

Material: Rain Garden Soil
Source: Bourne Amenity Ltd
Date Tested: 30/01/2019
Tested Against: BS3882:2015 Multipurpose Grade
Tested By: NRM Laboratories (ID No. 39229-19) & STRI (ID No. A17386/7)

Parameter	Unit	BS3882:2015 Multipurpose Range	Result	Compliance
Texture:				
Clay (<0.002mm)	% w/w	5 - 30%	6	Yes
Silt (0.002 - 0.05mm)	% w/w	0 - 65%	4	Yes
Sand (0.05 - 2.0mm)	% w/w	20 - 90%	90	Yes
Textual Class:	Sandy Loam			
Stones (2 - 20mm)	% w/w DW	0 - 30%	1.1	Yes
Stones (>50mm)	% w/w DW	0%	0.0	Yes
Sand Fraction (USGA Sieve Sizes):				
Very Fine Sand (0.05 - 0.15mm)	% w/w	n/a	4	--
Fine Sand (0.15 - 0.25mm)	% w/w	n/a	9	--
Medium Sand (0.25 - 0.50mm)	% w/w	n/a	40	--
Coarse Sand (0.50 - 1.0mm)	% w/w	n/a	33	--
Very Coarse Sand (1.0 - 2.0mm)	% w/w	n/a	4	--
Organic Matter (LOI)	% w/w	3.0 - 20.0	2.1	No
Ph		5.5 - 8.5	8.3	Yes
Exchangeable Sodium Percentage	%	< 15%	3.5	Yes
Phytotoxic Contaminants:				
Total Zinc (BS3882:2015)	mg/kg	< 300	22.5	Yes
Total Copper (BS3882:2015)	mg/kg	< 200	6.9	Yes
Total Nickel (S4UL)	mg/kg	< 180	<10	Yes
Available Nutrients:				
Nitrogen	mg/l	>0.15	0.08	No
Phosphorus	mg/l	16 - 140	39	Yes
Potassium	mg/l	121 - 1500	437	Yes
Magnesium	mg/l	51 - 600	72	Yes
Carbon:Nitrogen Ratio	:1	< 20:1	15.23	Yes
Calcium Carbonate	% m/m	n/a	0.7	--
Additional Analysis:				
Electrical Conductivity (1:2.5 water extract)	µS/cm	1500	587	Yes
Electrical Conductivity (1:2 CaSO4 extract)	µS/cm	3300	2602	Yes
Saturated Hydraulic Conductivity	mm/hr	--	71	--
Total Porosity	%	--	44.0	--
Air-filled Porosity	%	--	16.0	--
Capillary Porosity	%	--	27.9	--
Visible Contaminants:				
Plastics (>2.0mm) & Sharps (>2.0mm)	% w/w	< 0.25	0.00	Yes

Parameter	Unit	Guidelines	Value	Result	Compliance
Heavy Metals and Hydrocarbons					
Total Antimony (Sb)	mg/kg	S4UL	<500	0.2	Yes
Total Arsenic (As)	mg/kg	S4UL	<37	6.6	Yes
Total Barium (Ba)	mg/kg	S4UL	<1300	21.8	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	10.4	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	8.6	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	0.10	Yes
Total Vanadium (V)	mg/kg	S4UL	<410	15.9	Yes
Water Soluble Boron (B)	mg/kg	S4UL	<290	0.9	Yes
Water Soluble Sulphate (SO4)	g/l	BRE Special Digest 1:2005 (BRE)	<1.2	0.09	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	<1	Yes
Aliphatic TPH (C21 - C35)	mg/kg	S4UL^	<92000	14.1	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	<1	Yes
Aromatic TPH (C21 - C35)	mg/kg	S4UL^	<1500	<1	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	<0.2	Yes
MTBE	mg/kg	Sail Guideline Values	<470	<0.05	Yes
Asbestos	mg/kg	Control of Asbestos Regulations 2006	Absent	Absent	Yes