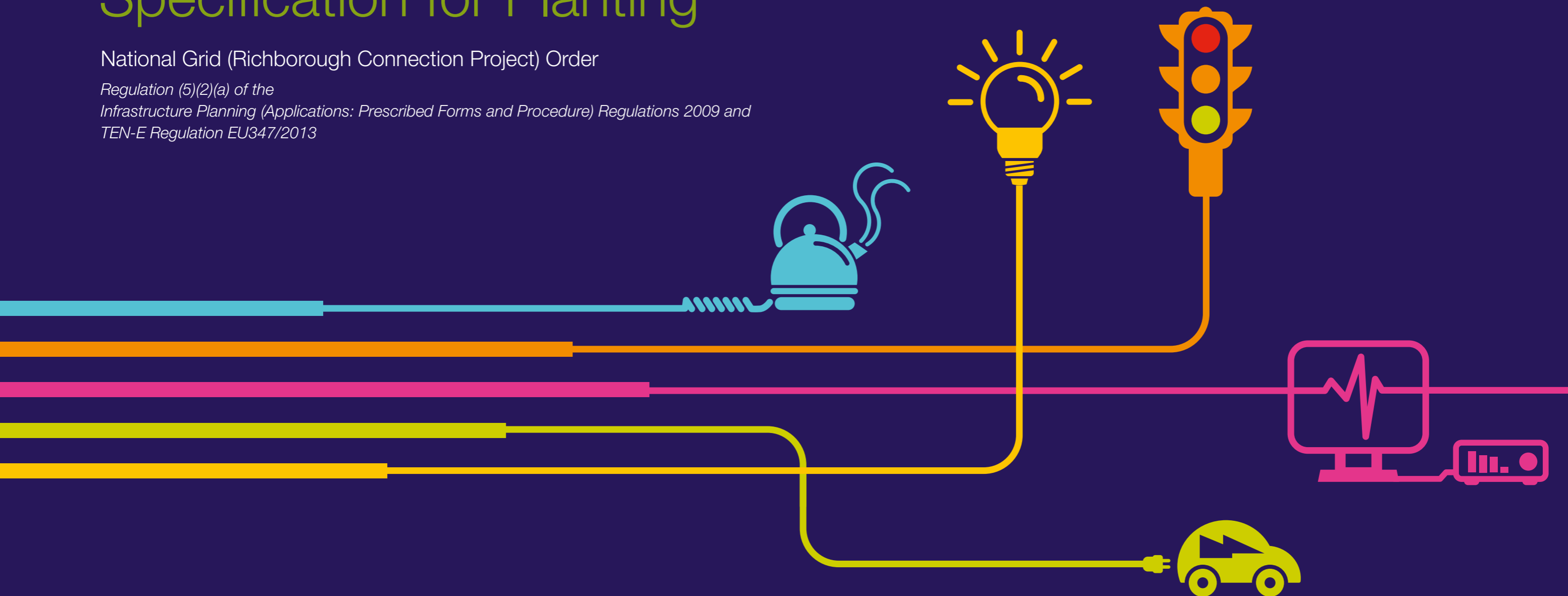


# 6D NBS Landscape Specification for Planting

National Grid (Richborough Connection Project) Order

*Regulation (5)(2)(a) of the  
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 and  
TEN-E Regulation EU347/2013*



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# **Richborough Connection Project**

## **Volume 5**

### **5.4 Environmental Statement Appendices**

#### **5.4.6D NBS Landscape Specification for Planting**

National Grid  
National Grid House  
Warwick Technology Park  
Gallows Hill  
Warwick  
CV34 6DA

Final

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*This Landscape Specification has been produced using National Building Specification Landscape (NBS Landscape) and describes the materials, standards and workmanship expected during construction and implementation of soft landscape works proposed as part of the Richborough Connection Project Enhancement Measures. Hard landscape works are not detailed in this specification as it is likely that each Local Authority will have specific construction details, materials and standards that hard landscape works will need to adhere to.*

*NBS Landscape is a software package used to write concise, technically accurate and up-to-date specifications for hard and soft landscape projects. NBS Landscape is an industry standard specification system that conforms to best practice providing clauses, guidance and product information.*

*NBS Landscape is a selection of NBS work sections with landscape preliminaries, including those for ICE Minor Works and JCLI Agreement for Landscape Maintenance Works. The product is intended for use on landscape and external works projects*



## 6D NBS LANDSCAPE SPECIFICATION FOR PLANTING

### Q28 Topsoil, growing media and ameliorants

#### SYSTEM OUTLINE

- 110 TOPSOIL SYSTEM FOR STRUCTURE PLANTING AREAS IF EXISTING TOPSOIL ON SITE IS DEFICIENT AND REQUIRES TOPPING UP
- Topsoil: Imported topsoil to BS 3882.
  - Ameliorants: None.
  - Accessories: None.

#### PRODUCTS

- 300 PREPARATION MATERIALS GENERALLY
- Purity: Free of pests, disease, and fungus.
  - Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
  - Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
    - Corrosive, explosive or flammable.
    - Hazardous to human or animal life.
    - Detrimental to healthy plant growth.
  - Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
  - Objectionable odour: None.
  - Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.
- 310 MATERIALS NOT PERMITTED
- Materials: Peat and Products containing peat.
- 315 IMPORTED TOPSOIL TO BS 3882
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
  - Standard: To BS 3882.
  - Classification: Multipurpose.
    - Grade: 0.6-2 mm.
  - Source: Contractor's choice.
    - Product reference: Contractor's choice.

#### EXECUTION

- 610 TOPSOIL ANALYSIS
- Soil to be analysed: Imported topsoil.
  - Soil analyst: Contractors choice.
  - Samples: Collect in accordance with BS 3882.
  - Submit:
    - Declaration of analysis:
      - Chemical analysis and contaminants;
      - Maximum stone content, stone size and pH value;
      - pH value and textural classification; and
      - Phytotoxic and CLEA elements.
- Report detailing soil analyst's recommendations.

**620 IMPORTING TOPSOIL**

- Give notice: Before stripping topsoil for transfer to site.
  - Notice period: 5 days.

**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: 5 days.

**630 DOCUMENTATION FOR IMPORTED TOPSOIL FOR SHRUB BEDS**

- 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: 2.

**650 NOTICE**

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

**655 MECHANICAL TOOLS**

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

**660 GRADING SUBSOIL**

- General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
- Areas of thicker topsoil: Excavate locally.

**665A SUBSOIL SURFACE PREPARATION**

- General: Excavate and/ or place fill to required profiles and levels.
- Loosening:
  - Light and non-cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 300 mm.
  - Stiff clay and cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 450 mm.
  - Rock and chalk subgrades: Lightly scarify to promote free drainage.
- Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
- Remove from site: Arisings, contaminants and debris and Builders rubble.

**670 INSPECTING FORMATIONS**

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

**680 SURPLUS TOPSOIL TO BE RETAINED**

- Generally: Spread and level on site:
  - Locations: Any areas where topsoil is required for new planting.
    - Protected areas: Do not raise soil level within root spread of trees that are to be retained.

**685 SURPLUS MATERIALS TO BE REMOVED**

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

**690 TOPSOIL STORAGE HEAPS**

- Location: Throughout the order limits.
- Height (maximum): 1.0 m.
- Width (maximum): 2.0 m.
- Protection:
  - Do not place any other material on top of storage heaps.
  - Do not allow construction plant to pass over storage heaps.Prevent compaction and contamination, by fencing and covering as appropriate.

**695 CULTIVATION**

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
  - Depth: 150 mm.
  - Particle size (maximum): 2-8 mm.
  - Timing: Within a few days before planting.
  - Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: 25 mm above adjoining paving or kerbs and 50 mm above adjoining lawns.
- Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 50 mm.
- Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

**700 GRADING OF TOPSOIL**

- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
  - Hollows and ridges: Not permitted.
- Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
- Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 100 mm.
- 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 for grass areas, 450mm for ornamental planting areas and 800mm for trees.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

**720 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT**

- Above adjoining paving or kerbs: 25 mm.
- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: Higher than adjoining grass areas by 50 mm.
- Within root spread of existing trees: Unchanged.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

**COMPLETION**

**905 APPLYING MAINTENANCE FERTILIZER**

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

## **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.

#### **160 NOTICE**

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

#### **170 SETTING OUT**

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

### **PREPARATION**

#### **210 HERBICIDE FOR ALL GRASSED AREAS**

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

#### **280 FINAL CULTIVATION**

- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
  - Depth: 25 mm.
  - Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
  - Remove surface stones/earth clods exceeding:
    - General areas: 40 mm.
    - Fine lawn areas: 10 mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

## **SEEDING**

### **311 GRASS SEED FOR ALL GRASSED AREAS (NON WILDFLOWER)**

- Supplier: Submit proposals.
  - Mixture reference: Submit proposals.
- Application rate: 34-50 g/m<sup>2</sup>.

### **319 QUALITY OF SEED FOR ALL GRASSED AREAS**

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

### **330 SOWING**

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

### **335 GRASS SOWING SEASON**

- Grass seed generally: April to June or August to October.

## **PROTECTING/CUTTING**

### **530 FIRST CUT OF GRASSED 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: Rotary.
- Arisings: Remove from site.

### **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: The next suitable planting season.

**SEEDING: WILDFLOWER AREAS**

311 GRASS SEED FOR WILDFLOWER AREAS

- Mixture as per specifications in planting palette table.
- Application rate: 30g/m<sup>2</sup>.

319 QUALITY OF SEED FOR ALL GRASSED AREAS

- Supplier to guarantee British/native provenance (local genotype if possible).
- 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.  
No addition of nutrients to soils
- Method: To suit soil type, proposed usage, location and weather conditions during and after sowing. A friable firm seed bed required, weed free, alleviation of compaction to a depth of 100-200mm, sowed on a firm and fine tilth. Seed bed preparation to be conducted in dry conditions, close to the time of sowing.
  - Distribution: 2 equal sowings at right angles to each other. By hand in small areas, by mechanical means if areas are large.

335 GRASS SOWING SEASON

- Grass seed generally: March to May or September to October.

**PROTECTING/CUTTING**

530 FIRST CUT OF WILDFLOWER GRASSED AREAS

- Timing: When grass is reasonably dry.
  - Height of initial growth: 150-200 mm.
- Preparation:
  - Debris and litter: Remove.
  - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: 75-100 mm. NB: cutting must be conducted when reptiles are active to ensure they are not harmed during cutting operations. No lower than 100m on reptiles sites (see planting palette table for details). Four cuts should be conducted in the first year, a single cut on October in any year thereafter.
  - Mower type: Rotary or strimming (area dependant).
  - Arisings: Remove from site.

**MAINTENANCE**

610 FAILURES OF SEEDING/TURFING

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period. Monitoring for wildflowers grassland will only apply to those being retained.
  - 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: The next suitable planting season.

## Q31 External planting

### 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.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
- Additional requirements: Remove remnants of old fence posts and mesh.

#### 118 SOIL CONDITIONS

- Soil for cultivating and planting: Moist, friable and (excepting 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.
- 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: One week.

#### 165 PREPARATION, PLANTING AND MULCHING MATERIALS

- General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- Certification of source, analysis, suitability for purpose and absence of harmful substances:



Submit.

- Certified materials: Submit proposals.  
Give notice before ordering or using.

200 PLANTS/ TREES - GENERAL

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

215 PLANTS/ TREES - SPECIFICATION CRITERIA

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

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 labelling for delivery to site, showing:
  - Full botanical name.
  - Total number.
  - Number of bundles.
  - Part bundles.
  - Supplier's name.
  - Employer's name and project reference.
  - Plant specification, in accordance with scheduled National Plant Specification categories.
- Additional information: Submit on request:
  - Country of origin;
  - Potting dates;
  - Propagation method and dates;
  - Pruning dates; and
  - Type of container.

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'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Plant packaging: Coextruded polyethylene bags with black interior and white exterior.
  - All bare roots plants to be supplied in bags containing and enclosing the whole root system. Transplants should be supplied with shoots and roots fully enclosed in the bag, whereas larger shrubs and trees should have only the root system enclosed. The bag should be coextruded polythene bags with black interior and white exterior with larger trees packaged as follows:
    - \* 6-8cm and 8-10cm girth trees = 3Nr trees per bag
  - All plants shall be adequately packaged and protected during transportation from source to planting on site. To minimise storage of plant stock, operations are to be arranged so that trees and shrubs are planted immediately after each planting pit is prepared.
- Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.
- Storage - Plants and trees to be stored in a secure and protected from site operations and over exposure to adverse weather conditions.
- Planting: Upright or well balanced with best side to front.

**280 TREATMENT OF TREE WOUNDS**

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

**290 SURPLUS MATERIAL**

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

**PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS****300 HERBICIDE TO CLEAR OVERGROWN BEDS**

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

**305 WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS**

- Locations: All planting areas.
- General: Prevent weeds from seeding and perennial weeds from becoming established, in accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotweed code of practice'.

**375 CULTIVATION**

- Compacted topsoil: Break up to full depth.
- Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
  - Depth: 350 mm.
  - Timing: Within a few days before planting.
  - Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels:
  - 25 mm above adjoining paving or kerbs;
  - 50 mm above adjoining lawns; and
  - Minimum 150 mm below dpc of adjoining buildings.
- Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 30 mm.
- Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

**471 NATURALIZED HEDGES**

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

**472 FENCING SUPPORT FOR NEW HEDGES**

- Type: Timber post and general pattern wire mesh.
- Standard: To BS 1722-2.
- Height: 600 mm.
- Timing: Before planting hedge.
- Support: Lightly secure hedge plants to fence wires at appropriate intervals.

**480 AFTER PLANTING**

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
- Top dressing: Not required.
  - Depth: N/A.

**PLANTING TREES****500 ANTIDESICCANT FOR CONIFERS/ EVERGREENS**

- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Application: Dip in or thoroughly spray before delivering to site. Spray again soon after planting.
  - Do not apply in wet or frosty weather.
  - Ensure full coverage of underside of foliage.

**505 TREE PITS**

- Sizes: 75 mm deeper than root system and wide enough to accommodate roots when fully spread.
- 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: Soil ameliorant worked into pit bottoms.
- Pit sides: Scarify.
- Backfilling material: Amsterdam tree soil.
- Accessories: Perforated plastics irrigation/ ventilation pipe and Root barrier.

**510 TREE PIT ROOT BARRIERS**

- Locations: Wherever the installed rootball will be within 3.0 m of an existing underground service route.
- Manufacturer: Greenleaf.
  - Product reference: ReRoot 2000.
- Depth of top of root barrier below finished soil level: 75 mm.
- Installation: With sides vertical.

**515 TREE PIT DRAINAGE**

- Depth of excavation: Increase from specified size to allow for aggregate layer, with base slightly falling to outlet.
- Aggregate layer: Clean gravel or broken stone, with no fines, graded 40 to 20 mm.
  - Depth: 150 mm.
- Drainage pipes:
  - Type: N/A.
  - Diameter: N/A.
  - Position: Lay around perimeter of pit within aggregate layer.
  - Discharge: N/A.
- Geotextile filter:
  - Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
  - Position: Lay over aggregate before installing tree or backfill.
- Completed pits: Test for free drainage before planting.

**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: Alkaline Copper Quaternary (ACQ).
- Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
- Stake size (minimum): 50 mm diameter.

**545 LONG SINGLE STAKING FOR FEATHERED TREES AND STANDARD TREES**

- Staking: Position stake close to tree on windward side and drive vertically at least 300 mm into bottom of pit before planting.
  - Backfilling: Consolidate material around stake.
- Height of stakes: Cut off just below lowest branch of tree.
- Ties: Adjustable ties.
- Tying: Secure tree firmly but not rigidly to stake with at least two ties. Use three ties if necessary to prevent tree touching stake.
  - Position: Top tie within 25 mm of top of stake and lower tie approximately halfway down.

**575 SHORT DOUBLE STAKING FOR STANDARD TREES IN SOFT LANDSCAPING**

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

**586 TREE BACKFILLING MATERIAL**

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required.
- Ameliorant/ Conditioner: Sanitized and stabilized compost.
  - Application rate: 1 m<sup>3</sup> per 10 m<sup>3</sup> of topsoil.
- Fertilizer: Organic.
  - Application rate: To suit soil report recommendations.

**590 MULCHING TREES**

- Material: Medium grade bark mulch.
  - Purity: Free of pests, disease, fungus and weeds.
  - Recycled content: None permitted.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: Over an area of 1.2 x 1.2 m with the tree in the centre.
- Finished level of mulch: 50 mm below adjacent grassed or paved areas.

**595 TREE PROTECTION**

- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Type: Spiral.
- Material: Polyethylene.
- Size: 0.6 m high x 150 mm diameter.
- Colour: Transparent.
- Support: Single timber stake.
- General: Ensure that protection methods do not impede natural movement of trees or restrict growth.

**WOODLAND/ MATRIX/ BUFFER ZONE 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: Scree an area one metre diameter around each planting location.
- Arisings: Remove.

615 EXISTING TREES/ SEEDLINGS/ COPPICE SHOOTS

- Existing trees and seedlings: Retain.
- Coppice shoots: Remove all stems and treat with suitable herbicide to prevent regrowth.

625 CULTIVATION

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

635 NOTCH PLANTING IN UNCULTIVATED GROUND

- Notching: Make a vertical 'I', 'L', 'T' or 'H' notch.
  - Depth: To accommodate full depth of roots.
- Planting: Plant tree, close notch with root collar at ground level and firm the soil.

680 SETTING OUT

- Planting density: 1m centres.
- Layout: Random groups of no less than 3 or more than 7 of the same species, ensuring that no three plants are aligned in any one direction.

**PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS**

710 MAINTENANCE

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

720 FAILURES OF PLANTING

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

740 CLEANLINESS

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

750 PLANTING MAINTENANCE GENERALLY

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

755 PLANTING MAINTENANCE - FERTILIZER

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

760 PLANTING MAINTENANCE - PRUNING

- General: Prune to promote healthy growth and natural shape.
  - Dead, dying, diseased wood and suckers: Remove.
  - Timing: In accordance with the agreed maintenance schedule.
  - Trees: Favour a single central leading shoot.
- Arisings: Remove.

770 WOODLAND PLANTING MAINTENANCE

- Watering: Only as necessary to prevent plants wilting.
- Loose plants: Refirm surrounding soil, without compacting.
- Weed control: Cut down and remove weeds prior to setting seed in a 1 m diameter area around each tree.
- Vegetation except trees and coppice shoots to be retained: Cut within the plantation area.
  - Height (maximum): 75 mm.
  - Arisings: Leave between rows.
- Mechanical, chemical or mulching methods of vegetation control: Submit proposals.
- Ditches and drains: Keep clear.
- Watering: Contractor's choice.

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): 75 mm.
- Trees: Remulch.

<b>Trees and Grassland Planting Palettes</b>						
<b>Mix Ref</b>	<b>Mix Name</b>	<b>Description</b>	<b>Planting Location</b>	<b>Species (common name)</b>	<b>Species (scientific name)</b>	<b>% mix</b>
<b>A</b>	Standard Coppice	Standard tree planting mix for replacement of groups and woodlands. Species selected to allow coppice management if required (e.g. beneath power lines) but can be grown as a high canopy woodland.	Group planting at location of replaced group or as specified; 2500 trees per hectare.	English oak Sessile oak Sweet chestnut Field maple Hornbeam Hazel Downy birch Silver birch Wych elm Small leaved lime	Quercus robur Quercus petraea Castanea sativa Acer campestre Carpinus betulus Corylus avellana Betula pubescens Betula pendula Ulmus glabra Tilia cordata	10% 5% 20% 10% 15% 20% 5% 5% 5% 5%
<b>B</b>	Standard Slow Growing	Standard tree planting mix for replacement of smaller groups or those in which coppice management is unsuitable such as adjacent to highways or along field margins. Forms a dense and bushy hedgerow mix.	Group planting at location of previous group or as specified; 2500 trees per hectare	Common hawthorn Midland hawthorn Blackthorn Bullace Spindle Holly Yew Wild service tree Wild privet Hazel European crab apple Common elder Rowan Wayfaring tree	Crataegus monogyna Crataegus laevigata Prunus spinosa Prunus insistitia Euonymus europaea Ilex aquifolium Taxus baccata Sorbus torminalis Ligustrum vulgare Corylus avellana Malus sylvestris Sambucus nigra Sorbus aucuparia Viburnum lantana	5% 5% 10% 5% 5% 10% 10% 10% 5% 10% 5% 5% 10% 5%
<b>C</b>	Dormouse Habitat	Species selected to maximise dormouse habitats. Can be coppiced.	Group planting at location of previous group or as specified; 2500 trees per hectare	Hazel Common hawthorn Field maple Dogwood Hornbeam Sweet chestnut English oak Wild service tree Holly European crab apple Spindle Bramble Honeysuckle	Corylus avellana Crataegus monogyna Acer campestre Cornus sanguinea Carpinus betulus Castanea sativa Quercus robur Sorbus torminalis Ilex aquifolium Malus sylvestris Euonymus europaea Rubus fruticosus Lonicera periclymenum	25% 5% 5% 5% 5% 10% 5% 5% 5% 5% 5% 10% 10%
<b>D</b>	Wetland Mix	Species mix for riverine or wetland environments (not saltwater).	Group planting at location of previous group or as specified; 2500 trees per hectare	Crack willow White willow Common alder Osier Grey willow Goat willow	Salix fragilis Salix alba Alnus glutinosa Salix viminalis Salix cinerea Salix caprea	20% 30% 20% 10% 10% 10%

Mix Ref	Mix Name	Description	Planting Location	Species (common name)	Species (scientific name)	% mix
E	High Value Mix	High diversity tree planting mix with species of conservation value and larger average planting sizes. For use where replacing features of high value.	Group planting at location of previous group or as specified; 2500 trees per hectare	English oak Hornbeam Downy birch Small leaved lime Wild service tree Rowan Common elder Sessile oak Sweet chestnut Field maple Hazel Midland hawthorn Blackthorn Bullace Spindle Holly Yew European crab apple Spindle	Quercus robur Carpinus betulus Betula pubescens Tilia cordata Sorbus torminalis Sorbus aucuparia Sambucus nigra Quercus petraea Castanea sativa Acer campestre Corylus avellana Corylus avellana Crataegus laevigata Prunus spinosa Prunus insistitia Euonymus europaea Ilex aquifolium Taxus baccata Malus sylvestris Euonymus europaea	5% 10% 5% 10% 10% 5% 5% 5% 10% 5% 5% 2% 2% 2% 2% 5% 5% 5% 5% 2%
F	High Impact Mix	Species and planting sizes selected to deliver faster establishment screening or aesthetic presence for use where mitigation relates mainly to views.	Group planting at location of previous group or as specified; 2500 trees per hectare	White poplar Hazel Holly oak Common elder Small leaved lime Holly	Populus alba Corylus avellana Quercus ilex Sambucus nigra Tilia cordata Ilex aquifolium	15% 20% 10% 20% 15% 20%
G	Standard Hedges	Standard planting mix for replacement of native hedges	Same alignment as previous hedge or as specified; staggered double-row of 5 plants per linear metre	Common hawthorn Blackthorn Common elder Field maple Wych elm Common alder Hazel Beech Holly English oak Wild privet Field rose Dog rose Common Yew Dogwood	Crataegus monogyna Prunus spinosa Sambucus nigra Acer campestre Ulmus glabra Alnus glutinosa Corylus avellana Fagus sylvatica Ilex aquifolium Quercus robur Ligustrum vulgare Rosa arvensis Rosa canina Taxus baccata Cornus sanguinea	20% 15% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5%
H	Hedgerow Trees	Standard tree planting mix for improvement of hedges that have been reduced in height for visibility or scaffolding	Within existing hedge at 10m spacing	Small leaved lime Wild cherry English oak Field maple	Tilia cordata Prunus avium Quercus robur Acer campestre	25% 25% 25% 25%
I	Direct Replacement	Denotes direct replacement of a feature with the same species except for Common ash, which will be replaced with English oak	At same location or as specified; 4:1 for individual trees or 2,500 trees per hectare for groups	(As per tree survey data TEP.X5003.005)	(As per tree survey data TEP.X5003.005)	100%



Mix Ref	Mix Name	Description	Planting Location	Species (common name)	Species (scientific name)	% mix
J	Wildflower Seeding (Bats)	Grassland mix with particular species for bat foraging	Bellmouth bunds during construction: BM22, 23, 24, 30, 31, 32, 33,34, 35, 36, 37	<p><b>Wildflowers</b> Yarrow</p> <p>Common Knapweed Wild Carrot Hedge Bedstraw Ladies' Bedstraw Oxeye Daisy</p> <p>Field scabious Corn poppy Birdsfoot Trefoil</p> <p>Musk mallow Selfheal Meadow Buttercup Common Sorrel Red Campion</p> <p><b>Grasses</b> Common Bent False Oatgrass</p> <p>Crested Dogstail</p> <p>Cocksfoot Red Fescue</p> <p>Meadow Barley</p> <p>Perennial Ryegrass Smooth Meadow grass Rough Meadow grass</p>	<p><b>20%Wildflowers</b> <i>Achillea millefolium</i> 15% <i>Centaurea nigra</i> 5% <i>Daucus carota</i> 5% <i>Galium mollugo</i> 5% <i>Galium verum</i> 5% <i>Leucanthemum vulgare</i> 15% <i>Knautia arvensis</i> 5% <i>Papaver rhoeas</i> 10 % <i>Lotus corniculatus</i> 10% <i>Malva moschata</i> 5% <i>Prunella vulgaris</i> 5% <i>Ranunculus acris</i> 5% <i>Rumex acetosa</i> 5% <i>Silene dioica</i> 5%</p> <p><b>80% Grasses</b> <i>Agrostis capillaris</i> 3% <i>Arrhenatherum elatius</i> 2% <i>Cynosurus cristatus</i> 20% <i>Dactylis glomerata</i> 3% <i>Festuca rubra spp</i> 43% <i>Hordeum secalinum</i> 2% <i>Lolium perenne</i> 20% <i>Poa pratensis</i> 4% <i>Poa trivialis</i> 3%</p>	
K	Wildflower Seeding (Reptiles)	Grassland mix to provide cover and invertebrates for reptile foraging	<p><i>Reptile Sites:</i></p> <p><i>PC2 after works are complete.</i></p> <p><i>Westbere areas once trees have been cleared as mitigation during works</i></p>	<p><b>Wildflowers</b> Yarrow</p> <p>Common Knapweed Wild Carrot Hedge Bedstraw Ladies' Bedstraw Oxeye Daisy</p> <p>Wild Parsnip Birdsfoot Trefoil</p> <p>Ribwort Plantain</p> <p>Selfheal Meadow Buttercup Common Sorrel Red Campion</p> <p><b>Grasses</b> Common Bent False Oatgrass</p> <p>Crested Dogstail</p> <p>Cocksfoot Red Fescue</p>	<p><b>20%Wildflowers</b> <i>Achillea millefolium</i> 15% <i>Centaurea nigra</i> 5% <i>Daucus carota</i> 5% <i>Galium mollugo</i> 5% <i>Galium verum</i> 5% <i>Leucanthemum vulgare</i>15% <i>Pastinaca sativa</i> 5% <i>Lotus corniculatus</i> 10% <i>Plantago lanceolata</i> 5% <i>Prunella vulgaris</i> 5% <i>Ranunculus acris</i> 10% <i>Rumex acetosa</i> 10% <i>Silene dioica</i> 5%</p> <p><b>80% Grasses</b> <i>Agrostis capillaris</i> 3% <i>Arrhenatherum elatius</i> 2% <i>Cynosurus cristatus</i> 20% <i>Dactylis glomerata</i> 3% <i>Festuca rubra spp</i> 43%</p>	

Mix Ref	Mix Name	Description	Planting Location	Species (common name)	Species (scientific name)	% mix
K (cont)				Meadow Barley Perennial Ryegrass Smooth Meadow grass Rough Meadow grass	<i>Hordeum secalinum</i> 2% <i>Lolium perenne</i> 20% <i>Poa pratensis</i> 4% <i>Poa trivialis</i> 3%	
L	LWS (as required, i.e. only if sufficient damage occurs during works that reseeding is required)	National vegetation Classification MG1/MG4 mixes tailored to each LWS site following works, if re seeding is required.	<i>Bespoke TBC: following on site monitoring of works at Pylon PC3 (Great Stour Ashford to Fordwich LWS, and Chislet Marshes LWS PC23-PC27).</i>	<b>Wildflowers</b> Cow parsley hogweed yarrow ribwort lesser knapweed lady's bedstraw Field scabious Birds foot trefoil meadow vetchling red clover meadow butter cup great burnet dandelion Autumn hawkbit <b>Grasses</b> Yorkshire fog False oat-grass Soft brome Meadow foxtail Rough meadow grass Crested dog's tail Red Fescue Perennial ryegrass Cocksfoot	<b>20%Wildflowers</b> <i>Anthriscus sylvestris</i> 5% <i>Heracleum sphondylium</i> 5% <i>Achillea millefolium</i> 15% <i>Plantago lanceolata</i> 5% <i>Centaurea nigra</i> 5% <i>Galium verum</i> 5% <i>Knautia arvensis</i> 5% <i>Lotus corniculatus</i> 10% <i>Lathyrus pratensis</i> 5% <i>Trifolium pratense</i> 20% <i>Ranunculus acris</i> 20% <i>Sanguisorba officinalis</i> 5% <i>Taraxacum officinale</i> 10% <i>Leontodon autumnalis</i> 5% <b>80% Grasses</b> <i>Holcus lanatus</i> 10% <i>Arrhenatherum elatius</i> 5% <i>Bromus mollis</i> 5% <i>Alopecurus pratensis</i> 5% <i>Poa trivialis</i> 5% <i>Cynosurus cristatus</i> 5% <i>Festuca rubra</i> spp 45% <i>Lolium perenne</i> 15% <i>Dactylis glomerata</i> 5%	
M	Riparian Strips (as required, i.e. only if sufficient damage occurs during works that reseeding is required)	National vegetation Classification MG4/MG9 mixes tailored to the site following works, if re seeding is required.	<i>Bespoke TBC: following on site monitoring of works in areas adjacent to watercourse s</i>	As appropriate of L, with: Tufted hair grass Creeping butter cup meadow butter cup Common Sorrel Common mouse ear	<i>Deschampsia cespitosa</i> <i>Ranunculus repens</i> <i>Ranunculus acris</i> <i>Rumex acetosa</i> <i>Cerastium fontanum</i>	

## Q35 Landscape Maintenance

### GENERALLY

#### 105 MAINTENANCE OBJECTIVES

- Location: All landscape areas.
  - Duration: Five years.
  - Aims:
    - Enhanced landscape quality;
    - Improved landscape visual amenity;
    - Provide wildlife habitat and increase biodiversity; and
    - To encourage natural woodland regeneration.
- Restrictions: Not applicable.
- Results: As scheduled.

#### 110 NOTICE

- Give notice before:
  - Application of herbicide.
  - Application of fertilizer.
  - Watering.
  - Each site maintenance visit.
- Period of notice: 7 days.

#### 130 REINSTATEMENT

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

#### 140 CONTROL OF MAMMALIAN PESTS

- Specialist firms: Submit proposals.
  - Method: Submit proposals.

#### 145 CONTROL OF INVASIVE ANIMAL SPECIES

- Specialist firms: Submit proposals.
- Species: European rabbit.
- Location: Whole site.
- Method: Submit proposals.

#### 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 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.

- 180 CHIPPING OR SHREDDING
- General: Not permitted on site.
- 181 MECHANICAL EQUIPMENT
- General: Minimize.
  - Prohibited equipment: Chippers.
  - Timing: Use of mechanical equipment allowed between the hours of 10:00 am and 4:00 pm only.
- 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.
- SHRUBS/TREES/HEDGES**
- 500 ESTABLISHMENT OF NEW PLANTING
- Duration: Five years.
  - Weed control:
    - Method: Keep planting beds clear of weeds by maintaining full thickness of mulch.
    - 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: Contractor's choice.
- 502 ESTABLISHMENT OF NEW PLANTING - FERTILIZER
- Time of year: March or April.
  - Type: Slow release.
  - Spreading: Spread evenly. Carefully lift and replace any mulch materials.
    - Application rate: As manufacturer's recommendations.
- 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.
- 520 REFIRMING OF TREES AND SHRUBS
- 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.

**545 PRUNING OF EXCESSIVE OVERHANG**

- Timing: Annually.
- Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
- Special requirements: None.

**550 PRUNING OF EXCESSIVE HEIGHT**

- Timing: Annually.
- Operations: Remove excessive height As instructed.

**555 PRUNING TREES AND SHRUBS**

- Standard: To BS 7370-4.
- Special requirements: Growth retardants not permitted.

**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.

**645 WEED CONTROL GENERALLY**

- Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high.
- 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 and mulched surfaces as little as possible.
- Completion: Rake area to a neat, clean condition.
- Mulch: Reinststate to original depth.

**655 WEED CUTTING BY HAND OR MACHINE**

- Undesirable grass, brambles and herbaceous growth: Cut down cleanly to a maximum height of 50 mm.
- Herbicides: Remove arisings before application.

**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.
- 690 MAINTENANCE OF LOOSE MULCH
- Thickness (minimum): 75 mm.
    - Top up: Twice per year.
  - 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.
- 710 WOODLAND PLANTING MAINTENANCE
- Watering: In exceptional circumstances to prevent plants dying.
  - 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.
  - Ditches and drains: Keep clear.
- 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 as schedule.

**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 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.

**860 REMOVING TREES, SHRUBS AND HEDGES**

- Standards: To BS 3998, 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.

**870 CAVITIES IN TREES**

- Investigation: Remove rubbish and rotten wood. Probe the cavity to find the extent of any decay, and give notice.
- Water filled cavities: Do not drain.
- Sound wood inside cavities: Do not remove.
- Cavity openings: Do not cover.

**920 FENCING**

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

## Q40 Fencing

### FENCING SYSTEMS

#### 140 GENERAL PATTERN WIRE MESH FENCING

- Manufacturer: Contractor's choice.
  - Product reference: Submit proposals.
- Standard: To BS 1722-2.
- Height: 1000 mm.
- Mesh: Hexagonal, 31 x 900 x 18 to BS EN10223-2.
- Posts and struts: Round wood.
  - Treatment: Alkaline Copper Quaternary (ACQ).
  - Finish: Contractor's choice.
- Maximum centres of posts:
  - Straining posts: 150 m in straight runs and at all ends, corners, changes of direction and acute variations in level.
  - Intermediate posts: 3.5 m.
- Method of setting posts and struts:
  - Straining posts: 450 mm square or 300 mm diameter holes, 600 mm deep filled to two thirds depth with concrete.
  - Struts: 300 x 450 mm holes, 450 mm deep filled to not less than half the depth with concrete.
  - Intermediate posts: Driven to a minimum depth of 600 mm.
- Accessories: None.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-2.

#### 140A GENERAL PATTERN WIRE MESH FENCING - RABBIT PROOF FENCING

- Manufacturer: Contractor's choice.
  - Product reference: Submit proposals.
- Standard: To BS 1722-2.
- Height: 1000 mm.
- Mesh: Hexagonal, 31 x 900 x 18 to BS EN10223-2.
- Posts and struts: Round wood.
  - Treatment: Alkaline Copper Quaternary (ACQ).
  - Finish: Contractor's choice.
- Maximum centres of posts:
  - Straining posts: 150 m in straight runs and at all ends, corners, changes of direction and acute variations in level.
  - Intermediate posts: 3.5 m.
- Method of setting posts and struts:
  - Straining posts: 450 mm square or 300 mm diameter holes, 600 mm deep filled to two thirds depth with concrete.
  - Struts: 300 x 450 mm holes, 450 mm deep filled to not less than half the depth with concrete.
  - Intermediate posts: Driven to a minimum depth of 600 mm.
- Accessories: Single leaf field gate and As drawing D3761.001 and 002.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-2.



## **EXECUTION**

### **710 INSTALLATION GENERALLY**

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

### **720 SETTING POSTS IN CONCRETE**

- Standard: To BS 8500-2.
- Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
- Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.
- Admixtures: Do not use.
- Holes: Excavate neatly and with vertical sides.
- Filling: Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.
- Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

### **750 DRIVEN POSTS**

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

### **770 SITE CUTTING OF WOOD**

- General: Kept to a minimum.
- Below or near ground level: Cutting prohibited.
- Treatment of surfaces exposed by minor cutting and drilling: Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.

## **COMPLETION**

### **910 CLEANING**

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

### **920 FIXINGS**

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

### **930 GATES**

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

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