



HAMWORTHY PARK PADDLING POOL – BOROUGH OF POOLE

Factual Report

MAY 2018

Hamworthy Park Paddling Pool – Borough of Poole

Factual Report

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Report Ref	18-92812	

Issue Number

Issue	Revision No.	Date Issued	Description of Revision	Reviewed by:
01		25/05/2018		
02	Rv1	05/07/2018	Adjustment to ground conditions	Anthony Elkins

Site Address
Hamworthy Park Paddling Pool
Poole
Dorset
BH15 5DH

Client Address
Borough of Poole
Unit 1 New Fields Bus. Park
Stinsford Road
Poole
Dorset
BH17 0NF

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1 INTRODUCTION

1.1 Terms of Reference

ACS Testing Ltd (ACS) were instructed by Lynne Wait from the Borough of Poole (the Client) in April 2018 to carry out a site investigation, laboratory testing and prepare a factual report for a site comprising Hamworthy Park Paddling Pool, Poole, Dorset.

1.2 Site Setting

'The Site' is located within Hamworthy Park, south-west of the town of Poole Dorset.

The Site is as defined on Figure 1 and Figure 2.

1.3 Scope

The scope of this study is as follows;

- ▶ Three cable percussion boreholes drilled to a depth of up to 10m below ground level (mbgl); one in the centre of the paddling pool and two in the macadam to the north and south.
- ▶ In situ geotechnical Standard Penetration Tests (SPT) at 1m intervals increasing to 1.5m intervals below 5mbgl within the cable percussion boreholes.
- ▶ Take and submit soil samples for geotechnical laboratory testing.
- ▶ The preparation of a factual report.

1.4 Proposed Development

It is understood the Client intends to replace the existing paddling pool. No further details of the development have been provided to ACS.

1.5 Limitations

ACS carried out the site investigation, collection of samples and laboratory analysis. It should be appreciated that there may be areas of the Site that have not been investigated where ground conditions may vary from those encountered. The contaminant concentrations or sub-surface features revealed may be more widespread than identified by the investigation carried out by the Client.

This factual report has been produced by ACS in accordance with the instructions received from the Client. The information contained in this report is intended for the use of the Client pursuant to the development described above. The information contained herein may not be appropriate to other development proposals.

We confirm that in preparing this report we have exercised reasonable skill and care as would be expected of a suitably qualified and experienced geoscience consultant working within the limits of the Client's instructions.

No liability can be accepted for information in other data sources or conditions not revealed by the sampling or testing. Any comments made on the basis of information obtained from the Client or other third parties are given in good faith on the assumption that the information is accurate; no independent validation of such information has been made by ACS Testing Ltd.

2 INTRUSIVE INVESTIGATION

2.1 Ground Investigation

An intrusive investigation was undertaken by ACS at Hamworthy Park, Poole, where three Cable Percussion boreholes were drilled. The locations of the boreholes are shown on Figure 2. Logs of the strata are included within Appendix A.

The investigation sampling and analysis plan is summarised in Table 1. The geotechnical testing was carried out to enable engineering design of the new structure.

Table 1 Summary of Sampling and Analysis Plan

Exploratory Hole	Depth of Sample (mbgl)	Testing
CP01	0.50-1.00	pH and sulphate
CP01	1.00-1.45	Particle size distribution pH and sulphate
CP01	2.00-2.45	Particle size distribution
CP01	3.00-3.45	Particle size distribution
CP01	4.00-4.45	Particle size distribution
CP01	4.70	Particle size distribution
CP01	5.00-5.45	pH and sulphate
CP01	5.90-6.30	pH and sulphate Particle size distribution
CP01	7.50	pH and sulphate Particle size distribution
CP01	8.00-8.45	Undrained shear strength
CP01	9.60-10.00	pH and sulphate Particle size distribution
CP02	2.00-2.45	pH and sulphate
CP02	2.50-3.00	Particle size distribution
CP02	3.70	Particle size distribution
CP02	5.00-5.45	Particle size distribution
CP02	6.50-6.90	pH and sulphate Particle size distribution
CP02	8.00-8.45	Undrained shear strength
CP02	9.00	Particle size distribution
CP02	9.60-10.00	pH and sulphate Plasticity index
CP03	2.00-2.45	Particle size distribution
CP03	4.70	Particle size distribution

<i>Exploratory Hole</i>	<i>Depth of Sample (mbgl)</i>	<i>Testing</i>
CP03	6.50-6.95	pH and sulphate Plasticity index Undrained shear strength
CP03	9.60-10.00	Particle size distribution Plasticity index

2.2 Geotechnical Testing

The following samples, selected by the Client, were submitted for testing -

- 16 particle size distribution
- 10 pH and water soluble sulphate.
- 3 natural moisture content, liquid limit and plastic limit.
- 3 quick unconsolidated undrained triaxial testing to determine undrained shear strength.

Standard penetration testing (SPT) was undertaken at regular vertical intervals within all exploratory holes.

Geotechnical laboratory test result certificates are included as Appendix B.

3 GROUND CONDITIONS

3.1 Ground Conditions Encountered

The ground conditions encountered during the Site investigation are summarised in Table 2 below. Full details are provided in the exploratory hole logs included as Appendix A.

Table 2: Summary of Strata

Strata	Exploratory Holes	Depth to Base of Stratum (mbgl)
Hardstanding (Concrete)	All	0.08 (CP01 surface slab) 0.45-0.50 (subslab)
Hardstanding (Bound Macadam)	CP02 and CP03	0.10
Made Ground (MG)	All	0.60-2.00
Beach Deposits (BD)	All	6.20-7.40
Poole Formation (Oakdale Clay Member) (OCM)	All	10.00

3.1.1 Hardstanding

Concrete (CP01) or macadam (CP02-03) surfacing was recorded in all three boreholes to depths between 0.08mbgl and 0.10mbgl.

3.1.2 Made Ground

Made Ground (MG) was recorded in all boreholes down to a maximum depth of 2.00mbgl. Beneath the hardstanding a hardcore ballast fill / angular crushed rock was recorded overlying a further slab. The underlying slab proven to depths between 0.50mbgl and 0.60mbgl generally comprised concrete with sub angular to rounded flint aggregate sized between 20mm and 41mm. ¼" thick diameter reinforcement was noted within the slab in CP01.

The MG beneath the sub-slab in CP02 and CP03 comprises three horizons; sandy gravel, sandy silt, sandy gravel. The sandy to very sandy gravel was recorded as beige, grey, light grey, grey brown and dark grey and includes concrete. In CP01 there was only one layer comprising sandy gravel.

3.1.3 Beach Deposits

Strata interpreted as Beach Deposits (BD) were recorded in all boreholes and proven to a maximum depth of 7.40mbgl. The unit was recorded to comprise beige very gravelly coarse grained sand which becomes slightly gravelly at depth. The gravel was noted to comprise fine to coarse angular to rounded flint which became finer at depth. Rare sub-rounded flint cobbles were noted in the upper horizon in CP03.

3.1.4 Poole Formation / Oakdale Clay Member

The Oakdale Clay Member (OCM) was recorded in all exploratory holes and proven to a depth of 10.00mbgl. The unit was recorded to comprise firm light grey/dark grey slightly to very sandy clay, with red and reddish brown mottling noted in CP01 and CP03. In CP01 and CP02 this is underlain by fine to coarse grained sand, and in all boreholes the base of this unit was described as very stiff light grey very sandy silt at depths between 9.50 and 9.60 mbgl.

3.1.5 Groundwater

Table 3 summarises the groundwater encountered during the Site investigation. Full details are provided in the exploratory hole logs included as Appendix A.

Table 3: Summary of Groundwater Observations

<i>Exploratory Hole Reference</i>	<i>Groundwater Strike (mbgl)</i>	<i>Geology of Strike</i>	<i>Rest Water Level After 20 Minutes (mbgl)</i>
CP02	1.00	Sandy gravel (MG)	0.70
CP03	1.50	Sandy silt (MG)	1.30

4 GEOTECHNICAL ANALYSIS RESULTS

The results of the laboratory geotechnical analysis are summarised in the section below. Full results can be found on the laboratory certificates included as Appendix B.

4.1 Particle Size Distribution

The results of the particle size distribution testing are summarised in Figure 3.

4.2 Index Properties – Moisture Content and Atterberg Limit Testing (LL/PL/PL)

The results from the three soil samples scheduled for index property testing have been summarised in the table below.

Table 4: Summary of index property test results

Borehole Reference Depth mbgl	Geology	Moisture Content %	Percentage Passing 425µm sieve (%)	Plastic Limit (%)	Liquid Limit (%)	Plasticity Index (%)	Modified Plasticity Index (%)
CP02 9.60-10.00	Very sandy silt (OCM)	19	99	16	24	8	7.92
CP03 6.50-6.95	Slightly sandy clay (OCM)	24	96	21	54	33	31.68
CP03 9.60-1.00	Very sandy silt (OCM)	23	100	16	39	23	23

4.3 Ground Corrosive to Concrete

The results from the pH and water soluble sulphate testing undertaken on soil samples are summarised in the table below.

Table 5: Summary of pH and water soluble sulphate test results

Borehole Reference Depth mbgl	Geology	pH	Water Soluble Sulphate (mg/l)
CP01 0.50-1.00	Slightly gravelly silty sand (BD)	9.0	106
CP01 1.00-1.45	Slightly gravelly silty sand (BD)	8.8	57.5
CP01 5.00-5.45	Very gravelly sand (BD)	8.7	8.40
CP01 5.90-6.30	Sand (BD)	8.5	25.8
CP01 7.50	Sandy clay (OCM)	8.5	7.31
CP01 9.60-10.00	Very sandy silt (OCM)	7.6	124
CP02 2.00-2.45	Very gravelly sand (BD)	9.1	126

Borehole Reference Depth mbgl	Geology	pH	Water Soluble Sulphate (mg/l)
CP02 6.50-6.90	Slightly gravelly sand (BD)	9.1	5.07
CP02 9.60-10.00	Very sandy silt (OCM)	8.1	51.4
CP03 6.50-6.95	Sandy clay (OCM)	8.1	78.4

4.4 Undrained Shear Strength

The results of the quick unconsolidated undrained triaxial results, carried out on three samples taken from the OCM, are summarised in the table below.

Table 6: Summary of undrained shear strength results

Borehole Reference Depth mbgl	Geology	Bulk Density (Mg/m³)	Cell Pressure (kPa)	Undrained Shear Strength (kPa)
CP01 8.00	Sandy clay (OCM)	2.14	160	98
CP02 8.00	Very sandy clay (OCM)	2.07	160	85
CP03 6.50	Slightly sandy clay (OCM)	2.08	130	95

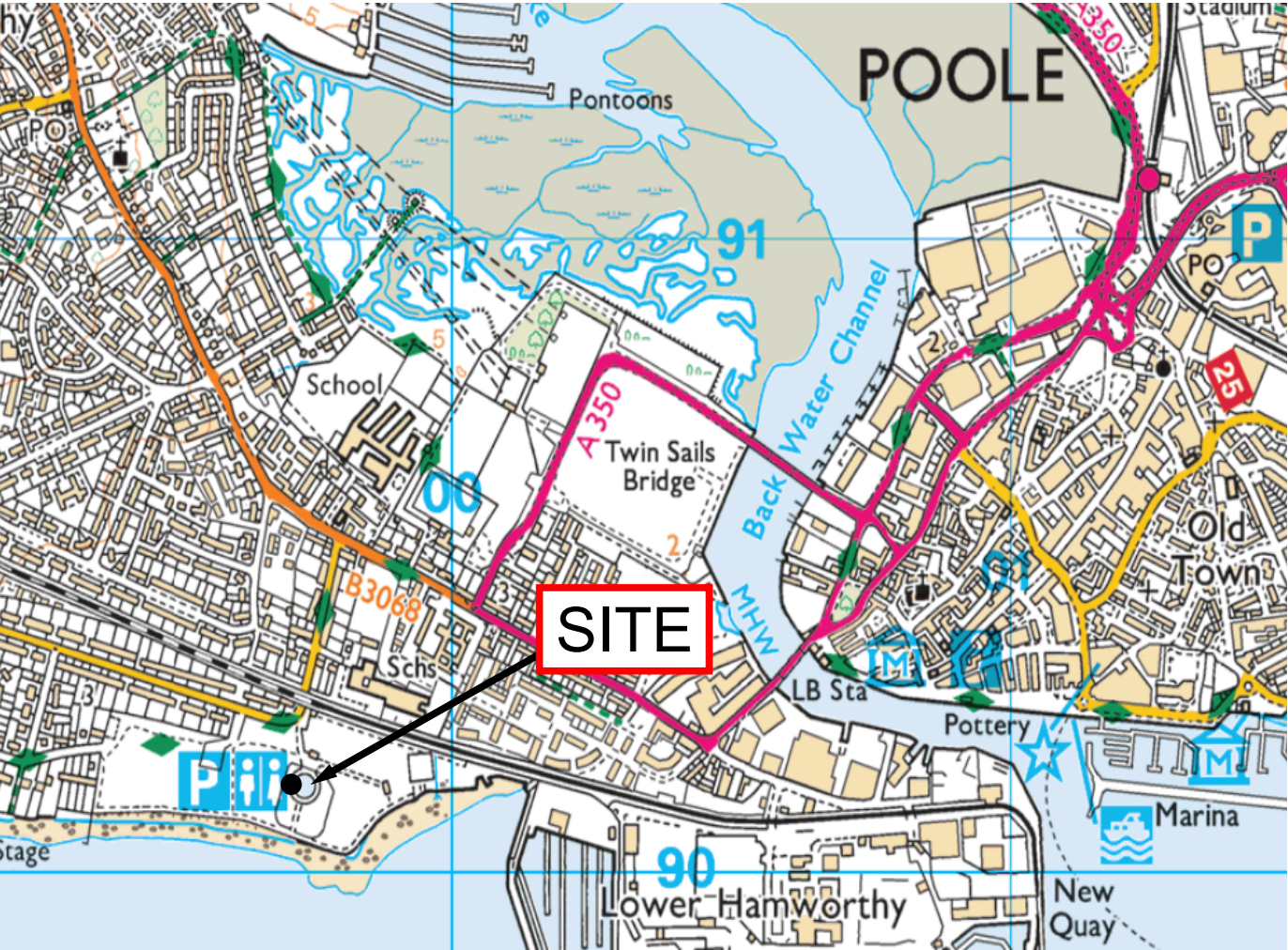
4.5 Standard Penetration Testing

SPT were undertaken at 1m vertical intervals to 5.0mbgl and 1.5m intervals thereafter within all the exploratory holes.

The SPT undertaken during the investigation have revealed varying N values between N=2 and N=4 within the Made Ground and between N=0 and N=>115 within the natural deposits. The results of the tests are shown on the exploratory logs in Appendix A and graphically represented in Figure 4.

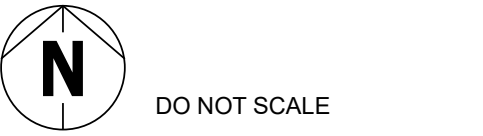
Figure 1 – Site Location Plan





Notes:

Key:



Drawing:
Site Location Plan

Client:
Borough of Poole

Project:	Project No:
Hamworthy Park	18-92812
Paddling Pool	Figure No:
Poole	01
Dorset	Revision:
BH15 4DH	

Drawn By: DW
Date: 03/05/2018

Checked By: BG
Date: 03/15/2018



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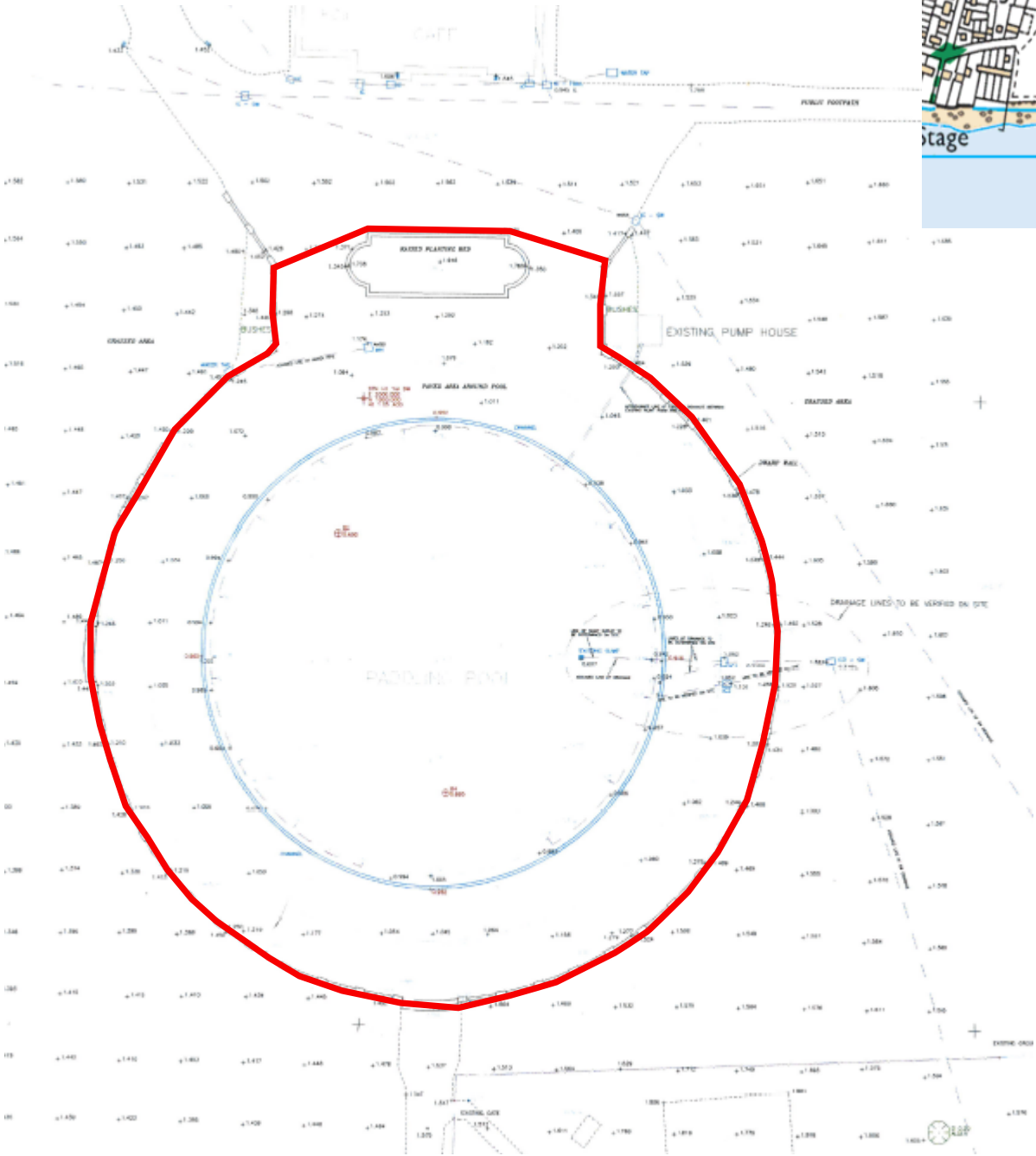
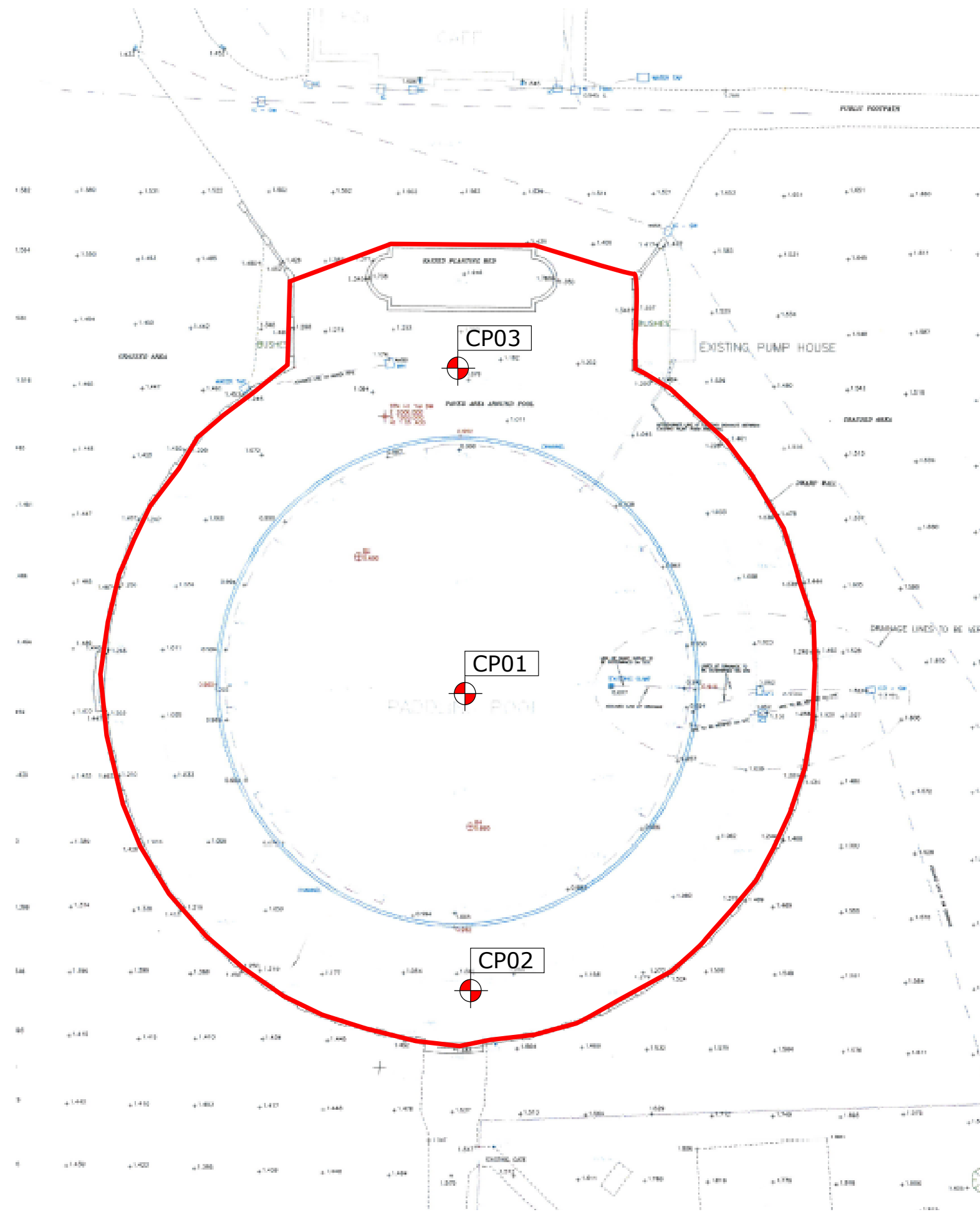


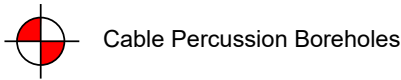
Figure 2 – Exploratory Hole Location Plan





Notes:

Key:



Drawing:
Exploratory Hole Location Plan

Client:
Borough of Poole

Project: Hamworthy Park Paddling Pool Poole Dorset BH15 4DH	Project No: 18-92812 Figure No: 02 Revision:
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Drawn By:
DW
Date:
03/05/2018

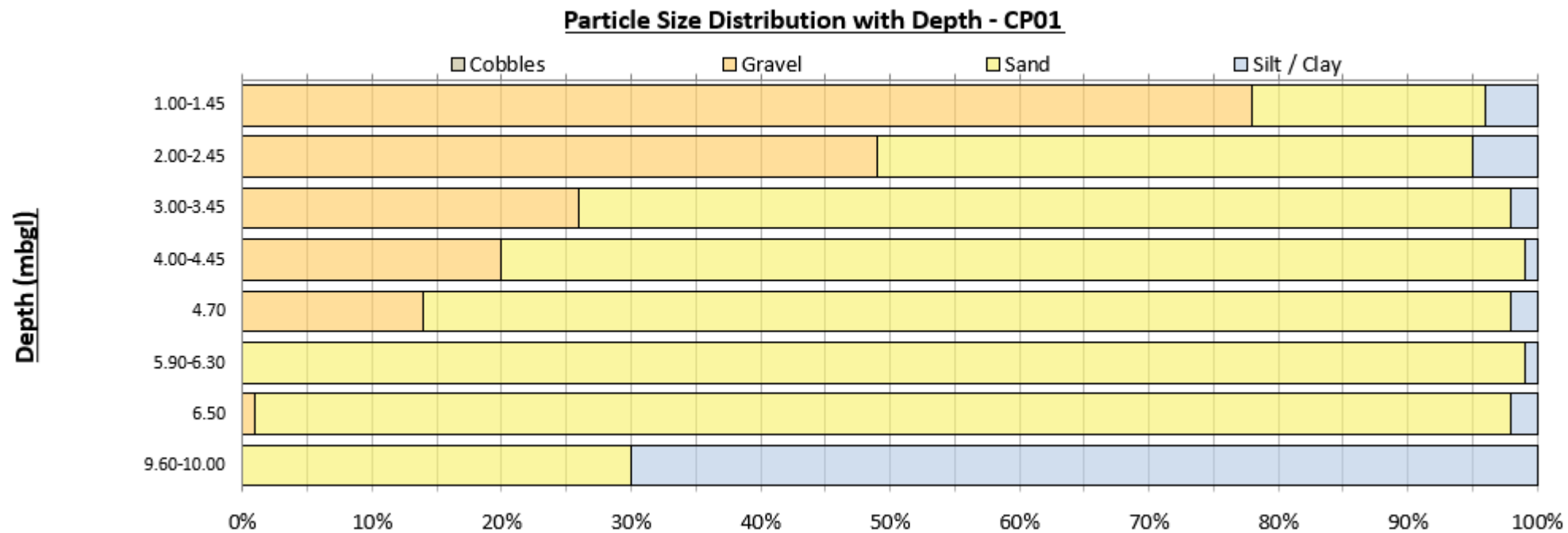
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BG
Date:
03/05/2018



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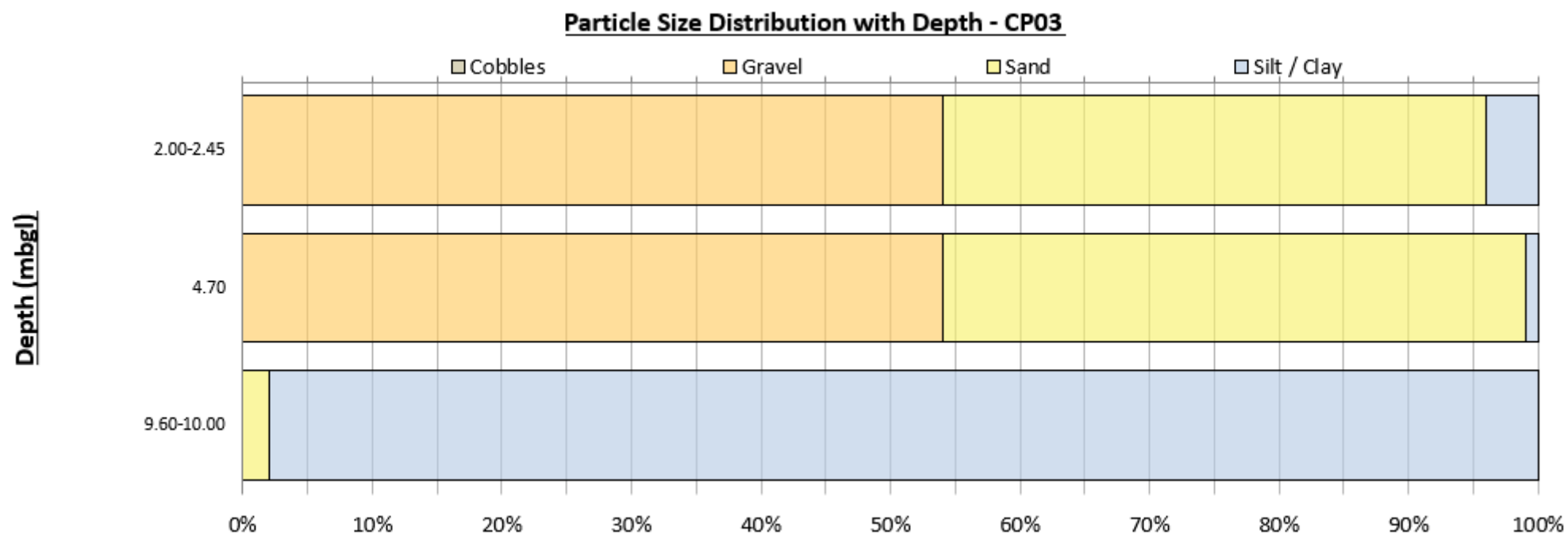
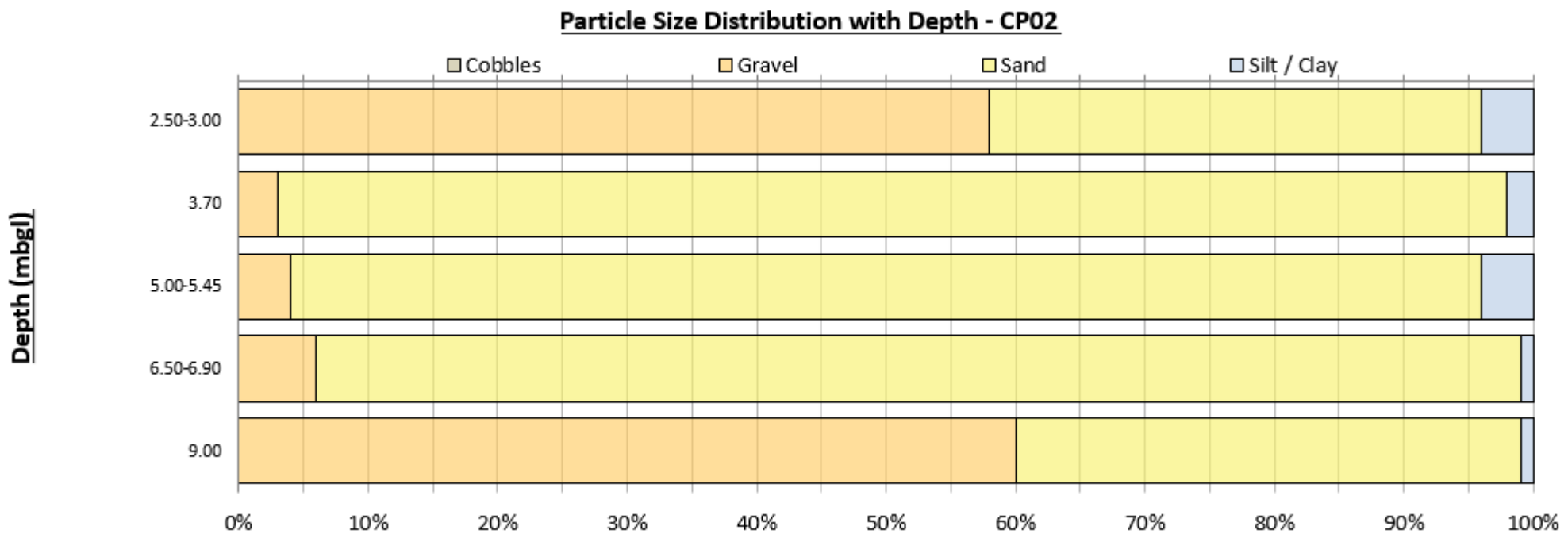
Figure 3 – Particle Size Distribution Graph





Notes:

Key:



Drawing:
Particle Size Distribution

Client:
Borough of Poole

Project:
Hamworthy Park Paddling
Pool
Poole
Dorset
CH15 5DH

Project No:
18-92812
Figure No:
03
Revision:

Drawn By:
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Date:
24/05/2018

Checked By:
CW

Date:
24/05/2018



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Figure 4 – Standard Penetration Test Results vs Depth



Notes:

Key:

Drawing:
Standard Penetration Test Results vs Depth

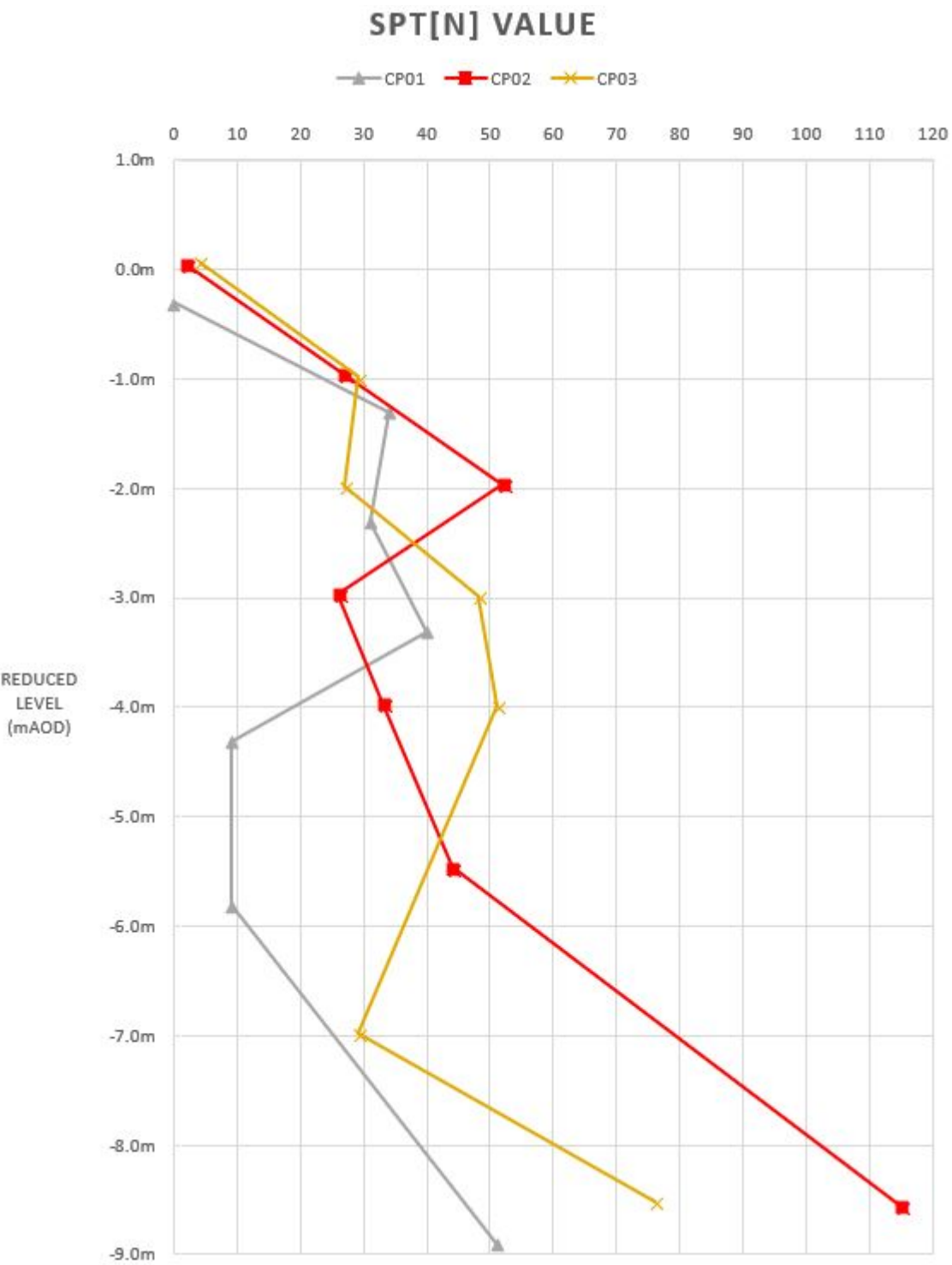
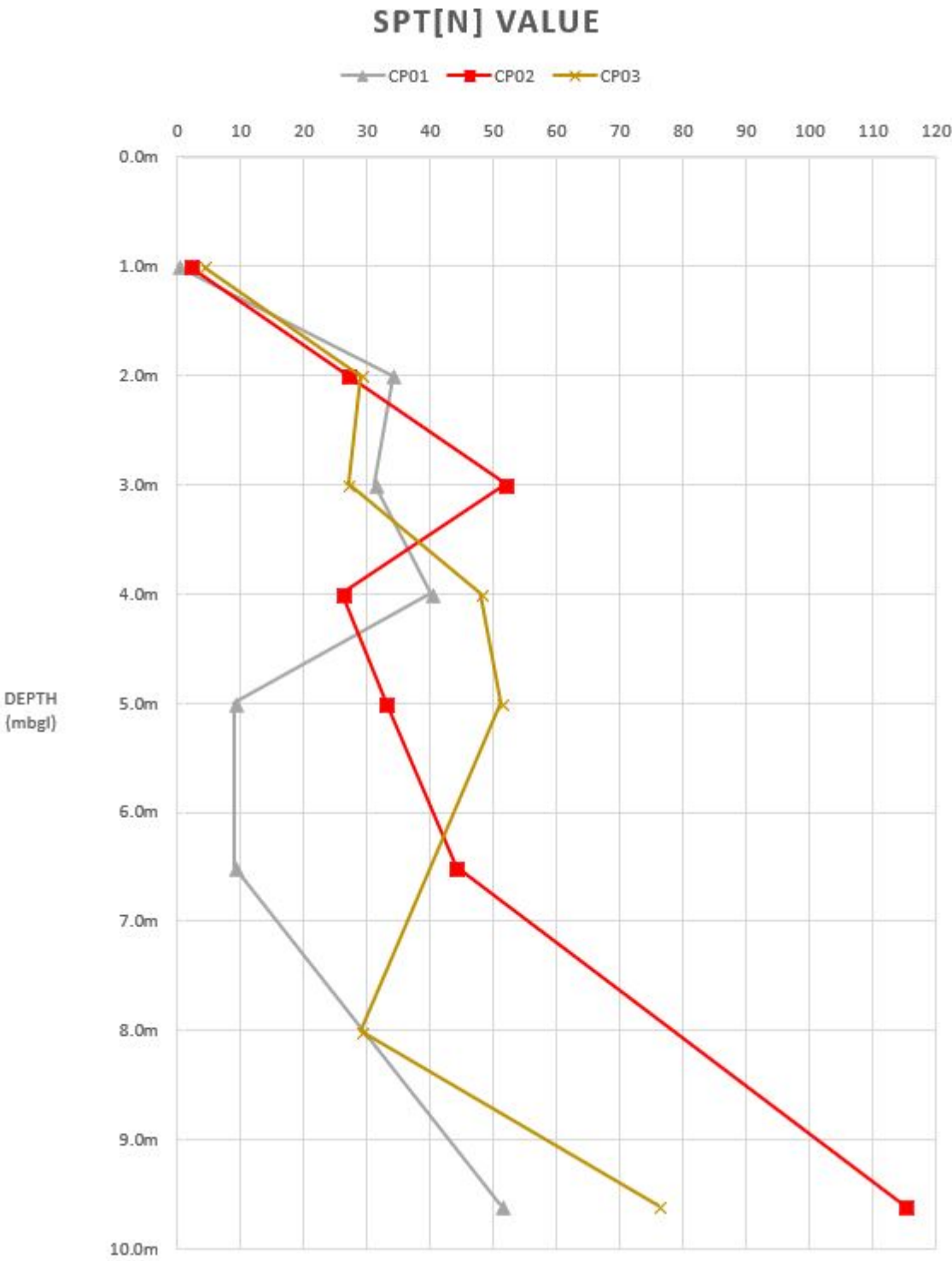
Client:
Borough of Poole

Project: Hamworthy Park Paddling Pool Poole Dorset CH15 5DH	Project No: 18-92812 Figure No: 04 Revision:
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Drawn By: BG	Date: 24/05/2018
Checked By: CW	Date: 24/05/2018



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APPENDIX A

Exploratory Hole Logs





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BOREHOLE LOG

CABLE PERCUSSION

Borehole No.

CP01

Sheet 1 of 1

Client: Borough of Poole

Lab. Ref: 18-92357

Hole Type
CP

Contract: Hamworthy Park Paddling Pool

Drilling Equipment:

Scale

Location: Lulworth Avenue, Hamworthy, BH15 4DH

Pilcon 1 Ton Cable Percussion Rig

Logged By

Ground Level (mAOD): 0.69

Co-ords: DNS

Date(s): 17/04/2018

DW

All units = (m)	Stratum Description	Depth (Level)	Thickness	Legend	Backfill	Water Strike Depth	Casing Depth at Strike	Sample (Type) Depth	In Situ Testing		
									Depth	Type	Results
1	CONCRETE.	0.08 (0.61)									
	Angular crushed rock fill well compacted (BOP description).	0.32 (0.37)									
	CONCRETE. Occasional medium (30-41mm) sub-angular to rounded flint aggregate noted throughout.	0.60 (0.09)						0.50 (B)			
	1/4" diameter reinforcement noted between 0.39-0.45m.	1.00 (-0.31)						1.00 (D)	1.00	SPT(S)	N=0 (1,0/0,0,0,0)
	MADE GROUND. Grey sandy GRAVEL. Gravel comprises fine, medium and coarse angular to sub-rounded limestone.	1.50 (-0.81)	(0.50)					1.40 (D) 1.45			
2	Very loose greenish brown sandy slightly silty GRAVEL. Gravel comprises fine, medium and coarse sub-angular to sub-rounded flint. (Beach Deposits)							1.50 (B)			
	Dense becoming loose beige very gravelly coarse grained SAND. Gravel comprises fine, medium and coarse angular to rounded flint. (Beach Deposits)							2.00 (D)	2.00	SPT(S)	N=34 (5,6/8,8,8,10)
								2.45			
								-- 2.70 (D) --			
								3.00 (D)	3.00	SPT(S)	N=31 (1,3/5,8,8,10)
3								3.45			
								-- 3.70 (D) --			
								4.00 (D)	4.00	SPT(S)	N=40 (2,4/6,8,12,14)
								4.45			
								-- 4.70 (D) --			
4								5.00 (D)	5.00	SPT(S)	N=9 (1,3/2,3,2,2)
								5.45			
								5.90 (B)			
								6.30			
								6.50 (D)	6.50	SPT(S)	N=9 (1,1/2,2,2,3)
5								6.90			
								-- 7.50 (D) --			
								8.00 (U)	8.00		
								8.45			
								-- 9.00 (D) --			
6								9.50 (U) 9.60			
								9.60 (D)	9.60		
								10.00			
7											
8											
9											
10											
	End of Borehole at 10.000m	10.00 (-9.31)									

Remarks

Water noted at the start of borehole at 0.10m.

Chiselling

Depth	Time


Groundwater Observations

Date	Strike	Casing	Wait	Standing	Remarks

Technical Notes (where applicable):
Fine grained soil consistencies and rock strengths have been determined by hand worked field tests as described in BS5930:2015.
Coarse grained soil densities are described based on SPT[N] values where available. Chalk is described in accordance with CIRIA C574.

Sample Codes: (D) - Small Disturbed / (B) - Bulk / (U) Undisturbed

05/07/2018

 <div> ACS Testing Ltd Tel: 01202 622858 Fax: 01202 625045 Email: testing@acstesting.co.uk www.acstesting.co.uk </div>		<div> BOREHOLE LOG CABLE PERCUSSION </div>				Borehole No. CP02 Sheet 1 of 1	
Client: Borough of Poole		Lab. Ref: 18-92357				Hole Type CP	
Contract: Hamworthy Park Paddling Pool		Drilling Equipment: Pilcon 1 Ton Cable Percussion Rig				Scale 1:55	
Location: Lulworth Avenue, Hamworthy, BH15 4DH		Date(s): 17/04/2018				Logged By DW	
Ground Level (mAOD): 1.04		Co-ords: DNS					

All units = (m)	Stratum Description	Depth (Level)	Thickness	Legend	Backfill	Water Strike Depth	Casing Depth at Strike	Sample (Type) Depth	In Situ Testing			
									Depth	Type	Results	
1	BOUND MACADAM. Ballast fill. (Driller's description).	0.10 (0.94)										
	CONCRETE. Occasional medium (20-31mm) sub-angular to rounded flint aggregate noted throughout.	0.40 (0.64) 0.50 (0.55)						0.50 (B) 1.00 (B)				
2	MADE GROUND. Beige very sandy GRAVEL. Gravel comprises fine, medium and coarse angular to sub-rounded limestone.	1.30 (-0.26)	(0.80)					1.20 (B) 1.65 (B)	1.20	SPT(S)	N=2 (2,1/1,0,1,0)	
	MADE GROUND very soft dark grey very sandy SILT.	1.80 (-0.76) 2.00 (-0.96)	(0.50)					2.00 (D) 2.45 (D)	2.00	SPT(S)	N=27 (3,3/3,5,8,11)	
3	MADE GROUND. Light grey slightly sandy GRAVEL. Gravel comprises fine, medium and coarse angular to sub-rounded flint and limestone. Medium dense to very dense beige very gravelly coarse grained SAND. Gravel comprises fine, medium and coarse sub-angular to rounded flint. Gravel is predominantly fine to medium below 4.00m. (Beach Deposits)		(4.20)					3.00 (B) 3.45 (D)	3.00	SPT(S)	N=52 (4,12/14,12,12,14)	
4			(1.20)					4.00 (D) 4.45 (D)	4.00	SPT(S)	N=26 (2,2/2,2,8,14)	
5			(0.70)					5.00 (D) 5.45 (D)	5.00	SPT(S)	N=33 (3,4/5,8,10,10)	
6			(1.40)					6.00 (D) 6.90 (D)	6.50	SPT(S)	N=44 (1,3/5,9,12,18)	
7	Dense beige slightly gravelly fine to coarse grained SAND. Gravel comprises fine, medium and coarse angular to sub-rounded flint. (Beach Deposits)	6.20 (-5.16)						7.60 (D)				
	Stiff dark grey very sandy CLAY. (Poole Formation)	7.40 (-6.36)						8.00 (D) 8.45 (D)				
8	Light brown very sandy GRAVEL. Gravel comprises fine, medium and coarse flint. (Poole Formation)	8.10 (-7.06)						9.00 (D) 9.60 (D)				
	Firm to stiff light grey very sandy SILT. (Poole Formation)	9.50 (-8.46) 10.00 (-8.96)	(0.50)					10.00 (D)	9.60	SPT(S)	115 (7,9/115 for 210mm)	
10	End of Borehole at 10.000m	10.00 (-8.96)										

Remarks


Chiselling

Depth	Time
0.40-0.50m	00:15

Groundwater Observations

Date	Strike	Casing	Wait	Standing	Remarks
17-04-18	1.00m	0.00m	20mins	0.70m	

Technical Notes (where applicable):
Fine grained soil consistencies and rock strengths have been determined by hand worked field tests as described in BS5930:2015.
Coarse grained soil densities are described based on SPT[N] values where available. Chalk is described in accordance with CIRIA C574.
Sample Codes: (D) - Small Disturbed / (B) - Bulk / (U) Undisturbed

 <div> ACS Testing Ltd Tel: 01202 622858 Fax: 01202 625045 Email: testing@acstesting.co.uk www.acstesting.co.uk </div>		<div>BOREHOLE LOG</div> <div>CABLE PERCUSSION</div>				Borehole No. CP03 Sheet 1 of 1	
Client: Borough of Poole		Lab. Ref: 18-92357				Hole Type CP	
Contract: Hamworthy Park Paddling Pool		Drilling Equipment: Pilcon 1 Ton Cable Percussion Rig				Scale 1:55	
Location: Lulworth Avenue, Hamworthy, BH15 4DH						Logged By DW	
Ground Level (mAOD): 1.08		Co-ords: DNS		Date(s): 18/04/2018			

All units = (m)	Stratum Description	Depth (Level)	Thickness	Legend	Backfill	Water Strike Depth	Casing Depth at Strike	Sample (Type) Depth	In Situ Testing			
									Depth	Type	Results	
	BOUND MACADAM. Hardcore ballast fill. (Driller's description).	0.10 (0.98)										
	CONCRETE. Occasional medium (20-32mm) sub-angular to rounded flint aggregate noted throughout.	0.40 (0.68) 0.50 (0.58)						0.50 (B)				
1	MADE GROUND. Dark grey sandy GRAVEL. Gravel comprises fine, medium and coarse angular to sub-rounded flint and concrete. Occasional sub-rounded concrete cobbles noted.	1.20 (-0.12)	(0.70)					1.20 ~ 1.4 (B) (D) ~	1.20	SPT(S)	N=4 (1,1/1,1,1,1)	
	MADE GROUND. Very soft dark grey very sandy SILT.	1.70 (-0.62)	(0.50)					~ 1.80 (D) ~	1.65			
2	MADE GROUND. Greyish brown sandy GRAVEL. Gravel comprises fine, medium and coarse angular to sub-rounded flint.	2.00 (-0.92)						(D)	2.45	2.00	SPT(S)	N=29 (2,4/6,8,8,7)
	Medium dense becoming dense to very dense beige very gravelly coarse grained SAND. Gravel comprises fine, medium and coarse angular to rounded flint. Rare sub-rounded flint cobbles noted. (Beach Deposits)							~ 2.70 (D) ~				
3								(D)	3.45	3.00	SPT(S)	N=27 (4,5/6,7,7,7)
								(B)	4.00			
4			(3.80)					(D)	4.45	4.00	SPT(S)	N=48 (4,8/12,12,12,12)
								~ 4.70 (D) ~				
5								(D)	5.45	5.00	SPT(S)	N=51 (4,9/12,12,13,14)
								(B)	6.20			
6	Beige slightly gravelly fine to coarse grained SAND. Gravel comprises fine to medium angular to sub-rounded flint. (Beach Deposits)	5.80 (-4.72)						~ 6.30 (D) ~				
	Firm light grey mottled red slightly sandy CLAY. (Poole Formation)	6.20 (-5.12)						(U)	6.95	6.50		U100 Blows = 70 U100 Rec = 100%
7								~ 7.50 (D) ~				
8			(3.40)					(D)	8.45	8.00	SPT(S)	N=29 (5,7/7,7,7,8)
								~ 9.00 (D) ~				
9								(D)	10.00	9.60	SPT(S)	76 (10,12/76 for 135mm)
10	Firm to stiff light grey slightly sandy SILT. (Poole Formation)	9.60 (-8.52)										
	End of Borehole at 10.000m	10.00 (-8.92)										

Remarks	Chiselling		Groundwater Observations					
	Depth	Time	Date	Strike	Casing	Wait	Standing	Remarks
	0.40-0.50m	00:15	18-04-18	1.50m	1.50m	20mins	1.30m	
Technical Notes (where applicable): Fine grained soil consistencies and rock strengths have been determined by hand worked field tests as described in BS5930:2015. Coarse grained soil densities are described based on SPT[N] values where available. Chalk is described in accordance with CIRIA C574. Sample Codes: (D) - Small Disturbed / (B) - Bulk / (U) Undisturbed								

APPENDIX B

Geotechnical Test Results



**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399719** Head Office Certificate No : **399719-18-92757-S05**

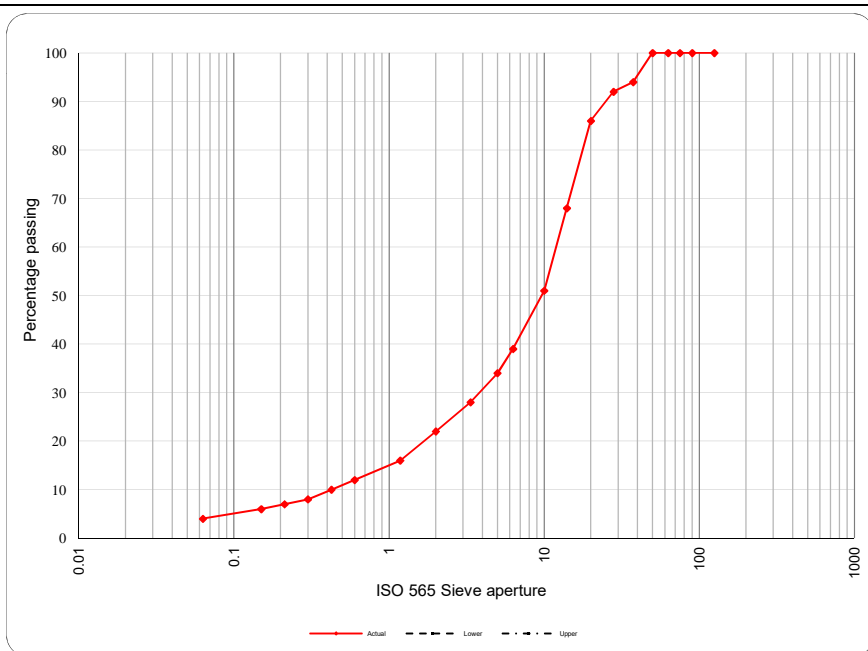
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**

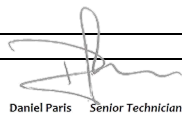
Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP01**
 Location of sample on site : **1.00-1.45m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Brown sandy slightly silty gravel**
 Total mass received : **1.73 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	94		
28.00mm	92		
20.00mm	86		
14.00mm	68		
10.00mm	51		
6.30mm	39		
5.00mm	34		
3.35mm	28		
2.00mm	22		
1.18mm	16		
0.600mm	12		
0.425mm	10		
0.300mm	8		
0.212mm	7		
0.150mm	6		
0.063mm	4		
U/COEF	29	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **24/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399721** Head Office Certificate No : **399721-18-92757-S05**

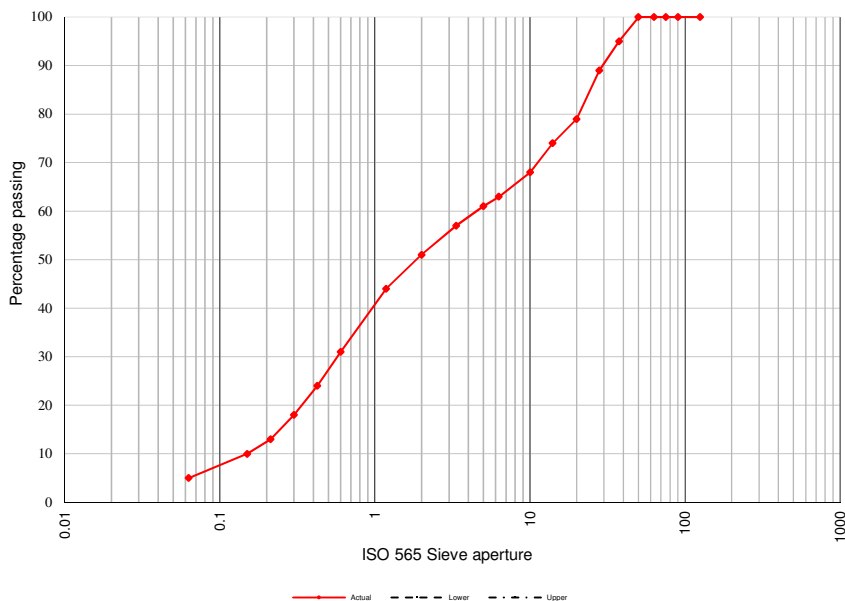
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**


Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP01**
 Location of sample on site : **2.00-2.45m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige very gravelly coarse grained sand**
 Total mass received : **2.54 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	95		
28.00mm	89		
20.00mm	79		
14.00mm	74		
10.00mm	68		
6.30mm	63		
5.00mm	61		
3.35mm	57		
2.00mm	51		
1.18mm	44		
0.600mm	31		
0.425mm	24		
0.300mm	18		
0.212mm	13		
0.150mm	10		
0.063mm	5		
U/COEF	31	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

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TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399722** Head Office Certificate No : **399722-18-92757-S05**

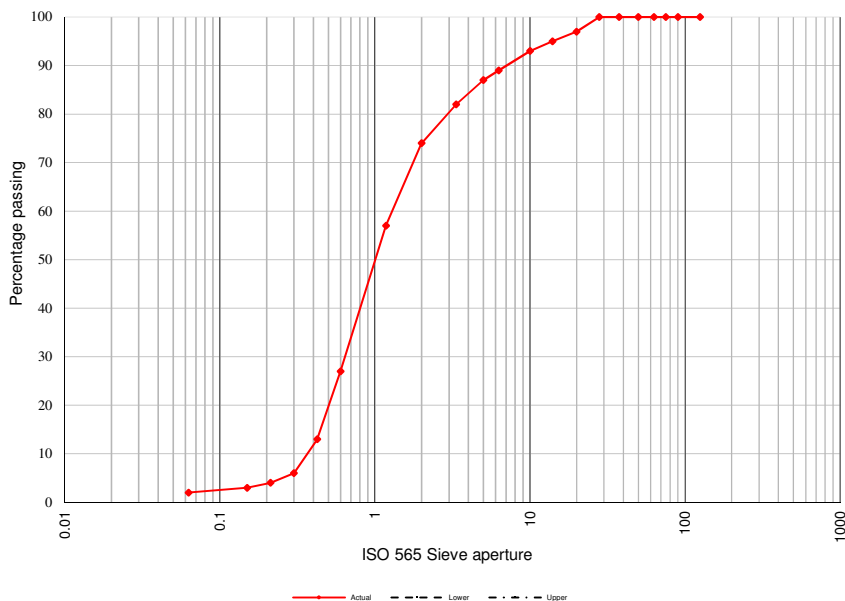
Client : **Borough of Poole - E&CPS**
Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
Client reference/data : **CP01**
Location of sample on site : **3.00-3.45m**
Borehole/pit no / depth : **N/A @ N/A m**
Date sampled : **17/04/2018**
Sampled by : **DW**
Date received : **17/04/2018**
Material description : **Beige very gravelly coarse grained sand**
Total mass received : **1.79 kg**
Method of preparation : **BS 1377 : Part 1 & Part 2**
Variation from test procedure : **None**
Location & orientation of test specimen within original sample : **N/A**
Sampling certificate : **No - None Submitted**
Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	97		
14.00mm	95		
10.00mm	93		
6.30mm	89		
5.00mm	87		
3.35mm	82		
2.00mm	74		
1.18mm	57		
0.600mm	27		
0.425mm	13		
0.300mm	6		
0.212mm	4		
0.150mm	3		
0.063mm	2		
U/COEF	3.5	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved : **Daniel Paris** Date : **11/05/2018**

Daniel Paris
Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399723** Head Office Certificate No : **399723-18-92757-S05**

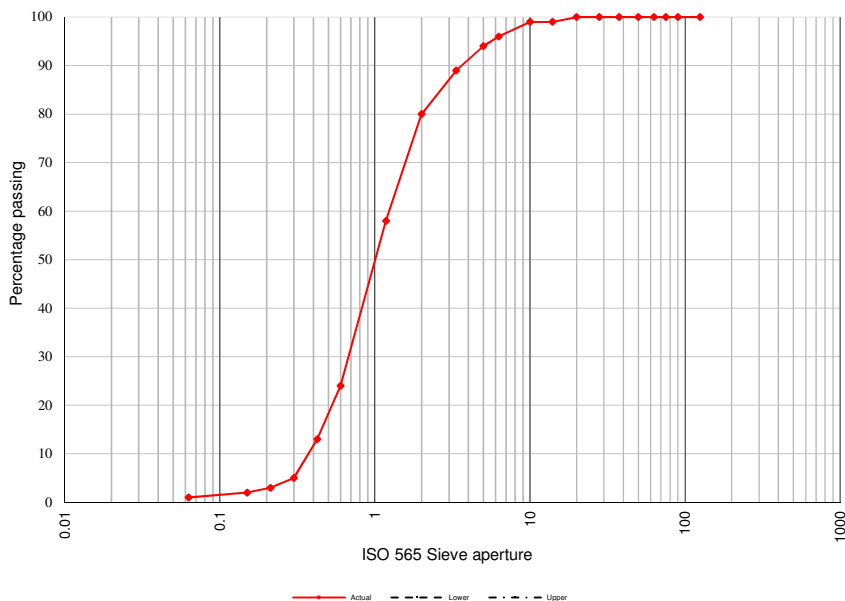
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
 Poole, Dorset, BH17 0NF**

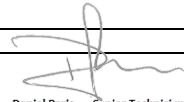
Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP01**
 Location of sample on site : **4.00-4.45m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige very gravelly coarse grained sand**
 Total mass received : **1.53 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	99		
10.00mm	99		
6.30mm	96		
5.00mm	94		
3.35mm	89		
2.00mm	80		
1.18mm	58		
0.600mm	24		
0.425mm	13		
0.300mm	5		
0.212mm	3		
0.150mm	2		
0.063mm	1		
U/COEF	3.2	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **09.05.2018** Approved :  Date : **10/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399724** Head Office Certificate No : **399724-18-92757-S05**

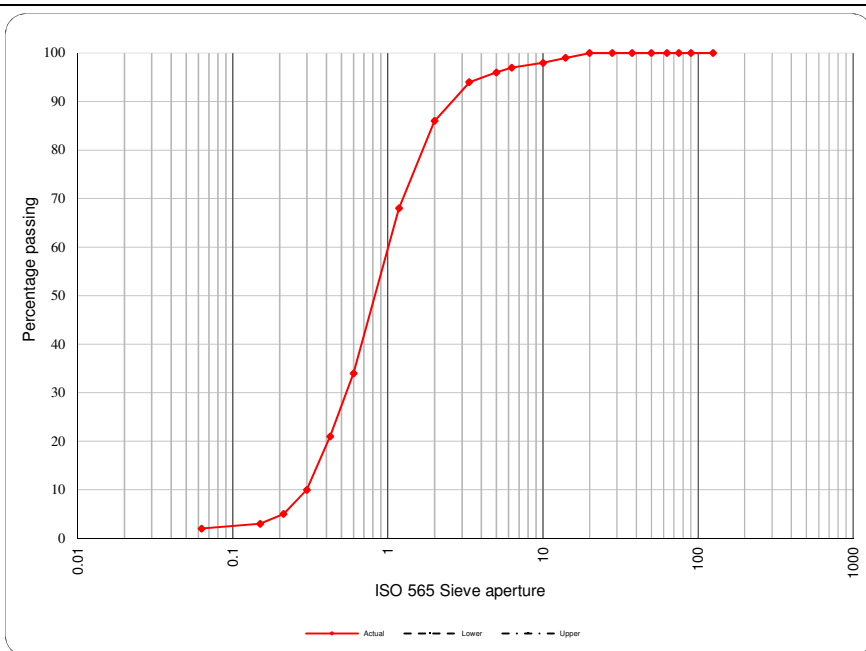
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**


Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP01**
 Location of sample on site : **4.70m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige very gravelly coarse grained sand**
 Total mass received : **1.02 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	99		
10.00mm	98		
6.30mm	97		
5.00mm	96		
3.35mm	94		
2.00mm	86		
1.18mm	68		
0.600mm	34		
0.425mm	21		
0.300mm	10		
0.212mm	5		
0.150mm	3		
0.063mm	2		
U/COEF	3.5	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

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TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399726** Head Office Certificate No : **399726-18-92757-S05**

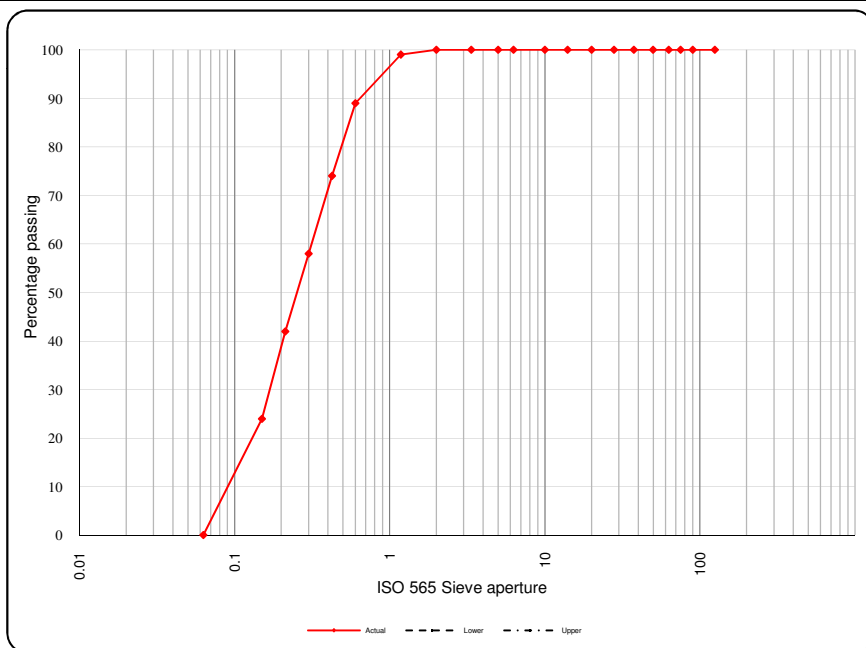
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**

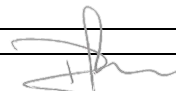
Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP01**
 Location of sample on site : **5.90-6.30m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Light grey fine to coarse grained sand.**
 Total mass received : **0.28 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	100		
10.00mm	100		
6.30mm	100		
5.00mm	100		
3.35mm	100		
2.00mm	100		
1.18mm	99		
0.600mm	89		
0.425mm	74		
0.300mm	58		
0.212mm	42		
0.150mm	24		
0.063mm	< 1.0		
U/COEF	3.2	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSMJKRCSAS** Date tested : **10.05.2018** Approved :  Date : **22/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399727** Head Office Certificate No : **399727-18-92757-S05**

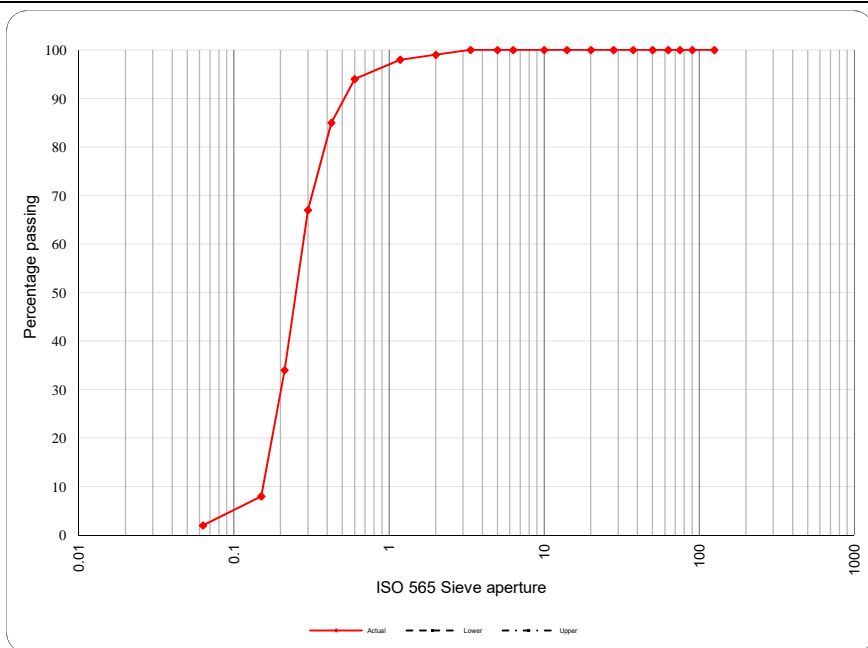
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
 Poole, Dorset, BH17 0NF**


Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP01**
 Location of sample on site : **6.50m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Firm to stiff light grey sandy clay**
 Total mass received : **1.72 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	100		
10.00mm	100		
6.30mm	100		
5.00mm	100		
3.35mm	100		
2.00mm	99		
1.18mm	98		
0.600mm	94		
0.425mm	85		
0.300mm	67		
0.212mm	34		
0.150mm	8		
0.063mm	2		
U/COEF	2	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **24/05/2018**

Daniel Paris Senior Technician

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TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

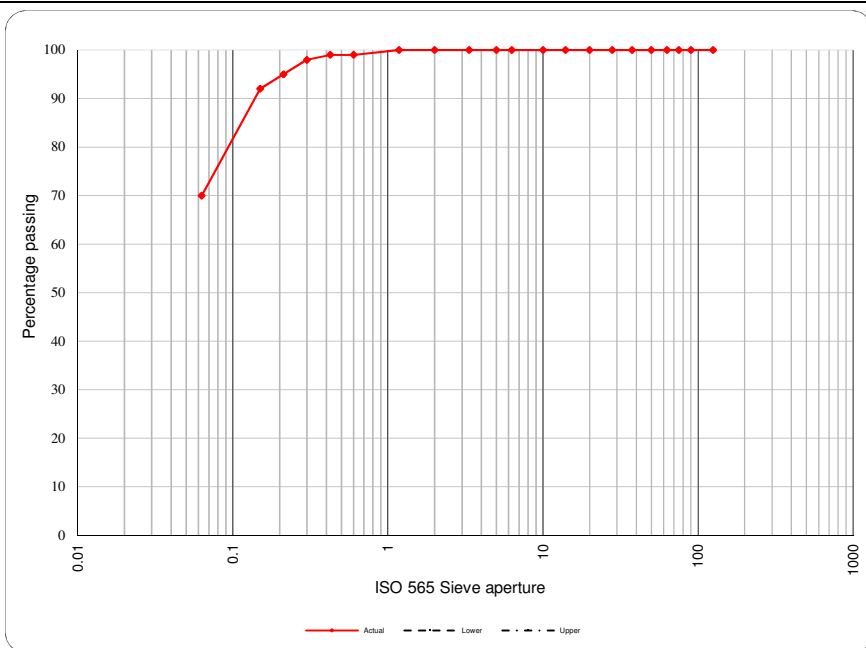
Laboratory reference no(s) : **18-92757 - 399728** Head Office Certificate No : **399728-18-92757-S05**

Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
 Poole, Dorset, BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**

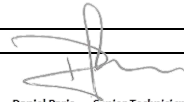
Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP01**
 Location of sample on site : **9.60-10.00m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Stiff light grey very sandy silt**
 Total mass received : **1.22 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	100		
10.00mm	100		
6.30mm	100		
5.00mm	100		
3.35mm	100		
2.00mm	100		
1.18mm	100		
0.600mm	99		
0.425mm	99		
0.300mm	98		
0.212mm	95		
0.150mm	92		
0.063mm	70		
U/COEF	N/A	N/A	N/A



Note: Unable to report Uniformity Coefficient as both D60 + D10 unable to be determined directly by this test.

Remarks : **None**

Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399730** Head Office Certificate No : **399730-18-92757-S05**

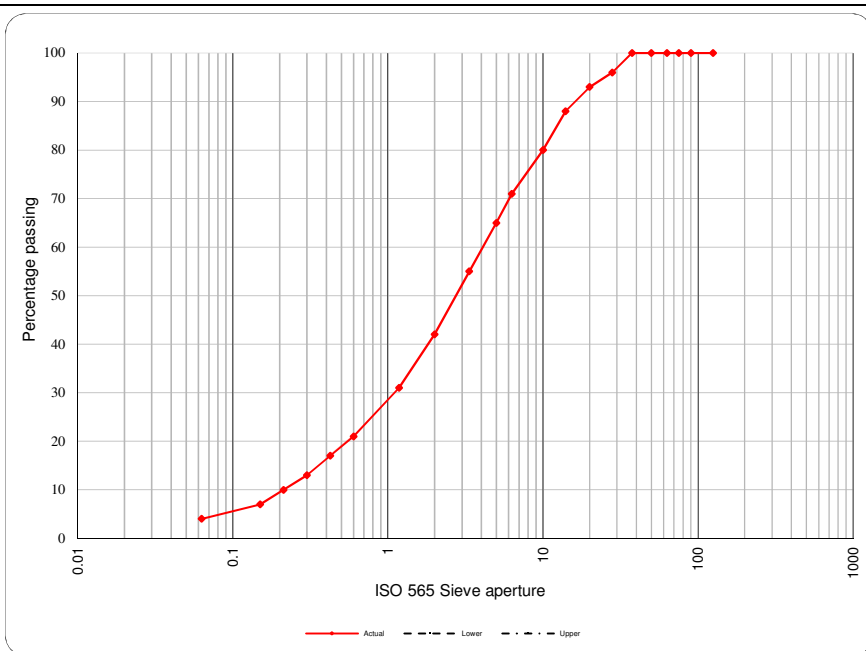
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**

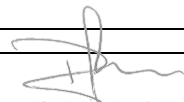
Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP02**
 Location of sample on site : **2.50-3.00m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige very gravelly coarse grained sand**
 Total mass received : **2.09 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	96		
20.00mm	93		
14.00mm	88		
10.00mm	80		
6.30mm	71		
5.00mm	65		
3.35mm	55		
2.00mm	42		
1.18mm	31		
0.600mm	21		
0.425mm	17		
0.300mm	13		
0.212mm	10		
0.150mm	7		
0.063mm	4		
U/COEF	20	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399731** Head Office Certificate No : **399731-18-92757-S05**

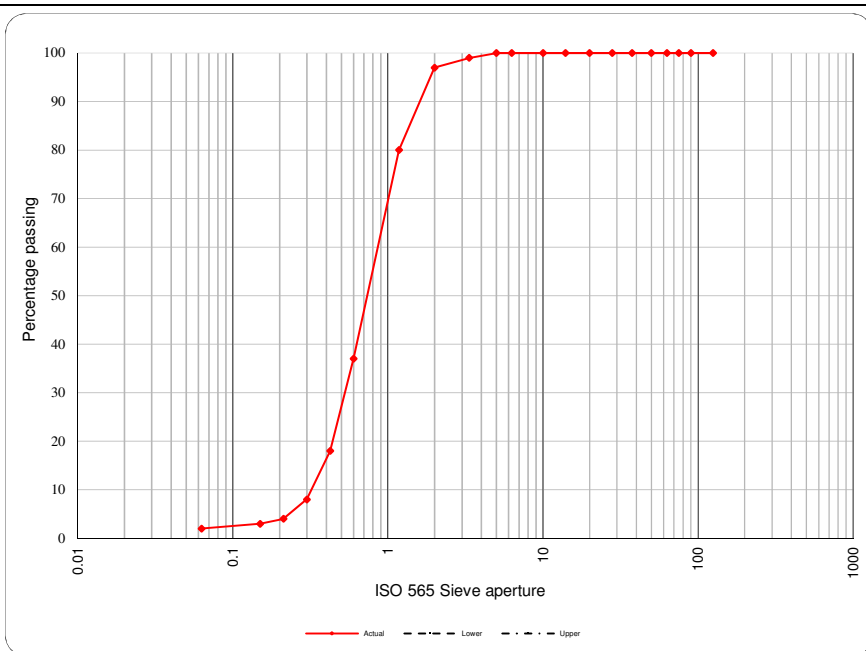
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**

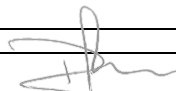
Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP02**
 Location of sample on site : **3.70m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige very gravelly coarse grained sand**
 Total mass received : **1.97 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	100		
10.00mm	100		
6.30mm	100		
5.00mm	100		
3.35mm	99		
2.00mm	97		
1.18mm	80		
0.600mm	37		
0.425mm	18		
0.300mm	8		
0.212mm	4		
0.150mm	3		
0.063mm	2		
U/COEF	2.7	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399732** Head Office Certificate No : **399732-18-92757-S05**

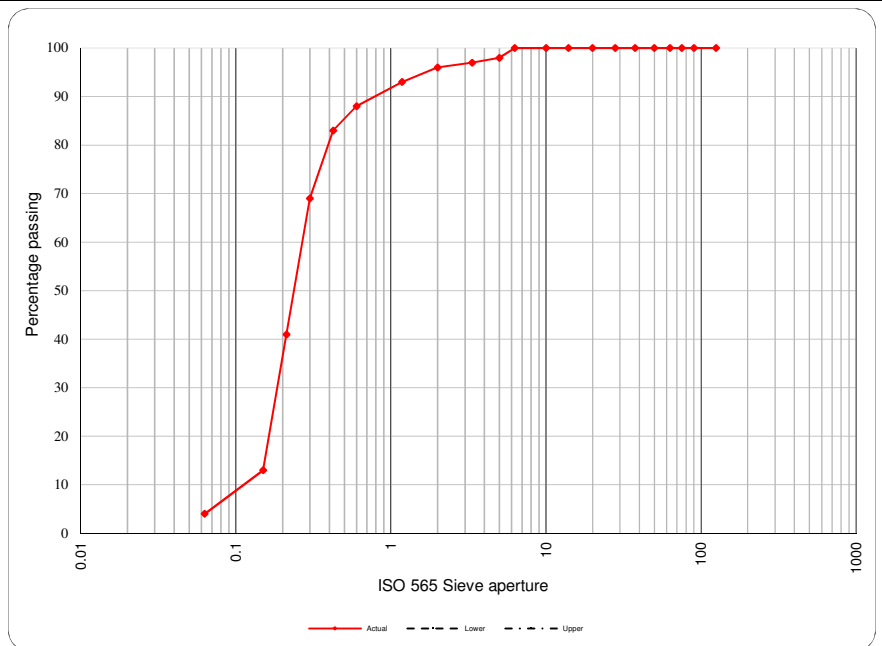
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**


Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP02**
 Location of sample on site : **5.00-5.45m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige very gravelly coarse grained sand**
 Total mass received : **0.58 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	100		
10.00mm	100		
6.30mm	100		
5.00mm	98		
3.35mm	97		
2.00mm	96		
1.18mm	93		
0.600mm	88		
0.425mm	83		
0.300mm	69		
0.212mm	41		
0.150mm	13		
0.063mm	4		
U/COEF	2.1	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399733** Head Office Certificate No : **399733-18-92757-S05**

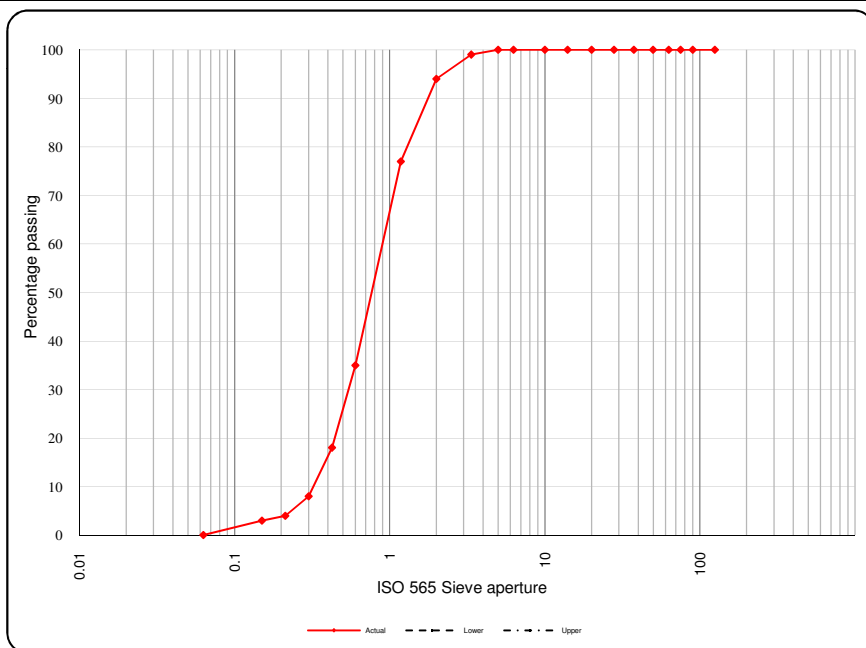
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**


Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP02**
 Location of sample on site : **6.50-6.90m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige slightly gravelly fine to coarse grained sand**
 Total mass received : **0.28 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	100		
10.00mm	100		
6.30mm	100		
5.00mm	100		
3.35mm	99		
2.00mm	94		
1.18mm	77		
0.600mm	35		
0.425mm	18		
0.300mm	8		
0.212mm	4		
0.150mm	3		
0.063mm	< 1.0		
U/COEF	2.9	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSMJKSAS** Date tested : **10.05.2018** Approved :  Date : **22/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399734** Head Office Certificate No : **399734-18-92757-S05**

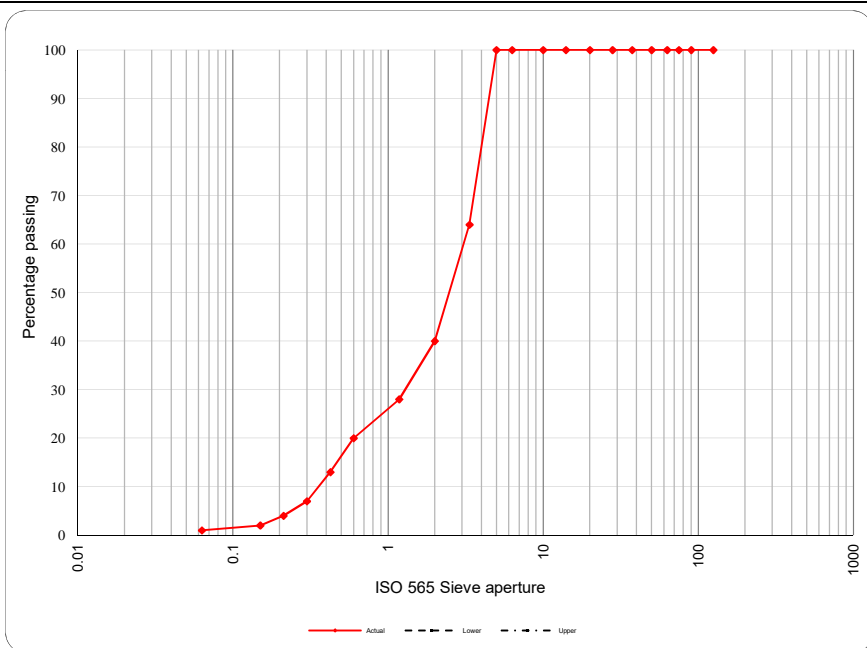
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**

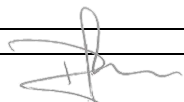
Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP02**
 Location of sample on site : **9.00m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **17/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Light brown very sandy gravel**
 Total mass received : **1.62 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	100		
10.00mm	100		
6.30mm	100		
5.00mm	100		
3.35mm	64		
2.00mm	40		
1.18mm	28		
0.600mm	20		
0.425mm	13		
0.300mm	7		
0.212mm	4		
0.150mm	2		
0.063mm	1		
U/COEF	8.5	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSMJKRCSAS** Date tested : **15.05.2018** Approved :  Date : **24/05/2018**

Daniel Paris Senior Technician

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CERTIFICATE OF TEST - DETERMINATION OF MOISTURE CONTENT
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CL 3.2.3.1

Laboratory reference no(s) : **18-92757 - 399735** Head Office Certificate No : **399735-18-92757-S2**

Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
 Poole, Dorset, BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**
 Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP02**
 Location of sample on site : **9.60-10.00m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Firm to stiff grey very sandy silt**
 Total mass received : **0.40 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2 : 1990**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**

Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) :

The test specimen was oven dried at : **108 °C**

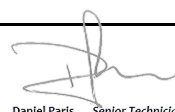
Moisture content : **19 %**

Remarks : **None**

Tested by : **GDBSAS**

Date tested : **02.05.2018** Approved :

Date : **25/05/2018**



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**CERTIFICATE OF TEST - DETERMINATION OF LIQUID/PLASTIC LIMIT, PLASTICITY/LIQUIDITY INDEX
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 4.3 & 5.0**

Laboratory reference no(s) : **18-92757 - 399735** Head Office Certificate No : **399735-18-92757-S4**

Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole
Dorset
BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**
 Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP02**
 Location of sample on site : **9.60-10.00m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Firm to stiff grey very sandy silt**
 Total mass received : **0.40 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**

Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

Soil tested in natural condition (BS 1377:Part 2:1990 Clause 4.2.3)

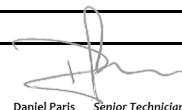
Proportion of material retained on 425 µm test sieve	:	1	%
Proportion of material passing 425 µm test sieve	:	99	%
Plastic limit	:	16	%
Liquid limit	:	24	%
Plasticity index	:	8	%
Liquidity index	:	0.399	

Remarks : **None**

Tested by : **MASAS**

Date tested : **11.05.2018**

Approved :



Daniel Paris Senior Technician

Date : **24/05/2018**

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399736** Head Office Certificate No : **399736-18-92757-S05**

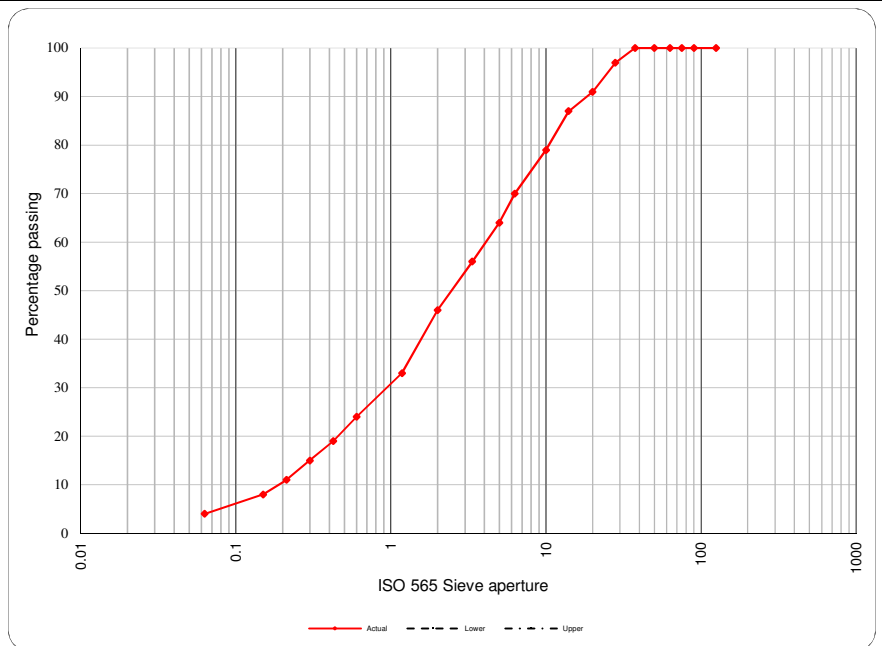
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
 Poole, Dorset, BH17 0NF**


Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP03**
 Location of sample on site : **2.00-2.45m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige very gravelly coarse grained sand**
 Total mass received : **1.57 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	97		
20.00mm	91		
14.00mm	87		
10.00mm	79		
6.30mm	70		
5.00mm	64		
3.35mm	56		
2.00mm	46		
1.18mm	33		
0.600mm	24		
0.425mm	19		
0.300mm	15		
0.212mm	11		
0.150mm	8		
0.063mm	4		
U/COEF	21	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399737** Head Office Certificate No : **399737-18-92757-S05**

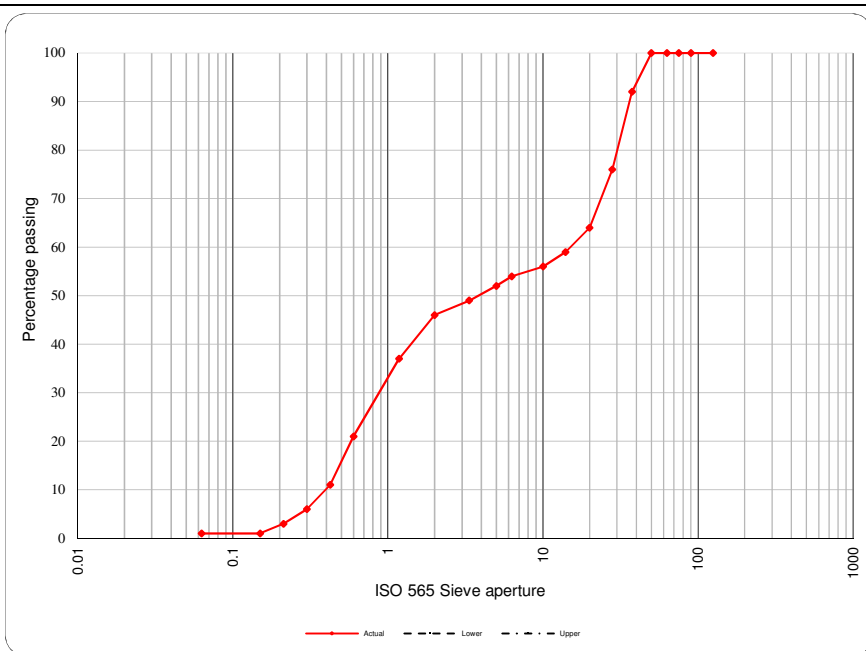
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**

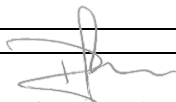
Contract : **Hamworthy Park Paddling Pool**

Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP03**
 Location of sample on site : **4.70m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Beige very gravelly coarse grained sand**
 Total mass received : **2.18 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	92		
28.00mm	76		
20.00mm	64		
14.00mm	59		
10.00mm	56		
6.30mm	54		
5.00mm	52		
3.35mm	49		
2.00mm	46		
1.18mm	37		
0.600mm	21		
0.425mm	11		
0.300mm	6		
0.212mm	3		
0.150mm	1		
0.063mm	1		
U/COEF	38	N/A	N/A

Remarks : **None**



Tested by : **CJBGDBJSRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

Bulk samples will be retained for a minimum of 21 days from date of receipt unless a written instruction is received within 14 days of receipt requesting sample retention

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CERTIFICATE OF TEST - DETERMINATION OF MOISTURE CONTENT
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CL 3.2.3.2

Laboratory reference no(s) : **18-92757 - 399738** Head Office Certificate No : **399738-18-92757-S2**

Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
 Poole, Dorset, BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**
 Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP03**
 Location of sample on site : **6.50-6.95m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Firm light grey mottled red slightly sandy clay**
 Total mass received : **1.57 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2 : 1990**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**

Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) :

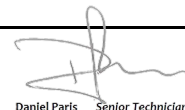
The test specimen was oven dried at : **108 °C**

Moisture content : **24 %**

Remarks : **None**

Tested by : **GDBJSSAS**

Date tested : **02.05.2018** Approved :



Daniel Paris Senior Technician

Date : **09/05/2018**

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**CERTIFICATE OF TEST - DETERMINATION OF LIQUID/PLASTIC LIMIT, PLASTICITY/LIQUIDITY INDEX
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 4.3 & 5.0**

Laboratory reference no(s) : **18-92757 - 399738** Head Office Certificate No : **399738-18-92757-S4**

Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole
Dorset
BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**
 Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP03**
 Location of sample on site : **6.50-6.95m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Firm light grey mottled red slightly sandy clay**
 Total mass received : **1.57 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**

Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

Soil washed through 425 µm test sieve (B.S. 1377 : Part 2 : 1990 Clause 4.2.4)
 Proportion of material retained on 425 µm test sieve : **4 %**
 Proportion of material passing 425 µm test sieve : **96 %**

Plastic limit	:	21	%
Liquid limit	:	54	%
Plasticity index	:	33	%
Liquidity index	:	0.121	

Remarks : **None**

Tested by : **MASAS** Date tested : **16.05.2018** Approved :  Date : **22/05/2018**

Daniel Paris Senior Technician

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CERTIFICATE OF TEST - DETERMINATION OF MOISTURE CONTENT
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CL 3.2.3.1

Laboratory reference no(s) : **18-92757 - 399739** Head Office Certificate No : **399739-18-92757-S2**

Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
 Poole, Dorset, BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**
 Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP03**
 Location of sample on site : **9.60-10.00m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Firm to stiff light grey very sandy silt**
 Total mass received : **0.72 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2 : 1990**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**

Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) :


The test specimen was oven dried at : **108 °C**

Moisture content : **23 %**

Remarks : **None**

Tested by : **GDBSAS**

Date tested : **02.05.2018** Approved :


 Daniel Paris Senior Technician

Date : **09/05/2018**

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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

Laboratory reference no(s) : **18-92757 - 399739** Head Office Certificate No : **399739-18-92757-S05**

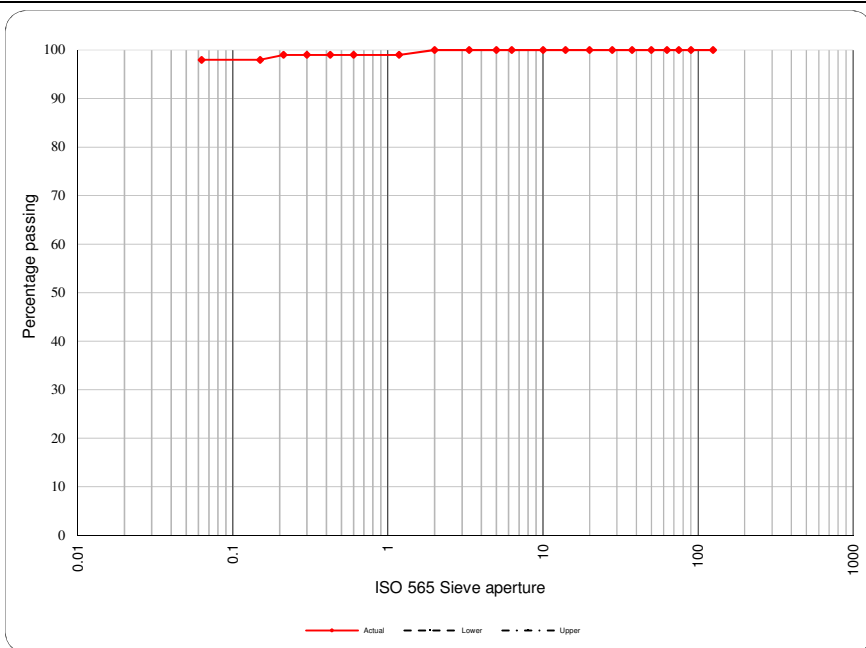
Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
Poole, Dorset, BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**


Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP03**
 Location of sample on site : **9.60-10.00m**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **Firm to stiff light grey very sandy silt**
 Total mass received : **0.72 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **Data not supplied**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100		
90.00mm	100		
75.00mm	100		
63.00mm	100		
50.00mm	100		
37.50mm	100		
28.00mm	100		
20.00mm	100		
14.00mm	100		
10.00mm	100		
6.30mm	100		
5.00mm	100		
3.35mm	100		
2.00mm	100		
1.18mm	99		
0.600mm	99		
0.425mm	99		
0.300mm	99		
0.212mm	99		
0.150mm	98		
0.063mm	98		
U/COEF	N/A	N/A	N/A

Remarks : **None**



Note: Unable to report Uniformity Coefficient as both D60 + D10 unable to be determined directly by this test.

Tested by : **CJBLKMKRCSAS** Date tested : **10.05.2018** Approved :  Date : **11/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - DETERMINATION OF LIQUID/PLASTIC LIMIT, PLASTICITY/LIQUIDITY INDEX
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 4.3 & 5.0**

Laboratory reference no(s) :	18-92757 - 399739	Head Office Certificate No :	399739-18-92757-S4
Client :	Borough of Poole - E&CPS		
Certificate address :	Unit 1 New Fields Bus. Park, Stinsford Road Poole Dorset BH17 0NF		
Contract :	Hamworthy Park Paddling Pool		
Source of material (as indicated by client) :	In situ		
Client reference/data :	CP03		
Location of sample on site :	9.60-10.00m		
Borehole/pit no / depth	N/A	@	N/A m
Date sampled :	18/04/2018		
Sampled by :	DW		
Date received :	17/04/2018		
Material description :	Firm to stiff light grey very sandy silt		
Total mass received :	0.72 kg		
Method of preparation :	BS 1377 : Part 1 & Part 2		
Variation from test procedure :	None		
Location & orientation of test specimen within original sample :	N/A		
Sampling certificate :	No - None Submitted		
Client's indicated specification(s) :	Data not supplied		

Soil tested in natural condition (BS 1377:Part 2:1990 Clause 4.2.3)			
Proportion of material retained on 425 µm test sieve	:	0	%
Proportion of material passing 425 µm test sieve	:	100	%
Plastic limit	:	16	%
Liquid limit	:	39	%
Plasticity index	:	23	%
Liquidity index	:	0.304	

Remarks : **None**

Tested by : JBSAS	Date tested : 12.05.2018	Approved : 	Date : 14/05/2018
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Daniel Paris Senior Technician

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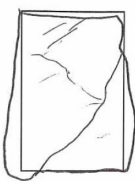


**CERTIFICATE OF TEST - DETERMINATION OF THE UNDRAINED SHEAR STRENGTH
IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE (DEFINITIVE METHOD)
TESTED IN ACCORDANCE WITH BS 1377 : PART 7 : 1990 : CLAUSE 8**

Laboratory reference no(s) : **18-92757 - 399752** Head Office Certificate No : **399752-18-92757-S42-U100 x1**

Client : **Borough of Poole - E&CPS**
 Certificate address : **Unit 1 New Fields Bus. Park, Stinsford Road
 Poole
 Dorset
 BH17 0NF**

Contract : **Hamworthy Park Paddling Pool**
 Source of material (as indicated by client) : **In situ**
 Client reference/data : **CP01**
 Location of sample on site : **8.00m**
 Borehole/pit no /depth : **N/A @ N/A m**
 Date sampled : **18/04/2018**
 Sampled by : **DW**
 Date received : **17/04/2018**
 Material description : **n/a**
 Total mass received : **7.73 kg**
 Method of preparation : **BS 1377 : Part 1**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **No - None Submitted**
 Client's indicated specification(s) : **DNS**

Specimen details	Sample A
Specimen condition :	Remoulded
Length (mm) :	204.3
Diameter (mm) :	103.1
Moisture content (%) :	18.0
Bulk Density (Mg/m³) :	2.14
Dry Density (Mg/m³) :	1.81
Test Details	Sample A
Type of membrane :	Latex
Membrane thickness (mm) :	0.3
Correction applied (kPa) :	1.0
Rate of strain (%/min) :	1.0
Cell Pressure (kPa) :	160
Strain at failure (%) :	17.1
Maximum deviator stress (kPa) :	197
Shear strength (kPa) :	98
Mode of failure :	

Remarks : **This sample tested was within UKAS accredited force load range.**

Tested by : **SS** Date tested : **17.05.2018** Approved :  Date : **22/05/2018**

Daniel Paris Senior Technician

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**CERTIFICATE OF TEST - DETERMINATION OF THE UNDRAINED SHEAR STRENGTH
IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE (DEFINITIVE METHOD)
TESTED IN ACCORDANCE WITH BS 1377 : PART 7 : 1990 : CLAUSE 8**

Laboratory reference no(s) :	18-92757 - 399753	Head Office Certificate No : 399753-18-92757-S41-U38 x1
Client :	Borough of Poole - E&CPS	
Certificate address :	Unit 1 New Fields Bus. Park, Stinsford Road Poole Dorset BH17 0NF	
Contract :	Hamworthy Park Paddling Pool	
Source of material (as indicated by client) :	In situ	
Client reference/data :	CP02	
Location of sample on site :	8.00m	
Borehole/pit no /depth :	N/A @ N/A m	
Date sampled :	17/04/2018	
Sampled by :	DW	
Date received :	17/04/2018	
Material description :	n/a	
Total mass received :	5.47 kg	
Method of preparation :	BS 1377 : Part 1	
Variation from test procedure :	None	
Location & orientation of test specimen within original sample :	N/A	
Sampling certificate :	No - None Submitted	
Client's indicated specification(s) :	DNS	

Specimen details	Sample A
Specimen condition :	Remoulded
Length (mm) :	86.4
Diameter (mm) :	36.8
Moisture content (%) :	22.0
Bulk Density (Mg/m³) :	2.07
Dry Density (Mg/m³) :	1.70
Test Details	Sample A
Type of membrane :	Latex
Membrane thickness (mm) :	0.3
Correction applied (kPa) :	1.4
Rate of strain (%/min) :	1.0
Cell Pressure (kPa) :	160
Strain at failure (%) :	7.5
Maximum deviator stress (kPa) :	171
Shear strength (kPa) :	85
Mode of failure :	

Remarks : **This sample tested was within UKAS accredited force load range.**

Tested by : **SS** Date tested : **17.05.2018** Approved :  Date : **21/05/2018**

Daniel Paris Senior Technician

Bulk samples shall be retained for 28 days after completion of testing, unless written notice is received within 14 days of certification requesting sample retention.

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**CERTIFICATE OF TEST - DETERMINATION OF THE UNDRAINED SHEAR STRENGTH
IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE (DEFINITIVE METHOD)
TESTED IN ACCORDANCE WITH BS 1377 : PART 7 : 1990 : CLAUSE 8**

Laboratory reference no(s) :	18-92757 - 399754	Head Office Certificate No : 399754-18-92757-S41-U38 x1
Client :	Borough of Poole - E&CPS	
Certificate address :	Unit 1 New Fields Bus. Park, Stinsford Road Poole Dorset BH17 0NF	
Contract :	Hamworthy Park Paddling Pool	
Source of material (as indicated by client) :	In situ	
Client reference/data :	CP03	
Location of sample on site :	6.50m	
Borehole/pit no /depth :	N/A @ N/A m	
Date sampled :	17/04/2018	
Sampled by :	DW	
Date received :	17/04/2018	
Material description :	n/a	
Total mass received :	6.21 kg	
Method of preparation :	BS 1377 : Part 1	
Variation from test procedure :	None	
Location & orientation of test specimen within original sample :	N/A	
Sampling certificate :	No - None Submitted	
Client's indicated specification(s) :	DNS	

Specimen details	Sample A
Specimen condition :	Remoulded
Length (mm) :	75.5
Diameter (mm) :	36.8
Moisture content (%) :	24.9
Bulk Density (Mg/m³) :	2.08
Dry Density (Mg/m³) :	1.66
Test Details	Sample A
Type of membrane :	Latex
Membrane thickness (mm) :	0.3
Correction applied (kPa) :	1.6
Rate of strain (%/min) :	1.0
Cell Pressure (kPa) :	130
Strain at failure (%) :	8.6
Maximum deviator stress (kPa) :	189
Shear strength (kPa) :	95
Mode of failure :	

Remarks : **This sample tested was within UKAS accredited force load range.**

Tested by : **SS** Date tested : **17.05.2018** Approved :  Date : **21/05/2018**

Bulk samples shall be retained for 28 days after completion of testing, unless written notice is received within 14 days of certification requesting sample retention.

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Certificate of Analysis

Certificate Number : 18-08688-Issue 1-Page: 1

Report Fao: GEO RESULTS
Site Address: Hamworthy Park Paddling Pool
Client Order No: 18-92757
Date of Sampling: 17/04/2018
Date Received: 02/05/2018
Report Date: 24/05/2018

Please find your certificates of test attached for your samples received in the laboratory on 02/05/2018 under our laboratory reference 18-08688.

Remarks:

None

Results reviewed by:



David Redfern Technical Supervisor

Test Certificates approved by:



Chris Love Operations Manager

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This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.
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Client's Sample Description / ACS Material Description are noted for reference only.*

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Certificate No. 18-08688-Issue 1-Page: 2
 Site Address Hamworthy Park Paddling Pool



ACSE Sample Number	35499	35500	35501
Sample ID	399718 - 18-92757	399720 - 18-92757	399725 - 18-92757
Clients Sample Ref.	CP01	CP01	CP01
Location / Sample Depth (m)	0.50-1.00m	1.00-1.45m	5.00-5.45m
Date Sampled	17/04/2018	17/04/2018	17/04/2018
Time Sampled	0900	0900	0900
Sample deviating codes	ef	ef	ef
Client's Sample Description			
ACS Testing Material Description	Made ground light grey sandy gravel. GRAVEL	Beige very gravelly coarse grained sand SAND	Beige very gravelly coarse grained sand SAND
ACSE Material Description (Principal Matrix - As Received)			

Determination	Units	Method	Prepared As	Result	AS	Result	AS	Result	AS
Anions									
Water Soluble Sulphate	mg/l	MT/ACSE/204	AD	106	*ef	57.5	*ef	8.40	*ef
pH and Conductivity									
pH (@ 20 °C)	units	MT/ACSE/301	AD	9.0	*ef	8.8	*ef	8.7	*ef

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ACSE Sample Number Sample ID	35502 399726 - 18-92757	35503 399727 - 18-92757	35504 399728 - 18-92757
Clients Sample Ref.	CP01	CP01	CP01
Location / Sample Depth (m)	5.90-6.30m	6.50m	9.60-10.00m
Date Sampled	17/04/2018	17/04/2018	17/04/2018
Time Sampled	0900	0900	0900
Sample deviating codes	ef	ef	ef
Client's Sample Description			
ACS Testing Material Description	Light grey fine to coarse grained sand. SAND	Firm to stiff light grey sandy clay SAND	Stiff light grey very sandy silt CLAY
ACSE Material Description (Principal Matrix - As Received)			

Determination	Units	Method	Prepared As	Result	AS	Result	AS	Result	AS
Anions									
Water Soluble Sulphate	mg/l	MT/ACSE/204	AD	25.8	*ef	7.31	*ef	124	*ef
pH and Conductivity									
pH (@ 20 °C)	units	MT/ACSE/301	AD	8.5	*ef	8.5	*ef	7.6	*ef

Certificate No. 18-08688-Issue 1-Page: 4
 Site Address Hamworthy Park Paddling Pool



ACSE Sample Number Sample ID	35505 399729 - 18-92757	35506 399733 - 18-92757	35507 399735 - 18-92757
Clients Sample Ref.	CP02	CP02	CP02
Location / Sample Depth (m)	2.00-2.45m	6.50-6.90m	9.60-10.00m
Date Sampled	17/04/2018	17/04/2018	17/04/2018
Time Sampled	0900	0900	0900
Sample deviating codes	ef	ef	ef
Client's Sample Description			

ACS Testing Material Description	Beige very gravelly coarse grained sand SAND	Beige slightly gravelly fine to coarse grained sand SAND	Firm to stiff grey very sandy silt SILT
ACSE Material Description (Principal Matrix - As Received)			

Determination	Units	Method	Prepared As	Result	AS	Result	AS	Result	AS
Anions									
Water Soluble Sulphate	mg/l	MT/ACSE/204	AD	126	*ef	5.07	*ef	51.4	*ef
pH and Conductivity									
pH (@ 20 °C)	units	MT/ACSE/301	AD	9.1	*ef	9.1	*ef	8.1	*ef

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 to the
 Construction Industry**

Certificate No. 18-08688-Issue 1-Page: 5
 Site Address Hamworthy Park Paddling Pool



ACSE Sample Number 35508
 Sample ID 399738 - 18-92757
 Clients Sample Ref. CP03
 Location / Sample Depth (m) 6.50-6.95m
 Date Sampled 17/04/2018
 Time Sampled 0900
 Sample deviating codes ef
 Client's Sample Description

ACS Testing Material Description Firm light grey mottled
 ACSE Material Description (Principal Matrix - As Received) red slightly sandy clay
 CLAY

Determination	Units	Method	Prepared As	Result	AS
Anions					
Water Soluble Sulphate	mg/l	MT/ACSE/204	AD	78.4	*ef
pH and Conductivity					
pH (@ 20 °C)	units	MT/ACSE/301	AD	8.1	*ef

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Technical Information for Analytical Results

Analysis

* - denotes analysis covered by our UKAS accreditation
- denotes analysis covered by our MCERTS certification
AD = Sample tested in air dried condition.
AR = Sample tested in as-received condition.
D = Sample tested in dry condition.
L = Laboratory prepared leachate
SC = sub contracted
All MCERTS certified test values reported on a dry weight basis.

Where results are less than the limit of detection, the value of 0 is used in calculations.

Deviating Codes

Deviating Samples

The use of any of the following symbols indicates that the sample was deviating and it is possible therefore that the results provided may not be representative of the sample taken.

- a – The date and /or time of sampling has not been provided, therefore it is not known if the time lapse between sampling and analysis has exceeded the acceptable holding time(s)*.
- b – The test item was received in a container which has not been recommended*.
- c – On receipt, the temperature of the sample received was found to fall outside the recommendations of BS ISO 18512:2007, Soil Quality. Guidance on long and short term storage of soil samples*.
- d – The sample was received in a container that had not been filled as recommended*.
- e – The delay between sampling and sample receipt is greater than the recommended holding time for the analyte of interest in this matrix*.
- f – The delay between sampling and analysis is greater than the recommended holding time for the analyte of interest in this matrix*.

*In accordance with the requirements of Technical Policy Statement TPS 63; UKAS Policy on Deviating Samples, all UKAS accredited testing laboratories are required to notify their clients that calibration or test results may be invalid where samples are found to be deviating. It is the opinion of ACSE that the term invalid should be interpreted as 'not fully representative of the sample taken at source'.

The following Additional Deviating Sample Codes may also be used.

- I/S – Insufficient sample mass/volume received for accurate quantification of this analyte.
- U/S – The sample received was deemed unsuitable for accurate determination of this analyte using the Test Methods available.

Deviating Methods

- Z – A minor deviation from the Test Method was necessary but this is deemed to have had no impact on the Test Result, the legitimacy of the method validation or the Accreditation Status of the Test Method.
- Y – A significant deviation from the Test Method was necessary which is deemed to have had no impact on the Test Result, however, due to a lack of sufficient supporting validation, the Accreditation Status of the Method has been removed.
- W – The normal LOD of the instrument/method could not be attained, thus an elevated LOD or LOQ has been applied to the Test Data, however, the data reported meets the requirements of the Client and does not affect compliance with the specification limit (where applicable).
- V – One of the QA/QC parameters failed, however, the increased implied Uncertainty associated with the Test Result meets the requirements of the Client and does not affect compliance with the specification limit (where applicable) (Quality Manual, Section 18.2.9).
- U – The precision acceptance criteria associated with the Test Method could not be met but the Test Result fulfils the Client's objectives and the elevated Uncertainty does not affect compliance with the specification limit (where applicable) (Quality Manual, Section 18.8.10).
- T – The Test Method used was supplied by the Client and involved a simple modification of a Test Method for which ACSE holds accreditation (Quality Manual, Section 18.3.8).

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