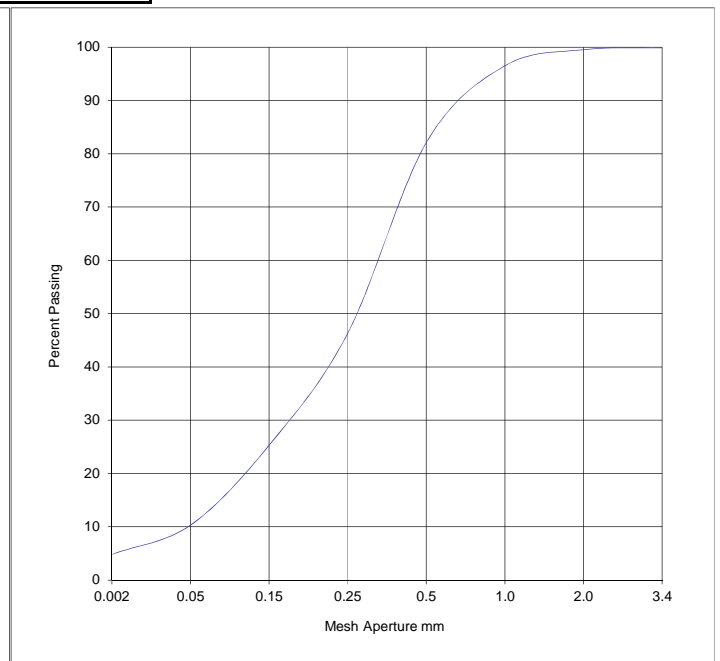
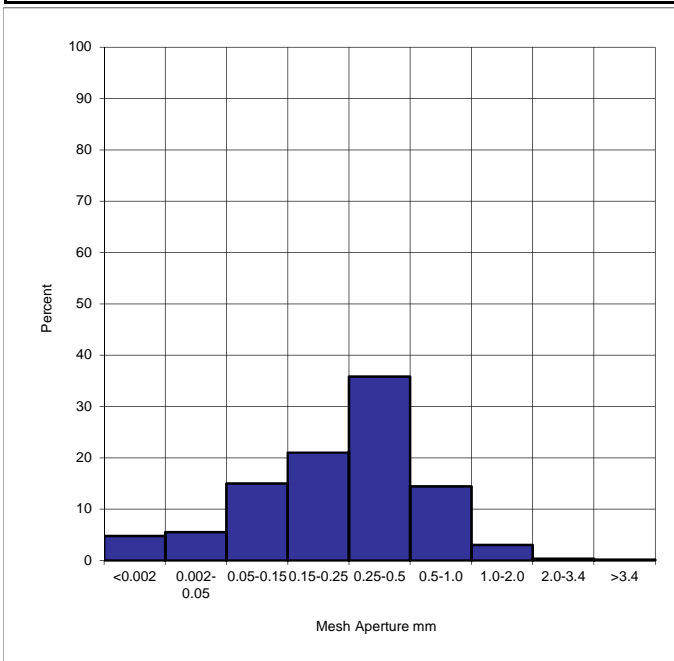


PARTICLE SIZE ANALYSIS USING USGA METHOD*

CLIENT: BRITISH SUGAR TOPSOIL	RESULTS TO: MAB
	SAMPLE NO: A17350/1
ADDRESS: SUGAR WAY, PETERBOROUGH, CAMBRIDGESHIRE, PE2 9AY	DATE RECEIVED: 04/12/2018
	DATE REPORTED: 07/12/2018
SAMPLE DESCRIPTION: SPORTS & TURF	TEST RESULTS AUTHORISED BY:
CONDITION OF SAMPLE UPON ARRIVAL: MOIST	Michael Baines, Laboratory Manager

Category	Diameter mm	%	Diameter mm	% Passing
Stones + C. gravel	>3.4	0.2	3.4	99.8
Fine gravel	3.4-2.0	0.3	2.0	99.5
Very coarse sand	2.0-1.0	3.0	1.0	96.5
Coarse sand	1.0-0.5	14.4	0.5	82.1
Medium sand	0.5-0.25	35.8	0.25	46.3
Fine sand	0.25-0.15	21.0	0.15	25.3
Very fine sand	0.15-0.05	15.0	0.05	10.3
Silt	0.05-0.002	5.5	0.002	4.8
Clay	<0.002	4.8		



Loss on ignition** % 1.34

Lime content (as CaCO₃)*** % 0.2

Qualitative Assessment of Particle Shape*: MEDIUM SPHERICITY / ANGULAR-SUB ANGULAR

THESE RESULTS PERTAIN ONLY TO THE SAMPLE(S) SUBMITTED AND TESTED

*ASTM F1632-03 (2010) Standard Test Method for Particle Size Analysis and Sand Shape of Golf Course Putting Green and Sports Field Rootzone Mixes

* ASTM F1647-11 Standard Test Methods for Organic Matter Content of Athletic Field Rootzone Mixes (Method A)

*** Lime content is not part of the scope of the A2LA accreditation



PHYSICAL CHARACTERISTICS OF COMPACTED ROOTZONE MATERIALS TESTED TO USGA PROCEDURE*

CLIENT: BRITISH SUGAR TOPSOIL	RESULTS TO: MAB
	SAMPLE NO: A17350/1
ADDRESS: SUGAR WAY, PETERBOROUGH, CAMBRIDGESHIRE, PE2 9AY	DATE RECEIVED: 04/12/18
	DATE REPORTED: 12/12/18
DESCRIPTION: SPORTS & TURF	TEST RESULTS AUTHORIZED BY:
CONDITION UPON ARRIVAL: MOIST	Michael Baines, Laboratory Manager

		USGA Guidelines	UK Golf Guidelines
	Saturated Hydraulic Conductivity (mm/hr) 13	Minimum 150 mm/hr	≥150 mm/hr
	Total Porosity (%) 36.5	35-55 %	≥35%
At 30 cm Tension	Air-filled Porosity (%) 5.1	15-30 %	≥14%
	Capillary Porosity (%) 31.4	15-25 %	≥17%
	Bulk Density (g/cc) 1.69		
	Particle Density (g/cc) 2.66		
	Organic Matter Content (%)** 1.34		0.5-3.5%

THESE RESULTS PERTAIN ONLY TO THE SAMPLE(S) SUBMITTED AND TESTED

* ASTM F1815-11 Standard Test Methods for Saturated Hydraulic Conductivity, Water Retention, Porosity and Bulk Density for Putting Green and Sports Turf Rootzones.

** ASTM F1647-11 Standard Test Methods for Organic Matter Content of Athletic Field Rootzone Mixes (Method A)



Testing Certificate 2159 - 01