeeze plate depths available to fine tune to local authority requirements
7. Method of fixing: Set in concrete foundation

##### **220 Benches**

---

1. Description: Anti-vandal bench
2. Manufacturer: Broxap Broxap Ltd
  - 2.1. Product reference: Eastgate anti-vandal seat BX 2020-AV
3. Material: cast iron frame & galvanised steel slats
  - 3.1. Finish: Polyester coated
  - 3.2. Colour: Jet black RAL 9005
4. Size: 1800 x 620 x 830mm
5. Accessories/ Special requirements: Slats also powder coated black
6. Method of fixing: Beneath ground extension legs in concrete footings

##### **230 Tables**

---

1. Manufacturer: Broxap Ltd
  - 1.1. Product reference: Eastgate Picnic Bench BX2038
2. Material: Cast iron frame and steel slats
  - 2.1. Finish: Powder coated
  - 2.2. Colour: Jet black RAL 9005
3. Size: 1800 x 1428 x 756mm
4. Accessories/ Special requirements: Extended top for wheelchair access
5. Method of fixing: Root/submerged fixing

##### **240 Litter bins**

---

1. Description: Derby Standard Litter bin
2. Manufacturer: B Broxap Ltd
  - 2.1. Product reference: BX45G 2550
3. Material: 2mm galvanised steel
  - 3.1. Finish: Powder galvanised prime and polyester powder coat to RAL 9005
  - 3.2. Colour: Jet black RAL 9005
4. Accessories/ Special requirements: Internal concrete ballast, anti graffiti coating

5. Method of fixing: Fixing kit

## Installation

### 510 Concrete foundations generally

---

1. Standard: To BS 8500-2.
2. Concrete: To engineer's design
3. Admixtures: Do not use.
4. Foundation holes: Neat vertical sides.
5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

### 515 Setting components in concrete

---

1. Holes: To engineer's design
2. Components: Accurately positioned and securely supported.
3. Concrete fill: Fully compacted as filling proceeds.
4. Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.
5. Temporary component support: Maintain undisturbed for minimum 48 hours.

### 540 Building in to masonry walls

---

1. Components being built in: Accurately positioned and securely supported. Set in mortar and pointed neatly to match adjacent walling.
2. Temporary support: Maintain for 48 hours (minimum) and prevent disturbance.

Ω End of Section



## Z21 Mortars

### Cement gauged mortars

#### 110 Cement gauged mortar mixes

---

1. **Specification:** Proportions and additional requirements for mortar materials are specified elsewhere.

#### 120 Sand for site made cement gauged masonry mortars

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1. **Standard:** To BS EN 13139.
2. **Grading:** 0/2 (FP or MP).
  - 2.1. **Fines content** where the proportion of sand in a mortar mix is specified as a range (e.g. 1:1: 5-6):
    - 2.1.1. **Lower proportion of sand:** Use category 3 fines.
    - 2.1.2. **Higher proportion of sand:** Use category 2 fines.
3. **Sand for facework mortar:** Maintain consistent colour and texture. Obtain from one source.

#### 160 Cements for mortars

---

1. **Cement:** To BS EN 197-1 and CE marked.
  - 1.1. **Types:** Portland cement, CEM I.
    - 1.1.1. **Portland limestone cement, CEM II/A-L or CEM II/A-LL.**
2. **Portland slag cement, CEM II/B-S.**
3. **Portland fly ash cement, CEM II/B-V.**
  - 3.1. **Strength class:** 32.5, 42.5 or 52.5.
4. **White cement:** To BS EN 197-1 and CE marked.
  - 4.1. **Type:** Portland cement, CEM I.
  - 4.2. **Strength class:** 52.5.
5. **Sulfate resisting Portland cement**
  - 5.1. **Type:** To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
6. **To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.**
  - 6.1. **Strength class:** 32.5, 42.5 or 52.5.
7. **Masonry cement:** To BS EN 413-1 and CE marked.
  - 7.1. **Class:** MC 12.5.

#### 180 Admixtures for site made cement gauged mortars

---

1. **Air entraining (plasticizing) admixtures:** To BS EN 934-3 and compatible with other mortar constituents.
2. **Other admixtures:** Submit proposals.
3. **Prohibited admixtures:** Calcium chloride, ethylene glycol and any admixture containing calcium chloride.

#### 200 Storage of cement gauged mortar materials

---

1. **Sands and aggregates:** Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
2. **Factory made ready-mixed lime:sand/ ready to use retarded mortars:** Keep in covered containers to prevent drying out or wetting.

3. Bagged cement/ hydrated lime: Store off the ground in dry conditions.

## **210 Making cement gauged mortars**

---

1. Batching: By volume. Use clean and accurate gauge boxes or buckets.
  - 1.1. Mix proportions: Based on dry sand. Allow for bulking of damp sand.
2. Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
  - 2.1. Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.
3. Working time (maximum): Two hours at normal temperatures.
4. Contamination: Prevent intermixing with other materials.

**Lime:sand mortars - Not Used**

Ω End of Section



Specification created using NBS Chorus