Shinfield Park

NBS Landscape Specification

On behalf of **Wrenbridge Ltd.**

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Document Control Sheet

Project Name: **Shinfield Park**
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	Name	Position	Date
Prepared by:	CY	Landscape Architect	23.01.26
Reviewed by:	DS	Landscape Architect Associate Director	23.01.26
For and on behalf of Stantec UK Limited			

Revision	Date	Description	Prepared	Reviewed	
T6	23.01.26	PRoW Update	CY	DS	

Contents

D41
Crib walls, gabions and other gravity retaining walls

To be read with preliminaries/ general conditions.

210 Flint Clad Retaining Wall

1. Description: Retaining wall with flint cladding to linear park. Indicative extent shown on civil engineer's drawings.
2. Specification:: To engineer's proposals
3. Manufacturer: To engineer's proposals
4. Manufacturer:: To contractor's choice
5. Product Reference as design intent:: Secret Fix Aluminium Wall Coping Lengths - 3m

Ω End of Section

L37
External stairs/ ramps/ handrails/ balustrades

Clauses - Not Used

General

110 External stairs

1. Description: To linear park, amenity spaces and to rear of unit 5 (emergency stairwell)
2. Type: Built in situ.
3. Surface: Precast concrete step units.

150 External handrails HR

1. Description: TO EXTERNAL STEPS compliant to Part M Design Standards
2. System manufacturer: Submit proposals
3. Material: Austenitic stainless steel.
4. Height (to upper surface of handrail)
    4.1. Above pitch line: 900-1000mm
    4.2. Above landing: 900-1100mm
    4.3. Horizontal Overshoot: 300mm
5. Fixing: Root fixed with paving cut above uprights

Design/ performance requirements - Not Used

Products

310 Precast concrete step unit ST

1. Description: TO ALL EXTERNAL STEPS
2. Manufacturer: Marshalls
    2.1. Product reference: Conservation X Step Unit
    2.2. Link to product: Conservation X Single Solid Step Units | Marshalls | Marshalls
3. Standard: To BS EN 771-2 and BS EN 771-3.
4. Size
    4.1. Surface width: 1000mm
    4.2. Going: 350mm
    4.3. Rise: 150mm
5. Colour: Silver Grey

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. Concrete: Designated not less than GEN 1 or 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.

630 Setting components in concrete

1. Holes: 250 x 250 x minimum 300 mm deep.
2. Components: Accurately positioned and securely supported.
3. Concrete fill: Compact as filling proceeds.
4. Concrete foundations exposed to view: Finished to weathering profile to shed water and trowel smooth.
5. Temporary component support: Maintain undisturbed for minimum 48 hours.

650 Installation generally

1. Fasteners: To 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 finished work as temporary support or strutting for other work.
4. Applied finishes: Substrates to be even, dry, sound and free from contaminants. Make good substrate surfaces and prepare/ prime as finish manufacturer's recommendation before application.

662 Adverse weather

1. General: Do not use frozen materials and do not lay on frozen surfaces.
2. Working limits: Do not lay blocks/ dressings:
   2.1. Cement gauged mortars: When the air temperature is at or below 3°C and falling or below 1°C and rising (unless mortar has a temperature of not less than 4°C when laid and work is thoroughly protected).
   2.2. Hydraulic lime:sand mortars: When the air temperature is at or below 5°C and falling or below 3°C and rising.
3. Temperature of the work: Maintain above freezing until mortar has fully set.
4. Newly erected work: Protect from precipitation; Prevent rapid drying in hot conditions.
5. Remedial work: Rake out and replace mortar damaged by frost.
   5.1. Damaged work: Rebuild.

Completion

910 Inspection

1. Timing: Two weeks after request by contract administrator.
2. Period of notice (minimum): Three working days.

920 Documentation

1. Contents
   1.1. Copies of structural design calculations/ test reports.
2. General product information.
   2.1. Installation information.
   2.2. Inspection and maintenance reports.
3. Submission: Two weeks after request by contract administrator.

Ω End of Section

N91
External signage and interpretation

Signage outline - Not Used

System performance

210 External signage generally

1. Signage systems generally: Complete to BS 559, including components, inserts, accessories and fixings necessary to complete the system.
2. External signage: To BS 559, clause 6.1.
3. Content: Signs including facing information, components, inserts, accessories and fixings necessary to complete the system.
4. Geometric shapes, colours and layout: To BS ISO 7001
5. Wind loads: To BS EN 1991-1-4.

235 Electrical requirements for illuminated signs

1. Electrical requirements for illumination: To BS 559, section 7.

Products

305 Signage products generally

1. Materials: To BS 559.
2. Colorimetric and photometric properties: To BS ISO 3864-4.
3. Fabricated letters: To BS 559, clause 6.6.
4. Fixings: To BS 559, clause 6.11 and section Z12.

Materials - Not Used

Fabrication

520 Monolith/ entrance/ welcome sign

1. Description: TO RETAINING WALL AT SITE ENTRANCE ALONG LINEAR PARK
2. Manufacturer: Submit proposals
   2.1. Product reference: Submit proposals

Execution/ erection/ installation - Not Used

Completion - Not Used

Ω End of Section

Q10
Kerbs/ edgings/ channels/ paving accessories

Types of kerbs/edgings and channels

110 Treated Softwood Edging K6

1. Description: Treated Softwood Edging with flush/minimal upstand and Pegs at 1200mm centres
2. Standard: To BS 8417, Class 4
3. Manufacturer: Contractor's choice
4. Size (width x height x length): 50x50x600mm pegs

112 Half Batter Kerbs K2

1. Description: Standard Precast Concrete Half Batter Kerb to engineer's proposals
2. Standard: To BS EN 1340.
3. Physical properties
   3.1. Finish: As cast.
   3.2. Dimensions: 120 x 255 x 914 mm.
4. Type: Concrete.
5. Special shapes: Additional specification to engineer's proposals of castellated kerb

112 Bull nose Kerbs K3

1. Description: Standard Precast Concrete Bull Nose Kerb to engineer's proposals
2. Standard: To BS EN 1340.
3. Size (width x height x length): 125x150mm
4. Finish: As cast.

112 Flat Top Edging K4

1. Description: Standard Precast Concrete Flat Top Edging to engineer's proposals
2. Standard: To BS EN 1340.
3. Size (width x height x length): 150x150mm
4. Finish: As cast.

112 Drop Kerb K5

1. Description: Standard Precast Concrete Drop Kerb to engineer's proposals
2. Standard: To BS EN 1340.
3. Finish: As cast.

170 Linear slot drainage channel systems

1. Refer to:: Civil Engineer's detail drawings, layouts, specification

180 Drainage channel systems with gratings

1. Refer to: :

   Civil Engineer's detail drawings, layouts, specification

185 Filtration drainage channels

1. Refer to:: Civil Engineer's detail drawings, layouts, specification

190 Carriageway kerb and drainage channel systems

1. Refer to:: Civil Engineer's detail drawings, layouts, specification

250 Material samples

1. Samples representative of colour and appearance of designated materials: Submit before placing orders.

Roads/paving accessories/ marking/ demarcation - Not Used

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.

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.

540 Cement mortar bedding

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

547 Bedding/ Backing of units on fresh concrete races

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: Filled with 1:3 cement:sand mortar finished flush.

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.

570 Channels

1. Installation: To an even gradient, without ponding or backfall.
2. Lowest points of channels: 6 mm above drainage outlets.

580 Drainage channel systems

1. Installation: To an even gradient, without ponding or backfall. Commence laying from outlets.
2. Silt and debris: Removed from entire system immediately before handover.
3. Washing and detritus: Safely disposed without discharging into sewers or watercourses.

590 Drainage channel systems with built in fall

1. Installation: Top of channels level, installed in correct sequence to form an even gradient without ponding or backfall. Commence laying from outlets.
2. Silt and debris: Removed from entire system immediately before handover.
3. Washings and detritus: Safely disposed without discharging into sewers or watercourses.

600 Radius kerbs/ channels

1. Usage: Radii of 15 m or less.

610 Angle kerbs

1. Usage: Internal and external 90° changes of direction.
2. Cutting of mitres: Not permitted.

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.

641 Tooled coloured mortar joints

1. Jointing: Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and raked out to a depth of 10 mm for pointing.

1.1. Joint width: 6 mm.

2. Pointing: Joints refilled and tooled to a neat flush profile.

2.1. Pointing mortar: 1:3 cement:sand.

2.2. Pigment colour: Select from list

650 Sealant movement joints

1. Joint filler: Compressible cellular rubber or plastics compatible with specified sealant.
2. Filler installation: Built in as work proceeds, extending through haunching and foundation. Filler positioned accurately to fully support sealant at the recommended depth below exposed faces of units.
3. Joint width: 10 mm
4. Sealant: Silicone

4.1. Colour: Colour match to kerbs

5. Sealant application: As section Z22.

Ω End of Section

Q20
Granular sub-bases to roads/ pavings

To be read with preliminaries/ general conditions.

110A Thicknesses of sub-base/ subgrade layers beneath wearing course

1. Cross reference and refer to Civil Engineers details and specification for all sub base, base, concrete footing, haunch, foundation and slab details.
   • All preparation, laying, compaction, accuracy and checking of sub grades is to Civil Engineers Specification.
2. NBS Landscape specification for hard landscape is for wearing course finishes.

Ω End of Section

Q21
In situ concrete roads/ pavings/ bases

Types of paving

115 Concrete Slab P0

1. Description: TO HGV YARDS
2. Specification:: To Civil Engineer's details and specification.

   Workmanship to civil engineer's details and specification.
3. Scope of works:: Refer to contractor administrator for the inclusion or exclusion of this surface material in the landscape external works tender.

   Extent of surface material shown on Landscape GA plans.
4. Finish: Brushed (to civil engineer's details)

General/ preparation - Not Used

Laying concrete - Not Used

Joints - Not Used

Surface finish

530 Brushed finish

1. Direction: To engineer's specification

Curing/ protection/ finishing - Not Used

Ω End of Section

Q22
Asphalt roads/ pavings

Types of paving

101 Bitumen Macadam Bound Surface P1

1. Specification: ALL bituminous material to Civil Engineer details and specification for tender & construction.
2. Description: 2. Refer to Landscape drawings for material locations and cross reference to civil engineers drawings, details and specification.
3. Tie Ins: 3. All tie ins and interfaces with kerbs, manhole covers, gully and other landscape finishes to be made sound.

101 Bitumen Macadam Bound Surface P2

1. Specification: ALL bituminous material to Civil Engineer details and specification for tender & construction.
2. Description: Black top standard to **footpaths and cyclepaths**. Build up to engineer's details
3. Tie Ins:: All tie ins and interfaces with kerbs, manhole covers, gully and other landscape finishes to be made sound.

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. Finishing: Allow emulsion to break completely before applying surface.

351 Contractor's use of pavements

1. Preparation for final surfacing
   1.1. Timing: Defer laying until as late as practicable.
   1.2. Immediately before laying final surfacing: Clean and make good the base/ binder course. Allow to dry.
   1.3. Finishing: Allow emulsion to break completely before applying surface.

Completion - Not Used

Ω End of Section

Q23
Gravel/ hoggin/ woodchip/ resin bound roads/ pavings/ overlays

Types of surfacing

130 Hoggin Footpath Gravel

1. Description: To improved sections of Public Right of Way and sitting within P11 Cell web system
2. Manufacturer: CED Stone or similar and approved
   2.1. Product reference: Hoggin Footpath Gravel | CED Stone
3. Surface course: Naturally occurring fine hoggin consisting of sand and gravel, with minimum clay content required to bind the material together, and with no large lumps of clay.
   3.1. Size: Minimum of 85% by weight passing a 10 mm BS sieve.
   3.2. Maximum particle size: 0-10mm nominal aggregate size.
   3.3. Compacted thickness: As detailed on drawing 333101463-RG-LD-103 PRoW Improvements Plan.dwg
4. Completion: Compact to produce a firm, regular surface, stable in use.

160 Loose gravel P5

1. Description: Quarried from one of our Northern quarries, this unusual material is a distinctive blend of greys, taupes and whites with the occasional pink fragment throughout.
   The subtle quartz element of the stone catches the light beautifully, making this a perfect choice for driveways, car parks, footpaths, borders and all garden uses.
2. Manufacturer: Breedon Special Aggregates
   2.1. Product reference: 20mm Tawny Grey
3. Gravel: Loose laid and raked to uniform thickness.
   3.1. Colour: Tawny Grey
   3.2. Size: 20mm

160 Self Binding Gravel P6

1. Description: TO LINEAR PARK AND PEDESTRIAN ROUTES
2. Manufacturer: Breedon Special Aggregates
   2.1. Product reference: 12mm Fines Self Binding Gravel
   2.2. Colour:: Golden Amber
   2.3. Compacted Thickness:: 50mm

Laying

315 Materials

1. Compatibility: Chippings suitable for use with respective binders/ emulsions/ resin/ epoxy.

320 Samples

1. Submit: Representative samples of all aggregates and all chippings.

325 Blinding to sub-base

1. Type: Coarse sand

2. Laying: Compact. Seal interstices. Provide free drainage.
3. Compacted thickness: 15 mm

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.

360 Drainage falls

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

370 Laying granular surfaces in vehicular areas

1. Permissible deviation from required levels, falls and cambers (maximum): ±20mm.
2. General: Spread and level in 150 mm maximum layers. As soon as possible compact each layer.
3. Dry weather: Lightly water layers during compaction.

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 Precast Concrete Paving Setts P3

1. Manufacturer: Tobermore
    1.1. Contact details
        1.1.1. Address: 2 Lisnamuck Road
        Tobermore
        Co L'derry
        BT45 5QF
        1.1.2. Telephone: +44 (0)844 800 5736
        1.1.3. Web: https://www.tobermore.co.uk/professional/
        1.1.4. Email: b.developmentteam@tobermore.co.uk
    1.2. Product reference: Pedesta | Concrete Block Paving
2. Standard: To BS EN 1338.
3. Physical properties
    3.1. Colour: Charcoal and Natural mix
    3.2. Finish: Smooth.
    3.3. Profile
        3.3.1. Paver type: Regular plan form.
        3.3.2. Arrises: Standard.
    3.4. Dimensions and associated tolerances
        3.4.1. Nominal sizes:
        3.4.2. Tolerances on diagonals: To BS EN 1338.
    3.5. Weathering resistance: Class 3.
    3.6. Abrasion resistance: Class 3.
    3.7. Slip resistance: Mean polished skid resistance value (PSRV): >45. Mean unpolished skid resistance value (USRV): >45.
    3.8. Environmental performance requirements
        3.8.1. Recycled content (minimum): Not less than 12%.
4. BREEAM rating: A (A+ can be achieved when used with recycled sub-base).
5. Strength: >3.6 MPa.
6. Surface finish: Hard-wearing layer with a minimum of 4 mm and >350 kg/m³ cement.

115 Permeable paving blocks P4

1. Manufacturer: Tobermore
    1.1. Contact details
        1.1.1. Address: 2 Lisnamuck Road
        Tobermore
        Co L'derry
        BT45 5QF
        1.1.2. Telephone: +44 (0)844 800 5736
        1.1.3. Web: https://www.tobermore.co.uk/professional/
        1.1.4. Email: NBSdataplatform@tobermore.co.uk

1.2. Product reference: Hydropave 240 | Permeable Block Paving

2. Standard: To BS EN 1338.
3. Physical properties
   3.1. Colour: Natural pavers with Charcoal Parking Line Delineation as shown in hard detail sheet: 333101463-RG-LD-301 Typical Paving Details
   3.2. Finish: Smooth.
   3.3. Profile
      3.3.1. Paver type: Regular plan form.
      3.3.2. Arrises: Chamfer.
   3.4. Dimensions and associated tolerances
      3.4.1. Nominal sizes: 240 x 120 x 80 mm.
      3.4.2. Tolerances on diagonals: To BS EN 1338.
   3.5. Weathering resistance: Class 3.
   3.6. Abrasion resistance: Class 3.
   3.7. Slip resistance: Extremely low (>75 USRV).
   3.8. Skid resistance: Extremely low (>75 USRV).
4. Recycled content (minimum): BREEAM B (A can be achieved when used with recycled sub-base).
5. Strength: >3.6 MPa.
6. FireRating: A1.
7. Efflorescence: Minimum 12 hour vapour curing to significantly reduce the possibility of efflorescence.
8. Drainage void width: 6% to accommodate correct grit grading, reduced maintenance and maximise drainage flow rate.
9. Permeability: 35 000 L/s/ha.
10. Surface finish: Hard-wearing layer with a minimum of 4 mm and >350 kg/m³ cement.

Execution

200 Execution generally – concrete block and clay paver paving

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

220 Samples

1. General: Before ordering, submit samples of concrete 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: Where deemed appropriate/sensible
   1.2. Size (minimum): 1.5 x 1.5 m
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.

385 Mortar bedded

1. Description: To engineer's specification

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. Edge detail: Turn sheet up to form an upstand fitted neatly against features.
   2.1. Height (minimum): Thickness of sand laying course.

445 Laying geotextile patches over drainage holes for conventional paving

1. General: Lay geotextile patches on the base, centred over each hole.

450 Laying geotextile sheet for conventional paving

1. Location: Immediately below laying course.
2. Laying: Fit neatly at edge restraints and other features that interrupt the sand laying course, e.g. drainage fittings, channels, manholes and kerbs.
   2.1. Edge detail: Turn sheet up to form an upstand against features.
      2.1.1. 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. 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.
   4.1. Concrete blocks and clay pavers: In accordance with BS 7533-3, Annex F, to site category required for laying course material.

490 Laying permeable paving

1. General: Do not fill joints with sand, except for a 300 mm strip along restraining edges and around features and the like, to hold cut blocks in place

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.

505 Regularity of paved surfaces

1. Maximum undulations in the surface of pavings (except tactile paving surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): 3 mm.
2. Joints between paving units or utility access covers
   - 2.1. Joints flush with the surface: difference in level between adjacent units to be no more than twice the joint width (with a 5 mm max difference in level).
   - 2.2. Recessed, filled joints: difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.
   - 2.3. Unfilled joints: difference in level between adjacent units to be no greater than 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

General

180 Plastics cellular pavers P10 and P11

1. Description: Sudspave System P10 and P11
2. Geomembrane:
   - 2.1. Manufacturer: ABG and CED Stone or equal and approved
     - 2.1.1. Contact details
       - 2.1.1.1. Address: Unit E7
         Meltham Mills Industrial Estate
         Meltham Mills Road
         Meltham
         West Yorkshire
         HD9 4DS
       - 2.1.1.2. Telephone: +44 (0)1484 852096
       - 2.1.1.3. Web: www.abgltd.com
       - 2.1.1.4. Email: enquiries@abgltd.com
     - 2.1.2. Product reference: ABG Sudspave 40®
   - 2.2. Physical properties
     - 2.2.1. Material: Recycled plastics.
     - 2.2.2. Colour: Black.
     - 2.2.3. Top surface finish: Standard.
     - 2.2.4. Profile
       - 2.2.4.1. Paver type: Regular plan form, rectangular.
       - 2.2.4.2. Interlocking features: Integrated interlocking features.
     - 2.2.5. Dimensions
       - 2.2.5.1. Plan size: 500 x 500 mm.
       - 2.2.5.2. Thickness (minimum): 40 mm.
   - 2.3. Load carrying capacity (minimum): Compressive strength (filled): 3000 kN/m². Permissible axle load: 210 kN/ axle.
   - 2.4. Nominal weight: 1.4 kg/ paving unit.
   - 2.5. Sub-base layer: Sub-base: DoT Type 3, Type 1x, Type 4/40 or Type 1 (with appropriate drainage). Sub-base thickness: 100–350 mm.
3. Paving units: Plastics pavers
   - 3.1. Filling:
     - P10 is gravel-filled and contains Sea Flint Gravel from CED Stone.
     - P11 is Sown with E1 Flowering Lawn from Emorsgate Seed

System performance - Not Used

Products

320 Tactile Corduroy Flags TA1

1. Description: Also referred to as Corduroy paving, this product should be used in accordance with The Disabled Persons Act 1981 and DDA 2004. Hazard Warning Tactile Flag Paving is for use at

the top and bottom of steps, level crossings and intersections of shared cycle/pedestrian routes. It should be installed at 90 degrees and 400mm from any potential hazards.

2. Standard: To PD CEN/TS 15209.
3. Material: Precast concrete
   3.1. Manufacturer: Marshalls plc or equal and approved
      3.1.1. Contact details
         3.1.1.1. Address: Landscape House
         Lowfields Business Park
         Elland
         West Yorkshire
         HX5 9HT
         3.1.1.2. Telephone: +44 (0)330 0574472
         3.1.1.3. Web: https://www.marshalls.co.uk
         3.1.1.4. Email: specification.support@marshalls.co.uk
      3.1.2. Product reference: FL6182550
4. Colour: Charcoal

320 Tactile Blister Flags TA2

1. Description: TO ROAD CROSSINGS.
   Build up to engineer's details
2. Material:
   2.1. Manufacturer: Marshalls plc or equal and approved
      2.1.1. Contact details
         2.1.1.1. Address: Landscape House
         Lowfields Business Park
         Elland
         West Yorkshire
         HX5 9HT
         2.1.1.2. Telephone: +44 (0)330 0574472
         2.1.1.3. Web: https://www.marshalls.co.uk
         2.1.1.4. Email: specification.support@marshalls.co.uk
      2.1.2. Product reference: Tactile Blister (400 x 400 x 50 mm)
   2.2. Physical properties
      2.2.1. Colour: Natural.
      2.2.2. Profile
         2.2.2.1. Flag type: Regular plan form.
      2.2.3. Dimensions and associated tolerances
         2.2.3.1. Nominal sizes: 400 x 400 x 50 mm.
      2.2.4. Abrasion resistance: ≤23 mm.
      2.2.5. Bending strength: 4 MPa.
   2.3. Slip resistance: >45.
   2.4. ThermalConductivity: To BS EN 13369.
   2.5. Reaction to fire: Class A1.
   2.6. Loading class: Category 1.
   2.7. Weight: 19 kg.
   2.8. Density: 2300 kg/m².

450 Gravel filling

1. Description: TO P10 SUDSPAVE
2. Material: Sea Flint Gravel

Execution

610 Material samples

1. Samples representative of colour and appearance of designated materials: Submit before placing orders.
   1.1. Designated materials: All pavings

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.

637 Regularity of paved surfaces

1. Maximum undulations in the surface of pavings (except tactile paving surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): 3 mm.

2. Joints between paving units or utility access covers

2.1. Joints flush with the surface: Difference in level between adjacent units to be no more than twice the joint width (with a 5 mm maximum difference in level).

2.2. Recessed, filled joints: Difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.

2.3. Unfilled joints: Difference in level between adjacent units to be no greater than 2 mm.

3. Sudden irregularities: Not permitted.

Completion

920 Completion of grassed pavings

1. Protection: Protect from traffic for 6-8 weeks or until grass can tolerate traffic.

Ω End of Section

Q28
Topsoil and soil ameliorants

System outline

115 Topsoil system for turfing and seeding

1. Description: FOR ALL GRASSED AREAS FOR ROAD VERGES
2. Composition
   2.1. Topsoil: Refer to Landscape Management Plan

125 Green roof growing media system

1. Description: To Architect's detail - to top of Cycle Stores shown as 'GR' on General Arrangement drawings.

135 Planting bed topsoil system

1. Description: TO ALL SOFT PLANTED AREAS
2. Composition
   2.1. Topsoil: Imported topsoil to BS 3882

155 Mulching and top dressing system

1. Description: TO ALL HERBACEOUS PLANTING AND STOCKHOLM TREE PITS
2. Composition
   2.1. Material: 50mm Fines Bark Mulch
   2.2. Refer to:: 333101463-RG-LD-300

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.

310 Materials not permitted

1. Materials: Peat & River and Canal Dredgings

315 Imported topsoil to BS 3882

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

2. Standard: An as dug topsoil conforming to BS3882:2015
3. Classification: Multipurpose
   3.1. Soil textural class to BS 3882, Figure 1: Sandy loam
4. Source: Bourne Amenity or equal and approved
   4.1. Product reference: TS1 Topsoil; 20mm Sandy Loam or equal and approved

Execution

610 Topsoil analysis

1. Soil to be analysed: Topsoil stockpile
2. Soil analyst: Tim O'hare or equal and approved
3. Contact Information: Address: Howbery Park, Wallingford, Oxfordshire OX10 8BA
   Phone: 01491 822653
4. Samples: Collect in accordance with BS 3882.
5. Submit
   5.1. Declaration of analysis: In accordance with BS 3882, clause 6 and Table 1.
   5.2. Additional analysis: Chemical contaminants
   5.3. Report detailing soil analyst's recommendations.

625 Sample loads

1. Description: FOR IMPORTED TOPSOIL
2. Deliver to site a sample load: of not less than 5 m³
3. Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
   3.1. Notice period: Sample to be approved prior to further deliveries of imported topsoil.

630 Documentation for imported topsoil

1. Timing: Submit at handover.
2. Contents
   2.1. Full description of all soil components.
   2.2. Record of source for all soil components.
   2.3. Record drawings showing the location and depth of all soils by type and grade.
   2.4. Declaration of analysis: in accordance with BS 3882, clause 6 and Table 1.

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

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.
1.6. Tree delivery, unloading and benchmark planting.

2. Period of notice: 1 week

655 Mechanical tools

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

660 Grading subsoil for:

1. Description: GRASSED AREAS, ORNAMENTAL PLANTING BEDS, WILDFLOWER AREAS, AMENITY PLANTING AREAS, WOODLAND PLANTING AREAS
2. Standard: In accordance with BS 8601.
3. General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.

   Earthworks contractor to offer up subsoil formation layer for approval prior to landscape contractor's application of topsoil.
4. Areas of thicker topsoil: Excavate locally.
5. Avoid compaction.
6. Excess subsoil: Remove.

665 Subsoil surface preparation for:

1. Description: GRASSED AREAS, WILDFLOWER AREAS, ORNAMENTAL PLANTING BEDS, AMENITY PLANTING AREAS, WOODLAND PLANTING AREAS
2. Standard: In accordance with BS 3882.
3. General: Excavate and/ or place fill to required profiles and levels as determined by the civil engineer and earthworks contractors.
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: 450 mm
      4.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.
   4.2. Wet conditions: Do not loosen subsoils.
5. Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
6. Remove from site: Arisings, contaminants and debris & Builders rubble

670 Inspecting formations

1. Give notice: Before spreading topsoil for areas to receive forestry planting, lawn areas, planting beds.
2. Notice period: 14 days and to be approved by earthworks contractor prior to landscape contractor's application of topsoil.

680 Surplus topsoil to be retained

1. Generally: Spread and level on site:
   1.1. Protected areas: Do not raise soil level within root spread of trees that are to be retained.

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.

805 Applying soil ameliorant

1. Description: Refer to Landscape Management Plan

810 Applying compost

1. Description: Refer to Landscape Management Plan

Completion - Not Used

Ω End of Section

Q30
Seeding/ turfing

General information/requirements

115 Seeded and turfed areas

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

120 Climatic conditions

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

145 Watering

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

146 Watering

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without displacing seed, seedlings or soil.
3. Frequency: As set out in Landscape Management Plan (LMP)

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: Prior arrangement to be made with Landscape consultant

170 Setting out

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

Preparation

250 Soil requirements

1. Type
    1.1. Seeded areas: Soil for grass swards, as section Q28

1.2. Turfed areas: Soil for grass swards, as section Q28

Seeding

310 Grass seed EG22

1. Description: FOR ALL TOUGH LAWN AREAS
2. Mixture: EG22
3. Supplier: Emorsgate Seeds
4. Application rate: 25 g/m²
5. Link for Reference: EG22 Strong Lawn Grass Mixture - Emorsgate Seeds

310 Grass seed EL1

1. Description: FOR ALL AREAS OF FLOWERING LAWN
2. Mixture: EGL1
3. Supplier: Emorsgate Seeds
4. Application rate: 4 g/m²
5. Link for Reference: EL1 Flowering Lawn Mixture - Emorsgate Seeds

312 Wildflower seed mixture EH1

1. Description: FOR WILDFLOWER MEADOWS
2. Supplier: Emorsgate Seeds
   2.1. Mixture reference: EH1 Hedgerow Meadow Mix
3. Application rate: 4 g/m²
4. Link for Reference: EH1 Hedgerow Mixture - Emorsgate Seeds

312 Wildflower seed mixture EM3

1. Description: FOR WILDFLOWER MEADOWS
2. Supplier: Emorsgate Seeds
   2.1. Mixture reference: EM3 Special General Purpose Meadow
3. Application rate: 4 g/m²
4. Link for Reference: EM3 Special General Purpose Meadow Mixture - Emorsgate Seeds

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.

320 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 and Department for Environment, Food and Rural Affairs Higher Voluntary Standard.

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 WILDFLOWER MEADOWS
2. Standard: In accordance with Flora Locale's 'Code of practice for collectors, growers and suppliers of native flora'.
3. Germination testing: Submit germination test results (to ISTA International rules for seed testing)
4. Freshness of seed: Germination test certification no greater than 2 years old
5. Samples: Submit when requested.

330 Sowing

1. General: Establish good seed contact with the root zone.
2. Method: To suit soil type, proposed usage, location and weather conditions during and after sowing
   2.1. Distribution: 2 equal sowings at right angles to each other and diagonally to main axis

Turfing

400 Cultivated turf PT05

1. Description: Rain Garden Meadow Turf
2. Supplier: Pictorial Meadows
   2.1. Product reference: PT05
   2.2. Standard: Free from undesirable grasses and weeds.

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: Sward species composition

423 Inspection of turf

1. Description: For PT05 Suds Turf
2. Sampling method: To BS 3969.
3. Give notice: Before lifting turf.
   3.1. Period of notice: Prior to delivery

430 Turfing generally

1. Time of year: To be agreed following supplier recommendations for PT05 Suds Turf
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. Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.

450 Trimming turf

1. Newly planted tree pits: Neatly cut away around individual trees and to kerb edges.

Protecting/cutting

510 Protective fencing

1. Fencing type: Chestnut pale fencing to BS 1722-4
   1.1. Height: 1.1 m
2. Erection: On completion of seeding/ turfing.
3. Removal: After grass is well established. Fencing will remain the property of the Contractor

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

540 First cut of

1. Description: ALL GRASSED AREAS
2. Refer to:: Landscape Management Plan (LMP)

560 Metal edgings K1

1. Manufacturer: Kinley or equal and approved
   1.1. Contact details
      1.1.1. Address: Northpoint, Compass Park
      Junction Road
      Staplecross
      East Sussex
      TN32 5BS
      1.1.2. Telephone: +44 (0) 1580313124
      1.1.3. Web: www.kinley.co.uk
      1.1.4. Email: sales@kinley.co.uk
   1.2. Product reference: AluExcel Aluminium Angle Edging (101028: Flexible Version 150 mm)

2. Material: Aluminium.
3. Edging
    3.1. Form: Flexible.
    3.2. Duty: Heavy.
    3.3. Length (minimum): 2.5 m.
    3.4. Size: 75 mm upstand
    3.5. Colour: To Match RAL of Building Facade
4. Height: 150 mm.
5. NominalThickness: 8.5 mm.

590 Cleanliness

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

Maintenance

610 Failures of seeding/ turfing

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

620 Maintaining

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: 75 mm
4. Preparation: Before each cut remove all litter and debris.
5. Cutting: As and when necessary to a height of 35 mm.
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. As set out in Landscape Management Plan (LMP)

Ω End of Section

Q31
External planting

General information/ requirements - Not Used

Plant containers - Not Used

Preparation of planting beds/ planting materials

350 Cellweb 'No-dig' Surfacing P11

1. Description:

   A cellular confinement system specifically designed for tree root protection (TRP). Geocells. Hoggin surface as per detail: 333101463-RG-LD-103 PRoW Improvements Plan.dwg
2. Manufacturer: Geosynthetics Limited
   - 2.1. Product reference: 75mm Cell Depth
   - 2.2. Length: 8100 mm
   - 2.3. Width: 2560 mm
   - 2.4. Infill: Angular stone, Type 4/20 mm., Angular stone, Type 20/40 mm.
   - 2.5. Product Information:
     - Guaranteed cellular confinement system(Geocells).
     - Independently tested.
     - No dig solution - loads placed upon it are laterally dissipated rather than transferred to the soil and roots below.
     - Prevents sub soil compaction.
     - 100% success rate.
     - Continued water permeation and gaseous exchange, ensuring that nutrient supplies to the tree roots are maintained.
     - Prevents surface rutting; optimising long term performance and aesthetics of the final surface.
     - Simple to install.
     - Complies with BS5837:2012, APN 12 and Tree Preservation Order (TPO) guidelines.
3. Waterproof Membrane: To manufacturer's specification.

Planting shrubs/ herbaceous plants/ bulbs - Not Used

Planting trees - Not Used

Woodland/ matrix/ buffer zone planting - Not Used

Protecting/ maintaining/ making good defects - Not Used

Ω End of Section

Q31
External planting

General information/ requirements

112 Site clearance generally

1. General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil
2. Vegetation: Clear scrub to ground level by flail mowing and remove arisings; retain and protect trees indicated on drawings

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 and protect on-site stock where possible

125 Times of year for planting

1. Deciduous trees and shrubs: Refer to Landscape Management Plan
2. Conifers and evergreens: Refer to Landscape Management Plan
3. Herbaceous plants (including marginal): Refer to Landscape Management Plan
4. Dried bulbs, corms and tubers: Refer to Landscape Management Plan
5. Green bulbs: Refer to Landscape Management Plan
6. Wildflower plugs: Refer to Landscape Management Plan

130 Mechanical tools

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

145 General watering

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

146 Specific watering

1. Refer to:: Landscape Management Plan

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: Two weeks

170 Soil requirements

1. Type
   1.1. Planted beds: Refer to Landscape Management Plan
   1.2. Tree pits, shrub pits and other backfilling: Refer to Landscape Management Plan
   1.3. External container planting: Refer to Landscape Management Plan
   1.4. Mulch applied after planting: Refer to Landscape Management Plan

200 Plants/ trees – general

1. Standard: To BS 3936-1 'Trees and shrubs' To BS 3936-7 'Bedding plants' To BS 3936-10 'Ground cover plants'
2. Condition: Materially undamaged, sturdy, healthy and vigorous
3. Appearance: Of good shape and without elongated shoots
4. Hardiness: Grown in a suitable environment and hardened off
5. Health: Free from pests, diseases, discoloration, weeds and physiological disorders
6. Root system and condition: Balanced with branch system
7. Species: True to name
8. Origin/ provenance: As plant schedule
9. Definition: Origin and provenance have the meaning given in the National Plant Specification
10. Verification: Landscape architect to select tree species at nursery alongside Landscape contractor

215 Plants/ trees – specification criteria

1. Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification.
2. Name, forms, dimensions and other criteria: To BS 3936-1 'Trees and shrubs' To BS 3936-7 'Bedding plants' To BS 3936-9 'Bulbs corms and tubers' To BS 3936-10 Ground cover plants

225 Bulbs/ corms/ tubers

1. Standard: To BS 3936-9 'Bulbs, corms and tubers'
2. Condition: Firm, entire, not dried out or shrivelled
3. Health: Free from pests, diseases and fungus
4. Handling: Remove from packaging immediately
5. Storage: Permitted only when necessary
   5.1. Location: Well-ventilated, dark, covered, rodent-proof container, away from exhausts and fruit
   5.2. Duration: Minimum period

235 Container-grown plants/ trees

1. Standard: To BS 3936-7 'Bedding plants' To BS 3936-10 'Ground cover plants' To BS 3936-1 'Trees and shrubs'
2. Growing medium: With adequate nutrients for plants to thrive until permanently planted
3. Plants: Centred in containers, firmed and well-watered
4. Root growth: Substantially filling containers, but not root-bound, and in a condition conducive to successful transplanting

5. Hardiness: Grown in the open for at least two months before being supplied
6. Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems

245 Labelling to National Plant Specification and other information

1. General: Provide each plant/ tree (or group of plants/ trees) of a single species or cultivar with the supplier's labelling for delivery to site, showing:
    1.1. Full botanical name.
    1.2. Total number.
    1.3. Number of bundles.
    1.4. Part bundles.
    1.5. The supplier's name.
    1.6. The employer's name and project reference.
    1.7. Plant specification, in accordance with scheduled National Plant Specification categories.

260 Plant/ tree substitution

1. Plants/ trees unobtainable, or likely to be unobtainable at time of ordering. Submit alternatives, stating:
2. Approval: Any substitutions or variations to be approved by Landscape Architect prior to purchase

265 Plant handling, storage, transport and planting

1. Standard: To Committee of Plant Supply and Establishment (CPSE) Recommendations for Plant Handling.
2. Frost: Protect plants from frost.
3. Handling: Handle plants with care. Protect them from mechanical damage and do not subject them to shock, e.g. by dropping them from a vehicle.

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.

290 Surplus material

1. Subsoil: Use surplus subsoil to replenish low-lying areas or improve soil structure in other parts of the site, ensuring that it is free of contaminants
2. Ties: Store excess for future use

Plant containers

298 Waterproofing lining

1. Description: As identified by arboricultural and ecology reports
2. Manufacturer: Contractor's choice

Preparation of planting beds/ planting materials

300 Herbicide

1. Description: Refer to Landscape Management Plan

305 Weed control

1. Description: Refer to Landscape Management Plan

Planting shrubs/ herbaceous plants/ bulbs

400 Random plant layout

1. Description: WHERE INDICATED ON DETAILED PLANTING PLANS
2. Spacing: As drawing
3. Density: As plant schedule

401 Regular plant layout

1. Description: WHERE INDICATED ON DETAILED PLANTING PLANS
2. Spacing: As drawing
3. Density: As plant schedule

420 Climbing plants

1. Description: To Unit 1 car park
2. Specification: As planting plans and schedule

445 Planting bulbs/ corms/ tubers

1. Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, and the base in contact with the bottom of the 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.

472 Fencing support for new hedges

1. Type: Timber post and general pattern wire mesh, as section Q40
2. Timing: Before planting hedge.
3. Support: Lightly secure hedge plants to fence wires at appropriate intervals.

480 After planting

1. Description: Refer to Landscape Management Plan

Planting trees

500 Tree planting

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

505 Tree pits

1. Refer to: 333101463-RG-LD-300 Typical Soft Landscape Details

510 Tree pit root barriers

1. Refer to: 333101463-RG-LD-300 Typical Soft Landscape Details and 333101463-RG-LD-101 Soil Volume Plan

512 Tree pit irrigation and ventilation accessories

1. Refer to: 333101463-RG-LD-300 Typical Soft Landscape Details
2. Manufacturer: To be approved by Landscape Architect

515 Tree pit drainage

1. Refer to: 333101463-RG-LD-300 Typical Soft Landscape Details
2. Manufacturer: To be approved by Landscape Architect

520 Stockholm Tree Pit System

1. Description: To all trees in hard landscape or limited root space in soft landscape as shown on 333101463-RG-LD-101 Soil Volume Plan
2. Manufacturer: To be approved by Landscape Architect
    2.1. Product reference: Stockholm Model Biochar
    2.2. Components: Crushed Rock, Fertilised Biochar and Inlet pipe.
3. Installation: Refer to: 333101463-RG-LD-300 Typical Soft Landscape Details

526 Underground guying

1. Description: Refer to soft planting details: 333101463-RG-LD-300 Typical Soft Landscape Details & Manufacturer information
2. Manufacturer: To be approved by Landscape Architect

535 Tree stakes

1. Description: Refer to soft planting details: 333101463-RG-LD-300 Typical Soft Landscape Details
2. Stakes: Softwood, peeled chestnut, larch or oak; straight, free from projections and large or edge knots, and with pointed lower end

550 Double staking

1. Staking
    1.1. Position: Either side of tree position, and perpendicular to wind direction
    1.2. Driving: Vertically at least 300 mm into bottom of pit before planting
    1.3. Backfilling: Consolidate material around stake
    1.4. Firming: Sufficiently firm to prevent movement of the root ball/ rootstock
    1.5. More Informatin: Refer to soft planting details: 333101463-RG-LD-300 Typical Soft Landscape Details

566 Tree protection

1. Description: Refer to arboriculturalist's method statement.

Woodland/ matrix/ buffer zone planting

600 Woodland work generally

1. Services: Check for below-ground and above-ground services, including land drainage, in the vicinity. Give notice if they may be affected and obtain instructions before proceeding
2. Safety: Comply with safety guidelines found on The Arboricultural Association's website

615 Existing trees/ seedlings/ coppice shoots

1. Existing trees and seedlings: Refer to arboriculturalist's method statement.

617 Removing trees and hedges

1. Identification: Clearly mark trees and hedges to be removed
2. Work near retained trees: Where canopies overlap, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained
3. Arisings: Remove
4. Tree stumps: Remove mechanically to a minimum depth of 300 mm below ground level

680 Setting out for tree screening

1. Planting density: As plant schedule

Protecting/ maintaining/ making good defects

710 Maintenance

1. Duration: Carry out the operations in the following clauses from completion of planting until The end of the rectification period.
2. Frequency of maintenance visits: In accordance with the agreed maintenance schedule

720 Failures of planting

1. Defects due to materials or workmanship not in accordance with the contract: Plants/ trees/ shrubs that have failed to thrive
   1.1. Exclusions: Theft or malicious damage after completion.
   1.2. Rectification: Replace with equivalent plants/ trees/ shrubs.
2. Replacements: To match size of adjacent or nearby plants of the same species or to match the original specification: whichever is the greater
3. Timing of making good: In accordance with an agreed defects rectification programme

740 Cleanliness

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

750 Planting maintenance generally

1. Refer to:: Landscape Management Plan

760 Planting maintenance – pruning

1. Refer to:: Landscape Management Plan

770 Woodland planting maintenance

1. Refer to:: Landscape Management Plan

780 Maintenance instructions

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

995 Verification on completion

1. Requirement:
    1. Verify that all planting areas have been planted.
    2. Evidence of compliance with ecologist specification.
    3. Ensure that all maintenance and monitoring plans are in place and operational.
2. Method: Conduct inspection after installation to ensure compliance with specification.

Ω End of Section

Q40
Fencing

Fencing systems

125 Palladin Fence F2

1. Description: To Architect's specification
2. Manufacturer: To Architect's specification
   2.1. Product reference: 2.4m High Palladin Fence
3. Standard: To BS 1722-14, Category 1.
4. Height: 2.4m high

210 Timber Post and Rail Fence F1

1. Description: 1.5m High Timber Post and Rail Fence comprising 2400mm posts; for a 4 rail fence, add 4 rails for every 2.85m
2. Manufacturer: Jacksons Fencing or equal and approved
   2.1. Contact details
      2.1.1. Address: 209 Stowting Common
      Ashford
      Kent
      TN25 6BN
      2.1.2. Telephone: 0800 408 4757
      2.1.3. Web: www.jacksons-security.co.uk
      2.1.4. Email: sales@jacksons-fencing.co.uk
   2.2. Product reference: Timber Post and Rail Fence
3. Standard: To BS 1722-7, Type ……
4. Height: 1500mm
5. Wood: Oak (European and English)

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

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. Holes: Excavate neatly and with vertical sides

4. Filling: Position post/ strut and fill hole with concrete to not less than the specified depth, well-rammed as filling proceeds and consolidated
5. Backfilling of holes not completely filled with concrete: Excavated material, well-rammed and consolidated Excavated material, well-rammed and consolidated

740 Setting posts in earth

1. Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling
2. Filling: Position posts/ struts and replace excavated material, well-rammed as filling proceeds

750 Driven posts

1. Damage to heads: Minimize
    1.1. Repair: Neatly finish post tops after installation

760 Nailed wood rails

1. Setting out: 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

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.

995 Verification on completion

1. Requirement: Check completed system and provide assurance of compliance with specified performance.
2. Method: Installation survey or inspections

Ω End of Section

Q41
Barriers/ guard rails

Types of barriers/ guard rails

240 Vertical Bar Railings F3

1. Description: Black Metal Vertical Bar Railings
2. System manufacturer: Contractor's choice and manufacturer's proposals
3. Height above ground surface (to upper surface of handrail)
    3.1. Upper handrail: 1200mm
4. Fixings/ foundations:
    1. Fixed to rear of retaining walls
    2. Root-fixed to foundation

241 Kee Klamp Railings F6

1. Description: Black Kee Klamp Railing System
2. System manufacturer: Kee Safety
3. Height above ground surface (to upper surface of handrail)
    3.1. Upper handrail: 1100mm
    3.2. Finish: Black
4. Fixings/ foundations:
    1. Fixed to rear of retaining walls
    2. Surface-fixed

Performance/ inspection/ testing - Not Used

Installation - Not Used

Completion - Not Used

Ω End of Section

Q50
Site/ street furniture/ equipment

Gates, barriers and parking controls

130 Gates

1. Description: All gates to match adjacent fences - proposals to be submitted. Refer to clauses detailing fence types.

196 Removable bollards BL

1. Description: Removable bollards to amenity areas accessed by vehicles
2. Manufacturer: Bailey Streetscene or equal and approved
3. Online Link:: Removable Stainless Steel Bollard
4. Material: Stainless steel
   4.1. Finish as delivered: Brushed Satin
5. Height above ground: 900mm
6. Sectional size: 101mm diameter
7. Method of fixing: Root fixed.

   Paving to be finished neatly around lockable socket.

Site and street furniture

212 Cycle Stores GR

1. Description: Double Cycle Stores with Green Roof to Architect's details. Located on Landscape GA plan as 'GR' (Green Roof).

220 Benches B1

1. Description: TO LINEAR PARK AND AMENITY AREAS
2. Manufacturer: Broxap
   2.1. Product reference: Litchard Bench
3. Material: FSC Treated Timber
   3.1. Finish: RAL 9005 (Jet Black)
4. Size: 1800m length
5. Method of fixing: Root Fixed

220 Benches B2

1. Description: TO LINEAR PARK AND AMENITY AREAS
2. Manufacturer: Broxap
   2.1. Product reference: Litchard Short Bench
3. Material: FSC Treated Timber
   3.1. Finish: RAL 9005 (Jet Black)
4. Size: Length: 560mm, Width: 435mm, Height: 450mm
5. Method of fixing: Root Fixed

220 Bench Planter B4

1. Description: TO FRONT OF UNIT 3B AND 4

2. Manufacturer: Europlanters or equal and approved
   2.1. Product reference: BENCH7
   2.2. Product Link:: Double Bench Planter – Europlanters
3. Size: 1800 depth, 1800 width, 450-500mm height
4. Colour::
   RAL to match Building Facade TBC

230 Combined outdoor tables and seating B3

1. Manufacturer: Broxap Street Furniture
   1.1. Contact details
      1.1.1. Address: Rowhurst Industrial Estate
      Chesterton
      Newcastle-under-Lyme
      Staffordshire
      ST5 6BD
      1.1.2. Telephone: +44 (0)1782 571700
      1.1.3. Web: https://www.broxap.com/
      1.1.4. Email: nbs@broxap.com
   1.2. Product reference: Litchard Picnic Unit
2. Length: 1.8 m.
3. Base: Root fixed.
4. Finish: RAL 9005

240 Litter bins Bi

1. Manufacturer: Broxap Street Furniture
   1.1. Contact details
      1.1.1. Address: Rowhurst Industrial Estate
      Chesterton
      Newcastle-under-Lyme
      Staffordshire
      ST5 6BD
      1.1.2. Telephone: +44 (0)1782 571700
      1.1.3. Web: https://www.broxap.com/
      1.1.4. Email: nbs@broxap.com
   1.2. Product reference: Westleigh Timber Slatted Litter Bin (BX45G 2800-110 - Galvanized steel)
2. Material: Galvanized steel and iroko hardwood.
3. Base: Bolt down fixing using 4 x m10 raw bolts.
4. Colours: RAL 9005 Jet Black
5. Capacity: 110 L.
6. Liner: Galvanized steel liner with safety top edge and two handles.
7. Depth: 350 mm.
8. Width: 670 mm.
9. Height: 982 mm.

Installation

510 Concrete foundations generally

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

515 Setting components in concrete

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

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

V90
Electrical systems

General

101 Lighting design

1. Specfication: Landscape & public realm lighting design is by others. Landscape design coordination will be required.
2. Details: Refer to Lighting Engineers detail drawings, layouts, specification and luminaire schedule for all external lighting design.

System performance

260 Design of external lighting system

1. Performance Specification:: To meet sufficient light levels for a safe public realm environment, as determined by the Lighting Engineer design, specification and luminaire schedule
2. Design and Detailing:: By Lighting Engineer.

Products

445 Electric vehicle charging points

1. Manufacturer: To engineer's proposals

Execution

600 Lighting design coordination generally

1. Performance requirement:: Landscape Contractor is to familiarise with the lighting design layout, below ground cable routes and location of light columns and fittings with the landscape layout.
2. Notification:: Notify the Contract Administrator of any known conflicts or coordination issues with regards the completion of the landscape contract works.
3. Ducts: Ducting may be required beneath hard landscape surfaces. The landscape contractor is to coordinate with the main contractor installing the light columns so that appropriate phasing of works takes place.

Completion - Not Used

Ω End of Section

Specification created using NBS Chorus