



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Mr John Coles
Bury Hill Landscape Supplies Ltd
The Estate Office
Old Bury Hill
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22nd November 2022
Our Ref: TOHA/22/7741/3/SS
Your Ref: see below

Dear Sirs

Analysis Report: Bury Hill Horsham Yard – Sussex Subsoil

We have completed the analysis of the soil sample recently submitted, referenced *Sussex Subsoil* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for use in landscape applications.

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the subsoil source. The report and results should therefore not be used by third parties as a means of verification or validation testing, especially after the subsoil has left the Bury Hill Landscape Supplies Ltd site.

SAMPLE EXAMINATION

The sample was described as a yellowish red (Munsell Colour 5YR 5/8), moist, friable, non-calcareous SAND with a single grain structure. The sample was virtually stone-free. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

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Plate 1: Sussex Subsoil Sample

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 of the soil. The following parameters were determined:

- detailed particle size analysis (5 sands, silt, clay);
- saturated hydraulic conductivity;
- stone content (2-10mm, >10mm);
- pH and electrical conductivity (1:2.5 water extract);
- calcium carbonate.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis

The sample fell into the *sand* texture class, with a total sand content of 95% and a fines content of 5%. Further detailed particle size analysis revealed the sample to have a narrow particle size distribution, with a predominance of *medium sand* (0.25-0.50mm) and *coarse sand* (0.5-1.0mm).

Saturated Hydraulic Conductivity

The saturated hydraulic conductivity result recorded for the sample was high (356 mm/hr) and confirms that the material would be 'highly permeable' once installed as subsoil material for example.

Stone Content

The sample was virtually stone-free and, as such, stones should not restrict the use of the soil for landscape applications.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 8.6) with a low calcium carbonate (lime) content. Therefore, the high pH recorded is likely to be due to the very low buffering capacity of the material as a result of its very high sand and very low organic matter contents. As such, this pH value should not restrict the use of the soil for landscape purposes.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

COMMENTS

The sand represented by this sample has the following properties:

- Narrow particle size distribution
- Low fines content
- High drainage rate
- Compaction resistant
- Low lime content
- Non-saline

The high pH level recorded would not be considered a significant limitation due to the very high sand content of the subsoil. In this instance, due to the very low buffering capacity, the pH will be predominantly influenced by external factors (e.g. overlying topsoil, water input) and therefore should not constitute a limitation for plant selection.

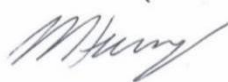
Based on these characteristics, the soil represented by this sample has a good re-use potential in landscape applications. Examples of suitable uses could include:

- 1) A free-draining compaction resistant subsoil for landscape environments where a higher level of permeability (and porosity) in the subsoil layer is required, e.g. when planting larger rootballed trees, for podium landscapes, or formal / high-use grass lawns;
- 2) use as a filter medium for bioretention systems and rain gardens that may be included within Sustainable Urban Drainage Systems (SuDS).
- 3) For use as a soil surface ameliorant / topdressing to improve wear tolerance for soils used in amenity grass in back gardens and sports pitches;
- 4) for blending with a suitable organic ameliorant to use as a high-permeability rootzone;

The suitability of this sand for any specific project or product should be carefully checked by further investigation as necessary and should be approved by the project's designer before use.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully



Matthew Heins
BSc (Hons) MSc SoilSci
Senior Soil Scientist



Ceri Spears
BSc MSc MSc SoilSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	Bury Hill Landscape Supplies Ltd
Project:	Bury Hill Horsham Yard - Washed Sand
Job:	Subsoil Analysis
Date:	22/11/2022
Job Ref No:	TOHA/22/7741/3/SS

Sample Reference		
		Accreditation
Clay (<0.002mm)	%	UKAS
Silt (0.002-0.05mm)	%	UKAS
Very Fine Sand (0.05-0.15mm)	%	UKAS
Fine Sand (0.15-0.25mm)	%	UKAS
Medium Sand (0.25-0.50mm)	%	UKAS
Coarse Sand (0.50-1.0mm)	%	UKAS
Very Coarse Sand (1.0-2.0mm)	%	UKAS
Total Sand (0.05-2mm)	%	UKAS
Texture Class (UK Classification)	--	UKAS
Stones (2-10mm)	% DW	GLP
Stones (>10mm)	% DW	GLP

Saturated Hydraulic Conductivity	mm/hr	A2LA
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pH Value (1:2.5 water extract)	units	MCERTS
Calcium Carbonate	%	UKAS
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS

Sussex Subsoil

5
0
2
7
54
27
5
95
S
0
0

356

8.6
1.8
146

S = SAND

Visual Examination

The sample can be described as a yellowish red (Munsell Colour, 5YR 5/8), moist, friable, non-calcareous, single grained SAND. The sample was virtually stone free and no unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

Matthew Heins
BSc (Hons) MSoilSci
Senior Soil Scientist

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

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