

Allen Pyke Associates

Soft Landscape and Hard Surface Finishes Specification

Pollards Nursery – Phase I **Lake Lane, Barnham**

Prepared on behalf of:

Redrow Homes Southern Counties

By:

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Landscape Architects

Ref: 2600-SP-01-P2

Date: October 2016



Landscape architecture | Urban design | Environmental planning

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Q

Paving/Planting/Fencing/Site furniture

Q25 Slab/brick/sett/cobble pavings

To be read with Preliminaries/ General conditions.

GENERAL

120 CONCRETE FLAG PAVING SYSTEM TO PRIVATE PATHS

- Subgrade improvement layer: to engineers detail.
 - Compacted thickness: to engineers detail.
- Granular sub-base: to engineers detail.
 - Compacted thickness: to engineers detail.
- Base: to engineers detail.
 - Thickness: to engineers detail.
- Laying course: to engineers detail.
 - Accessories: to engineers detail.
- Paving units: Concrete flags.
- Jointing: to engineers detail.
 - Bond: As indicated on drawings.
- Accessories: To engineers detail.

150 CONCRETE SETT PAVING SYSTEM TO PARKING BAYS

- Subgrade improvement layer: To engineers detail.
 - Compacted thickness: To engineers detail.
- Granular sub-base: To engineers detail.
 - Compacted thickness: To engineers detail.
- Base: To engineers detail.
 - Thickness: To engineers detail.
- Laying course: To engineers detail.
 - Accessories: To engineers detail.
- Paving units: Concrete setts.
- Jointing: To engineers detail.
 - Bond: As indicated on drawings.
- Accessories: To engineers detail.

PRODUCTS

315 CONCRETE FLAGS TO PRIVATE PATHS

- Standard: To BS EN 1339.
 - Manufacturer: Marshalls.
Product reference: Organa - FL593020.
- Recycled content: To manufacturer's specifications.
- Colour: Linen.
 - Finish: Coarse textured.
 - Nominal sizes: 450 x 450 x 50 mm.
- Arrises: Square.
- Water absorption and freeze/ thaw resistance class: To manufacturer's specifications.
- Bending strength class: To manufacturer's specifications.
- Abrasion resistance class: To manufacturer's specifications.
- Slip/ Skid resistance: To manufacturer's specifications.
- Breaking load class: To manufacturer's specifications.

335 CONCRETE SETTS FOR PARKING BAYS FRAMING

- Manufacturer: Marshalls.
 - Product reference: Tegula.
- Recycled content: To manufacturer's specifications.
- Colour: Traditional.
- Finish: To manufacturer's specifications.
- Sizes: To manufacturer's specifications.
- Slip/ Skid resistance: To manufacturer's specifications.
- Integral accessories: To manufacturer's specifications.

335A CONCRETE SETTS FOR SHARED PRIVATE DRIVES FRAMING

- Manufacturer: Marshalls.
 - Product reference: Tegula.
- Recycled content: To manufacturer's specifications.
- Colour: Pennant Grey.
- Finish: To manufacturer's specifications.
- Sizes: To manufacturer's specifications.
- Slip/ Skid resistance: To manufacturer's specifications.
- Integral accessories: To manufacturer's specifications.

335B CONCRETE SETTS FOR PRIVATE DRIVES FRAMING

- Manufacturer: Marshalls.
 - Product reference: Tegula.
- Recycled content: To manufacturer's specifications.
- Colour: Traditional.
- Finish: To manufacturer's specifications.
- Sizes: To manufacturer's specifications.
- Slip/ Skid resistance: To manufacturer's specifications.
- Integral accessories: To manufacturer's specifications.

EXECUTION

620 ADVERSE WEATHER

- General:
 - 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.
 - 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.

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): To engineers specifications.
 - Vehicular traffic (minimum): To engineers specifications.
- Access: Restrict access to paved areas to prevent damage from site traffic and plant.

COMPLETION

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

- Sand dressing: To manufacturer's specifications.
- Final compaction of the surface course: In accordance with BS 7533-3.
- Vacuum cleaning machines: Not allowed.

Q28 Topsoil and soil ameliorants

SYSTEM OUTLINE

- 110 NATURALLY OCCURRING TOPSOIL SYSTEM FOR ALL LANDSCAPE AREAS
- Topsoil: Site sourced topsoil .
 - Ameliorants: As required following topsoil analysis.
 - Accessories: None.
- 120 MANUFACTURED TOPSOIL/ GROWING MEDIA SYSTEM FOR ALL SOFT LANDSCAPE AREAS, WHERE SITE SOURCED TOPSOIL NOT AVAILABLE
- Topsoil/ growing media type: Imported manufactured topsoil.
 - Ameliorants: None.
 - Accessories: None.

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.
- 305 PERMITTED MATERIALS
- Materials: Bark and Composted green waste.
 - Give notice: before ordering or using.
 - Declaration of compliance: Not required.
- 310 MATERIALS NOT PERMITTED
- Materials: 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.

330A IMPORTED MANUFACTURED TOPSOIL/ GROWING MEDIUM FOR TREE PITS

- Type: Urban tree planting medium.
 - Grade: Within the parameters of 'sandy loam' textural class.
- Source: GT Specifier / Green Tech.
 - Product reference: To manufacturer's specification.

390 FERTILIZERS TO BE INCORPORATED INTO TOPSOIL AND MANUFACTURED TOPSOIL TO SUIT SOIL REPORT RECOMMENDATIONS

- Type: Slow release fertilizer and Sanitized and stabilized compost fertilizer.
- Source: Contractor's choice.
 - Product reference: Contractor's choice.

EXECUTION

610 TOPSOIL ANALYSIS

- Soil to be analysed: onsite topsoil.
- Soil analyst: Tim O'Hare Associates LLP
Howbery Park
Wallingford
Oxfordshire
OX10 8BA
T: +44 (0)1491 822664 .
- Samples: Collect in accordance with BS 3882.
- Submit:
 - Declaration of analysis: Chemical analysis and contaminants and Nutrient content, pH value and textural classification .
 - Report detailing soil analyst's recommendations.

620 IMPORTING TOPSOIL

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

625 SAMPLE LOADS FOR IMPORTED TOPSOIL

- Deliver to site a sample load: of not less than 5 m³.
- Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - Notice period: 7 days.

630 DOCUMENTATION FOR IMPORTED TOPSOIL FOR ALL SOFT LANDSCAPE AREAS

- 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 MATERIALS FOR IMPORTED SOIL IMPROVERS
- 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: 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.
- 660 GRADING SUBSOIL
- General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
 - 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.
 - Areas of thicker topsoil: Excavate locally.
 - Avoid over compaction.
- 665A SUBSOIL SURFACE PREPARATION
- General: Excavate and/ or place fill to required profiles and levels.
 - 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 30mm.
 - Remove from site: Arisings, contaminants and debris and Builders rubble.
- 670 INSPECTING FORMATIONS
- Give notice: Before spreading topsoil for lawn areas and planting beds.
 - Notice period: 7 days.
- 680 SURPLUS TOPSOIL TO BE RETAINED
- Generally: Spread and level on site:
 - Locations: Any areas where topsoil is required for new planting.
 - Protected areas: Do not raise soil level within root spread of trees that are to be retained.

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.

690 TOPSOIL STORAGE HEAPS

- Location: Throughout the site.
- Height (maximum): 1.0 m.
- Width (maximum): 4.0 m.
 - Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
- Protection:
 - Do not place any other material on top of storage heaps.
 - Do not allow construction plant to pass over storage heaps.
 - Prevent compaction and contamination, by fencing and covering as appropriate.

695 CULTIVATION

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
 - Depth: 150 mm.
 - Particle size (maximum): 15 mm.
 - Timing: Within a few days before planting.
 - Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels:
 - 25 mm above adjoining paving or kerbs;
 - 50 mm above adjoining lawns; and
 - Minimum 150 mm below dpc of adjoining buildings.
- Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 30mm.
- Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

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 less 3%, to BS 1377-2.

710 SPREADING TOPSOIL

- Temporary roads/ surfacing: Remove before spreading topsoil.
- Layers:
 - Depth (maximum): 150 mm.
 - Gently firm each layer before spreading the next.
- Depths after firming and settlement (minimum): Grass areas: 100mm, Planted areas: 450mm, Tree pits: no deeper than depth of root ball/container.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

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: 30 mm.
- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: Higher than adjoining grass areas by 50 mm.
- Within root spread of existing trees: Unchanged.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

805A APPLYING SOIL AMELIORANT AS REQUIRED

- Type: TO SUIT SOIL REPORT RECOMMENDATIONS.
- Locations: All planting areas.
- Timing: Prior to cultivation.

820 APPLYING GENERAL FERTILIZER SLOW RELEASE

- Locations: All planting areas.
- Application: Spread evenly, carefully incorporating below mulch materials.
 - Timing: Immediately before cultivation.
 - Application rate: As manufacturer's recommendations..
 - Other requirements: None.

COMPLETION

905 APPLYING MAINTENANCE FERTILIZER

- Time of year: March or April.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Rate: To suit soil report recommendations.

Q30 Seeding/turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS

115 SEEDED AND TURFED AREAS

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

120 CLIMATIC CONDITIONS

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

145 WATERING

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

150 WATER RESTRICTIONS

- 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

- Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Preparing seed bed.
 - Seeding or turfing.
 - Visiting site during maintenance period.
- Period of notice: 1 week.

170 SETTING OUT

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

PREPARATION

210 HERBICIDE FOR ALL GRASSED AREAS

- Type: Suitable for suppressing perennial weeds.
- Timing: Allow fallow period before cultivation.
 - Duration: As manufacturer's recommendation.

212 SEED BED CLEANING BEFORE SOWING ALL GRASSED AREAS

- Operations: Kill pernicious weeds with selective contact herbicide..

280 FINAL CULTIVATION

- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
 - Depth: 25 mm.
 - Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
 - Remove surface stones/earth clods exceeding:
General areas: 10 mm.
Fine lawn areas: 10 mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

SEEDING

311 GRASS SEED FOR ALL AMENITY GRADE GRASS AREAS

- Supplier: British Seed Houses.
 - Mixture reference: A19 (All Purpose Landscaping).
- Application rate: 34-50 g/m².

312B SEED MIXTURE FOR WILDFLOWER MEADOW AREAS

- Supplier: Emorsgate Seeds.
 - Mixture reference: EM3 - Special General Purpose Meadow Mixture.
- Origin (as defined in the National Plant Specification): Native UK.
- Application rate: 4 g/m².

319 QUALITY OF SEED FOR ALL GRASSED AREAS

- Freshness: Produced for the current growing season.
- Certification: Blue label certified varieties.
 - Standard: EC purity and germination regulations.
 - Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
- Samples of mixtures: Submit when requested.

330 SOWING

- General: Establish good seed contact with the root zone.
- Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
 - Distribution: 4 equal sowings.

335 GRASS SOWING SEASON

- Grass seed generally: April to October.

336 WILDFLOWER SOWING SEASON

- Wildflower seed generally: March to May or August to October.

PROTECTING/CUTTING

530A FIRST CUT OF AMENITY GRADE GRASSED AREAS

- Timing: When grass is reasonably dry.
 - Height of initial growth: 40-75 mm.
- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: 40 mm.
- Mower type: Contractor's choice.
- Arisings: Remove from site.

540A FIRST CUT OF WILDFLOWER MEADOW AREAS

- Height of initial growth: As per Landscape Maintenance Specification 2600-MP-02.
- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: As per Landscape Maintenance Specification 2600-MP-02.
- Mower type: As per Landscape Maintenance Specification 2600-MP-02.
- Arisings: As per Landscape Maintenance Specification 2600-MP-02.

590 CLEANLINESS

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

MAINTENANCE

610 FAILURES OF SEEDING/TURFING

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

620A MAINTAINING GENERAL GRASSED AREAS

- Duration: Carry out the following operations from completion of seeding/ turfing until: practical completion.
- Maximum height of growth at any time: 75 mm.
- Preparation: Before each cut remove all litter and debris.
- Cutting: As per LMS (Landscape Maintenance Specification) 2600-MP-02.
 - Arisings: Remove.
- Bulb planting areas: Do not cut until bulb foliage has died down.
- Trimming: All edges.
 - Arisings: Remove.
- Weed control: Substantially free of broad leaved weeds.
 - Method: Application of a suitable selective herbicide.
- Stones brought to the surface: Remove regularly.
 - Size: Exceeding 25 mm in any dimension.
- Areas of settlement: Make good.
- Watering: Contractor's choice.

Q31 External planting

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 50 mm.
 - Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
 - Vegetation: Clear any scrub to ground level by flail mowing and remove arisings; retain and protect trees indicated on drawings.
 - Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
 - Additional requirements: Remove remnants of previous development.
- 118 SOIL CONDITIONS
- Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
 - 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
- 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.
- 165 PREPARATION, PLANTING AND MULCHING MATERIALS
- General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
 - Certification of source, analysis, suitability for purpose and absence of harmful substances: Submit.
 - Certified materials: Composted green waste and Sanitized and stabilized compost.
 - Give notice before ordering or using.
- 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: Grown in the United Kingdom for at least one growing season, unless otherwise approved.
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°C.
- 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.

245A LABELLING AND INFORMATION

- General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:
 - Full botanical name.
 - Total number.
 - Number of bundles.
 - Part bundles.
 - Supplier's name.
 - Employer's name and project reference.
 - Plant specification, in accordance with scheduled National Plant Specification categories.
- Additional information: Submit: Country of origin and Date supplied and consignment details or reference.

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: Coextruded polyethylene bags with black interior and white exterior.
- Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.
- 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.

285 PROTECTION OF EXISTING GRASS

- General: Protect areas affected by planting operations using boards/ tarpaulins.
 - Excavated or imported material: Do not place directly on grass.
 - Duration: Minimum period.

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 HERBICIDE TO CLEAR OVERGROWN BEDS

- Locations: All planting areas.
- Type: Suitable for suppressing perennial weeds.
- Timing: Allow fallow period before cultivation.
 - Duration (minimum): As manufacturer's recommendation.

305 WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS

- Locations: All planting areas.
- General: Prevent weeds from seeding and perennial weeds from becoming established, by contractor's choice of herbicide.

375 CULTIVATION

- Compacted topsoil: Break up to full depth.
- Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
 - Depth: 150 mm.
 - Timing: Within a few days before planting.
 - Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels:
 - 25 mm above adjoining paving or kerbs;
 - 50 mm above adjoining lawns; and
 - Minimum 150 mm below dpc of adjoining buildings.
- Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 30mm.
- Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

400 RANDOM PLANT LAYOUT TO ALL BEDS

- Spacing: Evenly, avoiding straight lines.
- Density: As plant schedule.

401 REGULAR PLANT LAYOUT TO HEDGE PLANTING

- Spacing: In regular, staggered rows.
- 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 Not required.
- Backfilling material: Reuse excavated material..

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.

457 PLANTING AQUATIC/ MARGINAL PLANT PLUGS

- Handling: Keep plants watered and in shade until planted. Do not allow to dry out.
- Preparation: Remove coarse weeds etc. from planting sites.
- Planting sites: To attenuation basins. Refer to 2600-PP-10-12.
- Waterproofing membrane below soil: Do not puncture.
- Planting: Into a hole to suit plug size and shape. Create a cleft at bottom of hole to improve rooting. Gently firm plant into hole to ensure good root hold into substrate.

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.

480A 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.

485 MULCHING PLANTING BEDS

- Material: Medium grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
 - Recycled content: Submit proposals.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 50 mm depth.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

PLANTING TREES

505A TREE PITS

- Sizes: NO DEEPER THAN THE ROOTBALL/CONTAINER, MIN 75mm wider than root ball.
- Sloping ground: Maintain horizontal bases and vertical sides with minimum depth throughout.
- Pit bottoms: DO NOT BREAK UP UNLESS DRAINAGE ISSUE IS APPARENT AND FOLLOWING INSTRUCTION - SEEK CLARIFICATION FROM LANDSCAPE ARCHITECT BEFORE IF UNSURE.
- Pit sides: Scarify.
- Backfilling material: Reuse excavated material, maintaining top and sub soil horizons.
- Accessories: Perforated plastics irrigation/ ventilation pipe.

512 TREE PIT ACCESSORIES

- Locations: All tree pits.
- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Type: Perforated plastics irrigation pipe, 50 mm diameter, in circle above and around sides of rootball, with plastics cap.

525A EXTRA HEAVY STANDARD TREES

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

535 STAKING GENERALLY

- Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
 - Preservative treatment: Not required.
- Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
- Stake size (minimum): 50 mm diameter.

575 SHORT DOUBLE STAKING FOR STANDARD TREES

- Staking: Drive stakes vertically at least 300 mm into bottom of pit on either side of tree position before planting.
 - Backfilling: Consolidate material around stakes.
- Height of stakes: Cut to approximately 600 mm above ground level.
- Cross bar: Flexible webbing within 25 mm of top of stake.
 - Firmly fix on windward side of tree and as close as possible to stem.
- Ties: Biodegradable, adjustable ties.
- Tying: Secure tree firmly but not rigidly to cross bar.

586 TREE BACKFILLING MATERIAL

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required.
- Ameliorant/ Conditioner: Sanitized and stabilized compost.
 - Application rate: To soil report recommendations.
- Fertilizer: Slow release.
 - Application rate: To suit soil report recommendations.

590 MULCHING TREES

- Material: Medium grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
 - Recycled content: Submit proposals.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 50mm depth, in a circular area of 500 mm radius measured from the tree stem.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710 MAINTENANCE

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

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, or by use of approved non-residual herbicides where weeds are persistent.
- 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: At each scheduled maintenance visit.
- 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: Contractor's choice.

755 PLANTING MAINTENANCE - FERTILIZER

- Time of year: March or April.
- Fertilizer: Slow release.
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Application rate: To suit soil report 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.

780 MAINTENANCE INSTRUCTIONS

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

790 FINAL MULCHING

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

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

220A METAL ESTATE RAILING to public open space

- Manufacturer: Jackson's.
 - Product reference: Estate Railing
- Standard: To BS 1722-8 -.
- Height: 1200 mm.
- Posts and bars:
 - Corner/ End posts: 50x25mm Circular hollow section.
 - Bars: 19mm Circular hollow section
 - Finish: Powder coated to BS 1722-16, BLACK.
 - Colour: As supplied .
 - Centres of posts (maximum):
- Method of setting posts:
 - Intermediate/ Joiner posts: Driven.
 - End and corner posts: Set in rammed earth to a minimum depth of 550 mm.
- Accessories: None.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-8.

250A PREFABRICATED WOOD PANEL FENCING

- Manufacturer: Jackson's.
 - Product reference: 637300.
- Standard: To BS 1722-11.
- Type of infill: Vertical boards, lapped.
 - Treatment: As supplier.
 - Finish: -.
- Height: 1.8m.
- Posts: Wood.
 - Treatment: To provide a 25 year service life .
 - Finish: As per manufacturer.
- Method of setting posts:
 - Hole depth: As per suppliers guidance.
 - Concrete depth: Filled to not less than half the hole depth.
- Accessories: -.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-11.

GATES, POSTS AND STILES

550A WOOD GATES

- Manufacturer: Jacksons, Flat top Featherboard Gates.
- Standard: To BS 5709.
- Wood: Softwood.
- Treatment: As per supplier's recommendation
: --.
- Adhesive: Synthetic resin to BS EN 301, type 1.
- Workmanship: As section Z10.
- Fittings: -.
 - Finish: -.
- Method of fixing: To suppliers detail.
- Accessories: -.

560A METAL ESTATE RAILING GATE 1.2M WIDE -

- Manufacturer: Jacksons.
- Standard:
 - Steel palisade gates: To BS 1722-12.
- Manufacturer: Jacksons.
 - Product reference: 079400BM.
- Materials and workmanship: As section Z11.
- Finish: Polyester powder coated, as section Z31 and Powder coated to BS 1722-16, BLACK.
 - Colour: As supplied .
- Jointing: Welded.
- Fittings: All galvanised or stainless steel as suppliers specification.
- Finish: -.
- Method of fixing: As per suppliers detail.
- Accessories: -.

560B METAL ESTATE RAILING GATE 3.0M WIDE -

- Manufacturer: Jacksons.
- Standard:
 - Steel palisade gates: To BS 1722-12.
- Manufacturer: Jacksons.
 - Product reference: 079400BM.
- Materials and workmanship: As section Z11.
- Finish: Polyester powder coated, as section Z31 and Powder coated to BS 1722-16, BLACK.
 - Colour: As supplied .
- Jointing: Welded.
- Fittings: All galvanised or stainless steel as suppliers specification.
- Finish: -.
- Method of fixing: As per suppliers detail.
- Accessories: -.

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.

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.

730 EXPOSED CONCRETE FOUNDATIONS

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

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.