



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Mr John Coles
Bury Hill Landscape Supplies Ltd
The Estate Office
Old Bury Hill
Westcott
Nr Dorking
Surrey, RH4 3JU

1st February 2024
Our Ref: TOHA/24/1219/6/SS
Your Ref: see below

Dear Sirs

Sand Factual Report: Bury Hill Horsham Yard – Pure White Play Sand

We have completed the analysis of the sand sample recently submitted, referenced *Pure White Play Sand*, and have pleasure reporting our findings.

The sample was analysed to determine a selected range of horticultural and potential contamination properties only.

SAMPLE EXAMINATION

The sample can be described as a very pale brown (Munsell Colour, 10YR 8/3), slightly moist, friable, non-calcareous SAND with a single grained structure. The sample was stone free and no unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

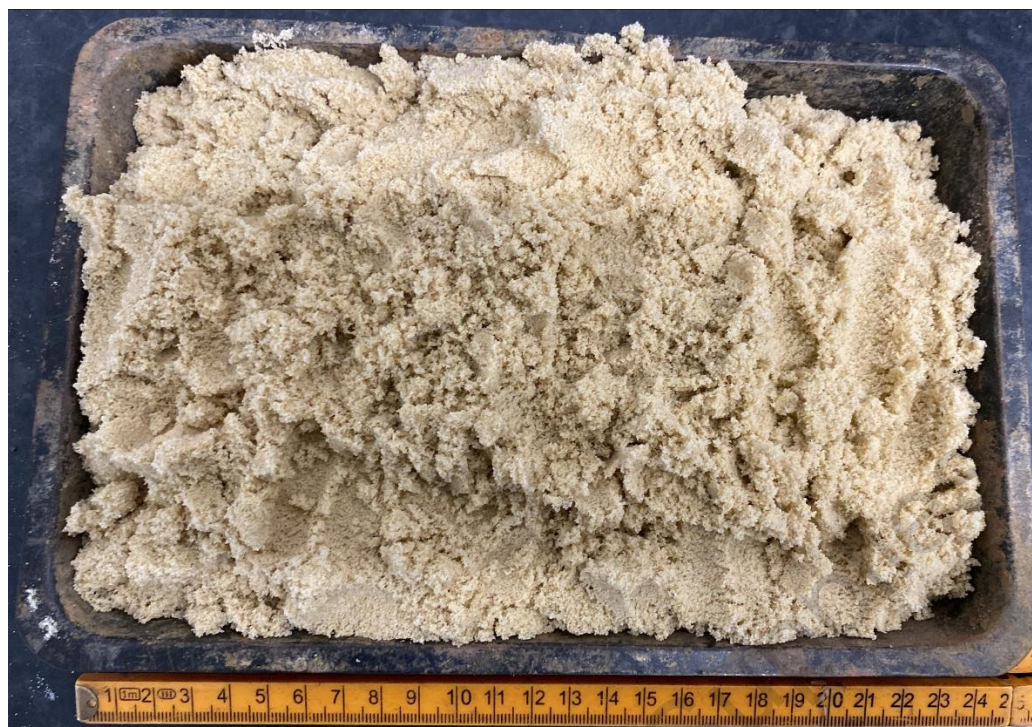


Plate 1: Pure White Play Sand Sample

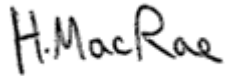
ANALYTICAL SCHEDULE

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 sand. The following parameters were determined:

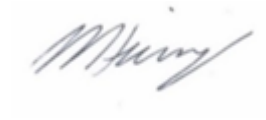
- detailed particle size analysis (5 sands, silt, clay);
- stone content (2-20mm, 20-75mm, >75mm);
- saturated hydraulic conductivity;
- pH and electrical conductivity (1:2.5 water extract);
- exchangeable sodium percentage
- calcium carbonate.
- organic matter content;
- visible contaminants;
- heavy metals (Sb, As, B, Ba, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, V, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificates of Analysis.

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.



Harriet MacRae
BSc MSc
Graduate Soil Scientist



Matthew Heins
BSc (Hons) MSoilSci
Senior Soil Scientist

For & on behalf of Tim O'Hare Associates LLP

Bury Hill Landscape Supplies Ltd



Client:	Bury Hill Landscape Supplies Ltd
Project:	Bury Hill Horsham Yard
Job:	Sand Analysis
Date:	01/02/2024
Job Ref No:	TOHA/24/1219/6/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 (2-20mm)	% DW	GLP
Stones (20-50mm)	% DW	GLP
Stones (>50mm)	% DW	GLP

Saturated Hydraulic Conductivity	mm/hr	A2LA
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pH Value (1:2.5 water extract)	units	UKAS
Calcium Carbonate	%	UKAS
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS
Electrical Conductivity (1:2 CaSO ₄ extract)	uS/cm	UKAS
Organic Matter (LOI)	%	UKAS
Exchangeable Sodium Percentage	%	UKAS

Visible Contaminants: Plastics >2.00mm	%	UKAS
Visible Contaminants: Sharps >2.00mm	%	UKAS

Total Antimony (Sb)	mg/kg	MCERTS
Total Arsenic (As)	mg/kg	MCERTS
Total Barium (Ba)	mg/kg	MCERTS
Total Beryllium (Be)	mg/kg	MCERTS
Total Cadmium (Cd)	mg/kg	MCERTS
Total Chromium (Cr)	mg/kg	MCERTS
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS
Total Copper (Cu)	mg/kg	MCERTS
Total Lead (Pb)	mg/kg	MCERTS
Total Mercury (Hg)	mg/kg	MCERTS
Total Nickel (Ni)	mg/kg	MCERTS
Total Selenium (Se)	mg/kg	MCERTS
Total Vanadium (V)	mg/kg	MCERTS
Total Zinc (Zn)	mg/kg	MCERTS
Water Soluble Boron (B)	mg/kg	MCERTS
Total Cyanide (CN)	mg/kg	MCERTS
Total (mono) Phenols	mg/kg	MCERTS

Naphthalene	mg/kg	MCERTS
Acenaphthylene	mg/kg	MCERTS
Acenaphthene	mg/kg	MCERTS
Fluorene	mg/kg	MCERTS
Phenanthrene	mg/kg	MCERTS
Anthracene	mg/kg	MCERTS
Fluoranthene	mg/kg	MCERTS
Pyrene	mg/kg	MCERTS
Benz(a)anthracene	mg/kg	MCERTS
Chrysene	mg/kg	MCERTS
Benzo(b)fluoranthene	mg/kg	MCERTS
Benzo(k)fluoranthene	mg/kg	MCERTS
Benzo(a)pyrene	mg/kg	MCERTS
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS
Dibenzo(a,h)anthracene	mg/kg	MCERTS
Benzo(g,h,i)perylene	mg/kg	MCERTS
Total PAHs (sum USEPA16)	mg/kg	MCERTS

Aliphatic TPH >C5 - C6	mg/kg	MCERTS
Aliphatic TPH >C6 - C8	mg/kg	MCERTS
Aliphatic TPH >C8 - C10	mg/kg	MCERTS
Aliphatic TPH >C10 - C12	mg/kg	MCERTS
Aliphatic TPH >C12 - C16	mg/kg	MCERTS
Aliphatic TPH >C16 - C21	mg/kg	MCERTS
Aliphatic TPH >C21 - C35	mg/kg	MCERTS
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS
Aromatic TPH >C5 - C7	mg/kg	MCERTS
Aromatic TPH >C7 - C8	mg/kg	MCERTS
Aromatic TPH >C8 - C10	mg/kg	MCERTS
Aromatic TPH >C10 - C12	mg/kg	MCERTS
Aromatic TPH >C12 - C16	mg/kg	MCERTS
Aromatic TPH >C16 - C21	mg/kg	MCERTS
Aromatic TPH >C21 - C35	mg/kg	MCERTS
Aromatic TPH (C5 - C35)	mg/kg	MCERTS

Benzene	mg/kg	MCERTS
Toluene	mg/kg	MCERTS
Ethylbenzene	mg/kg	MCERTS
p & m-xylene	mg/kg	MCERTS
o-xylene	mg/kg	MCERTS
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS

Asbestos	D/ND	ISO 17025
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S = SAND

Visual Examination

The sample can be described as a very pale brown (Munsell Colour, 10YR 8/3), slightly moist, friable, non-calcareous SAND with a single grained structure. The sample was stone free and no unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

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

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Pure White Play Sand

Clay (<0.002mm)	0
Silt (0.002-0.05mm)	0
Very Fine Sand (0.05-0.15mm)	9
Fine Sand (0.15-0.25mm)	51
Medium Sand (0.25-0.50mm)	39
Coarse Sand (0.50-1.0mm)	1
Very Coarse Sand (1.0-2.0mm)	0
Total Sand (0.05-2mm)	100
Texture Class (UK Classification)	S
Stones (2-20mm)	0
Stones (20-50mm)	0
Stones (>50mm)	0

Saturated Hydraulic Conductivity	755
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pH Value (1:2.5 water extract)	7.2
Calcium Carbonate	< 1.0
Electrical Conductivity (1:2.5 water extract)	64
Electrical Conductivity (1:2 CaSO ₄ extract)	2122
Organic Matter (LOI)	<0.5
Exchangeable Sodium Percentage	2.4

Visible Contaminants: Plastics >2.00mm	0
Visible Contaminants: Sharps >2.00mm	0

Total Antimony (Sb)	< 1.0
Total Arsenic (As)	1.7
Total Barium (Ba)	< 1.0
Total Beryllium (Be)	< 0.06
Total Cadmium (Cd)	< 0.2
Total Chromium (Cr)	1.5
Hexavalent Chromium (Cr VI)	< 1.8
Total Copper (Cu)	5.8
Total Lead (Pb)	< 1.0
Total Mercury (Hg)	< 0.3
Total Nickel (Ni)	< 1.0
Total Selenium (Se)	< 1.0
Total Vanadium (V)	2.0
Total Zinc (Zn)	3.0
Water Soluble Boron (B)	< 0.2
Total Cyanide (CN)	< 1.0
Total (mono) Phenols	< 1.0

Naphthalene	< 0.05
Acenaphthylene	< 0.05
Acenaphthene	< 0.05
Fluorene	< 0.05
Phenanthrene	< 0.05
Anthracene	< 0.05
Fluoranthene	< 0.05
Pyrene	< 0.05
Benz(a)anthracene	< 0.05
Chrysene	< 0.05
Benzo(b)fluoranthene	< 0.05
Benzo(k)fluoranthene	< 0.05
Benzo(a)pyrene	< 0.05
Indeno(1,2,3-cd)pyrene	< 0.05
Dibenzo(a,h)anthracene	< 0.05
Benzo(g,h,i)perylene	< 0.05
Total PAHs (sum USEPA16)	< 0.80

Aliphatic TPH >C5 - C6	< 0.020
Aliphatic TPH >C6 - C8	< 0.020
Aliphatic TPH >C8 - C10	< 0.050
Aliphatic TPH >C10 - C12	< 1.0
Aliphatic TPH >C12 - C16	< 2.0
Aliphatic TPH >C16 - C21	< 8.0
Aliphatic TPH >C21 - C35	< 8.0
Aliphatic TPH (C5 - C35)	< 10
Aromatic TPH >C5 - C7	< 0.010
Aromatic TPH >C7 - C8	< 0.010
Aromatic TPH >C8 - C10	< 0.050
Aromatic TPH >C10 - C12	< 1.0
Aromatic TPH >C12 - C16	< 2.0
Aromatic TPH >C16 - C21	< 10
Aromatic TPH >C21 - C35	< 10
Aromatic TPH (C5 - C35)	< 10

Benzene	< 0.005
Toluene	< 0.005
Ethylbenzene	< 0.005
p & m-xylene	< 0.005
o-xylene	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	< 0.005

Asbestos	Not-detected
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H. MacRae

Harriet MacRae
BSc MSc
Graduate Soil Scientist