

Material: Bourne Amenity Tree Sand
Source: Bourne Amenity Ltd
Date Tested: 15/03/2018
Tested Against: BS3882:2015 Multipurpose Grade
Tested By: NRM Laboratories (Report ID 93942-18) and STRI (Report ID A16684/1)

Parameter	Unit	Result
Texture:		
Clay (<0.002mm)	% w/w	1
Silt (0.002 - 0.63mm)	% w/w	3
Very Fine Sand (0.05 - 0.15mm)	% w/w	2
Fine Sand (0.15 - 0.25mm)	% w/w	8
Medium Sand (0.25 - 0.50mm)	% w/w	56
Coarse Sand (0.50 - 1.0mm)	% w/w	28
Very Coarse Sand (1.0 - 2.0mm)	% w/w	2
Total Sand (0.05 - 2.0mm)	% w/w	96
Textual Class:	Loamy Sand	
Stones (2 - 20mm)	% w/w DW	1.2
Stones (20-50mm)	% w/w DW	0.0
Stones (>50mm)	% w/w DW	0.0
Sand Fraction (USGA Sieve Sizes):		
Organic Matter (LOI)	% w/w	2.17
Ph	1:2.5 Water Extract	7.2
Exchangeable Sodium Percentage	%	3.7
Phytotoxic Contaminants:		
Total Zinc	mg/kg	43.6
Total Copper	mg/kg	4.3
Total Nickel	mg/kg	<10
Available Nutrients:		
Nitrogen	mg/l	0.04
Phosphorus	mg/l	30
Potassium	mg/l	411
Magnesium	mg/l	55
Carbon:Nitrogen Ratio	:1	31.46
Calcium Carbonate	% m/m	0.1
Additional Analysis:		
Electrical Conductivity (1:2.5 water extract)	µS/cm	454
Electrical Conductivity (1:2 CaSO4 extract)	µS/cm	2451
Saturated Hydraulic Conductivity	mm/hr	78
Total Porosity	%	41.2
Air-filled Porosity	%	20.1
Capillary Porosity	%	22.0

Bourne Amenity, The Wharf, Rye Road, Newenden, Kent TN18 5QG

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www.bourneamenity.co.uk

VAT No: 863 1196 22 • Registered in England No: 3453821

Parameter	Unit	Guidelines	Value	Result	Compliance
Heavy Metals and Hydrocarbons					
Total Antimony (Sb)	mg/kg	S4UL	<500	0.1	Yes
Total Arsenic (As)	mg/kg	S4UL	<37	7.4	Yes
Total Barium (Ba)	mg/kg	S4UL	<1300	<10	Yes
Total Beryllium (Be)	mg/kg	S4UL	<1.7	0.2	Yes
Total Cadmium (Cd)	mg/kg	S4UL	<11	<0.1	Yes
Total Chromium III (Cr)	mg/kg	S4UL	<910	10.3	Yes
Hexavalent Chromium (Cr Vi)	mg/kg	S4UL	<6	<0.1	Yes
Total Cyanide (Cn)	mg/kg	Dutch Action Value (DAV)	<20	<1	Yes
Total Lead (Pb)	mg/kg	SP1010 (Defra Category 4)	<200	6.0	Yes
Total Mercury (Hg)	mg/kg	S4UL	<1.2	<0.2	Yes
Total (mono) Phenols	mg/kg	S4UL^	<550	<1	Yes
Total Selenium (Se)	mg/kg	S4UL	<250	<0.1	Yes
Total Vanadium (V)	mg/kg	S4UL	<410	25.2	Yes
Acenaphthylene	mg/kg	S4UL^	<420	<0.05	Yes
Acenaphthene	mg/kg	S4UL^	<510	<0.05	Yes
Anthracene	mg/kg	S4UL^	<5400	<0.05	Yes
Benzo (a) Anthracene	mg/kg	S4UL^	<11	<0.1	Yes
Benzo (a) Pyrene	mg/kg	S4UL^	<2.7	<0.1	Yes
Benzo (b) Fluoranthene	mg/kg	S4UL^	<3.3	<0.1	Yes
Benzo (g,h,i) Perylene	mg/kg	S4UL^	<340	<0.1	Yes
Benzo (k) Fluoranthene	mg/kg	S4UL^	<93	<0.1	Yes
Chrysene	mg/kg	S4UL^	<22	<0.1	Yes
Dibenzo (a,h) Anthracene	mg/kg	S4UL^	<0.28	<0.1	Yes
Fluoranthene	mg/kg	S4UL^	<560	<0.1	Yes
Fluorene	mg/kg	S4UL^	<400	<0.05	Yes
Indeno (1,2,3-cd) Pyrene	mg/kg	S4UL^	<36	<0.1	Yes
Naphthalene	mg/kg	S4UL^	<5.6	<0.05	Yes
Phenanthrene	mg/kg	S4UL^	<220	<0.1	Yes
Pyrene	mg/kg	S4UL^	<1200	<0.1	Yes
Aliphatic TPH (C5 - C6)	mg/kg	S4UL^	<78	<0.1	Yes
Aliphatic TPH (C6 - C8)	mg/kg	S4UL^	<230	<0.1	Yes
Aliphatic TPH (C8 - C10)	mg/kg	S4UL^	<65	<0.1	Yes
Aliphatic TPH (C10 - C12)	mg/kg	S4UL^	<330	<1	Yes
Aliphatic TPH (C12 - C16)	mg/kg	S4UL^	<2400	<1	Yes
Aliphatic TPH (C16 - C21)	mg/kg	S4UL^	<92000	6.0	Yes
Aliphatic TPH (C21 - C35)	mg/kg	S4UL^		19.1	Yes
Aliphatic TPH (C35 - C44)	mg/kg	S4UL^	<92000	<1	Yes
Aromatic TPH (C5 - C7)	mg/kg	S4UL^	<140	<0.01	Yes
Aromatic TPH (C7 - C8)	mg/kg	S4UL^	<290	<0.01	Yes
Aromatic TPH (C8 - C10)	mg/kg	S4UL^	<83	<0.1	Yes
Aromatic TPH (C10 - C12)	mg/kg	S4UL^	<180	<1	Yes
Aromatic TPH (C12 - C16)	mg/kg	S4UL^	<330	<1	Yes
Aromatic TPH (C16 - C21)	mg/kg	S4UL^	<540	6.4	Yes
Aromatic TPH (C21 - C35)	mg/kg	S4UL^	<1500	21.6	Yes
Aromatic TPH (C35 - C44)	mg/kg	S4UL^	<1500	<1	Yes
Benzene	mg/kg	S4UL^	<0.17	<0.02	Yes
Toluene	mg/kg	S4UL^	<290	<0.2	Yes
Ethylbenzene	mg/kg	S4UL^	<110	<0.04	Yes
O-xylene	mg/kg	S4UL^	<140	<0.1	Yes
M-xylene	mg/kg	S4UL^	<140	<0.2	Yes
P-xylene	mg/kg	S4UL^	<130		Yes
MTBE	mg/kg	Sail Guideline Values	<470	<0.05	Yes

*All reports originate from samples collected in accordance with the guidelines laid out in the BS3882:2015 standard. Tests of this material are carried out a minimum of every 6 months.

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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	F18-447057-179041-1a	CLIENT:	Bourne Amenity Ltd
SAMPLE No.:	179041/1	ADDRESS:	The Wharf, Rye Road, Newnden, Kent
CLIENT REF:	1 (46535)	SITE:	Structural Tree Sand
DATE SAMPLED:	13/02/2018	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Structural Tree Sand
DATE RECEIVED:	14/02/2018	ADDITIONS:	None
DATE TEST COMPLETED:	16/02/2018	LOCATION:	Details Not Supplied
TESTED BY:	JMG	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	N/A	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.741	Mg/m ³
Moisture Content :	5.9	%
Dry Density :	1.644	Mg/m ³

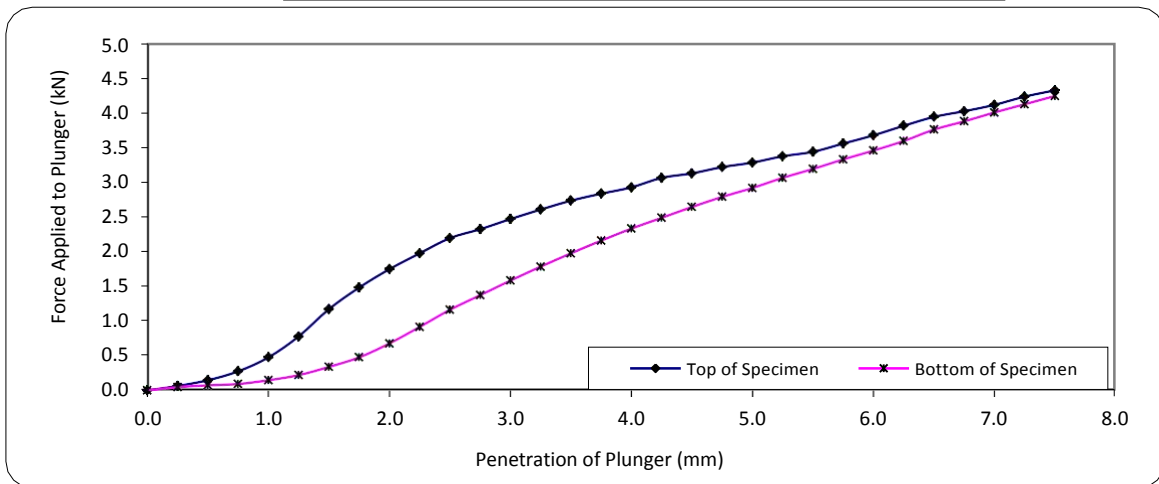
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration :	2.19	kN
CBR Value @ 2.5mm Penetration :	17	%
Load on Plunger @ 5.0mm Penetration :	3.28	kN
CBR Value @ 5.0mm Penetration :	16	%
Top Half Moisture Content :	6.0	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration :	1.16	kN
CBR Value @ 2.5mm Penetration :	8.8	%
Load on Plunger @ 5.0mm Penetration :	2.91	kN
CBR Value @ 5.0mm Penetration :	15	%
Bottom Half Moisture Content :	6.0	%

MEAN C.B.R VALUE: 16 %



REMARKS: HSV= Top: 6 KpA, Bottom: 16 KpA (This test is not UKAS accredited)

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver - Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor
Daniel Gay - Supervisor

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Report Format : L/Rep S16a /rev.3

Approved Signatory
02-Mar-18

