

Q28 TOPSOIL AND SOIL AMELIORANTS

To be read with Preliminaries/General Conditions and sections AA31 and AA90.

SYSTEM OUTLINE

- 115 SOIL SYSTEM FOR GRASS SWARDS FOR ALL GRASSED AREAS
- Composition:
 - Soil: Site sourced topsoil and Imported topsoil to BS 3882.
 - Ameliorants: Fertilizer to be incorporated into topsoil .
 - Accessories: None.
- 135 PLANTING BED SOIL SYSTEM FOR FLOWERING SHRUBS
- Composition:
 - Topsoil: Site sourced topsoil and Imported topsoil to BS 3882.
 - Ameliorants: Fertilizer.
 - Accessories: None.
- 145 PLANT PIT BACKFILLING SOIL SYSTEM FOR FLOWERING SHRUB PITS AND TREE PITS
- Composition:
 - Topsoil: Site sourced topsoil and Imported topsoil to BS 3882.
 - Ameliorants: Fertilizer.
 - Accessories: None.
- 155 MULCHING AND TOP DRESSING SYSTEM FOR ALL SHRUBS
- Composition:
 - Material: Organic materials and Fertilizer to be incorporated into topsoil .

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.
 - Products containing peat.
 - River and canal dredgings.

315 IMPORTED TOPSOIL TO BS 3882 FOR PLANTING BEDS AND TREE PITS

- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work. **Specifically, Benchers' border, Library planting bed, reprofiling of library bank, integrated planters and any grassed areas where levels are to be made up following construction activities.**
- Standard: To BS 3882.

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- **Screened, so free from non-soil material, brick and other building material and waste,**

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- **hydrocarbons, perennial weeds and other foreign material or substances that would render the topsoil unsuitable for use.**
 - Classification: Multipurpose.
 - Grade: Within the parameters of 'sandy loam' textural class. **Ideally a loamy sand or sandy loam, with good drainage capability and less likelihood of being compacted during transport. The topsoil for the planted beds should be screened to at least 20mm. The topsoil for the Benchers Lawn should be screened to at least 10mm and the topsoil for planters should be screened to 5mm.**
 - Source: Submit proposals.
 - Product reference: Submit proposals.
- 401 ORGANIC FERTILIZERS FOR PLANTING BEDS AND TREE PITS
- Manufacturer/ source: Submit proposals.
 - Product reference: Submit proposals.
 - Standard: In accordance with the Fertiliser Industry Assurance Scheme (FIAS).
 - Purpose: Establishment fertilizer.
 - Type: Submit proposals.
 - Availability to plants: Slow release.

EXECUTION

- 625 SAMPLE LOADS FOR IMPORTED TOPSOIL
- Deliver to site a sample load: of not less than 5 m³.
 - Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - Notice period: 14 days.
- 630 DOCUMENTATION FOR IMPORTED TOPSOIL FOR ALL PLANTED AREAS INCLUDING TREE PITS:
- Timing: Submit at Practical Completion.
 - 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: Two .
- 635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALS:
- Timing: Submit at Practical Completion.
 - 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: Required.
 - Number of copies: Two.
- 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.

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- **Supplementing areas of existing subsoil: Where necessary to supplement areas of existing sub soil due to construction excavation provide minimum of 300mm under Benchers' lawn topsoil, and 600mm under Benchers' border topsoil.**
 - Areas of thicker topsoil: Excavate locally.
 - Avoid over compaction.
- 665 SUBSOIL SURFACE PREPARATION
- General: Excavate and/ or place fill to required profiles and levels, as section D20.
 - Loosening:
 - Light and non-cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 300 mm.
 - Stiff clay and cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 450 mm.
 - Rock and chalk subgrades: Lightly scarify to promote free drainage.
 - Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
 - Remove from site: Arisings, contaminants and debris and builders' rubble.
- 670 INSPECTING FORMATIONS
- Give notice: Before spreading topsoil for lawn areas and planting beds.
 - Notice period: 14 days.
- 685 SURPLUS MATERIALS TO BE REMOVED
- Topsoil: Remove from site topsoil remaining after completion of all landscaping works.
 - Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.
- 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.
 - Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.
- 690 TOPSOIL STORAGE HEAPS:
- Location: Submit proposals.
 - Height (maximum): 1.5 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:

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- Depth (maximum): **Benchers' lawn topsoil - 150 mm, Benchers' border topsoil – 300mm**
 - Gently firm each layer before spreading the next.

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- Depths after firming and settlement (minimum): **Benchers' lawn topsoil - 150 mm, Benchers' border topsoil – 300mm**
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 LOOSE TIPPING OF TOPSOIL

- General: Do not firm, consolidate or compact topsoil when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

718 FINAL CULTIVATION FOR ALL PLANTING

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
- Depth: 100 mm.
- Particle size (maximum): 5 mm.
- Timing: Within a few days before planting..
- Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: refer to drawings.
- Undesirable material brought to the surface:
 - Remove visible weeds.
 - Remove roots and large stones with any dimension exceeding 20 mm.

720 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

- Above adjoining paving or kerbs: As drawings.
- Below dpc of adjoining buildings: Not less than refer for architects drawing for Library Extension and East Terrace planters.
- Planting beds: Higher than adjoining grass areas N/A..
- Seeded areas: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
- Sportsfields: To even levels and within the following permitted deviations:
 - From levels or gradients shown on drawings: ± 75 mm.
 - From line between boning rods 30 m apart: ± 25 mm.
- Within root spread of existing trees and shrubs to be retained: Do not dig or cultivate.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

825 APPLYING FERTILIZER TO PROPOSED GRASS AREAS TO TURFED AREAS

- Application: Before final cultivation and three to five days before seeding/ turfing.
- Coverage:
 - Spread evenly, in transverse directions.
 - Rate: As per manufacturer's recommendations..

845 APPLYING LOOSE MULCH FOR PLANTING BEDS AND TREE PITS

- Timing: Immediately after planting.
- Preparation: Clear all weeds.
- Coverage of mulch (minimum):
 - Planting beds (depth): 50 mm depth.
 - Trees: 75 litres per tree position, 75 mm depth.
 - Container planting: N/A.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

COMPLETION

- Rev C1** ~~910 — APPLYING MAINTENANCE FERTILIZER TO GRASS SWARDS TO LAWNS~~
~~— Duration: Carry out the following operations from completion of seeding / turfing until the end of the Rectification Period.~~
~~— Time of year: March or April.~~
~~— Application: Evenly spread, carefully incorporating below mulch materials.~~
~~— Rate: To manufacturer's recommendations.~~
- Rev C1** ~~915 — APPLYING MAINTENANCE FERTILIZER AS A FOLIAR FEED TO PLANTING BEDS AND TREE PITS~~
~~— Time of year: Start of growing season.~~
~~— Application: Evenly spread. Do not damage or contaminate adjacent surfaces or equipment.~~
~~— Rate: As recommended by manufacturer of product.~~
~~— Method: Apply carefully to underside of leaves.~~
- Rev C1** ~~921 — APPLYING MULCH~~
~~— Timing: At end of the Rectification Period.~~
~~— Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.~~
~~— Planting beds: Re-mulch.~~
~~— Depth (minimum): 50 mm.~~
~~— Trees: Remulch.~~
~~— Depth (minimum): 75 mm.~~