Camden: Agincourt House

External Works
FOR CONSTRUCTION

27 March 2013

REVISION A

Table of Contents

C
Demolition/ Alteration/ Renovation

C20
Demolition

C20 Demolition

To be read with Preliminaries/ General conditions

GENERAL REQUIREMENTS

110 DESK STUDY/ SURVEY

- Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:
  - the structure or structures to be deconstructed/ demolished,
  - the site on which the structure or structures stand, and
  - the surrounding area.
- Report and method statements: Submit, describing:
  - Form, condition and details of the structure or structures, the site, and the surrounding area.
    Extent: 051-AG-T02 & All boundaries affected by works to install replacement railings .
  - Type, location and condition of features of historical, archaeological, geological or ecological importance.
  - Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures, or by noise, vibration and/ or dust generated during deconstruction/ demolition.
  - Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
  - Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.
  - Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.
  - Proposed programme of work, including sequence and methods of deconstruction/ demolition.
  - Details of specific pre-weakening required.
  - Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
  - Arrangements for control of site transport and traffic.
  - Special requirements: Review routes of main services into sites across thresholds, depths of services and drainage.
    Demolition/removing fencing to be undertaken with care to avoid damaging existing/retained brick walls. Note all walls to be jet washed. Any masonary paint that has been applied to be removed. .
- Format of report: digital .

120 EXTENT OF DECONSTRUCTION/ DEMOLITION

- General: Subject to retention requirements specified elsewhere, deconstruct/ demolish structures down to 051-AG-T02.

130 GROUNDWORKS

• Old foundations, slabs and the like: Break out in locations and to the extents stated.
• Contaminated material: Remove, and carry out remediation required by the Enforcing Authority.

140 BENCH MARKS

• Unrecorded bench marks and other survey information: Give notice when found. Do not remove marks or destroy the fabric on which they are found.

150A FEATURES TO BE RETAINED

• General: Keep in place and protect the following: Boundary walls, gates, gate pillars and railings as noted on drawings by Architects, Engineers and Landscape Architect.

SERVICES AFFECTED BY DECONSTRUCTION/ DEMOLITION

210 SERVICES REGULATIONS

• Work carried out to or affecting new and/ or existing services: Carry out in accordance with the byelaws and/ or regulations of the relevant Statutory Authority.

220 LOCATION OF SERVICES

• Services affected by deconstruction/ demolition work: Locate and mark positions.
• Mains services marking: Arrange with the appropriate authorities for services to be located and marked.
- Marking standard: In accordance with National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.

230 SERVICES DISCONNECTION ARRANGED BY CONTRACTOR

• General: Arrange with the appropriate authorities for disconnection of services and removal of fittings and equipment owned by those authorities prior to starting deconstruction/ demolition.

240 DISCONNECTION OF DRAINS

• General: Locate, disconnect and seal disused foul and surface water drains.
• Sealing: Permanent, and within the site.

250 LIVE FOUL AND SURFACE WATER DRAINS

• Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings:
- Protect; maintain normal flow during deconstruction/ demolition.
- Make good any damage arising from deconstruction/ demolition work.
- Leave clean and in working order at completion of deconstruction/ demolition work.
• Other requirements: refer to engineers drawings.

260 SERVICE BYPASS CONNECTIONS

• General: Provide as necessary to maintain continuity of services to occupied areas of the site on which the deconstruction/ demolition is taking place and to adjoining sites/ properties.
• Minimum notice to adjoining owners and all affected occupiers: 72 hours, if shutdown

is necessary during changeover.

270 SERVICES TO BE RETAINED

- Damage to services: Give notice, and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction/ demolition.
- Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner.

DECONSTRUCTION/ DEMOLITION WORK

310 WORKMANSHIP

- Standard: Demolish structures in accordance with BS 6187.
- Operatives:
  - Appropriately skilled and experienced for the type of work.
  - Holding, or in training to obtain, relevant CITB Certificates of Competence.
- Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

320 GAS OR VAPOUR RISKS

- Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.

330 DUST CONTROL

- General: Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.
- Lead dust: Submit method statement for control, containment and clean-up regimes.

330A JET WASH

- General: Front of school jet wash all paving/walls to ensure no moss. Clean out drains/channels to ensure not blocked with discharge.
- Submit statement for timing & method.

340 HEALTH HAZARDS

- Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

350 ADJOINING PROPERTY

- Temporary support and protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.
- Defects: Report immediately on discovery.
- Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.
- Support to foundations: Do not disturb.

360A STRUCTURES & SURFACES TO BE RETAINED

- Extent: read drawing 051-AG-T01 & 051-AG-T02.
- Parts which are to be kept in place: Protect.

• Interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimize making good. Diamond cut tarmacadam to ensure clean edge.

370 PARTLY DEMOLISHED STRUCTURES

- General: Leave in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.
- Temporary works: Prevent overloading due to debris.
- Access: Prevent access by unauthorized persons.

380 DANGEROUS OPENINGS

- General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
- Access: Prevent access by unauthorized persons.

391 ASBESTOS-CONTAINING MATERIALS –UNKNOWN OCCURRENCES

- Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
- Removal: Submit statutory risk assessments and details of proposed methods for safe removal.

410 UNFORESEEN HAZARDS

- Discovery: Give notice immediately when hazards such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.
- Removal: Submit details of proposed methods for filling, removal, etc.

MATERIALS ARISING

510 CONTRACTOR'S PROPERTY

- Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided.
- Action: Remove from site as work proceeds where not to be reused or recycled for site use.

511 EMPLOYER'S PROPERTY

- Components and materials to remain the property of the Employer: Existing external storage unit and content.
- Protection: Maintain until these items are removed by the Employer or reused in the Works, or until the end of the Contract.
- Special requirements: lift to resite within courtyard.

520 RECYCLED MATERIALS

- Materials arising from deconstruction/ demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.
- Evidence of compliance: Submit full details and supporting documentation.
  - Verification: Allow adequate time in programme for verification of compliance.

D
Groundwork

D20
Excavating and filling

D20 Excavating and filling

To be read with Preliminaries/General conditions

GENERALLY/THE SITE

145 VARIATIONS IN GROUND WATER LEVEL

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

150 EXISTING SERVICES, FEATURES AND STRUCTURES

- Services: See section A12 for locations.
- Site features to be retained: See section A12 for details.
- Structures: See section A34 for details of protection.

CLEARANCE/EXCAVATING

168 SITE CLEARANCE

- Timing: Before topsoil stripping, if any.
- General: Clear site of rubbish, debris and vegetation. Do not compact topsoil.
- Treatment: Apply suitable non-residual herbicide to areas to receive planting..

170 REMOVING SMALL TREES, SHRUBS, HEDGES AND ROOTS

- Identification: Clearly mark trees to be removed.
- Small trees, shrubs and hedges: Cut down
- Roots: Grub up and dispose of without undue disturbance of soil and adjacent areas
- Safety: Comply with HSE/ Arboriculture and Forestry Advisory Group safety leaflets.

175 FELLING LARGE TREES

- Definition: Girth over 600 mm.
- Identification: Clearly mark trees to be removed.
- Safety: Comply with HSE/ Arboriculture and Forestry Advisory Group safety leaflets.
- Felling: As close to the ground as possible.
- Stumps: Remove mechanically to a minimum depth of 500 mm below ground level.
- 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

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

220 STRIPPING TOPSOIL

- 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.
- Depth:

- Remove to an average depth of 300 mm.

- Give notice where the depth of topsoil is difficult to determine.
- Handling: Handle topsoil for reuse or sale in accordance with clause 225.
- Around trees: Do not remove topsoil from below the spread of trees to be retained.
- Site storage: Keep separate from excavated sub-soil.

225 HANDLING TOPSOIL

- Standard: To BS 3882.
- Aggressive weeds:
  - Species: Included in the Weeds Act, section 2 or the Wildlife and Countryside Act, Schedule 9, part II.
  - Give notice: Obtain instructions before moving topsoil.

- Contamination: Do not mix topsoil with:
  - Subsoil, stone, hardcore, rubbish or material from demolition work.
  - Other soil or material containing aggressive weeds, sharps, plastics and non soil forming materials and notifiable animal or plant diseases.
  - Oil, fuel, cement or other substances harmful to plant growth.
  - Other classifications of topsoil.
- Multiple handling: Keep to a minimum. Use topsoil immediately after stripping.

244 EXCAVATIONS ADJACENT TO EXISTING FOUNDATIONS

- Prior to commencing excavation:
  - Excavate trial pits adjacent to existing foundations to determine extent and formation levels.
  - Allow for inspection of trial pits.
  - Allow time for amendment of details if required.
    Time period: 5 working days .
- Backfill material to new excavation: confirm with engineer .

250 PERMISSIBLE DEVIATIONS FROM FORMATION LEVELS

- Beneath mass concrete foundations: ±5 mm.
- Beneath ground bearing slabs and r.c. foundations: ±5 mm.
- Embankments and cuttings: ±0 mm.
- Ground abutting external walls: ±0 mm, but such as to ensure that finished level is not less than 150 mm below dpc.

255 ACCURACY - LINEAR DIMENSIONS

- Permissible deviations from linear dimensions generally: +/- 30mm .

267 INSPECTION OF FORMATIONS IN SHRINKABLE SOILS

- Inspect formation: For signs of conducting and fine moisture absorbing roots.
- Give notice: If significant quantities of roots are visible in the formation or in the bottom 75 mm of the walls of the excavation.

270 FOUNDATIONS GENERALLY

- Give notice if:
  - A natural bearing formation of undisturbed subsoil is not obtained at the depth shown

on the drawings.

The formation contains soft or hard spots or highly variable material.

310 UNSTABLE GROUND

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

320 RECORDED FEATURES

- Recorded foundations, beds, drains, manholes, etc: refer to engineer & LA drawings.
- Contaminated earth: Remove and disinfect as required by local authority.

330 UNRECORDED FEATURES

- 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

- Generally: Remove walls, roads, foundations, disused services, drains, manholes and the like to minimum depth.
- Minimum depth below finished levels:
  - Grass, ground cover and perennial planting: 500 mm.
  - Shrub planting: 750 mm.
  - Within 2 m of tree planting: 1000 mm.
- Walls and slabs remaining: In every 10 m²f wall or slab, make a drainage hole at least 600 mm diameter.

DISPOSAL OF MATERIALS

415 EXCAVATED TOPSOIL REMOVAL

- General: Remove from site.

450 WATER

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

454 GROUND WATER LEVEL, SPRING OR RUNNING WATER

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

460 PERMANENT DRAINAGE SYSTEM

• Disposal of water from the excavations through system: TBC.

FILLING

500 PROPOSED FILL MATERIALS

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

535 COMPACTION GENERALLY

• General: Compact fill not specified to be left loose as soon as possible after placing.
• 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.
• Defective areas: Remove and recompact to full thickness of layer using new material.

610 COMPACTED FILLING FOR LANDSCAPE AREAS

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

617 HIGHWAYS AGENCY TYPE 1 UNBOUND MIXTURE

• Fill: To Highways Agency 'Specification for highway works', clauses 801 and 803:
  - Crushed rock (other than argillaceous rock).
  - Crushed concrete.
  - Recycled aggregates.
  - Crushed non-expansive slag.
  - Well-burned non-plastic colliery shale.
• Amendments to requirements in Highways Agency 'Specification for highway works': -.
• Filling: To Highways Agency 'Specification for highway works', clause 802.

700 BACKFILLING AROUND FOUNDATIONS

• Under oversite concrete and pavings: Hardcore as clause 710.
• Under grassed or soil areas: Material excavated from the trench, laid and compacted in 300 mm maximum layers.

710 HARDCORE FILLING

• Fill: Granular material, free from excessive dust, well graded, all pieces less than 75 mm in any direction, minimum 10% fines value of 50 kN when tested in a soaked condition to BS 812-111, and in any one layer only one of the following:
- Crushed rock (other than argillaceous rock) or quarry waste with not more binding material than is required to help hold the stone together.
  - Crushed concrete, crushed brick or tile, free from plaster, timber and metal.
  - Crushed non-expansive slag.
- Gravel or hoggin with not more clay content than is required to bind the material

together, and with no large lumps of clay.

- Well-burned non-plastic colliery shale.
- Natural gravel.
- Natural sand.

• Filling: Spread and level in 150 mm maximum layers. Thoroughly compact each layer.

L

Windows/ Doors/ Stairs

L37
External stair, ramps, handrail and balustrades systems

L37 External stair, ramps, handrail and balustrades systems

GENERAL

PRODUCTS

420A APPLIED STAIR NOSINGSTO EXISTING STEPS Refer drawing 051-AG-D06

- Standard: In accordance with BS 8300.
- Manufacturer: Allite Tread (Treads UK Ltd) Ref Section 28 or similar and approved..
  - Product reference: Allite Tread (Treads UK Ltd) Ref Section 28.
- Material: alluminium with carborandum inset.
- Size - outer dimensions (rise x going): to length of steps
  Glued and screw fixed to manufacturers recommendation..

510 FABRICATION GENERALLY

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

EXECUTION

610 LOADING

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

650 INSTALLATION GENERALLY

- Fasteners: To section Z20.
- Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
- Temporary support: Do not use finished work as temporary support or strutting for other work.
- 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

- General: Do not use frozen materials and do not lay on frozen surfaces.
- Working limits: Do not lay blocks/ dressings:
  - Cement gauged mortars: When the air temperature is at or below 3° and falling or below 1° and rising (unless mortar has a temperature of not less than 4° when laid and work is thoroughly protected).
  - Hydraulic lime:sand mortars: When the air temperature is at or below 5° and falling or

below 3° and rising.

- Temperature of the work: Maintain above freezing until mortar has fully set.
- Newly erected work: Protect from precipitation; Prevent rapid drying in hot conditions.
- Remedial work: Rake out and replace mortar damaged by frost.
  Damaged work: Rebuild.

670 INSTALLATION OF TREAD INSERTS/ NOSINGS

- Treads: Fully cured, sound and level.
- Fixing:
  - Location/ position: As drawing 051-AG-D06.
  - Fixings: screw and glue.

  Centres: As manufacturer's recommendations.

F10
Brick/ block walling

F10 Brick/ block walling
To be read with Preliminaries/ General conditions.

TYPES OF WALLING
230A RECLAIMED BRICK FACING BRICKWORK
• Reclaimed bricks: from demolition/widening of existing brick walls.
- Condition: Sound, free from mortar and deleterious matter.
- Supplier/ Source: site.
• Mortar: As section Z21.
- Additional requirements: coping detail to match existing.
• Bond: to match existing.
• Joints: to match existing.

315 CLAY COMMON BRICKWORK FOR BOUNDARY WALLS
• Bricks: To BS EN 771-1.
- Type: Contractor to source brick to match existing boundary wall brick.
- Size: 215 x 102 x 65 mm.
- Mean compressive strength (minimum): TBA
- Durability designation: TBA.
- Density:
  Gross dry: TBA.
  Net dry: TBA __.
- Water absorption: TBA.
- Configuration: TBA.
- Recycled content: TBA.
- Additional requirements: TBA.
• Mortar: As section Z21.
- Standard: TBA.
- Mix: TBA.
- Additional requirements: TBA.
• Bond: to match existing.

WORKMANSHIP GENERALLY
430 CONDITIONING OF CLAY AND CALCIUM SILICATE BRICKS AND CLAY BLOCKS
• Bricks and blocks delivered warm from manufacturing process: Do not use until cold.
• Absorbent bricks in warm weather: Wet to reduce suction. Do not soak.

500A LAYING GENERALLY
• Mortar joints: Fill vertical joints. Lay bricks, solid and cellular blocks on a full bed.
• AAC block thin mortar adhesive and gypsum block adhesive joints: Fill vertical joints. Lay blocks on a full bed.
• Clay block joints:
- Thin layer mortar: Lay blocks on a full bed.
- Interlocking perpends: Butted.
• Bond to match existing.

- Vertical joints in brick and concrete block facework: Even widths. Plumb at every fifth cross joint.

535 HEIGHT OF LIFTS IN WALLING USING CEMENT GAUGED OR HYDRAULIC LIME MORTAR

- Quoins and advance work: Rack back.
- Lift height (maximum): 1.2 m above any other part of work at any time.
- Daily lift height (maximum): 1.5 m for any one leaf.

560 COURSING BRICKWORK

- Gauge: Four brick courses including bed joints to 300 mm.

561 COURSING BRICKWORK WITH EXISTING

- Gauge: Line up with existing brick courses.

635A JOINTING

- Profile: Consistent in appearance.
  To match existing wall, to key in neatly to create a seamless transition between old and new brickwork.

690 ADVERSE WEATHER

- General: Do not use frozen materials or lay on frozen surfaces.
- Air temperature requirements: Do not lay bricks/ blocks:
- In cement gauged mortars when at or below 3° and falling or unless it is at least 1° and rising.
- In hydraulic lime:sand mortars when at or below 5° and falling or below 3° and rising.
- In thin joint mortar glue when outside the limits set by the mortar manufacturer.
- Temperature of walling during curing: Above freezing until hardened.
- Newly erected walling: Protect at all times from:
- Rain and snow.
- Drying out too rapidly in hot conditions and in drying winds.

ADDITIONAL REQUIREMENTS FOR FACEWORK

750 COLOUR CONSISTENCY OF MASONRY UNITS

- Colour range: Submit proposals of methods taken to ensure that units are of consistent and even appearance within deliveries.
- Conformity: Check each delivery for consistency of appearance with previous deliveries and with approved reference panels; do not use if variation is excessive.
- Finished work: Free from patches, horizontal stripes and racking back marks.

760 APPEARANCE

- Brick/ block selection: Do not use units with damaged faces or arrises.
- Cut masonry units: Where cut faces or edges are exposed cut with table masonry saw.
- Quality control: Lay masonry units to match relevant reference panels.

- Setting out: To produce satisfactory junctions and joints with built-in elements and components.
- Coursing: Evenly spaced using gauge rods.
- Lifts: Complete in one operation.
- Methods of protecting facework: Submit proposals.

780 GROUND LEVEL

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

790 PUTLOG SCAFFOLDING

- Use: Not permitted in facework.

800 TOOTHED BOND

- New and existing facework in same plane: Bond together at every course to achieve continuity.

830 CLEANLINESS

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

Q
Paving/Planting/Fencing/Site furniture

Q10
Kerbs/ edgings/ channels/ paving accessories

Q10 Kerbs/ edgings/ channels/ paving accessories

To be read with Preliminaries/General conditions.

TYPES OF KERBS/EDGINGS AND CHANNELS

110 PROPRIETARY PRECAST CONCRETE EDGING TO PLANTING refer to 051-AG-D04

- Standard: To BS EN 1340.
- Manufacturer: Marshalls or similar and approved.
- - Product reference: Conservation Kerb.
- Recycled content: -.
- Designations: EF.
- Size (width x height x length): 255x205x915mm.
- Special shapes: Finish to be on all exposed sides - ensure exposed ends are finished.
- Finish: texture.
- Colour: silver grey.
- Bedding: Cement mortar.
- Joints generally: butt jointed dry.
- Sealant movement joints: n/a.
- Accessories: -.

110A PROPRIETARY PRECAST CONCRETESTAKED EDGING TO PLANTING refer to 051-AG-D07

- Standard: To BS EN 1340.
- Manufacturer: Marshalls or similar and approved.
- - Product reference: Conservation Kerb.
- Recycled content: -.
- Designations: EF.
- Size (width x height x length): 255x205x915mm.
- Special shapes: Finish to be on all exposed sides - ensure exposed ends are finished, as well as side and top.
  Kerb sections to be stacked to achieve stretcher bond. Survey of kerb requirements to be taken prior to ordering to minimise cutting on site.
  Kerbs laying flat and double staked to be drilled on site to accept steel kerb dowels. Mortar bed to match silver grey kerb. .
- Finish: texture.
- Colour: silver grey.
- Bedding: Cement mortar.
- Joints generally: butt jointed dry.
- Sealant movement joints: n/a.
- Accessories: -.

110B PROPRIETARY PRECAST CONCRETEEDGING TO FINISHES AND TREE PIT

- Standard: To BS EN 1340.
- Manufacturer: Marshalls or similar and approved.
- - Product reference: Conservation Edging .
- Recycled content: -.

- Designations: EF.
- Size (width x height x length): 50x150x915mm.
- Special shapes: N/A.
- Finish: texture.
- Colour: silver grey.
- Bedding: Cement mortar.
- Joints generally: butt jointed dry.
- Sealant movement joints: n/a.
- Accessories: -.

180A DRAINAGE CHANNEL SYSTEMS WITH GRATINGS

- Refer to engineers drawings

LAYING

510 LAYING KERBS, EDGINGS AND CHANNELS

- Cutting: Neat, accurate and without spalling. Form neat junctions.
  - Long units (450 mm and over) minimum length after cutting: 300 mm.
  - Short units minimum length after cutting: The lower of one third of their original length or 50 mm.
- 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.
- 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

- Conditions: Do not construct if the temperature is below 3° 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

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

540 CEMENT MORTAR BEDDING

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

550 KERB DOWELS

- Dowels: Steel bar to BS 4482.
  - Size: 12 mm diameter, 150 mm long.
- Installation of dowels: Vertically into foundation while concrete is plastic.
  - Centres: To suit holes in kerbs.
  - Projection: 75 mm.
- Grouting of holes in kerbs: Filled with 1:3 cement:sand mortar finished flush.

580 DRAINAGE CHANNEL SYSTEMS

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

590 DRAINAGE CHANNEL SYSTEMS WITH BUILT IN FALL

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

620 ACCURACY

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

625 REGULARITY OF PAVED SURFACES

- Maximum undulation of (non-tactile) paving surface: 3 mm.
  - Method of measurement: Under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface).
- Difference in level between adjacent units (maximum):
  - Joints flush with the surface: Twice the joint width (with 5 mm max difference in level).
  - Recessed, filled joints: 2 mm.
    Recess depth (maximum): 5 mm.
  - Unfilled joints: 2 mm.
- Sudden irregularities: Not permitted.

630 NARROW MORTAR JOINTS

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

640 TOOLED MORTAR JOINTS

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

Q22
Asphalt roads/ pavings

Q22 Asphalt roads/ pavings

To be read with Preliminaries/ General conditions.

TYPES OF PAVING

180 SURFACE TREATMENT TO EXISTING PAVING ENTRANCE & COURTYARD PEDESTRIAN ONLY

- Base: Existing Asphalt.
- Preparation: Cut out depressions, fill to match existing surface and compact.
- Surface to receive dressing: Clean and dry. All patching complete.
- Binder: Bond Coat as recommended by manufacturer..
- Finish: Natratex buff, Type 6mm aggregate
  Compacted thickness 25mm
  Topcoat clear jointing sealer supplied by manufacturer..
  Slip/ skid resistance: TBC.

180A SURFACE TREATMENT TO EXISTING PAVING ENTRANCE VEHICLE ONLY

- Base: Existing Asphalt.
- Preparation: Cut out depressions, fill to match existing surface and compact.
- Surface to receive dressing: Clean and dry. All patching complete.
- Binder: Bond Coat as recommended by manufacturer..
- Finish: Natratex buff, Type 6mm aggregate
  Compacted thickness 30mm
  Topcoat clear jointing sealer supplied by manufacturer..
  - Slip/ skid resistance: TBC.

PREPARATORY WORK/ REQUIREMENTS

220 BITUMINOUS MATERIALS GENERALLY

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

230 SAMPLES

- Submit: Natratex for client approval.

240 ACCEPTANCE OF SURFACES

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

250 ABUTMENTS

• Vertical edges of manholes, gullies, kerbs and other abutments: Clean and paint with a thin uniform coating of Polymer modified bitumen emulsion bond coat.
• Finishing: Tamp surface around projections.
Level: Flush or not more than 3 mm above projections.

LAYING

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

320 ADVERSE WEATHER
• Frozen materials: Do not use.
• Suspend laying:
- During freezing conditions
- If the air temperature reaches 0°, or in calm dry conditions -3°, on a falling thermometer.
- Hot rolled asphalt: During periods of continuous or heavy rain or if there is standing water on the base.

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

340 FLATNESS/ SURFACE REGULARITY
• Deviation of surface: Where appropriate in relation to the geometry of the surface, the variation in gap under a 3 m straightedge placed anywhere on the surface to be not more than:
- Base: Machine laid, 25 mm.
- Binder course: Hand laid, 13 mm and Machine laid, 13 mm.
- Surface course: Hand laid, 10 mm and Machine laid, 7 mm.
- Where a straightedge cannot be used the surface must be of a comparable standard of accuracy when judged by eye.

351 CONTRACTOR'S USE OF PAVEMENTS
• Preparation for final surfacing:
- Timing: Defer laying until as late as practicable.
- Immediately before laying final surfacing: Clean and make good the base/ binder course.

Allow to dry.

- Adhesion: Contractor's choice.

Application rate: As manufacturer's recommendation.

Accuracy: Uniform, without puddles.

Finishing: Allow emulsion to break completely before applying surface.

COMPLETION

390 DOCUMENTATION

- Standard: BS EN 13108-4.
  - Declaration of conformity: Submit.
- Number of copies: 1.
- Submission: Two weeks after request.

Q25
Slab/brick/sett/cobble pavings

Q25 Slab/brick/sett/cobble pavings

To be read with Preliminaries/ General conditions.

GENERAL

125 CONCRETE FLAG PAVING OVERLAY SYSTEM

- Existing base: reduced macadam pavement.
  - Preparation: Planing and repairs, to ensure achieve level thresholds and even fall to existing drainage channel.
- Laying course: 50mm min Sand cement mix.
- Paving units: Concrete flags: Charcon Stonemaster 600x200x80mm slab.
- Jointing: dry sand cement mix .
  - Bond: Half lap staggered.
- Accessories: none.

125A CONCRETE FLAG PAVING OVERLAY SYSTEM

- Existing base: reduced macadam pavement.
  - Preparation: Planing and repairs, to ensure achieve level thresholds and even fall to existing drainage channel.
- Laying course: Sand.
- Paving units: Concrete flags: Charcon Stonemaster 600x200x80mm slab Colour Dark Buff..
- Jointing: Sand.
  - Bond: Half lap staggered.
- Accessories: none.

190 HARD LANDSCAPING MATERIALS SPECIFICATION

- Minimum BRE 'Green Guide to Specification Online' rating: As drawing 051-AG-T01.

SYSTEM PERFORMANCE

PRODUCTS

EXECUTION

610 MATERIAL SAMPLES

- Samples representative of colour and appearance of designated materials: Submit before placing orders.
  - Designated materials: Stonemaster paving.

620 ADVERSE WEATHER

- General:
  - Temperature: Do not lay or joint paving if the temperature is below 3° on a falling

thermometer or below 1° on a rising thermometer.
- Frozen materials: Do not use. Do not lay bedding on frozen or frost covered bases.

• Paving with mortar joints and/ or bedding:
- Protect from frost damage, rapid drying out and saturation until mortar has hardened.

• Paving laid and jointed in sand:
- Stockpiled bedding sand: Protect from saturation.
- Exposed areas of sand bedding and uncompacted areas of sand bedded paving: Protect from heavy rainfall.
- Saturated sand bedding: Remove and replace, or allow to dry before proceeding.
- Laying dry-sand 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

• Appearance: Smooth and even with regular joints and accurate to line, level and profile.
• Falls: To prevent ponding.
• Bedding of paving units: Firm so that rocking or subsidence does not occur or develop.
- Bedding/ Laying course: Consistently and accurately graded, spread and compacted to produce uniform thickness and support for paving units.

• Slopes: Lay paving units upwards from the bottom of slopes.
• Paving units: Free of mortar and sand stains.
• Cutting: Cut units cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.

630 LEVELS OF PAVING

• Permissible deviation from specified levels:
- Generally: ± mm.

• Height of finished paving above features:
- At gullies: +6 to +10 mm.
- At drainage channels and kerbs: +3 to +6 mm.

635 REGULARITY OF PAVED SURFACES

• 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):
- Precast concrete paving blocks and clay pavers for flexible pavements: 10 mm.
- Precast concrete flags or natural stone slabs: 3 mm.

• Difference in level between adjacent paving units (maximum): 2 mm.
• Sudden irregularities: Not permitted.

637 REGULARITY OF PAVED SURFACES

• 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.
• Joints between paving units or utility access covers:
- 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).
- 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.

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

• Sudden irregularities: Not permitted.

645 PROTECTION

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

650 CEMENTITIOUS BASES AND SUB-BASES

• 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

• Trenches and excavation of soft or loose spots in subgrade: Fill and thoroughly compact.
• 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.
• Prepared existing and new bound bases (roadbases): Sound, clean, free from rutting or major cracking. Remove sharp stones, projections and debris.
• Sub-base/ Roadbase level tolerances: To BS 7533-7, Annex A.
• Levels and falls: Accurate and within the specified tolerances.
• Drainage outlets: Within 0-10 mm of the required finished level.
• Features in sand bedded paving (including mortar bedded restraints and drainage ironwork): Complete to required levels; adequately bed and haunch in mortar.
• Sub-bases containing cement/ hydraulic binder: Cure for minimum times specified in BS 7533-4.

665 PLANING AND REPAIRS TO EXISTING BASES

• Existing macadam/ asphalt surfaces: Plane to required levels.
• Repairs: Cut out to remove ruts and cracks over 25 mm wide and Cut out depressions, fill to match existing surface and compact.
• Building up existing surfaces to required levels: -.

715 LAYING FLAG AND SLAB PAVING - MORTAR LAYING COURSE AND JOINTING

• Standard generally: In accordance with BS 7533-4.
• Flag installation and cutting: To Interpave 'Concrete flag paving'.
• Laying course:
  - Nominal thickness: 30 mm before laying paving slabs.
• Laying and jointing: butt jointed, running course with staggared bond.

• Joint width (nominal): 3mm.

COMPLETION

915 COMPLETION OF PAVING WITH DRY SAND OR FINE AGGREGATE FILLED JOINTS

• Sand dressing: Leave a thin layer of dry jointing sand over the paving, sweep clean before practical completion.

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

• Vacuum cleaning machines: Not allowed.

Q26
Special surfacings/ pavings for sport/ general amenity

Q26 Special surfacings/ pavings for sport/ general amenity

To be read with Preliminaries/ General conditions.

SPORTS SURFACING

110 INFORMATION TO BE PROVIDED BY THE CONTRACTOR

- Submit:
  - Reference samples: Materials, seams and line markings.
  - Additional information: sample of artificial grass for approval, method statement for additional adhesive to carpet to ensure can not be lifted.

120 SURFACING FORCOURTYARD

- Type: Unfilled synthetic turf: SSP 600 Elite Artifical Turf with Shock Pad. (SSP Specialised Sports Products (Tel: 0844 257 0700) or similar and approved..
- Performance: To BS 7044-4 heavy duty outdoor: to be laid loose as manufacturers recommendation but with addtional adhesive to reduce likelihood of turf being lifted. Supplier/installer to advise)..
- Anticipated usage:
  - Hours per day: 8.
  - Days per week: 5.
- Priority of activities: boxing/gym kit/movement classe.
- Standard of play: n/a.
- Permeability: Not less than 150 mm/hour.
- Minimum life expectancy: 10 years.

140A SURFACE GRADIENTS, EVENNESS AND FLATNESS

- Surface regularity: As specified by BS 7044-4.
- Deviation from the finished plane: When checked on a 10 m grid the difference in level between adjacent grid points, after taking design gradients into account, must not exceed +/- 10mm.
- Profile: As drawing 050-AG-T01.
- Gradients: even to marry with existing levels..

150 SUITABILITY OF BASE/ SUB-BASE

- Preparation: Before starting work ensure the following:
  - Accuracy: Base/ sub-base will permit specified flatness/ regularity of finished surfacing.
  - Falls/ camber: Accurately incorporated in the base/ sub-base.

260A RESIN BOUND STONE AGGREGATE SURFACING TREE PITS

- Subgrade improvement layer: As drawing 051-AG-D03.
  - Compacted thickness: -.
- Sub-base: Type 3 granular subbase to clause SHW Clasue 805 or 4/40mm 4/20mm blinded with 2/6.3mm crushed stone graded concrete aggregate EN12620.
  - Compacted thickness: 150mm.
- Base: -.

- Thickness: -.

• Wearing surface: Resin bound mixed stone aggregate of 10 mm nominal size. Finished with two layers of acrylic coloured resin.
  - Thickness: 30mm.
  - Manufacturer: Sureset (01985 841180) or simlar and approved.
    Product reference: Barley Beach.
    Colour: Barley Beach.

265 RESIN BOUND STONE AGGREGATE SURFACING existing steps
[As drawing 051-AG-D06].
Base: [Existing concrete steps treads]. with bonding coat to manufacturer's recommendation.
Wearing surface: Resin bound mixed stone aggregate of 6 mm nominal size. Finished with two layers of acrylic coloured resin.
- Thickness: [8mm].
- Manufacturer: [Sureset (01985 841180) or simlar and approved].

Product reference: [Barley Beach].
Colour: [Barley Beach].

300 EXTENT OF IMPACT ABSORBING SURFACING
• General: Lay to the impact areas shown in the relevant parts of BS EN 1176.

ASSOCIATED ACCESSORIES

430 EDGES
• Finish: Precast concrete 50x150mm .
• Edge detail: see 051-D05.

EXECUTION

710 SYNTHETIC SPORTS TURF INSTALLATION
• Installation: Lay in continuous lengths across the width of the pitch with no cross joints.
• Joints:
  - Level differences (maximum): 2 mm.
  - Separation at joints and seams (maximum): 2 mm.
• Uniformity: No seams or textural variations which might cause a ball to be deflected from its true path.

COMPLETION

920 PLAY SURFACE TESTING
• Standard: To BS EN 1177 and BS 7188, where applicable.
• Testing body: A United Kingdom Accreditation Service (UKAS) independent laboratory.
• Timing: Within ten days of completing the surfacing works.
• Test results: Submit.

930 DOCUMENTATION

- General: For all types of surfacing, provide the following:
  - Name and contact details of installer.
  - Date of installation.
  - Name and contact details of manufacturer.
  - Type/ description/ reference of products used.
  - Manufacturer's recommended inspection and maintenance procedures to maintain safety and impact absorbing performance.

Manufacturer's recommended cleaning and maintenance methods, where relevant.

Q28
Topsoil and soil ameliorants

Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General conditions.

SYSTEM OUTLINE

120 MANUFACTURED TOPSOIL/ GROWING MEDIA SYSTEMFOR ALL SHRUB PLANTING

- Topsoil/ growing media type: Imported manufactured topsoil: British Sugar (www.bstopsoil.co.uk) Landscape 20 or similar and approved..
- Ameliorants: Sanitized and stabilized PAS 100 compost .
- Accessories: Mycorrhizal inoculant.

120A MANUFACTURED TOPSOIL/ GROWING MEDIA SYSTEM FOR ALL TREE PITS

- Topsoil/ growing media type: Imported manufactured topsoil: Tree Sand Arborsoil or similar and approved..
- Ameliorants: Sanitized and stabilized PAS 100 compost .
- Accessories: Mycorrhizal inoculant.

PRODUCTS

300 PREPARATION MATERIALS GENERALLY

- Purity: Free of pests and disease.
- 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.
- Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
  - Corrosive, explosive or flammable.
  - Hazardous to human or animal life.
  - Detrimental to healthy plant growth.
- Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
- Objectionable odour: None.
- 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

- Materials: Peat and Products containing peat.

315 IMPORTED TOPSOIL TO BS 3882

- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- Standard: To BS 3882.
- Classification: Multipurpose.
  - Grade: Within the parameters of 'sandy loam' textural class.

- Source: Submit proposals.
  Product reference: Submit proposals.

380 MYCORRHIZAL INOCULANTALL PLANTING
- Manufacturer: Rootgrow (01795 411527) or simliar and approved.
  Product reference: Rootgrow Professional.

390 FERTILIZERS TO BE INCORPORATED INTO TOPSOIL AND MANUFACTURED TOPSOILAll shrub areas
- Type: Sanitized and stabilized compost fertilizer.
- Source: Submit proposals.
  - Product reference: Submit proposals.

EXECUTION

620 IMPORTING TOPSOIL
- Give notice: Before stripping topsoil for transfer to site.
  Notice period: 7 days.

630 DOCUMENTATION FOR IMPORTED TOPSOILFOR ALL BEDS & TREE PITS
- Timing: Submit at handover.
- Contents:
  - Full description of all soil components.
  - Record of source for all soil components.
  - Record drawings showing the location and depth of all soils by type and grade.
  - Declaration of analysis: in accordance with BS 3882, Annex E.
- Number of copies: 1.

635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALSFOR ALL BEDS
- Timing: Submit at handover.
- Contents:
  - Full description of all compost components.
  - Record of source for all compost components.
  - Analyst's report for each test carried out.
  - Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.
  - Quality Compost Protocol certification: Not required.
- Number of copies: 1.

650 NOTICE
- Give notice before:
  - Setting out.
  - Spreading topsoil.
  - Applying herbicide.
  - Applying fertilizer.
  - Visiting site during maintenance period.
- Period of notice: One week.

655 MECHANICAL TOOLS

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

665 SUBSOIL SURFACE PREPARATION

- General: Excavate and/ or place fill to required profiles and levels, as section D20.
- Loosening:
  - Light and non-cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 300 mm.
  - Stiff clay and cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 450 mm.
  - Rock and chalk subgrades: Lightly scarify to promote free drainage.
- Stones: Immediately before spreading topsoil, remove stones larger than 75 mm.
- Remove from site: Arisings, contaminants and debris and Builders rubble.

670 INSPECTING FORMATIONS

- Give notice: Before spreading topsoil for planting beds.
- Notice period: 7 days.

685 SURPLUS MATERIALS TO BE REMOVED

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

700 GRADING OF TOPSOIL

- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
  - Hollows and ridges: Not permitted.
- Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
- Give notice: If required levels cannot be achieved by movement of existing soil.

705 HANDLING TOPSOIL

- Aggressive weeds: Give notice and obtain instructions before moving topsoil.
- Plant: Select and use plant to minimize disturbance, trafficking and compaction.
- Contamination: Do not mix topsoil with:
  - Subsoil, stone, hardcore, rubbish or material from demolition work.
  - Other grades of topsoil.
- Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
- Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit -.

715 LOOSE TIPPING OF TOPSOIL

- 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

- Above adjoining paving or kerbs: 20 mm.

- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: Higher than adjoining grass areas by -.
- Within root spread of existing trees: Unchanged.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

810 APPLYING COMPOSTALL BEDS

- Locations: All planting areas.
- Other requirements: None.
- Application rate for trees and shrubs: 50 mm thick.
  - Timing: Apply prior to cultivation.
- Application rate for grass: n/a.
  - Timing: Apply prior to cultivation.

840 APPLYING MYCORRHIZAL INOCULANTALL SHRUBS.

- Depth: To maintain contact with root system.

COMPLETION

905 APPLYING MAINTENANCE FERTILIZER

- Time of year: March or April.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Rate: To manufacturer's recommendations.

Q31
External planting

Q31 External planting

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/ REQUIREMENTS

112 SITE CLEARANCE GENERALLY

- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- Stones: Remove those with any dimension exceeding 75 mm.
- Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- Vegetation: Clear surface vegetation in areas shown on drawings using suitable nonresidual herbicide.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
- Additional requirements: Remove roots.

120 CLIMATIC CONDITIONS

- General: Carry out the work while soil and weather conditions are suitable.
  - Strong winds: Do not plant.

125 TIMES OF YEAR FOR PLANTING

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

130 MECHANICAL TOOLS

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

145 WATERING

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

150 WATER RESTRICTIONS

- 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

- Give notice before:
  - Setting out.
  - Applying herbicide.
  - Applying fertilizer.
  - Delivery of plants/ trees.
  - Planting shrubs.
  - Planting trees into previously dug pits.
  - Watering.
  - Visiting site during maintenance period.
- Period of notice: One week.

200 PLANTS/ TREES - GENERAL

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

215 PLANTS/ TREES - SPECIFICATION CRITERIA

- Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the
  National Plant Specification.

225 BULBS/ CORMS/ TUBERS

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

235 CONTAINER GROWN PLANTS/ TREES

- Growing medium: With adequate nutrients for plants to thrive until permanently planted.
- Plants: Centred in containers, firmed and well watered.
- Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
- Hardiness: Grown in the open for at least two months before being supplied.
- Containers: With holes adequate for drainage when placed on any substrate commonly

used under irrigation systems.

255 PLANTS/ TREES RESERVED AT SUPPLIER'S PREMISES

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

260 PLANT/ TREE SUBSTITUTION

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

265 PLANT HANDLING, STORAGE TRANSPORT AND PLANTING

- Standard: To HTA 'Handling and establishing landscape plants'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Plant packaging: pallet.
- Packaging of bulk quantities: pallets.
- Planting: Upright or well balanced with best side to front.

280 TREATMENT OF TREE WOUNDS

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

290 SURPLUS MATERIAL

- Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS

300 HERBICIDETo clear self sown seedlings

- Locations: Shrub beds.
- Type: Suitable for supressing perennial weeds.
- Timing: Allow fallow period before cultivation.
  - Duration (minimum): As manufacturer's recommendation.

305 WEED CONTROLFOR INVASIVE NON-NATIVE WEEDS

- Locations: Whole site.
- General: Prevent weeds from seeding and perennial weeds from becoming established, by hand weeding.

375 CULTIVATION

- Compacted topsoil: Break up to full depth.
- Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
  - Depth: 350 mm.
  - Timing: Within a few days before planting.
  - Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: 25mm below finished level.
- Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 75 mm.
- Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

400 RANDOM PLANT LAYOUTTO ALL BEDS

- Spacing: to be agreed on site with Landscape Architect.
- Density: As plant schedule.

405 SHRUB PLANTING PITS

- Timing: Excavate 1-2 days (maximum) before planting.
- Sizes: Wide enough to accommodate roots when fully spread and 75 mm deeper than root system.
- Pit bottom improvement Break up to a depth of 150 mm, incorporating 25 g of slow release fertilizer per planting pit.
- Backfilling material: Reuse excavated material..

417 MYCORRHIZAL INOCULANT

- Manufacturer: Rootgrow (www.rootgrow.co.uk) or simlar and approved..
  - Product reference: Rootgrow Professional.
- Application: Apply to roots of bare root plants before planting and backfilling.

420 CLIMBING PLANTS

- Planting: 150 mm clear of supporting structure (e.g. wall/ fence) with roots spread outward.
  - Branches: Lightly secured to supports.
- Climber supports: Stainless steel wire and tensioner along rear wall to assist growth to fence.
  - Base height: to be agreed on site.
  - Extent: 3 rows of wires, set 600mm above soil level across 60% of retaining wall to games court.
  - Centres: 300 mm
  - Distance from wall: 25 mm.
- Fixings: Stainless steel screw eyes.
  - Centres: 1 m.

435 CLIMBING PLANTS USED AS GROUND COVER

- Planting:
  - Canes or other supports: Remove.

- Arrangement: Spread stems.

• Fixing: Pinned to ground to ensure good contact.

445 PLANTING BULBS/ CORMS/ TUBERS

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

• Backfilling: Finely broken soil. Lightly firm to existing ground level.

• Naturalized planting in existing grassed areas:

- Scattering: Random. Plant bulbs/ corms/ tubers where they fall.

Planting: Neatly remove a plug of turf and replace after planting.

470 FORMAL HEDGES

• Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge.

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

476 SHRUB, HERBACEOUS AND BULB BACKFILLING MATERIAL –All beds

• Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required:

• Ameliorant/ Conditioner: Sanitized and stabilized compost.

- Application rate: 5 kg per m³f topsoil.

• Fertilizer: Slow release.

- Application rate: To manufacturer's/ supplier's recommendations.

480 AFTER PLANTING

• Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.

• 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.

• Top dressing: Not required.

Depth: 25-30 mm.

485 MULCHING PLANTING BEDS

• Material: Ornamental bark mulch Melcourt Spruce Ornamental (www.melcourt.co.uk)or

simlimar and approved.

- Purity: Free of pests, disease, fungus and weeds.
- Recycled content: 50% min.

• Preparation: Clear all weeds. Water soil thoroughly.

• Coverage: 50 mm depth.

• Finished level of mulch: 30 mm below adjacent areas.

PLANTING TREES

505 TREE PITS

• Sizes: As drawing 051-AG-D03.

• Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.

- Pit bottoms: With slightly raised centre. Break up to a depth of 200mm.
  - Treatment: As drawing 051-AG-D03.
- Pit sides: Scarify.
- Backfilling material: Arborsoil or simlar and approved. Load bearing tree soil..
- Accessories: aeration pipe, rootbarrier (Reroot by Greenleaf or simlar and approved) geotexile to line pit, underground guying system..

510 TREE PIT ROOT BARRIERS

- Locations: All tree pits.
- Manufacturer: Greenleaf (01424 717797).
  - Product reference: Reroot 100.
- Depth of top of root barrier below finished soil level: 75mm.
- Installation: With sides vertical.

512 TREE PIT ACCESSORIES

- Locations: All tree pits.
- Manufacturer: Green leaf (tell 01424717797) or simlar and approved..
  - Product reference: Rootrain Precinct RRPREC1C with Arborvent.
- Type: 3m pipe, circular inlet.

525 SEMIMATURE TREES

- Standard: Prepare roots and transplant to BS 4043.
- Backfilling material: As clause 585.
- Support: Underground guying to BS 4043.
- Protection: Not required.

586 TREE BACKFILLING MATERIAL

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required.
- Ameliorant/ Conditioner: Not required.
  - Application rate: -.
- Fertilizer: Slow release.
  Application rate: To manufacturer's/ supplier's recommendations.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710 MAINTENANCE

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

720 FAILURES OF PLANTING

- Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
  - Exclusions: Theft or malicious damage after completion.
  - Rectification: Replace with equivalent plants/ trees/ shrubs.
- Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.

- Timing of making good: During the next suitable planting season.

740 CLEANLINESS

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

750 PLANTING MAINTENANCE GENERALLY

- Weed control: Maintain weed free area around each tree and shrub.
  - Diameter (minimum): The larger of 1 m or the surface of original planting pit.
  - Keep planting beds clear of weeds: By hoeing.
- Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch.
- Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
- Staking: Check condition of stakes, ties, guys and guards.
  - Broken or missing items: Replace.
  - Rubbing: Prevent.
  - Ties: Adjust to accommodate growth.
  - Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
  - Frequency of checks: Every month.
- Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
- Trees: Spray crown when in leaf during warm weather.
  - Timing: After dusk.
- Watering: When instructed.

755 PLANTING MAINTENANCE - FERTILIZER

- Time of year: March or April.
- Fertilizer: Sanitized and stabilized compost.
  - Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Application rate: To manufacturer's recommendations.

760 PLANTING MAINTENANCE - PRUNING

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

Q40
Fencing

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

125A OPEN MESH STEEL PANEL GENERAL PURPOSE FENCING Location outside D&T

- Manufacturer: zaun or similar and approved..
  - Product reference: Duo Perimeter fencing.
- Standard: To BS 1722-14, category 1.
- Height: 2000mm.
- Mesh and wire: 8mm horizontals, 6mm verticals, colour to be confirmed.
- Posts: galvanised steel hollow section, colour to be confirmed..
- Maximum centres of posts: Submit proposals.
- Method of setting posts: Submit proposals.
- Bottom of fencing: 20mm above GL..
- Accessories: Matching single leaf gate, sliding lockable latch, drop bolts open & closed position, sleeve recessed into ground.
  Shop drawing following site survey for approval..
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-14.

125B OPEN MESH STEEL PANEL GENERAL PURPOSE FENCING: Agincourt House, Rear of site.

- Manufacturer: zaun or similar and approved..
  - Product reference: Duo Sports Fencing.
- Standard: To BS 1722-14, category 1.
- Height: 3.6m.
- Mesh and wire: 8mm horizontals, 6mm verticals, colour to be confirmed.
- Posts: galvanised steel hollow section, colour to be confirmed.
- Maximum centres of posts: Submit proposals.
- Method of setting posts: Submit proposals.
- Bottom of fencing: 20mm above GL..
- Accessories: Matching double leaf gate, sliding lockable latch, drop bolts open & closed position, sleeve recessed into ground.
- Shop drawing following site survey. Ensure timed for after rear wall reduced in height. Shop drawing to be approved by Architect.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-14.

220A STEEL FENCING & GATES WITH TIMBER INFILL PANELS, DECORATIVE TOP PANEL – located Chalcot School and Agincourt House.

- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-8.

Fence on top of wall & gates:

- Feature: design to run seamlessly along length of School Boundaries – to be designed as continuum, regardless of whether fixed above gates or the top of the existing walls.

- To be supplied by Lacefence.com, Tel +31 10 244 90 87, to main fence supplier, then incorporated into gate design.
- Specification: Rigid surface, heavy duty lace fence.
- Finish: raw, on import to gate manufacturer.

- Gate manufacturer to finish by galvanising.

- Standard Panels with 8mm bar boarder on all sides.

- NOTE: Agincourt to have 2 no. 10mm bars to reflect post centres at 3.2m (to match up with panels in wall).

- Detailed pattern to be: To be agreed by Client. Allow for 40% lace decoration, with maximum openings 35x35mm

- Gates to receive decorative upper panel:
- Chalcot School:
- Vehicular/Double Gates – gate numbers 1 & 4

- Agincourt House:
- Vehicular/Double Gates – gate number 6

- On top of wall:
- Post fixed using Engineers detail SK31
- Post size: 60x60mm SHS post.

- Shop drawings (co-ordinated with demolition of existing walls/widened openings/survey of boundaries) to be supplied to CA for Architects approval prior to manufacturer.

- **Gates:**
- **For gate schedules refer to drawings**
- **Agincourt: 051/AG T05**

- Design intention: Both pedestrian & Vehicular gates use same materials, to achieve unified external façade. Internal faces to be fair faced with timber boarding.

- Steel frame 60x80mm SHS frame, with 60x20 RHS brace, 20x30mm welded & drilled angle to accept timber boards.
- Finish to be galvanised steel.
- Fence posts to be 140x140mm

- Timber boards to be positioned both sides of main gates. Timber to be seasoned with 25year guarantee, knot-free.
- Supplier to propose FSC approved timber.
- Sample to be supplied for CA approval.
- Boards 20x90mm planed & painted. Allow for primer and 2 top coats, matt finish. Colour to be agreed by Architects.

- Timber to be fixed with snake eye counter sunk bolts, with nut counter sunk on internal face of gate. Ease of removal of bolts to be tested, findings to be provided for Client. Bolts to provide secure outer face, yet be able to be removed if timber requires replacement. Sample to be provided for CA approval.

- All hinges to be heavy duty to manufacturers detail, to be set, to allow for installation of Came UK automatic door opening mechanisms (or similar and approved).

- Shop drawings to be supplied for Architects approval prior to manufacturer.

- EXTERNAL SIGNAGE: any co-ordination on metalwork gates to be confirmed by Architect.

- **Gate Access Control**
- To be supplied by Came UK or similar and approved.
- Detail to be confirmed by M & E engineer.

- All gates to have access controls at detailed on Gate Schedules 051/AG/T05.

250A PREFABRICATED WOOD PANEL FENCING

- Manufacturer: Jackson's Timber (www.jacksons-fencing.co.uk) or simlar and approved..
  - Product reference: Hit & Miss Fencing.
- Standard: To BS 1722-11.
- Type of infill: Hit & Miss panel vertical.
  - Treatment: Jakcure finish to BS 8417.
  - Finish: None required.
- Height: 1.83m.
- Posts: slotted posts to match fencing system.
  - Treatment: Jakcure finish to BS 8417.
  - Finish: -.
- Method of setting posts:
  - Concrete depth: Filled to not less than half the hole depth.
- Accessories: gravel board to use with slotted bosts 150x1830x28mm, timber to match.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-11.

370A WROUGHT IRON- Agincourt Existing Fence.

- Repaint only.
  Clean up existing paintwork: wash railing to reveal metalwork.
  Note: fences are fragile. After washing railings to be reviewed with CA.
  Fence to be prepared for repaint: by removing existing paint (likely to be lead-based) and rust. Wash after preparation work.
  Coat fence with metal primer with rust inhibitor. Contractor to propose manufacturer.
  Allow for 2 coats of metal primer. Primer to be allowed to dry between coats.
  Allow for 2 final coats of matt enamel paint. Colour to be agreed with CA.

GATES, POSTS AND STILES

515 EXISTING HAND RAILS TO GAMES COURT

Sand, clean and repaint, using primer, 2 layers of external matt metal paint. Colour to be agreed with architect.

580A WROUGHT IRON- Agincourt Existing Gate 1.

- Standard: Restore using Traditional blacksmith's methods.
- Company: For Britannia Architectural Metalwork Ltd
  01420 84427 or similar and approved

  Works to restore gate: unhang gate, remove later addition letter box. Repair any damage, undertake any works necessary to prepare gate to accept fob control, shot-blast, zinc spray and redecorate using undercoat, 2 coats of good quality appropriate matt finish paint.

  Colour swatch to be approved by client.

  Submit certification of training and experience.
- Materials: Best quality true wrought iron.
- Steel or other substitutes: Not permitted.
- Consistency: Tough, ductile and fibrous in character and of even texture.
  Submit: Invoices or certificate of authenticity to confirm provenance, on request.

  Replacement hinges to be advised by metalwork specialist to ensure no corrosion occurs.

  Gate to be finished to accept new electronic opening system provided by M & E engineer.

- Workmanship:
- Ornamental work: Carefully forged, hand wrought and incised where required to produce the design and effect desired.
- Free ornament: Forged from substantial iron and forge welded where connected to other ironwork.
- Accuracy: Substantially framed together and closely fitted.

EXECUTION

710 INSTALLATION GENERALLY

- Set out and erect:
  - Alignment: Straight lines or smoothly flowing curves.
  - Tops of posts: Following profile of the ground.
  - Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.

  Fixings: All components securely fixed.

715A COMPETENCE

- Operatives: Contractors must employ competent operatives.
- Boundary Works are detailed and complex to be undertaken by operatives of appropriate skill and training for the different elements.

720A SETTING POSTS IN CONCRETE

To be confirmed by engineers detail.

720 SETTING POSTS IN CONCRETE

- Standard: To BS 8500-2.
- Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
- 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.
- Admixtures: Do not use.
- Holes: Excavate neatly and with vertical sides.
- Filling: Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.
- Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

770 SITE CUTTING OF WOOD

- General: Kept to a minimum.
- Below or near ground level: Cutting prohibited.
- 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

- 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.
- Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

790A SITE PAINTING

- Timing: Prepare surfaces and apply finishes as soon as possible after fixing. Ensure paintwork preparation thorough & each coat allowed to dry as manufacturer's recommendation.

Allow for painting galvanised metalwork: primer, undercoat, 2 topcoats matt finish CA instruction

COMPLETION

910 CLEANING

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

920 FIXINGS

- All components: Tighten.
- Timing: Before handover.

930 GATES

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

Q50
Site/street furniture/equipment

Q50 Site/street furniture/equipment

To be read with Preliminaries/ General conditions.

GATES, BARRIERS AND PARKING CONTROLS

160A DRINKING FOUNTAIN PLAYGROUND-

- Manufacturer: HALSEY TAYLOR or similar and approved.
  - Product reference: 4591.
- Type: stone concrete.
- Finish as delivered: grey.

  Accessories/ Features: include ss bowl and spout, 36mm trap. Connections refer to engineering spec..

SITE AND STREET FURNITURE

210 CYCLE STANDS

- Manufacturer: Contractor's choice.
  - Product reference: Sheffield cycle stands.
- Material: steel.
  - Finish: galvanised.
  - Colour: grey galvanised.
- Number of stands: refer to drawing 051-AG-T01(those within cycle shelter not in this count ref. 212A).
- Accessories: -.
- Method of fixing: Root, 300 mm below ground, set in concrete base.

212A CYCLE STORE Entrance to One to One

- Manufacturer: Falco (tel: 01538 380080) or simliar and approved.
  - Product reference: Falco Tel-K measuring 6mx2.9m clad with FSC hardwood with single lockable door on 6m side.
- Material: Aluzinc Steel sheet, hot dip galvanised to BS EN 1SO 1461..
- Accessories: 7 no. Flaco Sheffield Stands 41.5mm tube 900mm widex 800mm high, surface fixed.
- Method of fixing: 400x300m wide Reinforced concrete footing on well compacted ground see Engineers detail SK 20..

213 EXISTING STORE REUSED Courtyard location

Lift and relocate store with bike stands.

Material: Steel sheet

Method of fixing: To be agreed on site. [Allow same footing for Tender as 212A 400x300m wide Reinforced concrete footing on well compacted ground see Engineers detail SK 20.].

220 BENCHESCOURTYARD

- Manufacturer: Woodscape (tel:01254 685185) or similar and approved.
  - Product reference: Woodscape Type 1.
- Material: FSCHardwood.

- Finish: planed oiled.
- Colour: natural timber.

• Size: 2000x400mm, also corner special to be made see drawing 051-AG-D02.
• Accessories/ Special requirements: corner special.
• Method of fixing: ground fixing to manufacturer's recommendation.

230A TABLES & MATCHING BENCH

• Manufacturer: Broxap (Tel:01782 564411) or similar and approved.
- Product reference: Francioli cast concrete 'Picnic Unit'.

• Material: Cast concrete, creamy white.
- Finish: as manufactured.
- Colour: creamy white.

• Size: Bench 1900x400mm high, table 770x1900mm long.
• Accessories/ Special requirements: supplied flat pack for assemly by others..
• Method of fixing: root fixing to manufacturer's recommendation.

INSTALLATION

510 CONCRETE FOUNDATIONS GENERALLY

• Standard: To BS 8500-2.
• Concrete: Standard prescribed, not less than ST2.
• Admixtures: Do not use.
• Foundation holes: Neat vertical sides.
• Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

515 SETTING COMPONENTS IN CONCRETE

• Holes: as drawings.
• Components: Accurately positioned and securely supported.
• Concrete fill: Fully compacted as filling proceeds.
• Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.
• Temporary component support: Maintain undisturbed for minimum 48 hours.

530 PRESERVATIVE TREATED TIMBER

• Surfaces exposed by minor cutting and drilling: Treated by immersion or with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.
• Heavily worked sections: Re-treat.

545 ERECTION OF TIMBER AND PREFABRICATED STRUCTURES

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

550 DAMAGE TO GALVANIZED SURFACES

• Minor damage in areas up to 40 mm²including on fixings and fittings): Make good.

- 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.
  Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

560 SITE PAINTING

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

Q52
Play and sports equipment

Q52 Play and sports equipment

To be read with Preliminaries/ General conditions.

GENERAL

PRODUCTS

560 EXERCISE EQUIPMENT Rear Courtyard

- Manufacturer: Hags or simIlar and approved.
  - Product reference: TIBAS: 8003366.
- Type: Hand cycle, row, dip.
- Materials: steel.
  - Finish: Powdercoated.
- Features: Include interpretation board to explain how to use apparatus.
- Method of fixing: ground fix to manufacturer's standard.

560A PUNCH BAG SUPPORTRear Courtyard

- Manufacturer: Contractor's choice.
  - reference: See drawing 051-AG-DO1.
- Materials: steel.
  - Finish: Powdercoated - orange to match HAGS gym equipment.
- Features: Welded galvanised steel eye..
- Method of fixing: Foundation 600x600x900 deep C20 concrete base case on well compacted ground. .

EXECUTION

710 PLAY EQUIPMENT INSTALLATION GENERALLY

- Standard: To manufacturer's written instructions provided in accordance with BS EN 1176-1.

720 CONCRETE FOUNDATIONS GENERALLY

- Standard: To BS 8500-2.
- Concrete: Designated, not less than GEN 1 or Standard prescribed, not less than ST2.
- Admixtures: Do not use.
- Foundation holes: Neat vertical sides.
- Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

725 SETTING COMPONENTS IN CONCRETE

- Holes: to engineers detail.
- Components: Accurately positioned and securely supported.
- Concrete fill: Fully compacted as filling proceeds.
- Concrete foundations exposed to view: Finished to weathering profile to shed water and trowel smooth.
- Temporary component support: Maintain undisturbed for minimum 48 hours.

750 DAMAGE TO GALVANIZED SURFACES

- Minor damage in areas up to 40 mm²including on fixings and fittings): Make good.
  - Materials: 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.
  - Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

760 SITE PAINTING

- Timing: Prepare surfaces and apply finishes as soon as possible after installing components.

COMPLETION

910 INSPECTION

- Standard: In accordance with equipment manufacturer's maintenance and inspection instructions.
- Timing: 2 weeks prior to date when work is expected to be practically complete.
- Period of notice (minimum): 3 working days.

920 CLEANING

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

930 TESTING

- Standard: To BS EN 1176-1.

940 LABELS

- Standard: To BS EN 1176-1.
- Labels: Provide permanent labelling on all types of play equipment.
- Location: Where visible when erected on site.

950 DOCUMENTATION

- Standard: To BS EN 1176-1.
- Contents:
  - Copies of test reports.
  - General product information.
  - Installation information.
  - Inspection and maintenance information.
- Number of copies: 1.
- Submission: 2 weeks prior to date when work is expected to be practically complete.

970 OPERATING TOOLS

- Tools: Supply tools required for operation, maintenance and cleaning purposes.

R
Disposal systems

R13
Land drainage

R13 Land drainage

To be read with Preliminaries/General conditions.

GENERALLY

100 EXISTING DRAINS AND WATERCOURSES

- Setting out: Before starting work, check invert levels and positions of existing drainage against drawings. Report any discrepancies.
- Drains to be retained: Protect. Maintain normal operation.

100A DRAINAGE DETAIL

- Refer to Engineers detail

DRAINS

211A FILTER DRAINS WITH PIPE

- Trench:
  - Depth: 400mm.
  - Width: 400mm.
- Pipe bedding: Granular material to BS EN 12620, size 4/10.
  - Recycled cotnent of granular material: Contractor's choice.
- Pipes: 100mm perforated land drain wrapped in terram,
  Chanel capped with 50mm no fines concrete..

350 LAYING PIPES

- Weather conditions: Lay pipes in good weather using methods suitable for the site conditions.
  - Plastics pipes: Do not lay or backfill at temperatures lower than 5°.
  - Soil structure: Prevent compaction, smearing, top ponding, rutting and damage.
- General: Lay to line and gradient on a firm bed free from loose soil to give a free-draining installation without backfalls. Do not lay on soil backfill or in slurry.
- Drains closer than 6 m to trees or hedges: Unperforated pipes with positively sealed joints and as-dug backfill.
- Junctions between branches and mains: Purpose made components.
- Upper ends of drain runs: Plug to prevent ingress of soil or animals.
- Backfilling: Do not damage, distort or displace pipes.

EXCAVATING/ BEDDINGS/ SURROUNDS/ BACKFILL

515 EXISTING LIVE LAND DRAINS

- Drains exposed by excavation: Mark positions.
- Cutting out: Carefully break back piped drains to an undisturbed section.
- Reconnection: Connect exposed drain to new work.
- Record drawing: Show position of exposed system and new connections. Submit copy.

525 GRANULAR BEDS

- Compacted thickness (minimum): 50 mm.
  - Laying pipes: Scoop out locally at couplings and sockets and lay pipes digging slightly into bed and resting uniformly on their barrels.

540 GRANULAR SURROUND AND BACKFILL - SURFACE WATER DRAINS

- Material: Clean gravel, broken stone, hard clinker or slag, with no fines, graded 75 to 20 mm or approved recycled material.

800 CLEANING

- General: Thoroughly flush out the whole of the installation with clean water to remove silt and debris immediately before handover.
- Washings and detritus: Dispose of safely. Do not discharge into sewers or watercourses.

V91
Electrical systems - landscape

V91 Electrical systems - landscape

To be read with Preliminaries/ General conditions.

GENERAL

115A EXTERNAL LIGHTING SYSTEM
Read M & E engineers documentation.

Z
Building fabric reference specification

Z11 Purpose made metalwork

To be read with Preliminaries/ General conditions.

PRODUCTS

310 MATERIALS GENERALLY

- Grades of metals, section dimensions and properties: To appropriate British Standards.
  When not specified, select grades and sections appropriate for the purpose.
- Prefinished metal: May be used if methods of fabrication do not damage or alter appearance of finish, and finish is adequately protected.
- Fasteners: To appropriate British Standards and, unless specified otherwise, of same metal as component being fastened, with matching coating or finish.

FABRICATION

515 FABRICATION GENERALLY

- Contact between dissimilar metals in components: Avoid.
- Finished components: Rigid and free from distortion, cracks, burrs and sharp arrises.
- Moving parts: Free moving without binding.
- Corner junctions of identical sections: Mitre.

527A WELDINGBESPOKE GATES & DECORATIVE HIGH LEVEL FENCING.

- Welding procedures:
- Method and standard: Metal arc welding to BS EN 1011-1 and -2..
- Welding Procedure Specification (WPS): Submit copy before commencement of welding.
- Preparation:
- Joint preparation: Clean thoroughly.
- Surfaces of materials that will be self-finished and visible in the completed work: protect from weld splatter.
- Jointing:
- Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks.
- Dissimilar metals: Welding not permitted.
- Strength requirements: Welds to achieve design loads.
- Heat straightening: Submit proposals.
- Complex assemblies: Agree priority for welding members to minimize distortion caused by subsequent welds.
- Tack welds: Use only for temporary attachment.
- Jigs: Provide to support and restrain members during welding.
- Filler plates: Submit proposals.
- Lap joints: Minimum 5 x metal thickness or 25 mm, whichever is greater.
- Weld terminations: Clean and sound.

FINISHING

710 FINISHING WELDED AND BRAZED JOINTS VISIBLE IN COMPLETE WORK

- Standard: To BS EN ISO 8501-3.
- Preparation grade: -.

- Butt joints: Smooth, and flush with adjacent surfaces.
- Fillet joints: Neat.
- Grinding: Grind smooth where indicated on drawings.

745 PREPARATION FOR APPLICATION OF COATINGS

- General: Complete fabrication, and drill fixing holes before applying coatings.
- Paint, grease, flux, rust, burrs and sharp arises: Remove.

780 GALVANIZING

- Standard: To BS EN ISO 1461.
- Preparation:

- Vent and drain holes: Provide in accordance with BS EN 14713-1 and -2. Seal after sections have been drained and cooled.
- Components subjected to cold working stresses: Heat treat to relieve stresses before galvanizing.
- Welding slag: Remove.
- Component cleaning: To BS EN ISO 8501-3.
  Grade: St 2½

Z21 Mortars

To be read with Preliminaries/ General conditions.

CEMENT GAUGED MORTARS

120 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS

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

160 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1 and CE marked.
  - Types: Portland cement, CEM I.
    Portland limestone cement, CEM ll/A-L or CEM ll/A-LL.
    Portland slag cement, CEM II/B-S.
    Portland fly ash cement, CEM II/B-V.
  - Strength class: 32.5, 42.5 or 52.5.
- White cement: To BS EN 197-1 and CE marked.
  - Type: Portland cement, CEM I.
  - Strength class: 52.5.
- Sulfate resisting Portland cement:
  - Types: To BS 4027 and Kitemarked.
    To BS EN 197-1 fly ash cement, CEM ll/B-V and CE marked.
  - Strength class: 32.5, 42.5 or 52.5.
- Masonry cement: To BS EN 413-1 and CE marked.
  - Class: MC 12.5.

180 ADMIXTURES FOR SITE MADE CEMENT GAUGED MORTARS

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

190 RETARDED READY TO USE CEMENT GAUGED MASONRY MORTARS

- Standard: BS EN 998-2.
- Lime for cement:lime:sand mortars: Nonhydraulic to BS EN 459-1.

- Type: CL 90S.

• Pigments for coloured mortars: To BS EN 12878.

• Time and temperature limitations: Use within limits prescribed by mortar manufacturer.

Retempering: Restore workability with water only within prescribed time limits.

210 MAKING CEMENT GAUGED MORTARS

• Batching: By volume. Use clean and accurate gauge boxes or buckets.

- Mix proportions: Based on dry sand. Allow for bulking of damp sand.

• Mixing: Mix materials thoroughly to uniform consistency, free from lumps.

- Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.

• Working time (maximum): Two hours at normal temperatures.

• Contamination: Prevent intermixing with other materials.

400 MAKING HYDRAULIC LIME:SAND MORTARS

LIME:SAND MORTARS

310A LIME:SAND MORTAR MIXES

• Specification: Mortar to match existing in colour and make-up. Confirm with architect and engineer.

360 MAKING LIME:SAND MORTARS GENERALLY

• Batching: By volume. Use clean and accurate gauge boxes or buckets.

• Mixing: Mix materials thoroughly to uniform consistency, free from lumps.

• Contamination: Prevent intermixing with other materials, including cement.

400 MAKING HYDRAULIC LIME:SAND MORTARS

• Mixing hydrated hydraulic lime:sand: Follow the lime manufacturer's recommendations for each stage of the mix.

- Water quantity: Only sufficient to produce a workable mix.

• Working time: Within limits recommended by the hydraulic lime manufacturer.