

Sirius Environmental Ltd

FCC ENVIRONMENT

Pwllfawatkin Landfill Site Phase 3 & 4

Planting Specifications

13-11-2023

Restoration Planting and Aftercare Scheme

Contents

Q30 Seeding	1
Q31 External planting	4
Q35 Landscape maintenance	10
Q40 Fencing	14

Q30 Seeding

General information/requirements

115 Seeded areas

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

120 Climatic conditions

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

160 Notice

1. Give notice before
 - 1.1. Setting out.
 - 1.2. Applying herbicide.
 - 1.3. Applying fertilizer.
 - 1.4. Preparing seed bed.
 - 1.5. Seeding or turfing.
 - 1.6. Visiting site during maintenance period.
2. **Period of notice:** 3 working days

170 Setting out

1. **Boundaries:** Mark clearly.
2. **Delineation:** In straight lines as shown on drawings.

Preparation

210 Herbicide

1. **Description:** For all areas to be seeded
2. **Type:** Suitable for suppressing perennial weeds.
3. **Timing:** Allow fallow period before cultivation.
 - 3.1. **Duration:** As manufacturer's recommendation

250 Soil requirements

1. **Type**
 - 1.1. **Seeded areas:** Existing topsoil

Seeding

310 Grass seed

1. **Description:** For all Meadow Grass Areas within Redline for Phase 3 and 4
2. **Supplier:** Emorsgate Seeds or Similar Approved
3. **Mixture:** EM3 Special General Purpose Meadow Mixture
4. **Application rate:** 4g/m²

319 Quality of seed

1. Description: For all seeded areas
2. Freshness: Produced for the current growing season.
3. Certification: Blue label certified varieties.
 - 3.1. Standard: EC purity and germination regulations.
 - 3.2. Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
4. Samples of mixtures: Submit when requested.

330 Sowing

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

335 Grass sowing season

1. Grass seed generally: April to June

340 Pre-emergent herbicide

1. Description: For all areas to be seeded
2. Standard: Pesticide Safety Directorate approved.
3. Application rate: In accordance with manufacturer's written recommendation.
 - 3.1. Timing: Immediately after sowing.

Turfing - Not Used

Protecting/cutting

530 First cut of Meadow Grassland

1. Timing: When grass is reasonably dry.
 - 1.1. Height of initial growth: up to 125 mm
2. Preparation
 - 2.1. Debris and litter: Remove.
 - 2.2. Stones and earth clods larger than 25 mm in any dimension: Remove
3. Height of first cut: 40-60 mm
4. Mower type: Contractor's choice
5. Arisings: Spread evenly over cut areas

590 Cleanliness

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

Maintenance

610 Failures of seeding

1. Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.

2. Defective materials or workmanship: Areas that have failed to thrive.
 - 2.1. Exclusions: Theft or malicious damage.
3. Method of making good: Recultivation and reseeded.
4. Timing of making good: The next suitable planting season

Ω End of Section

Q31

External planting

General information/ requirements

118 Soil conditions

1. Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
2. 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

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

125 Times of year for planting

1. Deciduous trees and shrubs: Late October to late March.
2. Conifers and evergreens: September/ October or April/ May.
3. Container grown plants: At any time if ground and weather conditions are favourable.
 - 3.1. Watering and weed control: Provide as necessary.

130 Mechanical tools

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

145 Watering

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

160 Notice

1. Give notice before
 - 1.1. Setting out.
 - 1.2. Applying herbicide.
 - 1.3. Applying fertilizer.
 - 1.4. Delivery of plants/ trees.
 - 1.5. Planting shrubs.
 - 1.6. Planting trees into previously dug pits.
 - 1.7. Watering.
 - 1.8. Visiting site during maintenance period.
2. Period of notice: Two working days

200 Plants/ Trees – general

1. Condition: Materially undamaged, sturdy, healthy and vigorous.
2. Appearance: Of good shape and without elongated shoots.
3. Hardiness: Grown in a suitable environment and hardened off.
4. Health: Free from pests, diseases, discoloration, weeds and physiological disorders.

5. Budded or grafted plants: Bottom worked.
6. Root system and condition: Balanced with branch system.
 - 6.1. Standard: The relevant parts of BS 3936
7. Species: True to name.
8. Origin/ Provenance: Grown in the United Kingdom for at least one growing season, unless otherwise approved
9. Definition: Origin and Provenance have the meaning given in the National Plant Specification.

216 Plants/ Trees – specification criteria

1. Name, forms, dimensions and other criteria: To the relevant part of BS 3936.

235 Container grown plants/ Trees

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

245 Labelling and information

1. 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:
 - 1.1. Full botanical name.
 - 1.2. Total number.
 - 1.3. Number of bundles.
 - 1.4. Part bundles.
 - 1.5. Supplier's name.
 - 1.6. Employer's name and project reference.
 - 1.7. Plant specification, in accordance with scheduled National Plant Specification categories.

246 Labelling and information

1. Standard: To BS 3936.

255 Plants/ Trees reserved at supplier's premises

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

260 Plant/ Tree substitution

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

265 Plant handling, storage transport and planting

1. **Standard:** To CPSE 'Handling and establishing landscape plants'.
2. **Frost:** Protect plants from frost.
3. **Handling:** Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
4. **Plant packaging:** Coextruded polyethylene bags with black interior and white exterior
5. **Packaging of bulk quantities:** Pallets or bins sealed with polyethylene and shrink wrapped
6. **Planting:** Upright or well balanced with best side to front.

290 Surplus material

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

Plant containers - Not Used

Preparation of planting beds/ planting materials

300 Herbicide

1. **Description:** TO CLEAR EXISTING VEGETATION
2. **Locations:** All planting areas
3. **Type:** Suitable for suppressing perennial weeds.
4. **Timing:** Allow fallow period before cultivation.
 - 4.1. **Duration (minimum):** As manufacturer's recommendation

Planting shrubs/ herbaceous plants/ bulbs

401 Regular plant layout

1. **Description:** TO HEDGEROW PLANTING
2. **Spacing:** In regular, staggered rows
3. **Density:** As plant schedule

401 Regular plant layout Type A

1. **Description:** TO WOODLAND PLANTING
2. **Spacing:** In regular, staggered rows
3. **Density:** As plant schedule

405 Shrub planting pits

1. **Timing:** Excavate 1-2 days (maximum) before planting.
2. **Sizes:** As plant schedule
3. **Pit bottom improvement** break up to a depth of 150 mm, incorporating 50g of slow release fertilizer per planting pit.

471 Naturalized hedges

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

480 After planting

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

2. **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.

486 Shrub and Scrub plant protection

1. **Manufacturer:** Greentech or similar approved
 - 1.1. **Product reference:** Tubex Shrub Shelter Guard
2. **Type:** Round
3. **Material:** Polypropylene
4. **Size:** 60cm x 130-160mm
5. **Colour:** Green
6. **Support:** Single timber stake
7. **General:** Ensure that protection methods do not impede natural movement of shrubs or restrict growth.

Planting trees - Not Used

Woodland/ matrix/ buffer zone planting

600 Woodland work generally

1. **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.
2. **Safety:** Comply with Arboriculture and Forestry Advisory Group Safety leaflets.

605 Existing vegetation/ Weed clearance

1. **Surface vegetation clearance:** Screef an area one metre diameter around each planting location
2. **Arisings:** Remove.

615 Existing trees/ Seedlings/ Coppice shoots

1. **Existing trees and seedlings:** Retain.

635 Notch planting in uncultivated ground

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

665 Setting out

1. **Distance between trees:** As plant schedule
2. **Distance between rows:** 1.5 m
 - 2.1. **Plant in staggered rows.**

680 Setting out

1. **Planting density:** As plant schedule
2. **Layout:** Random groups of no less than 5 or more than 7 of the same species, ensuring that no three plants are aligned in any one direction. Feathers to be planted at 4.5m centres within the mix

Protecting/ maintaining/ making good defects

710 Maintenance

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

720 Failures of planting

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

730 Protective fencing

1. Fencing type: General pattern wire mesh fencing
2. Erection: On completion of planting.
3. Removal: After planting is well established

740 Cleanliness

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

750 Planting maintenance generally

1. Weed control: Maintain weed free area around each tree and shrub.
 - 1.1. Diameter (minimum): The larger of 1 m or the surface of original planting pit.
2. 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.
3. Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
4. Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
5. Trees: Spray crown when in leaf during warm weather.
 - 5.1. Timing: After dusk.
6. Tree accessories: Check condition of stakes, ties, guys, guards and irrigation and ventilation systems.
 - 6.1. Broken or missing items: Replace.
 - 6.2. Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
 - 6.3. Ties: Adjust to accommodate growth and prevent constriction or abrasion.
 - 6.4. Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
 - 6.5. Frequency of checks: At each scheduled maintenance visit
7. Watering: As required for healthy establishment, depending on weather conditions

760 Planting maintenance – pruning

1. General: Prune to promote healthy growth and natural shape.

- 1.1. Dead, dying, diseased wood and suckers: Remove.
- 1.2. Timing: In accordance with the agreed maintenance schedule
- 1.3. Trees: Favour a single central leading shoot.
2. Arisings: Remove.

770 Woodland planting maintenance

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

780 Maintenance instructions

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

Ω End of Section

Q35

Landscape maintenance

Generally

105 Maintenance objectives Hedgerow

1. Location: Proposed Hedgerows
 - 1.1. Duration: Five years followed by an annual review.
Proposed hedgerows to be cut annually
Refer to Landscape and Ecological Management Plan for Hedgerow Management Principles.
2. Aims: Improved landscape visual amenity. Provide wildlife habitat and increase biodiversity
Enhanced landscape quality
3. Results: As scheduled

105 Maintenance objectives Meadow Grassland

1. Location: Meadow Grass Areas
 - 1.1. Duration: Five years followed by an annual review
2. Aims: Improved landscape visual amenity. Provide wildlife habitat and increase biodiversity
Enhanced landscape quality
3. Results: As scheduled

105 Maintenance objectives Woodland and Scrub Planting

1. Location: Native woodland and Scrub planting areas
 - 1.1. Duration: Five years followed by an annual review
2. Aims: Improved landscape visual amenity. Provide wildlife habitat and increase biodiversity
3. Results: As scheduled

110 Notice

1. Give notice before
 - 1.1. Application of herbicide.
 - 1.2. Application of fertilizer.
 - 1.3. Watering.
 - 1.4. Each site maintenance visit.
2. Period of notice: Three Days

130 Reinstatement

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

160 Water restrictions

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

170 Disposal of arisings

1. General: Unless specified otherwise, dispose of arisings as follows:
 - 1.1. Biodegradable arisings: Compost on site

- 1.2. Grass cuttings: Spread evenly
- 1.3. Tree roots and stumps: Remove from site
- 1.4. Shrub and tree prunings: Remove to recycling facility
- 1.5. Litter and nonbiodegradable arisings: Remove from site

175 Disposal of arisings

1. General: Unless specified otherwise, dispose of arisings as follows:

190 Litter

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

197 Cleanliness

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

Grassed areas

220 Grass cutting generally

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

225 Tree stems

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

226 Tree stems

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

255 First cut of

1. Description: ALL GRASSED AREAS
2. Height of initial growth: up to 125mm
3. Preparation
 - 3.1. Debris and litter: Remove.
 - 3.2. Stones and earth clods larger than 25 mm in any dimension: Remove
4. Height of first cut: 40-60 mm
5. Mower type: Contractor's choice
6. Arisings: Spread evenly over cut areas

265 Mowing general areas

1. Grass height: Maintain between 50 and 75 mm
2. Arisings: Spread evenly over cut areas

Flower beds/ seasonal beddings - Not Used

Shrubs/trees/hedges

500 Establishment of new planting

1. Duration: 5 years
2. Weed control
 - 2.1. Method: Keep planting beds clear of weeds by use of suitable herbicides.
 - 2.2. 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.
3. Watering: Contractor's choice

530 Tree shelters

1. Loose or defective shelters: Adjust, refix or replace to original specification and to prevent chafing.
2. Removal: Two years after planting

640 Thinning by removal of surplus plants

1. Plants to be thinned: Any any overcrowded woodland planting
2. Standard: BS 7370-4.
3. Timing: When foliage of adjacent plants has begun to touch
4. Roots
 - 4.1. Disturbance to adjacent plants: Minimize.
 - 4.2. Soil: Refill holes with topsoil to leave an even graded surface.
 - 4.3. Adjacent plants: Make good any minor damage immediately.
5. Plants for retention: Select plants with a strong healthy habit.
6. Mature planting density: As schedule

645 Weed control generally

1. Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high
2. Adjacent plants, trees and grass: Do not damage.

657 Herbicide to kill regrowth

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

665 Weed control with winter herbicide

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

670 Weed control with summer herbicide

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

710 Woodland and Scrub planting maintenance

1. Watering: In exceptional circumstances to prevent plants dying.
2. Loose plants: Refirm surrounding soil, without compacting.

3. Vegetation: Except trees and coppice shoots to be retained, cut down to 100 mm above ground level within the plantation area.
 - 3.1. Arisings: Leave between rows.
4. Ditches and drains: Keep clear.

715 Woodland and Scrub thinning

1. Mature planting density: As per schedule
2. Timing: Thin in stages in accordance with the agreed management plan.

Tree work - Not Used

Water areas - Not Used

Hard landscape areas/fencing

910 Access track and site paths

1. Herbicide: Apply a suitable foliar acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arisings.
2. Hard surfaces: Remove litter, leaves and other debris.

Ω End of Section

Q40 Fencing

Fencing systems

150 General pattern strained wire fencing

1. Manufacturer: Contractor's choice
 - 1.1. Product reference: Contractor's choice
2. Standard: To BS 1722-2, type SW 120.
3. Wire: Carbon steel wire, 4 mm diameter
4. Posts and struts: Round wood and pencil pointed
 - 4.1. Treatment: To provide a 15-year service life pressure treated timber
 - 4.2. Finish: None
5. Maximum centres of posts
 - 5.1. Straining posts: 150 m in straight runs and at all ends, corners, changes of direction and acute variations in level.
 - 5.2. Intermediate posts: 3m.
6. Method of setting posts and struts
 - 6.1. Straining posts: 450 mm square or 300 mm diameter holes, 600 mm deep filled to two thirds depth with concrete
 - 6.2. Struts: 300 x 450 mm holes, 450 mm deep filled with excavated material, well rammed as filling proceeds
 - 6.3. Intermediate posts: As per detail drawing ref SRE 1130 09 01 Sheet 7
7. Accessories: A line of barbed wire between tops of posts
8. Conformity: Submit manufacturer's and installer's certificates, to BS 1722-2.

510 Field gates and posts

1. Manufacturer: Jacksons Fencing
 - 1.1. Product reference: [440200]. - Heavy gates, 3000 mm long
2. Size: 1150 mm high x 3000 mm wide
3. Materials: Steel gate and posts
 - 3.1. Treatment: Hot-dip galvanized to BS EN ISO 1461
 - 3.2. Finish: Powder-coated to BS 1722-16
4. Fittings: Adjustable hook and band top hinge, double swing rocker bottom hinge and loop over catch
 - 4.1. Finish: Hot-dip galvanized to BS EN ISO 1461
5. Method of setting posts: Concrete foundation, 450 mm square x 600 mm deep
6. Accessories: Additional mesh - wildlife netting

Gates, posts and stiles - Not Used

Accessories - Not Used

Execution

710 Installation generally

1. Set out and erect

- 1.1. Alignment: Straight lines
- 1.2. Tops of posts: Following profile of the ground.
- 1.3. Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
- 1.4. Fixings: All components securely fixed.

715 Competence

1. Operatives: Contractors must employ competent operatives.
2. Qualifications: Submit certification of training.
 - 2.1. NHSS Sector Scheme 2A sub categories: (a)

740 Setting posts in earth

1. Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling.
2. Filling: Position posts/ struts and replace excavated material, well rammed as filling proceeds.

750 Driven posts

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

Completion

910 Cleaning

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

920 Fixings

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

Ω End of Section



Specification created using NBS Chorus