

Originating Office  The Jewellery Business Centre 95 Spencer Street Birmingham B18 6DA																																															
Project THE VINERY P O L I N G , W E S T S U S S E X																																															
Specification Title	Discipline	Document	Clause / No	Cisfb Ref		Rev																																									
Excavating and Filling (Landscape clauses only)	L	SPEC		D20																																											
		Document Status Planning																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 5px;">Originating Manager Responsible</td> <td colspan="6"></td> </tr> <tr> <td colspan="2" style="padding: 5px;">QA System – Checks</td> <td colspan="4"></td> <td colspan="2" style="padding: 5px;">Date</td> </tr> <tr> <td style="padding: 5px;">Written by</td> <td style="padding: 5px;">Victoria Dudley-Cooke</td> <td colspan="4"></td> <td colspan="2" style="padding: 5px;">22/6/14</td> </tr> <tr> <td style="padding: 5px;">Checked</td> <td style="padding: 5px;">Chris Britton</td> <td colspan="4"></td> <td colspan="2" style="padding: 5px;">22/6/14</td> </tr> <tr> <td style="padding: 5px;">Authorised</td> <td style="padding: 5px;">Jane Findlay</td> <td colspan="4"></td> <td colspan="2" style="padding: 5px;">22/6/14</td> </tr> </table>								Originating Manager Responsible								QA System – Checks						Date		Written by	Victoria Dudley-Cooke					22/6/14		Checked	Chris Britton					22/6/14		Authorised	Jane Findlay					22/6/14	
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LANDSCAPE SPECIFICATION

D20 Excavating and Filling

To be read with Preliminaries/General conditions.

50 SCOPE

Clearance of site to ensure that all existing trees to be retained during works are protected and that all works necessary to clear planting areas for landscape build ups are carried out in a manner to promote healthy plant establishment.

GENERALLY/THE SITE

110 SITE INVESTIGATION

- Refer to site investigation report before the commencement of works.

145 VARIATIONS IN GROUND WATER LEVEL

- Give notice: If levels encountered are significantly different from levels in the site investigation report or previously measured.

150 EXISTING SERVICES/ FEATURES/ STRUCTURES

- Services: Refer to engineers and existing services drawings (Do not rely solely on this information ,establish location and mark out services on site clearly)
- Site features to be retained: Refer to client information on features to be retained.

CLEARANCE/EXCAVATING

162 TREE PROTECTION FENCE Erect fence in accordance with BS5837 before each phase of site clearance has begun. Refer to Landscape General Arrangement drawing for an indicative fence layout. Gain approval for adequacy of fencing from CA prior to commencing clearance.

165 TREE ROOTS WITHIN PROTECTION AREA

Refer to Arboricultural Report for methods of treating roots within protection areas. Notify arboricultural consultant if any roots are encountered outside the protection area over 25mm diameter and await instruction.

166 TREE ROOT BARRIER (If required to protect services)

- Trench: Dependant on services location.
- Root barrier: Green-Tech Ltd, Sweethills Park, Nun Monkton, York, YO26 8ET, Tel 01423 332 101, or similar approved.
- Cutting roots: As clause 164.
- Root barrier installation: Full depth of excavation. Fit closely to trench wall nearest the tree.
- Backfill material: As dug material excavated from trench.
- Backfilling: Lay and compact thoroughly in layers not more than 300 mm thick.

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- 170 REMOVING TREES, SHRUBS AND HEDGES
- Identification: Clearly mark trees to be removed.
 - Safety: Comply with HSE/ Arboriculture and Forestry Advisory Group Safety Guides.
 - Felling: Cut down and grub up roots of shrubs and smaller trees. Fell larger trees as close to the ground as possible and remove tree stumps using an approved method suitable for the location.
 - Work near retained trees: Take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained, where tree canopies overlap and in confined spaces generally.
 - Stumps: Obtain approval before removing stumps by winching and do not use other trees as supports or anchors.
- 181 SITE CLEARANCE
- Timing: Before topsoil stripping, if any.
 - General: Clear site of rubbish, debris and vegetation.
 - Do not compact topsoil.
 - Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
- 187 CHIPPING OR SHREDDING ON SITE of materials arising from the work will not be permitted.
- 220 STRIPPING TOPSOIL
- General: Before beginning general excavation or filling, strip topsoil from areas where there will be regrading, buildings, pavings/roads and other areas shown on drawings.
 - Depth: Top 75mm to be discarded
 - Remove to depth of topsoil as appropriate.
 - Give notice where the depth of topsoil is difficult to determine.
 - Handling: Handle topsoil for reuse or sale in accordance with clause 225.
 - Around trees: Do not remove topsoil from below the spread of trees to be retained.
- 221 TREATING TOPSOIL
- Treatment: Apply a suitable translocated nonresidual herbicide.
 - Timing: Not less than two weeks before excavating topsoil.
- 225 HANDLING TOPSOIL
- Aggressive weeds:
 - Species: Included in the Weeds Act, section 2 or the Wildlife and Countryside Act, Schedule 9, part II.
 - Give notice: Obtain instructions before moving topsoil.
 - Earthmoving equipment: Select and use to minimize disturbance, trafficking and compaction.
 - Contamination: Do not mix topsoil with:
 - Subsoil, stone, hardcore, rubbish or material from demolition work.
 - Oil, fuel, cement or other substances harmful to plant growth.
 - Other grades of topsoil.
 - Multiple handling: Keep to a minimum. Use 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 as defined by BS 3882, Annex N2.
- 226 AGGRESSIVE WEEDS
- Aggressive weeds including Japanese knotweed to be eradicated by specialist contractor. Thurlow Countryside Management or similar approved.
 - Work to be carried out prior to the commencement of construction works.
 - Specialist contractor to provide specifications and detailed method statement.

310 UNSTABLE GROUND

fira landscape architecture and urban design

Job No.	Issue Status	Author	Checked	Date	Revision	Page	Filename
LP1976	PLANNING	VDC	CB	22/6/14	-	3 of 6	D20 Landscape Clauses

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- Generally: Ensure that the excavation remains stable at all times.
- Give notice: Without delay if any newly excavated faces are too unstable to allow earthwork support to be inserted.
- Take action: If instability is likely to affect adjacent structures or roadways, take appropriate emergency action.

320 RECORDED FEATURES

- Recorded foundations, beds, drains, manholes, etc: Break out and seal drain ends.
- Contaminated earth: Remove and disinfect as required by local authority.

330 UNRECORDED FEATURES

- Give notice: If unrecorded foundations, beds, voids, basements, filling, tanks, pipes, cables, drains, manholes, watercourses, ditches, etc. not shown on the drawings are encountered.

370 UNDERGROUND STRUCTURES IN LANDSCAPE AREAS

- Generally: Remove walls, roads, foundations, disused services, drains, manholes and the like to minimum depth.
- Minimum depth of subsoil below finished levels:
 - Grass, ground cover and perennial planting: 500 mm.
 - Shrub planting: 750 mm.
 - Within 2 m of tree planting: 1000 mm.
- Walls and slabs remaining: In every 10 m² of wall or slab, make a drainage hole at least 600 mm diameter.

DISPOSAL OF MATERIALS

410 EXCAVATED TOPSOIL STORAGE

- Storage: Stockpile in temporary storage heaps as per clause 420

415 EXCAVATED TOPSOIL REMOVAL

- General: Remove from site.

420 TOPSOIL SPOIL HEAPS

- Location: To be agreed with the CA
- Height (maximum): 1.5m.
- Protection:
 - Do not place any other material on top of spoil heaps.
 - Do not allow construction plant to pass over spoil heaps.
 - Prevent compaction and contamination.

422 TOPSOIL SPOIL HEAP HERBICIDE TREATMENT

- Treatment: Apply a suitable herbicide at appropriate times to prevent seeding of weeds.

441 SURPLUS SUBSOIL

- Excavated material: Stockpile in temporary storage heaps.
- Retained material: Spread and level surplus subsoil on site if permitted by the CA in agreed areas.
 - Protected areas: Do not raise soil level within root spread of trees that are to be retained.
- Remaining material: Remove from site.

450 WATER

- Generally: Keep all excavations free from water until:

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- Formations are covered.
- Below ground construction are completed.
- Basement structures and retaining walls are able to resist leakage, water pressure and flotation.
- Drainage: Form surfaces of excavations and fill to provide adequate falls.
- Removal of water: Provide temporary drains, sumps and pumping as necessary. Do not pollute watercourses with silt laden water.

454 GROUND WATER LEVEL/ RUNNING WATER

- Give notice: If it is considered that the excavations are below the water table.
- Springs/ Running water: Give notice immediately if encountered.

FILLING

500 PROPOSED FILL MATERIALS

- Details: Submit full details of proposed fill materials to demonstrate compliance with specification, including:
 - Type and source of imported fill.
 - Proposals for processing and reuse of material excavated on site.
 - Test reports as required elsewhere.

510 HAZARDOUS, AGGRESSIVE OR UNSTABLE MATERIALS

- General: Do not use fill materials which would, either in themselves or in combination with other materials or ground water, give rise to a health hazard, damage to building structures or instability in the filling, including material that is:
 - Frozen or containing ice.
 - Organic.
 - Contaminated or noxious.
 - Susceptible to spontaneous combustion.
 - Likely to erode or decay and cause voids.
 - With excessive moisture content, slurry, mud or from marshes or bogs.
 - Clay of liquid limit exceeding 80 and/or plasticity index exceeding 55.
 - Unacceptable, class U2 as defined in the Highways Agency 'Specification for highway works'.
- Inform the CA if any evidence or symptoms of soil contamination are discovered on the site, or in subsoil to be imported.

605 SUBSOIL FOR AREA SOFT LANDSCAPE

- Fill: Subsoil arising from excavations meeting the following specification:
- Quantity: Provide as necessary to make up any deficiency of subsoil existing on site and to complete the work. Source: Contractors choice Texture: (to BS 1377: Part 2):
 - Sand (0.05-2.00mm) max. 70% min. 20%
 - Silt (0.002-0.05) max, 60% min. 5%
 - Clay (less than 0.002mm) max. 30% min. 5%
- Reaction: (to BS 1377:Part 3) pH 5.0 - 8.0. Stone content (dry sieving): less than 50 by dry weight
- Maximum size of stone in any dimension: 75mm
- Electrical conductivity (salinity): less than 1500 microsiemens per cm when expressed on a 1:2.5 w/v soil: water extract
- Phytotoxic elements (ICRCL 59/83 Table 3, Group B):
 - Total Copper (CU): less than 130mg/kg
 - Total Nickel (Ni): less than 70mg/kg
 - Total Zinc (Zn): less than 300mg/kg
 - Water soluble Boron (b): less than 3mg/kg
- Zootoxic elements (ICRCL 59/83 Table 3, Group A):
 - Total Arsenic (As): less than 40mg/kg

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- Total Cadmium (Cd): less than 15mg/kg
- Total Chromium (Cr): less than 1000mg/kg
- Total Lead (Pb): less than 2000mg/kg
- Total Mercury (Hg): less than 20mg/kg
- Screened or blended topsoil will not be acceptable
- Visual inspection: Free from visible weeds, roots of aggressive perennial weeds, turf and significant quantities of other foreign matter (brick, concrete, plaster, grass, metal, plastic, timber etc)
- Submit: Certificate of analysis.
- Excluding:
 - Materials arising from the excavations or imported
 - Material from marshes or bogs
 - Peat, logs, stumps, slurry, mud and perishable material
 - Material susceptible to spontaneous combustion
 - Material in a frozen condition
 - Clay of liquid limit exceeding 80 and/or plasticity index exceeding 55
 - Material with excessive moisture content
 - Material likely to erode or decay and cause voids

610 LIGHTLY COMPACTED FILLING FOR LANDSCAPE AREAS

- Fill: Material capable of compaction by light earthmoving plant.
- Filling: Layers not more than 200 mm thick. Lightly compact each layer to produce a stable soil structure.

611 LOOSE TIP FILLING FOR LANDSCAPE AREAS

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

612 SUBSOIL FOR MEADOW AREAS

As for clause 605 except:

- Subsoil to be of a friable nature and free from large lumps of clay and rock.
- Must be such that a fine enough tilth can be made suitable for sowing grass and wildflower seed mix.
- Subsoil should have a pH of between 7&8.
- Depth: 150mm (over ordinary subsoil or existing topsoil).
- Do not use subsoil contaminated with rubbish or other materials that are: As clause 510
- Corrosive, explosive or flammable
- Hazardous to human or animal life
- Detrimental to healthy plant growth
- Inform the D&B Contractor if any evidence of symptoms of soil contamination are discovered on the site, or in subsoil to be imported.

613 SUBSOIL FOR COVERING POND LINER

As for clause 605 except:

- Subsoil to be of a friable nature and free from angular or sharp stones and other objects, large lumps of clay and rock.
- Subsoil should have a pH of between 7 and 8.
- Depth: Minimum 150mm over liner geotextile.
- Do not use subsoil contaminated with rubbish or other materials that are: As clause 510
 - Corrosive, explosive or flammable
 - Hazardous to human or animal life
 - Detrimental to healthy plant growth
- Inform CA if any evidence of symptoms of soil contamination are discovered on the site, or in subsoil to be imported.