



L I Z A R D

Landscape Design and Ecology

LANDSCAPE WORKS SPECIFICATION

GRANGE ROAD

Netley, Hampshire

Stratland Estates

Prepared by	AS
Approved by	KM
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1.0 SECTION F MASONRY

F10 Brick/ Block Walling

Types of walling:

110 Clay Facing Brickwork: To Pumping Station

- Bricks: To BS EN 771-1.
 - Manufacturer: Contractor to provide proposals.
 - Product reference: Locally sourced, F2/S2 red clay facing bricks.
 - Recycled content: Permitted.
 - Special shapes: N/A.
- Mortar:
 - Standard: To BS EN 998-2.
 - Mix: To Engineer's specification
 - Additional requirements: Use hydrated lime cement.
- Bond: Flemish.
- Joints: Bucket handle.
- Features: On edge capping with double tile creasing.

Workmanship generally:

430 Conditioning of Clay 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.

500 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 perpend: Butted.
- Bond where not specified: Half lap stretcher.
- Vertical joints in brick and concrete block facework: Even widths. Plumb at every fifth cross joint.

635 Jointing:

- Profile: Consistent in appearance.

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°C and falling or unless it is at least 1°C and rising.
 - In hydraulic lime:sand mortars when at or below 5°C and falling or below 3°C and rising, or as manufacturer's/ supplier's recommendations.
 - In thin layer mortar 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:***710 The Term Facework:**

- Definition: Applicable in this specification to all brick/ block walling finished fair.
 - Painted facework: The only requirement to be waived is that relating to colour.

745 Masonry Sample Panels:

- Sampling frequency: A panel for each type and delivery of masonry unit.
- Selection of masonry units: Reasonably representative of the average quality of the whole order to be delivered.
- Panel types: As clause 740.

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 features 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.

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.

2.0 SECTION Q PAVING / PLANTING / FENCING / SITE FURNITURE**Q28 Topsoil and Soil Ameliorants**

System Outline:

116 Soil System for Grass Swards: For Wildflower Meadows

- Composition:
 - Soil: Imported topsoil to BS 3882:2015; low-fertility specific-purpose topsoil.
 - Ameliorants: None.
 - Accessories: None.
- Other requirements: No ameliorants or fertilizers to be used where wildflower grassland seed mixes are to be sown.

135 Planting Bed Soil System: For Feature Planting

- Composition:
 - Soil: Imported topsoil to BS 3882:2015; multi-purpose topsoil.
 - Ameliorants: None.
 - Accessories: None.

135 Planting Bed Soil System: Native Planting

- Composition:
 - Soil: Site sourced topsoil and imported topsoil to BS 3882:2015; multi-purpose topsoil.
 - Ameliorants: None.
 - Accessories: None.

145 Plant Pit Backfilling Soil System: For Tree Pits

- Composition:
 - Soil: Imported topsoil to BS 3882:2015; multi-purpose topsoil.
 - Ameliorants: Organic materials or Mycorrhizal fungi.
 - Accessories: None.

155 Mulching and Top Dressing System: For All Planting Areas

- Composition:

- Material: Well composted organic material, wood chips, or bark, shall be free of pests, disease, fungus, weeds and foreign material depth; to 75 mm;
- Organic mulch shall consist of graded fines to a maximum particle size of 40mm with approximately 70% particle size 5mm to 40mm, 30% particle size less than 5mm.

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: Composted green waste, wood waste.
- Give notice: before ordering or using.
- Declaration of compliance in accordance with BS EN 13650: Required.

310 Materials Not Permitted

- Materials: Products containing peat.

315 Imported Topsoil to BS 3882:2015 – For Feature Planting Beds

- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- Standard to BS 3882:2015 'Specification for topsoil and requirements for use'.
- Classification: Multi-purpose.
 - Grade: Within the parameters of 'sandy loam' textural class.
 - Maximum size of stones in any dimension: 20 mm;
 - Sand Content between 65 and 70 % of volume.
- Source: Source: Bourne Amenity Ltd (or equal and approved); The Wharf, Newenden, Kent, TN18 5QG; Tel: 01797 252299; Fax: 01797 253115; email: enquiries@bourneamenity.co.uk; Web: www.bourneamenity.co.uk
 - Product reference: TS6 – Multi-Purpose Top Soil.

315 Imported Topsoil to BS 3882:2015 – For Tree Pits.

- Standard to BS 3882:2015 'Specification for topsoil and requirements for use'.
- Classification: Multi-purpose.
 - Grade: Within the parameters of 'sandy loam' textural class.
 - Maximum size of stones in any dimension: 20 mm;
 - Sand Content between 65 and 70 % of volume.
- Source: Source: Bourne Amenity Ltd (or equal and approved); The Wharf, Newenden, Kent, TN18 5QG; Tel: 01797 252299; Fax: 01797 253115; email: enquiries@bourneamenity.co.uk; Web: www.bourneamenity.co.uk
- Product reference: TS6 – Multi-Purpose Top Soil.

*Execution***605 Site Investigation**

- Report: See section D20.

625 Sample Load: For Imported Topsoil

- Deliver to site a sample load: of not less than 1 m³.
- Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - Notice period: 2 days.

630 Documentation for Imported Topsoil

- 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.

630 Documentation for Preparation Materials: For Organic Materials

- Timing: Submit at handover.
- Contents:
 - Full description of all components.
 - Record of source for all components.
 - Analyst's report for each test carried out.
 - Supplier's declaration of compliance with BSI PD CR 13456.
- Number of copies: 1.

650 Notice

- Giving notice before:
 - Setting out.
 - Spreading topsoil.
 - Applying herbicide.
 - Applying fertilizer.
 - Visiting site during maintenance period.
- Period of notice: Two working days.

655 Mechanical Tools

- Restrictions: Do not use within 500 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.

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.

670 Inspecting Formations

- Give notice: Before spreading topsoil for all planting beds.
- Notice period: 2 days.

690 Topsoil Storage Heaps

- Location: Temporary topsoil location to be agreed on site with the Landscape Architect;
- Height (maximum): 1.0 m;
- Width (maximum): To be agreed on site with the Landscape Architect.
 - 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.

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 1377-2:1990.

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): Planting Areas: 300 mm depth.
- 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.

718 Final Cultivation: For Planting Areas

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
- Depth: 300 mm.
- Particle size (maximum): 2 – 8 mm.
- Timing: Within a few days before planting.
- Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: Do not alter ground levels within RPAs of existing trees.
- Undesirable material brought to the surface:
 - Remove visible weeds.
 - Remove roots and large stones with any dimension exceeding 50 mm.

718 Final Cultivation: For Tree Planting

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
- Depth: 300 mm.
- Particle size (maximum): 2 – 8 mm.
- Timing: Within a few days before planting.
- Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Undesirable material brought to the surface:
 - Remove visible weeds.
 - Remove roots and large stones with any dimension exceeding 50 mm.

720 Finished Levels of Topsoil after Settlement

- Above adjoining paving or kerbs: N/A.
- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: 75 mm below adjacent paved areas.
- Seeded areas: 25 mm below adjacent paved areas.
- Within root spread of existing trees: and shrubs to be retained: Do not dig or cultivate.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

845 Applying Loose Mulch

- Timing: Immediately after planting.
- Preparation: Ensure that soil is thoroughly moistened, applying water where necessary.
- Coverage of mulch (minimum):
 - Planting beds (depth): 75 mm depth.
 - Trees: In a circular area of 500 mm radius measured from the tree stem.
 - Container planting: 75 mm.
- Finished level of mulch: 25 mm below adjacent hard landscape surfaces.

Q30 Seeding / Turfing*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: 2 days.

170 Setting Out

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

*Preparation***210 Herbicide: for Wildflower Meadows & Native Tree and Shrub Planting**

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

212 Seed Bed Cleaning Before Sowing: Wild Flower Grassland

- Operations: As seed supplier's recommendations.

250 Soil Requirements:

- Type:
 - Seeded areas: Existing topsoil.
 - Turfed areas: Existing topsoil.

*Seeding:***311 Grass Seed: For Grass Seeded Amenity Areas in POS**

- Supplier: Germinal GB (or equal and approved),
Camp Road, Witham St. Hughs, Lincoln, LN6 9QJ,
Tel: +44 (0) 1522 868714, Fax: +44 (0) 1522 868095, Email:
lincoln@germinal.com, Web: <https://www.germinal.com>
- Mixture reference: 'A9 (General Outfield)'.
- Rate of application: 35g/m².
- For designated amenity grassland seeded areas refer to *Detailed Planting Plan drawings LLD2859 -LAN-DWG-200*.

311 Grass Seed: For Grass Seeded Amenity Areas in Domestic Gardens

- Supplier: Germinal GB (or equal and approved),
Camp Road, Witham St. Hughs, Lincoln, LN6 9QJ,
Tel: +44 (0) 1522 868714, Fax: +44 (0) 1522 868095, Email:
lincoln@germinal.com, Web: <https://www.germinal.com>
- Mixture reference: 'A19 (All-purpose Landscaping)'.
- Rate of application: 50g/m².

312 Seed Mixture: Wildflower Meadow to Site Boundary

- Supplier: Emorsgate Seeds (or equal and approved)
 - Contact: Limes Farm, Tilney All Saints, King's Lynn, Norfolk, PE34 4RT; Email: enquiries@emorsgateseeds.com
Web: <https://wildseed.co.uk/home>
Mixture Reference: 'EM4 - Meadow Mixture for Clay Soils'
 - Origin: Native UK.
 - Application rate: 4g / m²
 - Other requirements:
 - Wildflower grass seeded areas shall not be subject to any soil additives, ameliorants or conditioners.
 - Ground should not be highly fertile for this wildflower seed mix.
- For designated wildflower grassland seeded areas refer to Detailed Planting Plan drawings LLD2859 -LAN-DWG-200.

312 Seed Mixture: Wildflower Meadow to Shaded Areas (along Southern Boundary)

- Supplier: Emorsgate Seeds (or equal and approved)
 - Contact: Limes Farm, Tilney All Saints, King's Lynn, Norfolk, PE34 4RT; Email: enquiries@emorsgateseeds.com
 - Web: <https://wildseed.co.uk/home>
 - Mixture Reference: 'EH1 – Hedgerow Mixture'
 - Origin: Native UK.
 - Application rate: 4g / m²
 - Other requirements:
 - Wildflower grass seeded areas shall not be subject to any soil additives, ameliorants or conditioners.
 - Ground should not be highly fertile for this wildflower seed mix.
- For designated wildflower grassland seeded areas refer to Detailed Planting Plan drawings LLD2859 -LAN-DWG-200.

312 Seed Mixture: Wildflower Meadow to Streetscape

- Supplier: Emorsgate Seeds (or equal and approved)
 - Contact: Limes Farm, Tilney All Saints, King's Lynn, Norfolk, PE34 4RT; Email: enquiries@emorsgateseeds.com
 - Web: <https://wildseed.co.uk/home>
 - Mixture Reference: 'EL1 – Flowering Lawn Mixture'
 - Origin: Native UK.
 - Application rate: 4g / m²
 - Other requirements:
 - Wildflower grass seeded areas shall not be subject to any soil additives, ameliorants or conditioners.
 - Ground should not be highly fertile for this wildflower seed mix.
- For designated wildflower grassland seeded areas refer to Detailed Planting Plan drawings LLD2859 -LAN-DWG-200.

319 Quality of Seed: For Grassland Seeded 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: Surface sown by machine or broadcast by hand with 2 equal sowings at right angles to each other in overlapping sections.
 - Do not incorporate or cover the seed but firm in with a roll, or by treading, to give good soil/seed contact.
- Preparation: Aim to control weeds and produce a good seed bed before sowing using repeated cultivation or a herbicide; keeping disturbance to the minimum required to expose fresh soil.

335 Grass Sowing Season

- Grass seed generally: April to June (September)

336 Wildflower Sowing Season

- Wildflower seed generally: March to May or August to October.
- Note: can be sown at other times of the year if there is sufficient warmth and moisture.
- Note: Bulk up the seed with inert carrier e.g. sand to make distribution easier.

340 Pre-Emergent Herbicide: For Wildflower Meadows

- Standard: Pesticide Safety Directorate approved.
- Application rate: In accordance with manufacturer's written recommendation.
- Timing: Immediately after sowing.

350 Turfing

- Standard: To BS 3969, with no perennial ryegrass; Seed mix: Similar to seeded areas.
- Timing: Before sowing.
- Preparation: Rake back a 750 mm wide margin around prepared seed beds. Level of seed bed: Married in with turf.
- Placement: Single row laid end to end and trimmed to a line.
- Watering: On completion.

Turfing:

400 Cultivated Turf: For Detention Basin

- SuDS Turf. Product code: WFT-SUD-37
- Supplier: Wildflower Turf Ltd. Ashe Warren Farm, Overton Basingstoke, Hants, RG25 3AW.
- Turf size: 0.64 x 1 (0.64m²)
- Watering: in the first two weeks after laying to prevent drying out.
- Origin (as defined in the National Plant Specification): Native UK.

420 Delivery and Storage

- Timing: Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist.
- Frosty weather or waterlogged ground: Do not lift turf.
- Delivery: Arrange to avoid need for excessive stacking.
- Stacking height (maximum): 1 m.
- Dried out or deteriorated turf: Do not use.

423 Inspection of Turf

- Give notice: Before lifting turf for lawns.

430 Turfing Generally

- Time of year: Autumn or early winter.
- Time of laying:
 - Spring and summer: Within 18 hours of delivery.
 - Autumn and winter: Within 24 hours of delivery.
- Weather conditions: Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.
- Working access: Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.
- Jointing: Laid with broken joints, well butted up. Do not stretch turf.
- Edges: Whole turfs, trimmed to a true line.
- Adjusting levels: Remove high spots and fill hollows with fine soil.
- Consolidating: Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.
- Dressing, brushed well in to completely fill all joints: Sandy loam.
- Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.

Protecting / Cutting:

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.

Q31 External Planting

To be read with Preliminaries / General Conditions.

General Information / Requirements

112 Site Clearance

- 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 surface vegetation in areas shown on drawings using suitable non-residual herbicide.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.

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

- Rootballed Deciduous Trees and Shrubs: Late October to Late March;
- Bare-rooted Trees and Shrubs / Whips and Transplants: Late October to Late March.
- Conifers and evergreens: September / October or April / May.
- Herbaceous plants (*including aquatic and marginal*): September / October or March / April.
- Container grown plants: At any time if ground and weather conditions are favorable.
 - 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.

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: 2 days.

170 Soil Requirements

- Type:
 - Tree pits and other backfilling: imported multi-purpose topsoil to BS 3882:2015.
 - Planting areas: imported multi-purpose topsoil to BS 3882:2015.
 - Mulch applied after planting: Mulching and top dressing system, as section Q28.

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*.

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.

245 Labelling and Information

- General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labeling 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 on request: Type of container.

255 Plants / Trees Reserved at Supplier's Premises

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

256 Native and Ornamental Tree Planting

- Types/ Species: As LLD2859-LAN-SCH-001 – Detailed Plant Schedule and Specification.
- Stock: Standard (Selected).
- Supplier:
 - Barcham; or equal and approved.
 - Contact: Barcham Trees PLC, Eye Hill Drove, Ely, Cambridgeshire, CB7 5XF. Tel: 01353 720748; Fax: 01353 723060; Email: sales@barchamtrees.co.uk Web: <http://www.barcham.co.uk/>

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.
- Further alternatives: Proposed substitutions may not be acceptable and submission of further alternatives may be required.
- 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: Black polyethylene bags.
- 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.

290 Surplus Material

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

*Preparation of Planting Beds / Planting Materials:***305 Weed Control: For Invasive Non-Native Weeds**

- Location: All planting areas.
- General: Prevent weeds from seeding and perennial weeds from becoming established, by hand weeding.

*Planting Shrubs / Herbaceous Plants / Bulbs***401 Regular Plant Layout: To All Planting Areas**

- Spacing: As drawings LLD2859-LAN-DWG-200 – Detailed Planting Plan;
- Density: As LLD2859-LAN-SCH-001 – Detailed Plant Schedule and Specification.

405 Shrub Planting Pits (Ornamental and Defensive Planting)

- Timing: Excavate 1-2 days (maximum) before planting.
- Sizes: two times as large as the diameter of the root ball/ container and no deeper than roots.
- Pit bottom improvement: Break up to a depth of 150 mm.
- Backfilling material: Reuse excavated material if not highly compacted and mix with imported topsoil.

420 Climber Plants / Vertical Planting

- Support: weldmesh fence.
- Timing: Excavate 1-2 days (maximum) before planting.
- Sizes: two times as large as the diameter of the root ball/ container and no deeper than roots.
- Pit bottom improvement: Break up to a depth of 150 mm.
- Location: Refer to drawings *LLD2859-LAN-DWG-200*.
- Plant centres: 1.5m.
- Backfilling material: Reuse excavated material if not highly compacted and mix with imported topsoil.

470A Formal Hedge Planting

- Shrubs for hedges: Consistent in species, cultivar, clone and height to ensure a uniform hedge. Refer to LLD2859-LAN-SCH-001 – Detailed Plant Schedule and Specification.
- Planting: In a trench, twice as wide as size of hedge trough. Plant container-grown stock no deeper than how grown in nursery. Hedge offset from any walls min. 30 cm and min. 10 cm off foundations. Min.

30 cm topsoil overlay required on top of wall foundations. Ensure min. 60 cm rooting depth for hedges/ shrub planting.

- In poorly drained soil, ensure land drain along hedge, away from wall foundations.

470B Instant Hedge around Pumping Station

- Shrubs for hedges: Consistent in species, cultivar, clone and height to ensure a uniform hedge. Refer to LLD2859-LAN-SCH-001 – Detailed Plant Schedule and Specification.
- Planting: In a trench, twice as wide as size of container. Plant troughs no deeper than how grown in nursery. Hedge offset from Pumping Station wall min. 30 cm and min. 10 cm off foundations. Min. 30 cm topsoil overlay required on top of wall foundations. Ensure min. 60 cm rooting depth for hedge.
- In poorly drained soil, ensure land drain along hedge, away from wall foundations.

471 Naturalized Hedges

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

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.

Planting Trees

505 Tree Pits

- Size:
 - Pit width: two times as large as the diameter of the tree rootball.
 - Depth: No deeper than the depth of the tree rootball.
 - Refer to: BS8545:2014 – 'Trees: From Nursery to Independence in the Landscape – Recommendations'.
- 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 150 mm.
- Treatment: Soil ameliorant worked into pit bottoms.
- Pit sides: Scarify.
- Backfilling material: Plant pit backfilling soil system, as section Q28.

512 Tree Pit Irrigation and Ventilation Accessories:

Locations: To all proposed trees within the streetscape.

- Manufacturer: GreenBlueUrban Ltd (or equal and approved), Northpoint, Compass Park, Junction Road, Bodiam TN32 5BS, Telephone: 01580 830 800, e-mail: enquiries@greenblueurban.com.
 - Product reference: RootRain ArborVent.

Type: perforated plastic pipe with heavy-duty steel inlet.

Pipe diameter: 60 mm.

Ring diameter: 3.2 m; min. 12 m length.

Inlet: Stainless Steel; 100x100 mm.

Installation:

- Pipe: Lay in loop above root ball with slight fall away from inlet pipe. Trim length to ensure a close fit in the tree pit. Connect both ends of pipe securely into plastics tee junction on inlet.
- Top cap of inlet: Protruding slightly above finished surround level.
- Backfill material: Carefully compact in layers.

526 Underground Guying to Multi-Stem Trees.

- Manufacturer: Platipus Anchors Limited (or equal and approved)
Kingsfield Business Centre, Philanthropic Road, Redhill, Surrey, RH1 4DP, England Tel: 01737 762300, Fax: 01737 773395, E-mail: info@platipus-anchors.com.
- Product reference: Plati-Mat RF3RDMP.
- Anchoring system: 3 no kerbstones or sleepers as anchor points.
- Installation: Ensure tree is positioned correctly and vertically prior to tightening guy line tensioners.

546 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: To provide a 20 year service life.
- Nails: To BS 1202-1, galvanized, minimum 25mm long and with 10mm diameter heads.
- Minimum stake sizes: 75mm diameter.

570 Single Staking For: Selected Standard Stock Trees

- Staking: Drive stakes vertically at least 300 mm into bottom of pit before planting.
 - Backfilling: Consolidate material around stakes.
- Height of stakes: Cut off just below lowest branch of tree.
- Ties: Adjustable tie.
- Tying: Secure tree firmly but not rigidly to stake.

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: Monthly during growing season.

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.

730 Protective Fencing

- Fencing type: Chestnut Pale Fencing to *BS 1722-4:1986*.
- Height: min. 700 mm.
- Erection: On completion of planting to perimeter of entire habitat enhancement area.
- Removal: Fencing will remain the property of the Contractor. Remove and refill post holes following acceptance of rectified defects.

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.

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.

Q35 Landscape Maintenance

To be read with Preliminaries / General Conditions.

Generally

110 Notice

- Give notice before:
 - Application of herbicide.
 - Application of fertilizer.
 - Watering.
 - Each site maintenance visit.
- Period of notice: 2 days.

130 Reinstatement

- Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstatement to original condition.

155 Watering

- Supply: Potable mains water.
- Quantity: Wet full depth of topsoil.
- Application: Do not damage or loosen plants.
- Compacted soil: Loosen or scoop out, to direct water to root zone.
- Frequency: As necessary for the continued thriving of all planting.

160 Water Restrictions

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

170 Disposal of Arisings

- General: Unless specified otherwise, dispose of arisings as follows:
 - Biodegradable arisings: Remove to recycling facility.
 - Grass cuttings: Remove to recycling facility.
 - Tree roots and stumps: Remove to recycling facility.
 - Shrub and tree prunings: Remove to recycling facility.
 - Litter and non-biodegradable arisings: Remove from site.

190 Litter

- Extraneous rubbish not arising from the Contract Work: Collect and remove from site.

197 Cleanliness

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

Grassed Areas**210 Maintenance of Grassed Areas**

- General: Maintain turf in a manner appropriate to the intended use.
- Soil and grass:
 - Condition: Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.
 - Waterlogging and compaction: Prevent.
 - Damage: Repair trampling, abrasion or scalping.
- Ornamental lawns: Maintain reasonably free from moss, excessive thatch, weeds, frost heave, worm casts and mole hills.
 - Edges: Neat and well defined, in clean straight lines or smooth flowing curves.
- Litter and fallen leaves: Remove regularly to maintain a neat appearance.

211 Maintenance of Grassed Areas:

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

220 Grass Cutting Generally

- Before mowing: Remove litter, rubbish and debris.
- Finish: Neat and even, without surface rutting, compaction or damage to grass.
- Edges: Leave neat and well defined. Neatly trim around obstructions.
- Adjoining hard areas: Sweep clear and remove arisings.
- Drought or wet conditions: Obtain instructions.

225 Tree Stems

- Precautions: Do not use mowing machinery closer than 100 mm to tree stems. Use nylon filament rotary cutters and other hand held mechanical tools carefully to avoid damage to bark.

226 Tree and Plant Stems

- Precautions: Do not allow nylon filament rotary cutters and other mechanical tools closer than 100 mm to the stem of any tree.
 - Operations close to stems: Complete using hand tools.

235 Bulbs and Corms in Grassed Areas

- Before flowering: Do not cut.
- Interval between end of flowering and start of grass cutting (minimum): Six weeks.

250 Leaf Removal

- Operations: Collect fallen leaves.
- Disposal: Remove from site for recycling.

255 First Cut of: Grassed Areas

- Height of initial growth: 50 mm.
- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: 1/3.
- Mower type: To be agreed with contractor.
- Arisings: Remove.

256 First Cut of Wildflower Grassland Meadow

- Height of initial growth: 50-75 mm.
- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove.
- Height of first cut: 40-60 mm.
- Mower type: Contractor's choice.
- Arisings: Remove.

265 Mowing General Areas

- Grass height: Maintain between 25 and 50 mm.
- Arisings: Remove.

272 Maintaining: Wildflower Grassed Areas

- Preparation: Before each cut remove litter and debris.
- Height and frequency of cut in first growing season:
 - Time of first cut: March/April
 - Height of first cut: 40-60 mm.
 - Frequency of subsequent cutting (minimum): Most of the sown species will be slow to germinate and grow and will not usually flower in the first growing season. There will often be a flush of annual weeds from the soil in the first growing season. This weed growth is easily controlled by topping or mowing.
- Height and frequency of cut in second growing season:
 - Time of cut: September.
 - Height of cut: 50 mm.
- Trimming: All edges.
 - Arisings: Remove.
- Watering: When instructed.
- Management once established: In the second and subsequent years the wildflower grassland can be managed in a number of ways depending on the soil fertility.
 - Poor Shallow Soils: On poor shallow soils the wildflower grassland can be managed through one or two cuts towards the end of summer to help maintain diversity and interest.
 - Deeper Soils: Wildflower grassland seeded on deeper soils should be managed through a main summer hay cut in combination with autumn and spring mowing. The wildflower grassland seeded areas are not to be cut from spring through to late July/ August to allow the sown species to flower. After July/August a 'hay cut' with a petrol trimmer to 50 mm height should be undertaken with the hay left to dry and shed seed for 1 – 7 days before being removed from site. Regrowth should be mowed through to late autumn / winter to 50 mm height and again in spring if required.
- Other Requirements: For further maintenance requirements refer to the wildflower grassland seed mix supplier's instructions and recommendations.
- Other Requirements: No soil ameliorant / conditioner or fertilizer to be applied to the wildflower grassland.

309 Edges to Seeded Areas

- Location: Planting beds and around newly planted trees.
- Timing: After seeded areas are well established.
- Edges: Cut to clean straight lines or smooth curves. Draw back soil to permit edging.
- Arisings: Remove.

310 Re-Forming Grass Edges

- Location: Where damage occurs.
- Edges: Draw back soil and re-form edges to clean straight lines or smooth flowing curves, sloping slightly back from vertical.

381 Reinstatement of Lawns - Worn Areas

- Damaged turf: Remove to a depth of 40 mm.
- Preparation: Cultivate substrate to a fine tilth.
- Worn or damaged areas: Make good by returfing or reseeding:
 - Returfing standard: To BS 7370-3, Clause 12.2.
 - Reseeding standard: To BS 7370-3, Clause 12.6.
- Turf or seed: To match existing in appearance and quality.
- Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

*Shrubs / Trees / Hedges***500 Establishment of New Planting**

- Duration: to be agreed before entering contract.
- Weed control:
 - Method: Keep planting beds clear of weeds by use of suitable herbicides; maintaining full thickness of mulch and hand weeding.
 - Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
- Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Watering: When instructed.

510 Tree Stakes and Ties

- Inspection / maintenance times: ties should be checked monthly as part of the routine maintenance inspections and immediately after strong winds. Biannual checks shall be made to tree stakes, checking whether the tree can stand unsupported without bending or shifting in the ground. If the tree no longer requires the stake for support, then the stake may be removed (usually after eighteen months to three years of establishment).
- Stakes:
 - Replace loose, broken or decayed stakes to original specification.
 - If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.
- Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
 - Where chafing has occurred, reposition or replace ties to prevent further chafing.
- Removal of stakes and ties: Stakes shall remain in place until the tree can stand unsupported without bending or shifting in the ground - this may take between three months and three years.
- Fill stake holes with lightly compacted soil.

520 Refirming of Trees and Shrubs

- Timing: After strong winds, frost heave and other disturbances.
- Re-firming: Tread around the base until firmly bedded.
- Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and re-firm.

540 Pruning Generally

- Pruning: In accordance with good horticultural and arboricultural practice.
 - Removing branches: Do not damage or tear the stem or bark.
 - Wounds: Keep as small as possible and cut cleanly back to sound wood.
 - Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
 - Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
- Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well-balanced natural appearance.
- Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
- Disease or fungus: Give notice if detected.
- Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

545 Pruning of Excessive Overhang

- Timing: annually or as instructed by the Landscape Architect.
- Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.

550 Pruning of Excessive Height

- Timing: annually or as instructed by the Landscape Architect.
- Operations: Remove excessive height as instructed.

555 Pruning Trees and Shrubs

- Standard: To *BS 7370-4*.
- Special requirements: shrub planting to be pruned to height specified.

570 Formative Pruning of Young Trees

- Standard: Type and timing of pruning operations to suit the plant species.
- Time of year: Do not prune during the late winter/ early spring sap flow period.
- Young trees up to 4 m high:
 - Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well-balanced head and ensure the development of a single strong leader.
 - Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
- Trees with a narrow crown and columnar / compact form: lateral growth pruned out annually in the autumn, for the first two or three years of establishment, to keep the upright appearance. Once established, only prune if necessary.
- Whips or feathered trees: Do not prune.
- Operatives: Extensive pruning of young trees and any surgery to larger trees must be carried out by an approved member of the Arboricultural Association or other approved specialist.

575 Pruning Ornamental Shrubs (Feature and Defensive Planting)

- General: Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
- Suckers: Remove by cutting back level with the source stem or root.

610 Trimming Tapering Established Hedges

- Time of year: Trim once in July or August having regards to nesting birds.
- Operations
 - Form: Trim carefully and neatly to regular line and shape, with the width at the top less than that at the base.
 - Trim: Remove current growth rather than old wood.
- Tools/ Cutting: Shears or other suitable mechanical cutters

620 Removal of Dead Plant Material

- Operations: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

630 Dead and Diseased Plants

- Removal: As soon as possible.
- Replacement: In the next suitable planting season.

635 Reinstatement of Shrub / Herbaceous Areas

- Dead and damaged plants: Remove.
- Replacement plants:
 - Use pits and plants to original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
 - Additional requirements: Submit details and cost of plants before ordering.

640 Thinning by Removal of Surplus Plants

- Plants to be thinned: as instructed by the Landscape Architect;
- Standard: BS 7370-4:1991.
- Timing: as instructed by the Landscape Architect;
- Roots:
 - Disturbance to adjacent plants: Minimise.
 - Soil: Refill holes with topsoil to leave an even graded surface.
 - Adjacent plants: Make good any minor damage immediately.
- Plants for retention: Select plants with a strong healthy habit.
- Mature planting density: As schedule.

645 Weed Control Generally

- Weed tolerance: Weed to clear ground every two weeks.
- Adjacent plants, trees and grass: Do not damage.

650 Hand Weeding

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

657 Herbicide to Kill Regrowth

- Type: Suitable foliar acting herbicide to kill regrowth.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

665 Weed Control with Winter Herbicide

- Type: Suitable residual soil acting herbicide.
- Time of year: Unless otherwise agreed, complete before end of March.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

670 Weed Control with Summer Herbicide

- Type: Suitable foliar acting herbicide.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

680 Soil Aeration

- Compacted soil surfaces:
 - Prick up: To aerate the soil of root areas and break surface crust.
 - Size of lumps: Reduce to crumb and level off.
 - Damage: Do not damage plants and their roots.

685 Soil Level Adjustment

- Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.
 - Arisings (if any): Spread evenly over the bed.

690 Maintenance of Loose Mulch

- Thickness (minimum): 75 mm consistent depth.
 - Top up: Every year.
- Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
- Weeding: Remove weeds growing on or in mulch by non-residual herbicide treatment and / or hand weeding.

705 Winter Leaf Removal

- Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
- Arisings: remove to a Local Authority Green Waste Recycling Facility.

*Tree Work***810 Tree Work Generally**

- Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
- Protection: Avoid damage to neighbouring trees, plants and property.
- Standards: To BS 3998:2010 'Tree Work. Recommendations' and Health & Safety Executive (HSE) 'Forestry and Arboriculture Safety Leaflets'.
- Removing branches: Cut as Arboricultural Association Leaflet 'Mature tree management'. Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
- Appearance: Leave trees with a well-balanced natural appearance.
- Chain saw work: Operatives must hold a Certificate of Competence.
- Tree work: To be carried out by an approved member of the Arboricultural Association.

815 Additional Work

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

820 Prevention of Wound Bleeding

- Standard: To BS 3998:2010, Clause 8.

825 Prevention of Disease Transmission

- Standard: To BS 3998:2010, Clause 9 and Appendix B.

830 Cleaning Out and Deadwooding

- Remove:
 - Diseased wood.
 - Fungal growths and fruiting bodies.
 - Rubbish, wind blown or accumulated in branch forks.
 - Wires, clamps, boards and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
 - Other unwanted objects.
 - Climbing plants retain within existing trees.

835 Cutting and Pruning Generally

- Tools: Appropriate, well maintained and sharp.
- Final pruning cuts:
 - Do not use chainsaws on branches of less than 50 mm diameter.
 - When using handsaws, cut in one continuous operation to form a smooth cut surface;
 - Anvil type secateurs: Do not use.
- Removing branches: Do not damage or tear the stem.
- Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
- Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
- Large branches: Remove only with prior approval.
 - Remove in small sections and lower to ground with ropes and slings.
- Dead branches and stubs: When removing, do not cut into live wood.
- Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

840 Crown Reduction / Shaping

- General: Cut back selectively to lateral or sub-lateral buds or branches to retain flowing branch lines without leaving stumps.
- Operations: as instructed by the Landscape Architect.

845 Crown Lifting

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

850 Crown Thinning

- Removing branches: Remove inward growing, crossing, rubbing, dead and damaged branches.
- Thinning: Selectively remove secondary and small live branch growth evenly throughout the crown, as instructed by the Landscape Architect.
- Cutting:
 - Branches: Cut back to lateral or sub lateral buds or branches without leaving stumps.
- Appearance: Leave a uniform and well balanced structure of branches and foliage.

855 Cutting Tree Roots

- Excavating: Use hand tools only.
 - Protected area: Do not cut roots within the calculated tree Root Protection Area (RPA) in accordance with BS 5837:2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'.
- Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.
- Cutting:
 - Cutting: Make clean smooth cuts with a hand saw.
 - Wounds: Minimize. Avoid ragged edges.
 - Finishing: Pare cut surfaces smooth with a sharp knife.
- Backfilling:
 - Protection: Cover cut roots with clean sharp sand.
 - Material: Backfill with original topsoil.

860 Removing Trees and Shrubs

- Standards: To BS 3998:2010, Appendix A and Health & Safety Executive (HSE)/ Arboricultural and 'Forestry Advisory Group Safety Leaflets'.
- Existing Services: Check for below and above ground services. Give notice if they may be affected.
- Shrubs and Smaller Trees: Cut down and grub up roots.
- Tree stumps:
 - Removal: Remove mechanically to a minimum depth of 300 mm below ground level.
 - Removal by winching: Give notice. Do not use other trees as supports or anchors.
- Protection: Avoid damage to neighbouring trees, plants and property.
- Work near Retained Trees: Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
- Filling holes:
 - Material: Use as-dug material and/ or imported soil as required.
 - Finishing: Consolidate and grade to marry in with surrounding ground level.

865 Bark Damage

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

*Hard Landscape Areas/Fencing:***910 Hard Surfaces and Gravel Areas:**

- Herbicide: Apply a suitable foliar acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arisings.
- Hard surfaces: Remove litter, leaves and other debris.
- Surface gutters and channels: Remove mud, silt and debris.
- Drainage gullies: Empty traps and flush clean.
- Gravel areas: Rake over. Remove weeds, litter, leaves and debris, and level off.
- Repairs to flexible bituminous pavings: In accordance with the original paving specification or BS 7370-2, clause 4.12.
- Stain removal: In accordance with BS 7370-2, table 4.

920 Fencing:

- Fences: Inspect and repair to maintain protection against intruders.



L I Z A R D

Landscape Design and Ecology

The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7LH
T. 01903 216033 E. lizard.landscape@btconnect.com W. lizardlandscapeecology.com