

APPENDIX E

Site Won Fill Material Acceptability Testing

TEST REPORT:

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION & MOISTURE CONTENT

BS 1377 - 2 : 1990, Method 9.2 Washing & Dry Sieving and BS 1377 2 : 1990, Method 3.2

REPORT NUMBER:

C1055642 / 170938.4.1.1

SAMPLE NUMBER:

262765

CLIENT:

Collins Earthworks Limited

CLIENT REF:

262765

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

27/01/2022

SITE:

Havant, Portsmouth

SAMPLED BY:

Thomas Cook

SUPPLIER:

On site , Situ

DATE RECEIVED:

01/02/2022

MATERIAL:

Clay/ballast mix

DATE COMPLETED:

15/02/2022

CLASSIFICATION:

Class 2C

TESTED BY:

MD, MW, AJ

LOCATION:

Stockpile

TYPE OF SAMPLE:

Disturbed

PREPARATION METHOD:

BS 1377:Part 1:1990 clause 7.3 & 7.4.5

VARIATIONS:

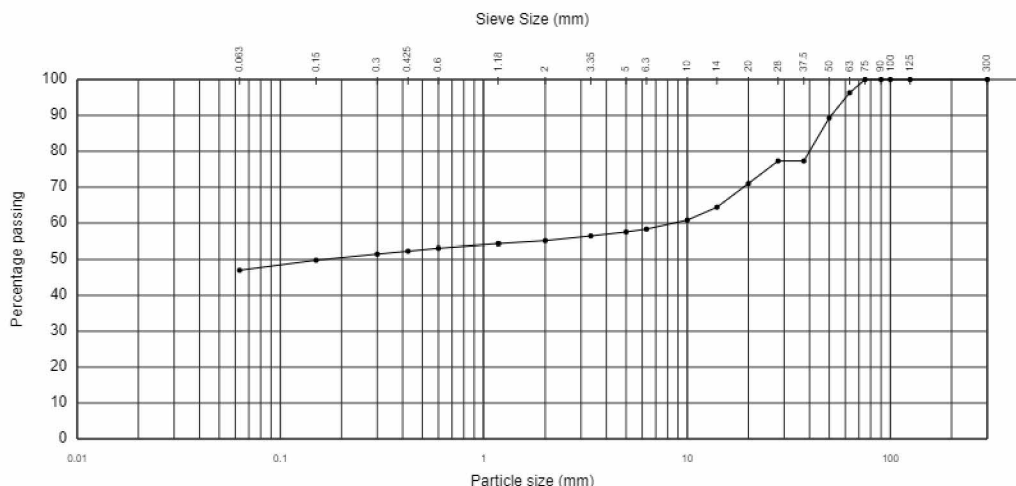
No variations

SAMPLING PLAN:

Client Specification

RESULT Test Location: Harrietsham Lab

SIEVE ANALYSYS



Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	100 - 100
100	100	
90	100	
75	100	
63	96	
50	89	
37.5	77	
28	77	
20	71	
14	64	
10	61	
6.3	58	
5	58	
3.35	56	
2	55	15 - 80
1.18	54	
0.6	53	
0.425	52	
0.3	52	
0.15	50	
0.063	47	15 - 80

Class 2C - Specification for Highway Works (2016) Table 6/2 Earthworks Materials - Class 2C

Uniformity Coefficient (D60/D10) N/A

Percentage passing 63µm > 10% therefore uniformity coefficient is estimated minimum.

Sample complies with the grading specification

Moisture content: 14%

Remarks:

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

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For and on behalf of CTS

Mike Gray - Laboratory Supervisor

Approved Signatory

Report date 15-Feb-22

Construction Testing Solutions Ltd.

Registered in England No. 05998333



0927

TEST REPORT:	DETERMINATION OF THE PLASTICITY INDEX OF SOIL		
	BS 1377:Part 2:1990 clause 5.4		
REPORT NUMBER:	C1055642 / 170938.2.1.1		
SAMPLE NUMBER:	262765	CLIENT:	Collins Earthworks Limited
CLIENT REF:	262765	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
DATE SAMPLED:	27/01/2022	SITE:	Havant, Portsmouth
SAMPLED BY:	Thomas Cook	SUPPLIER:	On site , Situ
DATE RECEIVED:	01/02/2022	MATERIAL:	Clay/ballast mix Yet to be classified
DATE COMPLETED:	15/02/2022	LOCATION:	Stockpile ,
TESTED BY:	Marilena Decu	PREPARATION METHOD:	BS 1377:Part 1:1990 cl 7.3 & 7.4.3
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None
WITHIN ORIGINAL SAMPLE:	N/A		

RESULTS:

TEST DETAILS	TEST RESULT	SPECIFICATION LIMITS	
		Lower Limit	Upper Limit
THE LIQUID LIMIT OF THE SAMPLE:	36%	N/A	N/A
THE PLASTIC LIMIT OF THE SAMPLE:	17%	N/A	N/A
THE PLASTICITY INDEX OF THE SAMPLE:	19%		
THE PERCENTAGE PASSING 425µm TEST SIEVE:	52%		
Sample History:	The material was tested after washing through a 425µm test sieve		

Remarks:
 Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.
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For and on behalf of CTS
 Buntu Melamane - Laboratory Training Supervisor



Approved Signatory
 Report date 15-Feb-22



0927

TEST REPORT:

DETERMINATION OF MOISTURE CONDITION VALUE (M.C.V.)

BS 1377 Part 4 : 1990 Clause 5.4 - Natural Moisture Content (Lab Test)

REPORT NUMBER:

C1055642 / 171279.1.1.1

SAMPLE NUMBER:

262765

CLIENT:

Collins Earthworks Limited

CLIENT REF:

262765

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

27/01/2022

SITE:

Havant, Portsmouth

SAMPLED BY:

Thomas Cook

SUPPLIER:

On site , Situ

DATE RECEIVED:

01/02/2022

MATERIAL:

Clay/ballast mix

DATE COMPLETED:

12/02/2022

FILL LOCATION:

Stockpile

TESTED BY:

EU, KJ

CERTIFICATE OF SAMPLING:

Yes

TYPE OF SAMPLE:

Disturbed

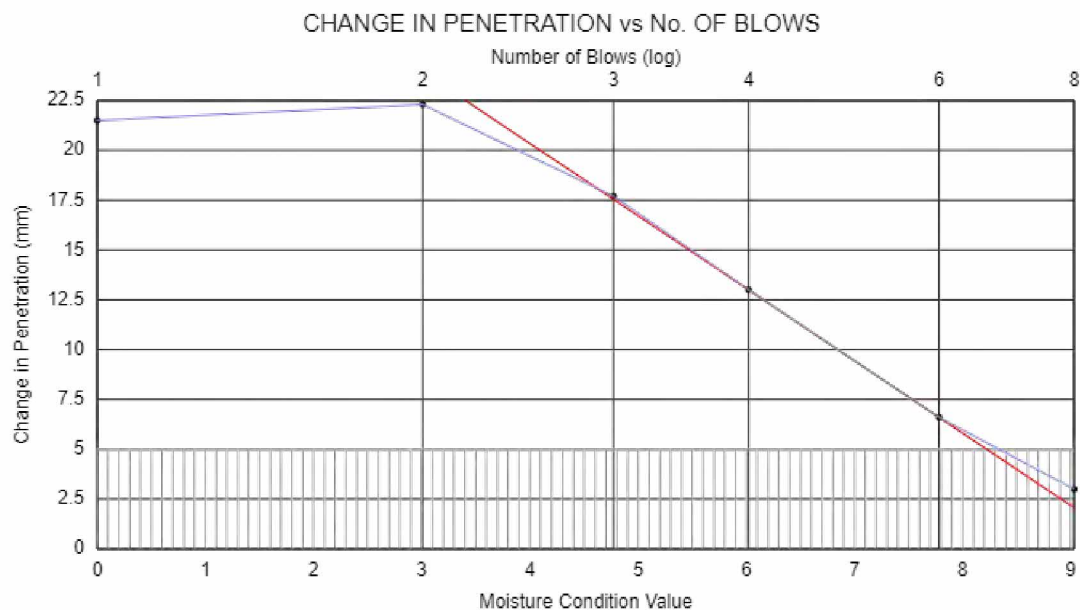
SAMPLING PLAN:

Client Specification

RESULTS

Test Location: Harrietsham Lab

MOISTURE CONDITION VALUE	8.2
NATURAL MOISTURE CONTENT (%)	18
PERCENTAGE RETAINED 20mm (%)	16.6
INTERPRETATION OF CURVE	Steepest straight line
PREPARATION METHOD	BS 1377: Part 4: 1990 clause 5.4 (Natural and sieved through 20mm test sieve)



Remarks:

Test results reported relate only to the items tested.

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Hsv 56

For and on behalf of CTS

Dan [Signature] Manager

Approved Signatory

Report date 14-Feb-22



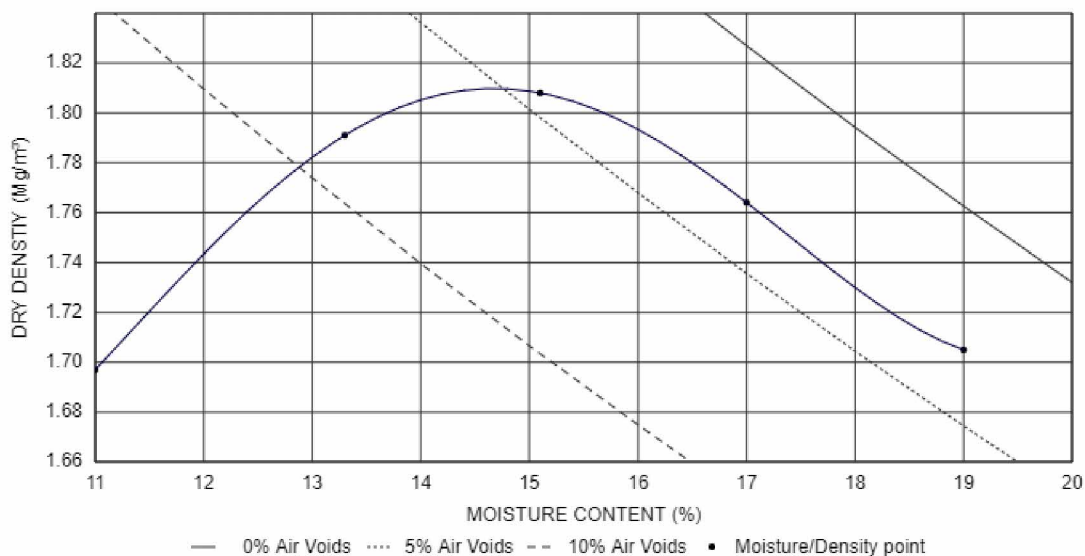
0927

TEST REPORT:	DETERMINATION OF DRY DENSITY/MOISTURE CONTENT RELATIONSHIP		
	BS 1377:Part 4:1990 clause 3.4 2.5kg Rammer method		
REPORT NUMBER:	C1055642 / 170938.3.1.1		
SAMPLE NUMBER:	262765	CLIENT:	Collins Earthworks Limited
CLIENT REF:	262765	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
DATE SAMPLED:	27/01/2022	SITE:	Havant, Portsmouth
SAMPLED BY:	Thomas Cook	SUPPLIER:	On site , Situ
DATE RECEIVED:	01/02/2022	MATERIAL:	Clay/ballast mix
DATE COMPLETED:	15/02/2022	LOCATION:	Stockpile
TESTED BY:	Colin Gourlay	PREPARATION METHOD:	CBR Mould (BS1377:Pt1:1990 Cl7.6.3) : Material chopped to <20mm, for cohesive soil.
TYPE OF SAMPLE:	Disturbed	COMPACTION SAMPLE:	Separate samples
VARIATIONS:	None	SAMPLING PLAN:	Client Specification

RESULT Test Location: Harrietsham Lab

MAXIMUM DRY DENSITY: 1.81 Mg/m³
OPTIMUM MOISTURE CONTENT: 15 %
AMOUNT (By Dry Mass) RETAINED ON >20mm TEST SIEVE: 29 %
AMOUNT (By Dry Mass) RETAINED ON >37.5mm TEST SIEVE: 23 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Remarks:
 Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.
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For and on behalf of CTS
 Director/Manager

Approved Signatory
 Report date 16-Feb-22



0927

TEST REPORT:**DETERMINATION OF THE MOISTURE CONTENT OF SOILS**

BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT NUMBER: C1055642 / 170938.1.1.1

SAMPLE NUMBER: See Below

CLIENT:

Collins Earthworks Limited

CLIENT REF: See Below

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED: 27/01/2022

SITE:

Havant, Portsmouth

SAMPLED BY: Thomas Cook

SUPPLIER:

On site

DATE RECEIVED: 01/02/2022

SOURCE:

Situ

DATE COMPLETED: 14/02/2022

MATERIAL:

See Below

TESTED BY: Matt Webley

LOCATION:

See Below

TYPE OF SAMPLE: Disturbed

PREPARATION METHOD:

BS 1377-1: 1990 clause 7

TEST RESULT:

SAMPLE NO.	CLIENT REF.	LOCATION OF TEST	MATERIAL DESCRIPTION	MOISTURE CONTENT (%)	LOWER LIMIT	UPPER LIMIT
262765	262765	Stockpile	Clay/ballast mix	14	NA	NA

Remarks:

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

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For and on behalf of CTS

Mike Gray - Laboratory Supervisor



Approved Signatory

Report date 17-Feb-22

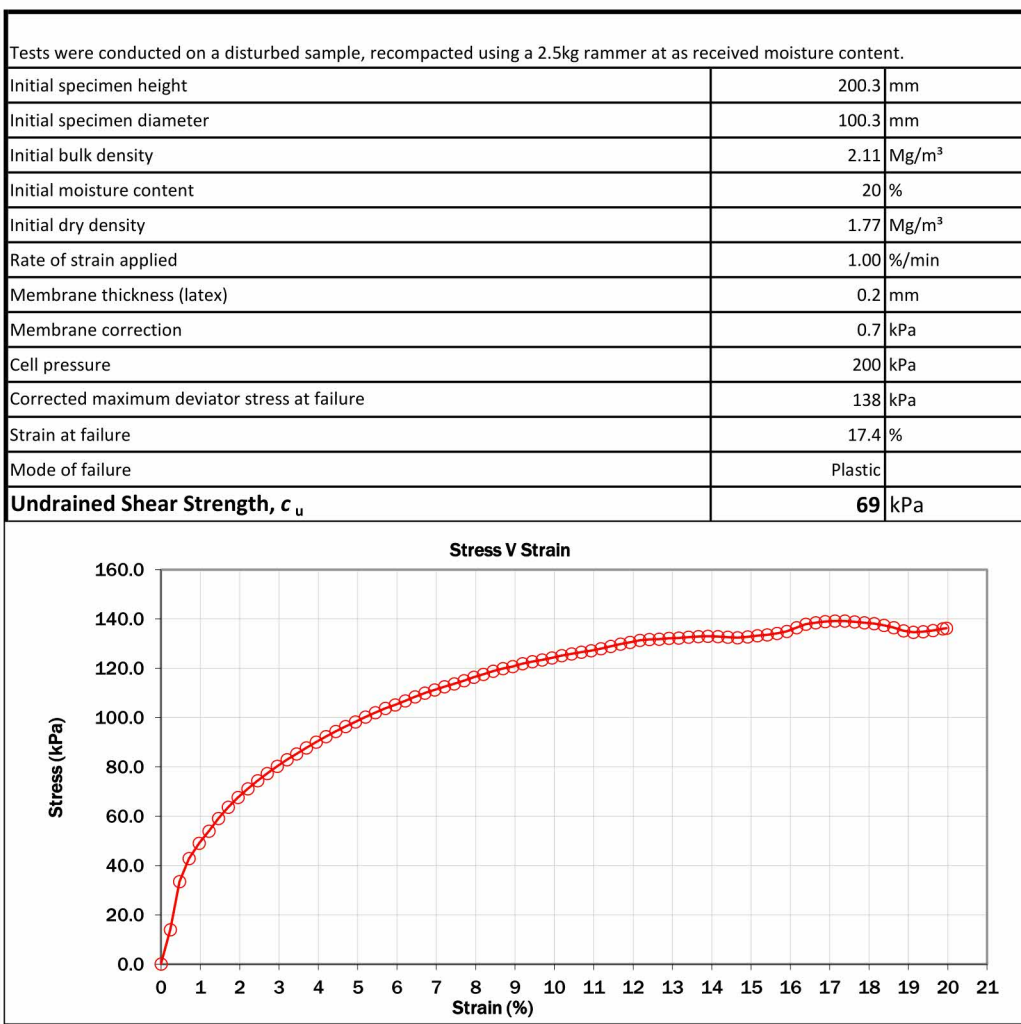


0927

DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT PORE PRESURE MEASUREMENT

BS 1377 : Part 7 : 1990 Clause 8

REPORT No.:	1055642 / 170938.5.1.1	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	262765	ADDRESS:	Whiteley Road
CLIENT REF:	262765	SITE:	Havant, Portsmouth
DATE SAMPLED:	27/01/2022	SUPPLIER:	On site
SAMPLED BY:	Thomas Cook	MATERIAL:	Clay/ballast mix
DATE RECEIVED:	01/02/2022	LOCATION:	Stockpile
DATE TEST COMPLETED:	16/02/2022	ACCEPT STD:	Contract Specification
TESTED BY:	JT	ORIENTATION OF TEST SPECIMEN	
TYPE OF SAMPLE:	Remoulded	WITHIN ORIGINAL SPECIMEN:	N/A
IF REMOULDED;			
METHOD OF COMPACTION:	2.5kg rammer		


REMARKS:

Bulk sample will be kept for a minimum 28 days from date of test.
 Test results reported relate only to the items tested.
 This report shall not be reproduced except in full without approval of the laboratory.

Laboratory Report	260053	Contract Sample No	/260053	 Construction Testing Solutions 	
Report Date	28/01/2022	Clients Reference	/260053		
		Material Description	Brown Clay Ballast Material		
Collins Earthworks Ltd		Date Sampled	19/01/2022		
Whiteley Road		Sampling Plan	CTS Procedure	Quarry Farm View	
Ripley		Source	Not Stated	Bowbridge Lane	
Derbyshire		Supplier	Not Stated	Newark	
DE5 3QL		Sampled By	CTS	Notts	
		Sampling Environment	Not Stated	NG24 3BZ	
		Sample Type	Bulk	Tel: (01636) 705100 Web: www.constructiontesting.co.uk	
		Location in sample	Not Stated	Email: enquiries@constructiontesting.co.uk	
		Sample Location	Routine Cut Finished Formation	Date Received	19/01/2022
Havant				Date Tests Completed	28/01/2022
				TEST REPORT	

Quarry Farm View

Tel: (01636) 705100

Email: enquiries@constructiontesting.co.uk

Date Received

Date Tests Complete

TEST REPORT

Determination of moisture content

Moisture Content

Particle size distribution (wet sieving method) - Tested in accordance with BS 1377: Part 2: 1990 Clause 9.2

Sample prepared in Accordance with BS 1377: Part 1: 2016 clause 8.3.4(a)

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Laboratory Report	260053	Contract Sample No	/260053	 Construction Testing Solutions Quarry Farm View Bowbridge Lane Newark Notts NG24 3BZ Tel: (01636) 705100 Web: www.constructiontesting.co.uk Email: enquiries@constructiontesting.co.uk		
Report Date	28/01/2022	Clients Reference	/260053			
Collins Earthworks Ltd Whiteley Road Ripley Derbyshire DE5 3QL Havant	Material Description	Brown Clay Ballast Material				
	Date Sampled	19/01/2022				
	Sampling Plan	CTS Procedure				
	Source	Not Stated				
	Supplier	Not Stated				
	Sampled By	CTS				
	Sampling Environment	Not Stated				
	Sample Type	Bulk		Date Received		19/01/2022
	Location in sample	Not Stated		Date Tests Completed		28/01/2022
Sample Location	Routine Cut Finished Formation		TEST REPORT			
Determination of Plastic Limit, Liquid Limit and Plasticity Index - Tested in Accordance with BS 1377: Part2: 1990 The sample was prepared from a natural soil specimen and in accordance with BS1377: Part 1: 2016: Clause 8.3.4(b)						% Passing Sieve taken from Particle Size Distribution test.
Liquid Limit (BS 1377: Part 2: 1990 Clause 4.4 - One Point)					40 %	
Plastic Limit (BS 1377: Part 2: 1990 Clause 5.3)					19 %	
Plasticity Index (BS 1377: Part 2: 1990 Clause 5.4)					21 %	
Material Passing 425 µm test sieve					25 %	
Material Retained on 425 µm test sieve					75 %	
Determination of Moisture Condition Value (MCV) at Natural Moisture Content Prepared and Tested on a Single Sample in Accordance with BS 1377: Part 4: 1990: Clause 5.4						
MCV - interpreted from the steepest straight line of the plot.					9.0	
Moisture Content in Accordance with BS 1377: Part 2: 1990: Clause 3.2					15 %	
Percentage of material retained on 20mm test sieve					18 %	

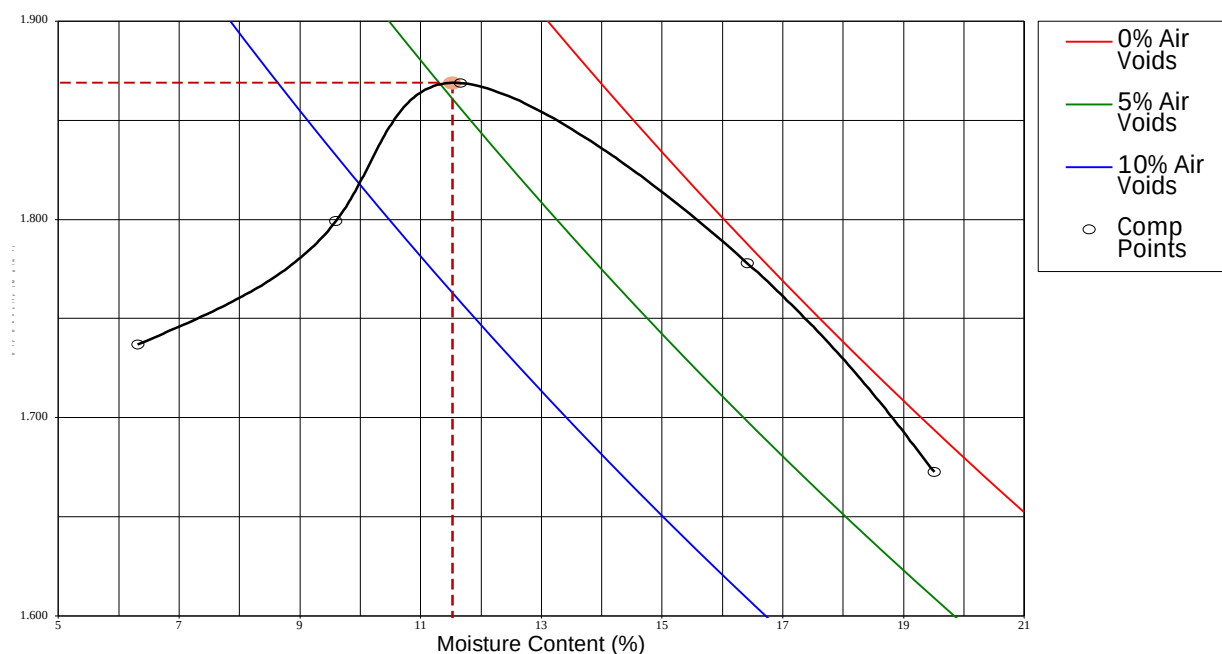
Laboratory Report	260053	Contract Sample No	/260053	 Construction Testing Solutions  Quarry Farm View Bowbridge Lane Newark Notts NG24 3BZ 4161 Tel: (01636) 705100 Web: www.constructiontesting.co.uk Email: enquiries@constructiontesting.co.uk	
Report Date	28/01/2022	Clients Reference	/260053		
		Material Description	Brown Clay Ballast Material		
Collins Earthworks Ltd		Date Sampled	19/01/2022		
Whiteley Road		Sampling Plan	CTS Procedure		
Ripley		Source	Not Stated		
Derbyshire		Supplier	Not Stated		
DE5 3QL		Sampled By	CTS		
		Sampling Environment	Not Stated		
		Sample Type	Bulk	Date Received	19/01/2022
Havant		Location in sample	Not Stated	Date Tests Completed	28/01/2022
		Sample Location	Routine Cut Finished Formation	TEST REPORT	

Determination of Dry Density / Moisture Content Relationship

Tested in Accordance with BS 1377: Part 4: 1990 Clause 3.4.4.2 (2.5kg Rammer, CBR mould)

The test was carried out using separate samples, each prepared in Accordance with BS1377: Part 1: 2016 Clause 8.3.4(b)

Sample particle size adjustment:



Optimum Moisture Content (%)	12 %
Maximum Dry Density	1.87 Mg/m³
Material Retained on 37.5mm test sieve	6 %
Material Retained on 20.0mm test sieve	18 %
Particle Density (Assumed)	2.53 Mg/m³

Laboratory Report	260053	Contract Sample No	/260053	 Construction Testing Solutions  4161	
Report Date	28/01/2022	Clients Reference	/260053		
Collins Earthworks Ltd Whiteley Road Ripley Derbyshire DE5 3QL		Material Description	Brown Clay Ballast Material	Quarry Farm View	
		Date Sampled	19/01/2022	Bowbridge Lane	
		Sampling Plan	CTS Procedure	Newark	
		Source	Not Stated	Notts	
		Supplier	Not Stated	NG24 3BZ	
		Sampled By	CTS	Tel: (01636) 705100 Web: www.constructiontesting.co.uk	
		Sampling Environment	Not Stated	Email: enquiries@constructiontesting.co.uk	
		Sample Type	Bulk	Date Received	19/01/2022
		Location in sample	Not Stated	Date Tests Completed	28/01/2022
		Havant	Sample Location	Routine Cut Finished Formation	TEST REPORT

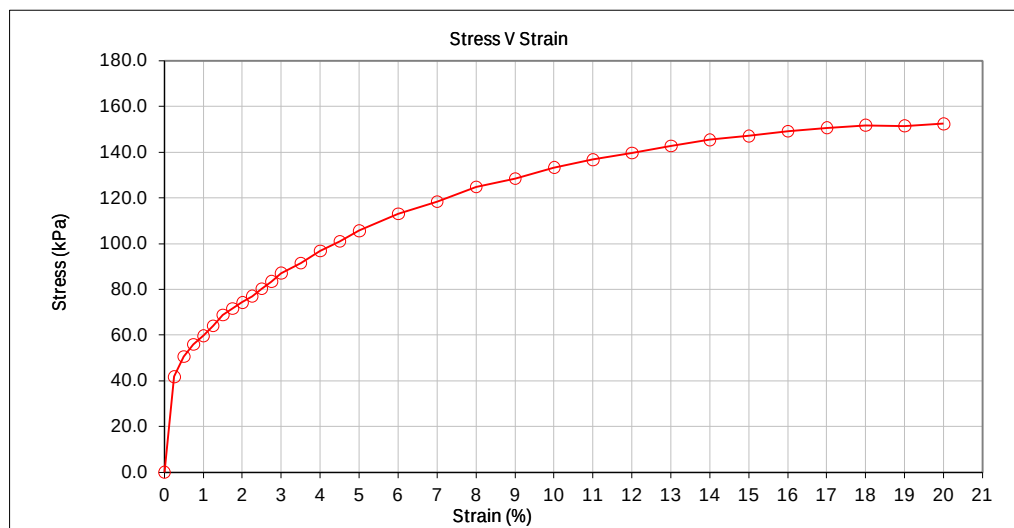
Determination of Undrained Shear Strength in Triaxial Compression Without Pore Pressure Measurement

Tested in Accordance with BS 1377: Part 7: 1990 Clause 8

Tests were conducted on an undisturbed sample trimmed from block sample, prepared in accordance with BS 1377-1: 1990: Clause 8.5

Initial specimen height	200	mm
Initial specimen diameter	100	mm
Initial bulk density	2.10	Mg/m ³
Initial moisture content	19	%
Initial dry density	1.76	Mg/m ³
Rate of strain applied	2.00	%/min
Membrane thickness (latex)	0.4	mm
Membrane correction	1.5	kPa
Cell pressure	200	kPa
Corrected maximum deviator stress at failure	151	kPa
Strain at failure	20.0	%
Time at Failure	10 Minutes, 0 Seconds	
Mode of failure	Compound	

Laboratory Temperature
18-22 °C



Undrained Shear Strength, c_u
75 kPa

Tested at rate of strain of 1%/minute as required by Specification for Highway Works Series 600, clause 633

Template Version: 1.6

Authorised Signatory

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Laboratory Report	262298	Contract Sample No	/ 262298	 Construction Testing Solutions  Quarry Farm View Bowbridge Lane Newark Notts NG24 3BZ Tel: (01636) 705100 Web: www.constructiontesting.co.uk Email: enquiries@constructiontesting.co.uk 4161	
Report Date	11/02/2022	Clients Reference	/ 262298		
Collins Earthworks Ltd Whiteley Road Ripley Derbyshire DE5 3QL		Material Description	Stiff Brown Gravelly Clay		
		Date Sampled	01/02/2022		
		Sampling Plan	CTS Procedure		
		Source	Not Stated	Tel: (01636) 705100 Web: www.constructiontesting.co.uk Email: enquiries@constructiontesting.co.uk	
		Supplier	Not Stated		
		Sampled By	CTS		
Havant		Sampling Environment	Not Stated	Date Received01/02/2022 Date Tests Completed11/02/2022	
		Sample Type	Bulk		
		Location in sample	Not Stated		
		Sample Location	Stockpile	TEST REPORT	

Quarry Farm View

Tel: (01636) 705100

Email: enquiries@constructiontesting.co.uk

Date Received

Date Tests Completed

TEST REPORT

Determination of moisture content

Moisture Content

Particle size distribution (wet sieving method) - Tested in accordance with BS 1377: Part 2: 1990 Clause 9.2

Sample prepared in Accordance with BS 1377: Part 1: 2016 clause 8.3.4(a)

[illegible]

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Laboratory Report	262298	Contract Sample No	/262298	 Construction Testing Solutions Quarry Farm View Bowbridge Lane Newark Notts NG24 3BZ Tel: (01636) 705100 Web: www.constructiontesting.co.uk Email: enquiries@constructiontesting.co.uk		
Report Date	11/02/2022	Clients Reference	/262298			
Collins Earthworks Ltd Whiteley Road Ripley Derbyshire DE5 3QL Havant		Material Description	Stiff Brown Gravelly Clay			
		Date Sampled	01/02/2022			
		Sampling Plan	CTS Procedure			
		Source	Not Stated			
		Supplier	Not Stated			
		Sampled By	CTS			
		Sampling Environment	Not Stated			
		Sample Type	Bulk			
		Location in sample	Not Stated	Date Received	01/02/2022	
Sample Location	Stockpile	Date Tests Completed	11/02/2022			

Determination of Plastic Limit, Liquid Limit and Plasticity Index - Tested in Accordance with BS 1377: Part2: 1990 The sample was prepared from a natural soil specimen and in accordance with BS1377: Part 1: 2016: Clause 8.3.4(b)		% Passing Sieve taken from Particle Size Distribution test.
Liquid Limit (BS 1377: Part 2: 1990 Clause 4.4 - One Point)	38 %	
Plastic Limit (BS 1377: Part 2: 1990 Clause 5.3)	18 %	
Plasticity Index (BS 1377: Part 2: 1990 Clause 5.4)	20 %	
Material Passing 425 µm test sieve	28 %	
Material Retained on 425 µm test sieve	72 %	

Determination of Moisture Condition Value (MCV) at Natural Moisture Content Prepared and Tested on a Single Sample in Accordance with BS 1377: Part 4: 1990: Clause 5.4		
MCV - interpreted from the steepest straight line of the plot.	9.8	
Moisture Content in Accordance with BS 1377: Part 2: 1990: Clause 3.2	14 %	
Percentage of material retained on 20mm test sieve	13 %	

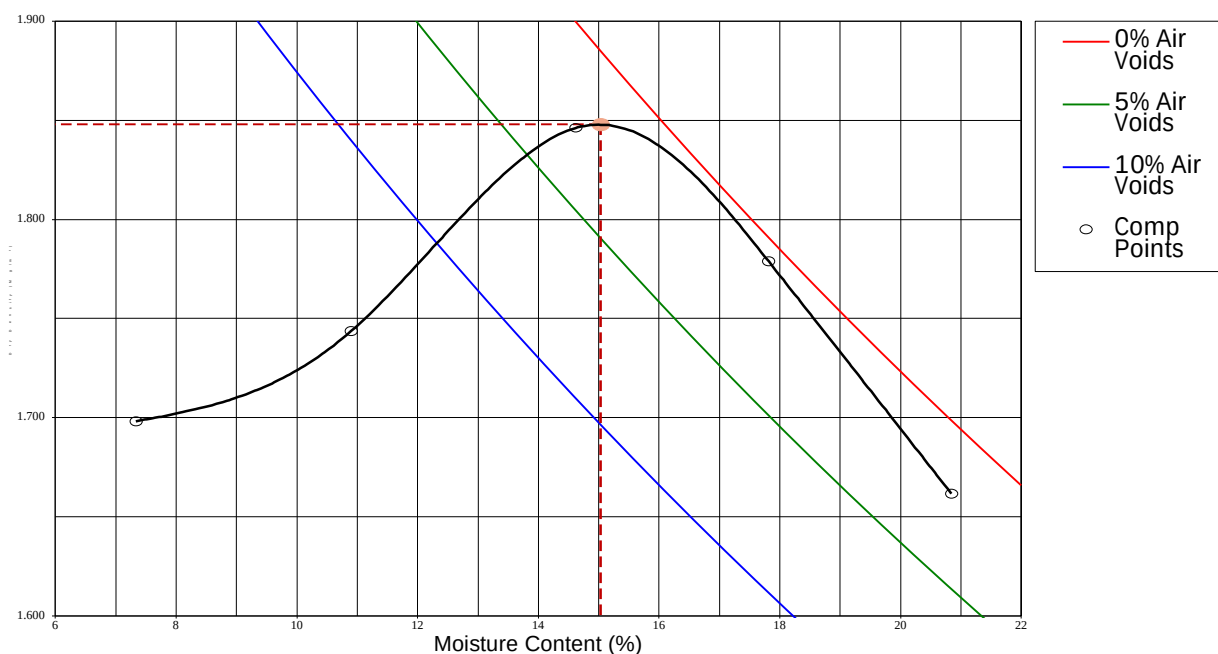
Laboratory Report	262298	Contract Sample No	/262298	 Construction Testing Solutions Quarry Farm View Bowbridge Lane Newark Notts NG24 3BZ Tel: (01636) 705100 Web: www.constructiontesting.co.uk Email: enquiries@constructiontesting.co.uk	
Report Date	11/02/2022	Clients Reference	/262298		
Collins Earthworks Ltd Whiteley Road Ripley Derbyshire DE5 3QL Havant		Material Description	Stiff Brown Gravelly Clay		
		Date Sampled	01/02/2022		
		Sampling Plan	CTS Procedure	Date Received 01/02/2022 Date Tests Completed 11/02/2022	
		Source	Not Stated		
		Supplier	Not Stated	TEST REPORT	
		Sampled By	CTS		
		Sampling Environment	Not Stated		
		Sample Type	Bulk		
		Location in sample	Not Stated		
		Sample Location	Stockpile		

Determination of Dry Density / Moisture Content Relationship

Tested in Accordance with BS 1377: Part 4: 1990 Clause 3.4.4.2 (2.5kg Rammer, CBR mould)

The test was carried out using separate samples, each prepared in Accordance with BS1377: Part 1: 2016 Clause 8.3.4(b)

Sample particle size adjustment:



Optimum Moisture Content (%)	15 %
Maximum Dry Density	1.85 Mg/m ³
Material Retained on 37.5mm test sieve	4 %
Material Retained on 20.0mm test sieve	13 %
Particle Density (Assumed)	2.63 Mg/m ³

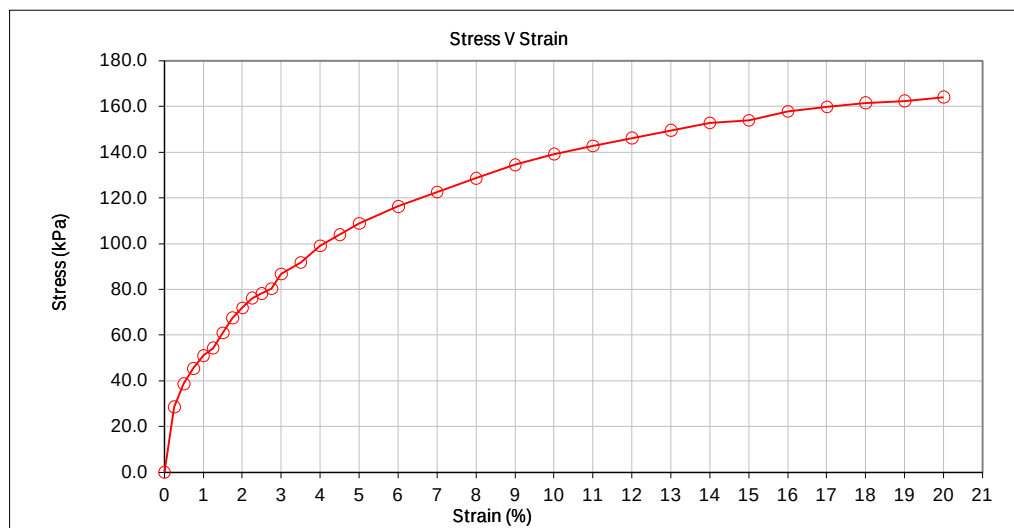
Laboratory Report	262298	Contract Sample No	/262298	 Construction Testing Solutions  Quarry Farm View Bowbridge Lane Newark Notts NG24 3BZ 4161 Tel: (01636) 705100 Web: www.constructiontesting.co.uk Email: enquiries@constructiontesting.co.uk	
Report Date	11/02/2022	Clients Reference	/262298		
Collins Earthworks Ltd Whiteley Road Ripley Derbyshire DE5 3QL Havant		Material Description	Stiff Brown Gravelly Clay	Date Received 01/02/2022 Date Tests Completed 11/02/2022 TEST REPORT	
		Date Sampled	01/02/2022		
		Sampling Plan	CTS Procedure		
		Source	Not Stated		
		Supplier	Not Stated		
		Sampled By	CTS		
		Sampling Environment	Not Stated		
		Sample Type	Bulk		
		Location in sample	Not Stated		
		Sample Location	Stockpile		

Determination of Undrained Shear Strength in Triaxial Compression Without Pore Pressure Measurement
Tested in Accordance with BS 1377: Part 7: 1990 Clause 8

Tests were conducted on a disturbed sample, recompacted using a 2.5kg rammer at as received moisture content.

Initial specimen height	200	mm
Initial specimen diameter	100	mm
Initial bulk density	2.08	Mg/m ³
Initial moisture content	14	%
Initial dry density	1.83	Mg/m ³
Rate of strain applied	2.00	%/min
Membrane thickness (latex)	0.4	mm
Membrane correction	1.5	kPa
Cell pressure	200	kPa
Corrected maximum deviator stress at failure	163	kPa
Strain at failure	20.0	%
Time at Failure	10 Minutes, 0 Seconds	
Mode of failure	Compound	

Laboratory Temperature
18-22 °C



Undrained Shear Strength, c_u
81 kPa

Tested at rate of strain of 1%/minute as required by Specification for Highway Works Series 600, clause 633

Template Version: 1.6

Authorised Signatory

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**** END OF REPORT ****

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APPENDIX F

Recycled Aggregate Material Acceptability Testing

TEST REPORT:

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION & MOISTURE CONTENT

BS 1377 - 2 : 1990, Method 9.2 Washing & Dry Sieving and BS 1377 2 : 1990, Method 3.2

REPORT NUMBER:

C1055642 / 163252.6.1.1

SAMPLE NUMBER:

257633

CLIENT:

Collins Earthworks Limited

CLIENT REF:

21/12/21

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

21/12/2021

SITE:

Havant, Portsmouth

SAMPLED BY:

Mitchell Butler

SUPPLIER:

Unknown

DATE RECEIVED:

06/01/2022

MATERIAL:

Crushed concrete

DATE COMPLETED:

19/01/2022

CLASSIFICATION:

Class 6F2

TESTED BY:

SM, ND

LOCATION:

Stockpile

WITHIN ORIGINAL SPECIMEN: N/A

PREPARATION METHOD: BS 1377:Part 1:1990 clause 7.3 & 7.4.5

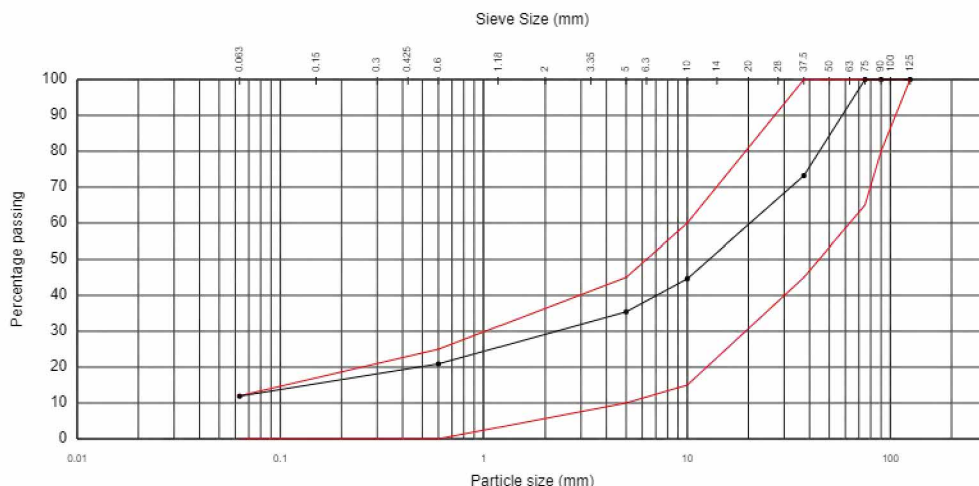
TYPE OF SAMPLE:

Disturbed

VARIATIONS:

No variations

RESULT



SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
125	100	100 - 100
100	100	
90	100	80 - 100
75	100	65 - 100
63	87	
50	80	
37.5	73	45 - 100
28	65	
20	56	
14	51	
10	45	15 - 60
6.3	38	
5	35	10 - 45
3.35	31	
2	27	
1.18	24	
0.6	21	0 - 25
0.425	19	
0.3	18	
0.15	14	
0.063	12	0 - 12

Class 6F2 - Specification for Highway Works (2016) Table 6/2 Earthworks Materials - Class 6F2

Uniformity Coefficient (D60/D10) N/A

Percentage passing 63µm > 10% therefore uniformity coefficient is estimated minimum.

Sample complies with the grading specification

Moisture content: 8.2%

Remarks:

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS

Sasha Mahon - Laboratory Supervisor

Approved Signatory

19-Jan-22



0927

TEST REPORT:

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION & WATER CONTENT

BS EN 933-1 : 2012 Washing & Dry Sieving and BS EN 1097-5 : 2008

REPORT NUMBER:

C1055642 / 170606.5.1.1

SAMPLE NUMBER:

265199

CLIENT:

Collins Earthworks Limited

CLIENT REF:

265199

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

08/02/2022

SITE:

Havant, Portsmouth

SAMPLED BY:

Thomas Cook

SUPPLIER:

Unknown

DATE RECEIVED:

14/02/2022

MATERIAL:

6f5 crushed recycled concrete

DATE COMPLETED:

17/02/2022

CLASSIFICATION:

Class 6F5

TESTED BY:

MD, MW, JF

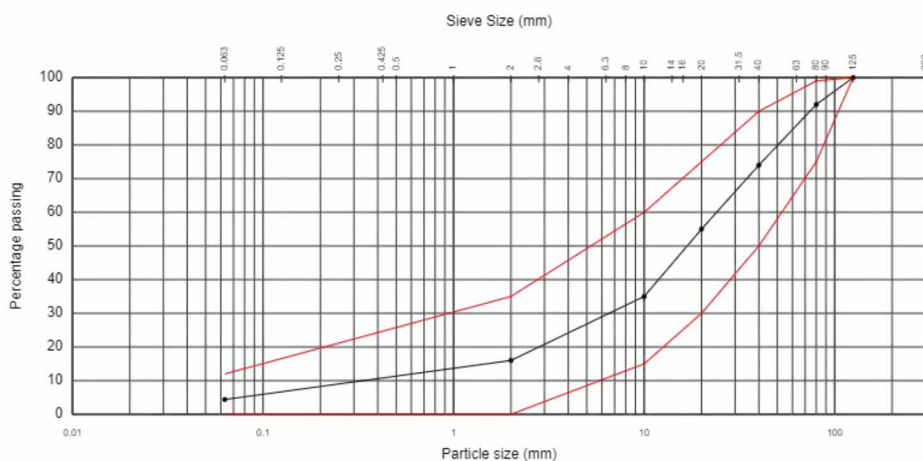
LOCATION:

Stockpile 1

SAMPLING PLAN:

Client Provided

RESULT Test Location: Harrietsham Lab



Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5

Uniformity Coefficient (D60/D10) N/A

Moisture content: 10.3%

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	100 - 100
90	100	
80	92	75 - 99
63	85	
40	74	50 - 90
31.5	67	
20	55	30 - 75
16	48	
14	44	
10	35	15 - 60
8	30	
6.3	25	
4	18	
2.8	17	
2	16	0 - 35
1	13	
0.5	10	
0.425	9	
0.25	7	
0.125	6	
0.063	4.4	0 - 12

Remarks:

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS

[Signature] Supervisor



0927

TEST REPORT:

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION & WATER CONTENT

BS EN 933-1 : 2012 Washing & Dry Sieving and BS EN 1097-5 : 2008

REPORT NUMBER:

C1055642 / 170606.5.1.2

SAMPLE NUMBER:

265204

CLIENT:

Collins Earthworks Limited

CLIENT REF:

265204

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

08/02/2022

SITE:

Havant, Portsmouth

SAMPLED BY:

Thomas Cook

SUPPLIER:

Unknown

DATE RECEIVED:

14/02/2022

MATERIAL:

6f5 crushed recycled concrete

DATE COMPLETED:

17/02/2022

CLASSIFICATION:

Class 6F5

TESTED BY:

MD, MW, JF

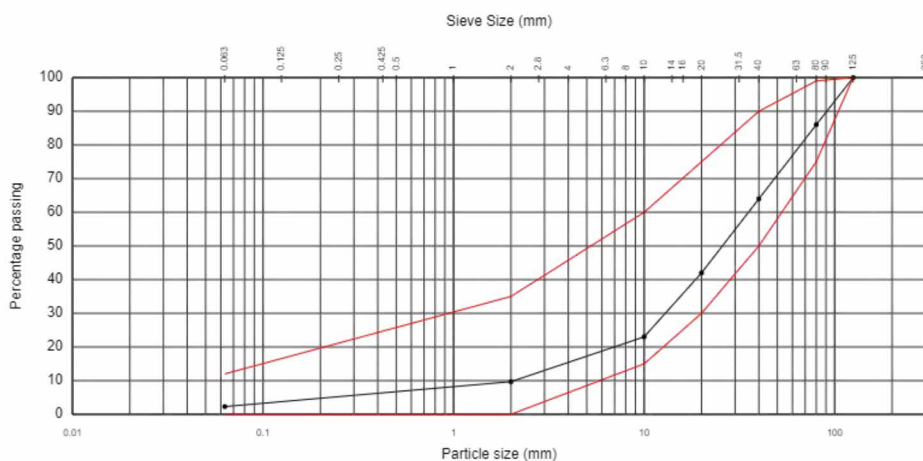
LOCATION:

Stockpile 1

SAMPLING PLAN:

Client Provided

RESULT Test Location: Harrietsham Lab



Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5

Uniformity Coefficient (D60/D10) N/A

Moisture content: 8.5%

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	100 - 100
90	100	
80	86	75 - 99
63	78	
40	64	50 - 90
31.5	55	
20	42	30 - 75
16	36	
14	32	
10	23	15 - 60
8	19	
6.3	16	
4	12	
2.8	11	
2	10	0 - 35
1	8	
0.5	6	
0.425	5	
0.25	4	
0.125	3	
0.063	2.3	0 - 12

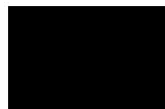
Remarks:

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS

Mike Gray - Laboratory Supervisor



Approved Signatory

Report date 17-Feb-22



0927

TEST REPORT:

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION & WATER CONTENT

BS EN 933-1 : 2012 Washing & Dry Sieving and BS EN 1097-5 : 2008

REPORT NUMBER:

C1055642 / 170606.5.1.3

SAMPLE NUMBER:

265205

CLIENT:

Collins Earthworks Limited

CLIENT REF:

265205

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

08/02/2022

SITE:

Havant, Portsmouth

SAMPLED BY:

Thomas Cook

SUPPLIER:

Unknown

DATE RECEIVED:

14/02/2022

MATERIAL:

6f5 crushed recycled concrete

DATE COMPLETED:

21/02/2022

CLASSIFICATION:

Class 6F5

TESTED BY:

HS, MD, MW

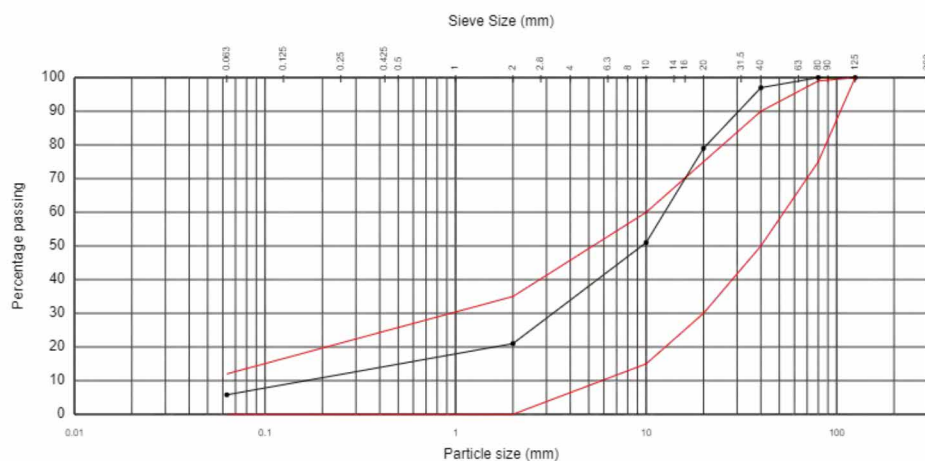
LOCATION:

Stockpile 1

SAMPLING PLAN:

Client Provided

RESULT Test Location: Harrietsham Lab



Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5

Uniformity Coefficient (D60/D10) N/A

Moisture content: 10.9%

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	100 - 100
90	100	
80	100	75 - 99 *
63	100	
40	97	50 - 90 *
31.5	92	
20	79	30 - 75 *
16	71	
14	65	
10	51	15 - 60
8	43	
6.3	37	
4	27	
2.8	24	
2	21	0 - 35
1	14	
0.5	10	
0.425	10	
0.25	8	
0.125	7	
0.063	5.8	0 - 12

Remarks:

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS

Dan Gay, Laboratory Manager

Ap
Re



0927

TEST REPORT:

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION & WATER CONTENT

BS EN 933-1 : 2012 Washing & Dry Sieving and BS EN 1097-5 : 2008

REPORT NUMBER:

C1055642 / 169623.7.1.1

SAMPLE NUMBER:

263556

CLIENT:

Collins Earthworks Limited

CLIENT REF:

263556

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

01/02/2022

SITE:

Havant, Portsmouth

SAMPLED BY:

Thomas Cook

SUPPLIER:

Not Specified, Not Specified

DATE RECEIVED:

10/02/2022

MATERIAL:

Type 1 Aggregate

DATE COMPLETED:

15/02/2022

CLASSIFICATION:

Type 1

TESTED BY:

HS, MD, MW

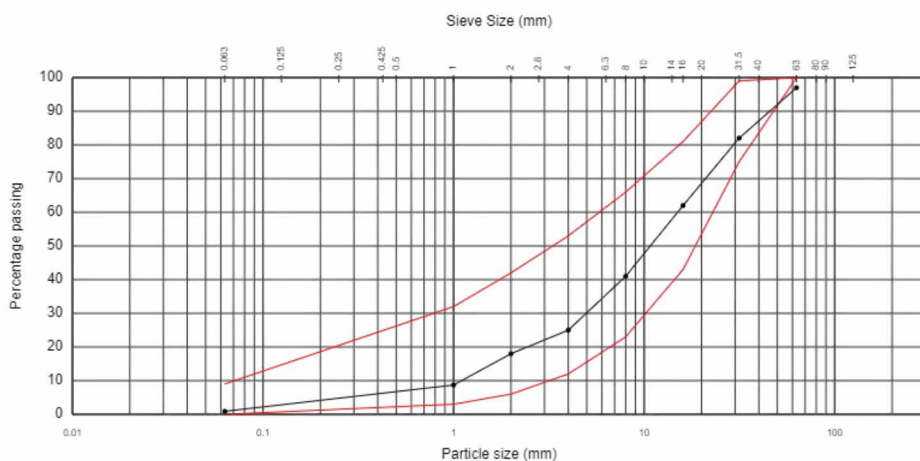
LOCATION:

Front Stockpile

SAMPLING PLAN:

Client Specification

RESULT Test Location: Harrietsham Lab



Type 1 - Specification For Highway Works (2016) Table 8/5, Clause 803

Uniformity Coefficient (D60/D10) 13

Moisture content: 7.5%

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	
90	100	
80	100	
63	97	* 100 - 100
40	88	
31.5	82	75 - 99
20	69	
16	62	43 - 81
14	58	
10	46	
8	41	23 - 66
6.3	34	
4	25	12 - 53
2.8	22	
2	18	6 - 42
1	9	3 - 32
0.5	5	
0.425	4	
0.25	2	
0.125	2	
0.063	0.9	0 - 9

Remarks:

A certificate of sampling is available.

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS

Supervisor

Report date 15 Feb 22



0927

TEST REPORT:

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION & WATER CONTENT

BS EN 933-1 : 2012 Washing & Dry Sieving and BS EN 1097-5 : 2008

REPORT NUMBER:

C1055642 / 169623.7.1.2

SAMPLE NUMBER:

263557

CLIENT:

Collins Earthworks Limited

CLIENT REF:

263557

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

01/02/2022

SITE:

Havant, Portsmouth

SAMPLED BY:

Thomas Cook

SUPPLIER:

On site , In situ

DATE RECEIVED:

10/02/2022

MATERIAL:

Type 1 crushed concrete

DATE COMPLETED:

17/02/2022

CLASSIFICATION:

Type 1

TESTED BY:

MD, MW, JT

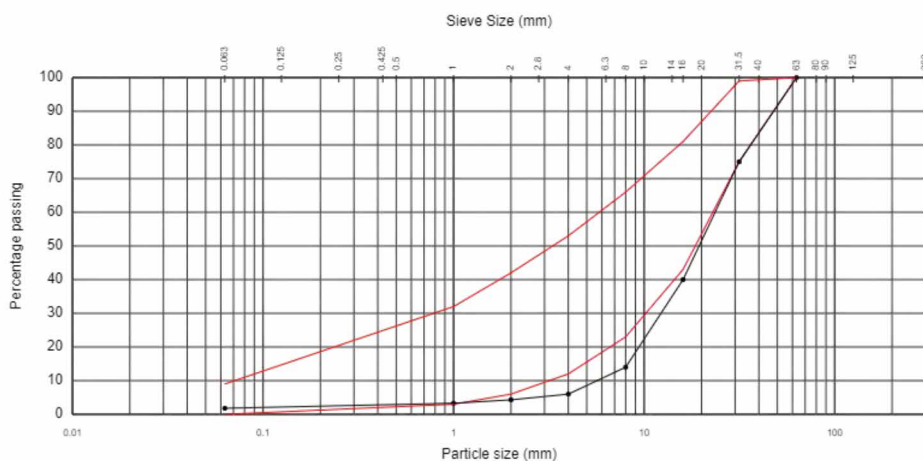
LOCATION:

Front stockpile

SAMPLING PLAN:

Client Provided

RESULT Test Location: Harrietsham Lab



Type 1 - Specification For Highway Works (2016) Table 8/5, Clause 803

Uniformity Coefficient (D60/D10) 4

Moisture content: 5.9%

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	
90	100	
80	100	
63	100	100 - 100
40	78	
31.5	75	75 - 99
20	50	
16	40	* 43 - 81
14	31	
10	19	
8	14	* 23 - 66
6.3	10	
4	6	* 12 - 53
2.8	5	
2	4	* 6 - 42
1	3	3 - 32
0.5	3	
0.425	3	
0.25	2	
0.125	2	
0.063	1.8	0 - 9

Remarks:

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS

Mike Gray - Laboratory Supervisor



Approved Signatory

Report date 17-Feb-22



0927

TEST REPORT:

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION & WATER CONTENT

BS EN 933-1 : 2012 Washing & Dry Sieving and BS EN 1097-5 : 2008

REPORT NUMBER:

C1055642 / 169623.7.1.3

SAMPLE NUMBER:

263558

CLIENT:

Collins Earthworks Limited

CLIENT REF:

263558

ADDRESS:

Whiteley Road, Ripley, Derbyshire, DE5 3QL

DATE SAMPLED:

01/02/2022

SITE:

Havant, Portsmouth

SAMPLED BY:

Thomas Cook

SUPPLIER:

On site , In situ

DATE RECEIVED:

10/02/2022

MATERIAL:

Type 1 crushed concrete

DATE COMPLETED:

17/02/2022

CLASSIFICATION:

Type 1

TESTED BY:

MD, MW, JF

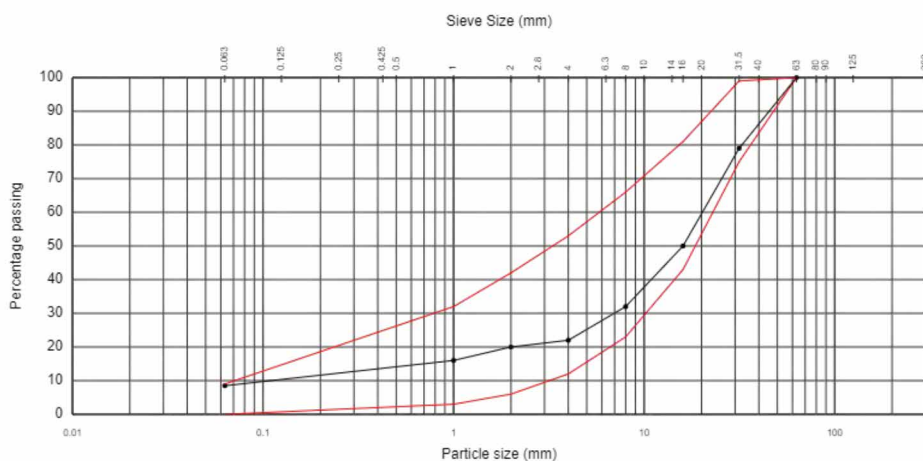
LOCATION:

Front stockpile

SAMPLING PLAN:

Client Provided

RESULT Test Location: Harrietsham Lab



Type 1 - Specification For Highway Works (2016) Table 8/5, Clause 803

Uniformity Coefficient (D60/D10) 101

Moisture content: 6.3%

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	
90	100	
80	100	
63	100	100 - 100
40	88	
31.5	79	75 - 99
20	61	
16	50	43 - 81
14	45	
10	36	
8	32	23 - 66
6.3	28	
4	22	12 - 53
2.8	21	
2	20	6 - 42
1	16	3 - 32
0.5	14	
0.425	13	
0.25	11	
0.125	9	
0.063	8.5	0 - 9

Remarks:

Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS

Mike Gray - Laboratory Supervisor



Report date 17-Feb-22



0927

TEST REPORT : **DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION**
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	1055642 / 169623.8.1.1	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	263556	ADDRESS:	Whiteley Road
CLIENT REF.:	263556	SITE:	Havant, Portsmouth
DATE RECEIVED:	10/02/2022	SUPPLIER:	Details not supplied
DATE SAMPLED:	01/02/2022	SOURCE:	Details not supplied
DATE TEST COMPLETED:	22/02/2022	MATERIAL:	Type 1 Aggregate
TESTED BY:	JG	LOCATION:	Front Stockpile
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Available

RESULT:

SPECIFICATION REQUIREMENTS			
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	29	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14		

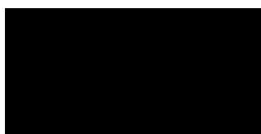
REMARKS:

Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the laboratory.

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

Report Format: L/Rep A10/rev.2

For and on behalf of CTS



Approved Signatory
23-Feb-22

Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver - Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor



TEST REPORT : **DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION**
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	1055642 / 169623.8.1.2	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	263557	ADDRESS:	Whiteley Road
CLIENT REF.:	263557	SITE:	Havant, Portsmouth
DATE RECEIVED:	10/02/2022	SUPPLIER:	On site
DATE SAMPLED:	01/02/2022	SOURCE:	Details not supplied
DATE TEST COMPLETED:	22/02/2022	MATERIAL:	Type 1 Crushed Concrete
TESTED BY:	JG	LOCATION:	Front Stockpile
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Available

RESULT:

SPECIFICATION REQUIREMENTS			
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	33	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14		

REMARKS:

Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the laboratory.

For and on behalf of CTS

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

Report Format: L/Rep A10/rev.2

Chris Davidson - Laboratory Manager
Ian Gay - Laboratory Supervisor
Matt Oliver - Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor

Approved Signatory
23-Feb-22



TEST REPORT : **DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION**
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	1055642 / 169623.8.1.3	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	263558	ADDRESS:	Whiteley Road
CLIENT REF.:	263558	SITE:	Havant, Portsmouth
DATE RECEIVED:	10/02/2022	SUPPLIER:	On site
DATE SAMPLED:	01/02/2022	SOURCE:	In Situ
DATE TEST COMPLETED:	22/02/2022	MATERIAL:	Type 1 Crushed Concrete
TESTED BY:	JG	LOCATION:	-
ACCEPTABLE STANDARD : Contract Specification		SAMPLING CERTIFICATE: Available	

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	29	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14		

REMARKS:

Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the laboratory.

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

Report Format: L/Rep A10/rev.2

For and on behalf of CTS



Approved Signatory
23-Feb-22

Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver - Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor



TEST REPORT : **DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION**
 Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	1055642 / 170606.7.1.1	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	265199	ADDRESS:	Whiteley Road
CLIENT REF.:	265199	SITE:	Havant, Portsmouth
DATE RECEIVED:	14/02/2022	SUPPLIER:	Details not supplied
DATE SAMPLED:	08/02/2022	SOURCE:	Details not supplied
DATE TEST COMPLETED:	22/02/2022	MATERIAL:	6F5 Crushed Recycled Concrete
TESTED BY:	JG	LOCATION:	Stockpile 1
ACCEPTABLE STANDARD : Contract Specification		SAMPLING CERTIFICATE: Available	

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	32	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14		

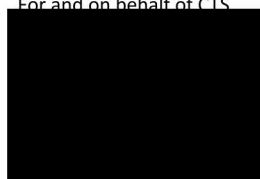
REMARKS:

Test results reported relate only to the items tested.
 This report shall not be reproduced except in full without approval of the laboratory.

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

Report Format: L/Rep A10/rev.2

For and on behalf of CTS



Approved Signatory
23-Feb-22

Chris Davidson - Laboratory Manager
 Dan Gay - Laboratory Supervisor
 Matt Oliver - Site Manager
 Phil Mayhew - Operations Manager
 Matt Butt - Operations Supervisor



TEST REPORT : **DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION**
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	1055642 / 170606.7.1.2	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	265204	ADDRESS:	Whiteley Road
CLIENT REF.:	265204	SITE:	Havant, Portsmouth
DATE RECEIVED:	14/02/2022	SUPPLIER:	Details not supplied
DATE SAMPLED:	08/02/2022	SOURCE:	Details not supplied
DATE TEST COMPLETED:	22/02/2022	MATERIAL:	6F5 Crushed Recycled Concrete
TESTED BY:	JG	LOCATION:	Stockpile 1
ACCEPTABLE STANDARD : Contract Specification		SAMPLING CERTIFICATE: Available	

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	29	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14		

REMARKS:

Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the laboratory.

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

Report Format: L/Rep A10/rev.2

For and on behalf of CTS



Approved Signatory
23-Feb-22

Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver- Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor



TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	1055642 / 170606.7.1.3	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	265205	ADDRESS:	Whiteley Road
CLIENT REF.:	265205	SITE:	Havant, Portsmouth
DATE RECEIVED:	14/02/2022	SUPPLIER:	Details not supplied
DATE SAMPLED:	08/02/2022	SOURCE:	Details not supplied
DATE TEST COMPLETED:	22/02/2022	MATERIAL:	6F5 Crushed Recycled Concrete
TESTED BY:	JG	LOCATION:	Stockpile 1
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Available

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	27	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14		

REMARKS:

Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the laboratory.

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

Report Format: L/Rep A10/rev.2

For and on behalf of CTS

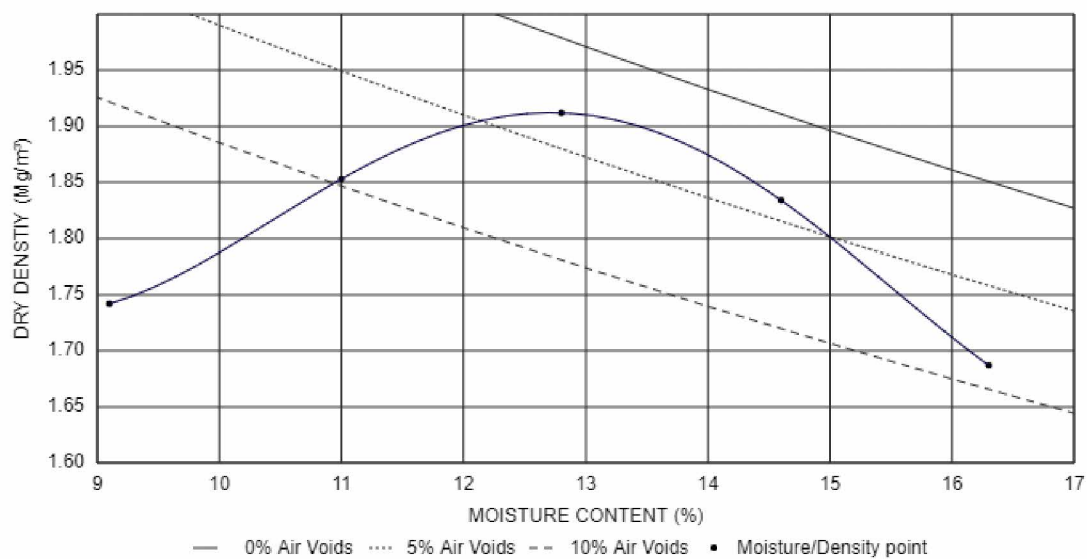
Approved Signatory
23-Feb-22Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver - Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor

TEST REPORT:	DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT		
	BS EN 13286-4: 2003 - Vibrating Hammer		
REPORT NUMBER:	C1055642 / 169623.6.1.1		
SAMPLE NUMBER:	263556	CLIENT:	Collins Earthworks Limited
CLIENT REF:	169623.1.1.1	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
DATE SAMPLED:	01/02/2022	SITE:	Havant, Portsmouth
SAMPLED BY:	Thomas Cook	SUPPLIER:	Not Specified, Not Specified
DATE RECEIVED:	10/02/2022	MATERIAL:	Type 1 Aggregate
DATE COMPLETED:	16/02/2022	LOCATION:	Ns/int
TESTED BY:	Edmund Uzande	COMPACTION SAMPLE:	Separate samples
TYPE OF SAMPLE:	Disturbed	SAMPLING PLAN:	Client Specification

RESULT Test Location: Harrietsham Lab

MAXIMUM DRY DENSITY: 1.91 Mg/m³
OPTIMUM WATER CONTENT: 12.5 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 12 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Remarks:
 Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.
 This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS
 Dan Gay - Laboratory Manager



Approved Signatory
 Report date 16-Feb-22

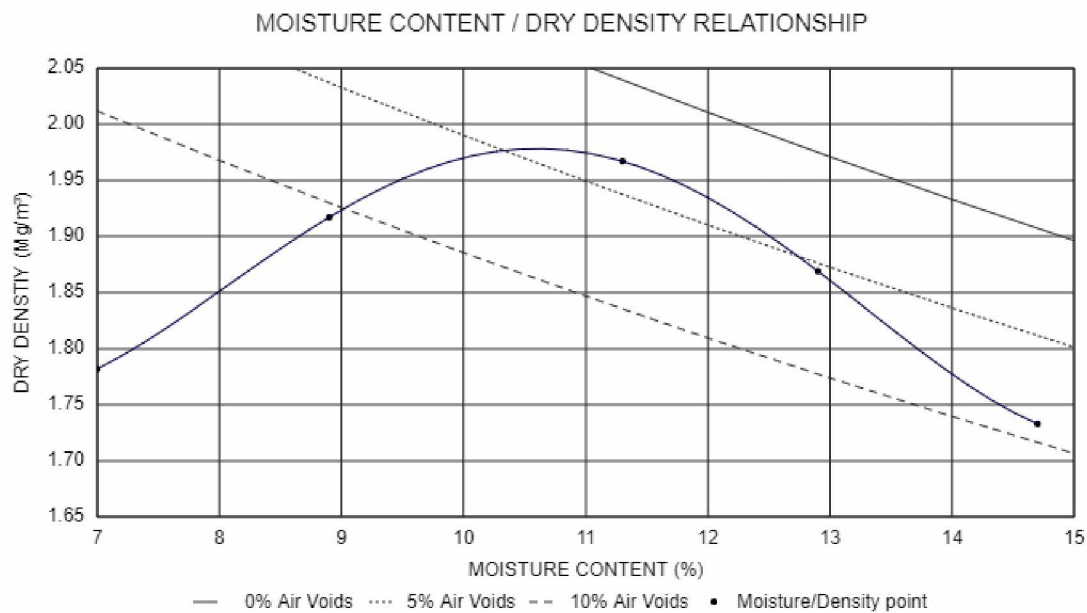


0927

TEST REPORT:	DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT		
	BS EN 13286-4: 2003 - Vibrating Hammer		
REPORT NUMBER:	C1055642 / 169623.6.1.2		
SAMPLE NUMBER:	263557	CLIENT:	Collins Earthworks Limited
CLIENT REF:	169623.1.1.2	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
DATE SAMPLED:	01/02/2022	SITE:	Havant, Portsmouth
SAMPLED BY:	Thomas Cook	SUPPLIER:	On site , In situ
DATE RECEIVED:	10/02/2022	MATERIAL:	Type 1 crushed concrete Type 1
DATE COMPLETED:	17/02/2022	LOCATION:	Ns/int
TESTED BY:	Edmund Uzande	COMPACTON SAMPLE:	Separate samples
TYPE OF SAMPLE:	Disturbed	SAMPLING PLAN:	Client Provided

RESULT Test Location: Harrietsham Lab

MAXIMUM DRY DENSITY: 1.98 Mg/m³
OPTIMUM WATER CONTENT: 10.5 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 21 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³



Remarks:
 Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.
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For and on behalf of CTS
 Dan Gay - Laboratory Manager

Approved Signatory
 Report date 17-Feb-22

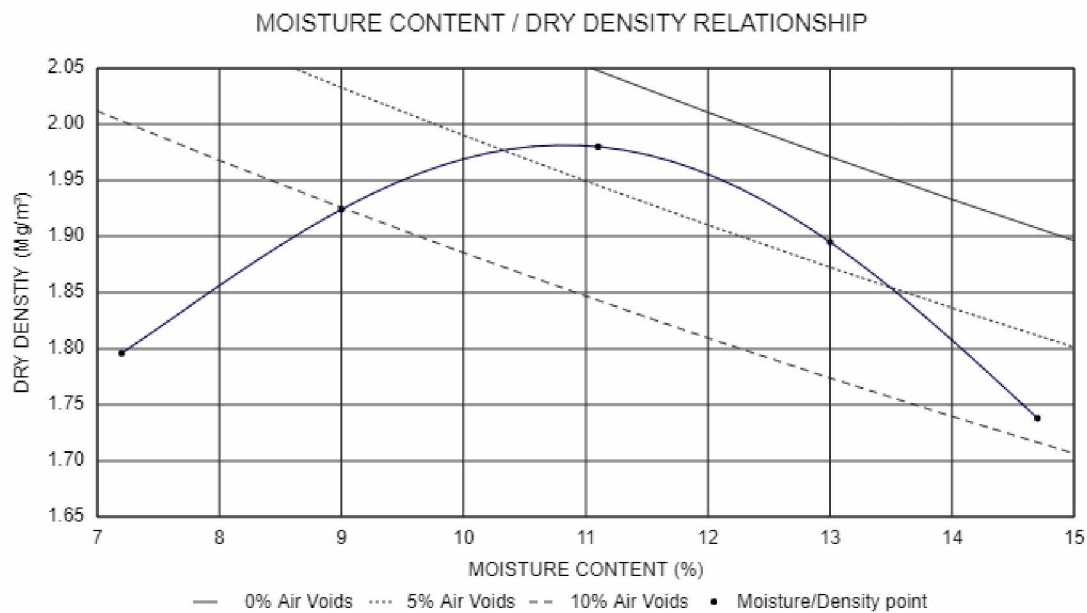


0927

TEST REPORT:	DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT		
	BS EN 13286-4: 2003 - Vibrating Hammer		
REPORT NUMBER:	C1055642 / 169623.6.1.3		
SAMPLE NUMBER:	263558	CLIENT:	Collins Earthworks Limited
CLIENT REF:	169623.1.1.3	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
DATE SAMPLED:	01/02/2022	SITE:	Havant, Portsmouth
SAMPLED BY:	Thomas Cook	SUPPLIER:	On site , In situ
DATE RECEIVED:	10/02/2022	MATERIAL:	Type 1 crushed concrete Type 1
DATE COMPLETED:	17/02/2022	LOCATION:	Ns/int
TESTED BY:	Edmund Uzande	COMPACTON SAMPLE:	Separate samples
TYPE OF SAMPLE:	Disturbed	SAMPLING PLAN:	Client Provided

RESULT Test Location: Harrietsham Lab

MAXIMUM DRY DENSITY: 1.98 Mg/m³
OPTIMUM WATER CONTENT: 11.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 12 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³



Remarks:
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For and on behalf of CTS
 Dan Gay - Laboratory Manager


 Approved Signatory
 Report date 17-Feb-22



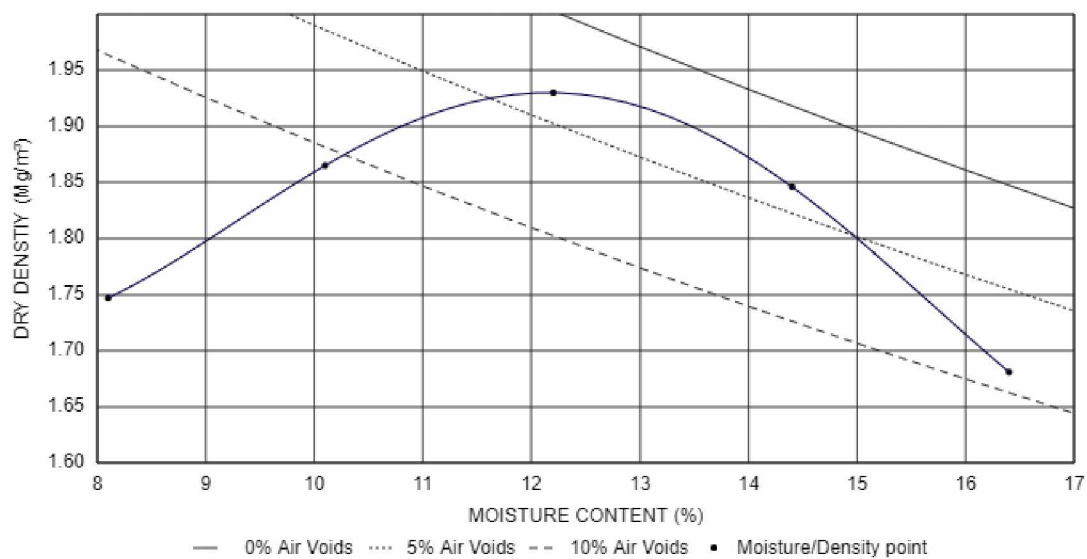
0927

TEST REPORT:	DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT		
	BS EN 13286-4: 2003 - Vibrating Hammer		
REPORT NUMBER:	C1055642 / 170606.4.1.1		
SAMPLE NUMBER:	265199	CLIENT:	Collins Earthworks Limited
CLIENT REF:	170606.1.1.1	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
DATE SAMPLED:	08/02/2022	SITE:	Havant, Portsmouth
SAMPLED BY:	Thomas Cook	SUPPLIER:	Unknown
DATE RECEIVED:	14/02/2022	MATERIAL:	6f5 crushed recycled concrete 6f5 recycled
DATE COMPLETED:	21/02/2022	LOCATION:	Ns/int
TESTED BY:	Edmund Uzande	COMPACTON SAMPLE:	Separate samples
TYPE OF SAMPLE:	Disturbed	SAMPLING PLAN:	Client Provided

RESULT Test Location: Harrietsham Lab

MAXIMUM DRY DENSITY: 1.93 Mg/m³
OPTIMUM WATER CONTENT: 12.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 25 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Remarks:
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For and on behalf of CTS
 Dan Gay - Laboratory Manager



Approved Signatory
 Report date 21-Feb-22

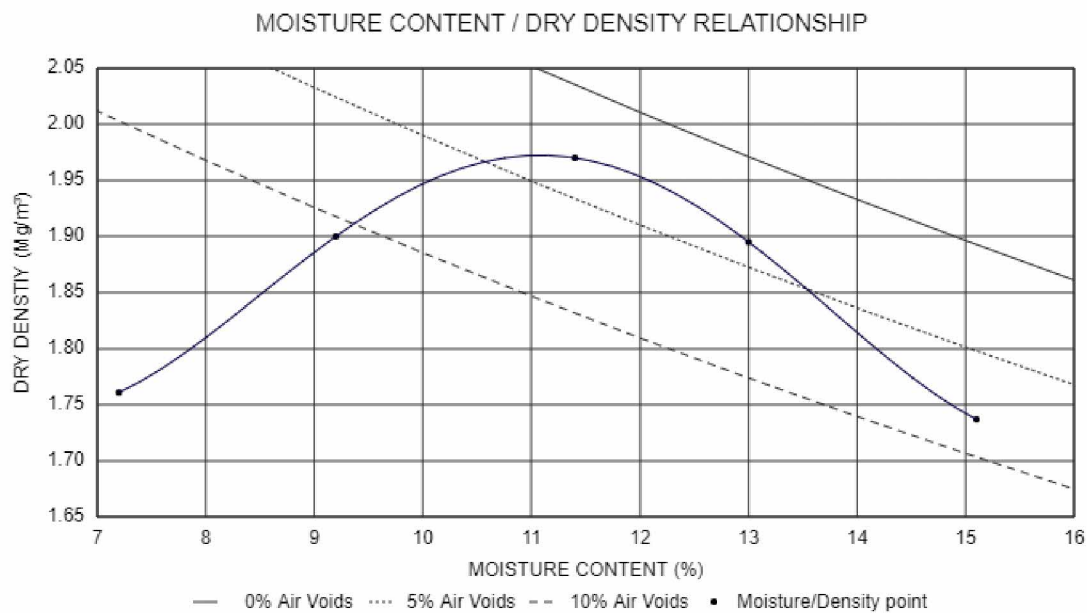


0927

TEST REPORT:	DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT		
	BS EN 13286-4: 2003 - Vibrating Hammer		
REPORT NUMBER:	C1055642 / 170606.4.1.2		
SAMPLE NUMBER:	265204	CLIENT:	Collins Earthworks Limited
CLIENT REF:	170606.1.1.2	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
DATE SAMPLED:	08/02/2022	SITE:	Havant, Portsmouth
SAMPLED BY:	Thomas Cook	SUPPLIER:	Unknown
DATE RECEIVED:	14/02/2022	MATERIAL:	6f5 crushed recycled concrete 6f5 recycled
DATE COMPLETED:	21/02/2022	LOCATION:	Ns/int
TESTED BY:	Edmund Uzande	COMPACTON SAMPLE:	Separate samples
TYPE OF SAMPLE:	Disturbed	SAMPLING PLAN:	Client Provided

RESULT Test Location: Harrietsham Lab

MAXIMUM DRY DENSITY: 1.97 Mg/m³
OPTIMUM WATER CONTENT: 11.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 34 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³



Remarks:
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For and on behalf of CTS
 Dan Gay - Laboratory Manager



Approved Signatory
 Report date 21-Feb-22



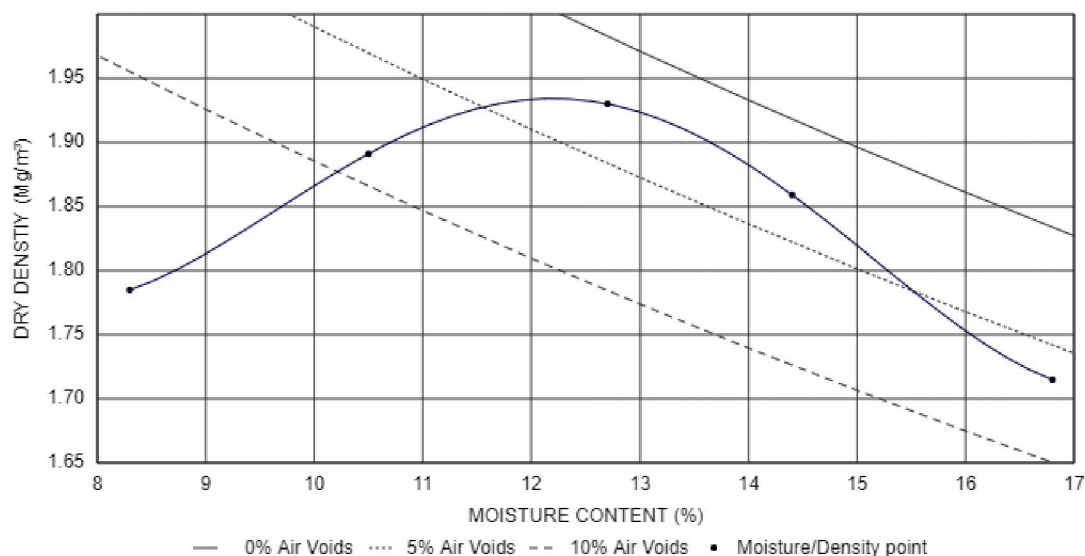
0927

TEST REPORT:	DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT		
	BS EN 13286-4: 2003 - Vibrating Hammer		
REPORT NUMBER:	C1055642 / 170606.4.1.3		
SAMPLE NUMBER:	265205	CLIENT:	Collins Earthworks Limited
CLIENT REF:	170606.1.1.3	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
DATE SAMPLED:	08/02/2022	SITE:	Havant, Portsmouth
SAMPLED BY:	Thomas Cook	SUPPLIER:	Unknown
DATE RECEIVED:	14/02/2022	MATERIAL:	6f5 crushed recycled concrete 6f5 recycled
DATE COMPLETED:	21/02/2022	LOCATION:	Ns/int
TESTED BY:	Edmund Uzande	COMPACTON SAMPLE:	Separate samples
TYPE OF SAMPLE:	Disturbed	SAMPLING PLAN:	Client Provided

RESULT Test Location: Harrietsham Lab

MAXIMUM DRY DENSITY: 1.93 Mg/m³
OPTIMUM WATER CONTENT: 12.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 2 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Remarks:
 Remaining sample will be retained for a minimum of 28 days from date of report. Test results reported relate only to the items tested.
 This report shall not be reproduced except in full without approval of the Laboratory.

For and on behalf of CTS
 Dan Gay - Laboratory Manager



Approved Signatory
 Report date 21-Feb-22



0927

TEST REPORT :
DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE

BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	1055642 / 169623.9.1.1	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	263556	ADDRESS:	Whiteley Road
CLIENT REF:	263556	SITE:	Havant, Portsmouth
DATE SAMPLED:	01/02/2022	SUPPLIER:	Not Specified
SAMPLED BY:	Thomas Cook	MATERIAL:	Type 1 Aggregate
DATE RECEIVED:	10/02/2022	LOCATION:	Front Stockpile
DATE TEST COMPLETED:	15/02/2022	ACCEPT STD:	Contract Specification
TESTED BY:	MD	SAMPLING CERT.:	Available
DRYING TEMPERATURE:	40 ± 5°C		

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc -	Concrete, concrete products & concrete masonry units.	64 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	36 % 0.0 %	Not Specified
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	0.0 %	Not Specified
Ra -	Bituminous Material	0.0 %	50
Rg -	Glass	0.0 %	25.0
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL -	Floating Particles	0.0 cm ³ /kg	Not Specified

REMARKS:

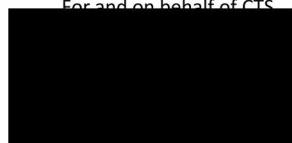
Remaining sample will be retained for a minimum of 28 days from date of report.

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Report Format: L/Rep A16/rev.1

REPORT No.: 1055642 / 169623.9.1.1

For and on behalf of CTS



Approved signatory

16-Feb-22

 Chris Davidson - Laboratory Manager
 Dan Gay - Laboratory Supervisor
 Matt Oliver- Site Manager
 Phil Mayhew - Operations Manager
 Matt Butt - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	1055642 / 169623.9.1.2	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	263557	ADDRESS:	Whiteley Road
CLIENT REF:	263557	SITE:	Havant, Portsmouth
DATE SAMPLED:	01/02/2022	SUPPLIER:	On site
SAMPLED BY:	Thomas Cook	MATERIAL:	Type 1 Crushed Concrete
DATE RECEIVED:	10/02/2022	LOCATION:	Front Stockpile
DATE TEST COMPLETED:	21/02/2022	ACCEPT STD:	Contract Specification
TESTED BY:	MD	SAMPLING CERT.:	Available
DRYING TEMPERATURE:	40 ± 5°C		

TEST RESULT:

	CONSTITUENT	FOUND PROPORTION	SPECIFICATION (%)
Rc -	Concrete, concrete products & concrete masonry units.	80 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate.	14 %	Not Specified
	(% of CHALK found within Ru)	0.0 %	
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	5.1 %	Not Specified
Ra -	Bituminous Material	0.0 %	50
Rg -	Glass	0.0 %	25.0
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.1 %	1.0
FL -	Floating Particles	0.0 cm ³ /kg	Not Specified

REMARKS:

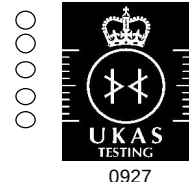
Remaining sample will be retained for a minimum of 28 days from date of report.

For and on behalf of CTS

Page 1 of 1
Report Format: L/Rep A16/rev.1

Approved signatory
25-Feb-22

Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver - Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor



REPORT No.: 1055642 / 169623.9.1.2

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	1055642 / 169623.9.1.3	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	263558	ADDRESS:	Whiteley Road
CLIENT REF:	263558	SITE:	Havant, Portsmouth
DATE SAMPLED:	01/02/2022	SUPPLIER:	On site
SAMPLED BY:	Thomas Cook	MATERIAL:	Type 1 Crushed Concrete
DATE RECEIVED:	10/02/2022	LOCATION:	Front Stockpile
DATE TEST COMPLETED:	21.02.2022	ACCEPT STD:	Contract Specification
TESTED BY:	MD	SAMPLING CERT.:	Available
DRYING TEMPERATURE:	40 ± 5°C		

TEST RESULT:

	CONSTITUENT	FOUND PROPORTION	SPECIFICATION (%)
Rc -	Concrete, concrete products & concrete masonry units.	70 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate.	30 %	Not Specified
	(% of CHALK found within Ru)	0.0 %	
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	0.0 %	Not Specified
Ra -	Bituminous Material	0.0 %	50
Rg -	Glass	0.0 %	25.0
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL -	Floating Particles	2.8 cm ³ /kg	Not Specified

REMARKS:

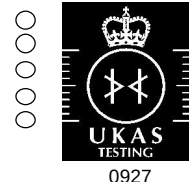
Remaining sample will be retained for a minimum of 28 days from date of report.

For and on behalf of CTS

Page 1 of 1
Report Format: L/Rep A16/rev.1

Approved signatory
25-Feb-22

Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver - Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor



REPORT No.: 1055642 / 169623.9.1.3

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	1055642 / 170606.8.1.1	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	265199	ADDRESS:	Whiteley Road
CLIENT REF:	265199	SITE:	Havant, Portsmouth
DATE SAMPLED:	08/02/2022	SUPPLIER:	Details not supplied
SAMPLED BY:	Thomas Cook	MATERIAL:	6F5 Crushed Recycled Concrete
DATE RECEIVED:	14/02/2022	LOCATION:	Stockpile 1
DATE TEST COMPLETED:	22/02/2022	ACCEPT STD:	Contract Specification
TESTED BY:	MD	SAMPLING CERT.:	Available
DRYING TEMPERATURE:	40 ± 5°C		

TEST RESULT:

	CONSTITUENT	FOUND PROPORTION	SPECIFICATION (%)
Rc -	Concrete, concrete products & concrete masonry units.	65 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate.	34 %	Not Specified
	(% of CHALK found within Ru)	0.0 %	
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	0.8 %	Not Specified
Ra -	Bituminous Material	0.0 %	50
Rg -	Glass	0.0 %	Not Specified
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL -	Floating Particles	0.0 cm ³ /kg	Not Specified

REMARKS:

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

For and on behalf of CTS

Page 1 of 1
Report Format: L/Rep A16/rev.1

Approved signatory
22-Feb-22

Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver- Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor



REPORT No.: 1055642 / 170606.8.1.1

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	1055642 / 170606.8.1.2	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	265204	ADDRESS:	Whiteley Road
CLIENT REF:	265204	SITE:	Havant, Portsmouth
DATE SAMPLED:	08/02/2022	SUPPLIER:	Details not supplied
SAMPLED BY:	Thomas Cook	MATERIAL:	6F5 Crushed Recycled Concrete
DATE RECEIVED:	14/02/2022	LOCATION:	Stockpile 1
DATE TEST COMPLETED:	22/02/2022	ACCEPT STD:	Contract Specification
TESTED BY:	MD	SAMPLING CERT.:	Available
DRYING TEMPERATURE:	40 ± 5°C		

TEST RESULT:

	CONSTITUENT	FOUND PROPORTION	SPECIFICATION (%)
Rc -	Concrete, concrete products & concrete masonry units.	63 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate.	34 %	Not Specified
	(% of CHALK found within Ru)	0.0 %	
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	2.2 %	Not Specified
Ra -	Bituminous Material	0.0 %	50
Rg -	Glass	0.0 %	Not Specified
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.3 %	1.0
FL -	Floating Particles	0.0 cm ³ /kg	Not Specified

REMARKS:

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

For and on behalf of CTS

Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver- Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor

Page 1 of 1
Report Format: L/Rep A16/rev.1

Approved signatory
22-Feb-22



REPORT No.: 1055642 / 170606.8.1.2

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	1055642 / 170606.8.1.3	CLIENT:	Collins Earthworks Limited
SAMPLE No.:	265205	ADDRESS:	Whiteley Road
CLIENT REF:	265205	SITE:	Havant, Portsmouth
DATE SAMPLED:	08/02/2022	SUPPLIER:	Details not supplied
SAMPLED BY:	Thomas Cook	MATERIAL:	6F5 Crushed Recycled Concrete
DATE RECEIVED:	14/02/2022	LOCATION:	Stockpile 1
DATE TEST COMPLETED:	22/02/2022	ACCEPT STD:	Contract Specification
TESTED BY:	MD	SAMPLING CERT.:	Available
DRYING TEMPERATURE:	40 ± 5°C		

TEST RESULT:

	CONSTITUENT	FOUND PROPORTION	SPECIFICATION (%)
Rc -	Concrete, concrete products & concrete masonry units.	70 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate.	28 %	Not Specified
	(% of CHALK found within Ru)	0.0 %	
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	1.3 %	Not Specified
Ra -	Bituminous Material	0.0 %	50
Rg -	Glass	0.0 %	Not Specified
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL -	Floating Particles	0.0 cm ³ /kg	Not Specified

REMARKS:

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

For and on behalf of CTS

Chris Davidson - Laboratory Manager
Dan Gay - Laboratory Supervisor
Matt Oliver- Site Manager
Phil Mayhew - Operations Manager
Matt Butt - Operations Supervisor

Page 1 of 1
Report Format: L/Rep A16/rev.1

Approved signatory
22-Feb-22



REPORT No.: 1055642 / 170606.8.1.3

APPENDIX G

Moisture Content and Field Dry Density NDG and Sand Replacement
Tests

TEST REPORT:	Estimation of In-Situ Dry Density, Relative Compaction And Air Voids In-House Procedure STP NDM-S Method D Direct Transmission		
REPORT NUMBER:	C1055642 / 165623.2.1.5		
CLIENT REF:	1055642	CLIENT:	Collins Earthworks Limited
DATE COMPLETED:	18/01/2022	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
TESTED BY:	Mitchell Butler	SITE:	Havant, Portsmouth
GAUGE MODEL No:	T3440	SUPPLIER:	Site Won
GAUGE SERIAL No:	15409	MATERIAL:	Sub layer soil/ballast
CORRECTION FACTORS:	Bulk $\gamma=1.020$ Moisture $b=1.087$	LOCATION:	Site Coverage
SPECIFIC GRAVITY:	2.63 Mg/m ³	MAX DRY DENSITY:	1.87 Mg/m ³

TEST RESULTS

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Moisture Content (%)	Mean Air Voids (%)	Mean Relative Compaction (%)
B4 - Layer 1 Finished Formation	2.078	0.225	2.12	13	1.88	14	3.2	100
	2.099	0.244	2.14	14				
C4 - Formation	2.129	0.195	2.17	11	1.93	12	4.1	103
	2.100	0.218	2.14	12				
B5 - Layer 1 Finished Formation	2.095	0.221	2.14	13	1.88	13	3.7	101
	2.082	0.234	2.12	14				
C5 - Formation	2.051	0.264	2.09	16	1.83	16	1.6	98
	2.099	0.269	2.14	16				
B12 - Formation	2.101	0.258	2.14	15	1.87	15	1.2	100
	2.112	0.251	2.15	14				
C12 - Formation	2.125	0.223	2.17	13	1.90	13	2.6	102
	2.100	0.237	2.14	14				
D12 - Formation	2.025	0.282	2.07	17	1.80	16	1.6	96
	2.095	0.265	2.14	16				
D11 - Formation	2.089	0.234	2.13	14	1.91	13	2.2	102
	2.151	0.228	2.19	13				
C11 - Formation	2.154	0.208	2.20	12	1.95	12	2.9	104
	2.116	0.215	2.16	12				
B11 - Formation	2.177	0.225	2.22	12	1.96	13	0.8	105
	2.154	0.228	2.20	13				
B13 - Formation	2.179	0.207	2.22	11	1.97	12	2.1	105
	2.134	0.215	2.18	12				
C13 - Formation	2.161	0.220	2.20	12	1.95	13	0.9	105
	2.157	0.235	2.20	13				

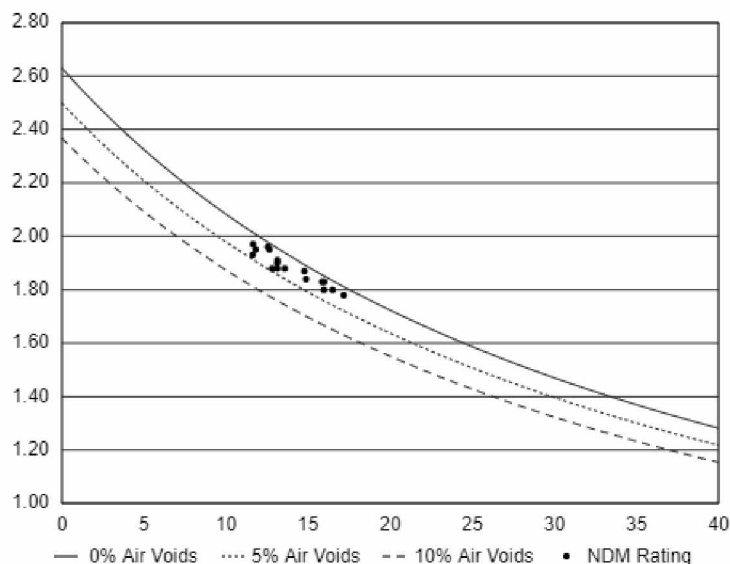
Remarks:
Test results reported relate only to the items tested.
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TEST REPORT: Estimation of In-Situ Dry Density, Relative Compaction And Air Voids
In-House Procedure STP NDM-S Method D Direct Transmission

REPORT NUMBER: C1055642 / 165623.2.1.5

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Moisture Content (%)	Mean Air Voids (%)	Mean Relative Compaction (%)
D13 - Formation	2.061	0.268	2.10	16	1.80	16	3.0	96
	2.025	0.260	2.07	16				
E13 - Formation	2.057	0.262	2.10	16	1.83	16	1.1	98
	2.108	0.277	2.15	16				
F13 - Formation	2.050	0.288	2.09	18	1.78	17	1.5	95
	2.050	0.276	2.09	17				
G13 - Formation	2.094	0.255	2.14	15	1.84	15	2.8	98
	2.045	0.248	2.09	15				
H13 - Formation	2.099	0.232	2.14	13	1.88	13	4.3	101
	2.065	0.212	2.11	12				

AIR VOID LINE PLOT



Remarks:
Test results reported relate only to the items tested.
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For and on behalf of CTS
Vincent Faulkner - Operations Supervisor



Approved Signatory
Report date 15-Feb-22



0927

TEST REPORT:	Estimation of In-Situ Dry Density, Relative Compaction And Air Voids In-House Procedure STP NDM-S Method D Direct Transmission		
REPORT NUMBER:	C1055642 / 166190.1.1.6		
CLIENT REF:	1055642	CLIENT:	Collins Earthworks Limited
DATE COMPLETED:	20/01/2022	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
TESTED BY:	Thomas Cook	SITE:	Havant, Portsmouth
GAUGE MODEL No:	T3440	SUPPLIER:	Site Won
GAUGE SERIAL No:	15409	MATERIAL:	Clay/ballast
CORRECTION FACTORS:	Bulk $\gamma=1.020$ Moisture $b=1.087$	LOCATION:	Site Coverage
SPECIFIC GRAVITY:	2.63 Mg/m ³	MAX DRY DENSITY:	1.87 Mg/m ³

TEST RESULTS

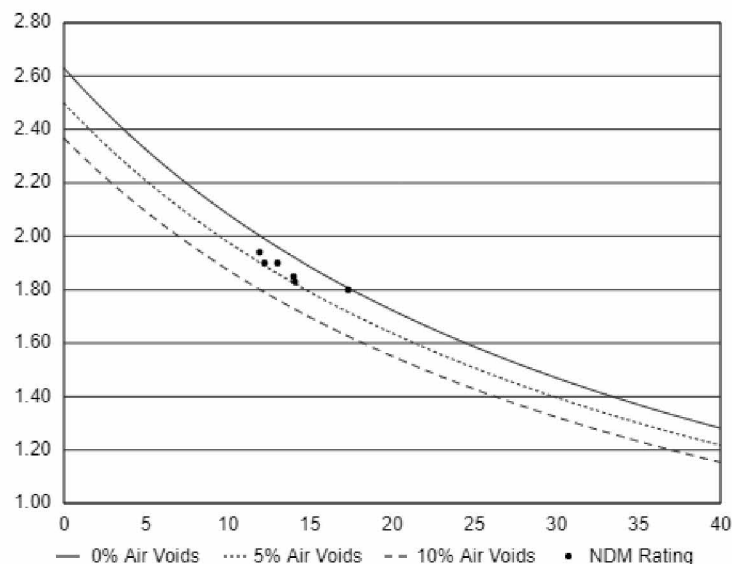
Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Moisture Content (%)	Mean Air Voids (%)	Mean Relative Compaction (%)
G12 - Formation SRD Correlation	2.062	0.246	2.10	15				
	2.038	0.229	2.08	14	1.83	14	4.5	98
G11 - Formation SRD Correlation	2.039	0.232	2.08	14				
	2.099	0.245	2.14	14	1.85	14	3.7	99
F11 - Formation SRD Correlation	2.085	0.294	2.13	18				
	2.049	0.279	2.09	17	1.80	17	0.5	96
F12 - Formation SRD Correlation	2.134	0.229	2.18	13				
	2.084	0.227	2.13	13	1.90	13	2.8	102
E11 - Formation SRD Correlation	2.127	0.207	2.17	12				
	2.123	0.218	2.17	12	1.94	12	3.3	104
E12 - Formation SRD Correlation	2.076	0.201	2.12	12				
	2.099	0.226	2.14	13	1.90	12	4.7	101

Remarks:
Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the Laboratory.

TEST REPORT: Estimation of In-Situ Dry Density, Relative Compaction And Air Voids
In-House Procedure STP NDM-S Method D Direct Transmission

REPORT NUMBER: C1055642 / 166190.1.1.6

AIR VOID LINE PLOT



Remarks:
Test results reported relate only to the items tested.
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For and on behalf of CTS
Vincent Faulkner - Operations Supervisor

Approved Signatory
Report date 15-Feb-22



0927

TEST REPORT:	Estimation of In-Situ Dry Density, Relative Compaction And Air Voids		
	In-House Procedure STP NDM-S Method D Direct Transmission		
REPORT NUMBER:	C1055642 / 168578.2.1.1		
CLIENT REF:	1055642	CLIENT:	Collins Earthworks Limited
DATE COMPLETED:	25/01/2022	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
TESTED BY:	Thomas Cook	SITE:	Havant, Portsmouth
GAUGE MODEL No:	T3440	SUPPLIER:	Site Won
GAUGE SERIAL No:	15409	MATERIAL:	Clay/soil/ballast
CORRECTION FACTORS:	Bulk $\gamma=1.020$ Moisture $b=1.087$	LOCATION:	Sub Layer Formation
SPECIFIC GRAVITY:	2.63 Mg/m ³	MAX DRY DENSITY:	1.87 Mg/m ³

TEST RESULTS

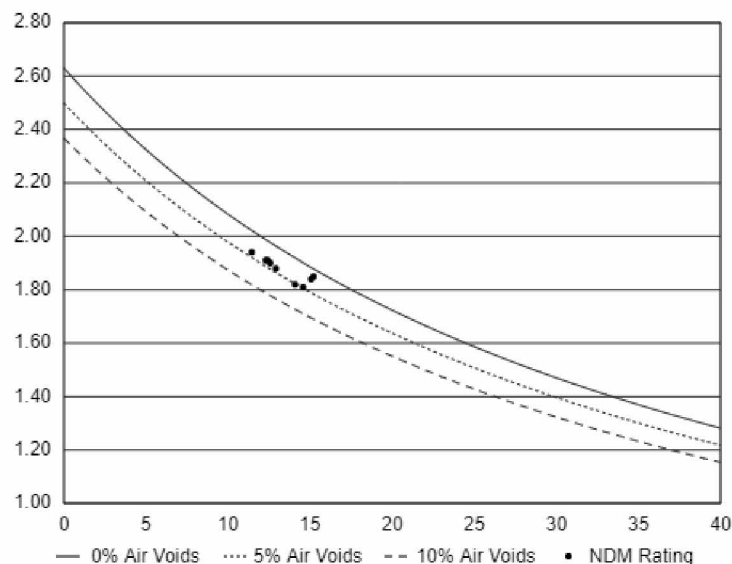
Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Moisture Content (%)	Mean Air Voids (%)	Mean Relative Compaction (%)
K11 - Formation	2.130	0.205	2.17	11				
	2.102	0.203	2.14	12	1.94	11	4.2	104
J11 - Formation	2.120	0.217	2.16	12				
	2.081	0.215	2.12	12	1.91	12	4.0	102
H11 - Formation	2.050	0.228	2.09	13				
	2.108	0.218	2.15	12	1.88	13	4.3	100
G10 - Formation	2.079	0.248	2.12	15				
	2.080	0.263	2.12	16	1.84	15	2.1	99
F10 - Formation	2.094	0.264	2.14	16				
	2.085	0.254	2.13	15	1.85	15	1.5	99
E10 - Formation	2.045	0.245	2.09	15				
	2.017	0.240	2.06	14	1.81	15	4.9	97
E9 - Formation	2.049	0.239	2.09	14				
	2.033	0.234	2.07	14	1.82	14	4.9	98
E8 - Formation	2.089	0.215	2.13	12				
	2.101	0.224	2.14	13	1.90	13	4.0	102
E7 - Formation	2.111	0.224	2.15	13				
	2.098	0.212	2.14	12	1.91	12	3.7	102

Remarks:
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TEST REPORT: Estimation of In-Situ Dry Density, Relative Compaction And Air Voids
In-House Procedure STP NDM-S Method D Direct Transmission

REPORT NUMBER: C1055642 / 168578.2.1.1

AIR VOID LINE PLOT



Remarks:
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For and on behalf of CTS
Vincent Faulkner - Operations Supervisor



Report date 15-Feb-22



0927

TEST REPORT:	Estimation of In-Situ Dry Density, Relative Compaction And Air Voids		
	In-House Procedure STP NDM-S Method D Direct Transmission		
REPORT NUMBER:	C1055642 / 168579.1.1.1		
CLIENT REF:	1055642	CLIENT:	Collins Earthworks Limited
DATE COMPLETED:	25/01/2022	ADDRESS:	Whiteley Road, Ripley, Derbyshire, DE5 3QL
TESTED BY:	Watson Aniyeloye	SITE:	Havant, Portsmouth
GAUGE MODEL No:	T3440	SUPPLIER:	Site Won
GAUGE SERIAL No:	15409	MATERIAL:	Gravelly clay
CORRECTION FACTORS:	Bulk $\gamma=1.020$ Moisture $b=1.087$	LOCATION:	Havant
SPECIFIC GRAVITY:	2.63 Mg/m ³	MAX DRY DENSITY:	1.87 Mg/m ³

TEST RESULTS

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Moisture Content (%)	Mean Air Voids (%)	Mean Relative Compaction (%)
F8 - Formation	2.084	0.267	2.13	16				
	2.054	0.252	2.10	15	1.83	15	2.3	98
G7 - Formation	2.143	0.203	2.19	11				
	2.185	0.213	2.23	12	1.98	11	2.1	106
G8 - Formation	2.071	0.226	2.11	13				
	2.146	0.216	2.19	12	1.91	13	3.3	102
G92 - Formation	2.100	0.243	2.14	14				
	2.058	0.246	2.10	15	1.85	14	2.9	99
F9 - Formation	2.116	0.228	2.16	13				
	2.043	0.203	2.08	12	1.89	12	4.8	101
K13 - Formation	2.074	0.275	2.12	16				
	2.148	0.252	2.19	14	1.87	15	0.3	100
J13 - Formation	2.050	0.306	2.09	19				
	2.055	0.287	2.10	18	1.77	18	0.4	95
K12 - Formation	2.115	0.236	2.16	14				
	2.077	0.217	2.12	12	1.89	13	3.5	101
J12 - Formation	2.084	0.231	2.13	13				
	2.064	0.234	2.11	14	1.86	14	3.9	100
H12 - Formation	2.111	0.239	2.15	14				
	2.061	0.222	2.10	13	1.88	13	3.6	100

Remarks:

Test results reported relate only to the items tested.

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