

1353 - Leighton Park Grove Field Theatre Spec

Grove Field Theatre Planting & Maintenance Specification

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Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General conditions.

SYSTEM OUTLINE

115 SOIL SYSTEM FOR GRASS SWARDS FOR LAWNS AND MEADOW

- Composition:
 - Soil: Site sourced topsoil.
 - Ameliorants: None.
 - Accessories: None.

PRODUCTS

300 PREPARATION MATERIALS GENERALLY

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

360 SANITIZED AND STABILIZED COMPOSTED MATERIALS CERTIFIED TO PAS 100 FOR TREE PIT PREPARATION

- Standard: In accordance with PAS 100.
- Source: Contractor's choice.
 - Product reference: Contractor's choice.
- Horticultural parameters:
 - pH (1:5 water extract): 7.0-8.7.
 - Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
 - Moisture content (m/m of fresh weight): 35-55%.
 - Organic matter content (minimum): 25%.
 - Grading (air dried samples): 99% passing 25 mm screen, and 90% passing: 10 mm screen mesh aperture.
 - Carbon:Nitrogen ratio (maximum): 20:1.
- Texture: Friable.
- Objectionable odour: None.
- Composting Association certification: Required.
- Declaration of analysis: Submit.
- Additional analyses: Not required.
- Samples: Not required.

EXECUTION

- 635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALS FOR COMPOST
- Timing: Submit at handover.
 - Contents:
 - Full description of all compost components.
 - Record of source for all compost components.
 - Analyst's report for each test carried out.
 - Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.
 - Quality Compost Protocol certification: Not required.
 - Number of copies: One.
- 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 100 mm.
 - Remove from site: Arisings, contaminants and debris and Builders rubble.
- 670 INSPECTING FORMATIONS
- Give notice: Before spreading topsoil for mounding.
 - Notice period: 14 days.
- 675 PREPARATION OF UNDISTURBED TOPSOIL
- Standard: In accordance with BS 4428.
 - Grading and cultivation: Category C.
 - 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): One month.
 - Weed control: At appropriate times treat with a suitable translocated nonresidual herbicide.

690 TOPSOIL STORAGE HEAPS

- Location: Already on site.
- Height (maximum): 2.0 m.
- Width (maximum): 5.0 m.
 - Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
- Protection:
 - Do not place any other material on top of storage heaps.
 - Do not allow construction plant to pass over storage heaps.
 - Prevent compaction and contamination, by fencing and covering as appropriate.

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): 300 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.

810 APPLYING COMPOST TO TREE PITS

- Application rate for trees and shrubs: 50 mm thick.
 - Timing: Apply prior to cultivation.
- Application rate for grass: 0.6 m³/100 m².
 - Timing: Apply prior to cultivation.
- Application rate for planters: Not required.
 - Timing: Apply prior to cultivation.
- Other requirements: None.

COMPLETION

920 APPLYING MULCH

- Timing: At end of the maintenance period.
- Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
- Planting beds: Re-mulch.
 - Depth (minimum): Not required.
- Trees: Remulch.
 - Depth (minimum): 50 mm.
- Container planting: Remulch.
 - Depth (minimum): Not required.

Q30 Seeding/ turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS

115 SEEDED AND TURFED AREAS

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

120 CLIMATIC CONDITIONS

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

145 WATERING

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

150 WATER RESTRICTIONS

- Timing: If water supply is or is likely to be restricted by emergency legislation do not carry out seeding/turfing until instructed. If seeding/turfing has been carried out, obtain instructions on watering.

PREPARATION

210 HERBICIDE FOR LAWNS

- Type: Suitable for suppressing perennial weeds.
- Timing: Allow fallow period before cultivation.
 - Duration: 2 weeks.

250 SOIL REQUIREMENTS

- Type:
 - Seeded areas: Soil for grass swards, as section Q28.
 - Turfed areas: N/A.
 - Reinforced grass areas: N/A.

SEEDING

311 GRASS SEED FOR LOWER PART OF THEATRE (Northern Side)

- Supplier: British Seed Houses, Germinal GB Ltd or similar and Approved.
 - Mixture reference: A19 Amenity Grass.
- Application rate: Supplier's recommendation.

311B GRASS SEED FOR UPPER PART OF THEATRE (Southern Side)

- Supplier: Emorsgate Seeds or similar and Approved.
 - Mixture reference: EM4 Meadow Mixture for Clay Soils.
- Application rate: 4 g/m².

PROTECTING/CUTTING

510 PROTECTIVE FENCING

- Fencing type: Temporary Plastic Mesh in Green Colour.
 - Height: 0.9 m.
- Erection: On completion of seeding/ turfing.
- Removal: Not required. Fencing will remain the property of the employer.

530 FIRST CUT OF GRASSED AREAS

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

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 reseeding/ returfing.
- Timing of making good: The next suitable planting season.

620 MAINTAINING AMENITY GRASS

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period, up to 5 years and beyond.
- Maximum height of growth at any time: 75 mm for amenity grass areas.
- Preparation: Before each cut remove all litter and debris.
- Cutting: As and when necessary to a height of 35 mm for amenity seeded areas.
 - Arisings: Remove.
- Bulb planting areas: Do not cut until bulb foliage has died down.
- Trimming: All edges.
 - Arisings: Remove.
- Weed control: Substantially free of broad leaved weeds.
 - Method: Application of a suitable selective herbicide.
- Stones brought to the surface: Remove regularly.
 - Size: Exceeding 25 mm in any dimension.
- Areas of settlement: Make good.
- Watering: When instructed.

650 MAINTAINING GRASSED AREAS WITH PERENNIAL WILDFLOWERS

- Duration: Carry out the following operations from completion of seeding/ turving until: the end of the rectification period, up to 5 years and beyond.
- Preparation: Before each cut remove all litter and debris.
- Height and frequency of cut in first growing season:
 - Time of first cut: March/ April.
 - Height of first cut: 40mm.
 - Frequency of subsequent cutting (minimum): Every two weeks within first year.
 - Height of growth permitted (maximum): 60mm.
- Height and frequency of cut in second growing season:
 - Time of cut: August and October.
 - Height of cut: 50 mm.
- Trimming: All edges.
 - Arisings: Remove.
- Watering: When instructed.

Q31 External planting

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/ REQUIREMENTS

112 SITE CLEARANCE GENERALLY

- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- Stones: Remove those with any dimension exceeding 50 mm.
- Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- Vegetation: Clear surface vegetation in areas shown on drawings using suitable nonresidual herbicide.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
- Additional requirements: to work carefully around the existing Yew bush beside old school.

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.

145A WATERING

- Quantity: Wet full depth of topsoil for planting and 80 litres for all trees 16-18cm girth or above.
- Application: Even and without damaging or displacing plants or soil.
- Frequency: Weekly during the growing season of the first 2 years, then as required at least up to 5 years.

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: Two weeks.

170 SOIL REQUIREMENTS

- Type
 - Planted beds: Existing topsoil.
 - Tree pits, shrub pits and other backfilling: Existing topsoil.
 - External container planting: Container planting growing media system, as section Q28.
 - Mulch applied after planting: Mulching and top dressing system, as section Q28.

200 PLANTS/ TREES - GENERAL

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

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.

290 SURPLUS MATERIAL

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

PLANTING TREES

505 TREE PITS

- Sizes: As drawn.
- 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: As drawn.
- Pit sides: Scarify.
- Backfilling material: As drawn.
- Accessories: As drawn.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710 MAINTENANCE

- Duration: Carry out the operations in the following clauses from completion of planting until years post installation.
- Frequency of maintenance visits: Weekly 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.
 - 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: As soon as possible or at the start of the planting the 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.

790 FINAL MULCHING

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

Q35 Landscape maintenance

To be read with Preliminaries/ General conditions.

GENERALLY

105 MAINTENANCE OBJECTIVES

- Location: All contracted soft landscape areas.
 - Duration: 5 years.
- Aims: To provide optimum conditions for the establishment of the newly planted trees, grass and meadow grass whilst maintaining a generally neat and tidy site with minimal weed growth and grass maintained to the specified lengths.
- Restrictions: Noisy activities could disturb the use of the theatre and music rooms. Therefore coordination with the school may be required, suggest at start of the maintenance period. There may also be special event days that effect maintenance of the landscape either when operations can take place or when particular effort for tidiness is desirable.
- Results: As Aims.

130 REINSTATEMENT

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

155 WATERING

- Supply: Potable mains water.
- Quantity: Wet full depth of topsoil .
- Application: Do not damage or loosen plants.
- Compacted soil: Loosen or scoop out, to direct water to 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.

197 CLEANLINESS

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

GRASSED AREAS

210 MAINTENANCE OF GRASSED AREAS

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

220 GRASS CUTTING GENERALLY

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

225 TREE STEMS

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

250 LEAF REMOVAL

- Operations: Collect fallen leaves.
- Special requirements: None.
- Disposal: Remove from site for recycling.

255 FIRST CUT OF ALL GRASSED AREAS

- 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: Remove for composting on site.

260 MOWING LAWNS

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

272 MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS

- Preparation: Before each cut remove litter and debris.
- Height and frequency of cut in first growing season:
 - Time of first cut: March/ April.
 - Height of first cut: 40mm .
 - Frequency of subsequent cutting (minimum): Every two weeks.
 - Height of growth permitted (maximum): 60mm.
- Height and frequency of cut in second growing season:
 - Time of cut: August and October.
 - Height of cut: 50mm.
- Trimming: All edges.
- Arisings: Remove.
- Watering: When instructed.

380 REINSTATEMENT OF DAMAGED LAWNS

- Damaged turf: Remove to a depth of 30 mm.
- Preparation: Cultivate substrate to a fine tilth.
- Reinstatement: Contractor's choice of returfing or topsoiling and reseeding:
 - 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 seed mix to match existing grass in quality and appearance.
- Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

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 and hand weeding.
 - Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
- Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Watering: Contractor's choice.

510 TREE STAKES AND TIES

- Inspection/ Maintenance times: Twice a year 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: 2 years after planting.
 - 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.

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.

690 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.

705 WINTER LEAF REMOVAL

- Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
- Arisings: Remove to recycling facility.