

External Softworks NBS Specification

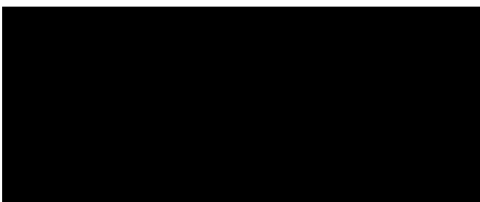
LITTLEHAMPTON LEISURE CENTRE LANDSCAPE AND PUBLIC REALM

13th April 2017

For Final Issue
(not for construction)

5312_LC_901

Issuing Studio: Exeter



LDA Design Consulting LLP Quality assurance to BS EN ISO 9001 : 2000

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This document has been prepared and checked in accordance with ISO 9001:2000

5312_Softworks NBS Specification

13 April 2017

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Q

Paving/Planting/Fencing/Site furniture

Q28

Topsoil and soil ameliorants

Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General conditions.

PRODUCTS**300 PREPARATION MATERIALS GENERALLY**

- Purity: Free of pests and disease.
- Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
- Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - Corrosive, explosive or flammable.
 - Hazardous to human or animal life.
 - Detrimental to healthy plant growth.
- Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
- Objectionable odour: None.
- Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

310 MATERIALS NOT PERMITTED

- Materials: Peat and Products containing peat.

315 IMPORTED TOPSOIL TO BS 3882 As per drawing 5312_LC_400

- 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: Contractor's choice.
 - Product reference: Contractor's choice.

EXECUTION**610 TOPSOIL ANALYSIS**

- Soil to be analysed: Imported topsoil.
- Soil analyst: Contractor's Choice.
- Samples: Collect in accordance with BS 3882.
- Submit:
 - Declaration of analysis: In accordance with BS 3882 Annexe E.
 - Report detailing soil analyst's recommendations.

625 SAMPLE LOADS FOR IMPORTED TOPSOIL

- Deliver to site a sample load: of 5 kg.
- Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - Notice period: As per PM's Requirements.

- 630 DOCUMENTATION FOR IMPORTED TOPSOIL Areas as per drawing 5312_LC_400
- 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: PM to advise.
- 650 NOTICE
- Give notice before:
 - Setting out.
 - Spreading topsoil.
 - Applying herbicide.
 - Applying fertilizer.
 - Visiting site during maintenance period.
 - Period of notice: PM to advise.
- 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.
- 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 50 mm.
 - Remove from site: Arisings, contaminants and debris and Builders rubble.
- 670 INSPECTING FORMATIONS
- Give notice: Before spreading topsoil for planting beds.
 - Notice period: PM to advise.

675 PREPARATION OF UNDISTURBED TOPSOIL

- Standard: In accordance with BS 4428.
 - Grading and cultivation: Grade to smooth flowing contours and cultivate to depth and tilth .
- Hard ground: Break up thoroughly.
- Clearing: Remove visible roots and large stones with a diameter greater than 50 mm .
- Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil.
- Fallow period (minimum): As herbicide manufacturer's recommendations .
 - Weed control: At appropriate times treat with a suitable translocated nonresidual herbicide .

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.

690A TOPSOIL STORAGE HEAPS

- Location: To be agreed with Contractor and Client.
 - Topsoil to be stored in an area of the site where it should not interfere with other site operations so that it can be left undisturbed.
 - Site Clearance: The area that is to be used for storing the topsoil shall be cleared of vegetation and any waste arising from the works e.g. building rubble and fill materials.
 - Method: Unless otherwise agreed by the PM prior to earthworks operations, all topsoil shall be stockpiled using the 'loose-tipping' method.
 - Height (maximum): 2.0 m.
- Width (maximum): As per Supervisor's recommendations.
 - 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.

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): 150 mm.
- 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.

718A FINAL CULTIVATION FOR LAWN AREA TO BE REINSTATED AND SPECIES RICH GRASSLAND

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
- Depth: 150 mm.
- Timing: Within a few days before planting.
- Weather and ground conditions: Suitably dry.
- Surface: Rake to a true, even surface, friable and lightly firmed but not over compacted.
- Levels: As per Drawing 5312_LC_400.
- Undesirable material brought to the surface:
 - Remove visible weeds.
 - Remove roots and large stones with any dimension exceeding 50 mm.

718B FINAL CULTIVATION For Herbaceous: Coastal and Naturalistic, Natural Screening Planting and Hedgerow

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a fine firm tilth with good crumb structure.
- Depth: 400 mm.
- Timing: Within a few days before planting.
- Weather and ground conditions: Suitably dry.
- Surface: Rake to a true, even surface, friable and lightly firmed but not over compacted.
- Levels: As per Drawing 5312_LC_400.
- Undesirable material brought to the surface:
 - Remove visible weeds.
 - Remove roots and large stones with any dimension exceeding 50 mm.

718C FINAL CULTIVATION For Wildflower Turf areas

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a fine firm tilth with good crumb structure.
- Depth: 100 mm cultivated topsoil and 250mm even mix of topsoil and subsoil.
- Timing: Within a few days before planting.
- Weather and ground conditions: Suitably dry.
- Surface: Rake to a true, even surface, friable and lightly firmed but not over compacted.
- Levels: As per Drawing 5312_LC_400.
- Undesirable material brought to the surface:
 - Remove visible weeds.
 - Remove roots and large stones with any dimension exceeding 50 mm.

720A FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

- Above adjoining paving or kerbs: 40mm to grass lawn areas. .
- Seeded areas: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
- 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 As per drawing 5312_LC_400

- Timing: Immediately after planting.
- Preparation: Ensure that soil is thoroughly moistened, applying water where necessary.
- Coverage of mulch (minimum):
 - Planting beds (depth): 50 mm depth.
 - Trees: 50 mm depth.
 - Container planting: NA.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

COMPLETION**904 NO FERTILISER TO BE APPLIED TO ANY PLANTING AREAS****920A APPLYING MULCH (to areas identified for mulching as per drawing 5312_LC_400)**

- Timing: A year after initial mulching, and annually for the first three years.
- Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
- Planting beds: Re-mulch.
 - Depth (minimum): 50 mm.
- Trees: Remulch.
 - Depth (minimum): 50 mm.

Q30
Seeding/turfing

Q30 Seeding/turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS**109 SOFTWARES SUB-CONTRACTORS**

The Contractor shall appoint a suitably qualified and experienced specialist landscape sub-contractor to undertake the works specified in Q30, Q31 and Q35. The following are provided as potential softworks sub-contractors, or equivalent agreed. Should the Main Contractor put forward other potential softworks sub-contractors they should provide evidence of suitable qualifications and relevant experience (including brief description, photographs), any awards won and references. This experience should cover high quality ornamental planting as well as more naturalistic habitat creation and planting of trees of similar size to the project.

Goddards
Goddards Farm, Bowling Alley, Crondall, Farnham, Surrey, GU10 5RJ
Tel: (01252) 850637 Fax: (01252) 851194
www.goddards-landscape.co.uk

Willerby Landscapes Ltd
Bridge Nurseries, Four Elms, Edenbridge, Kent, TN8 6RN
Tel: (0)1732 700646
www.willerby-landscapes.co.uk

Gavin Jones LTD
Woburn Hill, Addlestone, Surrey, KT15 2QG
Tel: 01932 833 833 Fax: 01932 833 877
www.gavinjones.co.uk

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: PM to advise.

170 SETTING OUT

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

PREPARATION**210A HERBICIDE For Lawn Areas, Species Rich Grassland, Herbaceous Planting, Natural Screening and Hedgerow planting.**

- Type: Suitable for suppressing perennial weeds. Only if necessary depending on any previous treatments of herbicide in the topsoil (refer to clause Q28/314).
- Timing: Allow fallow period before cultivation.
 - Duration: As manufacturer's recommendation. NB. Require Control of Pesticides Regulations certification to specify herbicides. Refer to Q30/130. .

SEEDING**312A SEED MIXTURE FOR LAWN AREA TO BE REINSTATED**

- Supplier: Emorsgate Seeds or equivalent agreed.
 - Web: <http://wildseed.co.uk/>
 - Email: enquiries@emorsgateseeds.com
 - Telephone - (01553) 829028
 - Mixture reference: EL1 Flowering Lawn Seed Mix.
- Origin (as defined in the National Plant Specification): As per mixture.
- Application rate: 4 g/m².

312B SEED MIXTURE SPECIES RICH GRASSLAND

- Supplier: Emorsgate Seeds or equivalent agreed.
 - Web: <http://wildseed.co.uk/>
 - Email: enquiries@emorsgateseeds.com
 - Telephone - (01553) 829028
 - Mixture reference: EM10 Tussock Grassland Mixture.
- Origin (as defined in the National Plant Specification): As per mixture.
- Application rate: 4 g/m².

320 QUALITY OF SEED FOR LAWN AREA TO BE REINSTATED AND SPECIES RICH GRASSLAND

- Freshness: Produced for the current growing season.
- Certification: Blue label certified varieties.
 - Standard: EC purity and germination regulations and Department for Environment, Food and Rural Affairs Higher Voluntary Standard.
 - 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: Contractor's Choice.

335 GRASS SOWING SEASON

- Grass seed generally: April to June.

352 EDGES TO SEEDED AREAS ADJACENT TO PLANTING BEDS AND TREE PITS

- Timing: After seeded areas are well established.
- Edges: Clean straight lines or smooth curves.
 - Mulch and soil: Draw back to permit edging.
- Arisings: Remove.
- Completion: Respread soil and mulch.

WILDFLOWER TURF**405A CULTIVATED TURF WILDFLOWER TURF WFT LANDSCAPE 34**

- Manufacturer: Wildflower Turf®
 - Co [REDACTED]
 - W [REDACTED]
 - E [REDACTED]
 - Telephone: (0)1263 771222
- Product reference: Wildflower Turf WFT Landscape 34
- Type: A soil-free wildflower turf system that is nursery grown to produce a mat of wildflower plants that retains 100% of its root system
- Size: Roll size will vary with application but is generally 1.62m x 0.77m = 1.25m² per roll. 2 x 20m (40m²) roll size is available.
- Jointing: As manufacturer's recommendations.
- Time of year: April to June or August to October
- Soil Preparation: Existing vegetation should be killed or removed.
 - Dig over or rotovate the soil to at least 100mm deep and rake over to create a reasonably fine tilth.
 - Remove large stones, roots or clods of earth as it is important that the roots of the plants in the turf are all in close contact with the soil.
 - Ensure soil is not waterlogged or compacted prior to laying the turf.
 - There is no need to fertilise the soil before or after laying the turf.
- Timing 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: 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.
- Watering: Water the turf thoroughly, for the first week, depending on the weather. If the soil is not soaked before laying it is important to check that the initial watering soaks through to the soil beneath the turf. Do not allow the turf to dry out while it establishes and this should only take approximately 2 weeks. Over watering can result in grass dominating the sward – so only water as necessary. As per manufacturer's recommendations.

405B CULTIVATED TURF WILDFLOWER TURF WFT SHADE 41

- Manufacturer: Wildflower Turf®



- Product reference: Wildflower Turf WFT Shade 41
- Type: A soil-free wildflower turf system that is nursery grown to produce a mat of wildflower plants that retains 100% of its root system
- Size: Roll size will vary with application but is generally 1.62m x 0.77m = 1.25m² per roll. 2 x 20m (40m²) roll size is available.
- Jointing: As manufacturer's recommendations.
- Time of year: April to June or August to October
- Soil Preparation: Existing vegetation should be killed or removed.
 - Dig over or rotovate the soil to at least 100mm deep and rake over to create a reasonably fine tilth.
 - Remove large stones, roots or clods of earth as it is important that the roots of the plants in the turf are all in close contact with the soil.
 - Ensure soil is not waterlogged or compacted prior to laying the turf.
 - There is no need to fertilise the soil before or after laying the turf.
- Timing 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: Do not walk on prepared bed or newly laid turf.
- Jointing: Laid with broken joints, well butted up. Do not stretch turf.
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- Watering: Water the turf thoroughly, for the first week, depending on the weather. If the soil is not soaked before laying it is important to check that the initial watering soaks through to the soil beneath the turf. Do not allow the turf to dry out while it establishes and this should only take approximately 2 weeks. Over watering can result in grass dominating the sward – so only water as necessary. As per manufacturer's recommendations.

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.
- Certification:
 - Standard: To BS 3969.
 - Declaration: Species mix, including percentage of specified species.

423 INSPECTION OF TURF For Wildflower Turf Areas

- Sampling method: To BS 3969.
- Give notice: Before lifting turf.
 - Period of notice: 1 week.

PROTECTING/CUTTING**530A FIRST CUT OF LAWN AREAS**

- Timing: When grass is reasonably dry.
 - Height of initial growth: 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: To confirm with PM.

550 AREAS NOT TO BE CUT

- Do not cut:
Areas of existing established woodland and scrub. .

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: the end of the rectification period.
- Defective materials or workmanship: Areas that have failed to thrive.
 - Exclusions: Theft or malicious damage.
- Method of making good: Recultivation and reseeded/ returfing.
- Timing of making good: Submit proposals.

620A MAINTAINING LAWN AREAS

- In accordance with Arun District Council maintenance regime.

620B MAINTAINING SPECIES RICH GRASSLAND

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Preparation: Before each cut remove all litter and debris.
- Timing of cut in first growing season:
 - Time of first cut: Allow annuals to flower before cutting back in mid-summer and removing the cut vegetation.
 - Height of first cut: 100 mm.
 - Frequency of subsequent cutting (minimum): To control scrub and bramble development, tussocky areas may need cutting every 2-3 years between October and February.
- Height and frequency of cut in second growing season:
 - Time of cut: Between October and February. Cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.
 - Height of cut: 100 mm.
- Trimming: All edges.
 - Arisings: Removal of arisings is essential to maintain lower nutrient status.
- Watering: Regular for the first 2 weeks to prevent turf from drying out, after which the occasional soak in long periods of dry weather.

620C MAINTAINING WILDFLOWER TURF AREAS

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Preparation: Before each cut remove all litter and debris.
- Timing of cut in first growing season:
 - Time of first cut: Autumn.
 - Height of first cut: 100 mm.
 - Frequency of subsequent cutting (minimum): Annually in the Autumn. Early summer cut leaving 6-8 inches from the ground and removal of cuttings is optional if the area is particularly fertile or if you have grass or species dominance. .
- Height and frequency of cut in second growing season:
 - Time of cut: Autumn.
 - Height of cut: 100 mm.
- Trimming: All edges.
 - Arisings: Removal of arisings is essential to maintain lower nutrient status.
- Watering: For the first 2 weeks to prevent turf from drying out, after which the occasional soak in long periods of dry weather.

Q31
External planting

Q31 External planting

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/ REQUIREMENTS**112A 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 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.

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: PM to Advise.

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.

240 HERBACEOUS PLANTS

- Well rooted, healthy, hardy, and not less than two years full growth.
- Plant in generously sized holes with finely broken topsoil returned around the roots
- Plant at even spacing: plant in groups and avoid straight lines unless specified.

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.

246 LABELLING AND INFORMATION

- Standard: To BS 3936.

255 PLANTS/ TREES RESERVED AT SUPPLIER'S PREMISES

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

260 PLANT/ TREE SUBSTITUTION

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

265A PLANT HANDLING, STORAGE TRANSPORT AND PLANTING

- Standard: To HTA 'Handling and establishing landscape plants'. Obtainable from
- Horticultural Trades Association Part I, Part II and Part III, paragraphs 1.3.3 to 1.3.6, 3.0 and 4.0 and Part III paragraphs 6.2 to 6.6.
- 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 material to be delivered to site within 48 hours of loading at the nursery.
- Trees or shrubs which are not planted on the day of delivery to be stored as follows or by other approved methods; rootballed plants placed close together and rootballs covered by sand, moist peat or wet straw. To be planted within 36 hours of delivery to site.
- 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**305 WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS**

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

341 PEAT

- Peat or products containing peat: Do not use.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS**400A PLANTING LAYOUT REFER TO FULL SOFTWORKS DRAWING PACKAGE****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.

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.

471A HEDGEROW TO BOAT YARD FENCE

- Planting: In trenches large enough to take full spread of roots. Set out plants evenly.
- Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge. As per drawing 5312_LC_406.
- Refer to 5312_LC_406 for typical setting out of hedging plants.

480 AFTER PLANTING

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
- Top dressing: Mulching and top dressing system, as section Q28.
 - Depth: 50 mm.

PLANTING TREES**505 TREE PITS**

- Sizes: As drawing 5312_LC_406.
- 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 200 mm.
 - Treatment: NA.
- Pit sides: Scarify.
- Backfilling material: Plant pit backfilling soil system, as section Q28.
- Accessories: As drawing 5312_LC_406.

515A TREE PIT DRAINAGE

- Completed pits: Test for free drainage before planting.

525A TRANSPLANT, FEATHERED AND SPECIMEN TREES

- Standard: Prepare roots and transplant to BS 4043.
- Backfilling material: As clause 585.
- Support: As drawing 5312_LC_406.
- Protection: As drawing 5312_LC_406.

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: To provide a 20 year service life.
- Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
- Stake size (minimum): 50 mm diameter.

555A SHORT SINGLE STAKING FOR TRANSPLANT AND FEATHERED TREES

- Staking: Position stake close to tree on windward side and drive vertically at least 250 mm into bottom of pit before planting.
 - Backfilling: Consolidate material around stake
- Height of stakes: Cut to approximately 600 mm above ground level.
- Timber take with Greenleaf Naturetie tree strapping
GreenBlue
Web - <http://www.greenblue.com>
Email - enquiries@greenblueurban.com
Tel - 01580 830 800
 - Firmly fix on windward side of tree and as close as possible to stem.
- Tying: Secure tree firmly but not rigidly to stake with one tie within 25 mm of top of stake.

565A LONG DOUBLE STAKING FOR SPECIMEN 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 off just below lowest branch of tree.
- Cross bar and Ties: Greenleaf Naturetie tree strapping
GreenBlue
Web - <http://www.greenblue.com>
Email - enquiries@greenblueurban.com
Tel - 01580 830 800
 - Firmly fix on windward side of tree and as close as possible to stem.
- Tying: Secure tree firmly but not rigidly to cross bar.

595A TREE PROTECTION TRANSPLANT AND FEATHERED TREES

- Acorn Biodegradable Shelterguard, 600x80mmØ
Web - <http://www.greenblue.com>
Email - enquiries@greenblueurban.com
Tel - 01580 830 800
- Firmly fix on windward side of tree and as close as possible to stem.
- General: Ensure that protection methods do not impede natural movement of trees or restrict growth.

WOODLAND/ PLANTING**600 WOODLAND WORK GENERALLY**

- Services: Check for below and above ground services, including land drainage, in the vicinity. Give notice if they may be affected and obtain instructions before proceeding.
- Safety: Comply with Arboriculture and Forestry Advisory Group Safety leaflets.

605 EXISTING VEGETATION/ WEED CLEARANCE

- Surface vegetation clearance: In areas shown on drawing 5312_LC_400 using suitable nonresidual herbicide.
- Arisings: Remove.

615 EXISTING TREES/ SEEDLINGS/ COPPICE SHOOTS

- Existing trees and seedlings: Retain.
- Coppice shoots: Thin to 3-5 stems per stool, removing all damaged, dead or diseased shoots.

625A CULTIVATION

- General: Rotary cultivate to full depth of topsoil.
- Soil within root spread of trees to be retained: Do not plough or cultivate.

645A PLANTING IN LAWN/WILDFLOWER TURF

- Preparation: Cut and upturn a turf of minimum to appropriate size to rootball.
- Notching: Make a vertical slit from the centre of the turf, to the side away from the prevailing wind.
 - Depth: To accommodate full depth of roots.
- Planting: Plant tree, close notch with root collar at ground level and firm the soil.

680A SETTING OUT

- Planting density: As per Softworks Package.

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.

720A 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 first available planting season. If this period falls outside of the twelve month rectification/maintenance period then the Contractor will still need to make good any failures and inform Arun District Council of the likely timing of any replacements.

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.

750A 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 and hand digging.
- Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch.
- Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
- Staking: Check condition of stakes, ties, guys and guards.
 - Broken or missing items: Replace.
 - Rubbing: Prevent.
 - Ties: Adjust to accommodate growth.
 - Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
 - Frequency of checks: Every month.
- Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
- Trees: Spray crown when in leaf during warm weather.
 - Timing: After dusk.
- Watering: To ensure establishment and healthy vigour of plants. In particular, during the first month of planting. Contractor to allow for an intensive period of watering.. .

760A PLANTING MAINTENANCE - PRUNING

- General: Prune to promote healthy growth and natural shape.
 - Dead, dying, diseased wood and suckers: Remove.
 - Shrubs - As appropriate to the species
 - Herbaceous - End of March, 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 details of any special procedures to be carried out.

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

Q35 Landscape maintenance

To be read with Preliminaries/ General conditions.

GENERALLY**105A MAINTENANCE OBJECTIVES**

- Location: Softworks are as identified as per drawing 5312_LC_400.
 - Duration: Until established.
- Aims: Improved landscape visual amenity, healthy and thriving planting, a neat and tidy public realm and to maximise biodiversity objectives. The desired appearance of planting is set out in the Littlehampton Leisure Centre Landscape Strategy .

110 NOTICE

- Give notice before:
 - Application of herbicide.
 - Application of fertilizer.
 - Watering.
 - Each site maintenance visit.
- Period of notice: PM to advise.

130 REINSTATEMENT

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

155 WATERING

- Supply: No site supply available, submit proposals.
- Quantity: Wet full depth of topsoil .
- Application: Do not damage or loosen plants.
- Compacted soil: Loosen or scoop out, to direct water to rootzone.
- 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 ARISING

- 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 from site.
 - Shrub and tree prunings: Remove to recycling facility.
 - Litter and nonbiodegradable arisings: Remove from site.

181 MECHANICAL EQUIPMENT

- General: Minimize.
- Prohibited equipment: In accordance with any requirements stipulated by ARUN District Council maintenance manager..
- Timing: Use of mechanical equipment to be agreed with ARUN District Council maintenance manager..

190 LITTER

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

195 PROTECTION OF EXISTING GRASS

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

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.

LAWN AREAS**210A MAINTENANCE OF LAWN AREAS**

- In accordance with Arun District Council maintenance regime.
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.

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.

226 TREE 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.

250 LEAF REMOVAL

- Operations: Collect fallen leaves.
- Special requirements: Remove by hand raking.
- Disposal: Remove from site for recycling.

255 FIRST CUT OF LAWNS

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

260A MOWING LAWNS

- Grass height: 75 mm maximum.
- Arisings: Remove.
- All other maintenance regimes, such as top dressing, fertilising, scarifying, spiking, use of selective herbicide etc. to maintain a healthy sward.

295 SPIKING

- Location: All lawns.
- Timing: As necessary to relieve compaction.
- Operations: Aerate the soil and improve surface water penetration.
- Depth (minimum): 100 mm into soil.

309A EDGES TO SEEDED AREAS LAWNS

- Location: Planting areas 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.

320 LEVELLING HOLLOWES AND BUMPS IN TURF

- Standard: To BS 7370-3, clauses 12.4 and 12.5.

340A SPOT WEEDKILLING IN SEEDED AREAS

- Herbicide: Suitable for suppressing perennial weeds.
- Operations: Spot treat
 - docks (*Rumex* spp);
 - injurious weed species listed in the Weeds Act 1959 and Wildlife and Countryside Act 1981;
 - Japanese knotweed (*Fallopia* spp);
 - nettles (*Urtica* spp);
 - ragworts (*Senecio* spp); and
 - thistles (*Cirsium* spp).

380A REINSTATEMENT OF DAMAGED LAWNS

- Damaged turf: Remove to a depth of 40 mm.
- Preparation: Cultivate substrate to a fine tilth.
- Reinstatement:
 - Returfing: Quality and appearance to match existing.
 - Reseeding: Fill with fine topsoil to BS 3882 multi purpose class, free from stones, debris and weeds. Reseed with a EL1 Flowering Lawn seed mix to match existing grass in quality and appearance.
- Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

381 REINSTATEMENT OF WORN OR DAMAGED LAWNS

- 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.

SHURB AND HERBACEOUS PLANTING AREAS**460A PERENNIALS AND SHRUBS**

- Gaps in planting where losses have occurred: Refill by replanting.
- Watering:
 - New plants: Before and after planting out.
 - Ongoing: As necessary for the continued thriving of all planting.
- Operations at end of growing season:
 - Trim: Older flowering stems of herbaceous perennials.
 - Remove: Redundant plant supports, litter, debris and arisings.
 - Cultivate: Fork over the soil, taking care not to cause undue disturbance to plants.
- Operations:
 - Trim: Older flowering stems of herbaceous perennials.
 - Remove: Redundant plant supports, litter, debris and arisings.
 - Cultivate: Fork over the soil, taking care not to cause undue disturbance to plants.
 - Top dress: Apply sanitised and stabilized compost top dressing at the end of the growing season or as required by the plants.
 - Remove: Dead flower heads, fallen leaves, litter and debris.
 - Weeds: Thoroughly hand weed.
 - Cultivate: Lightly hoe.
 - All plants have been selected for their low maintenance
 - Ornamental grasses to be cut back in spring to around 100mm in height before new growth appears.

461 PRUNING FLOWERING SPECIES OF SHRUBS

- Time of year:
 - Winter flowering shrubs: Spring.
 - Shrubs flowering between March and July: Immediately after the flowering period.
 - Shrubs flowering between July and October: Back to old wood in winter.

463 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.

464 DEAD AND DISEASED PLANTS

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

465 REINSTATEMENT OF SHRUB/ HERBACEOUS AREAS

- Dead and damaged plants: Remove.
- Mulch/ geotextile matting materials:
 - Carefully move to one side and dig over the soil, leaving it fit for replanting.
 - Do not disturb roots of adjacent plants.
- 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: None.
- Dressing: Slow release fertilizer:
 - Type: Liquid.
 - Application rate: As manufacturer's recommendations.

466 WEED CONTROL GENERALLY

- Weed tolerance: Weed cover less than 2% and no weed to exceed 100 mm high.
- Adjacent plants, trees and grass: Do not damage.
- Pesticides and herbicides should not be used during weeding operations.

468 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.

490A THINNING BY REMOVAL OF SURPLUS PLANTS

- Plants to be thinned: If ornamental grasses or other more aggressive plants self-seed and start to out compete other species.. Confirm with Landscape Architect prior to thinning (this excludes original planted annuals which are encouraged to self-seed).
- Standard: BS 7370-4, clause 3.5.17.1.
- Roots:
 - Disturbance to adjacent plants: Minimise.
 - Soil: Refill holes with topsoil to leave an even graded surface.
 - Mulch: Maintain mulch as original specification.
- Adjacent plants: Make good any minor damage immediately.
- Plants for retention: Select plants with a strong healthy habit.
- Mature planting density: As per schedule 5312_LC_405.

491 ESTABLISHMENT OF NEW PLANTING

- Duration: One year.
- Weed control:
 - Method: Keep planting beds clear of weeds by hoeing and screefing .
 - Area: All planting areas as per drawing 5312_LC_400.
- Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Watering:
 - New plants: Before and after planting out.
 - Ongoing: As necessary for the continued thriving of all planting.

491A ESTABLISHMENT OF NEW PLANTING

- Weed control:
 - Method: Keep planting beds clear of weeds by hoeing and screefing .
 - Area: All planting areas as per drawing 5312_LC_400.
- Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Watering:
 - New plants: Before and after planting out.
 - Ongoing: As necessary for the continued thriving of all planting.

492 PLANTING BEDS GENERALLY

- Operations:
 - Remove: Dead flower heads, fallen leaves, litter and debris.
 - Weeds: Thoroughly hand weed.
 - Cultivate: Lightly hoe.
- Fungicide: Not required.
- Insecticide: Not required.
- Maintain throughout the growing season.
- Gaps in planting where losses have occurred: Refill by replanting.
- Operations at end of growing season:
 - Trim: Older flowering stems of herbaceous perennials.
 - Remove: Redundant plant supports, litter, debris and arisings.
 - Cultivate: Fork over the soil, taking care not to cause undue disturbance to plants.

493A 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.

494A 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.

495A MAINTENANCE OF LOOSE MULCH

- Thickness (minimum): 50 mm.
 - Top up: Annually.
- Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
- Weeding: Remove weeds growing on or in mulch by hand weeding.

TREES/HEDGEROW/WOODLAND**500A ESTABLISHMENT OF NEW PLANTING**

- Duration: As necessary to achieve successful establishment. Typically two to three years from planting for large trees.
- Weed control:
 - Method: Keep tree and hedgerow planting areas clear of weeds by hoeing and screefing.
 - 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: As and when required for survival and healthy growth of trees. It is typical that newly planted trees have to be watered until the new fibre roots have grown beyond the canopy which may take up to three years. The softworks contractor can advise as the amount of water available to the tree and the amount of water required depends on the water retention capacity of the soil characteristics in which the tree is planted and the width and depth of the roots of the tree (and the weather). Continual observation of the trees is required to check for signs of drought so that additional watering may be initiated in time.

510 TREE STAKES AND TIES

- Inspection/ Maintenance times: As scheduled and immediately after strong winds.
- 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: When instructed.
 - Fill stake holes with lightly compacted soil.

520A REFIRMING OF TREES

- Timing: After strong winds, frost heave and other disturbances.
- Refirming: 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 refirm.

525 TREE GUARDS

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

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 infection: Give notice if detected.
- Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

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.
- Whips or feathered trees: Do not prune.
- Operatives: Member of the Arboricultural Association.

605A TRIMMING ESTABLISHING HEDGES

- General: Allow to reach sufficient height to cover up the entire fence as rapidly as possible along the Boat Storage Yard boundary fence.
 - Form: Trim back lateral branches moderately.
 - Maintain hedge height to cover up the fence entirely along the east school boundary with a minimum of 1 cut per year.
 - Arisings to be removed from site.

710A WOODLAND PLANTING MAINTENANCE

- Watering: Water regularly, especially during the first summer and prolonged dry spells.
- Loose plants: Refirm surrounding soil, without compacting.
- Vegetation: Except trees and coppice shoots to be retained, cut down to 100 mm above ground level within the plantation area.
 - Arisings: Leave between rows.
 - Prune shrubs down to 40-60cm in the first winter after planting to stimulate bushy growth and provide cover and nesting sites for wildlife.
 - Weed around new trees and shrubs to stop competition for food, water and light from brambles and grasses.
 - Visual inspection to assess canopy, health of trees and presence of litter, debris and weeds (every quarter).
 - Carry out visit after high winds to adjust tree ties and staking.
 - Remove tree stakes, shelters and ties in Year 5, or when no longer required.
 - Ditches and drains: Keep clear.

715A WOODLAND THINNING

- Mature planting density: As per drawing 5312_LC_406 .
- Timing: Thinning and cutting under-story (every 5-10yrs) once established.
- Periodic inspections by suitably qualified professional every 5-10 years in-line with the thinning works.

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 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, clause 8.

825 PREVENTION OF DISEASE TRANSMISSION

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

830 CLEANING OUT AND DEADWOODING

- Remove:
 - Dead, dying, or diseased wood, broken branches and stubs.
 - 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, e.g. tree houses, swings.
 - Climbing plants NA.

835 CUTTING AND PRUNING GENERALLY

- Tools: Appropriate, well maintained and sharp.
- Final pruning cuts:
 - Chainsaws: Do not use on branches of less than 50 mm diameter.
 - Hand saws: 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 if unavoidable.
 - 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.

Q40
Fencing

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

- 110A OPEN MESH STEEL PANEL GENERAL PURPOSE FENCING Perimeter Fence to Boat Storage Yard
- Supplier: BETA Fence
 - Manufacturer: Betafence Limited PO Box 119, Shepcote Lane, Sheffield S9 1TY. Tel: 0870 120 3252 Fax: 0870 127 0028. E-mail: sales.sheffield@betafence.com Web: www.betafence.com.
 - Fencing Type: Nylofor 2D or equivalent agreed with LA
 - Panels: Nylofor 2D
 - Nominal Height: 2000mm
 - Width panels: 2500mm
 - Mesh and wire: Welded mesh spacing 50mm vertical x 200mm horizontal x 5mm vertical and 6mm twin horizontal wires on the front and rear face of panel. Galvanised & polyester powder coated RAL 7043. POSTS: SENTINEL TWILFIX 2000 RHS
 - Galvanised rectangular hollow section 60 x 60 x 2.0mm, with M8 threaded inserts fitted in the front face, complete with black coated Universal fixing brackets and M8 x 35 Countersunk Trilobe tamper proof bolts, posts polyester powder coated RAL 7043.
 - Post centres: 2525mm.
 - OTHER:
 - Method of setting posts: In concrete foundations to comply with the design loading requirements specified by manufacturers technical specifications for this category of fence. Refer to Engineer's design
 - Conformity:
 - Nylofor 2D satisfies the requirements for Category: 1 (General Purpose) and Category: 2 (Security) fences as prescribed by B.S. 1722 Part: 14 – Open Mesh Steel Panel Fences
 - Upon receipt on site, or during storage off site, all care to be taken to ensure that no damage is incurred and that all precautions are taken against vandalism or theft.
 - Materials and installation to be covered by a 10year BEKassure Guarantee.
 - Subject to an inspection by an independent auditor on completion of works. Special Features
 - Fence to Contractor's design
 - All steel work to be galvanised and powder coated to RAL 7043
 - Any accessible fixings must be anti-vandal and anti-tamper.
 - All fixings and fittings not to cause corrosion/corrosion related staining or corrode themselves.
 - To Contractor's Design

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.