
FORD LANE
YAPTON, WEST SUSSEX

SOIL MANAGEMENT PLAN

Prepared on behalf of:

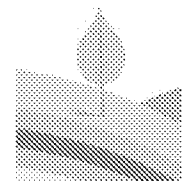
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Appendix 1 – Imported Topsoil Specification

1. INTRODUCTION

1.1 Background

- 1.1.1 The project is a residential development which will include the construction of a number of housing units with associated infrastructure, soft landscaping areas and residential back gardens.
- 1.1.2 The site is currently greenfield and comprised of 1 No. arable field. At the time of the Soil Resource Survey, a portion of the site topsoil had been stripped and stored in 6 No. topsoil stockpiles. The remaining topsoil and the site subsoil were in-situ and undisturbed.
- 1.1.3 It is the intention to re-use the site soils for the residential back gardens and landscaping areas of the development.
- 1.1.4 As per email correspondence from Martin Weil dated 03/02/2021 this management plan will lay out steps to best re-use the site won topsoil by placement of 150mm Imported Topsoil over 150mm Site Topsoil (TOHA Soil resource Survey - Option 2). A *Specification for Imported Topsoil* is included as **Appendix 1**.

1.2 Reference Material

- 1.2.1 The following information should be reviewed in conjunction with this *Soil Management Plan*.
- Tim O'Hare Associates – Soil Resource Survey Report: *Ford Lane, Yapton, West Sussex* (dated 13/02/21, referenced TOHA/20/6563/1/ML).

1.3 Report Purpose and Limitations

- 1.3.1 The purpose of the *Soil Management Plan* is to set out the correct procedures for topsoil recovery (stripping and storage), respreading and amelioration as well as treatments for the subsoil to ensure that a suitable soil profile is produced to help enable healthy root growth and successful plant establishment.
- 1.3.2 The *Soil Management Plan* also meets the criteria for a 'Soil Resource Plan' as defined by the Defra *Construction Code of practice for the sustainable use of soils on construction sites*.
- 1.3.3 Matters relating to geotechnical and geo-environmental issues are outside the scope of this document.

2. SITE SOIL RESOURCES

2.1 Site Topsoil

- 2.1.1 The Soil Resource Survey identified the topsoil to be consistent in composition across the site.
- 2.1.2 The in-situ topsoil was 310/390mm thick across the site, with an average depth of 340mm.
- 2.1.3 The topsoil was found to have the following characteristics:
- Neutral to slightly alkaline;
 - Non-saline;
 - Very slightly calcareous;
 - *Silty clay loam* soil texture (heavy, moisture retentive, poor drainage characteristics);
 - Weak soil structures;
 - Low stone content with occasional stones up to 30mm;
 - Deficiencies in total nitrogen, extractable potassium and extractable magnesium.
- 2.1.4 At present, the in-situ topsoil has an adequate soil structure and this should be maintained for future landscape works.
- 2.1.5 The physical condition of the topsoil stored within the stockpiles was poor (compacted) and as such, in its current condition, the stockpiled topsoil is unsuitable for re-use for landscape purposes.
- 2.1.6 Only if the physical condition of the stockpiled soil improved and thoroughly re-aerated will it be considered suitable for re-use for residential gardens and other soft landscape areas on site.
- 2.1.7 All large stones and debris greater than 50mm for planting and greater than 20mm for residential back gardens and areas of seeded amenity grass must be removed by picking and raking.
- 2.1.8 Prior to planting/seeding within communal garden and public open space, the deficiencies in major plant nutrients should be addressed by a routine application of fertiliser to the topsoil.

2.2 Site Subsoil

- 2.2.1 The site subsoil has a SILTY CLAY LOAM soil texture and was heavy in texture. Soil of this type is characterised as moisture retentive and any damage to the structure of this soil (e.g. by compaction) will further reduce its drainage potential.
- 2.2.2 Following earthworks and construction activities, the subsoil will require decompaction as part of the ground preparation work.

3.0 LANDSCAPE CONSTRUCTION

3.1.1 Development and Landscape Proposals

- 3.1.1 The current proposal for this site includes the construction of a new residential development, with associated back gardens and soft landscaping.
- 3.1.2 To facilitate the development's proposals, the topsoil will be stripped from the site and stored in temporary stockpiles before re-use for landscape construction.
- 3.1.3 The landscape design is at an early stage and was not provided for review. As such, at this stage the soft landscape scheme is likely to include the following:
- Domestic grass lawns;
 - Tree planting;
 - Shrub beds;
 - Communal amenity grass areas.
- 3.1.4 These potential landscape types will require a number of soil conditions (varying in terms of drainage requirements) in order to meet the demands of the plants and plant communities.

3.2 Soil Suitability

- 3.2.1 It would be sensible for the selected planting types and species to be suited to *moisture retentive soil* (subject to seasonal waterlogging). The site/soils would not be suited to species that prefer or demand light-free draining planting conditions.

3.3 Drainage Considerations

- 3.3.1 The site soils are dominated by silt sized particles and have weak soil structures. As such, they are vulnerable to structural degradation by settlement and self-compaction following disturbance, potentially resulting in poor drainage and aeration. These effects are difficult to improve in the short term.
- 3.3.2 Given the soil's vulnerability to damage during handling, it will be essential that the damage caused is minimised by observing *best practice* in terms of soil management. In particular, close attention should be paid to section 4.2 *General Soil Handling* and the soils should only be handled when they are reasonably dry and friable in consistency (crumbly). If these soils are handled when they are moist/wet and plastic, the damage caused is likely to render the soil unsuitable for re-use without further reconditioning.
- 3.3.3 In view of these conditions, the site soils would only be suited to plants which are tolerant of moisture retentive soils and they are not suited to more demanding planting environments (e.g. back gardens or tree pits). Planting types which demand free draining soils would not be suited to this site. Demanding planting types, such as semi-mature trees, will require improvements to their planting conditions (tree pits) to improve drainage, to prevent tree pits from acting as sumps and to reduce the risk of prolonged waterlogging / stagnation within the rooting zone. An alternative source of topsoil and subsoil should be considered for such uses.
- 3.3.4 There may be some options to mitigate the poor physical properties of these soils, including:
- 3.3.5 Installation of land drainage. Drainage may need to be installed at key locations or specifically for particularly vulnerable planting types. The type, design and depth of the drainage should be suitable to the proposed application. Such drainage would require a suitable outfall / discharge point.
- 3.3.6 Localised mounding for tree planting. The topsoil may be mounded locally for tree pits. This effectively 'lifts' the plants and reduces the risk of harm from waterlogging and improves aeration within the rooting zone.

4. SOIL MANAGEMENT PRACTICES

The following guidance is given provided the topsoil and subsoil is considered acceptable from an environmental perspective.

4.1 Outline Requirements

- 4.1.1 This section highlights the sequential treatments for the recovery, storage and re-use of the existing topsoil resource.

4.2 General Soil Handling

- 4.2.1 It is important to avoid soil physical degradation during all phases of soil handling (e.g. stripping, storage, resspreading and amelioration). Soil handling operations should ideally be carried out when the soil is reasonably dry and non-plastic (friable) in consistency.
- 4.2.2 The soils (topsoil and subsoil) should not be unnecessarily compacted by trampling or trafficking by site machinery.
- 4.2.3 If, during the course of the earthworks, the soil is structurally damaged, it should be suitably cultivated to relieve the compaction and restore the structure prior to any planting, seeding or turfing.

4.3 Pre-treatment of Existing Vegetation (In-Situ Topsoil)

- 4.3.1 It is good practice to minimise the quantity of vegetation entering the storage stockpiles in order to minimise the formation of anaerobic conditions during storage. As such, in advance of soil stripping, the topsoil should be cleared of surface vegetation by a method suited to the vegetation type present.
- 4.3.2 All adventitious weeds and grass should be close mown (< 100mm) and the cuttings collected where necessary for removal to a suitable green-waste recycling facility.
- 4.3.3 Trees/hedgerows should be pre-treated before soil stripping, in two stages:
1. Each tree/hedgerow should be felled/cut and removed from site, including all branches/brash.
 2. Stumps and associated large roots (> 20mm diameter) should be lifted using a suitable excavator fitted with a hydraulic grab.
 3. All woody materials (tree trunks, stumps, branches and brash, etc.), including wood chippings, should be removed from site to a suitable green-waste material processing facility for recycling.
- 4.3.4 To minimise anaerobism during storage and preserve the quality of the topsoil as a growing medium, coarse woody materials should not be incorporated with the soils during stripping. This includes any chippings left on the surface after clearance of trees/hedgerows.

4.4 Topsoil Stripping (In-Situ Topsoil)

- 4.4.1 The loose tip method, using dump trucks and hydraulic excavators, should be used to strip, transport and stockpile the topsoil.
- 4.4.2 The loose-tipping method involves the use of a tracked hydraulic excavator, fitted with a flat edged grading bucket to strip the topsoil and load it into a dump truck.
- 4.4.3 The dump truck, running along a pre-designated route, then transports the topsoil to the desired stockpile location.
- 4.4.4 This operation should be monitored to ensure that the topsoil is recovered without the inclusion of other soils (subsoil) or wastes. Cross contamination with other soil could significantly degrade the quality of the topsoil.
- 4.4.5 Any stones, waste or non-topsoil materials (>50mm) should be removed from areas to be stripped prior to topsoil stripping.
- 4.4.6 Stripping should ideally be carried out whilst the soil is reasonably dry and friable. However, if due to construction programme constraints topsoil stripping needs to be carried out whilst the topsoil is wet, an alternative method for topsoil stockpiling will be used (Figure 2).

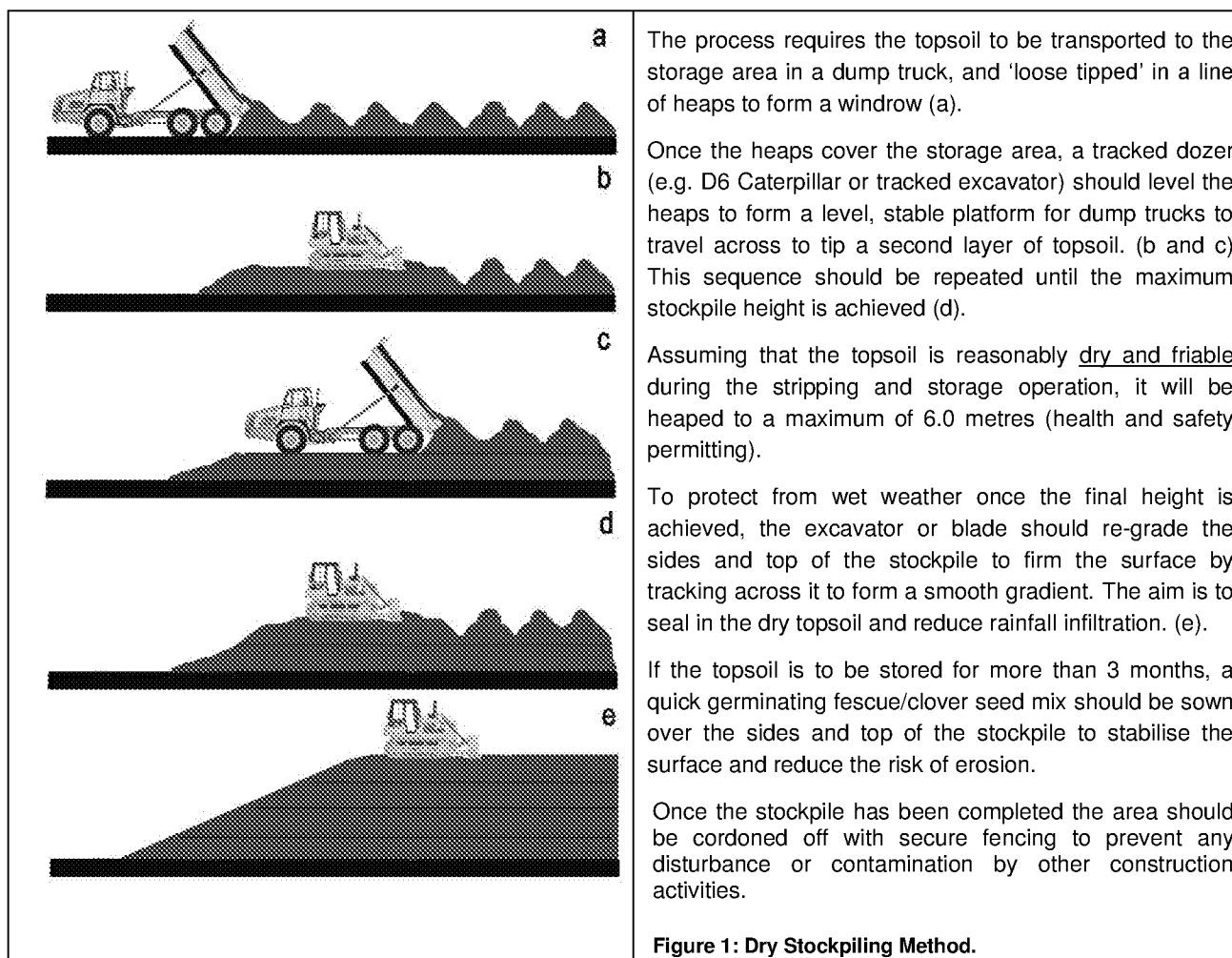
4.5 Depth of Topsoil Strip (In-Situ Topsoil)

- 4.5.1 The depth of strip should be set at 340mm to enable the majority of the topsoil to be recovered without the inclusion of significant quantities of subsoil.

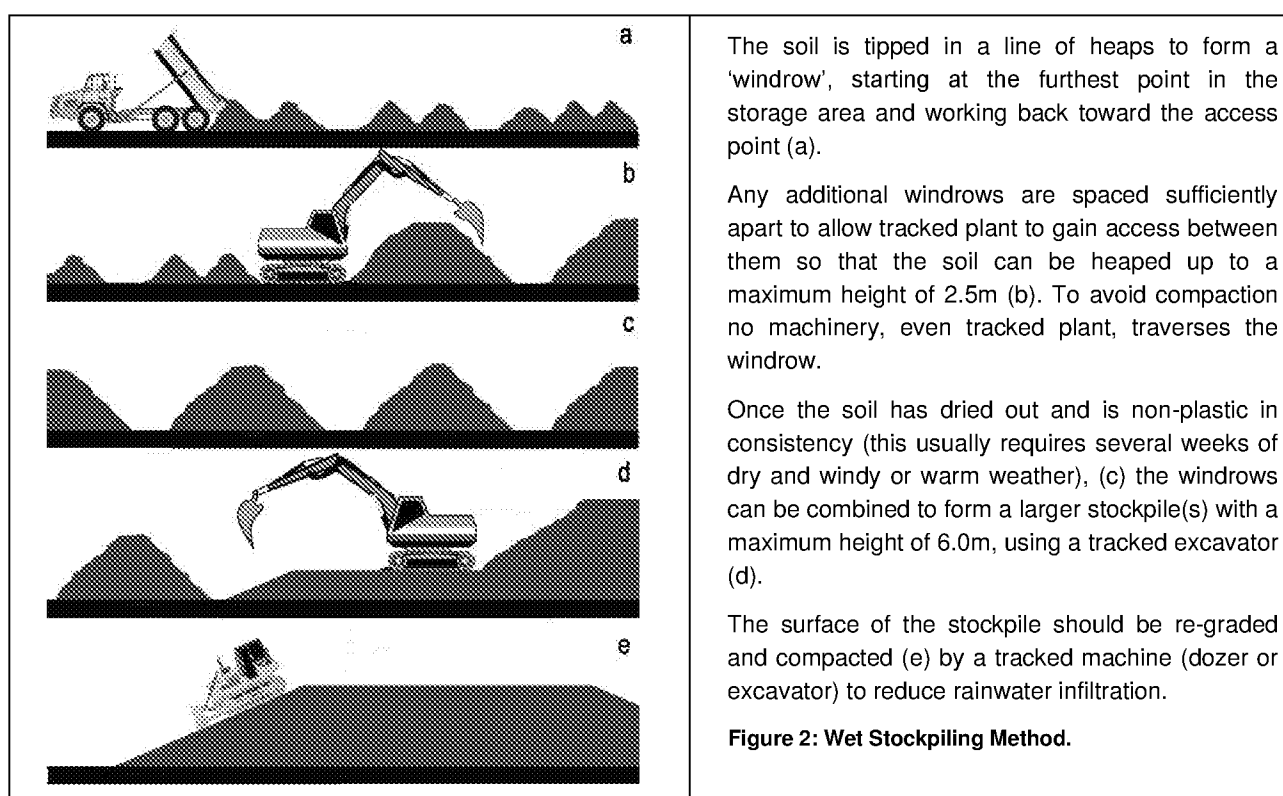
4.6 Topsoil Stockpiling (In-Situ Topsoil)

- 4.6.1 The topsoil should be stockpiled prior to re-spreading into the gardens and landscape areas when they become available.
- 4.6.2 The topsoil should be stored in an area of the site where it will not interfere with other site operations so that it can be left undisturbed during other construction activities. The area that is to be used for storing the topsoil will be cleared of vegetation, in-situ topsoil and any waste arising from the development e.g. building rubble and fill materials.
- 4.6.3 The topsoil should be transported to the storage area in a dump truck and be 'loose tipped' in a series of heaps, starting at the furthest point and working back towards the storage area access.
- 4.6.4 There are two options for stockpiling the topsoil depending on the **moisture content** and **plasticity**. These are referred to here as *dry soil stockpiling* and *wet soil stockpiling*.

4.6.5 The dry stockpiling method is illustrated below (*Figure 1*).



4.6.6 The wet stockpiling method is illustrated below (*Figure 2*); the wet soils are tipped for temporary storage as windrows until the topsoil has dried out. This technique minimises the amount of compaction caused by stockpiling as well as maximising the surface area of the stockpile to enable to soil to dry out. The reconditioning operation would ideally be timed during the summer months (May to September), to allow enough time for the topsoil to dry out effectively.



4.7 Subsoil Grading and Preparation

- 4.7.1 Prior to any subsoil preparation works, the location and depth of all services shall be determined and clearly marked out to ensure that all services are avoided and not damaged.
- 4.7.2 Any concrete haunching at the edges of landscape areas should be trimmed to the required minimum. The trimmings should be collected and removed off-site to a suitably licensed waste recycling facility.
- 4.7.3 Subsoil should be placed and graded in accordance with the Engineer's requirements. Grade to smooth flowing contours to achieve the desired formation levels and falls and the specified finished levels of topsoil.
- 4.7.4 Any large stones and other debris larger than 75mm brought to the surface during subsoil spreading should be stone picked or raked and removed. The stones should either be re-used on site or they should be removed off-site to a suitably licensed waste facility.
- 4.7.5 It is likely that the subsoil will have been heavily compacted following the construction period. Therefore, the subsoil should be loosened to a depth of at least **400mm at 300mm centres** to break up any panning.
- 4.7.6 A tracked excavator, fitted with a single tine ripper attachment (ripper tooth) should be used to loosen the subsoil. A toothed bucket is not an acceptable alternative.

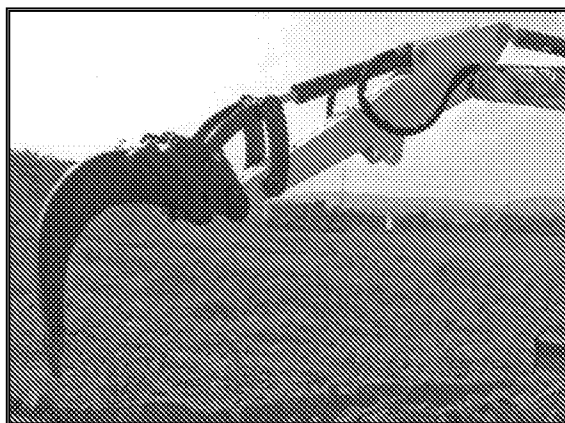


Plate 1: Excavator arm fitted with a Single Tine Ripper Attachment



Plate 2: Single Tine Ripper working

- 4.7.7 Repeated passes may be needed to break up the subsoil sufficiently. This will be largely dependent on the strength of the soil and its resistance to cultivation at the time of the operation.
- 4.7.8 Any large stones and other debris >75mm brought to the subsoil surface by this cultivation should be stone picked or raked and removed. The stones (and other debris) should be removed off-site to a suitably licensed waste recycling facility.
- 4.7.9 Following decompaction and stone picking, any large subsoil clods should be broken up using a toothed excavator bucket and then the subsoil surface should be roughly levelled and lightly firmed (without recompacting) to provide a sensible surface to place the topsoil.

4.8 Topsoil Respreading

- 4.8.1 The aim of this operation is to respread the topsoil and to minimise and eliminate any soil compaction caused during the process.
- 4.8.2 Following topsoil respreading, the soil profile shall comprise a minimum of 600mm decompacted soil (topsoil and subsoil combined) for handover to the Landscape Contractor. The aim of the decompaction operation is to break up compacted soil layers, prior to the final topsoil cultivation.
- 4.8.3 There are some general principles that should be considered during topsoil respreading by the Groundworks Contractor. These include:
- The topsoil should be respread using a combination of tracked excavator and dump truck.
 - During topsoil spreading, all plant should work from the subsoil layer only.
 - Trafficking over the ripped subsoil with either tracked or wheeled vehicles will cause further compaction. Therefore, all operations should be organised to minimise trafficking over ripped subsoil.
 - Trafficking by wheeled vehicles is more damaging to soils than tracked equipment and should therefore be kept to an absolute minimum. Dump trucks should run on pre-designated access routes only. Drivers should be disciplined to keep to these routes at all times.

- A larger excavator (e.g. 8 tonne) with a longer reach may be beneficial to reduce tracking over the subsoil. Wherever possible, the reach of the excavator should be utilised to minimise tracking on the subsoil.
- Following topsoil spreading, the access routes should be decompacted to break up the compaction caused during placement, e.g. by ripping using the excavator fitted with the single rigid tine attachment to a **minimum depth of 600 mm at 300 mm centres**.

4.8.4 An example sequence of the required operations is presented below for reference.

Example Sequence of Operations: Subsoil Decompaction and Topsoil Spreading

1. The subsoil is prepared by ripping, working backwards towards the area access point.
2. Prior to respreding the topsoil, a minimum number of access routes are clearly designated.
3. Running on the designated access routes, the dump truck deposits topsoil in a number of small heaps.
4. Running on the designated access routes, the excavator respreads the topsoil to the required thickness.
5. The excavator decompacts the access routes using the rigid tine to provide a minimum 600mm loosened soil.

4.9 Topsoil Depths

- 4.9.1 The total topsoil depth after firming and settlement should be 300mm (+/- 25mm) for the back gardens.
- 4.9.2 The site topsoil is to be used as a 'lower topsoil', by placing it to achieve a final thickness of 150mm, before placing and imported 'upper topsoil' to achieve 150mm thickness.
- 4.9.3 The topsoil should be 'firmed' to reduce future settlement, without causing over-compaction. Suitable methods may include the back of the excavator bucket or 'toe and heel' by operatives.

4.10 Tree Pit Construction and Backfilling

- 4.10.1 Tree pits should be constructed with reference to the Landscape Architects tree pit detail drawings.

4.11 Final Topsoil Cultivation

- 4.11.1 After respreding and regrading the topsoil, any large, compacted lumps should be broken down using suitable tillage equipment to produce a fine tilth suitable for planting (<40mm), turfing and seeding (<10mm).
- 4.11.2 Examples of appropriate equipment to use for topsoil cultivation include *pedestrian power harrow* or *rotavator*.



Plate 3: Pedestrian power harrow



Plate 4: Pedestrian rotavator

4.11.3 Within each area/plot, cultivation should begin at the point farthest from the plot access, working backwards. Once the topsoil has been cultivated, **no further machinery should traffic over the soil surface**. Unnecessary foot trafficking must also be minimised.

4.11.4 Any undesirable material brought to the surface during this exercise should be removed by picking or hand raking. For example, fill materials and stones larger than 50mm in any dimension.

4.12 Soil Ameliorants

4.12.5 Imported topsoil for residential back gardens should be ameliorated in accordance with the Soil Scientists report for the soil/source.

4.12.3 For public open space and communal gardens utilising the site -won topsoil, a Pre-Seeding Grass Fertiliser should be applied prior to turfing or seeding, following the manufacturers' recommendations.

4.12.4 To address the nutrient deficiencies and to help promote effective plant establishment, we recommend applying and incorporating the compound, controlled release fertiliser *ICL Osmocote PrePlant* (17%N:9%P₂O₅:10%K₂O:2%MgO+TE) at a rate of 70 g/m² for planting beds and/or 180 g/tree pit, and to a depth of 200mm.

4.13 Turf Installation

4.13.1 Lay new turf (with foot traffic only) in accordance with Turfgrass Growers Association (TGA) specification (www.turfgrass.co.uk).

4.13.2 As soon as the turf is anchored into the topsoil and the prevailing weather conditions are suitable, the surface of the lawn should be spiked to a **minimum depth of 75mm**. This will improve aeration and drainage through the turf layer. This can be achieved using a powered pedestrian aerator.



Plate 9: Pedestrian aerator



Plate 10: Pedestrian aerator fitted with solid tines

Document Qualifications

This document considers the re-use of the site soils for landscape purposes at the Ford Lane, Yapton site, West Sussex. It should not therefore be relied on for alternative end-uses or for other schemes. This report has been prepared solely for the benefit of our client Leap Environmental Ltd. No warranty is provided to any third party and no responsibility or liability will be accepted for any loss or damage in the event that this report is relied upon by a third party or is used in circumstances for which it was not originally intended.

Appendix 1

Imported Topsoil Specification

FORD LANE, YAPTON, WEST SUSSEX

IMPORTED TOPSOIL SPECIFICATION

The information given below sets out the *Imported Topsoil* that shall be used in soft landscape areas and the criteria that it must achieve. The document also sets out the necessary protocols that must be followed to demonstrate compliance with the relevant criteria.

SOIL MATERIALS

100 SOIL 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.
- 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.

200 IMPORTING TOPSOIL

- The Contractor shall appoint an independent testing company to undertake the sampling and testing of the topsoil considered for importation.
- The Contractor shall await written approval from the Contract Administrator prior to importing topsoil to site.

210 DOCUMENTATION FOR IMPORTED TOPSOIL

The Contractor shall provide the Contract Administrator with the independent test report for each source and type of topsoil to be imported.

- Timing: At least 1 week prior to delivery.
- Each report shall contain the following information:
 - Source name and location;
 - Date of sampling;
 - Visual examination;
 - Certificate of Analysis;
 - Interpretation of all results with comments on the suitability of the soil for the proposed landscape project;
 - Recommendations for soil improvements, treatments, additives.
- Number of copies: 1 (in digital format)

220 SAMPLE AND TESTING - IMPORTED TOPSOIL

- The samples shall be truly representative of the soil to be offered. One Composite Sample (made up of at least 10. No sub-samples) shall be taken for every 100m³ of *Imported Topsoil*.
- Samples shall be analysed strictly in accordance with relevant Testing Schedule given in this specification.
- The samples shall be analysed and reported on a 6 working day turnaround and the Contractor should incorporate this into their programme.

- The sampled soil materials shall be temporarily stockpiled at the source location until the Contract administrator has provided written approval on its suitability for use within the project. Each source of *Imported Topsoil* that is to be used in this scheme shall be sampled, analysed and approved prior to delivery to site.
- The composite sample(s) shall be sent to an approved independent soil science consultancy with a request for each sample to be analysed strictly in accordance with *Imported Topsoil Testing Schedule* clause below.
- An approved firm is: Tim O'Hare Associates LLP, Howbery Park, Wallingford, Oxon OX10 8BA Tel: 01491 822653 Email: info@toha.co.uk.

310 IMPORTED TOPSOIL - TESTING SCHEDULE

- Topsoil samples shall be tested prior to approval by the Contract Administrator. The following parameters shall be requested (methods in accordance with BS3882:2015 or as indicated):
 1. Visual examination to record Munsell colour, moisture status, aerobic state, soil structure, texture, stoniness (size & shape), the presence of any deleterious materials
 2. pH Value (1:2.5 soil/water extract)
 3. Electrical Conductivity (1:2.5 soil/water extract)
 4. Electrical Conductivity (1:2.5 soil/CaSO₄ extract)
 5. Exchangeable Sodium Percentage
 6. Particle Size Analysis (clay, silt, 5 sands – ASTM sieve sizes)
 7. Stone Content by % weight (2-20mm, 20-50mm, >50mm)
 8. Total Nitrogen (% - Dumas Method)
 9. Extractable Phosphorus, Potassium & Magnesium (RB427 Method)
 11. Organic Matter (%)
 12. Carbon: Nitrogen ratio (by calculation)
 13. Calcium Carbonate
 14. Potential Contaminants – See parameters in Clause 400

Additional samples and/or additional testing (eg. percolation) may be required if the initial results are not satisfactory or conclusive

330 IMPORTED TOPSOIL COMPOSITION

- Quantity: Provide as necessary to complete the work. Make due allowance for settlement after laying.
- The topsoil shall comply with the following lower and upper limits:

Parameter	Unit	Lower Limit	Upper Limit
Clay (<0.002mm)	%	5	18
Silt (0.002-0.05mm)	%	5	20
Sand (0.05-2.0mm) Of which at least 45% shall fall into fine sand to medium sand range (0.15-0.50mm)	%	60	85
Stones (2-20mm)	%DW	--	20
Stones (>20mm)	%DW	--	0
pH Value	Unit	5.5	8.5
Electrical Conductivity (1:2.5 water extract)	µS/cm	--	1500
Electrical Conductivity (CaSO ₄ extract)	µS/cm	--	2800
Exchangeable Sodium Percentage	%	--	15
Organic Matter	%	4.0	8.0
Total Nitrogen	%	0.20	--
Carbon: Nitrogen Ratio	--	--	20:1
Extractable Phosphorus	mg/l	26	100
Extractable Potassium	mg/l	240	1500
Extractable Magnesium	mg/l	80	600
Calcium Carbonate	%	--	1.0

400 ENVIRONMENTAL REQUIREMENTS

- The following Generic Assessment Criteria (GAC) shall be used as Tier 1 screening values for the assessment of soil(s) to be used, unless Site-Specific Assessment Criteria (SSAC) are provided for this project.
- In circumstances where any of these values are exceeded, further risk assessment and/or testing should be undertaken to confirm the significance of the non-compliance.

Parameter	Unit	Generic Assessment
Inorganic Arsenic	mg/kg	37
Boron (soluble)	mg/kg	290
Cadmium	mg/kg	11
Chromium (III)	mg/kg	910
Chromium (IV)	mg/kg	6
Copper	mg/kg	100
Lead	mg/kg	200
Mercury	mg/kg	1.2
Nickel	mg/kg	60
Selenium	mg/kg	250
Zinc	mg/kg	200
Phenol	mg/kg	280
Benzene	mg/kg	0.087
Toluene	mg/kg	130
Ethylbenzene	mg/kg	47
Xylene - m	mg/kg	59
Xylene - o	mg/kg	60
Xylene - p	mg/kg	56
Aliphatics C5-C6	mg/kg	42
Aliphatics C6-C8	mg/kg	100
Aliphatics C8-C10	mg/kg	27
Aliphatics C10-C12	mg/kg	130
Aliphatics C12-C26	mg/kg	1100
Aliphatics C16-C35	mg/kg	65,000
Aromatics C5-C7	mg/kg	70
Aromatics C7-C8	mg/kg	130
Aromatics C8-C10	mg/kg	34
Aromatics C10-C12	mg/kg	74
Aromatics C12-C16	mg/kg	140
Aromatics C16-C21	mg/kg	260
Aromatics C21-C35	mg/kg	1100
Acenaphthene	mg/kg	210
Acenaphthylene	mg/kg	170
Anthracene	mg/kg	2400
Benzo(a)anthracene	mg/kg	7.2
<i>Continued...</i>		

Benzo[a]pyrene	mg/kg	2.2
Benzo(b)fluoranthene	mg/kg	2.6
Benzo(g,h,i)perylene	mg/kg	320
Benzo(k)fluoranthene	mg/kg	77
Chrysene	mg/kg	15
Dibenzo[a,h]anthracene	mg/kg	0.24
Fluoranthene	mg/kg	280
Fluorene	mg/kg	170
Indeno(1,2,3-cd)pyrene	mg/kg	27
Naphthalene	mg/kg	2.3
Phenanthrene	mg/kg	95
Pyrene	mg/kg	620
Asbestos screen	Detected / Not Detected	Not Detected

GAC values derived from LQM CIEH S4ULs (2015) and BS3882:2015

SPECIFICATION QUALIFICATIONS

This document considers the proposal to use Imported Topsoil for landscaping purposes at Ford Lane, Yapton, West Sussex. This document should not therefore be relied on for alternative end-uses or for other schemes.

This specification has been prepared solely for the benefit of our client Leap Environmental Ltd. No warranty is provided to any third party and no responsibility or liability will be accepted for any loss or damage in the event that this document is relied upon by a third party or is used in circumstances for which it was not originally intended.