



British
Association
Landscape
Industries

Agenda

Sampling / Analysis / Certificates

Importing TOPSOIL

Site preparation

Delivery Options

Placement

De-Compaction

Verification

Special thanks to Tim O'Hare Associates & NHBC

The background features a series of concentric, curved stripes in shades of yellow and green, creating a dynamic, circular pattern. The stripes are of varying thickness and color, ranging from bright yellow to a deep forest green.

British Sugar TOPSOIL: Sampling / Analysis / Certificates

Sampling & Analysis:

British Sugar TOPSOIL analyse for 70 different parameters

- Samples are taken in accordance, at least, to BS3882:2015 every 5,000m³ (8KT)
- 25 sub samples are taken to ensure the bulk sample is representative
- We analyse our products over 30 times each year and hold historical data
- Laboratory analysis is undertaken at a UKAS and MCERT accredited laboratory
- Tim O'Hare Associates report includes
 - Declaration of compliance BS3882:2015 / BS8601:2013
 - Analytical schedule
 - Results of analysis
 - Conclusion
 - Recommendations
 - Certificate of Analysis



We ensure a representative sample is taken

Analytical Schedule:

Ensures are product contains no concentrations of chemical contaminants that would cause significant harm to human health and the environment

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- detailed particle size analysis (% 5 sands, silt, clay)
- stone content;
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Ba, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, V, Zn);
- total cyanide and total (mono) phenols;
- aromatic and aliphatic TPH (C5-C35 banding);
- speciated PAHs (US EPA18 suite);
- benzene, toluene, ethylbenzene, xylene;
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below. The interpretation considers the use of the LANDSCAPE 20 TOPSOIL for general landscape purposes and its compliance/non-compliance with our general landscape specification.



Report should also include:

- Results
- Feedback on Potential Contaminants
- Recommendation

We watermark all certificates to prevent fraud

Declaration of compliance BS3882:2015



Declaration of Compliance BS3882:2015

Soil source: British Sugar TOPSOIL

This declaration confirms that the topsoil represented by the attached Topsoil Analysis Report conforms to the requirements of the British Standard for Topsoil (BS3882:2015).

The sample was sampled and tested in accordance with the requirements of BS3882:2015

- Samples are taken for analysis every 8000 tonnes (5000 m³) of product
- Samples are taken from all TOPSOIL products ready for despatch
- All products are sampled after screening
- Analysis certificates are retained for a period of 5 years

- Laboratory analysis is undertaken at a UKAS and MCERTS accredited laboratory
- All laboratory methods are in accordance with BS3882:2015
- All British Sugar TOPSOIL products are produced to a Quality Management System approved by Lloyd's Register Quality Assurance to ISO 9001:2008 standard

Signed

A handwritten signature in black ink, appearing to read "A Spetch".

Andy Spetch
British Sugar TOPSOIL, National TOPSOIL Manager
Sugar Way, Peterborough, PE2 9AY
Telephone 0870 2402314

Certificate of Analysis



If older than 6 months ask questions?

Client: British Sugar plc Co-Products		Lab Ref No: TOSV180947/06	
Client Ref: Bury St Edmunds		Date: 28/10/18	
Job Ref No: TOSV180947/06		Lab Ref No: 180-Bury-Oct 18	
Sample Reference			
Clay (<630µm)	% U	22	✓
Silt (630-2000µm)	% U	22	✓
Sand (2000-20000µm)	% U	56	✓
Texture Class (UK Classification)	% U	205	✓
Stones (<20mm)	% DW G	1	✓
Stones (20-50mm)	% DW G	0	✓
Stones (>50mm)	% DW G	0	✓
Soil Volume (1:2.5 water extract)	µl/cm G	7.9	✓
Electrical Conductivity (1:2.5 water extract)	µS/cm U	1413	✓
Electrical Conductivity (1:2.5 CaSO ₄ extract)	µS/cm U	3010	✓
Exchangeable Sodium Fraction	% U	1.1	✓
Moisture Content	% U	18	✓
Organic Matter (LOI)	% U	5.5	✓
Total Nitrogen (Dumas)	% U	0.35	✓
C, N Ratio	- U	8	✓
Extractable Phosphorus	mg/L U	65	✓
Extractable Potassium	mg/L U	261	✓
Extractable Magnesium	mg/L U	119	✓
Total Arsenic (As)	mg/kg M	10	✓
Total Barium (Ba)	mg/kg M	46	✓
Total Beryllium (Be)	mg/kg M	0.66	✓
Total Cadmium (Cd)	mg/kg M	0.4	✓
Total Chromium (Cr)	mg/kg M	23	✓
Hexavalent Chromium (Cr-VI)	mg/kg M	< 4.0	✓
Total Copper (Cu)	mg/kg M	29	✓
Total Lead (Pb)	mg/kg M	21	✓
Total Manganese (Mn)	mg/kg M	< 5.3	✓
Total Nickel (Ni)	mg/kg M	15	✓
Total Selenium (Se)	mg/kg M	< 4	✓
Total Vanadium (V)	mg/kg M	32	✓
Total Zinc (Zn)	mg/kg M	80	✓
Water Soluble Boron (B)	mg/kg M	2	✓
Total Cyanide (CN)	mg/kg M	< 1	✓
Total (mono) Phenols	mg/kg M	< 1.2	✓
Acetophenone	mg/kg M	< 0.05	✓
Acetylphenone	mg/kg M	< 0.05	✓
Phenol	mg/kg M	< 0.05	✓
Chlorophenol	mg/kg M	< 0.05	✓
Aminophenol	mg/kg M	< 0.05	✓
Fluorophenol	mg/kg M	< 0.05	✓
Dyrene	mg/kg M	< 0.05	✓
Benzonitrile	mg/kg M	< 0.05	✓
Cyanide	mg/kg M	< 0.05	✓
Benzofuran	mg/kg M	< 0.05	✓
Benzofuranone	mg/kg M	< 0.05	✓
Benzofuranone	mg/kg M	< 0.05	✓
Indeno(1,2,3-cd)pyrene	mg/kg M	< 0.05	✓
Chloroanthracene	mg/kg M	< 0.05	✓
Benzofluoranthene	mg/kg M	< 0.05	✓
Total PAHs (sum USEPA16)	mg/kg M	< 0.80	✓
Aliphatic TPH (C5-C8)	mg/kg M	< 0.001	✓
Aliphatic TPH (C9-C10)	mg/kg M	< 0.001	✓
Aliphatic TPH (C11-C12)	mg/kg M	< 0.001	✓
Aliphatic TPH (C13-C14)	mg/kg M	< 2.0	✓
Aliphatic TPH (C15-C17)	mg/kg M	< 4.0	✓
Aliphatic TPH (C18-C20)	mg/kg M	< 8.0	✓
Aliphatic TPH (C21-C25)	mg/kg M	< 1.0	✓
Aromatic TPH (C7-C8)	mg/kg M	< 0.001	✓
Aromatic TPH (C9-C10)	mg/kg M	< 0.001	✓
Aromatic TPH (C11-C12)	mg/kg M	< 1.0	✓
Aromatic TPH (C13-C14)	mg/kg M	< 2.0	✓
Aromatic TPH (C15-C17)	mg/kg M	< 4.0	✓
Aromatic TPH (C18-C20)	mg/kg M	14	✓
Aromatic TPH (C21-C25)	mg/kg M	14	✓
Benzene	mg/kg M	< 0.001	✓
Toluene	mg/kg M	< 0.001	✓
o-Xylene	mg/kg M	< 0.001	✓
m-Xylene	mg/kg M	< 0.001	✓
p-Xylene	mg/kg M	< 0.001	✓
Asbestos	NRV I	Not detected	✓

Visual Examination
 The sample was described as a very dark greyish brown (Munsell Colour 10YR 3/2), slightly moist, blocky, calcareous, SANDY CLAY LOAM with a weakly developed, fine granular structure. The sample was virtually stone-free and no unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

✓	Meets General Landscape Specification
X	Fails General Landscape Specification
SC1	SANDY CLAY LOAM Texture Class
M	MPR118 accredited method (LABAS accredited method)
I	ISO 11269 accredited method
U	UKAS accredited method
G	GLP accredited method

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification or validation testing.

Results of analysis should be read in conjunction with the report they were issued with.

The contents of this certificate shall not be reproduced without the express written permission of Tim O'Hare Associates LLP.

Tim O'Hare Associates
 Civil Service
 ISO 9001 MSO100
 Senior Associate

We analysis for 70 Parameters



The background features a series of overlapping, curved, concentric shapes in shades of yellow and green, creating a dynamic, organic feel. The text is centered in white.

Importing subsoil / topsoil & Site Preparation

Remember that every project and planting scheme is unique

The aspect of the site. Is it North or South facing?

Is a subsoil needed?

Is the site drained?

What is the texture of the existing topsoil. Is it free draining or moisture retentive?

What is the nutrient content of the existing soil and the needs of your planting scheme?

What is the texture of the subsoil and does it need de-compacting?

Check access to your site



A site survey can save you a lot of time & money



Importing TOPSOIL:

We're becoming increasingly aware of soil being rejected at site due to poor quality

Buying soil 'blind' is extremely risky.

- Insist on an up-to-date analysis
- Build a relationship with your supplier like you would a nursery

Details

- Contact name and Company name
- Phone number, Email address & Site contact
- Product(s) and tonnage / number of bulk bags
- Delivery (with post code and vehicle type) or collection
- Date of delivery
- Site opening times
- Any special delivery instruction, loads per day

Site Access Considerations

- Bulk deliveries can be made by articulated, 8 wheeler or grab lorries depending on access and availability.
- As a guide the amount of TOPSOIL carried by these lorries is:
 - Articulated lorries approx. 29t
 - 8 Wheeler lorries approx. 20t (17t)
 - Grab lorries approx. 15t



Delivery Options

Typical Articulated Truck

Gross weight	44 tonne
Net weight	29 tonne
Width	3.2 metres
Length	12.8 metres
Height	4.0 metres



Typical Rigid Truck

Gross weight	32 tonne
Net weight	20 tonne
Width	3.2 metres
Length	11.5 metres
Height	3.7 metres



Typical Grab Lorry

Gross weight	32 tonne
Net weight	15 tonne
Width	3.0 metres
Length	11.3 metres
Height	3.7 metres



Site storage / Tipping area:

Segregated / On high ground / Accessible / Clean



The causes of soil compaction:

Handle soils when they are 'friable' and not when 'plastic'

- Soil excavation & stockpiling
 - Vehicle trafficking
 - Feet
 - Site compounds
 - Storage of materials
 - Piling mats
-
- Self-compaction, rainfall
 - Surface mulches
 - Excessive topsoil depths
 - Tree rootballs



De-compacting: Ripper tine and Landscape Rake



Ripping of subsoil to 400mm
Designated traffic routes / tipping areas
Place and rake topsoil, max 300mm



Site Managers Guide & Aftercare Guide



A Site Manager's Guide

ASSESS the site:

- What is the history of the site? Has a soil survey been carried out? Has the existing site soil been analysed for contamination?
- Is the soil heavily compacted/waterlogged or contaminated with construction waste?
- Is de-compaction/clean-up work needed?
- What imported soil is required – Subsoil? Topsoil? How much?
- If the onsite soil is suitable for re-use:
 - First remove any vegetation
 - Strip the topsoil and store
 - Strip the subsoil and store
- Is there a suitable area for storing and weatherproofing the onsite/imported soil?

PREPARE the site:

- Install any drainage systems required.
- **Only in dry conditions**, de-compact heavily trafficked/waterlogged areas using a ripper tine attachment on an excavator to rip the soil to depths of between 30cm and 60cm to loosen and break up the compacted layers.
- Prepare a clean, segregated and fenced off area to store onsite/imported soil, preferably on higher ground to prevent water running into it. Sheet the stockpiles if the soil is to be stored for several weeks.

ORDER your soil:

- Talk to your supplier – use the checklist below to make sure you order the right soil in the correct quantities, delivered without incident.

PLACE your soil:

- Avoid handling soils in wet conditions and minimise all traffic (machinery and pedestrian) on the areas to be landscaped.
- Place your soil to the correct depth, lightly consolidating with the back of an excavator bucket between different soil levels:
 - **Subsoil:** Tree pits – 500-700mm; Planting areas – 300mm.
 - **Topsoil:** Turf and grass areas – 150mm-200mm; Planting areas – 300mm max.
- Rake, then plant or turf, before cordoning off freshly landscaped areas.

SUPPLIER CHECKLIST

Make sure you ask your soil supplier the following questions before ordering:

1. What is the source of your soil? Greenfield/Brownfield/Skip/Manufactured
2. Do your products comply with the relevant British Standard for Subsoil and Topsoil?
3. How is it stored? Undercover/Outdoors
4. Do you have enough for the duration of this project?
5. Who does your sampling and analysis?
6. Can I have a copy of the Declaration of Analysis?
7. Are you a member of a reputable industry organisation?

INFORMATION YOUR SUPPLIER WILL NEED WHEN YOU PLACE AN ORDER

To ensure you order the right soil in the correct quantities, delivered without incident, have the following information ready when you call your soil supplier:

1. Type of project – housebuilding, amenity/commercial landscaping, tree planting, turfing etc.
2. Type of soil (subsoil/topsoil) and quantity required – calculate the area to be covered and the depth of product required to enable your supplier to calculate the correct tonnage.
3. Site access – most suppliers will deliver their soil in loose loads by 20 tonne rigid vehicles or 29 tonne articulated trucks. It is crucial you give them the following information for an incident-free delivery:
 - Width of access
 - Width of approach road/driveway
 - Any weight restrictions on the approach/site
 - Any height restrictions on site/overhead services
 - Site access times and any restrictions
 - Any local knowledge regarding adjacent properties/schools/neighbours etc.
 - Onsite contact name and mobile number
 - Order information (e.g. PO number etc.)

To order call 0870 240 2314
topsoil@britishsugar.com www.bstopsoil.co.uk
 All products are available in bulk, or in bulk bags (minimum order required)



Caring for your garden

How successful your lawns and planting borders will be year after year is largely dependent on keeping the soil in your garden healthy. This means making sure that it contains enough air and nutrients and that water (rainfall and irrigation) can move freely through it.



Common issues with newly imported and placed soil

Compaction. This is where the spaces between the soil particles become compacted, resulting in a lack of air in the soil, slow drainage, potential waterlogging, and plant deaths.

- Causes:**
- Heavy trafficking by site machinery, vehicles and people
 - Heavy rainfall
 - The over-application of surface mulch (such as bark, woodchip, slate etc.)

Remedy—Break up and shatter the compacted layer* manually with a garden fork, or aerate with a spike or plug aerator. *To find the depth of a compacted layer simply push a probe or garden fork into the soil/turf until resistance is encountered.



Compacted soil



Manually aerating the soil with a garden fork



De-compacting soil under turf

Natural settlement. It is common for soil to experience a degree of settlement after it has been placed and cultivated.

- Causes:**
- The soil has been insufficiently consolidated or 'firmed down' after placing
 - Where drainage has been installed, these areas can dry out more quickly, causing the soil to shrink and slump
 - Heavy rainfall

Remedy—Break up and loosen the soil before firming it down, and apply topsoil or topdressing to level up slumped areas. To raise topsoil levels in planting beds, simply add more topsoil and well-rotted organic matter between the plants, as required.



Removing turf to raise soil level



Raising soil level beneath turf with topsoil or topdressing



Top dressing a lawn after aeration

British Sugar TOPSOIL Product Range

Available in bulk loads or bulk bags

Landscape **20**

Landscape20 is a fully-analysed and compliant to BS3882:2015, sandy loam, TOPSOIL. It is ideal for general landscaping projects such as seeding and turfing .

Hort **Loam**

HortLoam is a BS3882:2015 compliant planting topsoil. With optimum reserves of organic matter and nutrients, HortLoam is ideal for planting rootball trees, shrub bed, retained planters and vegetable planting projects.

Lawn **Dressing**

Lawn dressing is ideal for the construction and repair of lawns where a free draining but fertile rootzone is needed.

Sub **Soil**

Free Draining subsoil: Suitable where a faster draining subsoil is needed i.e. lawns, sports pitches & tree pits

General Purpose subsoil: Compliant to BS8601:2013 as a multi purpose subsoil. Suitable for general landscaping purposes, trees, shrubs and amenity grasses

To find out more about British Sugar TOPSOIL

To arrange a visit or for more information on TOPSOIL products call 0870 240 2314
or visit our web site www.bstopsoil.co.uk



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Perennial
Partner



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY



LIFE BEYOND THE MILITARY –
OUTDOORS

“British Sugar TOPSOIL can help builders meet the requirements of Chapter 10.2 of NHBC standards”