Stonebond.

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Landscape plan

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GUI002

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Landscape Design Specifications for Planting Works

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GUI002-PWH-XX-XX-DR-L-94-016

# MILLFIELDS FARM, RUSPER CLDL 2431



# Landscape Design Specifications for Planting Works

## MILLFIELDS FARM, RUSPER CLDL 2431

## CLIENT: STONEBOND

| | | |
|---|---|---|
| REFERENCE TO LANDSCAPE DRAWINGS | Landscape design proposals: | GUI002-PWH-XX-XX-DR-L-94-001<br>GUI002-PWH-XX-XX-DR-L-94-002<br>GUI002-PWH-XX-XX-DR-L-94-003 |
| | Planting plans: | GUI002-PWH-XX-XX-DR-L-94-006<br>GUI002-PWH-XX-XX-DR-L-94-007<br>GUI002-PWH-XX-XX-DR-L-94-008<br>GUI002-PWH-XX-XX-DR-L-94-009<br>GUI002-PWH-XX-XX-DR-L-94-010<br>GUI002-PWH-XX-XX-DR-L-94-011 |
| | Planting details: | GUI002-PWH-XX-XX-DR-L-94-012 |

**23rd June 2025**

Petrow Harley Ltd | 1141

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# Q28
# Topsoil and soil ameliorants

## System outline

### 135 Planting bed topsoil system

1. Description: FOR GENERAL PLANTING AREAS, FOR ORNAMENTAL PLANTING BEDS
2. Composition
    2.1. Topsoil: Imported topsoil to BS 3882
    2.2. Ameliorants: Organic materials, Fertiliser
    2.3. Accessories: None

### 145 Planting pit backfilling topsoil system

1. Description: FOR SHRUB-PLANTING PITS, FOR ALL TREE PITS
2. Composition
    2.1. Topsoil: Imported topsoil to BS 3882
    2.2. Ameliorants: Organic materials, Fertiliser
    2.3. Accessories: Mycorrhizal inoculant

### 155 Mulching and top dressing system

1. Description: FOR LAWNS, FOR ALL GRASSED AREAS
2. Composition
    2.1. Material: Fertiliser to be incorporated into topsoil

## Products

### 300 Preparation materials generally

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

### 305 Permitted materials

1. Materials: Composted bark
2. Give notice: before ordering or using.
3. Declaration of compliance in accordance with BS EN 13650: Required

### 310 Materials not permitted

1. Materials: Peat

### 315 Imported topsoil to BS 3882

1. Description: FOR TREE PITS, FOR PLANTING BEDS, FOR TOP DRESSING
2. Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
3. Standard: To BS 3882.
4. Classification:
    4.1. Soil textural class to BS 3882
5. Source: Contractor's choice
    5.1. Product reference: Submit proposals

### 355 Organic materials

1. Description: FOR PLANTING BEDS
2. Type: Manure, Well rotted leaf mould
3. Source: Contractor's choice
    3.1. Product reference: Submit proposals

### 380 Mycorrhizal inoculant

1. Description: FOR TREE PITS
2. Manufacturer: Contractor's choice
    2.1. Product reference: Submit proposals

### 385 Water retention gels

1. Description: FOR TREE PITS
2. Type: Agri-polymer gel
3. Manufacturer: Contractor's choice
    3.1. Product reference: Submit proposals
4. Accessories: None

## Execution

### 610 Topsoil analysis

1. Soil to be analysed: Imported topsoil
2. Soil analyst: Contractors choice
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: Chemical analysis
    4.3. Report detailing soil analyst's recommendations.

### 620 Importing topsoil

1. Give notice: Before stripping topsoil for transfer to site.
    1.1. Notice period: 5 days

## 625 Sample loads

1. Description: FOR IMPORTED TOPSOIL
2. Deliver to site a sample load: of 5 kg
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

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

## 635 Documentation for compost and composted materials

1. Description: FOR COMPOST
2. Timing: Submit at handover.
3. Contents
    3.1. Full description of all compost components.
    3.2. Record of source for all compost components.
    3.3. Analyst's report for each test carried out.
    3.4. Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.
    3.5. Quality Compost Protocol certification: Not required
4. Number of copies: Two

## 650 Notice

1. Give notice before
    1.1. Setting out.
    1.2. Spreading topsoil.
    1.3. Applying herbicide.
    1.4. Applying fertiliser.
    1.5. Visiting site during maintenance period.
2. Period of notice: 5 working days

## 655 Mechanical tools

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

## 660 Grading subsoil for:

1. Description:
2. Standard: In accordance with BS 8601.
3. General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
4. Areas of thicker topsoil: Excavate locally.
5. Avoid compaction.

6. Excess subsoil: Remove.

## 665 Subsoil surface preparation for:

1. Description: All planted areas
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:
        - 4.1.2. Stiff clay and cohesive subsoils:
        - 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 …….
6. Remove from site: Arisings, contaminants and debris

## 670 Inspecting formations

1. Give notice: Before spreading topsoil for all planted areas.
2. Notice period: 5 days

## 675 Preparation of undisturbed topsoil

1. Standard: In accordance with BS 4428.
    - 1.1. Grading and cultivation: Category A
2. Hard ground: Break up thoroughly.
3. Clearing: Remove visible roots and large stones with a diameter greater than 50mm
4. Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil.
5. Fallow period (minimum): Two weeks
    - 5.1. Weed control: At appropriate times all appropriate times, treat with a suitable translocated nonresidual herbicide.

## 680 Surplus topsoil to be retained

1. Generally: Spread and level on site:
    - 1.1. Locations: Any areas where topsoil is required for new planting
    - 1.2. Protected areas: Do not raise soil level within root spread of trees that are to be retained.

## 690 Topsoil storage heaps

1. Location: Contractor's choice
2. Height (maximum): 1.0 m
3. Width (maximum): 2.0 m
    - 3.1. Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
4. Protection
    - 4.1. Do not place any other material on top of storage heaps.
    - 4.2. Do not allow construction plant to pass over storage heaps.
    - 4.3. Prevent compaction and contamination, by fencing and covering as appropriate.

## 700 Grading of topsoil

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

## 705 Handling topsoil

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

## 710 Spreading topsoil on:

1. Description: AMENITY PLANTING AREAS
2. Standard: In accordance with BS 3882.
3. Temporary roads/ surfacing: Remove before spreading topsoil.
4. Layers
    4.1. Depth (maximum): 150 mm.
    4.2. Gently firm each layer before spreading the next.
5. Depth after firming and settlement: 100 mm
6. Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

## 715 Loose tipping of topsoil

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

## 718 Final cultivation

1. Description: FOR PLANTING BEDS
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: 100 mm
5. Particle size (maximum): 2-8 mm
6. Timing: Within a few days before planting
7. Weather and ground conditions: Suitably dry.
8. Surface: Leave regular and even.
9. Levels: Minimum 150 mm below dpc of adjoining buildings
10. Undesirable material brought to the surface
    10.1. Remove visible weeds.
    10.2. Remove roots and large stones with any dimension exceeding 20 mm.

### 720 Finished levels of topsoil after settlement

1. In relation to adjoining paving, kerbs or hard surfaces: 25 mm below
2. In relation to dpc of adjoining buildings: Not less than 150 mm below.
3. In relation to adjacent grass areas: flush
4. Seeded areas: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

### 805 Applying soil ameliorant

1. Description: To all planted areas
2. Type: Well-rotted manure, spent mushroom compost, composted bark
3. Fully incorporate into topsoil to a depth of 100 mm.
4. Application: Spread evenly.
    4.1. Timing: Apply prior to cultivation.
    4.2. Rate: Apply as 75mm depth and work in
5. Timing: Prior to cultivation.
6. Other requirements: Submit 5 kg sample before ordering

### 820 Applying general fertiliser

1. Description: Growmore 7-7-7
2. Application: Spread evenly, carefully incorporating below mulch materials.
    2.1. Timing: Immediately before cultivation.
    2.2. Application rate: as manufacturers recommendations
    2.3. Other requirements:

### 825 Applying fertiliser to proposed grass areas

1. Description: TO TURFED AREAS
2. Application: Before final cultivation and three to five days before seeding/ turfing.
3. Coverage:
4. Spread evenly, in transverse directions.
    4.1. Rate: 50 g/m²

## Completion

### 905 Applying maintenance fertiliser to soil

1. Description: TO PLANTING BEDS, TO TREE PITS
2. Duration: Carry out the following operations from completion of seeding/ turfing until practical completion.
3. Time of year: During February and March
4. Application: Evenly spread, carefully incorporating below mulch materials.
5. Rate: 10 g/m²

### 910 Applying maintenance fertiliser to grass swards

1. Description: TO LAWNS
2. Duration: Carry out the following operations from completion of seeding/turfing until practical completion.
3. Time of year: March or April

4. Application: Evenly spread, carefully incorporating below mulch materials.
5. Rate: 10 g/m²

## 920 Applying mulch

1. Timing: At end of the maintenance period
2. Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
3. Planting beds: Re-mulch.
    3.1. Depth (minimum): 75 mm
4. Trees: Remulch.
    4.1. Depth (minimum): 75 mm
5. Container planting: Remulch.
    5.1. Depth (minimum): 75 mm

Ω End of Section

# Q30
# Seeding/ turfing

## General information/requirements

### 115 Seeded and turfed areas

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

### 120 Climatic conditions

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

### 145 Watering

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

### 146 Watering

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

### 150 Water restrictions

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

### 160 Notice

1. Give notice before
    1.1. Setting out.
    1.2. Applying herbicide.
    1.3. Applying fertiliser.
    1.4. Preparing seed bed.
    1.5. Seeding or turfing.
    1.6. Visiting site during maintenance period.
2. Period of notice: 5 working days

### 170 Setting out

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

## Preparation

### 210 Herbicide

1. Description: FOR ALL GRASSED AREAS
2. Type: Suitable for suppressing perennial weeds.

3. Timing: Allow fallow period before cultivation.
    3.1. Duration: As manufacturer's recommendation

### 212 Seed bed cleaning before sowing

1. Description: ALL GRASSED AREAS
2. Operations: Kill pernicious weeds with selective contact herbicide.

### 250 Soil requirements

1. Type
    1.1. Seeded areas: Existing topsoil / Imported topsoil
    1.2. Turfed areas: Existing topsoil / Imported topsoil

## Seeding

### 312 Wildflower seed mixture

1. Description: FOR WILDFLOWER MEADOWS
2. Supplier: **Emorsgate**
    2.1. Mixture reference:

        EL1: Flowering Lawn Mixture
        EW1 Woodland Mixture
        EH1 Hedgerow Mixture
        EM8: Meadow Mixture for Wetlands
        EM2: Standard General Purpose Meadow Mixture

3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): British Native
4. Application rate: Sowing Rate: **4 g/m²**

### 319 Quality of seed

1. Description: for all Grass Seed Mix covered areas
2. Freshness: Produced for the current growing season.
3. Certification: Blue label certified varieties.

3.1. Standard: EC purity and germination regulations.

3.2. Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.

4. Samples of mixtures: Submit when requested.

### 330 Sowing

1. General: Establish good seed contact with the root zone.
2. Method:
    2.1. Distribution: Broadcast in two equal transverse operations

### 335 Grass sowing season

1. Grass seed generally: April to October

### 336 Wildflower sowing season

1. Wildflower seed generally: February - March, September - October

### 340 Pre-emergent herbicide

1. Description: FOR ALL GRASSED AREAS
2. Standard: Pesticide Safety Directorate approved.
3. Application rate: In accordance with manufacturer's written recommendation.
    3.1. Timing: Immediately after sowing.

### 352 Edges to seeded areas

1. Description: ADJACENT TO PLANTING BEDS AND TREE PITS
2. Timing: After seeded areas are well established.
3. Edges: Clean straight lines or smooth curves.

3.1 Mulch and soil: Draw back to permit edging.

4. Arisings: Remove.
5. Completion: Respread soil and mulch.

## Turfing

### 430 Turfing generally

1. Time of year: Autumn or early winter
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 dry 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: None
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

1. Timing: When grass is reasonably dry.
    1.1. Height of initial growth: 40-75 mm
2. Preparation:
    2.1. Debris and litter: Remove.
    2.2. Stones and earth clods larger than 25 mm in any dimension: Remove
3. Height of first cut: 40 mm
4. Mower type: Rotary
5. Arisings: Remove from site

## 590 Cleanliness

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

# Maintenance

## 610 Failures of seeding/ turfing

1. Duration: Carry out the following operations from completion of seeding/ turfing until: practical completion.
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

1. Description: GENERAL GRASSED AREAS
2. Duration: Carry out the following operations from completion of seeding/ turfing until: practical completion.
3. Maximum height of growth at any time:

**TURFS**

| Ref. no. | *purpose* | supplier | Maximum height if left uncut temporarily |
|---|---|---|---|
| G-1 | *turf cover in rear/front gardens* | Medallion Turf, Rolawn | 50mm |
| G-2 | *mown grass path* | J 4Turf 100, Johnsons sport seeds | 50mm |

**GRASS MIXES**

| Ref. no. | *purpose* | supplier | Seed mixture type | Maximum height if left uncut temporarily |
|---|---|---|---|---|
| G-3 | *flowering lawn mix* | Emorsgate | EL1: Flowering Lawn Mixture | 50-100mm |
| G-4 | *woodland mix* | Emorsgate | EW1 Woodland Mixture | 600-1000mm |
| G-5 | *hedgerow mix* | Emorsgate | EH1 Hedgerow Mixture | 600-1000mm |
| G-6 | *wetland mix* | Emorsgate | EM8: Meadow Mixture for Wetlands | 600–1000mm |
| G-7 | *wildflower meadow mix* | Emorsgate | EM2: Standard General Purpose Meadow Mixture | 600–1000mm |

4. Preparation: Before each cut remove all litter and debris.
5. Cutting: 25-45 mm for turf; 50mm for Grass mixes
    5.1. Arisings: Remove
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

Ω End of Section

# Q31
# External planting

## General information/ requirements

### 112 Site clearance generally

1. Description: Site clearance
2. General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil
3. Stones: Remove those with any dimension exceeding 50 mm
4. Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life
5. Vegetation: Clear surface vegetation in areas shown on drawings using suitable nonresidual herbicide
6. Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas
7. Additional requirements:
8. Verification:
    - 8.1. Submittals:
    - 8.2. Timing:

### 118 Soil conditions

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

### 120 Climatic conditions

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

1. Deciduous trees and shrubs: Late October to late March
2. Herbaceous plants (including marginal): September/ October or March/ April
3. Container-grown plants: At any time, if ground and weather conditions are favourable
    - 3.1. Watering and weed control: Provide as necessary
4. Wildflower plugs: Late August to mid November or March/ April
5. Aquatic plants:

### 130 Mechanical tools

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

### 145 General watering

1. Quantity: Wet full depth of topsoil
2. Application: Even, and without damage or displacement of plants or soil
3. Frequency: As necessary to ensure that plant is established and continues to thrive

## 150 Water restrictions

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

## 160 Notice

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

## 170 Soil requirements

1. Type
   - 1.1. Planted beds:

### BLS 20 - Natural Topsoil - Boughton

https://www.boughton.co.uk/landscaping-products/topsoils/natural-screened-topsoil/

a) Composed of re-purposed, single source, screened natural topsoil, usually of sandy clay loam classification with added PAS 100 compost, 20% by volume. BLS 20 is a natural topsoil with boosted organic matter content, has excellent moisture and nutrient retention capabilities.

b) It is a premium soil best suited to large scale, ground level, planting projects BLS 20 should installed at depths no greater than 350–400 mm; greater depths should be built up with Boughton Loam's subsoil products.

c) BLS 20 is well suited to projects where permanent irrigation is not specified because of its good water retention properties. For plant establishment temporary irrigation maybe required.

d) For lawns please refer to the manufacturer's BLS 2 topsoil which has a lower organic matter and therefore creates a more stable tilth for lawns. Boughton Loam can provide additional advice if needed on how best to specific and install this topsoil.

**Features and benefits:**

- Clay (<0.002 mm): 23%.
- Silt (0.002–0.063 mm): 26%.
- Sand (0.063–2.0 mm): 51%
- Texture class (UK classification): SCL.
- Stone (2–20 mm): 12%.
- Stones (20–50 mm): 0%.
- Stones (>50 mm): 0%.
- pH value (1:2.5 water extract): 7.3.
  - Electrical conductivity (1:2.5 water extract): 610 uS/cm.
  - Electrical conductivity (1:2 $CaSO_4$ extract): 2487 uS/cm.
  - Exchangeable sodium percentage: 1.6%.

- Organic matter (LOI): 11.3%.
- Total nitrogen (Dumas): 0.48%.
- C:N ratio: 14.
- Extractable phosphorus: 52 mg/L.
- Extractable potassium: 591 mg/L.
- Extractable magnesium: 174 mg/L.

1.2. Tree pits, shrub pits and other backfilling:

1.3. External container planting:

1.4. Mulch applied after planting:

## 200 Plants/ trees – general

1. Standard: The National Plant Specification
2. Condition: Materially undamaged, sturdy, healthy and vigorous
3. Appearance: Of good shape and without elongated shoots
4. Hardiness: Grown in a suitable environment and hardened off
5. Health: Free from pests, diseases, discoloration, weeds and physiological disorders
6. Budded or grafted plants: Bottom worked
7. Root system and condition: Balanced with branch system
8. Species: True to name
9. Origin/ provenance: As plant schedule
10. Definition: Origin and provenance have the meaning given in the National Plant Specification
11. Verification:
    11.1. Submittals:
    11.2. Timing:

## 215 Plants/ trees – specification criteria

1. Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification.
2. Name, forms, dimensions and other criteria: To BS 3936-1 'Trees and shrubs'

## 246 Labelling to BS 3936 and other information

1. Standard: To BS 3936-1 'Trees and shrubs'

## 260 Plant/ tree substitution

1. Plants/ trees unobtainable, or 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 Committee of Plant Supply and Establishment (CPSE) Recommendations for Plant Handling.
2. Frost: Protect plants from frost.
3. Handling: Handle plants with care. Protect them from mechanical damage and do not subject them to shock, e.g. by dropping them from a vehicle.
4. Plant packaging: Black polyethylene bags

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.
7. Verification:
    7.1. Submittals:
    7.2. Timing:

### 285 Protection of existing grass

5. General: Protect areas affected by planting operations using boards/ tarpaulins.
    5.1. Tools: Hand tools
    5.2. Excavated or imported material: Do not place directly on grass.
    5.3. Timing: October to March
    5.4. Duration: Minimum period.

## Preparation of planting beds/ planting materials

### 300 Herbicide

5. Description: TO CLEAR OVERGROWN BEDS
6. Manufacturer: Contractor's choice
    6.1. Product reference: Translocated herbicide
7. Third-party certification: Manufactured under a quality system complying with BS EN ISO 9001
8. Locations: Ornamental beds, Shrub beds
9. Type: Suitable for suppressing perennial weeds
10. Programme:
    10.1. Duration (minimum):
11. Verification:
    11.1. Submittals:
    11.2. Timing: Allow fallow period before cultivation

### 305 Weed control

3. Description: FOR INVASIVE & NON-NATIVE WEEDS
4. Locations: All planting areas
5. General: Prevent weeds from seeding and perennial weeds from becoming established: by hand-weeding.
6. Verification:
    6.1. Submittals:
    6.2. Timing:

## Planting shrubs/ herbaceous plants/ bulbs

### 401 Regular plant layout

2. Description: TO SHRUB PLANTING
3. Spacing: In regular, staggered rows
4. Density: As plant schedule

### 405 Shrub planting pits

2. Description: Planting areas
3. Timing: Excavate 2 days (maximum) before planting.
4. Sizes: Wide enough to accommodate roots when fully spread and 75 mm deeper than root system
5. Pit bottom improvement: Break up to a depth of 150 mm, incorporating soil ameliorant/ conditioner at 50 g/m².

### 470 Formal hedges

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

### 471 Naturalised hedges

6. Description: Hedging
7. Trees and shrubs for hedges: Native species, with diversity in height, growth habit and seasonal interest to enhance biodiversity.
8. Planting: In trenches large enough to take the full spread of roots. Set plants out evenly.

### 480 After planting

1. Description:
2. Watering: Immediately after planting, thoroughly, and without damaging or displacing plants or soil
3. 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
4. Top dressing: Mulching and top-dressing system, as section Q28
   4.1. Depth: 75mm

## Planting trees

### 500 Tree planting

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

### 505 Tree pits

1. Description: Planting pits
2. Sizes: As per submitted planting plans:

   GUI002-PWH-XX-XX-DR-L-94-006
   GUI002-PWH-XX-XX-DR-L-94-007
   GUI002-PWH-XX-XX-DR-L-94-008
   GUI002-PWH-XX-XX-DR-L-94-009
   GUI002-PWH-XX-XX-DR-L-94-010
   GUI002-PWH-XX-XX-DR-L-94-011

3. Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout
4. Excavated material: Separate topsoil and subsoil material and stockpile for backfilling
5. Pit bottoms: excavate with slightly raised centre: Break up base to a depth of 150 mm

5.1. Treatment:

6. Pit sides:

7. Backfilling material: Topsoil, as section Q28

**SUPPLEMENTARY TREE PIT SPECIFICATION** *(Project-Specific Clause – to supplement NBS Chorus Q31 External Planting)*

**505A TREE PIT CONSTRUCTION**

**Description**

All trees shall be planted in prepared tree pits in accordance with BS 8545:2014 *Trees: From Nursery to Independence in the Landscape – Recommendations*.

**Pit Dimensions**

Unless otherwise shown on the approved drawings:

**Standard trees (12–14 cm to 14–16 cm girth):**

- Minimum pit dimensions:
    - Length: 1200 mm
    - Width: 1200 mm
    - Depth: 750 mm

**Heavy standard trees (16–18 cm to 18–20 cm girth):**

- Minimum pit dimensions:
    - Length: 1500 mm
    - Width: 1500 mm
    - Depth: 900 mm

**Pit Excavation**

- Excavate pits with vertical sides and level bases.
- Break up pit bases and sides to a minimum depth of 150 mm to eliminate glazing and compaction.
- Remove all construction debris, concrete, rubble and contaminated material.
- Ensure free drainage from the pit.
- Any waterlogged pits shall be reported immediately for further instruction.

**Soil Specification (see above 170 – Soil requirements)**

**Backfilling**

- Position tree centrally within the pit.
- Root collar shall finish at surrounding finished ground level.
- Backfill in layers not exceeding 150 mm.
- Lightly firm each layer to remove voids whilst avoiding compaction.
- Water thoroughly during backfilling operations.

**Drainage**

Where poor drainage is encountered:

- Notify the Contract Administrator.
- Do not plant until suitable drainage measures have been agreed.

## 505B TREE MULCHING

### Mulch Material

- Medium-grade approved organic bark mulch
- Supplier: Melcourt (https://melcourt.co.uk/) or similar and approved
- Free from contaminants, pathogens and viable weed seed.

### Application

Immediately following planting:

- Apply mulch over 1000mm diameter above pit area.
- Depth: 75 mm after settlement.
- Maintain a mulch-free zone of 120 mm around the stem base.

### Maintenance

- Maintain mulch thickness throughout the establishment period.
- Reinstate depleted mulch as necessary to maintain specified depth.

## 505C TREE WATERING AND ESTABLISHMENT

### Watering at Planting

Immediately after planting:

- Apply not less than 50 litres of water per tree.
- Repeat as necessary to ensure complete saturation of the rootball and surrounding soil.

### Establishment Period

During the maintenance period:

- Water as required according to weather conditions.
- Maintain sufficient soil moisture to support healthy establishment and growth.
- Increase watering frequency during prolonged dry periods.

## 505D TREE SUPPORT SYSTEM

### Highway Trees

Trees located within areas intended for highway adoption shall be supported using:

- Three timber stakes.
- Three straps + spacers, secured to top of stake and tree stem

### Stakes

- Softwood, peeled and pressure treated.
- Diameter: 75 mm minimum.
- Length: 2700 mm minimum (1200mm above ground + 1500mm under ground)

### Installation

- Drive stakes outside the rootball.
- Secure tree with the straps.

- Allow slight movement to encourage root establishment.

**Maintenance**

Inspect at every maintenance visit:

- Re-secure loose straps
- Adjust straps to prevent abrasion or constriction.
- Re-firm loose stakes.

Remove stakes and ties once the tree is independently established, normally after 2–3 growing seasons or as directed by the Highway Authority.

# Woodland/ matrix/ buffer zone planting

## 615 Existing trees/ seedlings/ coppice shoots

1. Existing trees and seedlings: Retain, according to survey and the submitted Landscape Plans:

   GUI002-PWH-XX-XX-DR-L-94-006
   GUI002-PWH-XX-XX-DR-L-94-007
   GUI002-PWH-XX-XX-DR-L-94-008
   GUI002-PWH-XX-XX-DR-L-94-009
   GUI002-PWH-XX-XX-DR-L-94-010
   GUI002-PWH-XX-XX-DR-L-94-011

2. Coppice shoots: Remove all stems and treat with suitable herbicide to prevent regrowth

## 617 Removing trees and hedges

1. Identification: Clearly mark trees and hedges to be removed
2. Work near retained trees: Where canopies overlap, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained
3. Arisings: Remove
4. Tree stumps: Cut as close to ground as possible, and kill with a suitable herbicide immediately after felling

## 625 Cultivation

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

# Protecting/ maintaining/ making good defects

## 710 Maintenance

1. Duration: Carry out the operations in the following clauses from completion of planting until Practical completion.
2. Frequency of maintenance visits: Submit proposals

## 720 Failures of planting

1. Defects due to materials or workmanship not in accordance with the contract: Plants/ trees/ shrubs that have failed to thrive
    1.1. Exclusions: none
    1.2. Rectification: Replace with equivalent plants/ trees/ shrubs.
2. Replacements: To match size of adjacent or nearby plants of the same species or to match the original specification: whichever is the greater
3. Timing of making good: Replace failed, dead, damaged or diseased planting during the Maintenance Period and within the next appropriate planting season.
4. Maintenance responsibility**:** The Contractor shall remain responsible for the maintenance, establishment and replacement of planting for the duration of the Maintenance Period. Upon completion of the Maintenance Period and acceptance of the works, responsibility for ongoing maintenance shall transfer to the relevant landowner or management body, including:
    - Individual homeowners for planting within privately owned plots;
    - The Management Company for communal landscaped areas;
    - The Highway Authority for planting located within areas formally adopted as public highway.

## 740 Cleanliness

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

## 750 Planting maintenance generally

1. Weed control: Maintain weed-free area around each tree and shrub
    1.1. Diameter (minimum): The surface of original planting pit
    1.2. Keep planting beds clear of weeds:
        - By hoeing
        - By maintaining full thickness of mulch
        - By use of approved non-residual herbicides
2. Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch
3. Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools
4. Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs
5. Trees: Spray crown with **clean water** when in leaf during warm weather if required to reduce drought stress during establishment
    5.1. Timing: After dusk.
6. Tree accessories: Check condition of stakes, ties, guys, guards, and irrigation and ventilation systems
    6.1. Broken or missing items: Replace.
    6.2. Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
    6.3. Loose guys: Re-firm anchor points and adjust as necessary to provide support to the tree.
    6.4. Ties: Adjust to accommodate growth and prevent constriction or abrasion.
    6.5. Damage to bark: Cut back neatly with a sharp knife. Prevent further damage.
    6.6. Frequency of checks: At each scheduled maintenance visit

7. Watering: As required for healthy establishment, depending on weather conditions

## 760 Planting maintenance – pruning

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

## 780 Maintenance instructions

1. General: Before end of the maintenance period, submit printed instructions recommending procedures to be established by the employer for the maintenance of the planting work for one full year:
2. Provide a schedule of any ongoing maintenance problems experienced during the rectification period.

## 790 Final mulching

1. Timing: At end of the maintenance period
2. Watering: Ensure that soil is thoroughly moistened prior to re-mulching, applying water where necessary
3. Planting beds: Re-mulch
4. Depth (minimum): 75 mm
5. Trees: Re-mulch
6. Depth (minimum): 75 mm

## 995 Verification on completion

1. Requirement:
   1.1 **For verifying tree planting completion** confirm the number of trees planted, their location, and species. This is done through field verification, including taking pictures, noting species, and checking the planting area, with data review and documentation.
   1.2 **For verification upon completion of planting shrubs and herbaceous vegetation**: confirm plant proper establishment, and adherence to specific project requirements according to detailed Planting Plans:

GUI002-PWH-XX-XX-DR-L-94-006
GUI002-PWH-XX-XX-DR-L-94-007
GUI002-PWH-XX-XX-DR-L-94-008
GUI002-PWH-XX-XX-DR-L-94-009
GUI002-PWH-XX-XX-DR-L-94-010
GUI002-PWH-XX-XX-DR-L-94-011

2. Method: Inspection after installation to ensure compliance with Planting Plan and specifications.
3. Submittals:
   3.1. Format: Perform assessments of plant health and establishment success according to **Planting Plan** and specifications, at specified intervals approved in advance.
   3.2. Timing: Scheduled in specified intervals and approved prior to installation

Ω End of Section

# ROOT PROTECTION BARRIER INSTALLATION

**Note:**

The following clauses are project-specific requirements prepared by the Landscape Architect. They are written in a format compatible with NBS Chorus landscape work sections Q31 Advanced Landscape Operations and Q35 Landscape Maintenance, but are NOT original standard NBS Chorus specification clauses.

## [Q31 ADVANCED LANDSCAPE OPERATIONS]

**ROOT BARRIERS TO TREES ADJACENT TO UNDERGROUND SERVICES**

**Root Barrier System**

- Manufacturer: **GreenBlue Urban** *(see manufacturer's specification in appendix 1)*
- Product: ReRoot Flat Root Barrier.
- Material: High-density polyethylene (HDPE), manufactured from recycled material.
- Thickness: 1 mm minimum.
- Depth: 600 mm.
- Accessories:
    - ReRoot jointing tape.
    - Manufacturer's proprietary fixing and connection accessories.
- Performance:
    - Impervious to root penetration and moisture.
    - Resistant to puncture, biodegradation, photodegradation, bacteria and most chemicals.
    - Expected service life: Minimum 50 years.

**Locations**

Provide root barriers where shown on the **approved planting plans** where the trees are located within influence distance of:

- Utility corridors.
- Drainage infrastructure.
- Foul and surface water sewers.
- Water mains.
- Gas services.
- Electricity and telecommunications services.
- Highway kerbs, footways and paved areas where indicated.

**Installation**

- Install vertically between tree pit and service corridor.
- Barrier depth: 600 mm below finished ground level.
- Top edge of barrier to finish **10 mm above** the final soil level to prevent surface root overgrowth, yet make the root barrier invisible.
- Excavate trench of sufficient width to allow installation without distortion.
- Maintain continuous barrier alignment.
- Join adjacent sections using manufacturer's proprietary root-proof jointing tape.
- Ensure no gaps occur at joints, corners or terminations.

- Backfill and compact carefully to avoid displacement or damage.
- Do not puncture barrier during installation.
- Form returns at barrier ends where necessary to direct roots downward and away from services.

**Extent**

As shown on the Landscape drawing: **GUI002-PWH-XX-XX-DR-L-94-012**

**Inspection**

Prior to backfilling:

- Notify Contract Administrator for inspection.
- Confirm correct depth, continuity and alignment.
- Record installed locations on as-built drawings.

# [Q31 TREE PLANTING]

**TREE PITS ADJACENT TO SERVICES**

Where root barriers are specified:

- Install root barrier **before** placing topsoil or tree pit backfill.
- Ensure barrier does not reduce minimum rooting volume specified for the tree.
- Root barriers shall guide roots downward while maintaining unrestricted root development within the planting pit.
- Tree pit construction and irrigation systems shall remain fully functional following barrier installation.
- Any damage to root barriers during construction shall be replaced before planting.

# [Q35 LANDSCAPE MAINTENANCE]

**ROOT BARRIER INSPECTION**

During the defects and establishment period:

- Inspect exposed root barrier edges during routine maintenance visits.
- Ensure barriers remain visible where intended.
- Reinstate disturbed ground adjacent to barriers.
- Repair or replace damaged sections in accordance with manufacturer's recommendations.
- Maintain effectiveness of root exclusion for the duration of the establishment period.

**Biosecurity**

- All root barrier materials, tree pit components, soils, mulch and associated planting materials shall comply with the project biosecurity requirements.
- Imported materials shall be free from invasive species, pests and diseases.
- Planting stock shall be UK-sourced and Plant Healthy certified or equivalent.

**Mycorrhizal Products**

- Any mycorrhizal inoculants, biostimulants or biological soil amendments shall be sourced from a UK supplier and shall contain strains appropriate to the local provenance and UK environmental conditions.
- Products shall be free from invasive, non-native or potentially pathogenic organisms.
- Evidence of supplier certification and product provenance shall be submitted for approval prior to use.

# APPENDIX 1

## ReRoot Flat
Flat Root Barrier



| | |
|---|---|
| **Overview** | ReRoot Flat is a high strength root barrier for deeper applications. This product has been used extensively on many projects around the UK, particularly in new service infrastructure projects, business parks and housing developments. Useable vertically, horizontally, around sharp corners, curves and landscape edges, it is one of the most highly adaptable solutions available.<br><br>ReRoot Flat is rigid enough to hold its form when placed into a trench. This is a big advantage as it will not be dragged downward during backfilling. Market leading puncture resistance and strength, mean that this is the root barrier of choice for specifiers and utility companies requiring root free service corridors.<br><br>The high puncture resistance of ReRoot Flat allows easier compaction close to the barrier ensuring an excellent product/soil interface. |
| **Features** | Available in 300mm, 600mm and 1000mm depths<br>Available in 1mm or 2mm thicknesses<br>Supplied in roll form and cut to order in 10m increments to minimise waste<br>100% recycled HDPE is impervious to moisture and root penetration<br>Resistant to puncture, biodegradation, photodegradation, bacteria and most chemicals<br>ReRoot jointing tape allows root-proof joints<br>Can be fully recycled at end of life |
| **Benefits** | Effective in the control of Japanese Knotweed and other invasive plants<br>Fulfills all Arboricultural Advisory and Information Service guidlines for root barriers<br>Prevents pavement 'root heave' effectively eliminating trip hazards<br>Ease of installation in virtually all situations with no specialist equipment required<br>Roll form provide flexibility to work around obsticles while being rigid enough to hold it's form when backfilling |

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W: greenblue.com

GreenBlue URBAN
Establishing the future urban landscape

**Product codes**

| Code | Thickness | Depth | Roll length | Pallet Qty |
|---|---|---|---|---|
| RER210X0.6A | 1mm | 600mm | 100mtr | 12 rolls |
| RER210X1.0A | 1mm | 1000mm | 100mtr | 10 rolls |
| RER210X1.5A | 1mm | 1500mm | 100mtr | 6 rolls |
| RER220X1.0A | 2mm | 1000mm | 100mtr | 10 rolls |
| RER220X1.5A | 2mm | 1500mm | 100mtr | 6 rolls |
| RER220X2.0A | 2mm | 2000mm | 50mtr | 6 rolls (wide pallet) |

**Material**

100% recycled extruded polypropylene 1mm thick

**Lifespan**

In excess of 50 years

**Material performance characteristics**

| Test | Standard | | Mean | Std Dev |
|---|---|---|---|---|
| Static Puncture CBR | BS EN ISO 12236:2006(2016) | *Force (kN)* | 3.10 | 0.46 |
| | | *Displacement (mm)* | 94 | 21 |
| Melt Flow Index | BS EN ISO 1133-1:2011(2016) 190c, 2.16KG | *g/10min* | 0.12 | - |
| Tear Resistance | BS ISO 34-1:2015 Trouser Tear Method A | | | |
| | ***Machine Direction*** | *F, N* | 140.8 | 7.8 |
| | | *d, mm* | 1.07 | 0.02 |
| | | *$T_s$ kN/m* | 131.5 | 5.8 |
| | ***Cross Machine Direction*** | *F, N* | 136.5 | 3.8 |
| | | *d, mm* | 1.06 | 0.06 |
| | | *$T_s$ kN/m* | 128.7 | 4.8 |

*Permeability*: ReRoot is completely impervious to moisture and root penetration
*Durability*: HDPE is resistant to puncture, biodegradation, photodegradation, bacteria and most chemicals

**Accessories**

RERJTA - ReRoot jointing tape for root-proof joints

**Maintenance**

No maintenance required

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