

Enzygo Ltd

Watsons Construction Ltd

Milltown, Glossop

1828.002-ENZ-ZZ-ZZ-SP-L-00-001

Milltown Landscape Specification

For Construction

C01

22-01-2024

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D20 Excavating and filling

Clauses

2 To be read with preliminaries/general conditions

Generally/the site

145 Variations in ground water level

1. Give notice: If levels encountered are significantly different from levels in the site investigation report or previously measured.

Clearance/excavating

164 Tree roots

1. Protected area: Do not cut roots within precautionary protection area.
 - 1.1. Size of area: As drawing Arboricultural impact assessment
2. Excavation in protected area
 - 2.1. Method: By hand
 - 2.2. Backfill as soon as possible or temporarily line with polyethylene sheet to reduce evaporation.
3. Outside protected area: Give notice of roots exceeding 25 mm and do not cut without approval.
4. Cutting
 - 4.1. Make clean smooth cuts with no ragged edges.
 - 4.2. Pare cut surfaces smooth with a sharp knife.
 - 4.3. Treatment of cut roots: Not required
5. Backfill: As dug material, enriched with amelioration as section Q31

166 Tree root barriers

1. Trench: Sever all roots.
 - 1.1. Depth: 0.6m
2. Root barrier: Re root 600 or equal approved
3. Cutting roots: As clause 164.
4. Root barrier installation: Full depth of excavation. Fit closely to trench wall nearest the tree.
5. Backfill material: As dug material excavated from trench.
6. Backfilling: Lay and compact thoroughly in layers not more than 300 mm thick.

168 Site clearance

1. Timing: Before topsoil stripping, if any.
2. General: Clear site of rubbish, debris and vegetation. Do not compact topsoil.
3. Treatment: N/a

170 Removing small trees, shrubs, hedges and roots

1. Identification: Clearly mark trees to be removed.
2. Small trees, shrubs and hedges: Cut down.
3. Roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.

4. **Safety:** Comply with Forest Industry Safety Accord safety leaflets.

175 Felling large trees

1. **Definition:** Girth over 600 mm.
2. **Identification:** Clearly mark trees to be removed.
3. **Safety:** Comply with Forest Industry Safety Accord safety leaflets.
4. **Felling:** As close to the ground as possible.
5. **Stumps:** Remove by stump grinding
6. **Work near retained trees:** Take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained, where tree canopies overlap and in confined spaces generally.

180 Chipping and shredding

1. **General:** Permitted, spread arisings on site in areas designated

220 Stripping topsoil

1. **General:** Before beginning general excavation or filling, strip topsoil from areas where there will be regrading, buildings, pavings/ roads and other areas shown on drawings.
2. **Depth**
 - 2.1. Remove to an average depth of 150 mm.
 - 2.2. Give notice where the depth of topsoil is difficult to determine.
3. **Handling:** Handle topsoil for reuse or sale in accordance with clause 225.
4. **Around trees:** Do not remove topsoil from below the spread of trees to be retained.
5. **Site storage:** Keep separate from excavated sub-soil

221 Treating topsoil

1. **Treatment:** Apply a suitable translocated nonresidual herbicide.
2. **Timing:** Not less than two weeks before excavating topsoil.

225 Handling topsoil

1. **Standard:** To BS 3882.
2. **Aggressive weeds**
 - 2.1. **Species:** Notify the presence of species included in the Weeds Act, section 2, or the appropriate Wildlife and Countryside Act for the relevant jurisdiction.
 - 2.2. **Give notice:** Obtain instructions before moving topsoil.
3. **Contamination:** Do not mix topsoil with:
 - 3.1. Subsoil, stone, hardcore, rubbish or material from demolition work.
 - 3.2. Other soil or material containing aggressive weeds, sharps, plastics and non soil forming materials and notifiable animal or plant diseases.
 - 3.3. Oil, fuel, cement or other substances harmful to plant growth.
 - 3.4. Other classifications of topsoil.
4. **Multiple handling:** Keep to a minimum. Use topsoil immediately after stripping.

245 Excavations adjacent to existing foundations – Contractor's design

1. **Prior to commencing excavation:** Excavate trial pits adjacent to existing foundations to determine extent and formation levels.
2. **Submit proposals:** For ensuring the safety of the existing foundations if the formation level for the new excavation will be

3. Backfill material to new excavation:

270 Foundations generally

1. Give notice if
 - 1.1. A natural bearing formation of undisturbed subsoil is not obtained at the depth shown on the drawings.
 - 1.2. The formation contains soft or hard spots or highly variable material.

290 Foundations in made up ground

1. Depth: Excavate down to a natural formation of undisturbed subsoil.
2. Discrepancy: Give notice if this is greater or less than depth given.

310 Unstable ground

1. Generally: Ensure that the excavation remains stable at all times.
2. Give notice: Without delay if any newly excavated faces are too unstable to allow earthwork support to be inserted.
3. Take action: If instability is likely to affect adjacent structures or roadways, take appropriate emergency action.

330 Unrecorded features

1. Give notice: If unrecorded foundations, beds, voids, basements, filling, tanks, pipes, cables, drains, manholes, watercourses, ditches, etc. not shown on the drawings are encountered.

370 Underground structures in landscape areas

1. Generally: Remove walls, roads, foundations, disused services, drains, manholes and the like to minimum depth.
2. Minimum depth below finished levels
 - 2.1. Grass, ground cover and perennial planting: 500 mm
 - 2.2. Shrub planting: 750 mm.
 - 2.3. Within 2 m of tree planting: 1000 mm.
3. Walls and slabs remaining: In every 10 m² of wall or slab, make a drainage hole at least 600 mm diameter.

Disposal of materials

410 Excavated topsoil storage

1. Storage: Stockpile in temporary storage heaps: where possible on site

420 Topsoil storage heaps

1. Location: contractors choice
2. Standard: To BS 3882.
3. Height (maximum): 3m
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.

441 Surplus subsoil

1. **Excavated material:** Stockpile in temporary storage heaps.
2. **Retained material:** Spread and level surplus subsoil on site.
 - 2.1. **Locations:** contractors choice
 - 2.2. **Protected areas:** Do not raise soil level within root spread of trees that are to be retained.
3. **Remaining material:** Remove from site.

450 Water

1. **Generally:** Keep all excavations free from water until:
 - 1.1. Formations are covered.
 - 1.2. Below ground constructions are completed.
 - 1.3. Basement structures and retaining walls are able to resist leakage, water pressure and flotation.
2. **Drainage:** Form surfaces of excavations and fill to provide adequate falls.
3. **Removal of water:** Provide temporary drains, sumps and pumping as necessary. Do not pollute watercourses with silt laden water.

454 Ground water level, springs or running water

1. **Give notice:** If it is considered that the excavations are below the water table.
2. **Springs/ Running water:** Give notice immediately if encountered.

460 Permanent drainage system

1. **Disposal of water from the excavations through system:** Not permitted

Filling

500 Proposed fill materials

1. **Details:** Submit full details of proposed fill materials to demonstrate compliance with specification, including:
 - 1.1. Type and source of imported fill.
 - 1.2. Proposals for processing and reuse of material excavated on site.
 - 1.3. Test reports as required elsewhere.
2. **Timing:** At least 21 days before starting filling

510 Hazardous, aggressive or unstable materials

1. **General:** Do not use fill materials which would, either in themselves or in combination with other materials or ground water, give rise to a health hazard, damage to building structures or instability in the filling, including material that is:
 - 1.1. Frozen or containing ice.
 - 1.2. Organic.
 - 1.3. Contaminated or noxious.
 - 1.4. Susceptible to spontaneous combustion.
 - 1.5. Likely to erode or decay and cause voids.
 - 1.6. With excessive moisture content, slurry, mud or from marshes or bogs.
 - 1.7. Clay of liquid limit exceeding 80 and/or plasticity index exceeding 55.
 - 1.8. Unacceptable, class U2 as defined in the 'Specification for highway works', clause 601.

520 Frost susceptibility

1. **General:** Except as allowed below, fill must be non frost-susceptible as defined in the 'Specification for highway works', clause 801.8.
2. **Test reports:** If the following fill materials are proposed, submit a laboratory report confirming they are non frost- susceptible:
 - 2.1. Fine grained soil with a plasticity index less than 20%.
 - 2.2. Coarse grained soil or crushed granite with more than 10% retained on a 0.063 mm sieve.
 - 2.3. Crushed chalk.
 - 2.4. Crushed limestone fill with average saturation moisture content in excess of 3%.
 - 2.5. Burnt colliery shale.
3. **Frost-susceptible fill:** May only be used:
 - 3.1. At depths below the finished ground surface greater than: 500 mm
 - 3.2. Within the external walls of buildings below spaces that will be heated. Protect from frost during construction.
 - 3.3. Where frost heave will not affect structural elements.

530 Placing fill

1. **Surfaces of excavations and areas to be filled:** Free from loose soil, topsoil, organic material, rubbish and standing water.
2. **Freezing conditions:** Do not place fill on frozen surfaces. Remove material affected by frost. Replace and recompact if not damaged after thawing.
3. **Adjacent structures, membranes and buried services**
 - 3.1. Do not overload, destabilise or damage.
 - 3.2. Submit proposals for temporary support necessary to ensure stability during filling.
 - 3.3. Allow 14 days (minimum) before backfilling against in situ concrete structures.
4. **Layers:** Place so that only one type of material occurs in each layer.
5. **Earthmoving equipment:** Vary route to avoid rutting.

535 Compaction generally

1. **General:** Compact fill not specified to be left loose as soon as possible after placing.
2. **After compaction:** Surface of each layer must be well closed, showing no movement under compaction plant, and without cracks, holes, ridges, loose material and the like.
3. **Defective areas:** Remove and recompact to full thickness of layer using new material.

540 Benching in fill

1. **Adjacent areas:** If, during filling the difference in level between adjacent areas of filling exceeds 600 mm, cut into edge of higher filling to form benches 600 mm minimum width and height equivalent to depth of a layer of compacted filling.
2. **New filling:** Spread and compact to ensure maximum continuity with previous filling.

550 Geotextile sheet

1. **Manufacturer:** Contractor's choice
 - 1.1. **Product reference:** Contractor's choice
2. **Type:** Woven
3. **Polymer type:** Contractor's choice
4. **Recycled content:** 90% (minimum) to BS EN ISO 14021
5. **Jointing:** 300 mm overlap

6. **Preparation of subgrade:** Before laying sheet, remove humps and sharp projections. Fill hollows
7. **Protect from**
 - 7.1. Exposure to light.
 - 7.2. Contaminants.
 - 7.3. Materials listed as potentially deleterious by geotextile manufacturer.
 - 7.4. Wind uplift.

571 Geocells

1. **Manufacturer:** Submit proposals
 - 1.1. **Product reference:** Submit proposals
2. **Materials:** Contractor's choice
3. **Recycled content:** Submit proposals
4. **Size of cells (length x width x thickness):** as required for no dig areas
5. **Preparation of subgrade:** as per manufacturers instructions
6. **Fixing/ Connecting:** Carbon steel 'J' pins
 - 6.1. **Centres:** 500 mm

610 Compacted filling for landscape areas

1. **Fill:** Material capable of compaction by light earthmoving plant.
2. **Filling:** Layers not more than 200 mm thick. Lightly compact each layer to produce a stable soil structure.

615 Loose tip filling for landscape areas

1. **Filling:** Do not firm, consolidate or compact when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

617 Type 1 unbound mixture

1. **Fill:** To 'Specification for highway works', clauses 801 and 803:
 - 1.1. Crushed rock (other than argillaceous rock).
 - 1.2. Coarse crushed concrete aggregate.
 - 1.3. Recycled aggregates.
 - 1.4. Crushed non-expansive slag to clause 801.2.
 - 1.5. Well-burned non-plastic colliery shale.
2. **Amendments to requirements in the 'Specification for highway works':** None
3. **Filling:** To 'Specification for highway works', clause 802.

620 Subgrade improvement layer (capping)

1. **Fill:** To 'Specification for highway works', Table 6/1, Class 6F1 or 6F2.
2. **oFilling:** 'Specification for highway works' (SHW), Table 6/1, clause 612 and clause 613.3, 613.9 and 613.10.

621 Type 3 unbound mixture

1. **Fill:** To 'Specification for highway works', clauses 801 and 805:
 - 1.1. Crushed rock (other than argillaceous rock) with well-defined edges.
 - 1.2. Coarse crushed concrete aggregate.
 - 1.3. Crushed non-expansive slag.

2. Amendments to requirements in the 'Specification for highway works': None
3. Filling: To 'Specification for highway works', clause 802.

626 Compacted general fill

1. Suitable material: Any inorganic material excavated on the site
2. Excavated material: Select suitable material and keep separate.
3. Filling: Spread and level material in layers. As soon as possible thoroughly compact each layer.
4. Required compaction: To suit use of fill as backfill in line with engineers requirements
5. Proposals: Well in advance of starting work submit details of proposed:
 - 5.1. Materials to be used, including quantities of each type.
 - 5.2. Type of plant.
 - 5.3. Maximum depth of each compacted layer.
 - 5.4. Minimum number of passes per layer.

650 Protection of compacted filling

1. Temporary protective filling: Before allowing construction traffic, raise level of compacted cohesive soil filling at least 150 mm above formation level using properly compacted temporary filling.
2. Removal: Remove temporary protective filling from site before permanent construction.

Bioremediation - Not Used

'specification for highway works: earthworks specification' appendices - Not Used

Ω End of Section

D41

Crib walls, gabions and other gravity retaining walls

To be read with preliminaries/ general conditions.

105 Design and construction of earth retaining structure

1. Requirement: Obtain from the structure manufacturer:
 - 1.1. A design and details for the retention structure.
 - 1.2. A stability check for the earth mass containing the structure.
2. Type of structure: Drystack interlocking masonry Precast reinforced concrete stem wall
3. Structural requirements
 - 3.1. Generally: As section B50 or B51.
 - 3.2. Design: Complete in accordance with the designated code of practice to satisfy specified performance criteria. to engineers specification and in line with Suppliers installation drawings.
4. Other requirements: Filter membrane behind structure
5. Fill/ Backfill
 - 5.1. Material: Contractor's choice to suit requirements of retaining structure manufacturer
 - 5.2. Compaction: As retaining structure manufacturer's instructions.

107 Construction of earth retaining structure

1. Type of structure: Drystack interlocking masonry Precast reinforced concrete stem wall
2. Structural requirements
 - 2.1. Generally: As engineers specification
 - 2.2. Design: As engineers specification and suppliers site specific details.
3. Other requirements: None
4. Fill/ Backfill

310 Concrete interlocking blocks Type A

1. Manufacturer: [AG](#)
 - 1.1. Contact details
 - 1.1.1. Address: 64 Old Moy Road
Dungannon
Co Tyrone
BT71 6PU
 - 1.1.2. Telephone: +44 (0) 28 8778 8112
 - 1.1.3. Web: www.ag.uk.com
 - 1.1.4. Email: specifications@ag.uk.com
 - 1.2. Product reference: [Anchor® Vertica® Walling](#)
2. Standard: Manufactured to BS 771-3:2011+A1:2015 - Specification for masonry units.
3. Certification: CE marked; Certificate 14B/1-7-13, attestation Level 4 CPR (2011) Annex V.
4. Dimensions: 457 x 280 x 200 mm.
5. Finish
 - 5.1. Exposed faces: StoneCut textured.
6. Colour: Canelletto.
7. Special shapes: Anchor Vertica Cap. Anchor Vertica Corner. Anchor Shortcut Cap.

8. Type: Standard and Double-sided where exposed to rear.
9. Face batter: as per supplier detail drawings.
10. Accessories: Geogrid reinforcement.
11. Compressive Strength: BBA block: 40 N/mm².
12. Water absorption: 7%.

320 Laying drystack interlocking masonry

1. Installation
 - 1.1. Perpends aligned and all voids filled.
 - 1.2. First course: Lay close jointed and bedded into fresh concrete footing
 - 1.3. Backfill:
 - 1.4. To top of each course as work proceeds and compact in layers maximum 150 mm deep.
 - 1.5. Sweep debris from top of each course before laying next.

330 Geogrid reinforcement

1. Manufacturer: Contractor's choice
 - 1.1. Product reference: Contractor's choice
2. Foundation condition at time of laying reinforcement: Clean and level with no debris, projections, organic matter, soft material or material liable to damage the reinforcement.
3. Laying reinforcement
 - 3.1. Backfill: Bring up to level and compact before installing each layer of reinforcement.
 - 3.2. Jointing: Neatly abut adjacent sheets and connect to blocks as recommended by block manufacturer. Do not protrude from front face of wall.
 - 3.3. Tensioning: Lay a minimum of two further courses of blocks and lightly tension the reinforcement before placing and compacting the next layer of backfill material.

410 Precast reinforced concrete stem walls

1. Manufacturer: F.P.Mcann (or equal approved)
 - 1.1. Product reference: L Wall.
2. Properties: To retain earth banks ranging upto 2.2m
 - 2.1. Sizes: As per engineers levels plan and manufacturer's fabrication drawings.
 - 2.2. Weight: As Manufacturer's drawing
 - 2.3. Special shapes: As required
 - 2.4. Features: Predrilled holes
3. Substrate: Concrete foundations as section E10, To engineers detail
4. Facing: Not required
5. Other requirements: Carbon steel anchor rod connections, Bitumen-impregnated cork board joint filler, Excavated granular free-draining backfill and Pressure relief drainage

420 Placing precast reinforced concrete stem walls

1. Installation
 - 1.1. Perpends: Aligned.
 - 1.2. Joints: As manufacturer's drawing
 - 1.3. Securing: As per engineer's drawing
2. Backfill: Compact in layers maximum 200 mm deep.

Ω End of Section

F10 Brick/ block walling

Types of walling

230 Reclaimed brick facing brickwork

1. Description: TO EXTERNAL FREE-STANDING WALLS
2. Reclaimed bricks:
 - 2.1. Condition: Sound, free from mortar and deleterious matter.
 - 2.2. Supplier/ Source: Site won stone materials.
 - 2.3. Format: To match existing
3. Mortar: As section Z21.
 - 3.1. Additional requirements: Wall ties and engineers detail where over 600mm
4. Bond: To match existing
5. Joints: To match existing

290 New Entrance Walling

1. Description: To reconstructed site entrance off main road
2. Blocks: To BS 1217.
 - 2.1. Walling type: Ashlar coursed and bonded, to layout on drawing- Sub contractor drawings to be submitted for approval.
 - 2.2. Manufacturer: Site won stone- heritage stone mason to be used to re-build.
 - 2.2.1. Product reference: Re-use of existing
 - 2.3. Block type: Existing reclaimed and re used
 - 2.4. Work sizes (length x height x thickness): Max wall height to return 600mm. Pier reconstructed further into site
 - 2.5. Finish/ colour: as existing
3. Mortar: As section Z21.
4. Bond: to match existing
5. Joints: to match existing
6. Features: Coping detail to match existing new pier reconstructed into site

Testing

400 Hard landscaping materials specification

1. Minimum BRE 'Green Guide to Specification' online rating: A

Workmanship generally

460 Mortar designations

1. Mix proportions: For a specified designation select a mix from the following:
 - 1.1. Designation (i) (BS EN 998-2 M12 equivalent)
 - 1.1.1. 1:0-¼:3 (Portland cement:lime:sand with or without air entraining additive).
 - 1.1.2. 1:3 (Portland cement:sand and air entraining additive).
 - 1.2. Designation (ii) (BS EN 998-2 class M6 equivalent)
 - 1.2.1. 1:½:4-5 (Portland cement:lime:sand with or without air entraining additive).

- 1.2.2. 1:3 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
- 1.2.3. 1:2½-3½ (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
- 1.2.4. 1:3-4 (Portland cement:sand and air entraining additive).
- 1.3. Designation (iii) (BS EN 998-2 class M4 equivalent)
 - 1.3.1. 1:1:5-6 (Portland cement:lime:sand with or without air entraining additive).
 - 1.3.2. 1:3½-4 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
 - 1.3.3. 1:4-5 (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
 - 1.3.4. 1:5-6 (Portland cement:sand and air entraining additive).
- 1.4. Designation (iv) (BS EN 998-2 class M2 equivalent)
 - 1.4.1. 1:2:8-9 (Portland cement:lime:sand with or without air entraining additive).
 - 1.4.2. 1:4½ (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
 - 1.4.3. 1:5½-6½ (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
 - 1.4.4. 1:7-8 (Portland cement:sand and air entraining additive).
- 2. **Batching:** Mix proportions by volume.
- 3. **Mortar type:** Continuous throughout any one type of masonry work.

500 Laying generally

- 1. **Mortar joints:** Fill vertical joints. Lay bricks, solid and cellular blocks on a full bed.
- 2. **AAC block thin mortar adhesive and gypsum block adhesive joints:** Fill vertical joints. Lay blocks on a full bed.
- 3. **Clay block joints**
 - 3.1. **Thin-layer mortar:** Lay blocks on a full bed.
 - 3.2. **Interlocking perpend:** Butted.
- 4. **Bond where not specified:** Half-lap stretcher.
- 5. **Vertical joints in brick and concrete block facework:** Even widths. Plumb at every fifth cross joint.

520 Accuracy

- 1. **Courses:** Level and true to line.
- 2. **Faces, angles and features:** Plumb.
- 3. **Permissible deviations**
 - 3.1. **Position in plan of any point in relation to the specified building reference line and/ or point at the same level:** ± 10 mm.
 - 3.2. **Straightness in any 5 m length:** ± 5 mm.
 - 3.3. **Verticality up to 3 m height:** ± 10 mm.
 - 3.4. **Verticality up to 7 m height:** ± 14 mm.
 - 3.5. **Overall thickness of walls:** ± 10 mm.
 - 3.6. **Level of bed joints up to 5 m (brick masonry):** ± 11 mm.
 - 3.7. **Level of bed joints up to 5 m (block masonry):** ± 13 mm.

690 Adverse weather

- 1. **General:** Do not use frozen materials or lay on frozen surfaces.

2. **Air temperature requirements:** Do not lay bricks/ blocks:
 - 2.1. In cement-gauged mortars when at or below 3°C and falling or unless it is at least 1°C and rising.
 - 2.2. In hydraulic lime:sand mortars when at or below 5°C and falling or below 3°C and rising, or as manufacturer's/ supplier's recommendations.
 - 2.3. In thin-layer mortars when outside the limits set by the mortar manufacturer.
3. **Temperature of walling during curing:** Above freezing until hardened.
4. **Newly erected walling:** Protect at all times from:
 - 4.1. Rain and snow.
 - 4.2. Drying out too rapidly in hot conditions and in drying winds.

Additional requirements for facework

760 Appearance

1. **Brick/ block selection:** Do not use units with damaged faces or arrises.
2. **Cut masonry units:** Where cut faces or edges are exposed cut with table masonry saw.
3. **Quality control:** Lay masonry units to match relevant reference panels.
 - 3.1. **Setting out:** To produce satisfactory junctions and joints with built-in features and components.
 - 3.2. **Coursing:** Evenly spaced using gauge rods.
4. **Lifts:** Complete in one operation.
5. **Methods of protecting facework:** Submit proposals.

780 Ground level

1. **Commencement of facework:** Not less than 150 mm below finished level of adjoining ground or external works level.

830 Cleanliness

1. **Facework:** Keep clean.
2. **Mortar on facework:** Allow to dry before removing with stiff bristled brush.
3. **Removal of marks and stains:** Rubbing not permitted.

Ω End of Section

M60

Painting/clear finishing

Clauses

30 Preparation generally

1. Standard: In accordance with BS 6150.
2. Refer to any pre-existing CDM Health and Safety File and CDM Construction Phase Plan where applicable.
3. Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
4. Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
5. Substrates: Sufficiently dry in depth to suit coating.
6. Efflorescence salts, dirt, grease and oil: Remove.
7. Surface irregularities: Provide smooth finish.
8. Organic growths and infected coatings:
 - 8.1. Remove with assistance of biocidal solution.
 - 8.2. Apply residual effect biocidal solution to inhibit regrowth.
9. Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.
10. Dust, particles and residues from preparation: Remove and dispose of safely.

32 Previously coated surfaces generally

1. Preparation: In accordance with BS 6150, clause 11.5.
2. Contaminated or hazardous surfaces: Give notice of:
 - 2.1. Coatings suspected of containing lead.
 - 2.2. Substrates suspected of containing asbestos or other hazardous materials.
 - 2.3. Significant rot, corrosion or other degradation of substrates.
3. Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
4. Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
5. Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
6. Alkali affected coatings: Completely remove.
7. Retained coatings:
 - 7.1. Thoroughly clean.
 - 7.2. Gloss coated surfaces: Provide key.
8. Partly removed coatings: Apply additional preparatory coats.
9. Completely stripped surfaces: Prepare as for uncoated surfaces.

39 Steel preparation

1. Corrosion and loose scale: Take back to bare metal.
2. Residual rust: Treat with a proprietary removal solution.
3. Bare metal: Apply primer as soon as possible.

61 Coating generally

1. Application standard: In accordance with BS 6150, clause 9.
2. Conditions: Maintain suitable temperature, humidity and air quality.
3. Surfaces: Clean and dry at time of application.
4. Thinning and intermixing: Not permitted unless recommended by manufacturer.
5. Priming coats: Apply as soon as possible on same day as preparation is completed.
6. Finish:
 - 6.1. Even, smooth and of uniform colour.
 - 6.2. Free from brush marks, sags, runs and other defects.
 - 6.3. Cut in neatly.
7. Doors, opening windows and other moving parts: Ease before coating and between coats.

65 Concealed joinery surfaces

1. General: After priming, apply additional coatings to surfaces that will be concealed when component is fixed in place.

66 Concealed metal surfaces

1. General: Apply additional coatings to surfaces that will be concealed when component is fixed in place.
 - 1.1. Components: Underside of fence rails
 - 1.2. Additional coatings: Black paint to BS 1070

68 Staining wood

1. Primer: Apply if recommended by stain manufacturer.
2. Application: Apply in flowing coats and brush out excess stain to produce uniform appearance.

Coating systems - Not Used

Generally - Not Used

Preparation - Not Used

Application - Not Used

Ω End of Section

Q10

Kerbs/ edgings/ channels/ paving accessories

Clauses

2 To be read with preliminaries/general conditions.

Types of kerbs/edgings and channels

110 Concrete kerbs Type D

1. Description: Flush inlay retention edge/ transition kerbs
2. Manufacturer: [AG](#)
3. Contact details
 - 3.1. Address: 64 Old Moy Road
Dungannon
Co Tyrone
BT71 6PU
 - 3.2. Telephone: [+44 \(0\) 28 8778 8112](tel:+44(0)2887788112)
 - 3.3. Web: www.ag.uk.com
 - 3.4. Email: specifications@ag.uk.com
4. Product reference: [TerraKerb](#) (E3)
5. Standard: Manufactured to BS EN 1340; installed to BS7533.
6. Physical properties
 - 6.1. Colour:
 - 6.2. Finish: Textured top and front face.
 - 6.3. Dimensions: 255 x 125 x 900 mm, square edge.
7. Finish: Grit blasted
8. Colour: Silver Grey
9. Bedding: Fresh concrete races

112A Precast concrete

1. Description: KERBS
2. Standard: To BS EN 1340.
3. Recycled content: 20% (minimum) to BS EN ISO 14021
4. Designations: K1. Half Batter Kerb
5. Size (width x height x length): 125 x 150 x 915 mm
6. Finish: As cast
7. Colour: Natural
8. Bedding: to engineers detail
9. Joints generally: to engineers detail
10. Sealant movement joints: to engineers detail

112B Precast concrete

1. Description: KERBS
2. Standard: To BS EN 1340.
3. Recycled content: 20% (minimum) to BS EN ISO 14021

4. Designations: K1d. Dropper Kerb
5. Size (width x height x length): 255 x 125 x 915 mm
6. Special shapes: Right and Left hand dropper kerbs
7. Finish: As cast
8. Colour: Natural
9. Bedding: to engineers detail
10. Joints generally: to engineers detail
11. Sealant movement joints: to engineers detail

112C Precast concrete

1. Description: KERBS
2. Standard: To BS EN 1340.
3. Recycled content: 20% (minimum) to BS EN ISO 14021
4. Designations: K2. Bullnose Kerb
5. Size (width x height x length): 255 x 125 x 915 mm
6. Finish: As cast
7. Colour: Natural
8. Bedding: to engineers detail
9. Joints generally: to engineers detail
10. Sealant movement joints: to engineers detail

112D Precast concrete

1. Description: KERBS
2. Standard: To BS EN 1340.
3. Recycled content: 20% (minimum) to BS EN ISO 14021
4. Designations: E1. Flat Top Kerb (Wet Cast)
5. Size (width x height x length): 150 x 50 x 915 mm
6. Finish: As cast
7. Colour: Natural
8. Bedding: to engineers detail
9. Joints generally: to engineers detail
10. Sealant movement joints: to engineers detail

200 Special

1. Description: Dwarf Wall Kerb
2. Manufacturer: Acheson and Glover (or similar)
 - 2.1. Product reference: 600mm Dwarf Wall Kerb
3. Size: 600 x 915 x 90mm
4. Type/ Material: Pre cast (wet cast Concrete)
 - 4.1. Finish: Natural
 - 4.2. Colour: Natural
5. Accessories: Casting-in anchors
6. Bedding: Fresh concrete races
7. Joints: Close butted min 3mm and silicon sealed

Roads/paving accessories/ marking/ demarcation

395 Road marking (thermoplastic)

1. **Standard:** Road Safety Markings Association standard specification document for road marking and road studs (StanSpec).
2. **Manufacturer:** Contractor's choice
 - 2.1. **Product reference:** Contractor's choice
3. **Colour:** as required for location
4. **Retroreflectivity to BS EN 1436:** Not required (Class R0)

Laying

510 Laying kerbs, edgings and channels

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.

510 Laying kerbs, edgings and channels Type A

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:** pre drilled and placed on to dowel fixings set into in a mortar bed on accurately cast foundations or on a race of fresh concrete. Positioned true to line and levelled along top and front faces,. No rear haunching with edge of footing held in place by form work until set.
3. **Securing of units:** After bedding has set, secured on to dowels cast on to footings at 300mm spacings and masonry resin fixed in place

520 Adverse weather

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

1. **Standard:** To BS 8500-2.
2. **Designated mix:** Not less than GEN0 or Standard mix ST1.
3. **Workability:** Very low.

547 Bedding/ Backing of units on fresh concrete races

1. **Standard:** To BS 7533-6.

550 Kerb dowels

1. **Dowels:** Steel bar to BS 4482.
 - 1.1. **Size:** 12 mm diameter, 150 mm long.

2. Installation of dowels: Vertically into foundation while concrete is plastic.
 - 2.1. Centres: To suit holes in kerbs.
 - 2.2. Projection: 75 mm.
3. Grouting of holes in kerbs: resin fixed (contractor to submit proposals)

560 Haunching dowels

1. Dowels: Steel bar to BS 4482.
 - 1.1. Size: 12 mm diameter, 150 mm long.
2. Installation of dowels: Vertically into foundation while concrete is plastic.
 - 2.1. Centres: 450 mm.
 - 2.2. Distance from back face of kerb: 50 mm.
 - 2.3. Projection: 75 mm.
3. Haunching: Rectangular cross section, cast against formwork, fully enclosing and protecting dowels.

620 Accuracy

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

625 Regularity of paved surfaces

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

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

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

Clauses

2 To be read with preliminaries/ general conditions.

Types of paving

110A Asphalt concrete paving

1. Description: To all adopted roads and footpaths
2. Standard: To adoptable standards as per engineers details.
3. Subgrade improvement layer: To engineers details
 - 3.1. Compacted thickness: To engineers details
4. Geotextile: To engineers details
 - 4.1. Manufacturer: Contractors choice
 - 4.1.1. Product reference: To engineers details
5. Granular sub-base: To engineers details
 - 5.1. Compacted thickness: To engineers details
6. Base: To engineers details
 - 6.1. Paving grade: To engineers details
 - 6.2. Compacted thickness: To engineers details
7. Binder course: To engineers details
 - 7.1. Paving grade: To engineers details
 - 7.2. Compacted thickness: To engineers details
8. Surface course: To engineers details
 - 8.1. Paving grade: To engineers details
 - 8.2. Slip/ Skid resistance: To engineers details
 - 8.3. Compacted thickness: To engineers details
9. Reclaimed content
 - 9.1. Standard: To BS EN 13108-8.
 - 9.2. Value (maximum): To engineers details
10. Surface treatment: To engineers details
11. Other requirements: To engineers details

110B Asphalt concrete paving Parking bays and unadopted paths

1. Description: To all unadopted parking bays and pah areas.
2. Standard: appropriate for vehicle loading (vehicle, pedestrian) and usage requirements as per engineers details.
3. Subgrade improvement layer: To engineers details
 - 3.1. Compacted thickness: To engineers details
4. Geotextile: To engineers details
 - 4.1. Manufacturer: Contractors choice
 - 4.1.1. Product reference: To engineers details
5. Granular sub-base: To engineers details
 - 5.1. Compacted thickness: To engineers details

6. Base: To engineers details
 - 6.1. Paving grade: To engineers details
 - 6.2. Compacted thickness: To engineers details
7. Binder course: To engineers details
 - 7.1. Paving grade: To engineers details
 - 7.2. Compacted thickness: To engineers details
8. Surface course: To engineers details
 - 8.1. Paving grade: To engineers details
 - 8.2. Slip/ Skid resistance: To engineers details
 - 8.3. Compacted thickness: To engineers details

140 Hot rolled asphalt paving

1. Description: To Shared Surface squares
2. Standard: To adoptable standards and engineers specification
3. Subgrade improvement layer: To engineers specification
 - 3.1. Compacted thickness: To engineers specification
4. Geotextile: To engineers specification
 - 4.1. Manufacturer: Contractors choice
 - 4.1.1. Product reference: Contractors choices
5. Granular sub-base: To engineers specification
 - 5.1. Compacted thickness: To engineers specification
6. Base: To engineers specification
 - 6.1. Paving grade: To engineers specification
 - 6.2. Compacted thickness: To engineers specification
7. Binder course: To engineers specification
 - 7.1. Paving grade: To engineers specification
 - 7.2. Compacted thickness: To engineers specification
8. Surface course: To include buff gravel chippings and to engineers specification
 - 8.1. Paving grade: To engineers specification
 - 8.2. Slip/ Skid resistance: To engineers specification
 - 8.3. Compacted thickness: To engineers specification
9. Reclaimed content

Preparatory work/ requirements

220 Bituminous materials generally

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

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.

Laying

310 Laying generally

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

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

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

350 Contractor's use of pavements

1. Before use
 - 1.1. Timing: allow newly laid sections to cool before trafficking.
 - 1.2. Open-grained surface: Fill with 0/4 mm size coated grit. Remove surplus.
 - 1.3. Finish: Uncoated chipping and binder surface treatment.
2. Preparation for final surfacing
 - 2.1. Timing: Defer laying until as late as practicable.
 - 2.2. Immediately before laying final surfacing: Clean and make good the base/ binder course. Allow to dry.
 - 2.3. Adhesion: Tack coat to BS 434-1 or BS EN 13808
 - 2.3.1. Application rate: As manufacturer's recommendation
 - 2.3.2. Accuracy: Uniform, without puddles.
 - 2.4. Finishing: Allow emulsion to break completely before applying surface.

Completion

390 Documentation

1. Standard: BS EN 13108-1
 - 1.1. Declaration of conformity: Submit.

2. Number of copies: 3
3. Submission: Two weeks prior to date when Contractor expects work to be complete

Ω End of Section

Q23

Gravel/ hoggin/ woodchip/ resin bound roads/ paving/ overlays

Clauses

2 To be read with preliminaries/ general conditions.

Types of surfacing

110 Hard binding gravel

1. Description: Self binding gravel
2. Subgrade improvement layer: Submit proposals
 - 2.1. Compacted thickness: 300 mm
3. Geotextile: Sheet
 - 3.1. Manufacturer: CED
 - 3.1.1. Product reference: CEDEC Gold
4. Granular sub-base: Type 1 unbound mixture, as section D20
 - 4.1. Compacted thickness: 160 mm
5. Blinding to sub-base: Required
6. Surface course: Angular gravel, free from clay, with sufficient grit to enable compaction.
 - 6.1. Type: Pit gravel
 - 6.2. Source: Submit proposal
 - 6.3. Colour: buff
 - 6.4. Size: <6mm
 - 6.5. Compacted thickness: 50mm
7. Completion: Compact to produce a firm, regular surface, stable in use.

270 Hard landscaping materials specification

1. Minimum 'BRE Green Guide to Specification Online' rating: A

Laying

310 Timber edging

1. Softwood board
 - 1.1. Size: 150 x 38 mm.
 - 1.2. Fixing: Galvanized nails into softwood pegs.
2. Softwood pegs
 - 2.1. Size: 50 x 50 x 450 mm long
 - 2.2. Fixing: Drive into ground.
 - 2.3. Centres: 900 mm Maximum 500 mm on radii of less than 6 m
3. Preservative treatment: Not required

340 Laying generally

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

- 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.

380 Laying granular surfaces in pedestrian areas and cycle tracks

- 1. Permissible deviation from required levels, falls and cambers (maximum): ± 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

- 1. Paved areas: Restrict access to prevent damage.

Completion - Not Used

Ω End of Section

Q24

Interlocking brick/ block roads/ pavings

Types of paving

110 Concrete pavers To Heritage Area Parking Bays

1. Geotextile: Sheet
 - 1.1. Manufacturer: [AG](#)
 - 1.1.1. Contact details
 - 1.1.1.1. Address: 64 Old Moy Road
Dungannon
Co Tyrone
BT71 6PU
 - 1.1.1.2. Telephone: [+44 \(0\) 28 8778 8112](tel:+44(0)2887788112)
 - 1.1.1.3. Web: www.ag.uk.com
 - 1.1.1.4. Email: specifications@ag.uk.com
 - 1.1.2. Product reference: [Country Cobble Paving](#)
 - 1.2. Standard: Manufactured to BS EN 1338; installed to BS 7533.
 - 1.3. Physical properties
 - 1.3.1. Finish: Weathered.
 - 1.3.2. Dimensions and associated tolerances
 - 1.3.2.1. Nominal sizes: 200 x 150 mm x 80mm
 - 1.4. Jointing Sand: Buff.
2. Granular sub-base: Type 1 unbound mixture, as section D20
 - 2.1. Compacted thickness: 300 mm
3. Laying course
 - 3.1. Material: In accordance with BS 7533-3.
4. Blocks: To BS EN 1338.
 - 4.1. Sizes:
 - 4.2. Colour/ Finish: Slate
5. Setting out
 - 5.1. Bond: Random Stretcher running horizontal across the parking bay.

110A Concrete pavers Heritage pedestrian Routes.

1. Geotextile: Sheet
 - 1.1. Manufacturer: [AG](#)
 - 1.1.1. Contact details
 - 1.1.1.1. Address: 64 Old Moy Road
Dungannon
Co Tyrone
BT71 6PU
 - 1.1.1.2. Telephone: [+44 \(0\) 28 8778 8112](tel:+44(0)2887788112)
 - 1.1.1.3. Web: www.ag.uk.com
 - 1.1.1.4. Email: specifications@ag.uk.com
 - 1.1.2. Product reference: [Country Cobble Paving](#) mix 3
 - 1.2. Standard: Manufactured to BS EN 1338; installed to BS 7533.

- 1.3. Physical properties
 - 1.3.1. Finish: Weathered.
 - 1.3.2. Dimensions and associated tolerances
 - 1.3.2.1. Nominal sizes: 100 x 150 mm. 150 x 150 mm. 200 x 150 mm x 50mm
- 1.4. Jointing Sand: Buff.
- 2. Granular sub-base: Type 1 unbound mixture, as section D20
 - 2.1. Compacted thickness: 300 mm
- 3. Laying course
 - 3.1. Material: In accordance with BS 7533-3.
- 4. Blocks: To BS EN 1338.
 - 4.1. Colour/ Finish: Corrib
- 5. Setting out
 - 5.1. Bond: Random course perpendicular to going of footway.

110C Concrete flags Type H-m Transition Inlay

- 1. Geotextile: Sheet
 - 1.1. Manufacturer: [AG](#)
 - 1.1.1. Contact details
 - 1.1.1.1. Address: 127 Crievehill Road
Fivemiletown
Tyrone
United Kingdom
BT75 0SY
 - 1.1.1.2. Telephone: [+44 \(0\) 28 8778 8112](tel:+44(0)2887788112)
 - 1.1.1.3. Web: www.ag.uk.com
 - 1.1.1.4. Email: specifications@ag.uk.com
 - 1.1.2. Product reference: [Plaza Paving + Flags \(Flagstones\)](#)
- 1.2. Standard: To BS EN 1338, paving blocks.
- 1.3. Physical properties
 - 1.3.1. Colour: Exposed aggregate (16% salt, 42% pepper, 42% lakrinds)
 - 1.3.2. Finish: Water-etched, lightly textured.
 - 1.3.3. Profile
 - 1.3.3.1. Flag type: Regular plan form.
 - 1.3.4. Dimensions and associated tolerances
 - 1.3.4.1. Nominal sizes: 80 x 200 x 100 mm.
 - 1.3.5. Skid resistance: (USRV) >75 low potential for slip.
- 1.4. Jointing Sand: rigid mortar joint
- 1.5. Installation: Installed to BS 7533.
- 1.6. Abrasion resistance: To BS 1339, Class 4.
- 1.7. Frost protection: To BS 1339, Class 3.
- 1.8. Surface Layer: 5 mm.
- 1.9. Cement: 380 kg/m³.
- 1.10. Granite content: ≥90%.

130 Natural stone sett paving

- 1. Description: to back of footway adopted highway transition.

2. Subgrade improvement layer: As section D20
 - 2.1. Compacted thickness: Submit proposals
3. Granular sub-base: Type 1 unbound mixture, as section D20
 - 3.1. Compacted thickness: 200 mm
4. Geotextile: Sheet
 - 4.1. Manufacturer: Submit proposals
 - 4.1.1. Product reference: Submit proposals
5. Laying course
 - 5.1. Material: In accordance with BS 7533-7, clause 5.1.1.1.
 - 5.2. Compaction: In accordance with BS 7533-7, clauses 8.4.1 and 11.1 and Annex E.
 - 5.3. Nominal thickness after compaction: 40 mm
6. Setts
 - 6.1. Standard: To BS EN 1342.
 - 6.2. Supplier: Marshalls or site won materials.
 - 6.2.1. Product reference: Silver grey Granite/ Yorkstone Setts
 - 6.3. Sizes: 100 x 100 x 100 mm 200 x 100 x 100 mm
 - 6.4. Colour/ Finish: natural
7. Method of cutting sett sides: Diamond sawn.
8. Jointing
 - 8.1. Material: In accordance with BS 7533-7, clause 5.2.1.1.
 - 8.2. Joint width: 2-4 mm.
9. Setting out:
 - 9.1. Bond: Stretcher
 - 9.2. Features: Mortar bedded edge restraint Mortar bedded traffic calming ramps
10. Sealer/ Stabilizer: Not required
11. Accessories: None

Execution

200 Execution generally – concrete block and clay paver paving

1. Standard: In accordance with BS 7533-3.

205 Execution generally – natural stone paving

1. Standard: In accordance with BS 7533-7, as relevant to flexible (non-rigid) laying and construction.
2. Subgrade, sub-base and roadbase presentation: Tight and dense surface, to prevent loss of laying course material into it during construction and use.
3. Joint filling: Do not work in damp conditions. Top joints up at the earliest opportunity.

220 Samples

1. General: Before ordering, submit samples of Grantie, Tegulam, and over blocks/ pavers/ setts that are representative of colour and appearance.

230 Control samples

1. General: Carry out sample area of finished work:
 - 1.1. Location: Contractors choice
 - 1.2. Size (minimum): 2m²

- 1.3. Features to be included: Bond and edge trim
2. Give notice: When ready for inspection.
3. Timing: Obtain approval of appearance before proceeding.

240 Adverse weather

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

325 Drainage holes in existing bases

1. Location: Impervious layers of existing road/ paving.
2. Drainage: Form regular grid of holes, through base and any additional build up, down to sub-base:
 - 2.1. Spacing in both directions: 500 mm
 - 2.2. Minimum clear opening: 30 mm
 - 2.3. Do not weaken or excessively disturb road/ paving.
3. Completion
 - 3.1. Remove jagged or protruding edges.
 - 3.2. Fill holes with 2-8 mm pea gravel. Ram down to form flush smooth surface.

385 Mortar bedded

1. Description: Stone Setts
2. Foundation
 - 2.1. Size: 200 x 150 mm
3. Bedding
 - 3.1. Thickness: 10 mm minimum to 40 mm maximum.
 - 3.2. Mortar: As section Z21 mix 1:3 cement:sand, grading MP or FP.
4. Laying: Bed units on foundation, and secure with continuous mortar haunching.
 - 4.1. Keep exposed faces clean and free from mortar.
5. Jointing: Tooled mortar

420 Tooled joints in mortar bedded units

1. Jointing: Butter ends of units with bedding mortar as work proceeds, to fill joints.
 - 1.1. Joint width: 6-10 mm
 - 1.2. Finish: Tool to a neat flush profile.

430 Sealant movement joints in mortar bedded units

1. Spacing: to tarmac and paving interface
2. Extent of joints: Through edge units and haunching
3. Joint filler: Appropriate sealant to materials and trafficking (contractor to submit proposals)
4. Barrier (joint breaker): As recommended by sealant manufacturer. Position filler and barrier accurately to fully support sealant at recommended distance from exposed faces of units.
5. Sealant: High performance trafficable joint sealant
 - 5.1. Colour: Grey
 - 5.2. Application: As section Z22.

440 Laying geotextile edging strip for conventional paving

1. Location: Immediately below laying course, abutting features that interrupt the laying course, including:

- 1.1. Perimeters, edge restraints and kerbs.
- 1.2. Other types of paving.
- 1.3. Drainage fittings, e.g. channels and manholes.
2. Width: 500 mm
3. Jointing: Lap by 300 mm
4. Edge detail: Turn sheet up to form an upstand fitted neatly against features.
 - 4.1. Height (minimum): Thickness of sand laying course.

450 Laying geotextile sheet for conventional paving

1. Location: Immediately below sub base and laying course.
2. Jointing: Lap by 300 mm
3. Laying: Fit neatly at edge restraints and other features that interrupt the sand laying course, e.g. drainage fittings, channels, manholes and kerbs.
 - 3.1. Edge detail: Turn sheet up to form an upstand against features.
 - 3.1.1. Height (minimum): Thickness of sand laying course.

452 Prepared existing and new bound bases (roadbases)

1. Condition before placing laying course: Sound, clean, free from rutting or major cracking and cleared of sharp stones, projections or debris.

485 Laying blocks/ pavers/ setts

1. Setting out: Start from an edge restraint.
2. Cutting: Cleanly, accurately and vertically, without spalling. Do not mark or damage visible surfaces.
3. Cut edges: Turn inwards where possible; do not position against edge restraints or other features.
4. In situ mortar or concrete infill: 1:3 cement for all voids less than 1/4 of cut block width
5. Compaction: Vibrate to produce thoroughly interlocked paving of even overall appearance with regular joints and accurate to line, level and profile. Do not mark or damage paving units, kerbs and adjacent work.
 - 5.1. Concrete blocks and clay pavers: In accordance with BS 7533-3, Annex F, to site category required for laying course material.

495 In situ surrounds to obstructions

1. Locations: Around circular drainage fittings At circular street furniture bases Where blocks/ pavers cannot be fitted tight up to features
2. Material: 3:1 mix of coarse aggregate and mortar in accordance with BS 7533-3, clause 5.4.3.2. C35 air entrained concrete or 3:1 mix of coarse aggregate and mortar in accordance with BS 7533-3, clause 5.4.3.2.
3. Shape and size: Rectangular, 100 mm (minimum) all round obstruction.
4. Thickness (minimum): Combined depth of blocks/ pavers/ setts and sand laying course.
5. Colour: To approval
6. Timing: Lay and allow to cure in advance of laying blocks/ pavers/ setts.

500 Regularity of paved surfaces

1. Maximum variation in gap under a 3 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface)
 - 1.1. Precast concrete paving blocks and clay pavers for flexible pavements: 10 mm.
2. Difference in level between adjacent paving units (maximum): 2 mm.

3. Sudden irregularities: Not permitted.

Completion

615 Completion of paving

1. Final compaction of the surface course: In accordance with BS 7533-3.
2. Vacuum cleaning machines: Not allowed.

Ω End of Section

Q25 Slab/brick/sett/cobble pavings

Clauses

2 To be read with preliminaries/ general conditions.

General

120 Concrete flag paving system

1. Description: Concrete flags to rear areas
2. Subgrade improvement layer: As section D20
 - 2.1. Compacted thickness: Not applicable
3. Granular sub-base: Type 1 unbound mixture, as section D20
 - 3.1. Compacted thickness: 150 mm
4. Base: 50mm bedding sand
 - 4.1. Thickness: 50mm
5. Laying course: Sand/ fine aggregate
 - 5.1. Accessories: None
6. Paving units: Concrete flags
7. Jointing: Sand/ fine aggregate
 - 7.1. Bond: Straight line, Change in direction cuts to allow perpendicular abutments for majority of runs.
8. Accessories: Channels, as section Q10 Kerbs, as section Q10

150 Concrete sett paving system

1. Description: Impermeable block paving to parking and pedestrian areas.
2. Subgrade improvement layer: Not required
 - 2.1. Compacted thickness: Not applicable
3. Granular sub-base: Type 1 unbound mixture, as section D20
 - 3.1. Compacted thickness: 200 mm
4. Laying course: Fine aggregate
 - 4.1. Accessories:
5. Paving units: Concrete setts and Blocks
6. Jointing: Fine aggregate
 - 6.1. Bond: As drawings
7. Accessories: Channels, as section Q10 Edgings, Kerbs, as section Q10

185 Gravel filled plastics paving system

1. Description: Gravel filled plastic grid to informal path and parking area.
2. Subgrade improvement layer: Submit proposals
 - 2.1. Compacted thickness: Submit proposals
3. Geomembrane: Geotextile membrane
 - 3.1. Manufacturer: British Recycled plastics
Low Carbon Products Ltd,
Unit 8F,
Top Land Country Business Park,

Cragg Road, Mytholmroyd,
Hebden Bridge,
West Yorkshire,
HX7 5RW

- 3.1.1. Product reference: Hebden X grid
- 4. Granular sub-base: Coarse graded aggregate for permeable paving, as section D20
 - 4.1. Compacted thickness: Min 150 mm
- 5. Water collection: Not required
- 6. Laying course: Submit proposals
- 7. Paving units: Plastics pavers
 - 7.1. Bond: In accordance with manufacturer's recommendations
 - 7.2. Filling: Gravel
 - 7.3. Accessories: Submit proposals

190 Hard landscaping materials specification

- 1. Minimum BRE 'Green Guide to Specification Online' rating: A

System performance - Not Used

Products

315 Concrete flags (A)

- 1. Standard: To BS EN 1339.
 - 1.1. Manufacturer: AG
 - 1.1.1. Product reference: [Tavira Flagstone](#)
 - 1.2. Manufacturer: [AG](#)
 - 1.2.1. Contact details
 - 1.2.1.1. Address: 64 Old Moy Road
Dungannon
Co Tyrone
BT71 6PU
 - 1.2.1.2. Telephone: [+44 \(0\) 28 8778 8112](#)
 - 1.2.1.3. Web: [www.ag.uk.com](#)
 - 1.2.1.4. Email: [specifications@ag.uk.com](#)
- 1.3. Standard: To EN 1339:2003.
- 1.4. Physical properties
 - 1.4.1. Colour: Silver.
 - 1.4.2. Finish: Textured.
 - 1.4.3. Profile
 - 1.4.3.1. Flag type: Regular plan form.
 - 1.4.3.2. Arrises: Chamfered.
 - 1.4.4. Dimensions and associated tolerances
 - 1.4.4.1. Nominal sizes: 450 x 450 x 40 mm.
 - 1.4.5. Abrasion resistance: Class 3.
 - 1.4.6. Slip resistance: >70 low to extremely low potential for slip.
 - 1.4.7. Bending strength: Class 3.
 - 1.4.8. Recycled content (minimum): 60%.

390 Sand/ fine aggregate for unbound laying course and jointing of concrete flag paving

1. **Description:** To all impermeable concrete slab and block paving
2. **Standard:** To BS 7533-4, unbound construction laying course and jointing material.
3. **Purity:** Free from deleterious salts, contaminants, lime and cement.
4. **Procurement:** Obtain from one source and ensure consistent grading.

Execution

620 Adverse weather

1. **General**
 - 1.1. **Temperature:** Do not lay or joint paving if the temperature is below 3°C on a falling thermometer or below 1°C on a rising thermometer.
 - 1.2. **Frozen materials:** Do not use. Do not lay bedding on frozen or frost covered bases.
2. **Paving with mortar joints and/ or bedding**
 - 2.1. **Protect from frost damage, rapid drying out and saturation until mortar has hardened.**
3. **Paving laid and jointed in sand/ fine aggregate**
 - 3.1. **Stockpiled laying course sand/ fine aggregate:** Protect from saturation.
 - 3.2. **Exposed areas of unbound laying course and uncompacted areas of unbound paving:** Protect from heavy rainfall.
 - 3.3. **Saturated unbound laying course:** Remove and replace, or allow to dry before proceeding.
 - 3.4. **Laying dry sand/ fine aggregate jointed paving in damp conditions:** Brush in as much jointing sand as possible. Minimize site traffic over paving. As soon as paving is dry, top up joints and complete compaction.

625 Laying pavings – general

1. **Appearance:** Smooth and even with regular joints and accurate to line, level and profile.
2. **Falls:** To prevent ponding.
3. **Bedding of paving units:** Firm so that rocking or subsidence does not occur or develop.
 - 3.1. **Bedding/ Laying course:** Consistently and accurately graded, spread and compacted to produce uniform thickness and support for paving units.
4. **Slopes:** Lay paving units upwards from the bottom of slopes.
5. **Paving units:** Free of mortar and sand stains.
6. **Cutting:** Cut units cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.

630 Levels of paving

1. **Permissible deviation from specified levels**
 - 1.1. **Generally:** ± 6 mm.
2. **Height of finished paving above features**
 - 2.1. **At gullies:** +6 to +10 mm.
 - 2.2. **At drainage channels and kerbs:** +3 to +6 mm.

635 Regularity of paved surfaces

1. **Maximum variation in gap under a 3 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface)**
 - 1.1. **Precast concrete paving blocks and clay pavers for flexible pavements:** 10 mm.

- 1.2. Precast concrete flags or natural stone slabs: 3 mm.
2. Difference in level between adjacent paving units (maximum): 2 mm.
3. Sudden irregularities: Not permitted.

645 Protection

1. Cleanliness: Keep paving clean and free from mortar droppings, oil and other materials likely to cause staining.
2. Materials storage: Do not overload pavings with stacks of materials.
3. Handling: Do not damage paving unit corners, arrises, or previously laid paving.
4. Mortar bedded pavings: Keep free from traffic after laying:
 - 4.1. Pedestrian traffic (minimum): 24 hours
 - 4.2. Vehicular traffic (minimum): 7 days
5. Access: Restrict access to paved areas to prevent damage from site traffic and plant.

650 Cementitious bases and sub-bases

1. General: Protect from moisture loss, if not covered by another pavement course within 2 hours of completion.

655 Condition of sub-bases/ bases before spreading laying course

1. Trenches and excavation of soft or loose spots in subgrade: Fill and thoroughly compact.
2. Granular surfaces: Lay and compact so as to be sound, clean, smooth and close-textured enough to prevent migration of bedding/ laying course materials into the sub-base during compaction and use, free from movement under compaction plant and free from compaction ridges, cracks and loose material.
3. Prepared existing and new bound bases (roadbases): Sound, clean, free from rutting or major cracking. Remove sharp stones, projections and debris.
4. Sub-base/ Roadbase level tolerances: To BS 7533-7, Annex A.
5. Levels and falls: Accurate and within the specified tolerances.
6. Drainage outlets: Within 0-10 mm of the required finished level.
7. Features in unbound paving (including mortar bedded restraints and drainage ironwork): Complete to required levels; adequately bed and haunch in mortar.
8. Sub-bases containing cement/ hydraulic binder: Cure for minimum times specified in BS 7533-4.

675 Laying geotextile sheet edging strips

1. Location: Immediately below the sub base, abutting features which interrupt the laying course, including:
 - 1.1. Perimeters/ Edge restraints/ Kerbs.
 - 1.2. Other types of paving.
 - 1.3. Drainage fittings, e.g. channels and manholes.
2. Edge detail: Turn sheet up to a height not less than thickness of the laying course to form an upstand fitted neatly against features.
3. Width: 300 mm
4. Jointing: Lap by 300 mm.

710 Laying flag and slab paving – sand/ fine aggregate laying course and jointing

1. Standard: In accordance with BS 7533-4.
2. Flag installation and cutting: To Interpave 'Concrete flag paving'.

3. Laying course
 - 3.1. Nominal thickness after compaction: 35 mm
4. Joint width: 2-5 mm.

750 Laying natural stone cobble paving

1. Bedding, laying, jointing and completion: In accordance with BS 7533-7 and -10.

Completion

915 Completion of paving with dry sand or fine aggregate filled joints

1. Sand dressing: Leave a thin layer of dry jointing sand/ fine aggregate over the paving, sweep clean before practical completion
2. Final compaction of the surface course: In accordance with BS 7533-3.
3. Vacuum cleaning machines: Not allowed.

Ω End of Section

Q28

Topsoil and soil ameliorants

Clauses

2 To be read with preliminaries/ general conditions.

System outline

115 Soil system for grass swards

1. Description: For all grassed areas
2. Composition
 - 2.1. Soil: Site sourced topsoil and Imported topsoil to BS 3882
 - 2.2. Ameliorants: Sanitized and stabilized composted materials
 - 2.3. Accessories: Submit design and cost proposals

135 Planting bed soil system

1. Description: For flowering shrubs
2. Composition
 - 2.1. Topsoil: Site sourced topsoil and Imported topsoil to BS 3882
 - 2.2. Ameliorants: - Aggregates;- Organic materials; and- Sanitized and stabilized composted materials
 - 2.3. Accessories: Mycorrhizal inoculant and Gel irrigation system

145 Plant pit backfilling soil system

1. Description: For tree pits
2. Composition
 - 2.1. Topsoil: Imported topsoil, custom mix
 - 2.2. Ameliorants: - Aggregates;- Organic materials; and- Sanitized and stabilized composted materials
 - 2.3. Accessories: Mycorrhizal inoculant and Gel irrigation system

155 Mulching and top dressing system

1. Description: For plant beds shrubs and woodland areas
2. Composition
 - 2.1. Material: PAS100 Sanitized and stabilized composted materials

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 animal manures;- Composted bark;- Composted cocoa shell;- Composted coir fibre;- Composted food waste; and- Composted green/ food waste certified to PAS 100
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;- Products containing peat; and- River and canal dredgings

315 Imported topsoil to BS 3882

1. **Description:** For grass seeding and planting beds
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:** Multipurpose
 - 4.1. **Soil textural class to BS 3882, Figure 1:** Any class or Sandy clay loam
5. **Source:** Contractor's choice
 - 5.1. **Product reference:** Contractor's choice

360 Sanitized and stabilized composted materials certified to PAS 100

1. **Description:** For plant bed, tree and shrub planting
2. **Standard:** In accordance with PAS 100 and Compost Quality Protocol
3. **Source:** Contractor's choice
 - 3.1. **Product reference:** Submit proposals
4. **Horticultural parameters**
 - 4.1. **pH (1:5 water extract):** 6.0-9.0
 - 4.2. **Electrical conductivity (maximum, 1:5 water extract):** 200 mS/m
 - 4.3. **Moisture content (m/m of fresh weight):** 35-55%.
 - 4.4. **Organic matter content (minimum):** 30%
 - 4.5. **Grading (air dried samples):** 95% passing 25 mm and 90% passing 10 mm screen mesh apertures
 - 4.6. **Carbon:Nitrogen ratio (maximum):** 20:1.
5. **Texture:** Friable.
6. **Objectionable odour:** Not permitted.
7. **Compost Certification Scheme certification:** Required
8. **Declaration of analysis:** Submit.
9. **Additional analyses:** Phytotoxic elements
10. **Samples:** Supply 5 kg sample before ordering

380 Mycorrhizal inoculant

1. **Description:** To tree pits and structural root cells.

2. Manufacturer: Submit proposals
 - 2.1. Product reference: Submit proposals

385 Water retention gels

1. Description: For tree pits
2. Type: Agri-polymer gel
3. Manufacturer: Submit proposals
 - 3.1. Product reference: Submit proposals
4. Accessories: None

Execution

610 Topsoil analysis

1. Soil to be analysed: - Existing soil in area of the demolished building;- Imported topsoil; and- Topsoil stockpile
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: Not required
 - 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: 14 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: All areas
2. Timing: Submit at handover.
3. Contents
 - 3.1. Full description of all soil components.
 - 3.2. Record of source for all soil components.
 - 3.3. Record drawings showing the location and depth of all soils by type and grade.
 - 3.4. Declaration of analysis: in accordance with BS 3882, clause 6 and Table 1.
4. Number of copies: 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: Required
4. Number of copies: Three

650 Notice

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: 1 week

655 Mechanical tools

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

660 Grading subsoil for:

1. Description: Wildflower areas
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: Wildflower 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: 150 mm
 - 4.1.2. Stiff clay and cohesive subsoils: 300 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 50 mm.
6. Remove from site: Arisings, contaminants and debris

670 Inspecting formations

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

675 Preparation of undisturbed topsoil

1. **Standard:** In accordance with BS 4428.
 - 1.1. **Grading and cultivation:** To suit cultivation operations specified in Q30
2. **Hard ground:** Break up thoroughly.
3. **Clearing:** Remove visible roots and large stones with a diameter greater than 50 mm.
4. **Areas covered with turf or thick sward:** Plough or dig over to full depth of topsoil.
5. **Fallow period (minimum):** Three months
 - 5.1. **Weed control:** At appropriate times re-cultivate at fortnightly intervals to suppress weed growth.

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.

685 Surplus materials to be removed

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.

690 Topsoil storage heaps

1. **Location:** Throughout the site
2. **Height (maximum):** 3.0 m
3. **Width (maximum):** 5.0 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:** -grassed areas;- amenity planting areas; and- woodland 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:** 300 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.

720 Finished levels of topsoil after settlement

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

840 Applying mycorrhizal inoculant

1. **Description:** To tree planting
2. **Depth:** To manufacturer's/ supplier's recommendations

845 Applying loose mulch

1. **Description:** For amenity, shrub and tree planting
2. **Timing:** Immediately after planting
3. **Preparation:** Ensure that soil is thoroughly moistened, applying water where necessary
4. **Coverage of mulch (minimum)**
 - 4.1. **Planting beds (depth):** 50 mm depth
 - 4.2. **Trees:** 50 mm depth
 - 4.3. **Container planting:** 50 mm depth
5. **Finished level of mulch:** edge 30 mm below adjacent grassed or paved areas

Completion

920 Applying mulch

1. Timing: At end of the rectification 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): 50 mm
4. Trees: Remulch.
 - 4.1. Depth (minimum): 50 mm
5. Container planting: Remulch.
 - 5.1. Depth (minimum): 50 mm

Ω End of Section

Q30 Seeding/turfing

Clauses

2 To be read with preliminaries/general conditions.

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.

150 Water restrictions

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

160 Notice

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

170 Setting out

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

Preparation

212 Seed bed cleaning before sowing

1. **Description:** All areas to be seeded
2. **Operations:** Remove weeds by hand weeding and hoeing.

250A Soil requirements

1. Type
 - 1.1. Seeded areas: Soil for grass swards, as section Q28
 - 1.2. Wildflower Seeded areas: Cultivated Subsoil as section Q28
 - 1.3. Turfed areas: Soil for grass swards, as section Q28
 - 1.4. Wildflower turf areas: Cultivated Subsoil as section Q28

Seeding

311 Grass seed

1. Description: For all grassed areas
2. Supplier: Emmorsgate
 - 2.1. Mixture reference: EL11
3. Application rate: 10 g/m²

312 Wildflower seed mixture

1. Description: For naturalized areas
2. Supplier: Pictorial meadows (or equal approved)
 - 2.1. Mixture reference: Persian Carpet, Cottage Garden,
3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): UK origin
4. Application rate: Supplier's recommendations 4 g/m²

312A Wildflower seed mixture

1. Description: For woodland areas
2. Supplier: Pictorial meadows (or equal approved)
 - 2.1. Mixture reference: Woodland Edge
3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): UK origin
4. Application rate: Supplier's recommendations

319 Quality of seed

1. Description: For all grassed 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.

322 Quality of wildflower seed

1. Description: For all seeded areas
2. Standard: In accordance with Flora Locale's 'Code of practice for collectors, growers and suppliers of native flora'.
3. Germination testing: Not required
4. Freshness of seed: Produced for the current growing season

5. **Samples:** Submit when requested.

330 Sowing

1. **General:** Establish good seed contact with the root zone.
2. **Method:** Manually broadcast, raked and rolled
 - 2.1. **Distribution:** 2 equal sowings at right angles to each other and diagonally to main axis

335 Grass sowing season

1. **Grass seed generally:** April to June or August to October

336 Wildflower sowing season

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

350 Turf edging to seeded areas

1. **Description:** Adjacent to footpath
2. **Standard:** To BS 3969, with no perennial ryegrass.
 - 2.1. **Seed mix:** Similar to seeded area.
3. **Timing:** Before sowing.
4. **Preparation:** Rake back a 750 mm wide margin around prepared seed beds.
 - 4.1. **Level of seed bed:** Married in with turf.
5. **Placement:** Single row laid end to end and trimmed to a line.
6. **Watering:** On completion.

Turfing

400 Cultivated turf

1. **Description:** For lawns
2. **Supplier:** Contractor's choice
 - 2.1. **Product reference:** Contractor's choice
3. **Properties of soil used for turf production:** Peat-free, well drained sandy loam

401 Wildflower turf

1. **Description:** Meadow edge and Embankments
2. **Supplier:** Pictorial meadows (or similar)
 - 2.1. **Product reference:** Woodland Edge
3. **Properties of soil used for turf production:** Submit proposals

420 Delivery and storage

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:** Species mix, including percentage of specified species

430 Turfing generally

1. Time of year: To be agreed
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: None
10. Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.

440 Turfing on banks exceeding 30° slope

1. Turf configuration: Diagonal or horizontal.
2. Securing turfs
 - 2.1. Fixings: Pointed softwood pegs, 200 mm long x 25 mm square
 - 2.2. Frequency of fixings: Each turf
3. Removal of fixings: Not required

Protecting/cutting

530 First cut of grassed areas

1. Timing: When grass is reasonably dry.
 - 1.1. Height of initial growth: 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: 50 mm
4. Mower type: Contractor's choice
5. Arisings: Remove from site

540 First cut of

1. Description: Wildflower meadows
2. Height of initial growth: 75 mm
3. Preparation:
 - 3.1. Debris and litter: Remove.
 - 3.2. Stones and earth clods larger than 25mm: break up clods and remove stones
4. Debris and litter: Remove.
5. Height of first cut: 50 mm
6. Mower type: Contractor's choice
7. 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

620 Maintaining

1. **Description:** General grassed 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:** 100 mm
4. **Preparation:** Before each cut remove all litter and debris.
5. **Cutting:** As and when necessary to a height of 50 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

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:** June/ July
 - 3.2. **Height of first cut:** 50 mm
 - 3.3. **Frequency of subsequent cutting (minimum):** Every 6-8 weeks until autumn
 - 3.4. **Height of growth permitted (maximum):** 150 mm
4. **Height and frequency of cut in second growing season**
 - 4.1. **Time of cut:** Single cut in early October
 - 4.2. **Height of cut:** 50 mm
5. **Trimming:** All edges.
 - 5.1. **Arisings:** Remove.
6. **Watering:** When instructed Contractor's choice Contractor's choice

Ω End of Section

Q31

External planting

Clauses

2 To be read with preliminaries/general conditions.

General information/ requirements

112 Site clearance generally

1. **General:** Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
2. **Stones:** Remove those with any dimension exceeding 50 mm.
3. **Contamination:** Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
4. **Vegetation:** Clear scrub to ground level by flail mowing and remove arisings; retain and protect trees indicated on drawings
5. **Large roots:** Grub up and dispose of without undue disturbance of soil and adjacent areas.
6. **Additional requirements:** Remove remnants of old fence posts and mesh

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. **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

1. **Restrictions:** Do not use within 200 mm of tree and plant stems.

145 Watering

1. **Quantity:** Wet full depth of topsoil.
2. **Application:** Even and without damaging or displacing plants or soil.

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

150 Water restrictions

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

160 Notice

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

170 Soil requirements

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:** Container planting growing media system, as section Q28
 - 1.4. **Mulch applied after planting:** Mulching and top dressing system, as section Q28

200 Plants/ Trees – general

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

216 Plants/ Trees – specification criteria

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

225 Bulbs/ Corms/ Tubers

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.

246 Labelling and information

1. **Standard:** To BS 3936.

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.

280 Treatment of tree wounds

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

285 Protection of existing grass

1. **General:** Protect areas affected by planting operations using boards/ tarpaulins.

- 1.1. Excavated or imported material: Do not place directly on grass.
- 1.2. Duration: Minimum period.

290 Surplus material

1. Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove. or if suitably inert reuse in habitat and meadow areas

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, in accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotweed code of practice'.

Planting shrubs/ herbaceous plants/ bulbs

400 Random plant layout

1. Description: To all beds
2. Spacing: Random groups of 3-11 plants of the same species.
3. Density: As plant schedule

405 Shrub planting pits

1. Timing: Excavate 1-2 days (maximum) before planting.
2. Sizes: As plant schedule
3. Pit bottom improvement Break up to a depth of 150 mm, incorporating 10 kg 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.

470 Formal hedges

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

471 Naturalized hedges

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

472 Fencing support for new hedges

1. Type: Chestnut pale fence, as section Q40
2. Timing: Before planting hedge.
3. Support: Lightly secure hedge plants to fence wires at appropriate intervals.

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:** Mulching and top dressing system, as section Q28
 - 3.1. **Depth:** 50 mm

Planting trees

500 Tree planting

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

505 Tree pits

1. **Sizes:** 75 mm wider than the root spread, and same depth as the rootball
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 150 mm.
 - 4.1. **Treatment:** Soil ameliorant worked into pit bottoms
5. **Pit sides:** Scarify.
6. **Backfilling material:** Excavated material from tree pit, installed to original soil profiles in accordance with BS 8545

510 Tree pit root barriers

1. **Locations:** To all tree pits adjacent to paved areas
2. **Manufacturer:** Green Blue Urban
 - 2.1. **Product reference:** Re root 600
3. **Thickness:** 1.0 mm
4. **Barrier depth:** 600 mm
5. **Foil liner:** Not required
6. **Top of root barrier in relation to finished topsoil level:** 25 mm below ground level
7. **Installation:** With sides vertical. Remove all sharp objects adjacent to barrier.

535 Tree stakes

1. **Stakes:** To trees in soft landscaping, Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
 - 1.1. **Preservative treatment:** Submit proposals Not required
2. **Stake size (minimum):** 75 mm diameter
3. **Stake length (minimum):** 1800 mm

550 Double staking for

1. **Description:** Trees in soft landscaping (excluding car park as clause 526)
2. **Staking**
 - 2.1. **Position:** Either side of tree position and perpendicular to wind direction.
 - 2.2. **Driving:** Vertically at least 300 mm into bottom of pit before planting.
 - 2.3. **Backfilling:** Consolidate material around stake.

- 2.4. **Firming:** Sufficiently firm to prevent movement of the rootball/ rootstock.
- 3. **Height of stakes:** Cut off at approximately half of the height of the clear stem of tree
- 4. **Horizontal bracing:** Rubber belting with spacers
 - 4.1. **Fixing:** Nailed to stake within 25 mm of top of stakes
- 5. **Ties:** Not required
- 6. **Tying:** Secure rubber belting around tree stem firmly without causing constriction or chafing
- 7. **Nails for fixing ties, belts and webbing:** To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
- 8. **Nails for fixing cross bars:** To BS 1202-1, galvanized round wire, minimum 75 mm long and 3.75 mm gauge

576 Tree pit surfacing – loose fill

- 1. **Surfacing material:** Mulch, as section Q28
- 2. **Area:** 300 mm radius circle
- 3. **Depth:** 50 mm
- 4. **Watering:** Water soil thoroughly before laying.
- 5. **Installation:** Ensure the base of the tree stem is kept free from loose filled material.

Woodland/ matrix/ buffer zone planting - Not Used

Protecting/ maintaining/ making good defects

750 Planting maintenance generally

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

790 Final mulching

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

Ω End of Section

Q35

Landscape maintenance

Clauses

2 To be read with preliminaries/ general conditions.

Generally

105 Maintenance objectives

1. Location: Wildflower meadow
 - 1.1. Duration: 10 years
2. Aims: - Enhanced landscape quality;- Improved landscape visual amenity; and- Provide wildlife habitat and increase biodiversity
3. Restrictions: As described in the landscape maintenance manual
4. Results: As scheduled

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.

140 Control of mammalian pests

1. Specialist firms: Submit proposals
 - 1.1. Method: Submit proposals

152 Performance criteria for control of invasive plant species

1. Specialist firms: Submit proposals
2. Species: Japanese knotweed, Himalayan Balsam, Giant Hogweed
3. Location: Whole site
4. Requirement: treat at first instances of discovery
 - 4.1. Timing: As detailed in Local Biodiversity Action Plan

155 Watering

1. Supply: No site supply available, submit proposals
2. Quantity: Wet full depth of topsoil
3. Application: Do not damage or loosen plants.
4. Compacted soil: Loosen or scoop out, to direct water to rootzone.
5. Frequency: As necessary for the continued thriving of all planting.

160 Water restrictions

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

170 Disposal of arisings

1. **General:** Unless specified otherwise, dispose of arisings as follows:
 - 1.1. **Biodegradable arisings:** Compost on site in suitable area. Wildflower cuttings to be removed from area. Except invasive species, all arisings from these to be removed to an approved facility
 - 1.2. **Grass cuttings:** Spread evenly
 - 1.3. **Tree roots and stumps:** Remove from site
 - 1.4. **Shrub and tree prunings:** Chip on site and spread to base of hedgerows and tree planting
 - 1.5. **Litter and nonbiodegradable arisings:** Remove from site

190 Litter

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

195 Protection of existing grass

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

197 Cleanliness

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

Grassed areas

211 Maintenance of grassed areas

1. **Standard:** To BS 7370-3. Carry out maintenance appropriate to each category of turf, as follows:
 - 1.1. **Objectives:** To BS 7370-3, table 6.
 - 1.2. **Programme:** To BS 7370-3, clause 11.
 - 1.3. **Mowing methods:** To BS 7370-3, table 3.

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.

226 Tree stems

1. **Precautions:** Do not allow nylon filament rotary cutters and other mechanical tools closer than 200 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): 6 weeks

255 First cut of

1. Description: All grassed areas
2. Height of initial growth: 75 mm
3. Preparation
 - 3.1. Debris and litter: Remove.
 - 3.2. Stones and earth clods larger than 25 mm in any dimension: Remove
4. Height of first cut: 50 mm
5. Mower type: Contractor's choice
6. Arisings: Spread evenly over cut areas

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: June/ July
 - 2.2. Height of first cut: 50 mm
 - 2.3. Frequency of subsequent cutting (minimum): Every 6–8 weeks until autumn
 - 2.4. Height of growth permitted (maximum): 150 mm
3. Height and frequency of cut in second growing season
 - 3.1. Time of cut: Single cut in October
 - 3.2. Height of cut: 50 mm
4. Trimming: All edges.
 - 4.1. Arisings: Remove.
5. Watering: When instructed

Flower beds/ seasonal beddings

460 Beds of perennials or perennials and annuals

1. Plant supports: Stake and tie plants using flower canes.
 - 1.1. Length: To suit plant height
 - 1.2. Maintain throughout the growing season.
2. Gaps in planting: Refill by replanting.
3. Watering
 - 3.1. New plants: Before and after planting out.
 - 3.2. Ongoing: As necessary for the continued thriving of all planting.
4. Operations at end of growing season
 - 4.1. Trim: Older flowering stems of herbaceous perennials.
 - 4.2. Remove: Redundant plant supports, litter, debris and arisings.
 - 4.3. Cultivate: Fork over the soil, taking care not to cause undue disturbance to plants.
 - 4.4. Top dress: Apply sanitized and stabilized compost top dressing.

470 Flower beds generally

1. Operations
 - 1.1. Remove: Dead flower heads, fallen leaves, litter and debris.
 - 1.2. Weeds: Thoroughly hand weed.

- 1.3. Cultivate: Lightly hoe.
- 1.4. Trim: Clip grass edges.
2. Fungicide: Not required
3. Insecticide: Not required

Shrubs/trees/hedges

500 Establishment of new planting

1. Duration: 5 years
2. Weed control
 - 2.1. Method: Keep planting beds clear of weeds by maintaining full thickness of mulch.
 - 2.2. Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
3. Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
4. Watering: As schedule and when instructed

510 Tree stakes and ties

1. Inspection/ Maintenance times: As scheduled 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: During spring when no longer required to support the tree
 - 4.1. Fill stake holes with lightly compacted soil.

520 Refirming of trees and shrubs

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

525 Tree guards

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

540 Pruning generally

1. Pruning: In accordance with good horticultural and arboricultural practice.
 - 1.1. Removing branches: Do not damage or tear the stem or bark.
 - 1.2. Wounds: Keep as small as possible and cut cleanly back to sound wood.
 - 1.3. Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
 - 1.4. Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
2. Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.

3. **Tools:** Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
4. **Disease or infection:** Give notice if detected.
5. **Growth retardants, fungicide or pruning sealant:** Do not use unless instructed.

545 Pruning of excessive overhang

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

570 Formative pruning of young trees

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

605 Trimming slowly establishing hedges

1. **Operations**
 - 1.1. **Timing:** Cut back tops 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.

615 Trimming field hedges

1. **Operations:** Trim to specified height and profile using suitable mechanical cutters. run on an rotational cycle so as to have variety of hedge types.

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:** Submit details and cost of plants before ordering
5. **Dressing:** Slow release fertilizer:
 - 5.1. **Type:** Organic
 - 5.2. **Application rate:** As manufacturer's recommendations

642 Thinning by transplanting surplus plants

1. **Plants to be thinned:** Herbaceous beds
2. **Standard:** BS 7370-4.
3. **Timing:** When foliage of adjacent plants has begun to touch
4. **Roots**
 - 4.1. **Disturbance to adjacent plants:** Minimise.
 - 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:** 4 plants per m²

645 Weed control generally

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

650 Hand weeding

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

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:** Annually
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.

705 Winter leaf removal

1. **Operations:** Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
2. **Arisings:** Compost on site

Tree work

810 Tree work generally

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

815 Additional work

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

820 Prevention of wound bleeding

1. **Standard:** To BS 3998.

825 Prevention of disease transmission

1. **Standard:** To BS 3998.

830 Cleaning out and deadwooding

1. **Remove**
 - 1.1. Dead, dying, or diseased wood, broken branches and stubs.
 - 1.2. Fungal growths and fruiting bodies.
 - 1.3. Rubbish, windblown or accumulated in branch forks.
 - 1.4. Wires, clamps, boards and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
 - 1.5. Other unwanted objects, e.g. tree houses, swings.
 - 1.6. Climbing plants n/a.

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:** Remove only if unavoidable
 - 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.

840 Crown reduction/ shaping

1. **General:** Cut back selectively to lateral or sublateral buds or branches to retain flowing branch lines without leaving stumps.
2. **Operations:** Reduce crown by 15%

845 Crown lifting

1. **Clearances:** Remove branch systems to give clearance.
 - 1.1. **Height:** As recommended by BS 7370-4, clause 3.7.2.3
2. **Removing branches:** Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.

850 Crown thinning

1. **Removing branches:** Remove inward growing, crossing, rubbing, dead and damaged branches.
2. **Thinning:** Selectively remove secondary and small live branch growth evenly throughout the crown.
 - 2.1. **Quantity:** 15 %
3. **Cutting:** Make no cuts of more than 35 mm diameter.
 - 3.1. **Branches:** Cut back to lateral or sublateral buds or branches without leaving stumps.
4. **Appearance:** Leave a uniform and well balanced structure of branches and foliage.

855 Cutting tree roots

1. **Excavating:** Use hand tools only.
2. **Protected area:** Do not cut roots within an area which is the larger of:
 - 2.1. The branch spread of the tree.
 - 2.2. An area with a radius of half the tree's height, measured from the trunk.
3. **Outside protected area:** Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.
4. **Cutting**
 - 4.1. **Cutting:** Make clean smooth cuts with a hand saw.
 - 4.2. **Wounds:** Minimize. Avoid ragged edges.
 - 4.3. **Finishing:** Pare cut surfaces smooth with a sharp knife.
5. **Backfilling**
 - 5.1. **Protection:** Cover cut roots with clean sharp sand.
 - 5.2. **Material:** Backfill with original topsoil.

860 Removing trees, shrubs and hedges

1. **Standards:** To BS 3998 and Health & Safety Executive (HSE)/ Arboricultural and Forestry Advisory Group Safety Leaflets.
2. **Existing services:** Check for below and above ground services. Give notice if they may be affected.

3. Shrubs and smaller trees: Cut down and grub up roots.
4. Tree stumps
 - 4.1. Treatment: Remove mechanically to a minimum depth of 300 mm below ground level
 - 4.2. Removal by winching: Give notice. Do not use other trees as supports or anchors.
5. Protection: Avoid damage to neighbouring trees, plants and property
6. Work near retained trees: Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
7. Filling holes
 - 7.1. Material: Use as-dug material and/ or imported soil as required.
 - 7.2. Finishing: Consolidate and grade to marry in with surrounding ground level.

865 Bark damage

1. Wounds
 - 1.1. Do not attempt to stop sap bleeding.
 - 1.2. Bark: Remove ragged edges using a sharp knife.
 - 1.3. Wood: Remove splintered wood from deep wounds.
 - 1.4. Size: Keep wounds as small as possible.
2. Liquid or flux oozing from apparently healthy bark: Give notice.

870 Cavities in trees

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

Water areas - Not Used

Hard landscape areas/fencing

900 Snow clearance

1. Clearance: On reaching a depth of 5 mm
2. Deicing: To roads and footpaths
 - 2.1. Material: Urea granules
 - 2.2. Timing: When the road surface temperature falls to +1°C with forecast of freezing conditions and ice forming
 - 2.3. Application rate: Spread evenly at a rate of: As manufacturer's recommendations

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

Q40 Fencing

Clauses

2 To be read with preliminaries/ general conditions.

Fencing systems

210 Wooden post and rail fencing

1. Manufacturer: Contractors choice
 - 1.1. Product reference: Timber post and rail fencing
2. Height: min 900mm max 1200mm (falls from height greater than 1m)
3. Wood: Contractor's choice
 - 3.1. Treatment: To provide a 30-year service life
 - 3.2. Finish: None
4. Maximum centres of posts: 1.8 m
5. Method of setting posts: 300 mm square or round holes, 600 mm deep filled to not less than half the depth with concrete
6. Accessories: Double leaf maintenance access gates
7. Conformity: Submit manufacturer's and installer's certificates, to BS 1722-7.

310A Closeboard fencing

1. Manufacturer: Jacksons Fencing. (or similar approved)
 - 1.1. Web: www.jacksons-security.co.uk.
 - 1.2. Email: sales@jacksons-fencing.co.uk.
 - 1.3. Product reference: Traditional Closeboard Fencing
2. Posts: Concrete 230300
3. Corner posts: concrete 231000
4. Pales: 230600
5. Rails:
 - 5.1. Type: 231400
 - 5.2. Gravel Boards: concrete 230700 With hedgehog holes/gaps
6. Gates: 231300
7. Accessories: Jakcured end grain preservative, 300mm trellis panel to rear boundaries.
8. Height: 900mm front garden 1800mm rear divider runs and 2100mm (with 300mm trellis)rear boundaries.
9. Method of setting posts: 300 mm square or round holes, 600 mm deep filled to not less than half the depth with concrete
10. Accessories: Concrete gravel board with hedgehog holes, Pedestrian access gates to rear boundaries

320A Temporary Cleft chestnut pale fencing

1. Manufacturer: Jacksons Fencing.
 - 1.1. Web: www.jacksons-security.co.uk.
 - 1.2. Email: sales@jacksons-fencing.co.uk.
 - 1.3. Product reference: Cleft Chestnut Fencing

2. Posts: 090200
3. Struts: 114700
4. Anchor stakes: 090900
5. Fencing: 291000
 - 5.1. Accessories: None

340 Steel vertical bar fencing

1. Manufacturer: Contractors choice
 - 1.1. Product reference: Steel Vertical Bar fencing.
2. Standard: To BS 1722-9.
3. Height: 1000 mm
4. Verticals: 12 mm square bar, angle to view. blunt top
5. Centres of verticals: 112 mm
6. Posts: RHS, 50 x 50 x 3 mm
 - 6.1. Finish: Hot-dip galvanized to BS EN ISO 1461 Powder-coated to BS 1722-16
 - 6.1.1. Colour: Black
7. Centres of posts (maximum): 2m
8. Method of setting posts/ stays/ legs: Posts embedded 450 mm with minimum 100 mm concrete cover, intermediate supports in rammed earth
9. Accessories: Single leaf pedestrian gate double leaf maintenance access gates
10. Conformity: Submit manufacturer's and installer's certificates, to BS 1722-9.

Gates, posts and stiles - Not Used

Accessories - Not Used

Execution

710 Installation generally

1. Set out and erect
 - 1.1. Alignment: Straight lines or smoothly flowing curves.
 - 1.2. Tops of posts: Following profile of the ground.
 - 1.3. Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
 - 1.4. Fixings: All components securely fixed.

715 Competence

1. Operatives: Contractors must employ competent operatives.
2. Qualifications: Submit certification of training.
 - 2.1. NHSS Sector Scheme 2A sub categories: (a) and (b)
 - 2.2. NHSS Sector Scheme 2C sub categories: (b)

720 Setting posts in concrete

1. Standard: To BS 8500-2.
2. Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
3. Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.

4. **Admixtures:** Do not use.
5. **Holes:** Excavate neatly and with vertical sides.
6. **Filling:** Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.
7. **Backfilling of holes not completely filled with concrete:** Excavated material, well rammed and consolidated.

730 Exposed concrete foundations

1. **Filling:** Compact until air bubbles cease to appear on the upper surface.
2. **Finishing:** Weathered to shed water and trowelled smooth.

760 Nailed wood rails

1. **Length (minimum):** Two bays, with joints in adjacent rails staggered.
2. **Fixing:** Nail each length of rail to each post with two 100 mm galvanized nails.
3. **Rails with split ends:** Replace.

770 Site cutting of wood

1. **General:** Kept to a minimum.
2. **Below or near ground level:** Cutting prohibited.
3. **Treatment of surfaces exposed by minor cutting and drilling:** Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.

780 Making good galvanized surfaces

1. **Treatment of minor damage (including on fasteners and fittings):** Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.
2. **Thickness:** Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

790 Site painting

1. **Timing:** Prepare surfaces and apply finishes as soon as possible after fixing.

Completion

910 Cleaning

1. **General:** Leave the works in a clean, tidy condition.
2. **Surfaces:** Clean immediately before handover.

920 Fixings

1. **All components:** Tighten.
 - 1.1. **Timing:** Before handover.

930 Gates

1. **Hinges, latches and closers:** Adjust to provide smooth operation. Lubricate where necessary.
 - 1.1. **Timing:** Before handover.

Ω End of Section

Q50

Site/street furniture/equipment

Clauses

2 To be read with preliminaries/ general conditions.

Gates, barriers and parking controls

190 Timber bollards Type B

1. Manufacturer: [Jacksons Fencing](#)
 - 1.1. Contact details
 - 1.1.1. Address: 209 Stowting Common
Ashford
Kent
TN25 6BN
 - 1.1.2. Telephone: [0800 408 4757](tel:0800 408 4757)
 - 1.1.3. Web: www.jacksons-security.co.uk
 - 1.1.4. Email: sales@jacksons-fencing.co.uk
 - 1.2. Product reference: [Timber Bollards \(Bollard A - machine rounded with chamfered top\)](#)
2. Timber
 - 2.1. Species: Jakcure®-treated timber (softwood).
 - 2.2. Source: Manufacturer's standard.
3. Dimensions
 - 3.1. Size and profile: 150 mm, square.
 - 3.2. Height: 900 mm. 1200 mm.
 - 3.3. Length below ground: min 1/3
4. Top profile: Square (flat-topped pyramid).
5. Base: Manufacturer's standard.
6. Finishes
 - 6.1. Worked finish: Planed.
 - 6.2. Treatment: Pressure treated.
 - 6.3. Applied finish: Natural timber.
7. Accessories: White reflectors.

196 Carbon steel bollards Type B

1. Manufacturer: Art Form Urban
 - 1.1. Product reference: [Annapolis Bollard \(Annapolis™ Standard bollard, embedded\)](#)
2. Manufacturer: [Artform Urban Furniture Limited](#)
 - 2.1. Contact details
 - 2.1.1. Address: Adlington Business Park
London Road
Adlington
Cheshire
United Kingdom
SK10 4NL
 - 2.1.2. Telephone: [+44 \(0\)1625 877554](tel:+44 (0)1625 877554)

2.1.3. Web: www.artformurban.co.uk

2.1.4. Email: enquiries@artformurban.co.uk

3. Dimensions

3.1. Size and profile: 152 mm.

3.2. Height: 838 mm.

3.3. Length below ground: 462 mm.

4. Post top: Smart bollard top (solar-powered lighting).

5. Post base: Manufacturer's standard.

6. Finishes

6.1. Applied finish: Powder coated.

6.2. Colour: Black.

7. Accessories: Protective sleeve, black.

Site and street furniture

210 Cycle stands

1. Manufacturer: Contractor's choice

1.1. Product reference: Contractor's choice

2. Type: Single Sheffield stands

3. Material: Steel

3.1. Finish: Hot-dip galvanized to BS EN ISO 1461 and Painted, as section M60

3.2. Colour: RAL 9005

4. Accessories: None

5. Method of fixing: Root, 300 mm below ground, set in concrete base

225 Street and site seats Type A

1. Manufacturer: Logic Street Furniture

1.1. Product reference: [Plano Seating \(Seat, standard\)](#)

2. Manufacturer: [Logic Manufactured Bespoke](#)

2.1. Contact details

2.1.1. Address: Pennine House
Hurricane Court
Stockton-on-Tees
North Yorkshire
United Kingdom
TS18 3TL

2.1.2. Telephone: [+44 \(0\)1642 373400](tel:+44(0)1642373400)

2.1.3. Web: www.logic-bespoke.com

2.1.4. Email: specification@logic-bespoke.com

3. Length: 1980 mm. 1380 mm.

4. Base: Surface fix.

5. Material: Oak seat with galvanized steel legs.

6. Style: Straight seat with legs.

240 Dog Waste bins Type A

1. Description: Metal Fido 35 Dog Waste Bin

2. Manufacturer: Glasdon

- 2.1. Product reference: Metal Fido 35 Dog Waste Bin
3. Material: Steel
 - 3.1. Finish: As manufactured
 - 3.2. Colour: Red
4. Accessories/ Special requirements: Post mounted and fixed below ground in concrete
5. Method of fixing: Base plate bolted to 400 x 400 x 400 mm concrete base 100 mm below paving surface

Installation

510 Concrete foundations generally

1. Standard: To BS 8500-2.
2. Concrete: Standard prescribed, not less than ST2
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.

545 Erection of timber and prefabricated structures

1. Checking: 5 days (minimum) before proposed erection date, check foundations, holding down bolts, etc.
2. Inaccuracies or defects in prepared bases or supplied structures: Report immediately. Obtain instructions before proceeding.

550 Damage to galvanized surfaces

1. Minor damage in areas up to 40 mm² (including on fixings and fittings): Make good.
 - 1.1. Material: Low melting point zinc alloy repair rods or powders made for this purpose or at least two coats of zinc-rich paint to BS 4652.
 - 1.2. Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

560 Site painting

1. Timing: Prepare surfaces and apply finishes as soon as possible after fixing.

Ω End of Section

Q55

External decks, boardwalks and bridges

Tendering - Not Used

General

130 Footbridge

1. Description: To new pedestrian link over weir
2. Width: 2.14m
3. Span: Min 7m to be confirmed post site measure
4. Structure, other than surfacing: Submit proposals
 - 4.1. Fasteners: To manufacturers and engineers detail
5. Post setting: Concrete pad foundations
6. Surfacing: Deck boards
 - 6.1. Method of attachment: as supplied
7. Guarding: Required
8. Edge protection: 100 mm upstand with visual contrast as drawing

System performance

215 Contractor's design

1. Design responsibility: Supplier, Engineer and Landscape Architect
 - 1.1. Including: Fabric and structure, fixings between elements, anchorage to supporting structure and functionality.
2. Additional requirements: Location, size and acceptable loading on anchorages to be checked for suitability with design and detailing of supporting structure

Products

305 Timber procurement

1. Timber (including timber for wood-based products): Obtained from well-managed forests and/ or plantations in accordance with:
 - 1.1. The laws governing forest management in the producer country or countries.
 - 1.2. International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
2. Documentation: Provide either in accordance with chain of custody certification scheme requirements:
 - 2.1. documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied; or
 - 2.2. evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.
3. Other evidence: UK Government Timber Procurement Policy (UKTPP) Category B evidence

400 Proprietary footbridge

1. Manufacturer: Street life or similar

Fabrication

510 Fabrication generally

1. Design: Complete the detailed design and obtain approval prior to commencing fabrication.
2. Shop drawings: Submit.
3. Structural calculations: Submit.
4. Frameworks: Assemble and brace, including temporary members required for installation.
5. Contact between dissimilar metals: Avoid.
6. Fixings: Fully bolt together. Tighten bolts.
7. Temporary support: Do not subject members to non-design loadings.

Execution

610 Loading

1. Site activities: Restrict, to ensure that design loads are not exceeded, or submit proposals for temporary supports.

620 Concrete foundations generally

1. Standard: To BS 8500-2.
2. Mix: Designated concrete not less than GEN 1 or standard prescribed concrete not less than ST2.
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.

665 Installation generally

1. Fasteners and methods of fixing: As section Z20.
2. Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
3. Temporary support: Do not use stairs, walkways or balustrades as temporary support or strutting for other work.

Completion

950 Documentation

1. Contents
 - 1.1. General product information.
 - 1.2. Installation information.
 - 1.3. Inspection and maintenance reports.
2. Number of copies: 3
3. Submission: Two weeks prior to date when principal contractor expects work to be practically complete

Ω End of Section



Specification created using NBS Chorus