

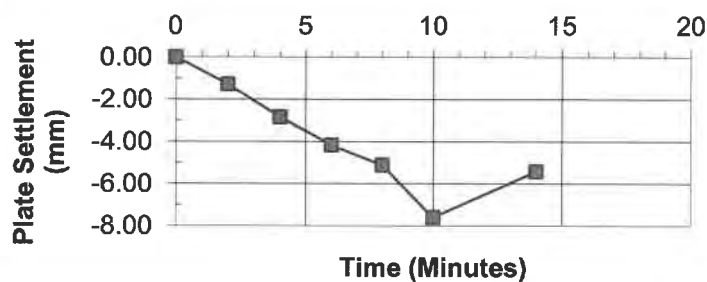
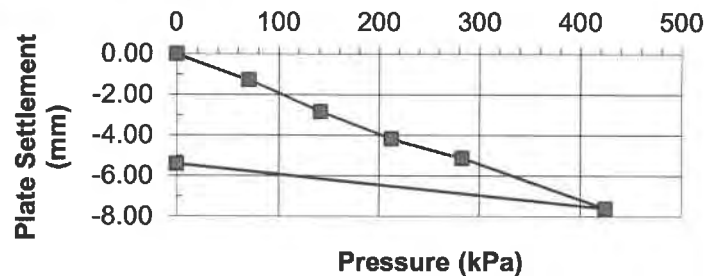
MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/9		
TEST LOCATION	Ramp 1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	28-Apr-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4807	4738	4735	4760	0.00	0.00	0.0
4689	4622	4585	4632	-1.28	20.00	70.7
4555	4458	4416	4476	-2.84	40.00	141.5
4431	4322	4275	4343	-4.17	60.00	212.2
4353	4219	4169	4247	-5.13	80.00	282.9
4107	3971	3920	3999	-7.61	120.00	424.4
4297	4257	4100	4218	-5.42	0.00	0.0



Pressure at 1.25 mm deflexion =	69 kPa
Modulus of subgrade reaction (k) =	55 MPa/m
Equivalent 762 mm plate reaction =	44 MPa/m
Equivalent CBR =	6.9 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 29-Apr-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



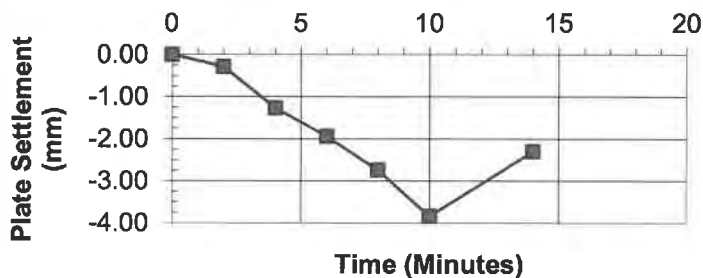
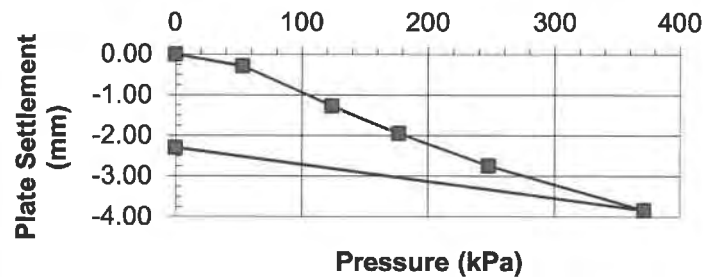
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/9		
TEST LOCATION	Ramp 2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	28-Apr-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4868	4934	4852	4885	0.00	0.00	0.0
4829	4903	4835	4856	-0.29	15.00	53.1
4709	4817	4748	4758	-1.27	35.00	123.8
4628	4752	4690	4690	-1.95	50.00	176.8
4534	4675	4621	4610	-2.75	70.00	247.6
4412	4562	4528	4501	-3.84	105.00	371.4
4597	4723	4645	4655	-2.30	0.00	0.0



Pressure at 1.25 mm deflexion =	122 kPa
Modulus of subgrade reaction (k) =	98 MPa/m
Equivalent 762 mm plate reaction =	79 MPa/m
Equivalent CBR =	18.5 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 29-Apr-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



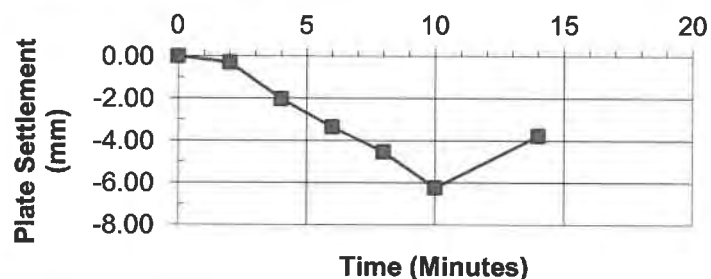
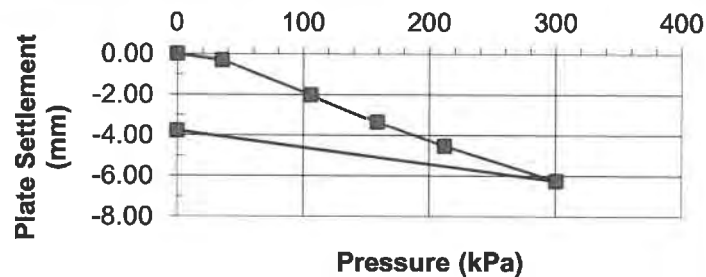
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/9		
TEST LOCATION	Ramp 3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	28-Apr-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4753	4783	4787	4774	0.00	0.00	0.0
4741	4725	4764	4743	-0.31	10.00	35.4
4588	4518	4611	4572	-2.02	30.00	106.1
4467	4367	4482	4439	-3.36	45.00	159.2
4363	4235	4366	4321	-4.53	60.00	212.2
4205	4043	4200	4149	-6.25	85.00	300.6
4417	4356	4416	4396	-3.78	0.00	0.0



Pressure at 1.25 mm deflexion =	74 kPa
Modulus of subgrade reaction (k) =	59 MPa/m
Equivalent 762 mm plate reaction =	48 MPa/m
Equivalent CBR =	7.8 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 29-Apr-20

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract CLR 19 1016 –
Manchester College Campus

Job Number MRN 3817/10
Date of Issue 12 May 2020
Page 1 of 13

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

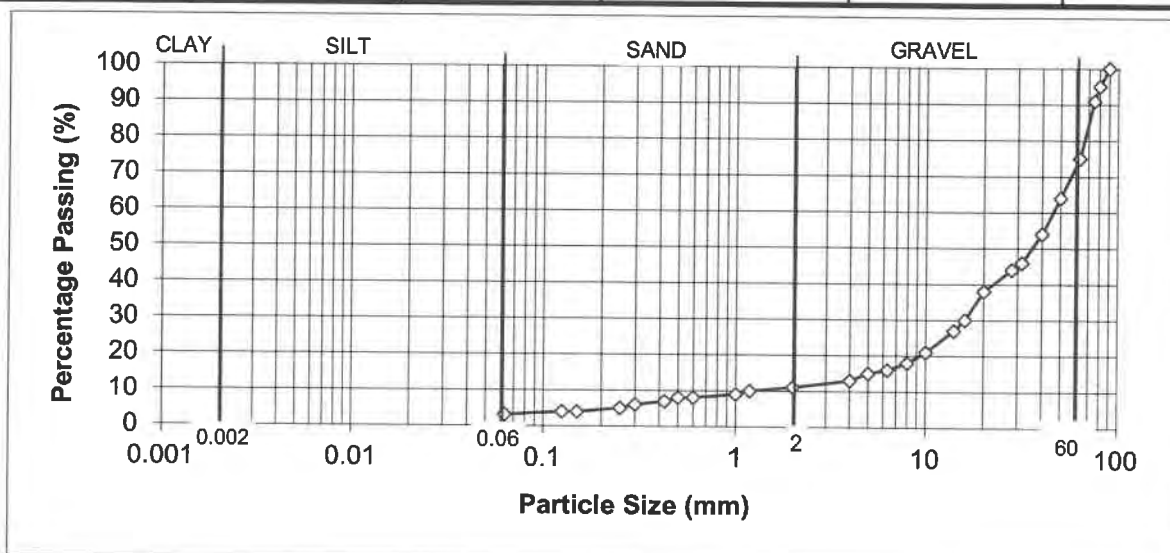
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR08	DATE SAMPLED	28-Apr-20
LAB SAMPLE No	89136	DATE RECEIVED	28-Apr-20
DATE TESTED	28-Apr-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	16	
90	100		5	15	
80	95	75-99	4	13	
75	91		2	11	0-35
63	75		1.18	10	
50	64		1	9	
40	54	50-90	0.6	8	
31.5	46		0.5	8	
28	44		0.425	7	
20	38	30-75	0.3	6	
16	30		0.25	5	
14	27		0.15	4	
10	21	15-60	0.125	4	
8	18		0.063	3.1	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 7.4%

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

12-May-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

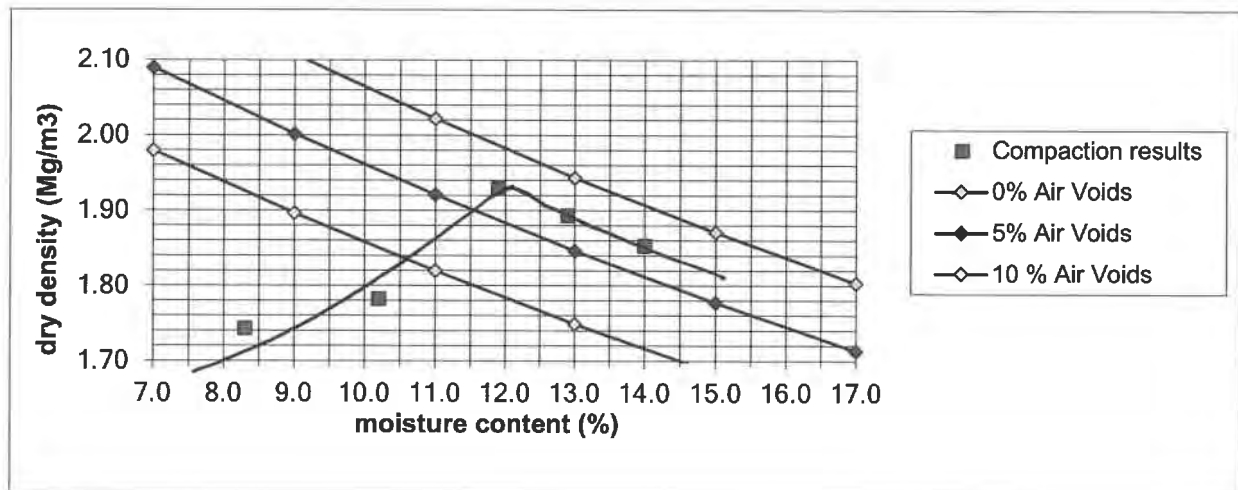
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR08	DATE SAMPLED	28-Apr-20
LAB SAMPLE No	89136	DATE RECEIVED	28-Apr-20
DATE TESTED	04-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m ³)
1	8.3	1.743
2	10.2	1.782
3	11.9	1.929
4	12.9	1.893
5	14.0	1.853
Optimum	12.0	
Maximum		1.93
Particle Density	2.6 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 46%
Percentage of material retained on 20mm sieve = 62%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

12-May-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/10
Laboratory sample number.	:	89136
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR08
Certificate of sampling received.	:	No
Date and time of sampling.	:	28 April 2020
Date received at Laboratory.	:	28 April 2020
Date of start of test	:	29 April 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	35% passing 14mm-retained 12.5mm 65% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 45

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 12 May 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
ORGANIC MATTER CONTENT
(Loss on Ignition)
BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR08	DATE SAMPLED	28 April 2020
LAB SAMPLE No	89136	DATE RECEIVED	28 April 2020
DATE TESTED	04 May 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	14	%
Loss on Ignition material passing 2mm (Avg. of 2)	3.8	%

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 12 May 2020

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

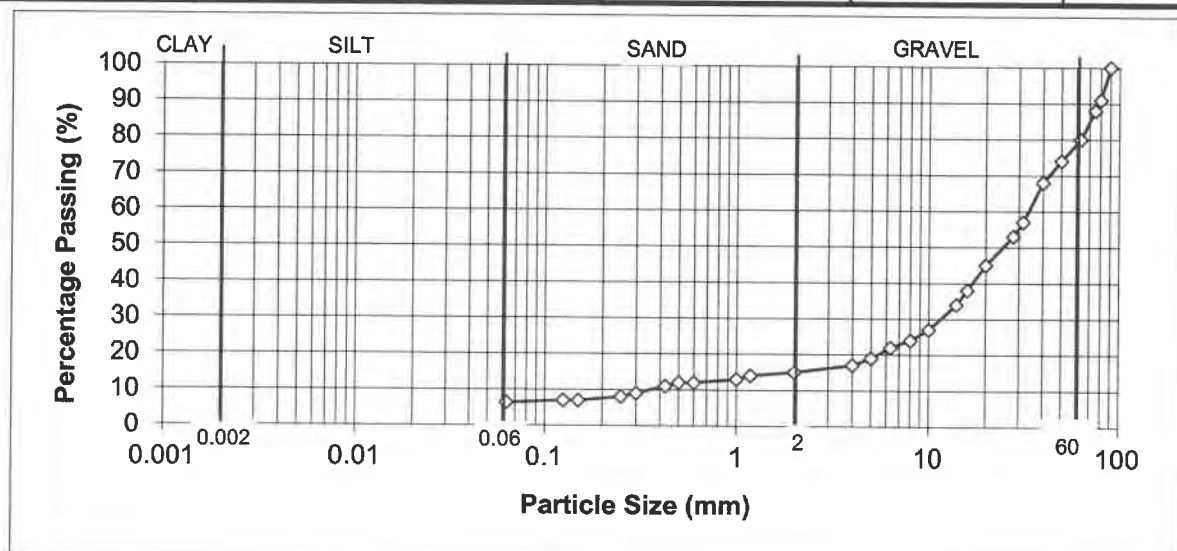
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR09	DATE SAMPLED	28-Apr-20
LAB SAMPLE No	89137	DATE RECEIVED	28-Apr-20
DATE TESTED	28-Apr-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	22	
90	100		5	19	
80	91	75-99	4	17	
75	88		2	15	0-35
63	80		1.18	14	
50	74		1	13	
40	68	50-90	0.6	12	
31.5	57		0.5	12	
28	53		0.425	11	
20	45	30-75	0.3	9	
16	38		0.25	8	
14	34		0.15	7	
10	27	15-60	0.125	7	
8	24		0.063	6.3	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 7.3%

SIGNED



NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

12-May-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

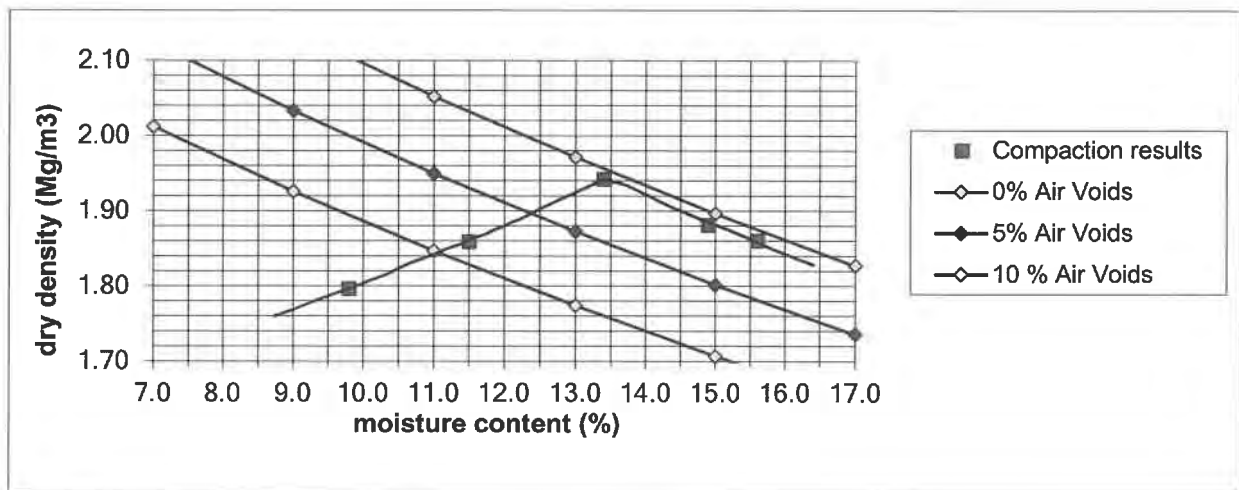
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR09	DATE SAMPLED	28-Apr-20
LAB SAMPLE No	89137	DATE RECEIVED	28-Apr-20
DATE TESTED	04-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m3)
1	9.8	1.796
2	11.5	1.859
3	13.4	1.942
4	14.9	1.881
5	15.6	1.86
Optimum	13.0	
Maximum		1.94
Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 32%
Percentage of material retained on 20mm sieve = 55%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

12-May-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/10
Laboratory sample number.	:	89137
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR09
Certificate of sampling received.	:	No
Date and time of sampling.	:	28 April 2020
Date received at Laboratory.	:	28 April 2020
Date of start of test	:	29 April 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	35% passing 14mm-retained 12.5mm 65% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 46

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 12 May 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
ORGANIC MATTER CONTENT
(Loss on Ignition)
BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR09	DATE SAMPLED	28 April 2020
LAB SAMPLE No	89137	DATE RECEIVED	28 April 2020
DATE TESTED	04 May 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	13	%
Loss on Ignition material passing 2mm (Avg. of 2)	3.6	%

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 12 May 2020

TEST CERTIFICATE**PARTICLE SIZE DISTRIBUTION**

BS EN 933-1 : 2012 (Washing & Sieving Method)

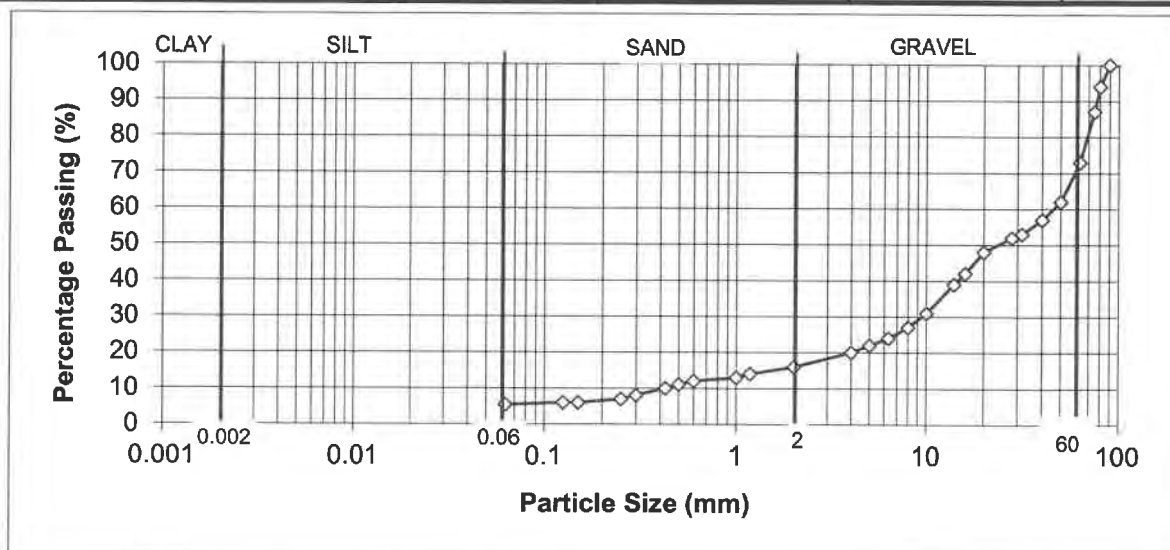
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR10	DATE SAMPLED	28-Apr-20
LAB SAMPLE No	89138	DATE RECEIVED	28-Apr-20
DATE TESTED	28-Apr-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	24	
90	100		5	22	
80	94	75-99	4	20	
75	87		2	16	0-35
63	73		1.18	14	
50	62		1	13	
40	57	50-90	0.6	12	
31.5	53		0.5	11	
28	52		0.425	10	
20	48	30-75	0.3	8	
16	42		0.25	7	
14	39		0.15	6	
10	31	15-60	0.125	6	
8	27		0.063	5.4	0-12

**REMARKS**

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 7.9%

SIGNED



NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

12-May-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

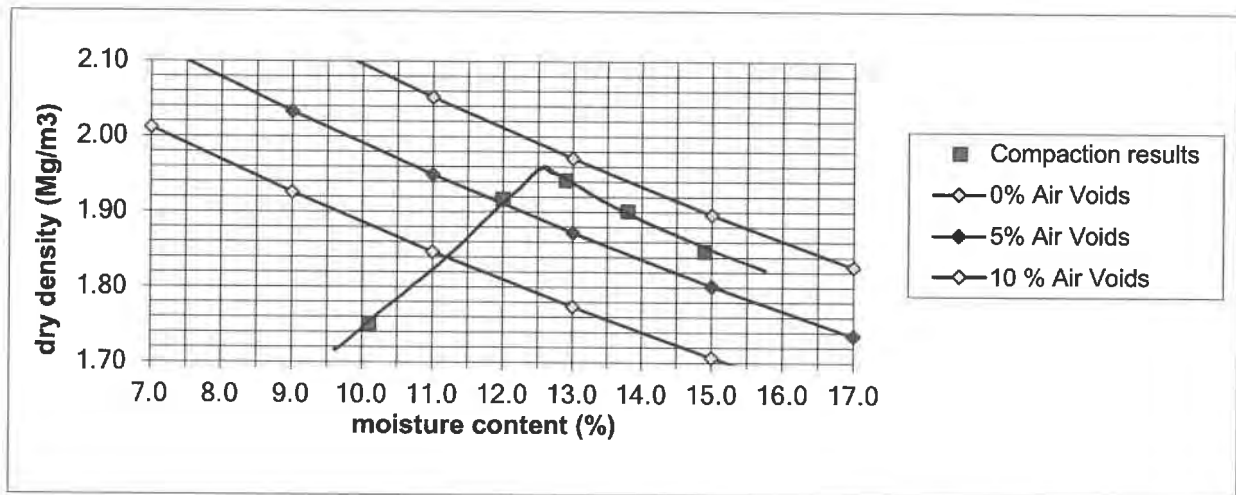
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR09	DATE SAMPLED	28-Apr-20
LAB SAMPLE No	89138	DATE RECEIVED	28-Apr-20
DATE TESTED	04-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m3)
1	10.1	1.751
2	12.0	1.917
3	12.9	1.942
4	13.8	1.901
5	14.9	1.848
Optimum	13.0	
Maximum		1.96
Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 43%
Percentage of material retained on 20mm sieve = 52%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

12-May-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/10
Laboratory sample number.	:	89138
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR10
Certificate of sampling received.	:	No
Date and time of sampling.	:	28 April 2020
Date received at Laboratory.	:	28 April 2020
Date of start of test	:	29 April 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	34% passing 14mm-retained 12.5mm 66% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 48

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 12 May 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
ORGANIC MATTER CONTENT
(Loss on Ignition)
BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/10

SAMPLE LABEL	CR10	DATE SAMPLED	28 April 2020
LAB SAMPLE No	89138	DATE RECEIVED	28 April 2020
DATE TESTED	04 May 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	16	%
Loss on Ignition material passing 2mm (Avg. of 2)	3.4	%

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 12 May 2020

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Former Boddington's Brewery,
Gt Ducie Street, Cheetham Hill,
Manchester M3 1PT

Job Number MRN 3817/11
Date of Issue 15 May 2020
Page 1 of 6

Approved Signatories

S J Hutchings, O P Davies

Notes

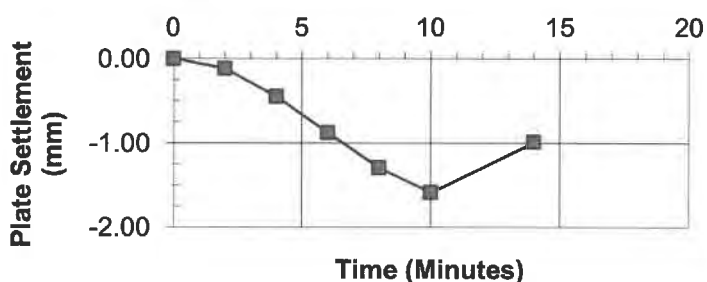
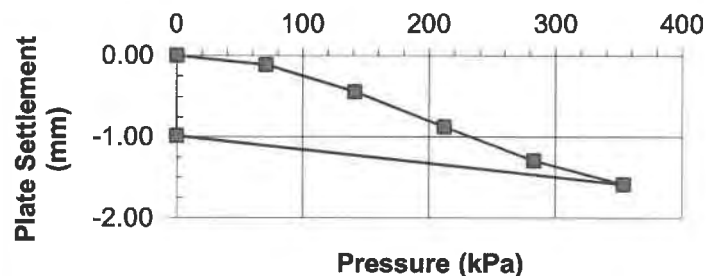
- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/11		
TEST LOCATION	MCC 1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	14-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4775	4820	4583	4726	0.00	0.00	0.0
4765	4802	4577	4715	-0.11	5.00	70.7
4740	4756	4548	4681	-0.45	10.00	141.5
4700	4702	4513	4638	-0.88	15.00	212.2
4662	4650	4478	4597	-1.29	20.00	282.9
4642	4606	4454	4567	-1.59	25.00	353.7
4691	4690	4501	4627	-0.99	0.00	0.0



Pressure at 1.25 mm deflexion =	276 kPa
Modulus of subgrade reaction (k) =	221 MPa/m
Equivalent 762 mm plate reaction =	98 MPa/m
Equivalent CBR =	27.0 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

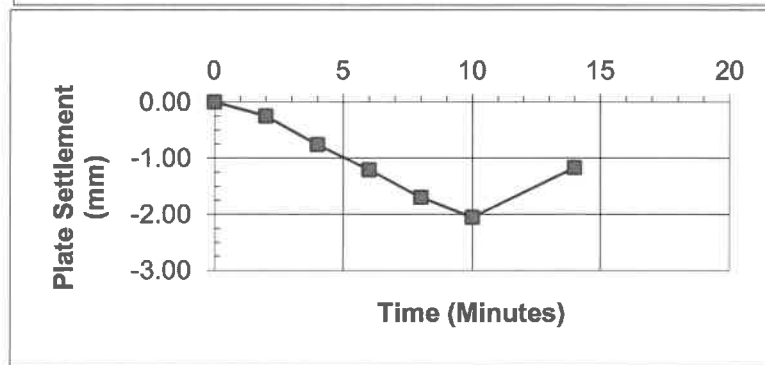
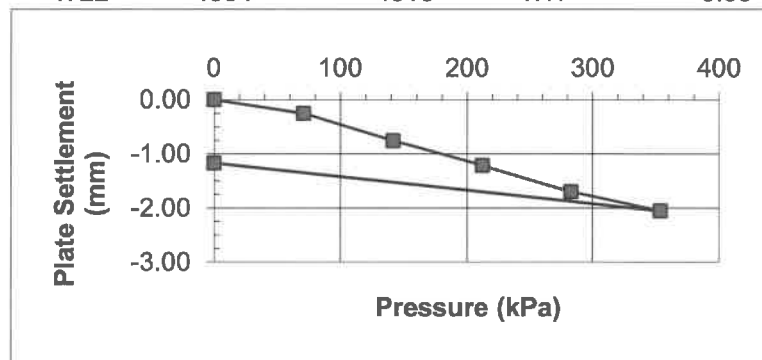
DATE 15-May-20



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/11		
TEST LOCATION	MCC 2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	14-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4690	4837	4671	4733	0.00	0.00	0.0
4665	4808	4650	4708	-0.25	5.00	70.7
4616	4759	4595	4657	-0.76	10.00	141.5
4570	4716	4549	4612	-1.21	15.00	212.2
4518	4667	4502	4562	-1.70	20.00	282.9
4484	4621	4477	4527	-2.05	25.00	353.7
4561	4722	4564	4616	-1.17	0.00	0.0



Pressure at 1.25 mm deflexion =	218 kPa
Modulus of subgrade reaction (k) =	174 MPa/m
Equivalent 762 mm plate reaction =	77 MPa/m
Equivalent CBR =	17.9 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

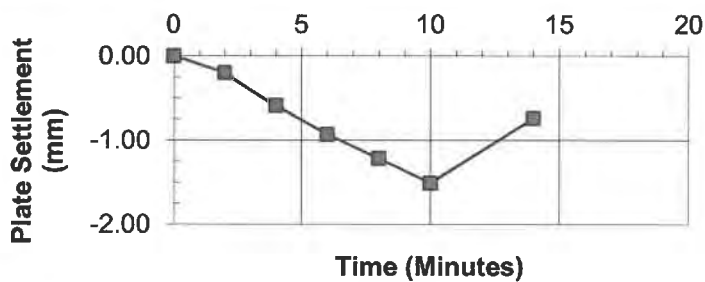
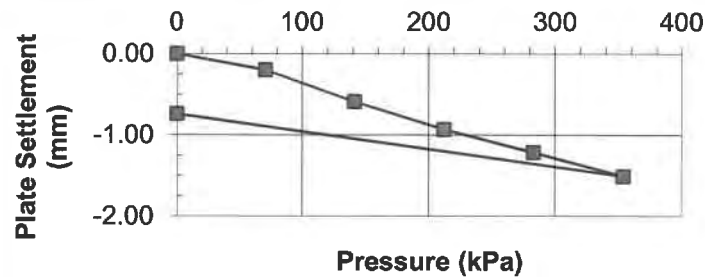
DATE 15-May-20



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/11		
TEST LOCATION	MCC 3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	14-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4940	4885	4852	4892	0.00	0.00	0.0
4916	4863	4838	4872	-0.20	5.00	70.7
4880	4824	4796	4833	-0.59	10.00	141.5
4853	4786	4758	4799	-0.93	15.00	212.2
4831	4753	4728	4771	-1.22	20.00	282.9
4798	4733	4693	4741	-1.51	25.00	353.7
4873	4813	4769	4818	-0.74	0.00	0.0



Pressure at 1.25 mm deflexion =	290 kPa
Modulus of subgrade reaction (k) =	232 MPa/m
Equivalent 762 mm plate reaction =	102 MPa/m
Equivalent CBR =	29.4 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 15-May-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



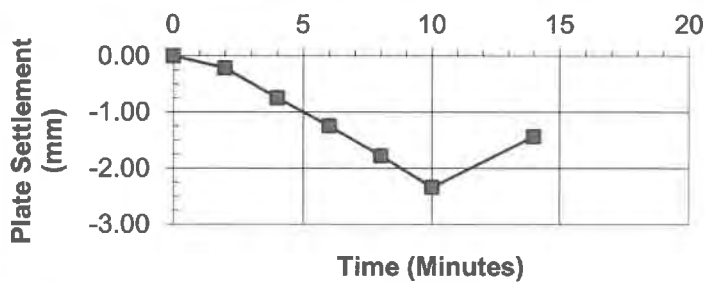
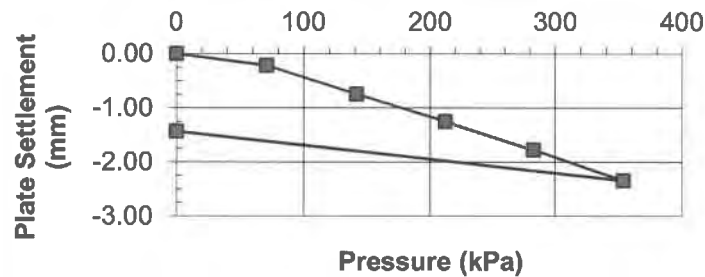
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/11		
TEST LOCATION	MCC 4	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	14-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4774	4683	4757	4738	0.00	0.00	0.0
4752	4660	4737	4716	-0.22	5.00	70.7
4686	4614	4690	4663	-0.75	10.00	141.5
4623	4559	4657	4613	-1.25	15.00	212.2
4560	4494	4626	4560	-1.78	20.00	282.9
4491	4427	4593	4504	-2.34	25.00	353.7
4594	4532	4658	4595	-1.43	0.00	0.0



Pressure at 1.25 mm deflexion =	212 kPa
Modulus of subgrade reaction (k) =	170 MPa/m
Equivalent 762 mm plate reaction =	75 MPa/m
Equivalent CBR =	17.1 %

REMARKS

SIGNED

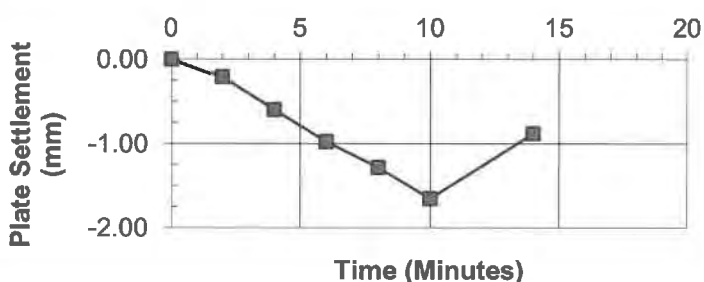
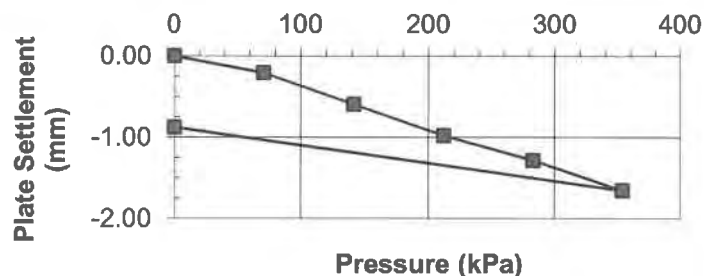
NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 15-May-20

TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/11		
TEST LOCATION	MCC 5	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	14-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4819	4663	4710	4731	0.00	0.00	0.0
4803	4641	4686	4710	-0.21	5.00	70.7
4762	4601	4650	4671	-0.60	10.00	141.5
4727	4562	4609	4633	-0.98	15.00	212.2
4703	4526	4577	4602	-1.29	20.00	282.9
4670	4483	4542	4565	-1.66	25.00	353.7
4733	4573	4622	4643	-0.88	0.00	0.0



Pressure at 1.25 mm deflexion =	274 kPa
Modulus of subgrade reaction (k) =	219 MPa/m
Equivalent 762 mm plate reaction =	97 MPa/m
Equivalent CBR =	26.7 %

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 15-May-20



TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Former Boddington's Brewery,
Gt Ducie Street, Cheetham Hill,
Manchester M3 1PT

Job Number MRN 3817/12
Date of Issue 21 May 2020
Page 1 of 6

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



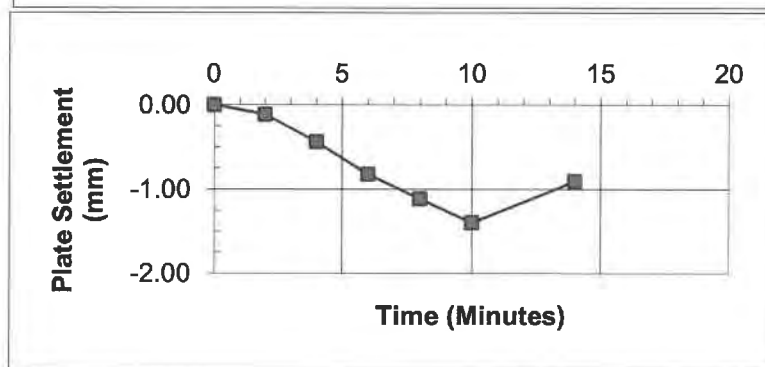
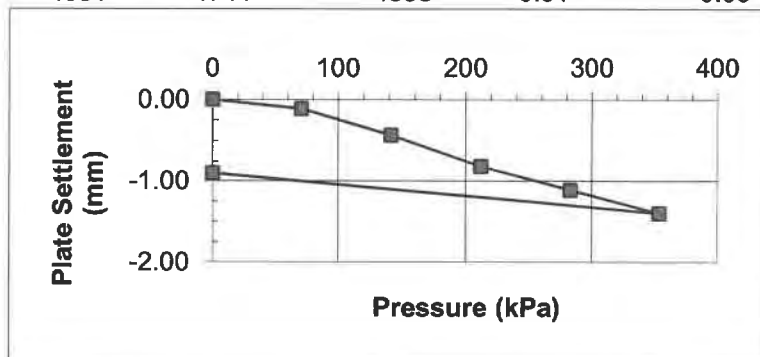
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/12		
TEST LOCATION	PR01	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4769	4762	4836	4789	0.00	0.00	0.0
4760	4747	4826	4778	-0.11	5.00	70.7
4725	4714	4796	4745	-0.44	10.00	141.5
4684	4680	4756	4707	-0.82	15.00	212.2
4656	4652	4725	4678	-1.11	20.00	282.9
4633	4614	4700	4649	-1.40	25.00	353.7
4670	4681	4744	4698	-0.91	0.00	0.0



Pressure at 1.25 mm deflexion =	317 kPa
Modulus of subgrade reaction (k) =	254 MPa/m
Equivalent 762 mm plate reaction =	112 MPa/m
Equivalent CBR =	34.3 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 21-May-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



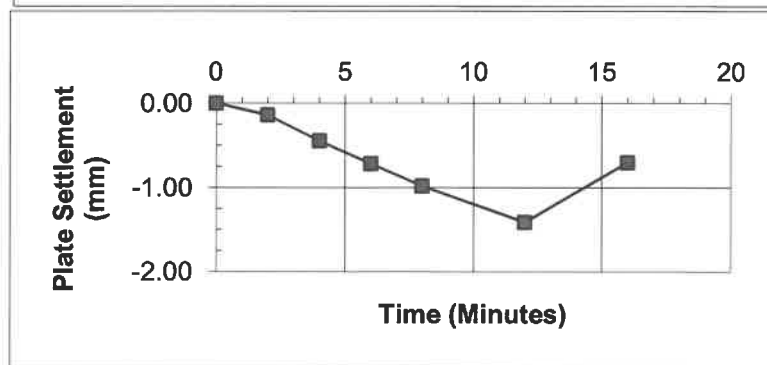
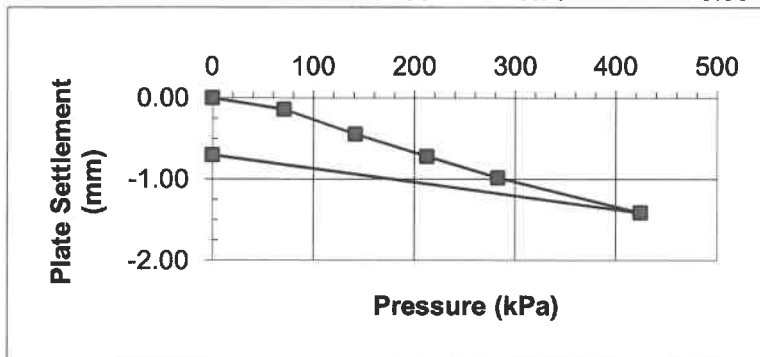
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate					
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT					
JOB NUMBER	MRN 3817/12					
TEST LOCATION	PR02	LOADING DEVICE		20 Tonne Enerpac Jack		
TEST DATE	20-May-20	PLATE SIZE (mm)		300 diameter		
TEST DEPTH	Surface	REACTION LOAD USED		Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT		Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4820	4933	4764	4839	0.00	0.00	0.0
4815	4910	4750	4825	-0.14	5.00	70.7
4786	4874	4723	4794	-0.45	10.00	141.5
4760	4841	4700	4767	-0.72	15.00	212.2
4733	4814	4675	4741	-0.98	20.00	282.9
4696	4765	4632	4698	-1.41	30.00	424.4
4752	4869	4685	4769	-0.70	0.00	0.0



Pressure at 1.25 mm deflexion =	372 kPa
Modulus of subgrade reaction (k) =	298 MPa/m
Equivalent 762 mm plate reaction =	131 MPa/m
Equivalent CBR =	45.3 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 21-May-20

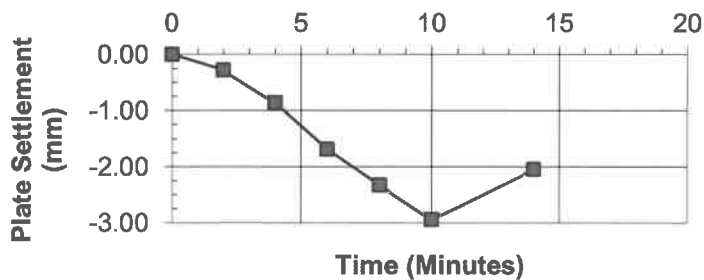
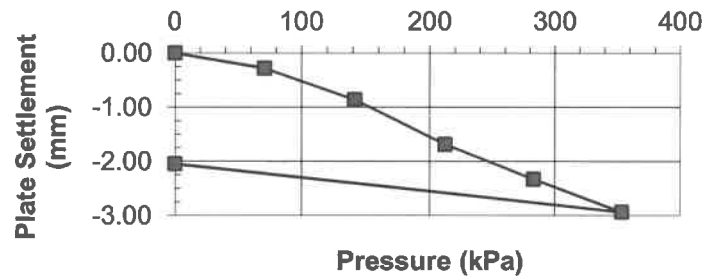
MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/12		
TEST LOCATION	PR03	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4805	4791	4734	4777	0.00	0.00	0.0
4773	4763	4710	4749	-0.28	5.00	70.7
4722	4700	4649	4690	-0.86	10.00	141.5
4656	4598	4569	4608	-1.69	15.00	212.2
4591	4518	4522	4544	-2.33	20.00	282.9
4536	4442	4470	4483	-2.94	25.00	353.7
4621	4551	4544	4572	-2.05	0.00	0.0



Pressure at 1.25 mm deflexion =	175 kPa
Modulus of subgrade reaction (k) =	140 MPa/m
Equivalent 762 mm plate reaction =	62 MPa/m
Equivalent CBR =	12.3 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 21-May-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



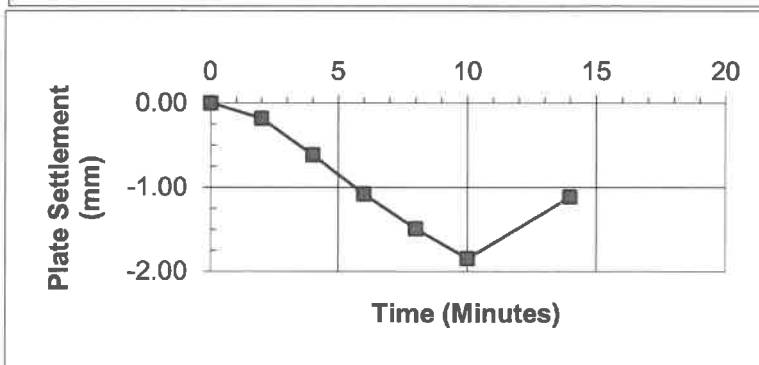
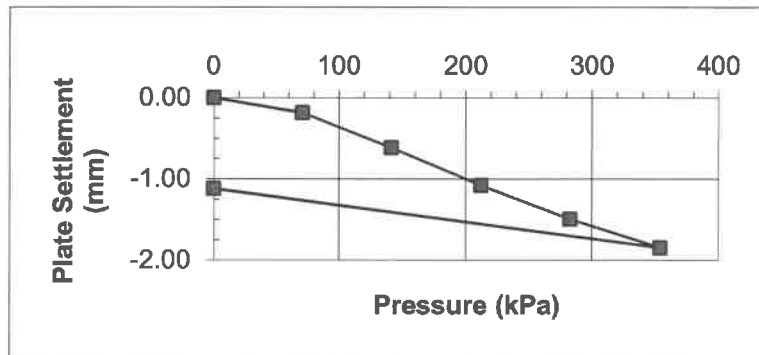
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/12		
TEST LOCATION	PR04	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4871	4851	4784	4835	0.00	0.00	0.0
4858	4831	4762	4817	-0.18	5.00	70.7
4819	4786	4716	4774	-0.62	10.00	141.5
4786	4730	4666	4727	-1.08	15.00	212.2
4752	4679	4627	4686	-1.49	20.00	282.9
4721	4638	4593	4651	-1.85	25.00	353.7
4763	4734	4674	4724	-1.12	0.00	0.0



Pressure at 1.25 mm deflexion =	242 kPa
Modulus of subgrade reaction (k) =	193 MPa/m
Equivalent 762 mm plate reaction =	85 MPa/m
Equivalent CBR =	21.4 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 21-May-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



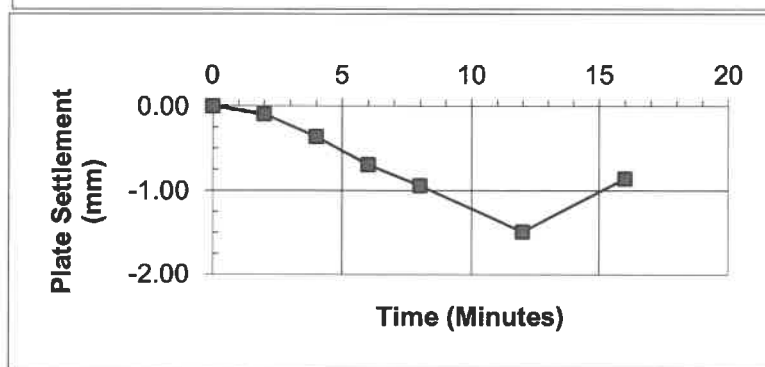
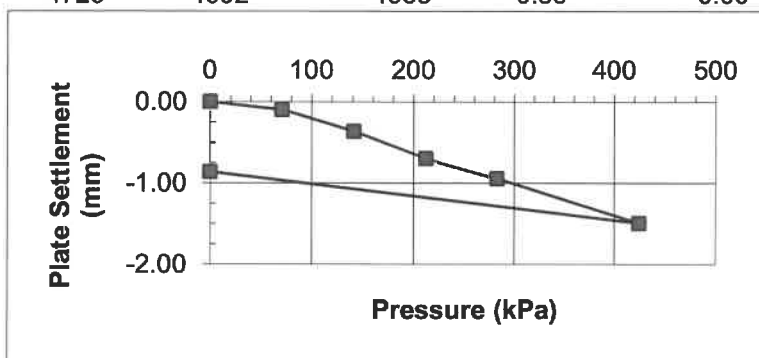
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/12		
TEST LOCATION	PR05	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4640	4827	4780	4749	0.00	0.00	0.0
4634	4810	4774	4739	-0.10	5.00	70.7
4613	4772	4753	4713	-0.36	10.00	141.5
4590	4730	4718	4679	-0.70	15.00	212.2
4570	4700	4694	4655	-0.94	20.00	282.9
4524	4640	4635	4600	-1.49	30.00	424.4
4570	4726	4692	4663	-0.86	0.00	0.0



Pressure at 1.25 mm deflexion =	363 kPa
Modulus of subgrade reaction (k) =	290 MPa/m
Equivalent 762 mm plate reaction =	128 MPa/m
Equivalent CBR =	43.4 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 21-May-20

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Former Boddington's Brewery,
Gt Ducie Street, Cheetham Hill,
Manchester M3 1PT

Job Number MRN 3817/13
Date of Issue 26 May 2020
Page 1 of 6

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX

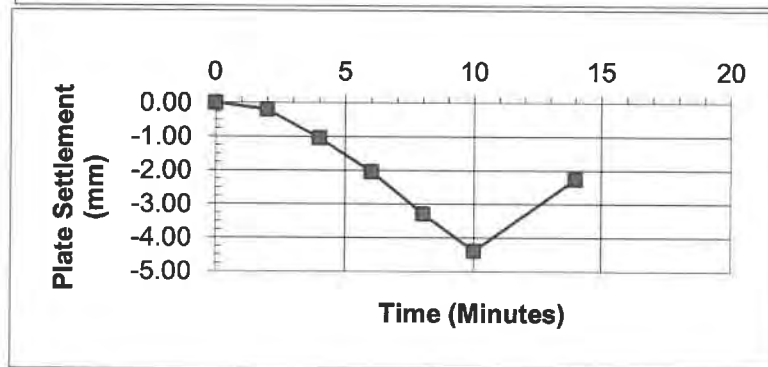
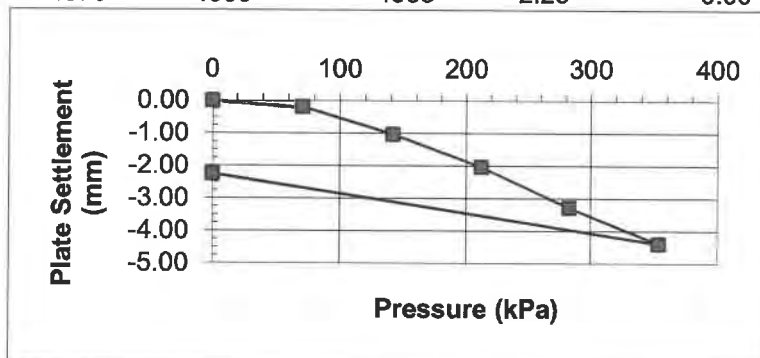
ANDREW HOUSE, HADFIELD STREET
 DUKINFIELD, CHESHIRE SK16 4QX
 TEL 0161 475 0870

**TEST CERTIFICATE****PLATE INCREMENTAL LOAD TEST**

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/13		
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	22-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4691	4810	4775	4759	0.00	0.00	0.0
4673	4785	4759	4739	-0.20	5.00	70.7
4590	4693	4681	4655	-1.04	10.00	141.5
4493	4587	4583	4554	-2.04	15.00	212.2
4361	4461	4467	4430	-3.29	20.00	282.9
4255	4351	4352	4319	-4.39	25.00	353.7
4471	4573	4555	4533	-2.26	0.00	0.0



Pressure at 1.25 mm deflexion =	156 kPa
Modulus of subgrade reaction (k) =	125 MPa/m
Equivalent 762 mm plate reaction =	55 MPa/m
Equivalent CBR =	10.0 %

REMARKS

SIGNED

NAME S.J. Hutchings
 (Director)

DATE 26-May-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



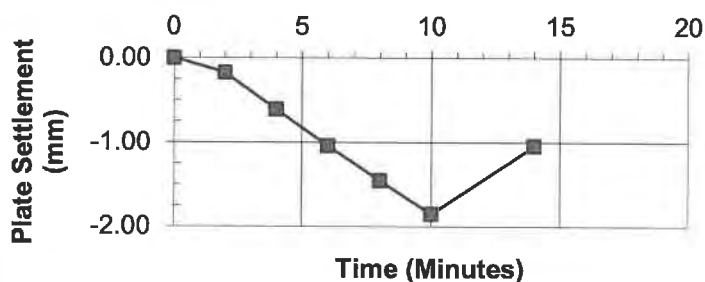
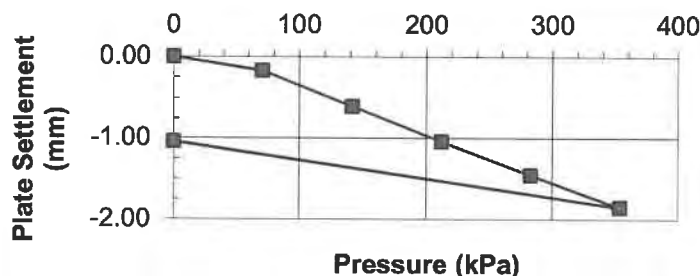
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/13		
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	22-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4713	4852	4826	4797	0.00	0.00	0.0
4699	4831	4809	4780	-0.17	5.00	70.7
4658	4783	4767	4736	-0.61	10.00	141.5
4613	4732	4733	4693	-1.04	15.00	212.2
4572	4686	4696	4651	-1.46	20.00	282.9
4535	4649	4651	4612	-1.85	25.00	353.7
4610	4741	4727	4693	-1.04	0.00	0.0



Pressure at 1.25 mm deflexion =	248 kPa
Modulus of subgrade reaction (k) =	198 MPa/m
Equivalent 762 mm plate reaction =	87 MPa/m
Equivalent CBR =	22.4 %

REMARKS

SIGNED

NAME S.J. Hutchings
(Director)

DATE 26-May-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



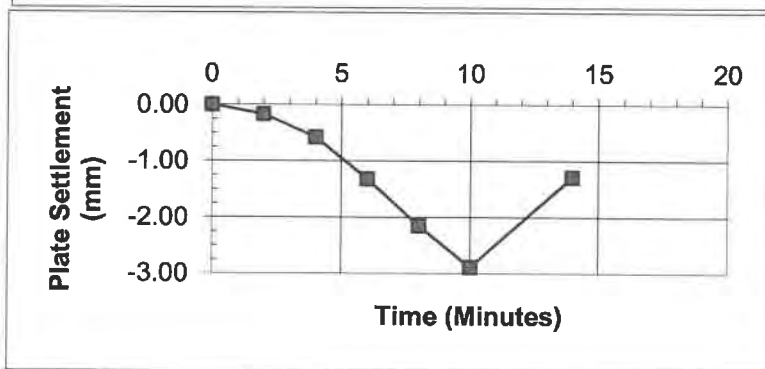
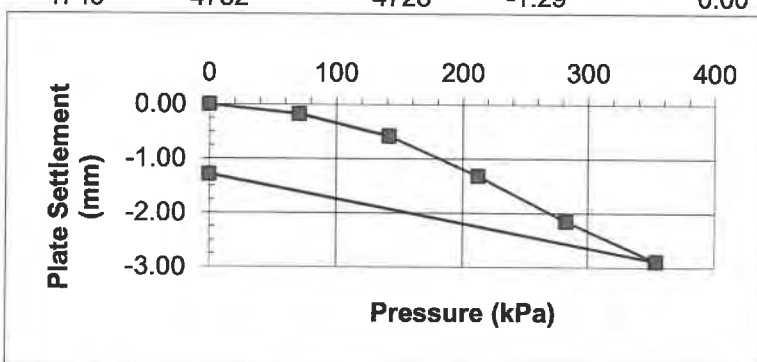
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/13		
TEST LOCATION	3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	22-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4836	4882	4852	4857	0.00	0.00	0.0
4810	4870	4838	4839	-0.17	5.00	70.7
4773	4819	4804	4799	-0.58	10.00	141.5
4694	4740	4740	4725	-1.32	15.00	212.2
4608	4654	4661	4641	-2.16	20.00	282.9
4530	4580	4593	4568	-2.89	25.00	353.7
4702	4749	4732	4728	-1.29	0.00	0.0



Pressure at 1.25 mm deflexion =	206 kPa
Modulus of subgrade reaction (k) =	164 MPa/m
Equivalent 762 mm plate reaction =	73 MPa/m
Equivalent CBR =	16.2 %

REMARKS

SIGNED

NAME S.J. Hutchings
(Director)

DATE 26-May-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



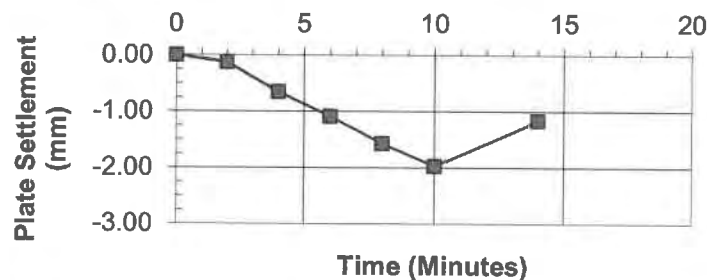
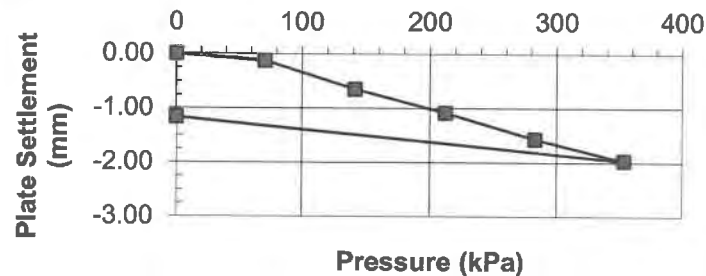
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/13		
TEST LOCATION	4	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	22-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4671	4787	4791	4750	0.00	0.00	0.0
4661	4770	4780	4737	-0.13	5.00	70.7
4606	4714	4734	4685	-0.65	10.00	141.5
4564	4667	4691	4641	-1.09	15.00	212.2
4522	4617	4639	4593	-1.57	20.00	282.9
4483	4575	4599	4552	-1.97	25.00	353.7
4560	4664	4676	4633	-1.16	0.00	0.0



Pressure at 1.25 mm deflexion =	236 kPa
Modulus of subgrade reaction (k) =	189 MPa/m
Equivalent 762 mm plate reaction =	83 MPa/m
Equivalent CBR =	20.6 %

REMARKS

SIGNED

NAME S.J. Hutchings
(Director)

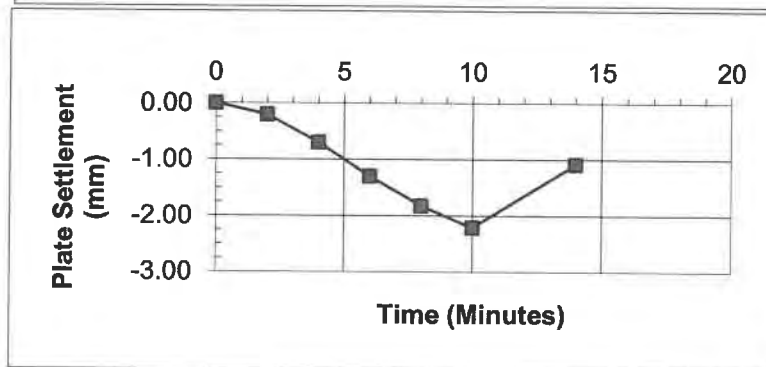
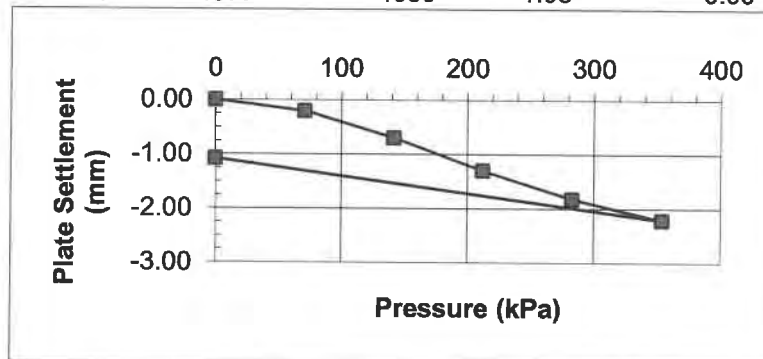
DATE 26-May-20



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/13		
TEST LOCATION	5	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	22-May-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4762	4902	4702	4789	0.00	0.00	0.0
4742	4884	4678	4768	-0.21	5.00	70.7
4690	4840	4627	4719	-0.70	10.00	141.5
4630	4785	4561	4659	-1.30	15.00	212.2
4572	4738	4508	4606	-1.83	20.00	282.9
4535	4701	4466	4567	-2.21	25.00	353.7
4651	4813	4577	4680	-1.08	0.00	0.0



Pressure at 1.25 mm deflexion =	206 kPa
Modulus of subgrade reaction (k) =	165 MPa/m
Equivalent 762 mm plate reaction =	73 MPa/m
Equivalent CBR =	16.3 %

REMARKS

SIGNED

NAME S.J. Hutchings
(Director)

DATE 26-May-20

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract CLR 19 1016 –
Manchester College Campus

Job Number MRN 3817/13A
Date of Issue 01 June 2020
Page 1 of 13

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

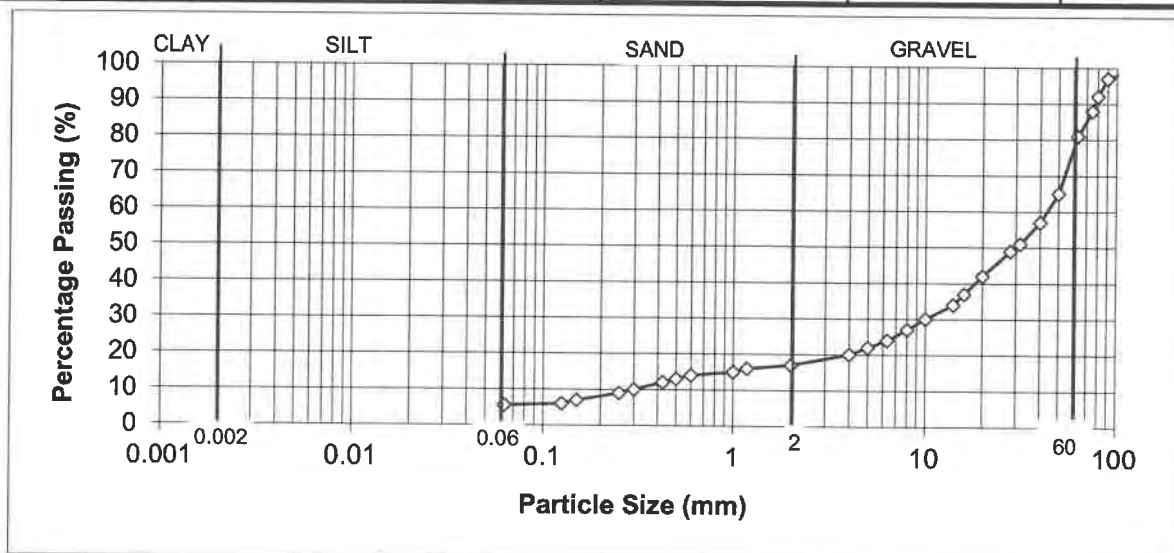
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR11	DATE SAMPLED	14-May-20
LAB SAMPLE No	89344	DATE RECEIVED	14-May-20
DATE TESTED	14-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	24	
90	97		5	22	
80	92	75-99	4	20	
75	88		2	17	0-35
63	81		1.18	16	
50	65		1	15	
40	57	50-90	0.6	14	
31.5	51		0.5	13	
28	49		0.425	12	
20	42	30-75	0.3	10	
16	37		0.25	9	
14	34		0.15	7	
10	30	15-60	0.125	6	
8	27		0.063	5.5	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)
As received moisture content = 6.4%

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

01-Jun-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

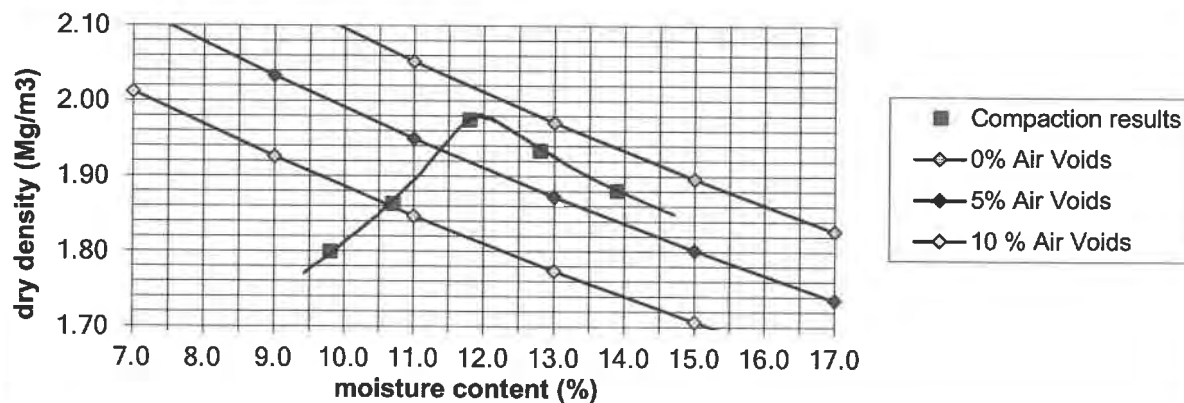
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR11	DATE SAMPLED	14-May-20
LAB SAMPLE No	89344	DATE RECEIVED	14-May-20
DATE TESTED	14-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m ³)
1	9.8	1.799
2	10.7	1.863
3	11.8	1.975
4	12.8	1.934
5	13.9	1.881
Optimum	12.0	
Maximum		1.98
Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 43%
Percentage of material retained on 20mm sieve = 58%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

01-Jun-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/13A
Laboratory sample number.	:	89344
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR11
Certificate of sampling received.	:	No
Date and time of sampling.	:	14 May 2020
Date received at Laboratory.	:	14 May 2020
Date of start of test	:	15 May 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	35% passing 14mm-retained 12.5mm 65% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 45

Comment

Signed 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 01 June 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE**ORGANIC MATTER CONTENT**

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR11	DATE SAMPLED	14 May 2020
LAB SAMPLE No	89344	DATE RECEIVED	14 May 2020
DATE TESTED	15 May 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	12	%
Loss on Ignition material passing 2mm (Avg. of 2)	2.9	%

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 01 June 2020

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

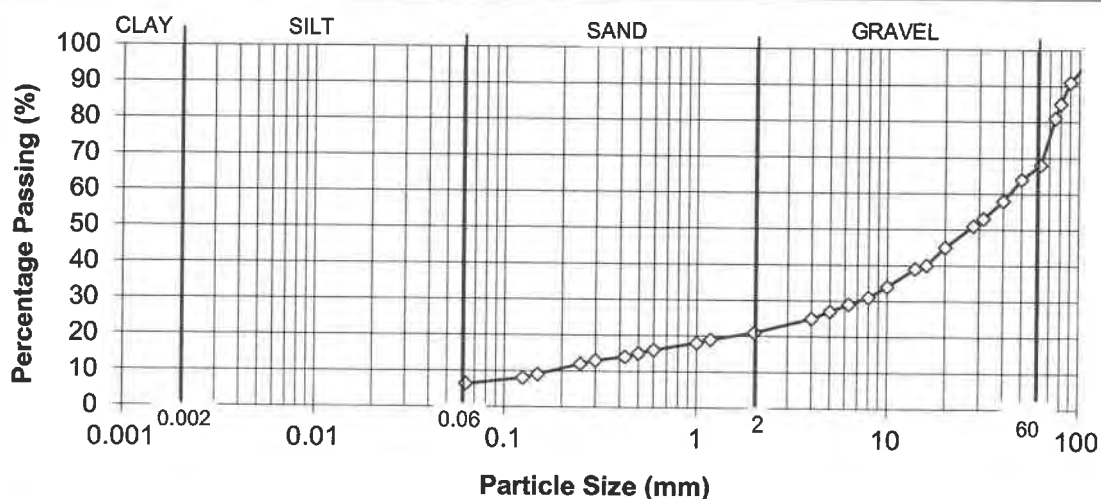
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR12	DATE SAMPLED	14-May-20
LAB SAMPLE No	89345	DATE RECEIVED	14-May-20
DATE TESTED	14-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	29	
90	91		5	27	
80	85	75-99	4	25	
75	81		2	21	0-35
63	68		1.18	19	
50	64		1	18	
40	58	50-90	0.6	16	
31.5	53		0.5	15	
28	51		0.425	14	
20	45	30-75	0.3	13	
16	40		0.25	12	
14	39		0.15	9	
10	34	15-60	0.125	8	
8	31		0.063	6.3	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)
As received moisture content = 6.2%

SIGNED



NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

01-Jun-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

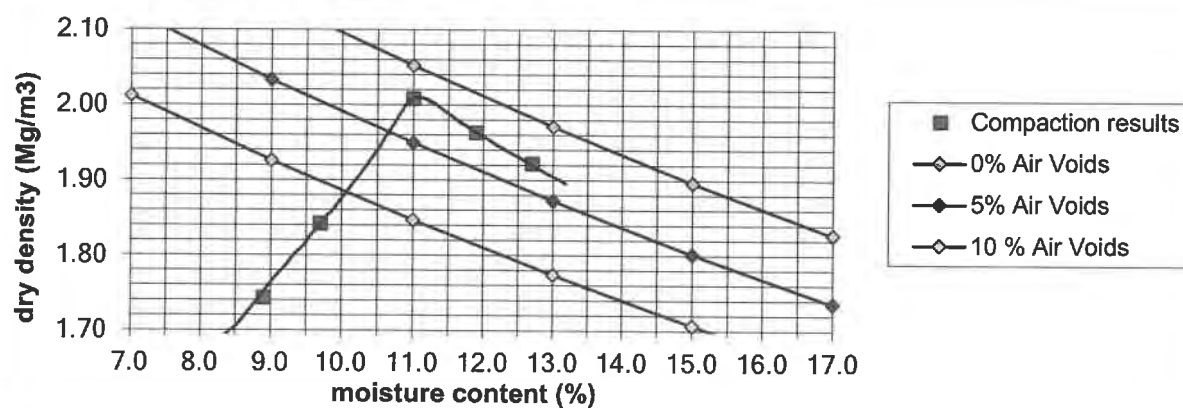
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR12	DATE SAMPLED	14-May-20
LAB SAMPLE No	89345	DATE RECEIVED	14-May-20
DATE TESTED	14-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m ³)
1	8.9	1.743
2	9.7	1.842
3	11.0	2.008
4	11.9	1.963
5	12.7	1.922
Optimum	11.0	
Maximum		2.01
Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 42%
Percentage of material retained on 20mm sieve = 55%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

01-Jun-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/13A
Laboratory sample number.	:	89345
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR12
Certificate of sampling received.	:	No
Date and time of sampling.	:	14 May 2020
Date received at Laboratory.	:	14 May 2020
Date of start of test	:	15 May 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	35% passing 14mm-retained 12.5mm 65% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 48

Comment

Signed 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 01 June 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE**ORGANIC MATTER CONTENT**

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR12	DATE SAMPLED	14 May 2020
LAB SAMPLE No	89345	DATE RECEIVED	14 May 2020
DATE TESTED	15 May 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	17	%
Loss on Ignition material passing 2mm (Avg. of 2)	3.0	%

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 01 June 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

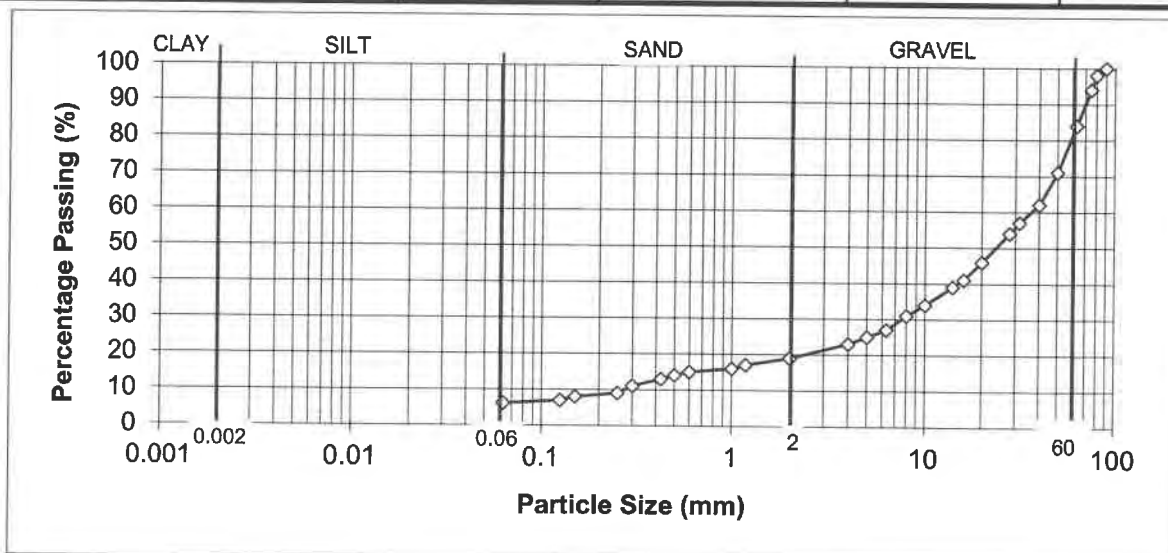
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR13	DATE SAMPLED	14-May-20
LAB SAMPLE No	89346	DATE RECEIVED	14-May-20
DATE TESTED	14-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	27	
90	100		5	25	
80	98	75-99	4	23	
75	94		2	19	0-35
63	84		1.18	17	
50	71		1	16	
40	62	50-90	0.6	15	
31.5	57		0.5	14	
28	54		0.425	13	
20	46	30-75	0.3	11	
16	41		0.25	9	
14	39		0.15	8	
10	34	15-60	0.125	7	
8	31		0.063	6.1	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 5.4%

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

01-Jun-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

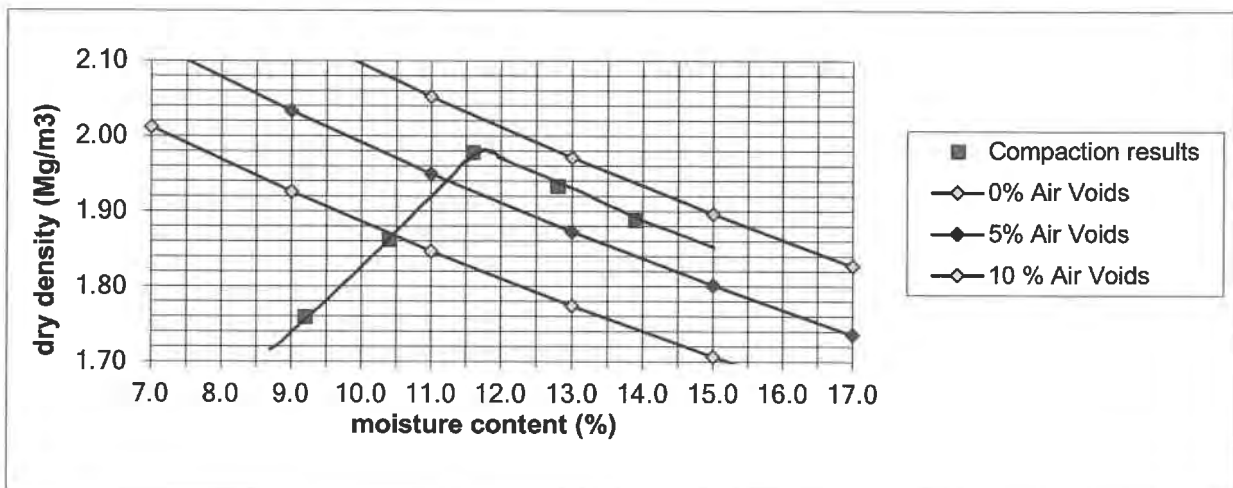
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR13	DATE SAMPLED	14-May-20
LAB SAMPLE No	89346	DATE RECEIVED	14-May-20
DATE TESTED	14-May-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m ³)
1	9.2	1.759
2	10.4	1.862
3	11.6	1.978
4	12.8	1.933
5	13.9	1.888
Optimum	12.0	
Maximum		1.98
Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 38%
Percentage of material retained on 20mm sieve = 54%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

01-Jun-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/13A
Laboratory sample number.	:	89346
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR13
Certificate of sampling received.	:	No
Date and time of sampling.	:	14 May 2020
Date received at Laboratory.	:	14 May 2020
Date of start of test	:	15 May 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	33% passing 14mm-retained 12.5mm 67% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 48

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 01 June 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE**ORGANIC MATTER CONTENT**

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/13A

SAMPLE LABEL	CR13	DATE SAMPLED	14 May 2020
LAB SAMPLE No	89346	DATE RECEIVED	14 May 2020
DATE TESTED	15 May 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	16	%
Loss on Ignition material passing 2mm (Avg. of 2)	2.7	%

REMARKS

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 01 June 2020

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Former Boddington's Brewery,
Gt Ducie Street, Cheetham Hill,
Manchester M3 1PT

Job Number MRN 3817/14
Date of Issue 11 June 2020
Page 1 of 70

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.



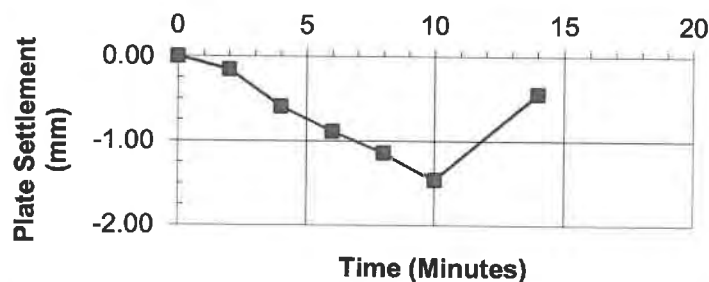
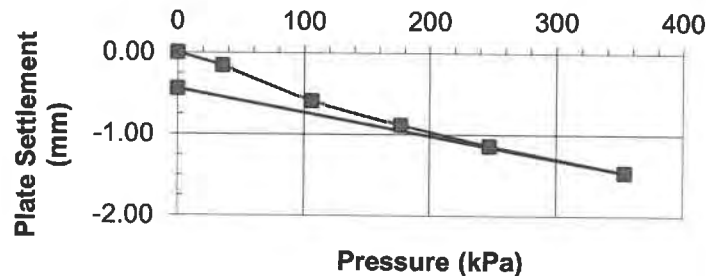
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4936	4852	4827	4872	0.00	0.00	0.0
4917	4840	4811	4856	-0.16	10.00	35.4
4865	4803	4769	4812	-0.59	30.00	106.1
4833	4776	4740	4783	-0.89	50.00	176.8
4800	4753	4720	4758	-1.14	70.00	247.6
4756	4719	4701	4725	-1.46	100.00	353.7
4878	4804	4800	4827	-0.44	0.00	0.0



Pressure at 1.25 mm deflexion =	284 kPa
Modulus of subgrade reaction (k) =	227 MPa/m
Equivalent 762 mm plate reaction =	183 MPa/m
Equivalent CBR =	80.2 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	1	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	1	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	2 22 20 16 17	0 10 20 30 40 50		
1	20 24 16 13 11		0	
	6 4 3 1 2		0	
2	1 2 1 2 1		0	
	2 1 2 1 2		0	
3	2 1 2 2 3		0	
	3 3 3 3 3		0	
4	4 4 3 3 4		0	
	3 4 5 4 4		0	
5	5 5 6 6 5		0	
	0 0 0 0 0			
6	0 0 0 0 0			
	0 0 0 0 0			
7	0 0 0 0 0			
	0 0 0 0 0			
8	0 0 0 0 0			
	0 0 0 0 0			
9	0 0 0 0 0			
	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
☐ O.P. Davies
☐

Signature

1/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 1

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	2		
0.2	22		
0.3	20	29	290
0.4	16		
0.5	17		
0.6	20	35	350
0.7	24		
0.8	16		
0.9	13	35	350
1	11		
1.1	6		
1.2	4	14	140
1.3	3		
1.4	1		
1.5	2	4	40
1.6	1		
1.7	2		
1.8	1	3	30
1.9	2		
2	1		
2.1	2	3	30
2.2	1		
2.3	2		
2.4	1	3	30
2.5	2		
2.6	2		
2.7	1	3	30
2.8	2		
2.9	2		
3	3	5	50
3.1	3		
3.2	3		
3.3	3	6	60
3.4	3		
3.5	3		
3.6	4	7	70
3.7	4		
3.8	3		
3.9	3	7	70
4	4		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	3		
4.2	4	7	70
4.3	5		
4.4	4		
4.5	4	9	90
4.6	5		
4.7	5		
4.8	6	11	110
4.9	6		
5	5		
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



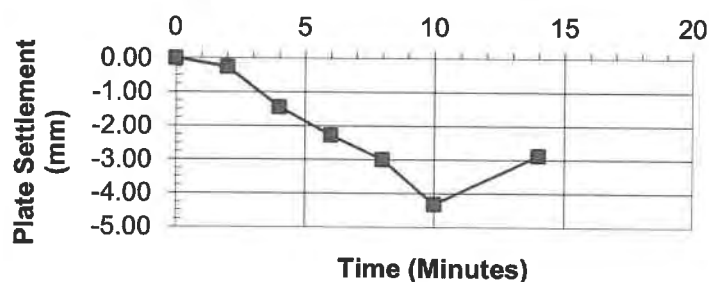
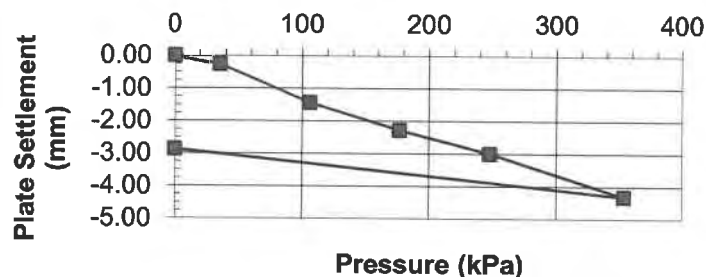
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4687	4763	4686	4712	0.00	0.00	0.0
4651	4740	4667	4686	-0.26	10.00	35.4
4495	4651	4557	4568	-1.44	30.00	106.1
4395	4575	4482	4484	-2.28	50.00	176.8
4310	4510	4417	4412	-3.00	70.00	247.6
4150	4387	4303	4280	-4.32	100.00	353.7
4316	4571	4387	4425	-2.87	0.00	0.0



Pressure at 1.25 mm deflexion =	95 kPa
Modulus of subgrade reaction (k) =	76 MPa/m
Equivalent 762 mm plate reaction =	61 MPa/m
Equivalent CBR =	12.0 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	2	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	2	interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	7 17 24 33 32	0 10 20 30 40 50		
1	30 15 8 5 3		0	
	4 5 4 3 3		0	
2	4 5 3 3 2		0	
	2 3 2 2 1		0	
3	1 2 2 3 4		0	
	3 3 3 3 3		0	
4	3 3 3 4 5			
	4 4 5 refusa 0			
5	0 0 0 0 0			
	0 0 0 0 0			
6	0 0 0 0 0			
	0 0 0 0 0			
7	0 0 0 0 0			
	0 0 0 0 0			
8	0 0 0 0 0			
	0 0 0 0 0			
9	0 0 0 0 0			
	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
☐ O.P. Davies
☐

Signature _____ 11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 2

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	7		
0.2	17		
0.3	24	32	320
0.4	33		
0.5	32		
0.6	30	63	630
0.7	15		
0.8	8		
0.9	5	19	190
1	3		
1.1	4		
1.2	5	8	80
1.3	4		
1.4	3		
1.5	3	7	70
1.6	4		
1.7	5		
1.8	3	8	80
1.9	3		
2	2		
2.1	2	5	50
2.2	3		
2.3	2		
2.4	2	5	50
2.5	1		
2.6	1		
2.7	2	3	30
2.8	2		
2.9	3		
3	4	6	60
3.1	3		
3.2	3		
3.3	3	6	60
3.4	3		
3.5	3		
3.6	3	6	60
3.7	3		
3.8	3		
3.9	4	7	70
4	5		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	4		
4.2	4	9	90
4.3	5		
4.4	refusal		
4.5			
4.6			
4.7			
4.8			
4.9			
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			



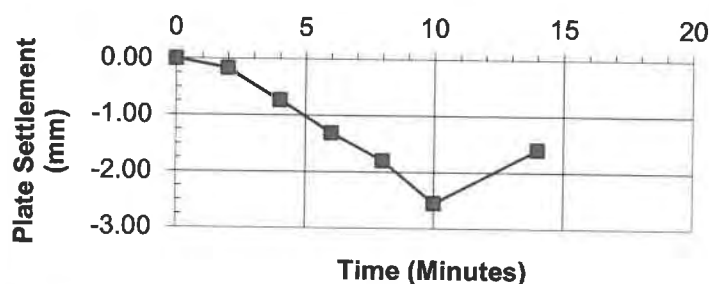
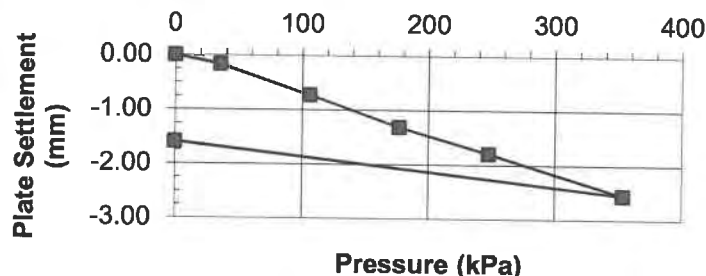
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate				
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT				
JOB NUMBER	MRN 3817/14				
TEST LOCATION	3	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4815	4937	4622	4791	0.00	0.00	0.0
4810	4897	4618	4775	-0.16	10.00	35.4
4758	4820	4577	4718	-0.73	30.00	106.1
4696	4754	4531	4660	-1.31	50.00	176.8
4641	4698	4496	4612	-1.80	70.00	247.6
4527	4640	4441	4536	-2.55	100.00	353.7
4623	4786	4487	4632	-1.59	0.00	0.0



Pressure at 1.25 mm deflexion =	170 kPa
Modulus of subgrade reaction (k) =	136 MPa/m
Equivalent 762 mm plate reaction =	109 MPa/m
Equivalent CBR =	32.8 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	3	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	3	interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	4 12 28 14 15	0 10 20 30 40 50		
1	17 9 6 4 3		0	
2	3 7 4 3 3		0	
3	2 3 4 4 6		0	
4	3 3 2 3 5		0	
5	3 3 3 1 13		0	
6	4 3 1 3 3		0	
7	7 9 12 16 21		0	
8	29 refusal 0 0 0			
9	0 0 0 0 0			
10	0 0 0 0 0			
11	0 0 0 0 0			
12	0 0 0 0 0			
13	0 0 0 0 0			
14	0 0 0 0 0			
15	0 0 0 0 0			
16	0 0 0 0 0			
17	0 0 0 0 0			
18	0 0 0 0 0			
19	0 0 0 0 0			
20	0 0 0 0 0			
21	0 0 0 0 0			
22	0 0 0 0 0			
23	0 0 0 0 0			
24	0 0 0 0 0			
25	0 0 0 0 0			
26	0 0 0 0 0			
27	0 0 0 0 0			
28	0 0 0 0 0			
29	0 0 0 0 0			
30	0 0 0 0 0			
31	0 0 0 0 0			
32	0 0 0 0 0			
33	0 0 0 0 0			
34	0 0 0 0 0			
35	0 0 0 0 0			
36	0 0 0 0 0			
37	0 0 0 0 0			
38	0 0 0 0 0			
39	0 0 0 0 0			
40	0 0 0 0 0			
41	0 0 0 0 0			
42	0 0 0 0 0			
43	0 0 0 0 0			
44	0 0 0 0 0			
45	0 0 0 0 0			
46	0 0 0 0 0			
47	0 0 0 0 0			
48	0 0 0 0 0			
49	0 0 0 0 0			
50	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 3

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	4		
0.2	12		
0.3	28	29	290
0.4	14		
0.5	15		
0.6	17	31	310
0.7	9		
0.8	6		
0.9	4	13	130
1	3		
1.1	3		
1.2	7	9	90
1.3	4		
1.4	3		
1.5	3	7	70
1.6	2		
1.7	3		
1.8	4	6	60
1.9	4		
2	6		
2.1	3	9	90
2.2	3		
2.3	2		
2.4	3	5	50
2.5	5		
2.6	3		
2.7	3	7	70
2.8	3		
2.9	1		
3	13	11	110
3.1	4		
3.2	3		
3.3	1	5	50
3.4	3		
3.5	3		
3.6	7	9	90
3.7	9		
3.8	12		
3.9	16	25	250
4	21		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	29		
4.2	refusal		
4.3			
4.4			
4.5			
4.6			
4.7			
4.8			
4.9			
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



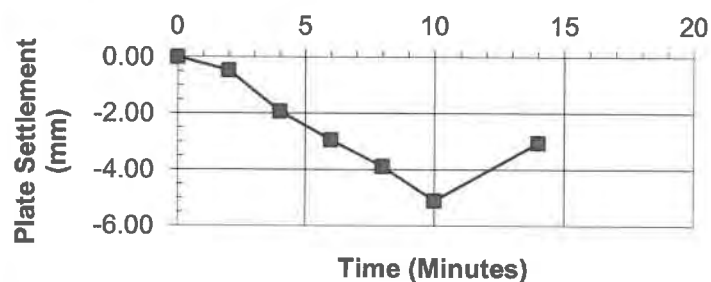
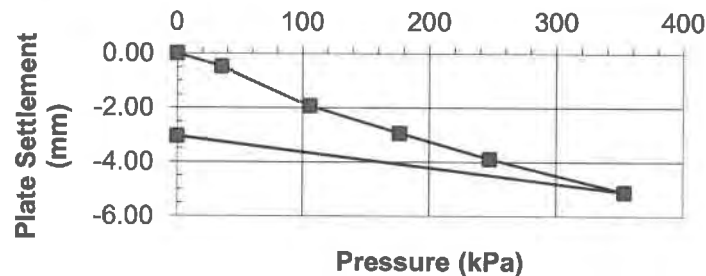
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	4	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4811	4676	4839	4775	0.00	0.00	0.0
4760	4635	4789	4728	-0.47	10.00	35.4
4617	4502	4628	4582	-1.93	30.00	106.1
4509	4403	4530	4481	-2.95	50.00	176.8
4410	4314	4434	4386	-3.89	70.00	247.6
4282	4176	4333	4264	-5.12	100.00	353.7
4494	4366	4551	4470	-3.05	0.00	0.0



Pressure at 1.25 mm deflexion =	73 kPa
Modulus of subgrade reaction (k) =	58 MPa/m
Equivalent 762 mm plate reaction =	47 MPa/m
Equivalent CBR =	7.6 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	4	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	4	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	7 10 22 19 17	0 10 20 30 40 50		
1	12 13 10 6 5		0	
	5 5 3 7 4		0	
2	3 3 1 2 3		0	
	5 2 3 2 3		0	
3	4 3 3 2 2		0	
	2 2 2 1 2		0	
4	3 3 9 9 4			
	2 3 3 16 20			
5	refusa 0 0 0 0			
	0 0 0 0 0			
6	0 0 0 0 0			
	0 0 0 0 0			
7	0 0 0 0 0			
	0 0 0 0 0			
8	0 0 0 0 0			
	0 0 0 0 0			
9	0 0 0 0 0			
	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
☐ O.P. Davies
☐

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 4

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	7		
0.2	10		
0.3	22	26	260
0.4	19		
0.5	17		
0.6	12	32	320
0.7	13		
0.8	10		
0.9	6	19	190
1	5		
1.1	5		
1.2	5	10	100
1.3	3		
1.4	7		
1.5	4	9	90
1.6	3		
1.7	3		
1.8	1	5	50
1.9	2		
2	3		
2.1	5	7	70
2.2	2		
2.3	3		
2.4	2	5	50
2.5	3		
2.6	4		
2.7	3	7	70
2.8	3		
2.9	2		
3	2	5	50
3.1	2		
3.2	2		
3.3	2	4	40
3.4	1		
3.5	2		
3.6	3	4	40
3.7	3		
3.8	9		
3.9	9	14	140
4	4		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	2		
4.2	3	6	60
4.3	3		
4.4	16		
4.5	20	26	260
4.6	refusal		
4.7			
4.8			
4.9			
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

MURRAY RIX

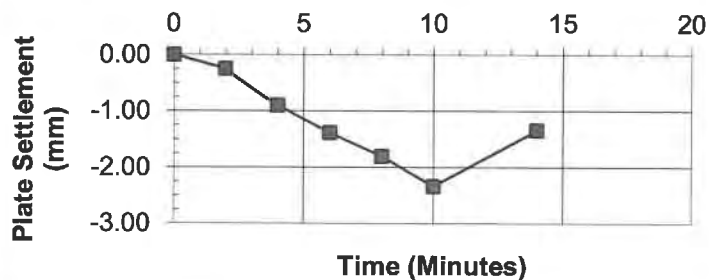
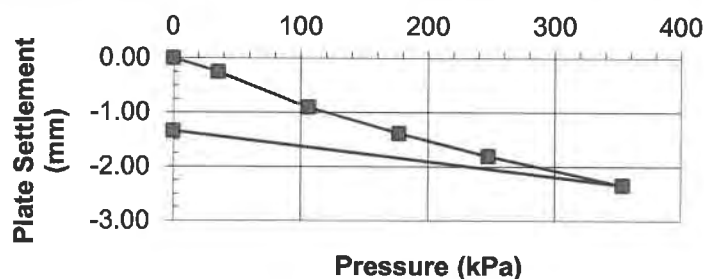
ANDREW HOUSE, HADFIELD STREET
 DUKINFIELD, CHESHIRE SK16 4QX
 TEL 0161 475 0870

**TEST CERTIFICATE****PLATE INCREMENTAL LOAD TEST**

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	5	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4778	4807	4922	4836	0.00	0.00	0.0
4758	4782	4892	4811	-0.25	10.00	35.4
4685	4711	4840	4745	-0.90	30.00	106.1
4639	4662	4790	4697	-1.39	50.00	176.8
4602	4616	4747	4655	-1.81	70.00	247.6
4560	4538	4706	4601	-2.34	100.00	353.7
4621	4617	4866	4701	-1.34	0.00	0.0



Pressure at 1.25 mm deflexion =	157 kPa
Modulus of subgrade reaction (k) =	125 MPa/m
Equivalent 762 mm plate reaction =	101 MPa/m
Equivalent CBR =	28.6 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
 (Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	5	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	5	interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	8 24 44 31 27	0 10 20 30 40 50		
1	12 14 11 10 11		0	
2	4 2 1 2 8		0	
3	18 36 29 21 21		0	
4	20 23 27 24 refusal			
5	0 0 0 0 0			
6	0 0 0 0 0			
7	0 0 0 0 0			
8	0 0 0 0 0			
9	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 5

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m2
0			
0.1	8		
0.2	24		
0.3	44	51	510
0.4	31		
0.5	27		
0.6	25	55	550
0.7	21		
0.8	20		
0.9	19	40	400
1	13		
1.1	12		
1.2	14	26	260
1.3	11		
1.4	10		
1.5	11	21	210
1.6	11		
1.7	7		
1.8	9	18	180
1.9	9		
2	7		
2.1	4	13	130
2.2	2		
2.3	1		
2.4	2	3	30
2.5	8		
2.6	18		
2.7	36	41	410
2.8	29		
2.9	21		
3	21	47	470
3.1	20		
3.2	23		
3.3	27	47	470
3.4	24		
3.5	refusal		
3.6			
3.7			
3.8			
3.9			
4			

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



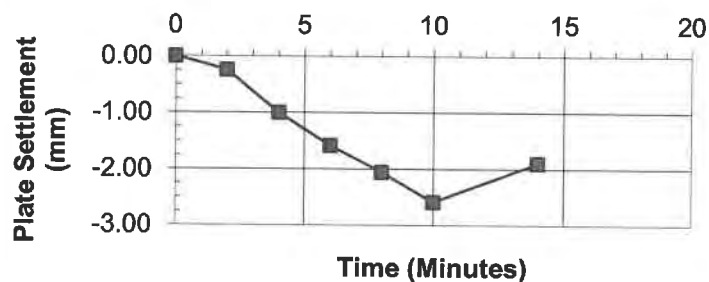
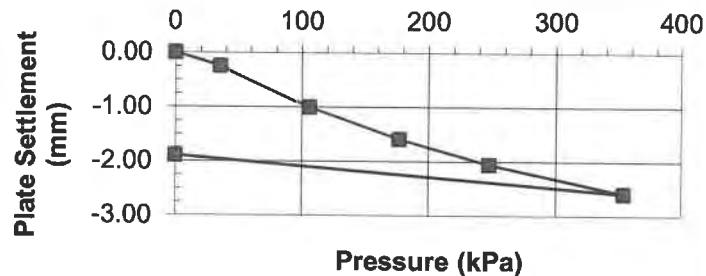
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	6	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4794	4663	4768	4742	0.00	0.00	0.0
4759	4639	4754	4717	-0.24	10.00	35.4
4667	4566	4691	4641	-1.00	30.00	106.1
4596	4518	4635	4583	-1.59	50.00	176.8
4542	4470	4595	4536	-2.06	70.00	247.6
4465	4425	4558	4483	-2.59	100.00	353.7
4558	4478	4620	4552	-1.90	0.00	0.0



Pressure at 1.25 mm deflexion =	136 kPa
Modulus of subgrade reaction (k) =	109 MPa/m
Equivalent 762 mm plate reaction =	88 MPa/m
Equivalent CBR =	22.4 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	6	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	6	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	6 9 10 11 11	0 10 20 30 40 50		
1	15 17 18 19 18		0	
2	11 8 10 3 2		0	
3	3 3 3 2 1		0	
4	2 1 1 2 1		0	
5	2 2 2 2 3		0	
6	2 2 2 2 4		0	
7	4 2 2 2 2			
8	8 12 11 7 5			
9	8 15 24 refusal 0			
10	0 0 0 0 0			
11	0 0 0 0 0			
12	0 0 0 0 0			
13	0 0 0 0 0			
14	0 0 0 0 0			
15	0 0 0 0 0			
16	0 0 0 0 0			
17	0 0 0 0 0			
18	0 0 0 0 0			
19	0 0 0 0 0			
20	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 6

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	6		
0.2	9		
0.3	10	17	170
0.4	11		
0.5	11		
0.6	15	25	250
0.7	17		
0.8	18		
0.9	19	36	360
1	18		
1.1	11		
1.2	8	25	250
1.3	10		
1.4	3		
1.5	2	10	100
1.6	3		
1.7	3		
1.8	3	6	60
1.9	2		
2	1		
2.1	2	3	30
2.2	1		
2.3	1		
2.4	2	3	30
2.5	1		
2.6	2		
2.7	2	3	30
2.8	2		
2.9	2		
3	3	5	50
3.1	2		
3.2	2		
3.3	2	4	40
3.4	2		
3.5	4		
3.6	4	7	70
3.7	2		
3.8	2		
3.9	2	4	40
4	2		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	8		
4.2	12	15	150
4.3	11		
4.4	7		
4.5	5	15	150
4.6	8		
4.7	15		
4.8	24	31	310
4.9	refusal		
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

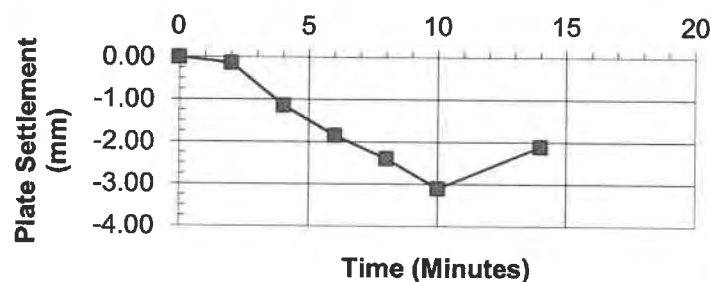
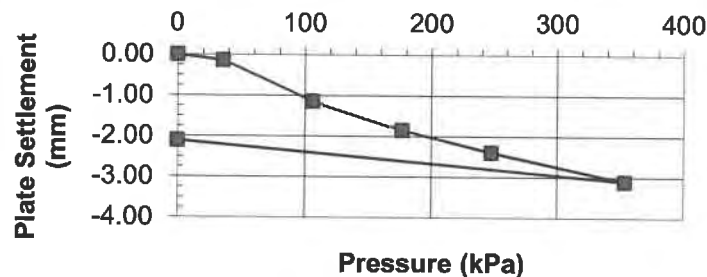


TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	7	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4780	4742	4801	4774	0.00	0.00	0.0
4771	4716	4795	4761	-0.14	10.00	35.4
4680	4591	4709	4660	-1.14	30.00	106.1
4622	4502	4644	4589	-1.85	50.00	176.8
4574	4430	4601	4535	-2.39	70.00	247.6
4511	4330	4550	4464	-3.11	100.00	353.7
4600	4442	4649	4564	-2.11	0.00	0.0



Pressure at 1.25 mm deflexion =	117 kPa
Modulus of subgrade reaction (k) =	94 MPa/m
Equivalent 762 mm plate reaction =	75 MPa/m
Equivalent CBR =	17.2 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	7	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	7	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	6 15 15 14 16	0 10 20 30 40 50		
1	17 19 14 15 7		0	
2	8 7 9 9 8		0	
3	4 5 5 5 6		0	
4	6 6 8 7 10		0	
5	9 6 6 6 4		0	
6	5 3 4 7 5		0	
7	4 6 6 4 4		0	
8	4 4 4 4 7		0	
9	6 5 5 7 8		0	
10	0 0 0 0 0			
11	0 0 0 0 0			
12	0 0 0 0 0			
13	0 0 0 0 0			
14	0 0 0 0 0			
15	0 0 0 0 0			
16	0 0 0 0 0			
17	0 0 0 0 0			
18	0 0 0 0 0			
19	0 0 0 0 0			
20	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 7

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	6		
0.2	15		
0.3	15	24	240
0.4	14		
0.5	16		
0.6	17	31	310
0.7	19		
0.8	14		
0.9	15	32	320
1	7		
1.1	8		
1.2	7	15	150
1.3	9		
1.4	9		
1.5	8	17	170
1.6	4		
1.7	5		
1.8	5	9	90
1.9	5		
2	6		
2.1	6	11	110
2.2	6		
2.3	8		
2.4	7	14	140
2.5	10		
2.6	9		
2.7	6	17	170
2.8	6		
2.9	6		
3	4	11	110
3.1	5		
3.2	3		
3.3	4	8	80
3.4	7		
3.5	5		
3.6	4	11	110
3.7	6		
3.8	6		
3.9	4	11	110
4	4		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	4		
4.2	4	8	80
4.3	4		
4.4	4		
4.5	7	10	100
4.6	6		
4.7	5		
4.8	5	11	110
4.9	7		
5	8		
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			



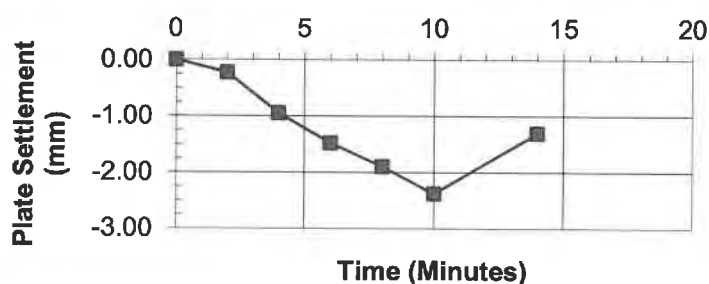
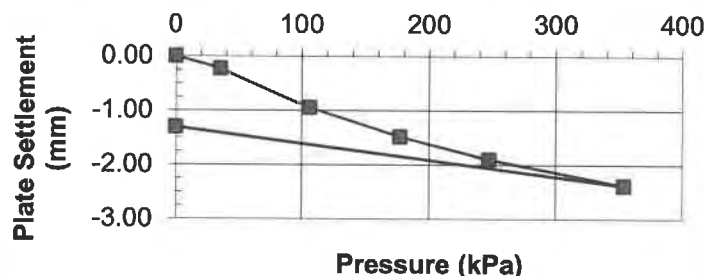
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	8	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4855	4763	4810	4809	0.00	0.00	0.0
4822	4741	4796	4786	-0.23	10.00	35.4
4724	4687	4733	4715	-0.95	30.00	106.1
4658	4638	4688	4661	-1.48	50.00	176.8
4612	4595	4651	4619	-1.90	70.00	247.6
4553	4546	4614	4571	-2.38	100.00	353.7
4681	4672	4683	4679	-1.31	0.00	0.0



Pressure at 1.25 mm deflexion =	146 kPa
Modulus of subgrade reaction (k) =	117 MPa/m
Equivalent 762 mm plate reaction =	94 MPa/m
Equivalent CBR =	25.3 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	8	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	8	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	6 9 15 17 20	0 10 20 30 40 50		
1	21 20 19 17 15		0	
	6 6 9 9 10		0	
2	8 6 5 5 5		0	
	6 6 5 9 12		0	
3	11 9 10 9 3		0	
	4 4 4 3 3		0	
4	4 6 7 7 7		0	
	4 4 5 6 8		0	
5	8 8 9 8 7		0	
	0 0 0 0 0			
6	0 0 0 0 0			
	0 0 0 0 0			
7	0 0 0 0 0			
	0 0 0 0 0			
8	0 0 0 0 0			
	0 0 0 0 0			
9	0 0 0 0 0			
	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 8

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	6		
0.2	9		
0.3	15	20	200
0.4	17		
0.5	20		
0.6	21	39	390
0.7	20		
0.8	19		
0.9	17	37	370
1	15		
1.1	6		
1.2	6	18	180
1.3	9		
1.4	9		
1.5	10	19	190
1.6	8		
1.7	6		
1.8	5	13	130
1.9	5		
2	5		
2.1	6	11	110
2.2	6		
2.3	5		
2.4	9	13	130
2.5	12		
2.6	11		
2.7	9	21	210
2.8	10		
2.9	9		
3	3	15	150
3.1	4		
3.2	4		
3.3	4	8	80
3.4	3		
3.5	3		
3.6	4	7	70
3.7	6		
3.8	7		
3.9	7	13	130
4	7		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	4		
4.2	4	10	100
4.3	5		
4.4	6		
4.5	8	13	130
4.6	8		
4.7	8		
4.8	9	17	170
4.9	8		
5	7		
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
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6.8			
6.9			
7			
7.1			
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7.3			
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7.5			
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7.8			
7.9			
8			
8.1			

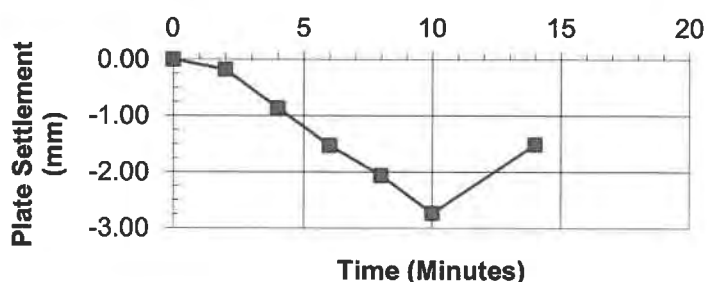
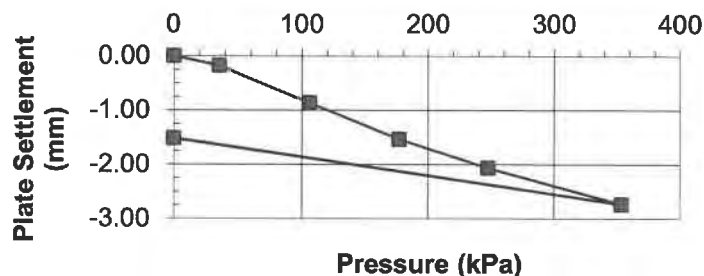
MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	9	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	08-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4785	4859	4737	4794	0.00	0.00	0.0
4771	4833	4724	4776	-0.18	10.00	35.4
4691	4752	4679	4707	-0.86	30.00	106.1
4612	4671	4638	4640	-1.53	50.00	176.8
4548	4607	4607	4587	-2.06	70.00	247.6
4471	4519	4570	4520	-2.74	100.00	353.7
4616	4668	4642	4642	-1.52	0.00	0.0



Pressure at 1.25 mm deflexion =	147 kPa
Modulus of subgrade reaction (k) =	118 MPa/m
Equivalent 762 mm plate reaction =	95 MPa/m
Equivalent CBR =	25.6 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	08-Jun-20	Type of Anvil	Fixed
LOCATION	9	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	9	interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	13 19 17 16 10	0 10 20 30 40 50		
1	9 5 5 10 5		0	
2	2 2 4 3 2		0	
3	1 1 1 3 3		0	
4	1 1 2 1 1		0	
5	1 2 3 1 1		0	
6	1 1 2 1 1		0	
7	1 1 2 1 1		0	
8	1 1 2 1 1		0	
9	1 1 2 1 1		0	
10	1 1 2 1 1		0	

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 9

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	13		
0.2	19		
0.3	17	33	330
0.4	16		
0.5	10		
0.6	9	23	230
0.7	5		
0.8	5		
0.9	10	13	130
1	5		
1.1	2		
1.2	2	6	60
1.3	4		
1.4	3		
1.5	2	6	60
1.6	1		
1.7	1		
1.8	1	2	20
1.9	3		
2	3		
2.1	2	5	50
2.2	1		
2.3	2		
2.4	1	3	30
2.5	1		
2.6	1		
2.7	1	2	20
2.8	1		
2.9	1		
3	1	2	20
3.1	1		
3.2	2		
3.3	3	4	40
3.4	1		
3.5	1		
3.6	1	2	20
3.7	1		
3.8	2		
3.9	14	11	110
4	refusal		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



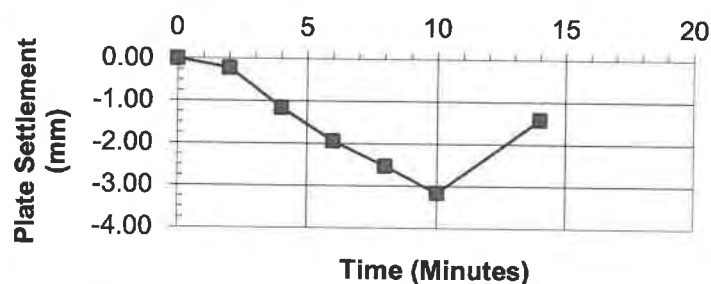
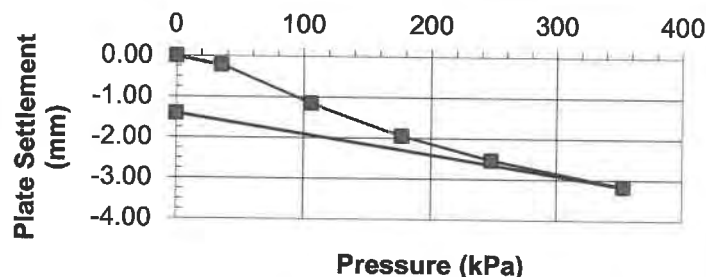
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate					
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT					
JOB NUMBER	MRN 3817/14					
TEST LOCATION	10	LOADING DEVICE	20 Tonne Enerpac Jack			
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter			
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant			
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required			

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4910	4821	4882	4871	0.00	0.00	0.0
4888	4790	4869	4849	-0.22	10.00	35.4
4786	4681	4800	4756	-1.15	30.00	106.1
4680	4599	4750	4676	-1.95	50.00	176.8
4599	4535	4719	4618	-2.53	70.00	247.6
4511	4464	4687	4554	-3.17	100.00	353.7
4794	4635	4760	4730	-1.41	0.00	0.0



Pressure at 1.25 mm deflexion =	115 kPa
Modulus of subgrade reaction (k) =	92 MPa/m
Equivalent 762 mm plate reaction =	74 MPa/m
Equivalent CBR =	16.7 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	10	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	10	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	17 20 20 12 9	0 10 20 30 40 50		
1	7 6 5 12 3		0	
2	4 4 7 9 12		0	
3	14 17 17 6 3		0	
4	3 2 2 1 2		0	
5	2 2 1 2 3		0	
6	3 2 2 3 4		0	
7	3 4 6 7 12		0	
8	19 27 29 refusal 0			
9	0 0 0 0 0			
10	0 0 0 0 0			
11	0 0 0 0 0			
12	0 0 0 0 0			
13	0 0 0 0 0			
14	0 0 0 0 0			
15	0 0 0 0 0			
16	0 0 0 0 0			
17	0 0 0 0 0			
18	0 0 0 0 0			
19	0 0 0 0 0			
20	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 10

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	17		
0.2	20		
0.3	20	38	380
0.4	12		
0.5	9		
0.6	7	19	190
0.7	6		
0.8	5		
0.9	12	15	150
1	3		
1.1	4		
1.2	4	7	70
1.3	7		
1.4	9		
1.5	12	19	190
1.6	14		
1.7	17		
1.8	17	32	320
1.9	6		
2	3		
2.1	3	8	80
2.2	2		
2.3	2		
2.4	1	3	30
2.5	2		
2.6	2		
2.7	2	4	40
2.8	1		
2.9	2		
3	3	4	40
3.1	3		
3.2	2		
3.3	2	5	50
3.4	3		
3.5	4		
3.6	3	7	70
3.7	4		
3.8	6		
3.9	7	11	110
4	12		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	19		
4.2	27	39	390
4.3	29		
4.4	refusal		
4.5			
4.6			
4.7			
4.8			
4.9			
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



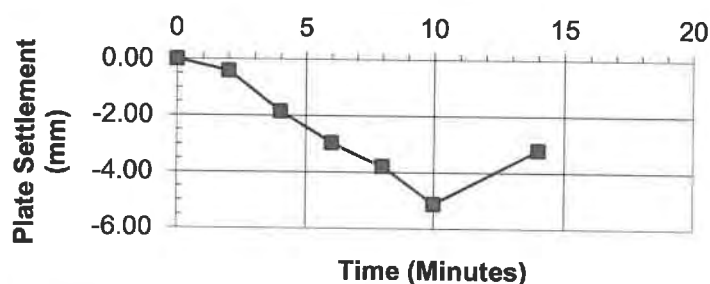
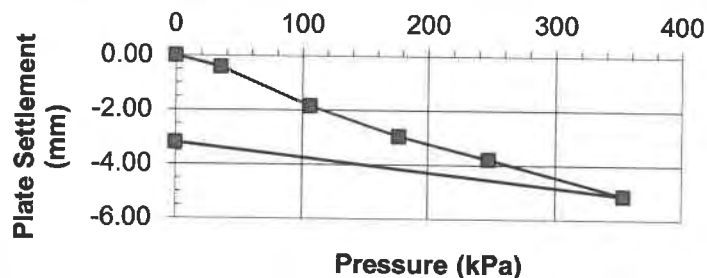
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	11	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4889	4812	4731	4811	0.00	0.00	0.0
4831	4775	4703	4770	-0.41	10.00	35.4
4657	4623	4598	4626	-1.85	30.00	106.1
4526	4508	4511	4515	-2.96	50.00	176.8
4446	4412	4437	4432	-3.79	70.00	247.6
4304	4271	4321	4299	-5.12	100.00	353.7
4545	4451	4477	4491	-3.20	0.00	0.0



Pressure at 1.25 mm deflexion =	77 kPa
Modulus of subgrade reaction (k) =	61 MPa/m
Equivalent 762 mm plate reaction =	49 MPa/m
Equivalent CBR =	8.3 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	11	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	11	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	6 15 11 12 10	0 10 20 30 40 50		
1	10 8 6 6 4		0	
	7 7 6 5 6			
2	4 5 6 6 6		0	
	6 5 4 4 3			
3	5 8 6 5 5		0	
	3 3 3 3 4			
4	4 4 3 3 3		0	
	18 20 22 24 29			
5	36 refusal 0 0 0			
	0 0 0 0 0			
6	0 0 0 0 0			
	0 0 0 0 0			
7	0 0 0 0 0			
	0 0 0 0 0			
8	0 0 0 0 0			
	0 0 0 0 0			
9	0 0 0 0 0			
	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 11

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	6		
0.2	15		
0.3	11	21	210
0.4	12		
0.5	10		
0.6	10	21	210
0.7	8		
0.8	6		
0.9	6	13	130
1	4		
1.1	7		
1.2	7	12	120
1.3	6		
1.4	5		
1.5	6	11	110
1.6	4		
1.7	5		
1.8	6	10	100
1.9	6		
2	6		
2.1	6	12	120
2.2	5		
2.3	4		
2.4	4	9	90
2.5	3		
2.6	5		
2.7	8	11	110
2.8	6		
2.9	5		
3	5	11	110
3.1	3		
3.2	3		
3.3	3	6	60
3.4	3		
3.5	4		
3.6	4	7	70
3.7	4		
3.8	3		
3.9	3	7	70
4	3		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	18		
4.2	20	27	270
4.3	22		
4.4	24		
4.5	29	50	500
4.6	36		
4.7	refusal		
4.8			
4.9			
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



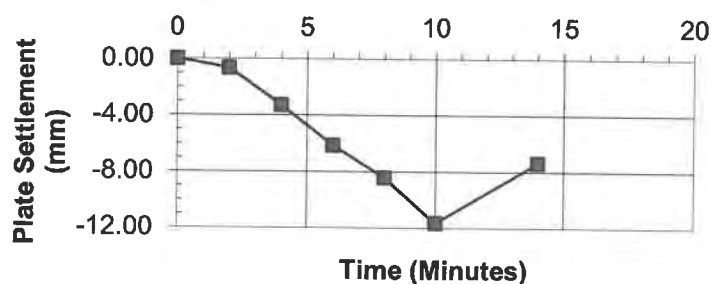
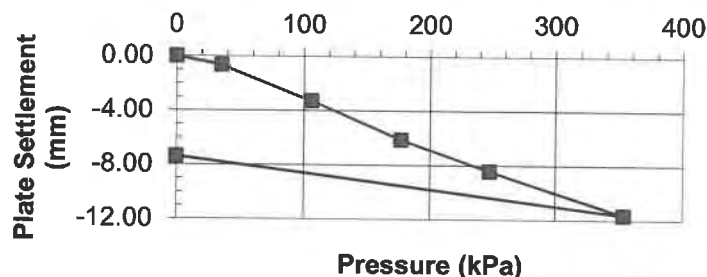
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	12	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4735	4568	4651	4651	0.00	0.00	0.0
4652	4507	4601	4587	-0.65	10.00	35.4
4353	4244	4372	4323	-3.28	30.00	106.1
4032	3974	4103	4036	-6.15	50.00	176.8
3791	3745	3890	3809	-8.43	70.00	247.6
3432	3476	3551	3486	-11.65	100.00	353.7
3936	3852	3952	3913	-7.38	0.00	0.0



Pressure at 1.25 mm deflexion =	52 kPa
Modulus of subgrade reaction (k) =	41 MPa/m
Equivalent 762 mm plate reaction =	33 MPa/m
Equivalent CBR =	4.2 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	12	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	12	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	5 5 5 6 5	0 10 20 30 40 50		
1	4 5 5 5 4		0	
2	3 3 2 2 1		0	
3	2 3 1 1 3		0	
4	5 7 7 8 6			
5	7 8 9 13 23			
6	refusa 0 0 0 0			
7	0 0 0 0 0			
8	0 0 0 0 0			
9	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 12

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	5		
0.2	5		
0.3	5	10	100
0.4	6		
0.5	5		
0.6	4	10	100
0.7	5		
0.8	5		
0.9	5	10	100
1	4		
1.1	3		
1.2	3	7	70
1.3	2		
1.4	2		
1.5	1	3	30
1.6	2		
1.7	3		
1.8	1	4	40
1.9	1		
2	3		
2.1	5	6	60
2.2	7		
2.3	7		
2.4	8	15	150
2.5	6		
2.6	7		
2.7	8	14	140
2.8	9		
2.9	13		
3	23	30	300
3.1	refusal		
3.2			
3.3			
3.4			
3.5			
3.6			
3.7			
3.8			
3.9			
4			

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$



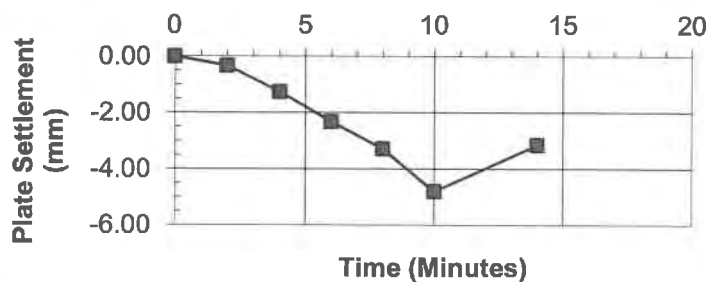
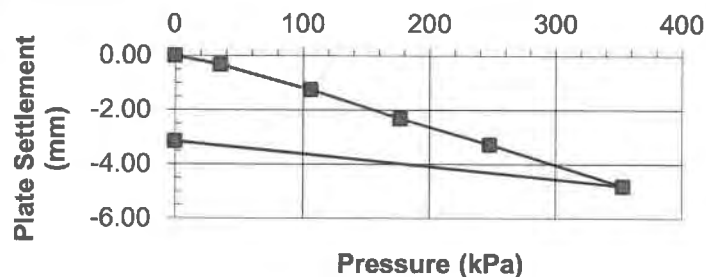
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	13	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4891	4807	4813	4837	0.00	0.00	0.0
4868	4759	4786	4804	-0.33	10.00	35.4
4785	4648	4701	4711	-1.26	30.00	106.1
4677	4533	4605	4605	-2.32	50.00	176.8
4578	4429	4519	4509	-3.28	70.00	247.6
4421	4262	4385	4356	-4.81	100.00	353.7
4587	4466	4513	4522	-3.15	0.00	0.0



Pressure at 1.25 mm deflexion =	105 kPa
Modulus of subgrade reaction (k) =	84 MPa/m
Equivalent 762 mm plate reaction =	68 MPa/m
Equivalent CBR =	14.3 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	13	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	13	interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	9 11 9 8 6	0 10 20 30 40 50		
1	4 4 4 6 7		0	
2	5 6 4 4 6		0	
3	9 4 3 3 5		0	
4	4 4 5 3 3			
5	2 4 2 3 4			
6	7 refusal 0 0 0			
7	0 0 0 0 0			
8	0 0 0 0 0			
9	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 13

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	9		
0.2	11		
0.3	9	19	190
0.4	8		
0.5	6		
0.6	4	12	120
0.7	4		
0.8	4		
0.9	6	9	90
1	7		
1.1	5		
1.2	6	12	120
1.3	4		
1.4	4		
1.5	6	9	90
1.6	9		
1.7	4		
1.8	3	11	110
1.9	3		
2	5		
2.1	4	8	80
2.2	4		
2.3	5		
2.4	3	8	80
2.5	3		
2.6	2		
2.7	4	6	60
2.8	2		
2.9	3		
3	4	6	60
3.1	7		
3.2	refusal		
3.3			
3.4			
3.5			
3.6			
3.7			
3.8			
3.9			
4			

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



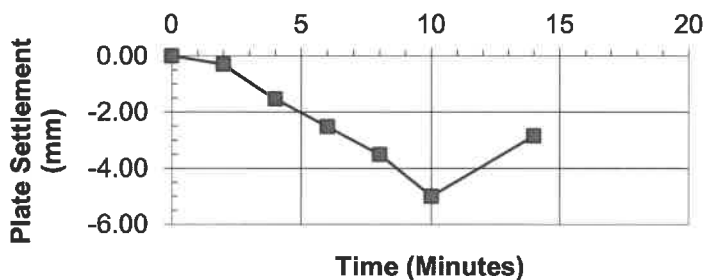
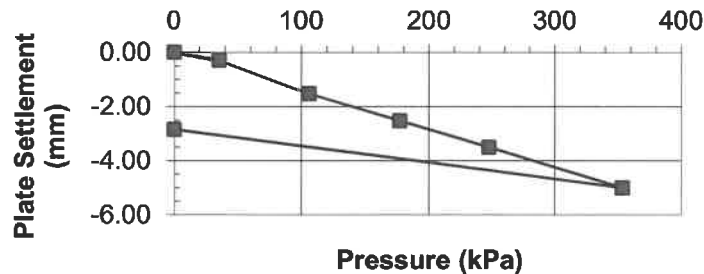
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	14	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4795	4748	4804	4782	0.00	0.00	0.0
4766	4721	4772	4753	-0.29	10.00	35.4
4652	4598	4637	4629	-1.53	30.00	106.1
4568	4500	4522	4530	-2.52	50.00	176.8
4480	4395	4419	4431	-3.51	70.00	247.6
4350	4244	4253	4282	-5.00	100.00	353.7
4534	4480	4480	4498	-2.84	0.00	0.0



Pressure at 1.25 mm deflexion =	90 kPa
Modulus of subgrade reaction (k) =	72 MPa/m
Equivalent 762 mm plate reaction =	58 MPa/m
Equivalent CBR =	10.9 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	14	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	14	interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	7 10 10 8 9	0 10 20 30 40 50		
1	6 5 7 8 7		0	
	9 15 9 9 8			
2	4 7 8 9 8		0	
	7 8 9 6 6			
3	10 14 13 11 8		0	
	9 14 11 11 10			
4	8 6 4 4 5		0	
	7 6 5 9 12			
5	14 15 26 refusal 0			
	0 0 0 0 0			
6	0 0 0 0 0			
	0 0 0 0 0			
7	0 0 0 0 0			
	0 0 0 0 0			
8	0 0 0 0 0			
	0 0 0 0 0			
9	0 0 0 0 0			
	0 0 0 0 0			
10	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
☐ O.P. Davies
☐

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 14

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	7		
0.2	10		
0.3	10	18	180
0.4	8		
0.5	9		
0.6	6	15	150
0.7	5		
0.8	7		
0.9	8	13	130
1	7		
1.1	9		
1.2	15	21	210
1.3	9		
1.4	9		
1.5	8	17	170
1.6	4		
1.7	7		
1.8	8	13	130
1.9	9		
2	8		
2.1	7	16	160
2.2	8		
2.3	9		
2.4	6	15	150
2.5	6		
2.6	10		
2.7	14	20	200
2.8	13		
2.9	11		
3	8	21	210
3.1	9		
3.2	14		
3.3	11	23	230
3.4	11		
3.5	10		
3.6	8	19	190
3.7	6		
3.8	4		
3.9	4	9	90
4	5		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	7		
4.2	6	12	120
4.3	5		
4.4	9		
4.5	12	17	170
4.6	14		
4.7	15		
4.8	26	37	370
4.9	refusal		
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

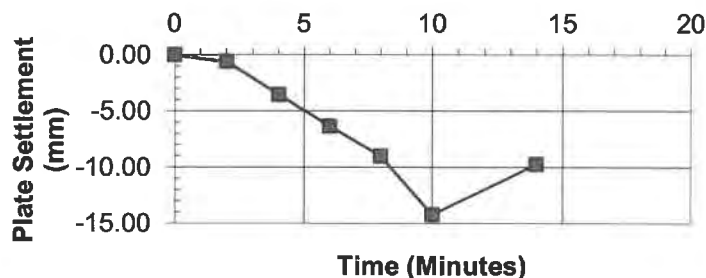
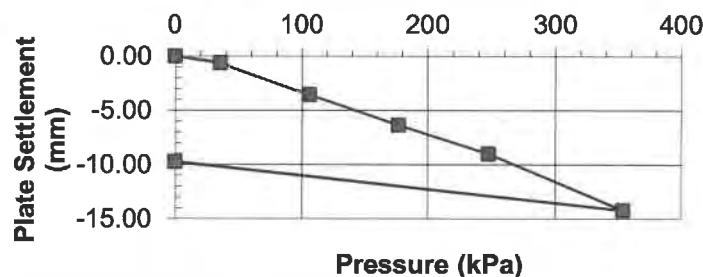
MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	15	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4630	4656	4712	4666	0.00	0.00	0.0
4560	4596	4661	4606	-0.60	10.00	35.4
4244	4310	4381	4312	-3.54	30.00	106.1
3945	4055	4093	4031	-6.35	50.00	176.8
3660	3811	3823	3765	-9.01	70.00	247.6
3122	3323	3285	3243	-14.23	100.00	353.7
3576	3771	3729	3692	-9.74	0.00	0.0



Pressure at 1.25 mm deflexion =	51 kPa
Modulus of subgrade reaction (k) =	41 MPa/m
Equivalent 762 mm plate reaction =	33 MPa/m
Equivalent CBR =	4.1 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	15	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	15	interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	2 2 6 6 4	0 10 20 30 40 50		
1	3 5 4 2 5		0	
2	5 4 4 5 7		0	
3	10 10 10 7 6		0	
4	5 6 9 9 11		0	
5	12 11 10 13 15		0	
6	13 10 13 12 17		0	
7	17 18 21 25 29		0	
8	33 39 refusal 0 0			
9	0 0 0 0 0			
10	0 0 0 0 0			
11	0 0 0 0 0			
12	0 0 0 0 0			
13	0 0 0 0 0			
14	0 0 0 0 0			
15	0 0 0 0 0			
16	0 0 0 0 0			
17	0 0 0 0 0			
18	0 0 0 0 0			
19	0 0 0 0 0			
20	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 15

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	2		
0.2	2		
0.3	6	7	70
0.4	6		
0.5	4		
0.6	3	9	90
0.7	5		
0.8	4		
0.9	2	7	70
1	5		
1.1	5		
1.2	4	9	90
1.3	4		
1.4	5		
1.5	7	11	110
1.6	10		
1.7	10		
1.8	10	20	200
1.9	7		
2	6		
2.1	5	12	120
2.2	6		
2.3	9		
2.4	9	16	160
2.5	11		
2.6	12		
2.7	11	23	230
2.8	10		
2.9	13		
3	15	25	250
3.1	13		
3.2	10		
3.3	13	24	240
3.4	12		
3.5	17		
3.6	17	31	310
3.7	18		
3.8	21		
3.9	25	43	430
4	29		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	33		
4.2	39	67	670
4.3	refusal		
4.4			
4.5			
4.6			
4.7			
4.8			
4.9			
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



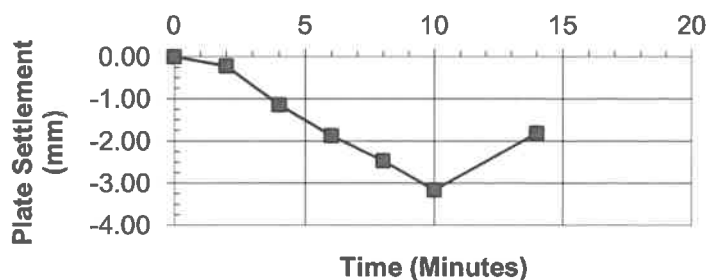
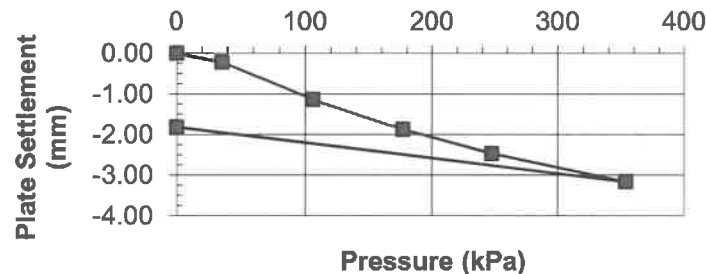
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	16	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4812	4879	4806	4832	0.00	0.00	0.0
4799	4840	4792	4810	-0.22	10.00	35.4
4698	4754	4703	4718	-1.14	30.00	106.1
4624	4680	4630	4645	-1.88	50.00	176.8
4557	4631	4567	4585	-2.47	70.00	247.6
4489	4562	4496	4516	-3.17	100.00	353.7
4601	4763	4588	4651	-1.82	0.00	0.0



Pressure at 1.25 mm deflexion =	117 kPa
Modulus of subgrade reaction (k) =	94 MPa/m
Equivalent 762 mm plate reaction =	75 MPa/m
Equivalent CBR =	17.2 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	16	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	16	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	6 13 19 11 11	0 10 20 30 40 50		
1	9 12 10 8 7		0	
2	7 8 8 9 7		0	
3	8 6 5 6 9		0	
4	4 3 3 2 3			
5	3 4 3 3 2			
6	8 12 19 26 29			
7	refusa 0 0 0 0			
8	0 0 0 0 0			
9	0 0 0 0 0			
10	0 0 0 0 0			
11	0 0 0 0 0			
12	0 0 0 0 0			
13	0 0 0 0 0			
14	0 0 0 0 0			
15	0 0 0 0 0			
16	0 0 0 0 0			
17	0 0 0 0 0			
18	0 0 0 0 0			
19	0 0 0 0 0			
20	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 16

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	6		
0.2	13		
0.3	19	25	250
0.4	11		
0.5	11		
0.6	9	21	210
0.7	12		
0.8	10		
0.9	8	20	200
1	7		
1.1	7		
1.2	8	15	150
1.3	8		
1.4	9		
1.5	7	16	160
1.6	8		
1.7	6		
1.8	5	13	130
1.9	6		
2	9		
2.1	4	13	130
2.2	3		
2.3	3		
2.4	2	5	50
2.5	3		
2.6	3		
2.7	4	7	70
2.8	3		
2.9	3		
3	2	5	50
3.1	8		
3.2	12		
3.3	19	26	260
3.4	26		
3.5	29		
3.6	refusal		
3.7			
3.8			
3.9			
4			

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

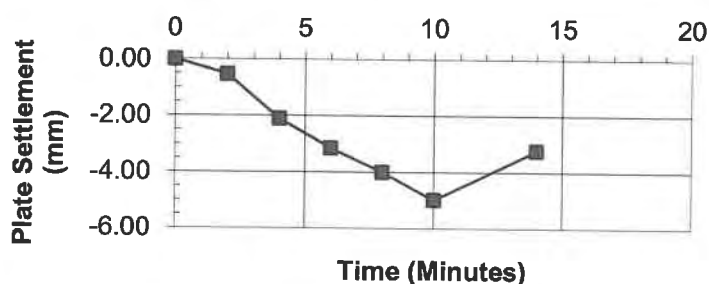
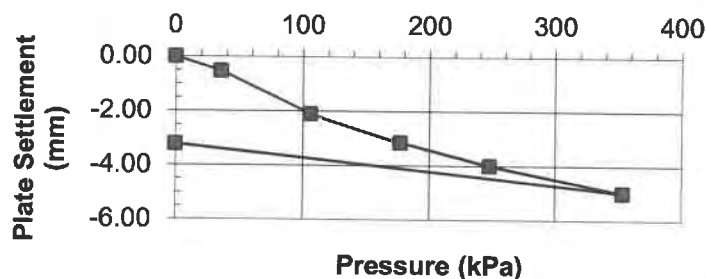
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	17	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4719	4706	4710	4712	0.00	0.00	0.0
4678	4631	4667	4659	-0.53	10.00	35.4
4550	4460	4492	4501	-2.11	30.00	106.1
4462	4348	4380	4397	-3.15	50.00	176.8
4386	4261	4287	4311	-4.00	70.00	247.6
4287	4170	4181	4213	-4.99	100.00	353.7
4512	4365	4289	4389	-3.23	0.00	0.0



Pressure at 1.25 mm deflexion =	68 kPa
Modulus of subgrade reaction (k) =	54 MPa/m
Equivalent 762 mm plate reaction =	44 MPa/m
Equivalent CBR =	6.7 %

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

CLIENT	LK Remediate
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
JOB NUMBER	MRN 3817/14

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	17	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	17	Interruptions during test	All less than 1 minute

Depth m	Blow per 100 mm	Blow count	Torque (in N.M)	Remarks
0	9 12 35 42 43	0 10 20 30 40 50		
1	40 15 7 6 11		0	
2	8 8 7 8 9		0	
3	14 6 6 5 6		0	
4	6 6 5 6 6		0	
5	7 6 7 7 6		0	
6	5 4 3 2 1		0	
7	2 2 2 3 7			
8	9 14 17 19 refusal			
9	0 0 0 0 0			
10	0 0 0 0 0			
11	0 0 0 0 0			
12	0 0 0 0 0			
13	0 0 0 0 0			
14	0 0 0 0 0			
15	0 0 0 0 0			
16	0 0 0 0 0			
17	0 0 0 0 0			
18	0 0 0 0 0			
19	0 0 0 0 0			
20	0 0 0 0 0			

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Approved Signatory : ☒ S.J. Hutchings
[] O.P. Davies
[]

Signature

11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 17

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
0			
0.1	9		
0.2	12		
0.3	35	37	370
0.4	42		
0.5	43		
0.6	40	83	830
0.7	15		
0.8	7		
0.9	6	19	190
1	11		
1.1	8		
1.2	8	18	180
1.3	7		
1.4	8		
1.5	9	16	160
1.6	14		
1.7	6		
1.8	6	17	170
1.9	5		
2	6		
2.1	6	11	110
2.2	6		
2.3	5		
2.4	6	11	110
2.5	6		
2.6	7		
2.7	6	13	130
2.8	7		
2.9	7		
3	6	13	130
3.1	5		
3.2	4		
3.3	3	8	80
3.4	2		
3.5	1		
3.6	2	3	30
3.7	2		
3.8	2		
3.9	3	5	50
4	7		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	9		
4.2	14	20	200
4.3	17		
4.4	19		
4.5	refusal		
4.6			
4.7			
4.8			
4.9			
5			
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
6			
6.1			
6.2			
6.3			
6.4			
6.5			
6.6			
6.7			
6.8			
6.9			
7			
7.1			
7.2			
7.3			
7.4			
7.5			
7.6			
7.7			
7.8			
7.9			
8			
8.1			

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



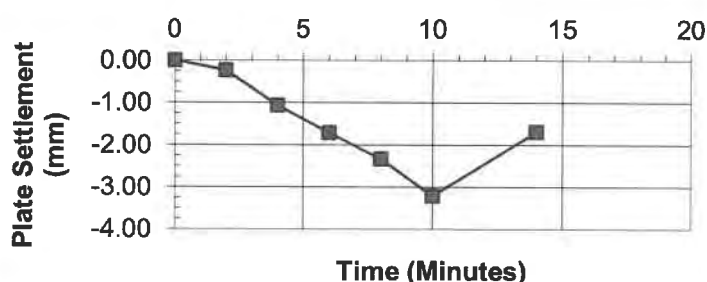
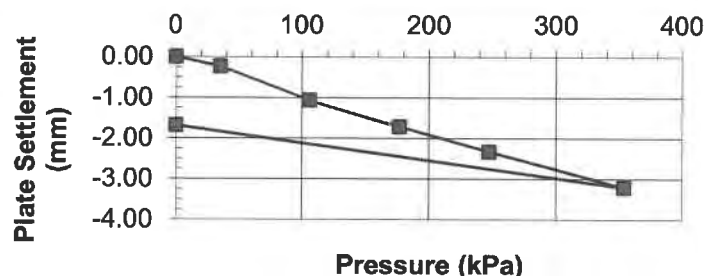
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/14		
TEST LOCATION	18	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	09-Jun-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Fill	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4781	4893	4772	4815	0.00	0.00	0.0
4760	4863	4753	4792	-0.23	10.00	35.4
4673	4769	4684	4709	-1.07	30.00	106.1
4609	4691	4631	4644	-1.72	50.00	176.8
4546	4620	4580	4582	-2.33	70.00	247.6
4459	4515	4509	4494	-3.21	100.00	353.7
4591	4734	4614	4646	-1.69	0.00	0.0



Pressure at 1.25 mm deflexion =	126 kPa
Modulus of subgrade reaction (k) =	100 MPa/m
Equivalent 762 mm plate reaction =	81 MPa/m
Equivalent CBR =	19.5 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 11-Jun-20

TEST CERTIFICATE
DYNAMIC PROBING TEST DPSH-A
BS EN ISO 22476 2:2005

DATE	09-Jun-20	Type of Anvil	Fixed
LOCATION	18	Precautions against rod friction	None
GROUND LEVEL m	Surface	Blow count frequency	25 per Minute
TEST NUMBER	18	interruptions during test	All less than 1 minute

Hammer: type/mass	63.4 kg	Cone: Type/Diameter	45.0 mm	Cone left behind:	yes
Standard Drop	500mm	Rod: Type/Diameter	32 mm	Hole Backfilled:	Yes
Damper: No	type N/A	Equipment Check	Yes	Operation on	land

Signature 11/06/2020

DYNAMIC PROBE TO SPT CONVERSION

LK Remediate - Former Boddington Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT
Test 18

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m2
0			
0.1	3		
0.2	19		
0.3	21	29	290
0.4	18		
0.5	19		
0.6	22	39	390
0.7	25		
0.8	16		
0.9	12	35	350
1	11		
1.1	9		
1.2	8	19	190
1.3	7		
1.4	3		
1.5	3	9	90
1.6	2		
1.7	2		
1.8	1	3	30
1.9	2		
2	2		
2.1	2	4	40
2.2	2		
2.3	1		
2.4	1	3	30
2.5	1		
2.6	2		
2.7	1	3	30
2.8	2		
2.9	2		
3	2	4	40
3.1	3		
3.2	5		
3.3	4	8	80
3.4	5		
3.5	5		
3.6	4	9	90
3.7	4		
3.8	4		
3.9	5	9	90
4	4		

For DCP to SPT Conversion the following calculation is used

$$\text{SPT "N" Value} = \frac{\text{DCP blows / 300mm}}{1.5}$$

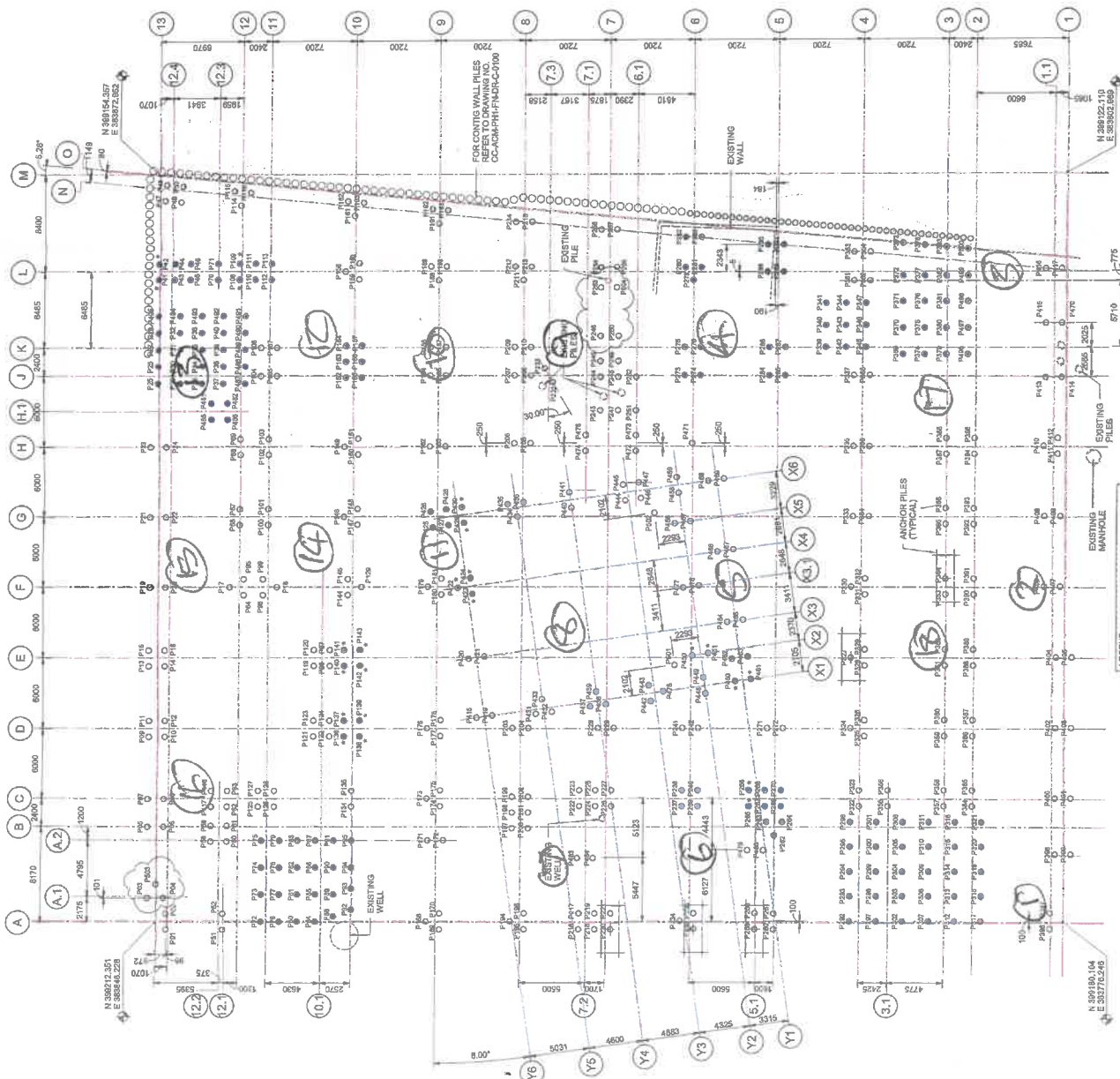
DYNAMIC PROBE TO SPT CONVERSION

Depth (m)	DCP (blows / 100mm)	SPT "N" Value (blows / 300 mm)	Bearing Capacity kN/m ²
4.1	5		
4.2	5	9	90
4.3	6		
4.4	6		
4.5	5	11	110
4.6	4		
4.7	5		
4.8	6	10	100
4.9	6		
5	5		
5.1			
5.2			
5.3			
5.4			
5.5			
5.6			
5.7			
5.8			
5.9			
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8			
8.1			

Issue	Revision	Description
1	1	ISSUED FOR CONSTRUCTION
2	1	ISSUED FOR CONSTRUCTION
3	1	ISSUED FOR CONSTRUCTION
4	1	ISSUED FOR CONSTRUCTION
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99	1	ISSUED FOR CONSTRUCTION
100	1	ISSUED FOR CONSTRUCTION

- NOTES
1. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH AECOM PERFORMANCE SPECIFICATION.
 2. PILING
 3. FOUNDATIONS.
- DIMENSION OF PILES = 450MM
CONCRETE GRADE C30/37
TESTING OF PILES REFER TO AECOM PILING SPECIFICATION
REFER TO AECOM PILING AND CONCRETE SPECIFICATION

PILE AND PILECAP LAYOUTS ARE BASED ON HSL STEELWORK DESIGN LOADS



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TEST REPORT

Client LK Remediate
Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract 19-1016-MCC

Job Number MRN 3817/1
Date of Issue 23 March 2020
Page 1 of 5

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

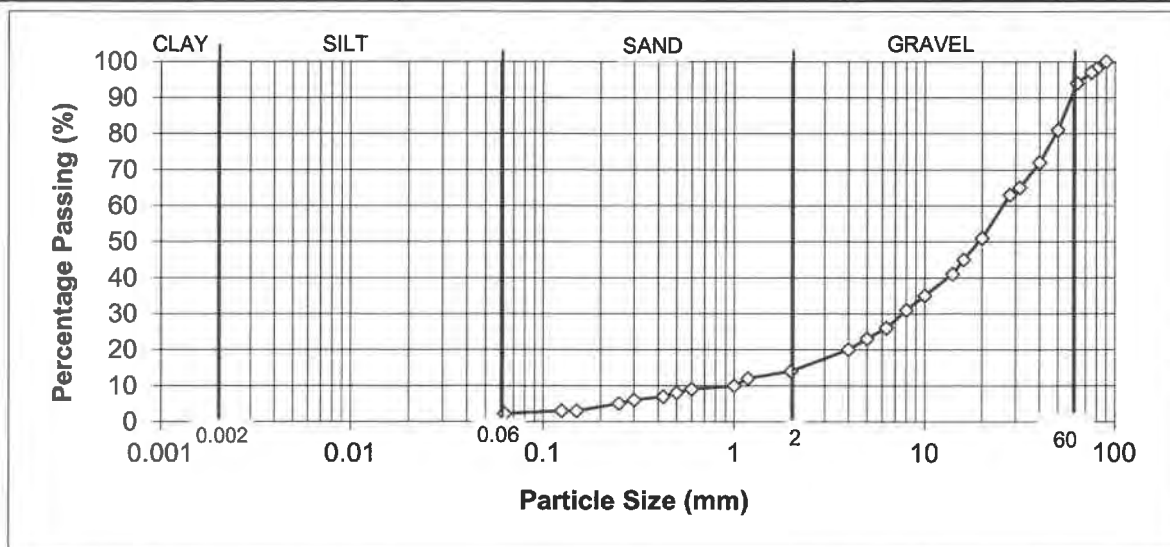
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/1

SAMPLE LABEL	CR01	DATE SAMPLED	16-Mar-20
LAB SAMPLE No	88604	DATE RECEIVED	16-Mar-20
DATE TESTED	17-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	26	
90	100		5	23	
80	98	75-99	4	20	
75	97		2	14	0-35
63	94		1.18	12	
50	81		1	10	
40	72	50-90	0.6	9	
31.5	65		0.5	8	
28	63		0.425	7	
20	51	30-75	0.3	6	
16	45		0.25	5	
14	41		0.15	3	
10	35	15-60	0.125	3	
8	31		0.063	2.2	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 8.2%

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

23-Mar-20

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

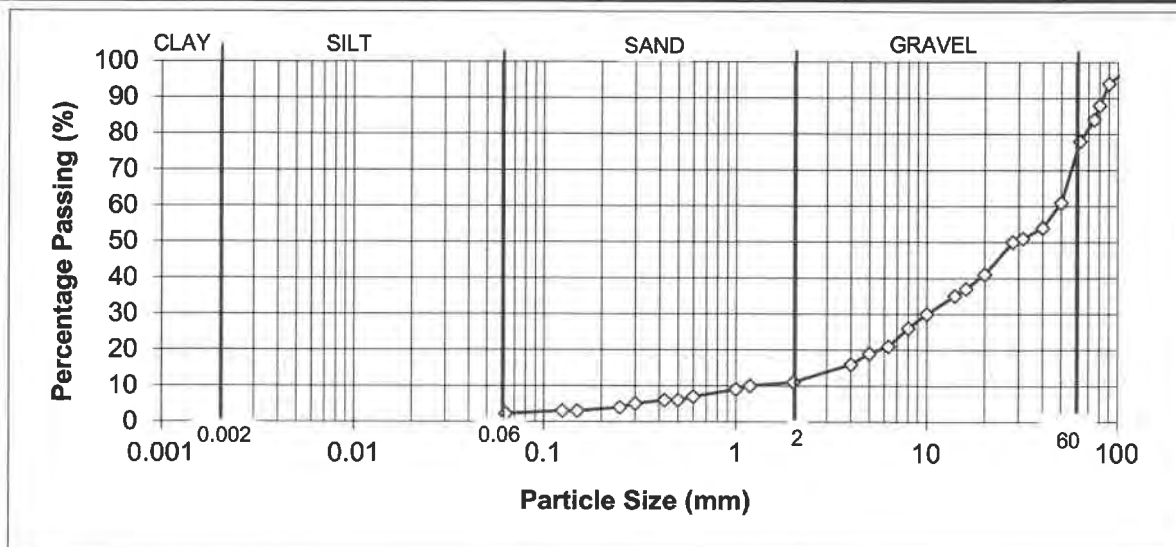
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/1

SAMPLE LABEL	CR02	DATE SAMPLED	16-Mar-20
LAB SAMPLE No	88605	DATE RECEIVED	16-Mar-20
DATE TESTED	17-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	21	
90	94		5	19	
80	88	75-99	4	16	
75	84		2	11	0-35
63	78		1.18	10	
50	61		1	9	
40	54	50-90	0.6	7	
31.5	51		0.5	6	
28	50		0.425	6	
20	41	30-75	0.3	5	
16	37		0.25	4	
14	35		0.15	3	
10	30	15-60	0.125	3	
8	26		0.063	2.2	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 7.0%

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 23-Mar-20

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

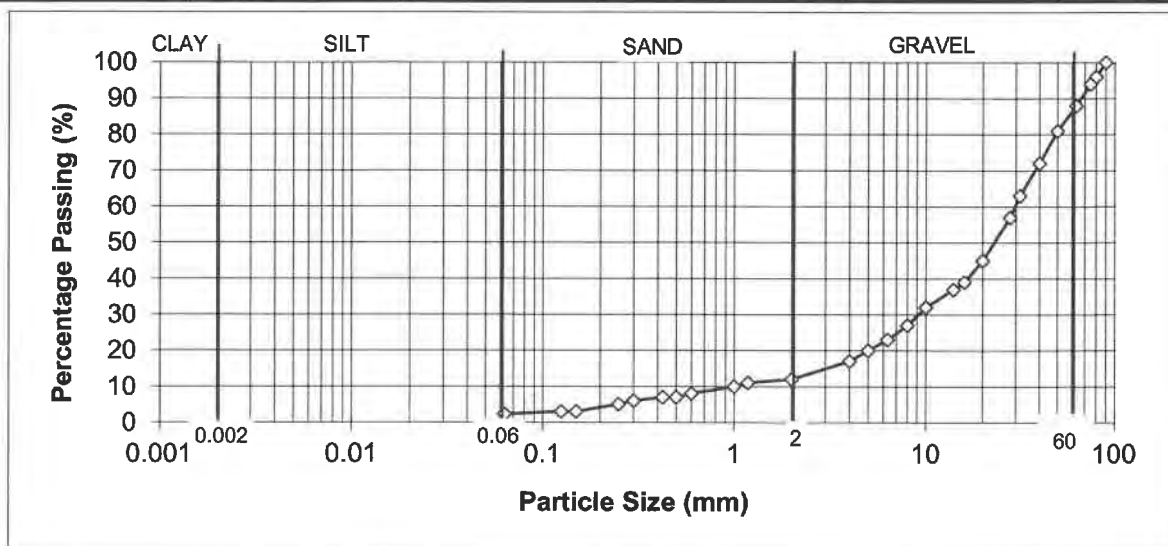
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/1

SAMPLE LABEL	CR03	DATE SAMPLED	16-Mar-20
LAB SAMPLE No	88606	DATE RECEIVED	16-Mar-20
DATE TESTED	17-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	23	
90	100		5	20	
80	96	75-99	4	17	
75	94		2	12	0-35
63	88		1.18	11	
50	81		1	10	
40	72	50-90	0.6	8	
31.5	63		0.5	7	
28	57		0.425	7	
20	45	30-75	0.3	6	
16	39		0.25	5	
14	37		0.15	3	
10	32	15-60	0.125	3	
8	27		0.063	2.3	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 7.6%

SIGNED 

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

23-Mar-20

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

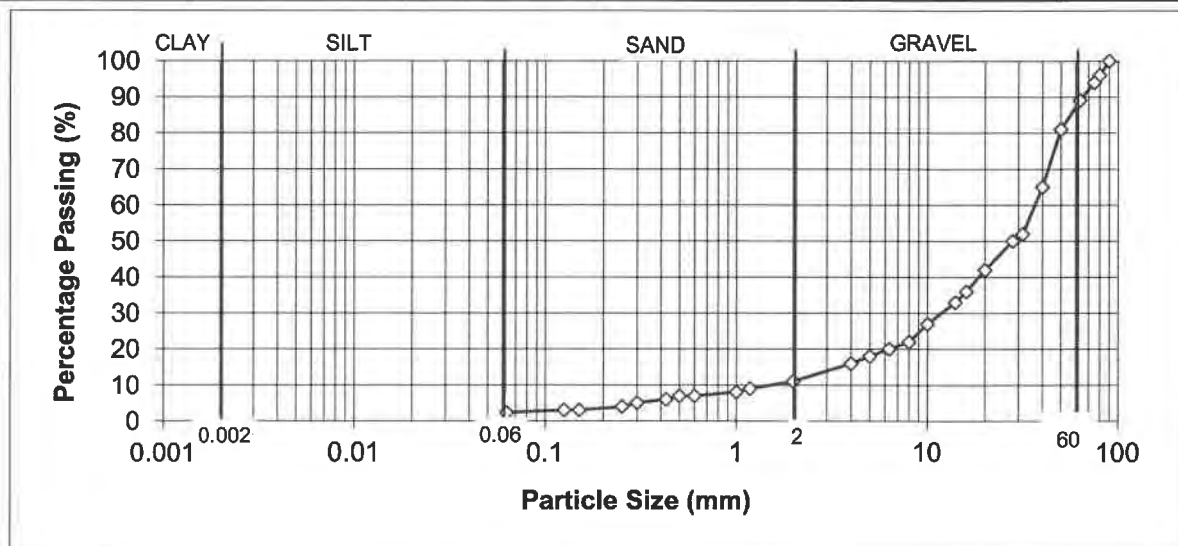
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/1

SAMPLE LABEL	CR04	DATE SAMPLED	16-Mar-20
LAB SAMPLE No	88607	DATE RECEIVED	16-Mar-20
DATE TESTED	17-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	20	
90	100		5	18	
80	96	75-99	4	16	
75	94		2	11	0-35
63	89		1.18	9	
50	81		1	8	
40	65	50-90	0.6	7	
31.5	52		0.5	7	
28	50		0.425	6	
20	42	30-75	0.3	5	
16	36		0.25	4	
14	33		0.15	3	
10	27	15-60	0.125	3	
8	22		0.063	2.3	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 11%

SIGNED 

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

23-Mar-20

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Former Boddington's Brewery,
Gt Ducie Street, Cheetham Hill,
Manchester M3 1PT

Job Number MRN 3817/2
Date of Issue 24 March 2020
Page 1 of 8

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.



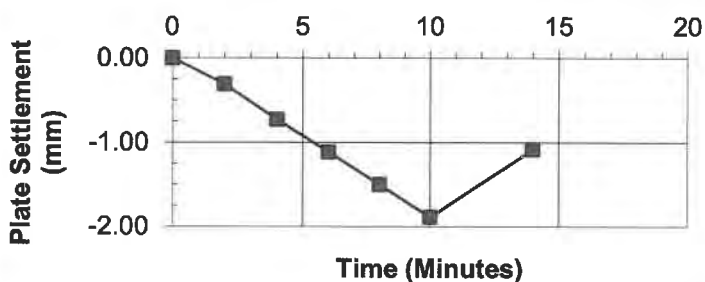
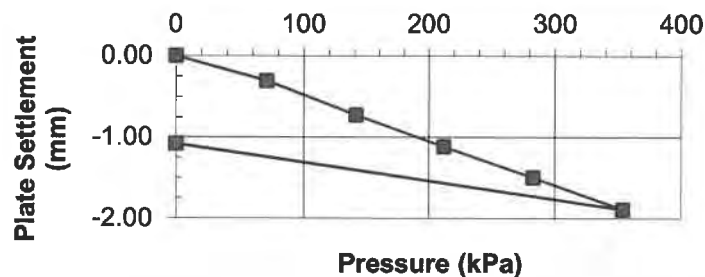
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/2		
TEST LOCATION	MCC 1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4829	4809	4800	4813	0.00	0.00	0.0
4800	4773	4772	4782	-0.31	5.00	70.7
4759	4729	4731	4740	-0.73	10.00	141.5
4720	4686	4697	4701	-1.12	15.00	212.2
4677	4647	4664	4663	-1.50	20.00	282.9
4633	4608	4630	4624	-1.89	25.00	353.7
4718	4685	4710	4704	-1.08	0.00	0.0



Pressure at 1.25 mm deflexion =	236 kPa
Modulus of subgrade reaction (k) =	189 MPa/m
Equivalent 762 mm plate reaction =	83 MPa/m
Equivalent CBR =	20.6 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 24-Mar-20

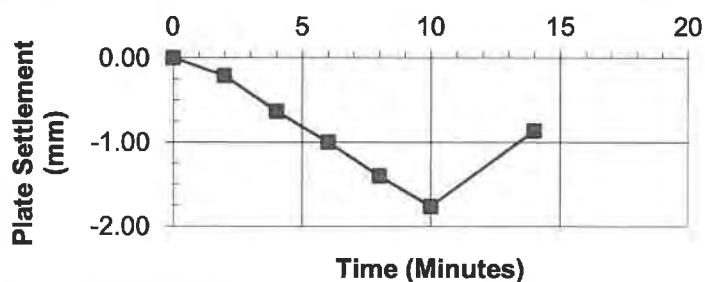
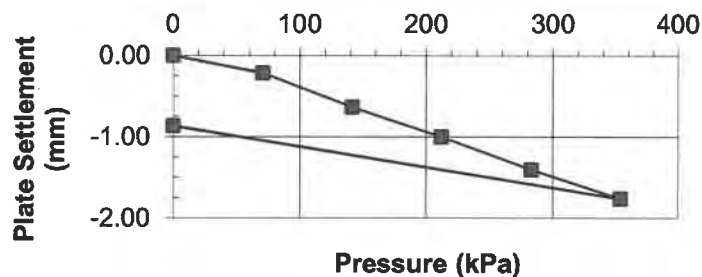
MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/2		
TEST LOCATION	MCC 2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4794	4671	4756	4740	0.00	0.00	0.0
4771	4651	4735	4719	-0.21	5.00	70.7
4727	4608	4695	4677	-0.64	10.00	141.5
4689	4573	4659	4640	-1.00	15.00	212.2
4650	4539	4611	4600	-1.40	20.00	282.9
4611	4509	4572	4564	-1.76	25.00	353.7
4698	4589	4674	4654	-0.87	0.00	0.0



Pressure at 1.25 mm deflexion =	256 kPa
Modulus of subgrade reaction (k) =	205 MPa/m
Equivalent 762 mm plate reaction =	90 MPa/m
Equivalent CBR =	23.7 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 24-Mar-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



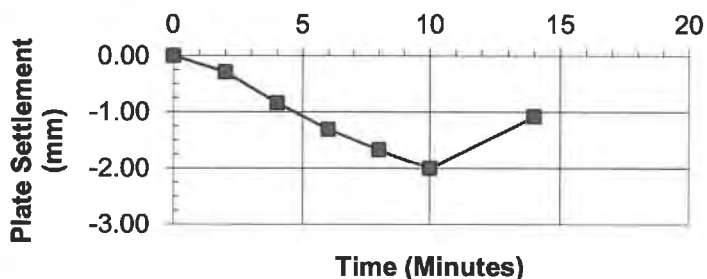
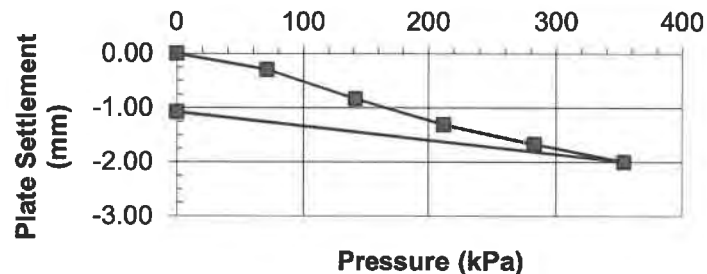
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/2		
TEST LOCATION	MCC 3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4852	4742	4849	4814	0.00	0.00	0.0
4821	4712	4823	4785	-0.29	5.00	70.7
4752	4661	4779	4731	-0.84	10.00	141.5
4691	4616	4743	4683	-1.31	15.00	212.2
4641	4583	4717	4647	-1.67	20.00	282.9
4596	4551	4696	4614	-2.00	25.00	353.7
4692	4641	4787	4707	-1.08	0.00	0.0



Pressure at 1.25 mm deflexion =	203 kPa
Modulus of subgrade reaction (k) =	162 MPa/m
Equivalent 762 mm plate reaction =	72 MPa/m
Equivalent CBR =	15.9 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 24-Mar-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



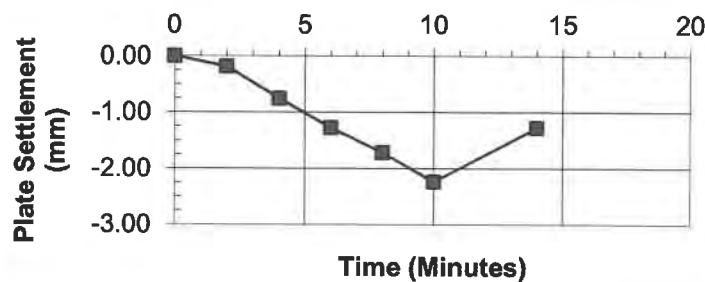
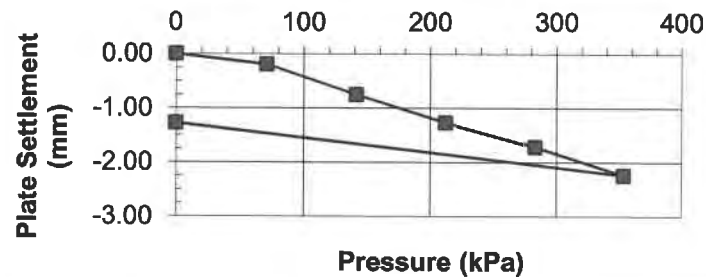
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/2		
TEST LOCATION	MCC 4	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4712	4761	4833	4769	0.00	0.00	0.0
4690	4740	4819	4750	-0.19	5.00	70.7
4623	4682	4775	4693	-0.75	10.00	141.5
4558	4627	4739	4641	-1.27	15.00	212.2
4507	4579	4704	4597	-1.72	20.00	282.9
4456	4523	4655	4545	-2.24	25.00	353.7
4561	4628	4734	4641	-1.28	0.00	0.0



Pressure at 1.25 mm deflexion =	210 kPa
Modulus of subgrade reaction (k) =	168 MPa/m
Equivalent 762 mm plate reaction =	74 MPa/m
Equivalent CBR =	16.7 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 24-Mar-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



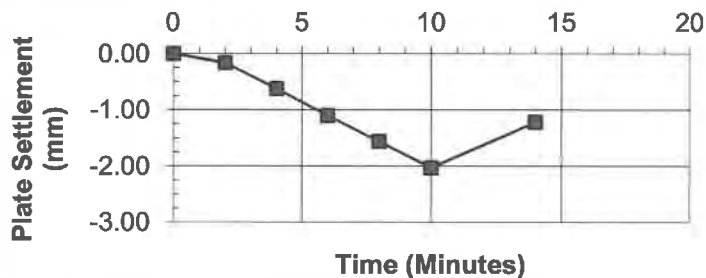
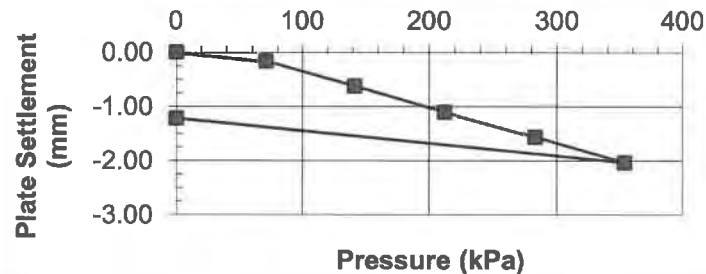
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/2		
TEST LOCATION	MCC 5	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4785	4726	4803	4771	0.00	0.00	0.0
4773	4705	4787	4755	-0.16	5.00	70.7
4728	4656	4743	4709	-0.62	10.00	141.5
4680	4604	4699	4661	-1.10	15.00	212.2
4630	4558	4657	4615	-1.56	20.00	282.9
4573	4519	4612	4568	-2.03	25.00	353.7
4650	4613	4686	4650	-1.22	0.00	0.0



Pressure at 1.25 mm deflexion =	235 kPa
Modulus of subgrade reaction (k) =	188 MPa/m
Equivalent 762 mm plate reaction =	83 MPa/m
Equivalent CBR =	20.4 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 24-Mar-20



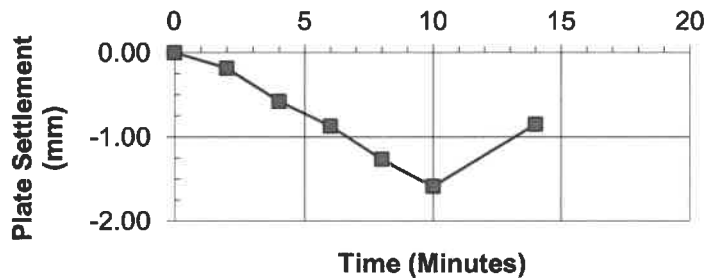
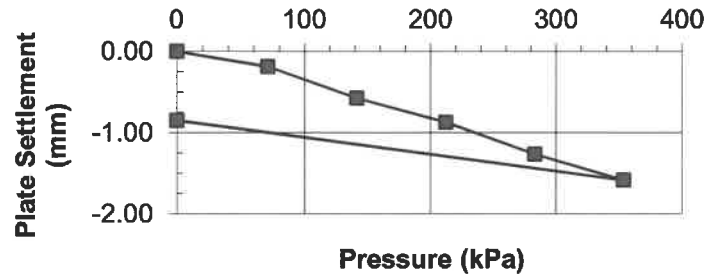
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/2		
TEST LOCATION	MCC 6	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4907	4798	4932	4879	0.00	0.00	0.0
4891	4773	4917	4860	-0.19	5.00	70.7
4850	4729	4885	4821	-0.58	10.00	141.5
4827	4687	4861	4792	-0.87	15.00	212.2
4789	4636	4832	4752	-1.27	20.00	282.9
4763	4598	4800	4720	-1.59	25.00	353.7
4832	4695	4855	4794	-0.85	0.00	0.0



Pressure at 1.25 mm deflexion =	279 kPa
Modulus of subgrade reaction (k) =	223 MPa/m
Equivalent 762 mm plate reaction =	99 MPa/m
Equivalent CBR =	27.5 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 24-Mar-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

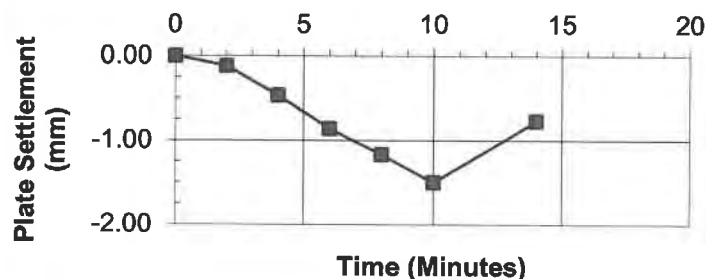
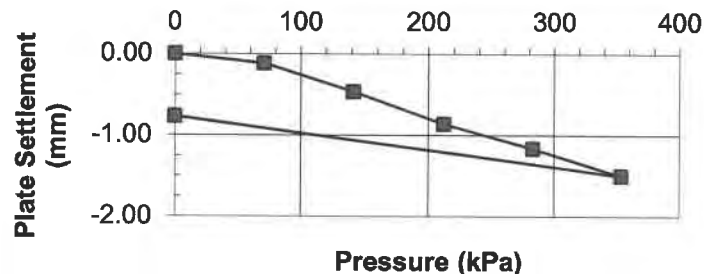


TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/2		
TEST LOCATION	MCC 7	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4706	4656	4897	4753	0.00	0.00	0.0
4694	4644	4886	4741	-0.12	5.00	70.7
4661	4593	4865	4706	-0.47	10.00	141.5
4617	4545	4838	4667	-0.86	15.00	212.2
4580	4513	4816	4636	-1.17	20.00	282.9
4541	4480	4788	4603	-1.50	25.00	353.7
4615	4558	4855	4676	-0.77	0.00	0.0



Pressure at 1.25 mm deflexion =	300 kPa
Modulus of subgrade reaction (k) =	240 MPa/m
Equivalent 762 mm plate reaction =	106 MPa/m
Equivalent CBR =	31.2 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 24-Mar-20

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Former Boddington's Brewery,
Gt Ducie Street, Cheetham Hill,
Manchester M3 1PT

Job Number MRN 3817/3
Date of Issue 26 March 2020
Page 1 of 6

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



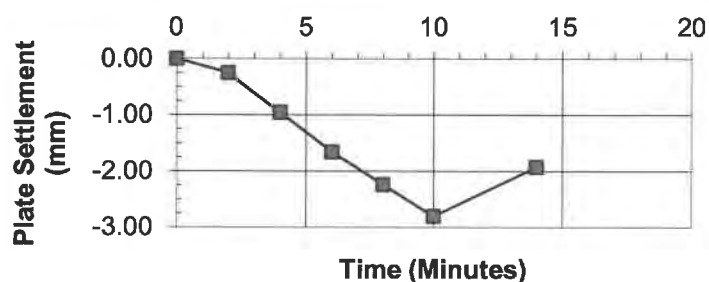
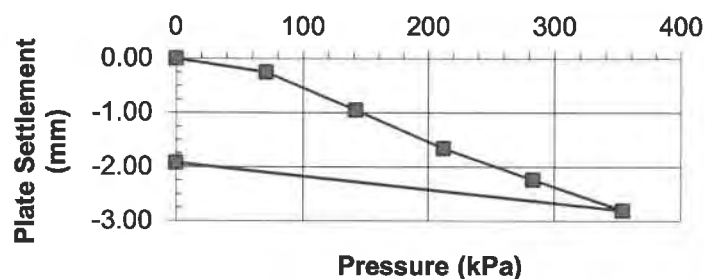
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/3		
TEST LOCATION	MCC 8	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	25-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4790	4701	4623	4705	0.00	0.00	0.0
4761	4680	4598	4680	-0.25	5.00	70.7
4702	4600	4526	4609	-0.95	10.00	141.5
4634	4527	4455	4539	-1.66	15.00	212.2
4579	4466	4398	4481	-2.24	20.00	282.9
4523	4408	4341	4424	-2.81	25.00	353.7
4606	4514	4416	4512	-1.93	0.00	0.0



Pressure at 1.25 mm deflexion =	171 kPa
Modulus of subgrade reaction (k) =	137 MPa/m
Equivalent 762 mm plate reaction =	60 MPa/m
Equivalent CBR =	11.8 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 26-Mar-20

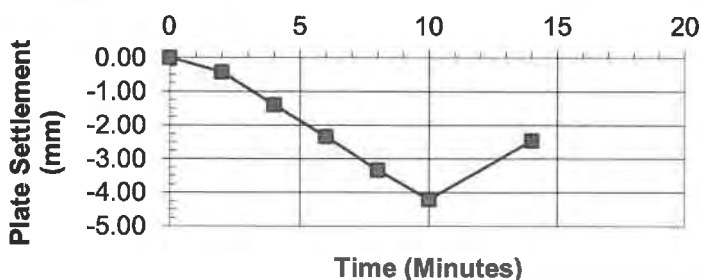
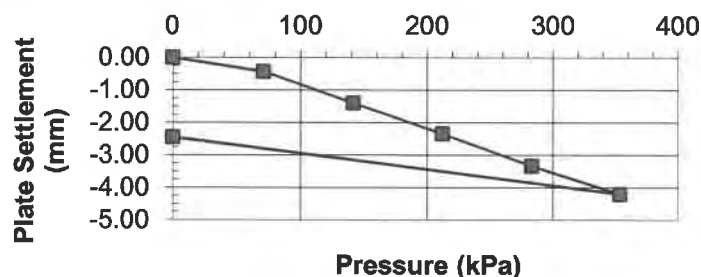
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/3		
TEST LOCATION	MCC 9	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	25-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4788	4773	4708	4756	0.00	0.00	0.0
4745	4727	4668	4713	-0.43	5.00	70.7
4647	4627	4574	4616	-1.40	10.00	141.5
4558	4530	4477	4522	-2.35	15.00	212.2
4462	4426	4381	4423	-3.33	20.00	282.9
4381	4333	4293	4336	-4.21	25.00	353.7
4544	4527	4462	4511	-2.45	0.00	0.0



Pressure at 1.25 mm deflexion =	131 kPa
Modulus of subgrade reaction (k) =	104 MPa/m
Equivalent 762 mm plate reaction =	46 MPa/m
Equivalent CBR =	7.4 %

REMARKS

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 26-Mar-20

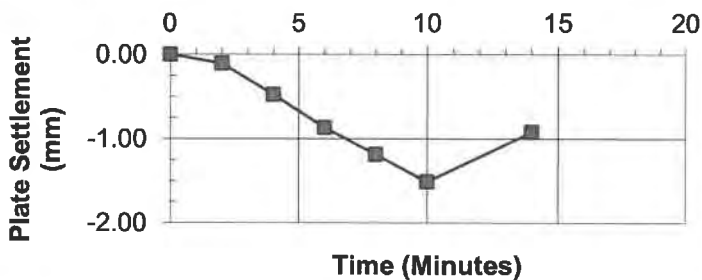
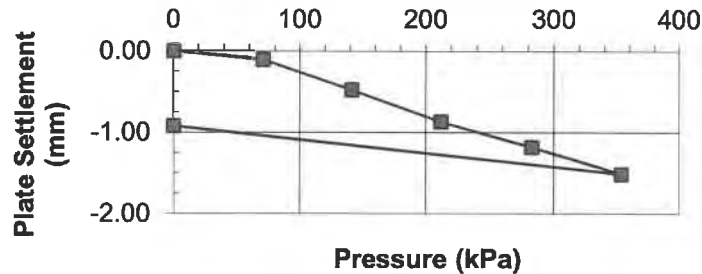
MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/3		
TEST LOCATION	MCC 10	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	25-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4802	4771	4858	4810	0.00	0.00	0.0
4790	4754	4855	4800	-0.11	5.00	70.7
4748	4716	4824	4763	-0.48	10.00	141.5
4705	4679	4786	4723	-0.87	15.00	212.2
4671	4648	4756	4692	-1.19	20.00	282.9
4638	4612	4727	4659	-1.51	25.00	353.7
4686	4690	4778	4718	-0.92	0.00	0.0



Pressure at 1.25 mm deflexion =	296 kPa
Modulus of subgrade reaction (k) =	237 MPa/m
Equivalent 762 mm plate reaction =	105 MPa/m
Equivalent CBR =	30.5 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 26-Mar-20

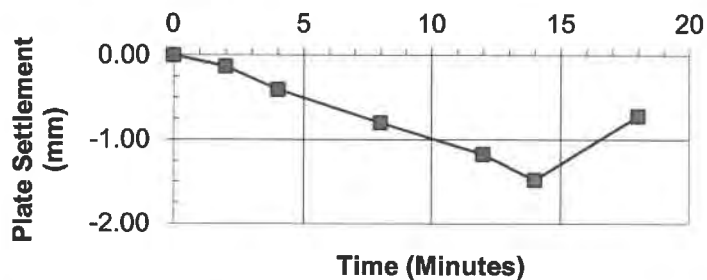
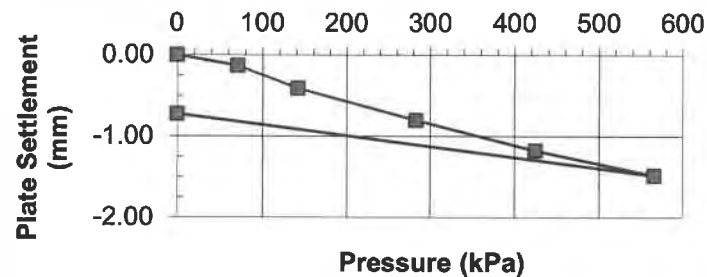
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/3		
TEST LOCATION	MCC 11	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	25-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4848	4886	4854	4863	0.00	0.00	0.0
4834	4866	4848	4849	-0.13	5.00	70.7
4807	4839	4819	4822	-0.41	10.00	141.5
4764	4795	4788	4782	-0.80	20.00	282.9
4717	4757	4761	4745	-1.18	30.00	424.4
4678	4728	4737	4714	-1.48	40.00	565.9
4764	4813	4794	4790	-0.72	0.00	0.0



Pressure at 1.25 mm deflexion =	457 kPa
Modulus of subgrade reaction (k) =	366 MPa/m
Equivalent 762 mm plate reaction =	161 MPa/m
Equivalent CBR =	64.7 %

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 26-Mar-20

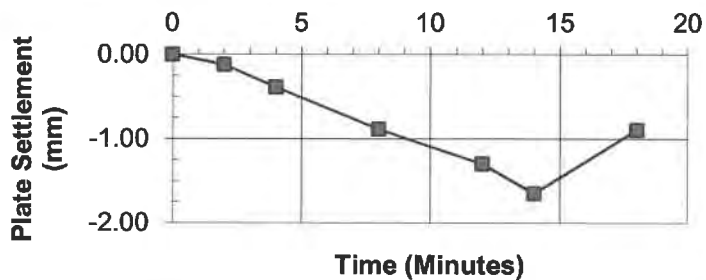
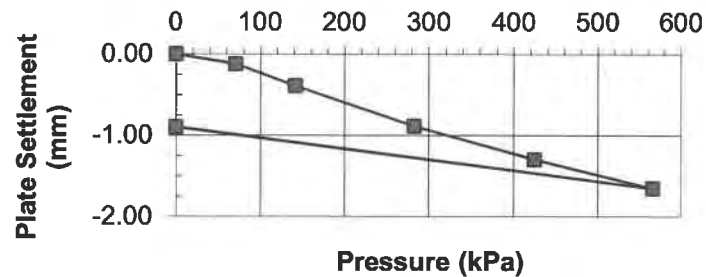
MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/3		
TEST LOCATION	MCC 12	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	25-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4770	4761	4793	4775	0.00	0.00	0.0
4761	4744	4783	4763	-0.12	5.00	70.7
4732	4718	4757	4736	-0.39	10.00	141.5
4686	4658	4714	4686	-0.89	20.00	282.9
4644	4609	4681	4645	-1.30	30.00	424.4
4619	4559	4650	4609	-1.65	40.00	565.9
4671	4657	4727	4685	-0.90	0.00	0.0



Pressure at 1.25 mm deflexion =	407 kPa
Modulus of subgrade reaction (k) =	326 MPa/m
Equivalent 762 mm plate reaction =	144 MPa/m
Equivalent CBR =	52.9 %

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 26-Mar-20

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract 19-1016-MCC

Job Number MRN 3817/4
Date of Issue 30 March 2020
Page 1 of 13

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site 19-1016-MCC

SAMPLE DETAILS

Job number.	:	MRN 3909/4
Laboratory sample number.	:	88604
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR01
Certificate of sampling received.	:	No
Date and time of sampling.	:	16 March 2020
Date received at Laboratory.	:	16 March 2020
Date of start of test	:	23 March 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	35% passing 14mm-retained 12.5mm 65% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 44

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 30 March 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE**ORGANIC MATTER CONTENT**

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/4

SAMPLE LABEL	CR01	DATE SAMPLED	16 March 2020
LAB SAMPLE No	88604	DATE RECEIVED	16 March 2020
DATE TESTED	23 March 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	15	%
Loss on Ignition material passing 2mm (Avg. of 2)	3.8	%

REMARKS

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 30 March 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

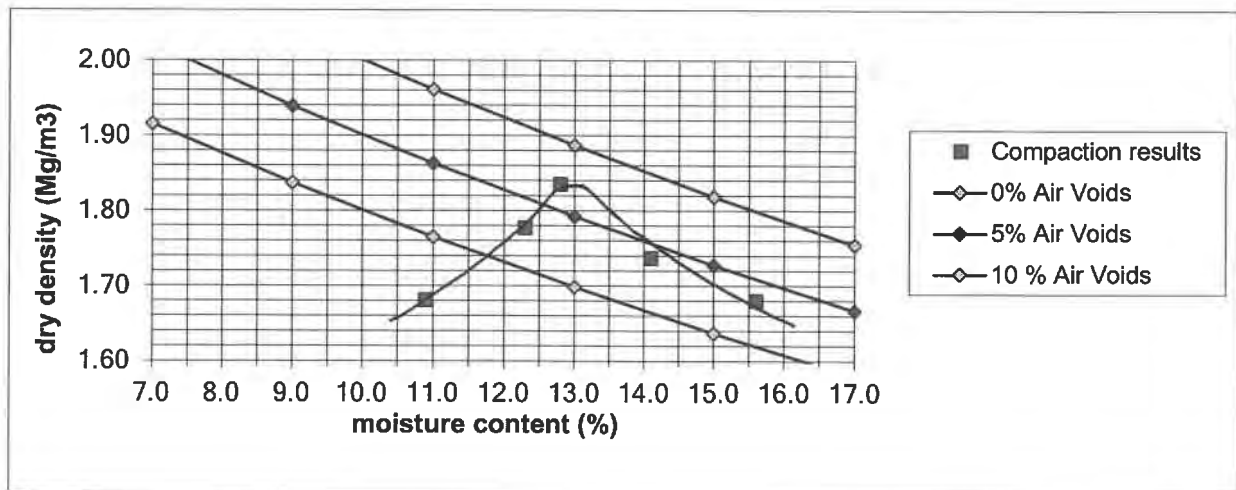
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/1

SAMPLE LABEL	CR01	DATE SAMPLED	16-Mar-20
LAB SAMPLE No	88604	DATE RECEIVED	16-Mar-20
DATE TESTED	23-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m3)
1	10.9	1.681
2	12.3	1.777
3	12.8	1.835
4	14.1	1.737
5	15.6	1.68
Optimum	13.0	
Maximum		1.83
Particle Density	2.5 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 28%
Percentage of material retained on 20mm sieve = 49%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

30-Mar-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site 19-1016-MCC

SAMPLE DETAILS

Job number.	:	MRN 3909/4
Laboratory sample number.	:	88605
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR02
Certificate of sampling received.	:	No
Date and time of sampling.	:	16 March 2020
Date received at Laboratory.	:	16 March 2020
Date of start of test	:	23 March 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	33% passing 14mm-retained 12.5mm 67% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 45

Comment

Signed 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 30 March 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE**ORGANIC MATTER CONTENT**

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/4

SAMPLE LABEL	CR02	DATE SAMPLED	16 March 2020
LAB SAMPLE No	88605	DATE RECEIVED	16 March 2020
DATE TESTED	23 March 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	14	%
Loss on Ignition material passing 2mm (Avg. of 2)	3.8	%

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 30 March 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

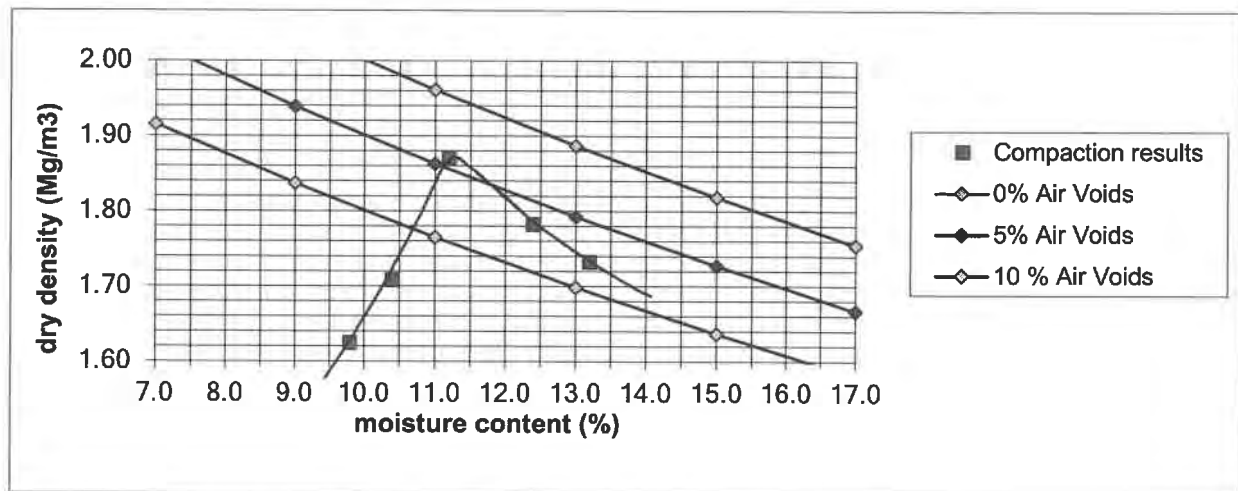
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/1

SAMPLE LABEL	CR02	DATE SAMPLED	16-Mar-20
LAB SAMPLE No	88605	DATE RECEIVED	16-Mar-20
DATE TESTED	23-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m3)
1	9.8	1.624
2	10.4	1.708
3	11.2	1.871
4	12.4	1.782
5	13.2	1.732
Optimum	11.0	
Maximum		1.87
Particle Density	2.5 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 46%
Percentage of material retained on 20mm sieve = 59%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

30-Mar-20



TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site 19-1016-MCC

SAMPLE DETAILS

Job number.	:	MRN 3909/4
Laboratory sample number.	:	88606
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR03
Certificate of sampling received.	:	No
Date and time of sampling.	:	16 March 2020
Date received at Laboratory.	:	16 March 2020
Date of start of test	:	23 March 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	37% passing 14mm-retained 12.5mm 63% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 48

Comment

Signed 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 30 March 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE**ORGANIC MATTER CONTENT**

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/4

SAMPLE LABEL	CR03	DATE SAMPLED	16 March 2020
LAB SAMPLE No	88606	DATE RECEIVED	16 March 2020
DATE TESTED	23 March 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	11	%
Loss on Ignition material passing 2mm (Avg. of 2)	3.2	%

REMARKS

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 30 March 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

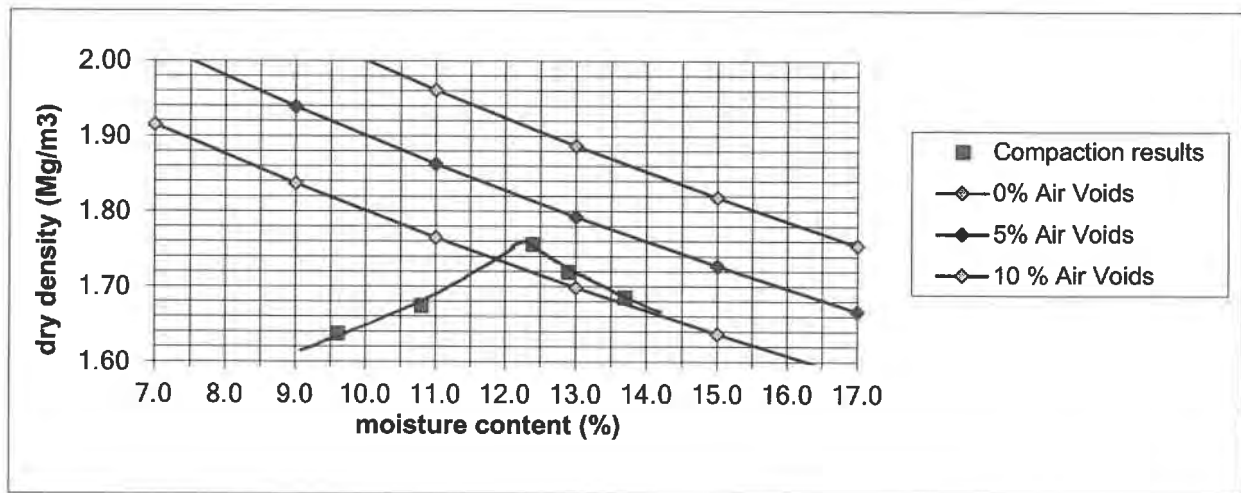
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/1

SAMPLE LABEL	CR03	DATE SAMPLED	16-Mar-20
LAB SAMPLE No	88606	DATE RECEIVED	16-Mar-20
DATE TESTED	23-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m3)
1	9.6	1.637
2	10.8	1.674
3	12.4	1.756
4	12.9	1.719
5	13.7	1.685
Optimum	12.0	
Maximum		1.76
Particle Density	2.5 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 28%
Percentage of material retained on 20mm sieve = 55%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

30-Mar-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site 19-1016-MCC

SAMPLE DETAILS

Job number.	:	MRN 3909/4
Laboratory sample number.	:	88607
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR04
Certificate of sampling received.	:	No
Date and time of sampling.	:	16 March 2020
Date received at Laboratory.	:	16 March 2020
Date of start of test	:	23 March 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	34% passing 14mm-retained 12.5mm 66% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 48

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 30 March 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE**ORGANIC MATTER CONTENT**

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/4

SAMPLE LABEL	CR04	DATE SAMPLED	16 March 2020
LAB SAMPLE No	88607	DATE RECEIVED	16 March 2020
DATE TESTED	23 March 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	17	%
Loss on Ignition material passing 2mm (Avg. of 2)	3.3	%

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 30 March 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

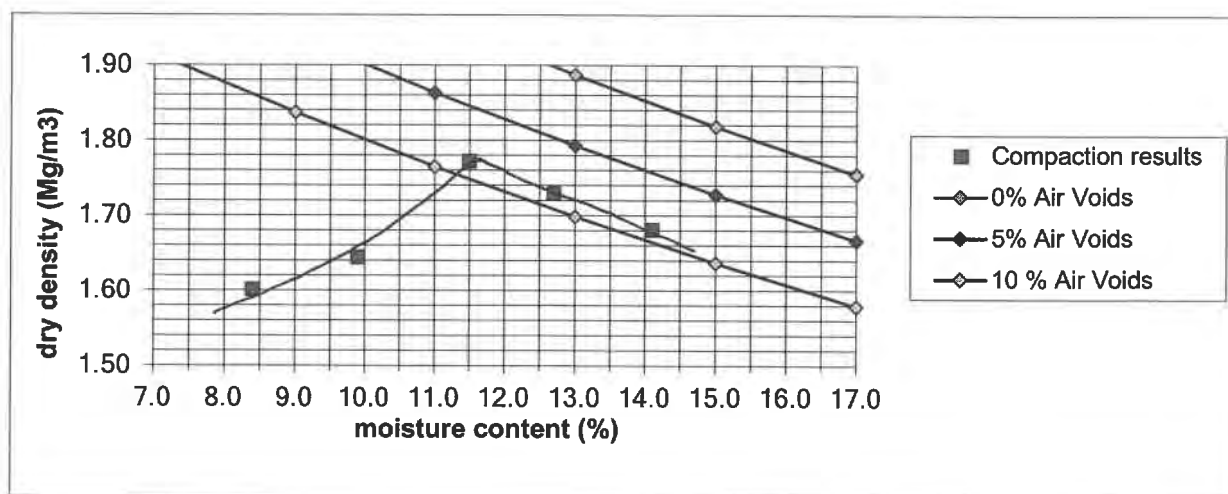
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	19-1016-MCC
JOB NUMBER	MRN 3817/1

SAMPLE LABEL	CR04	DATE SAMPLED	16-Mar-20
LAB SAMPLE No	88607	DATE RECEIVED	16-Mar-20
DATE TESTED	23-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m3)
1	8.4	1.601
2	9.9	1.644
3	11.5	1.772
4	12.7	1.729
5	14.1	1.681
Optimum	12.0	
Maximum		1.77
Particle Density	2.5 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 35%
Percentage of material retained on 20mm sieve = 58%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

30-Mar-20



TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Former Boddington's Brewery,
Gt Ducie Street, Cheetham Mill,
Manchester M3 1PT

Job Number MRN 3817/5
Date of Issue 31 March 2020
Page 1 of 4

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.



MURRAY RIX

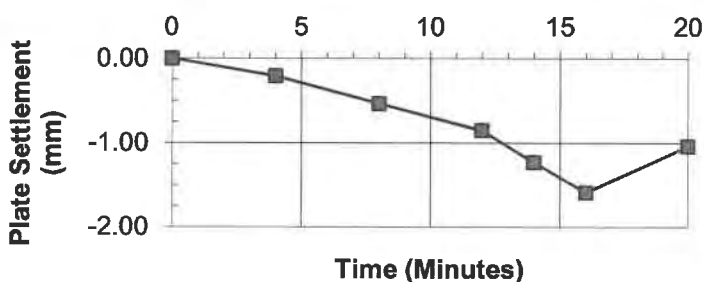
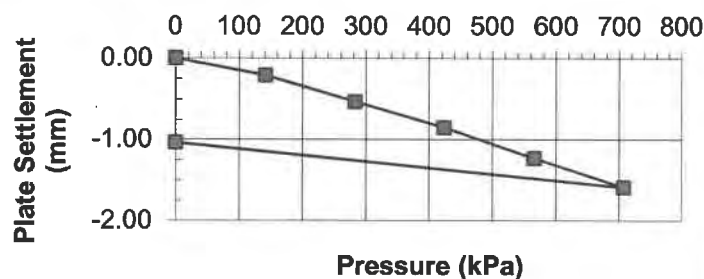
ANDREW HOUSE, HADFIELD STREET
 DUKINFIELD, CHESHIRE SK16 4QX
 TEL 0161 475 0870

**TEST CERTIFICATE****PLATE INCREMENTAL LOAD TEST**

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/5		
TEST LOCATION	MCC 13	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	30-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4839	4799	4845	4828	0.00	0.00	0.0
4820	4770	4830	4807	-0.21	10.00	141.5
4791	4728	4803	4774	-0.54	20.00	282.9
4761	4685	4781	4742	-0.85	30.00	424.4
4730	4643	4740	4704	-1.23	40.00	565.9
4699	4595	4712	4669	-1.59	50.00	707.4
4750	4672	4749	4724	-1.04	0.00	0.0



Pressure at 1.25 mm deflexion =	574 kPa
Modulus of subgrade reaction (k) =	459 MPa/m
Equivalent 762 mm plate reaction =	203 MPa/m
Equivalent CBR =	96.1 %

REMARKS

SIGNED

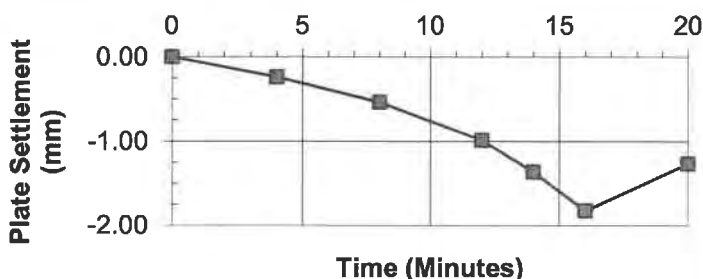
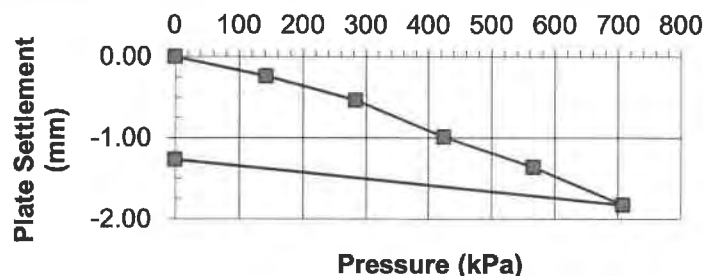
NAME O.P. Davies BA (Hons)
 (Laboratory Manager)

DATE 31-Mar-20

TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/5		
TEST LOCATION	MCC 14	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	30-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4925	4901	4732	4853	0.00	0.00	0.0
4909	4866	4712	4829	-0.24	10.00	141.5
4885	4819	4693	4799	-0.54	20.00	282.9
4844	4757	4661	4754	-0.99	30.00	424.4
4808	4700	4641	4716	-1.36	40.00	565.9
4756	4636	4618	4670	-1.83	50.00	707.4
4794	4724	4660	4726	-1.27	0.00	0.0



Pressure at 1.25 mm deflexion =	524 kPa
Modulus of subgrade reaction (k) =	419 MPa/m
Equivalent 762 mm plate reaction =	185 MPa/m
Equivalent CBR =	82.0 %

REMARKS

SIGNED

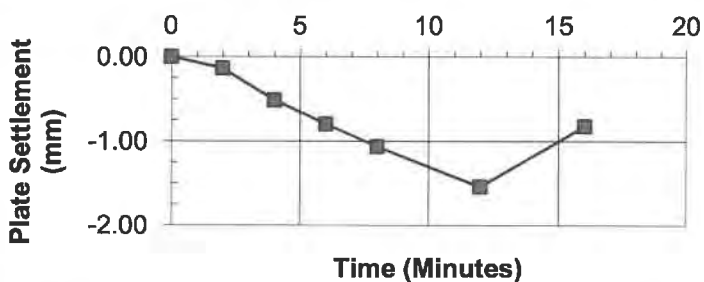
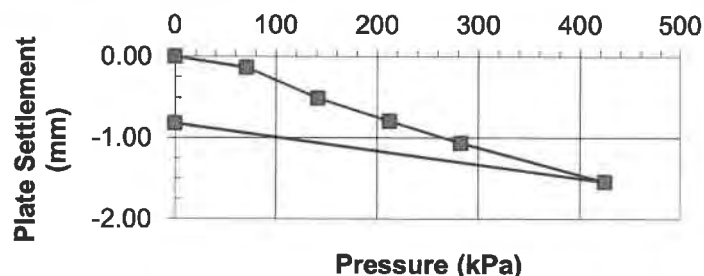
NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 31-Mar-20

TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/5		
TEST LOCATION	MCC 15	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	30-Mar-20	PLATE SIZE (mm)	300 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4756	4863	4849	4823	0.00	0.00	0.0
4747	4843	4837	4809	-0.14	5.00	70.7
4713	4799	4802	4771	-0.51	10.00	141.5
4685	4764	4780	4743	-0.80	15.00	212.2
4656	4732	4760	4716	-1.07	20.00	282.9
4610	4671	4724	4668	-1.54	30.00	424.4
4674	4761	4786	4740	-0.82	0.00	0.0



Pressure at 1.25 mm deflexion =	337 kPa
Modulus of subgrade reaction (k) =	270 MPa/m
Equivalent 762 mm plate reaction =	119 MPa/m
Equivalent CBR =	38.2 %

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 31-Mar-20

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract CLR 19 1016 –
Manchester College Campus

Job Number MRN 3817/6
Date of Issue 09 April 2020
Page 1 of 13

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

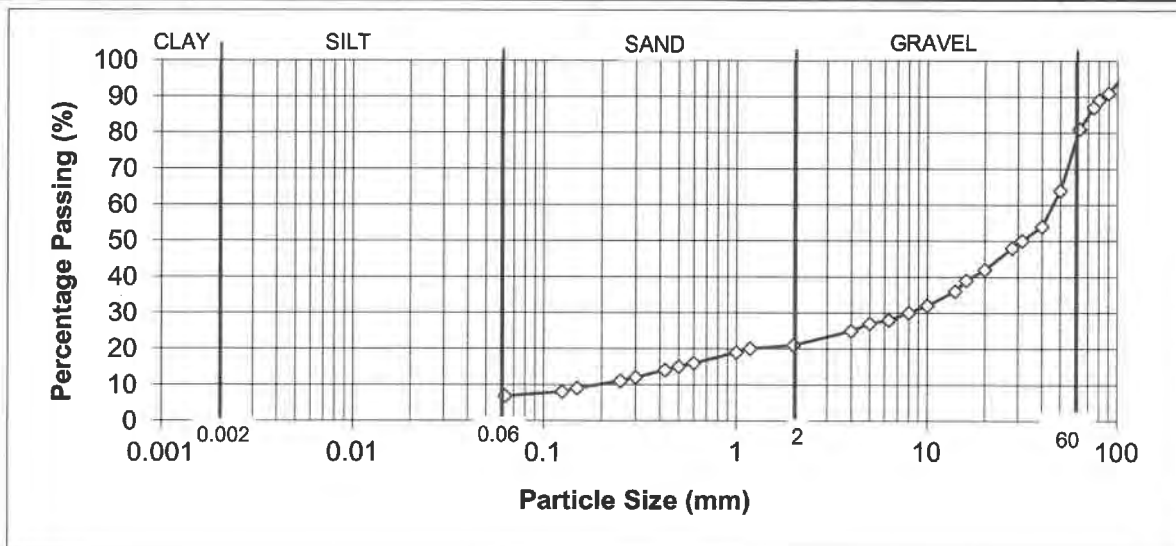
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR05	DATE SAMPLED	30-Mar-20
LAB SAMPLE No	88827	DATE RECEIVED	30-Mar-20
DATE TESTED	30-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	28	
90	91		5	27	
80	89	75-99	4	25	
75	87		2	21	0-35
63	81		1.18	20	
50	64		1	19	
40	54	50-90	0.6	16	
31.5	50		0.5	15	
28	48		0.425	14	
20	42	30-75	0.3	12	
16	39		0.25	11	
14	36		0.15	9	
10	32	15-60	0.125	8	
8	30		0.063	6.8	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 10%

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

09-Apr-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

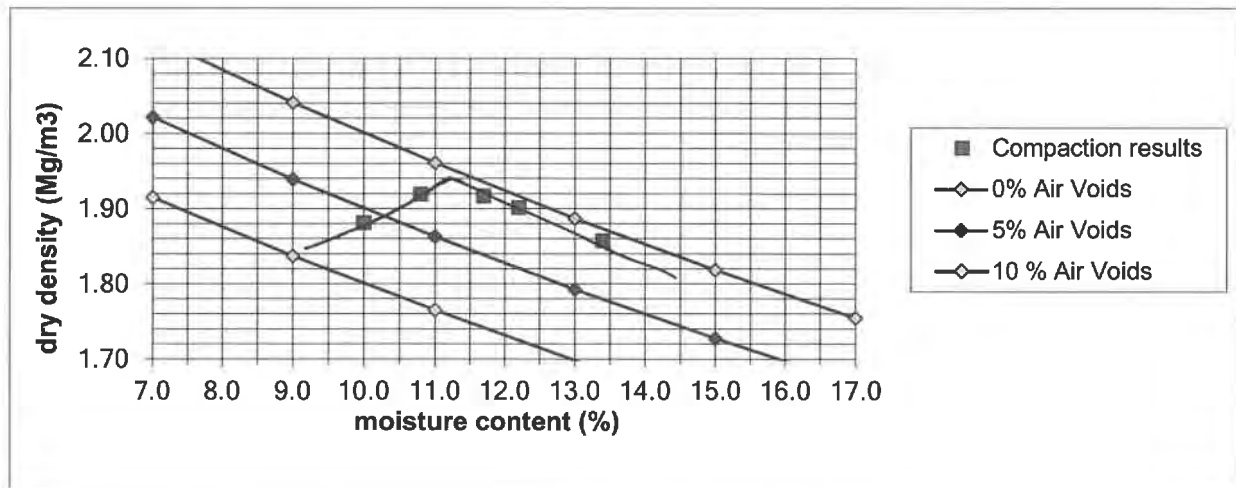
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR05	DATE SAMPLED	30-Mar-20
LAB SAMPLE No	88827	DATE RECEIVED	30-Mar-20
DATE TESTED	01-Apr-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m ³)
1	10.0	1.881
2	10.8	1.919
3	11.7	1.917
4	12.2	1.901
5	13.4	1.857
Optimum	11.0	
Maximum		1.94
Particle Density	2.5 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 46%
Percentage of material retained on 20mm sieve = 58%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

09-Apr-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/6
Laboratory sample number.	:	88827
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR05
Certificate of sampling received.	:	No
Date and time of sampling.	:	30 March 2020
Date received at Laboratory.	:	30 March 2020
Date of start of test	:	30 March 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	35% passing 14mm-retained 12.5mm 65% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 45

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 09 April 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

ORGANIC MATTER CONTENT

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR05	DATE SAMPLED	30 March 2020
LAB SAMPLE No	88827	DATE RECEIVED	30 March 2020
DATE TESTED	31 March 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	20	%
Loss on Ignition material passing 2mm (Avg. of 2)	5.0	%

REMARKS

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 09 April 2020

TEST CERTIFICATE**PARTICLE SIZE DISTRIBUTION**

BS EN 933-1 : 2012 (Washing & Sieving Method)

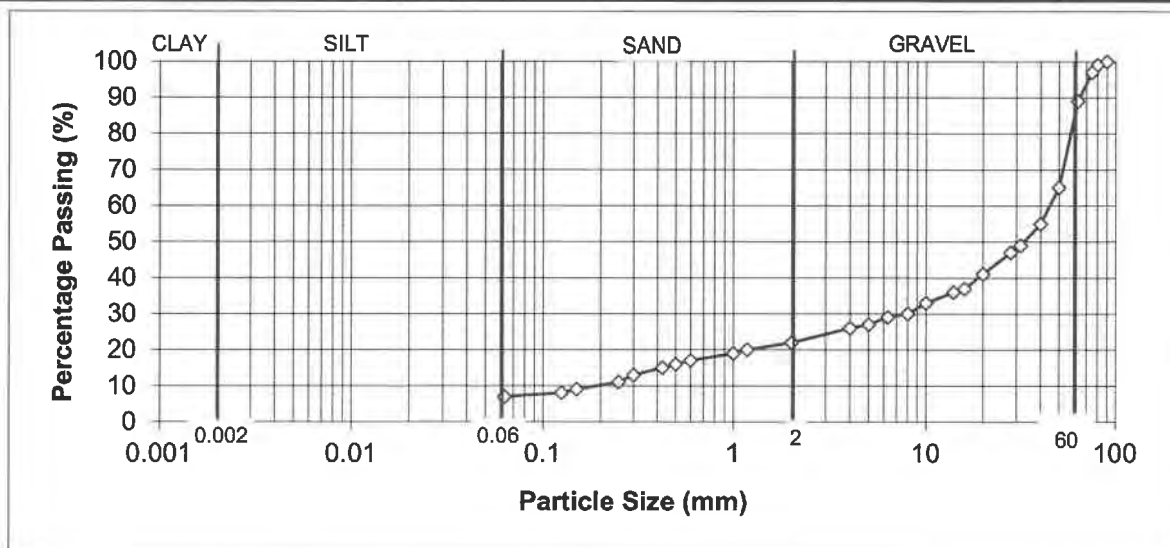
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR06	DATE SAMPLED	30-Mar-20
LAB SAMPLE No	88828	DATE RECEIVED	30-Mar-20
DATE TESTED	30-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	29	
90	100		5	27	
80	99	75-99	4	26	
75	97		2	22	0-35
63	89		1.18	20	
50	65		1	19	
40	55	50-90	0.6	17	
31.5	49		0.5	16	
28	47		0.425	15	
20	41	30-75	0.3	13	
16	37		0.25	11	
14	36		0.15	9	
10	33	15-60	0.125	8	
8	30		0.063	7.0	0-12

**REMARKS**

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 12%

SIGNED



NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

09-Apr-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

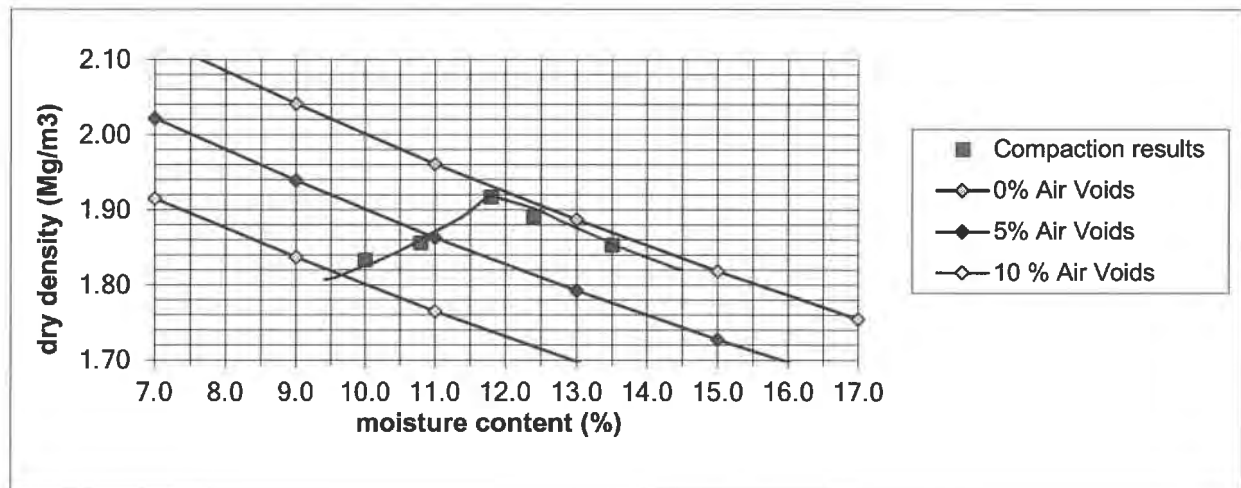
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR06	DATE SAMPLED	30-Mar-20
LAB SAMPLE No	88828	DATE RECEIVED	30-Mar-20
DATE TESTED	01-Apr-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m3)
1	10.0	1.833
2	10.8	1.856
3	11.8	1.917
4	12.4	1.891
5	13.5	1.853
Optimum	12.0	
Maximum		1.92
Particle Density	2.5 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 45%
Percentage of material retained on 20mm sieve = 59%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

09-Apr-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/6
Laboratory sample number.	:	88828
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR06
Certificate of sampling received.	:	No
Date and time of sampling.	:	30 March 2020
Date received at Laboratory.	:	30 March 2020
Date of start of test	:	30 March 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	33% passing 14mm-retained 12.5mm 67% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 48

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 09 April 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE**ORGANIC MATTER CONTENT**

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR06	DATE SAMPLED	30 March 2020
LAB SAMPLE No	88828	DATE RECEIVED	30 March 2020
DATE TESTED	31 March 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	25	%
Loss on Ignition material passing 2mm (Avg. of 2)	5.2	%

REMARKS

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 09 April 2020

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

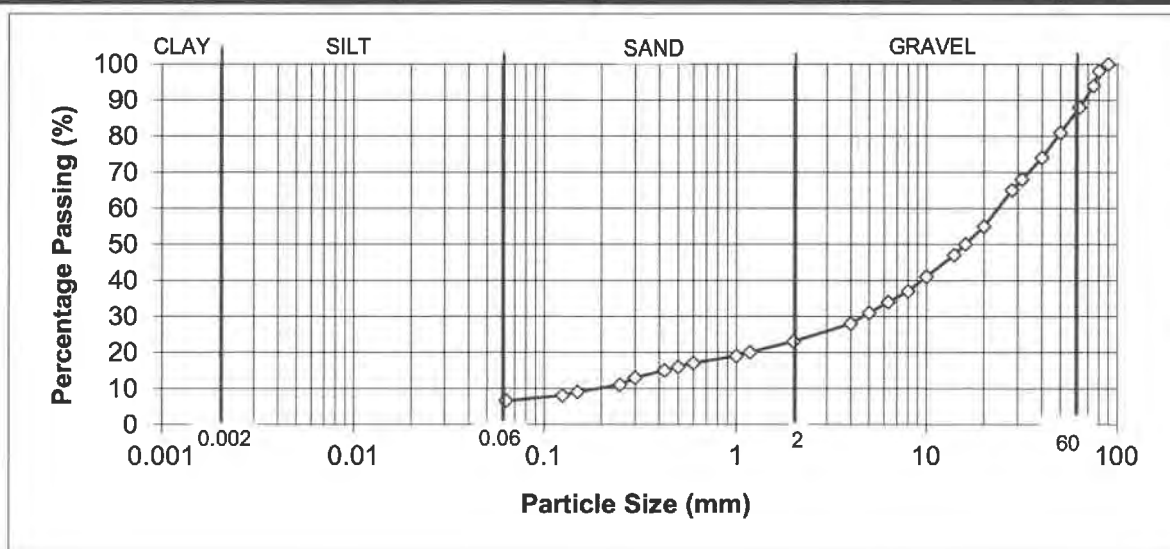
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR07	DATE SAMPLED	30-Mar-20
LAB SAMPLE No	88829	DATE RECEIVED	30-Mar-20
DATE TESTED	30-Mar-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	34	
90	100		5	31	
80	98	75-99	4	28	
75	94		2	23	0-35
63	88		1.18	20	
50	81		1	19	
40	74	50-90	0.6	17	
31.5	68		0.5	16	
28	65		0.425	15	
20	55	30-75	0.3	13	
16	50		0.25	11	
14	47		0.15	9	
10	41	15-60	0.125	8	
8	37		0.063	6.6	0-12



REMARKS

Sample complies with the advised grading specification 6F5 (SHW 2016)

As received moisture content = 7.5%

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 09-Apr-20

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

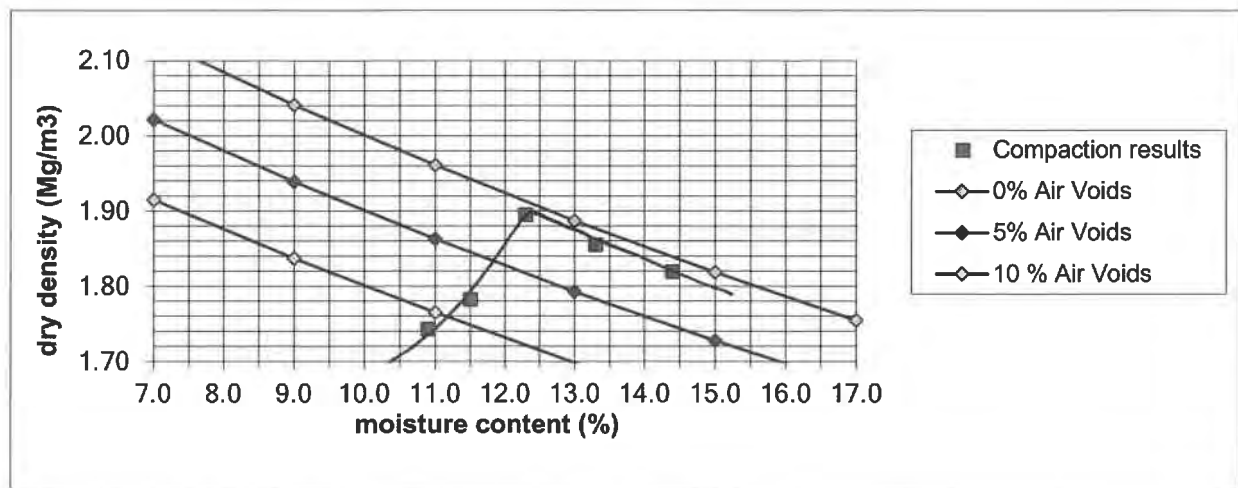
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate
SITE	CLR 19 1016 - Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR07	DATE SAMPLED	30-Mar-20
LAB SAMPLE No	88829	DATE RECEIVED	30-Mar-20
DATE TESTED	01-Apr-20	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried / Separate Batches

Point Number	Moisture Content (%)	Dry Density (Mg/m ³)
1	10.9	1.743
2	11.5	1.782
3	12.3	1.895
4	13.3	1.855
5	14.4	1.819
Optimum	12.0	
Maximum		1.90
Particle Density	2.5 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 26%
Percentage of material retained on 20mm sieve = 45%

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

09-Apr-20

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST
METHOD
BS EN 1097-2:2010

Client. LK Remediate
Site CLR 19 1016 – Manchester College Campus

SAMPLE DETAILS

Job number.	:	MRN 3817/6
Laboratory sample number.	:	88829
Material	:	Recycled Crush
Advised Source	:	As client and site above
Site mark.	:	CR07
Certificate of sampling received.	:	No
Date and time of sampling.	:	30 March 2020
Date received at Laboratory.	:	30 March 2020
Date of start of test	:	30 March 2020
Sampling location.	:	Stockpile
Method of sampling.	:	BS EN 932-1 : 1997
Sampled by.	:	Client
Size Fraction	:	38% passing 14mm-retained 12.5mm 62% passing 12.5mm-retained 10mm
Mass of dry sample tested	:	5000 g
Target specification.	:	<50

RESULT

Los Angeles Coefficient : 48

Comment

Signed



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

Date 09 April 2020

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

ORGANIC MATTER CONTENT

(Loss on Ignition)

BS 1377: PART 3: 1990

CLIENT	LK Remediate
SITE	CLR 19 1016 – Manchester College Campus
JOB NUMBER	MRN 3817/6

SAMPLE LABEL	CR07	DATE SAMPLED	30 March 2020
LAB SAMPLE No	88829	DATE RECEIVED	30 March 2020
DATE TESTED	31 March 2020	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	As client and site above
PRE TREATMENT	Air Dried

% Passing 2mm in sample	19	%
Loss on Ignition material passing 2mm (Avg. of 2)	5.0	%

REMARKS

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 09 April 2020

TEST REPORT

Client LK Remediate

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Former Boddington's Brewery,
Gt Ducie Street, Cheetham Hill,
Manchester M3 1PT

Job Number MRN 3817/7
Date of Issue 24 April 2020
Page 1 of 31

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



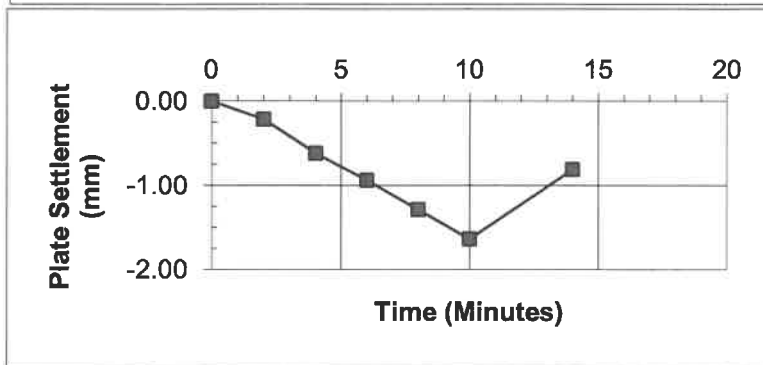
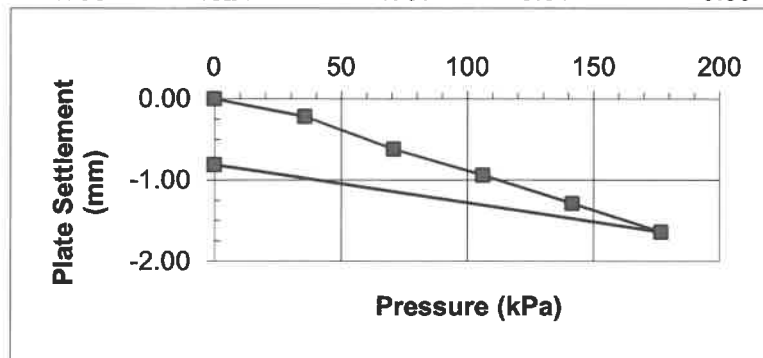
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/7		
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	23-Apr-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4847	4906	4883	4879	0.00	0.00	0.0
4823	4876	4872	4857	-0.22	10.00	35.4
4786	4814	4850	4817	-0.62	20.00	70.7
4766	4757	4831	4785	-0.94	30.00	106.1
4731	4718	4800	4750	-1.29	40.00	141.5
4689	4683	4772	4715	-1.64	50.00	176.8
4770	4798	4824	4797	-0.81	0.00	0.0



Pressure at 1.25 mm deflexion =	137 kPa
Modulus of subgrade reaction (k) =	110 MPa/m
Equivalent 762 mm plate reaction =	88 MPa/m
Equivalent CBR =	22.7 %

REMARKS

SIGNED

NAME S.J. Hutchings
(Director)

DATE 24-Apr-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



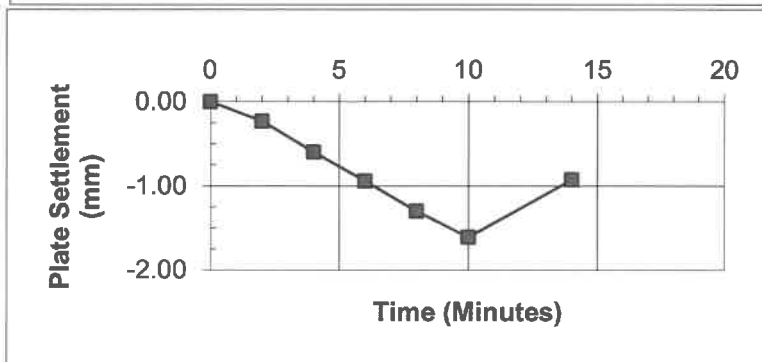
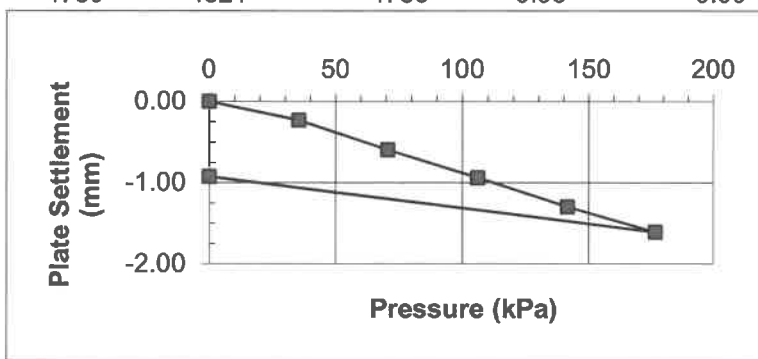
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/7		
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	23-Apr-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4871	4869	4895	4878	0.00	0.00	0.0
4858	4838	4870	4855	-0.23	10.00	35.4
4827	4786	4843	4819	-0.60	20.00	70.7
4809	4735	4809	4784	-0.94	30.00	106.1
4776	4683	4786	4748	-1.30	40.00	141.5
4746	4637	4769	4717	-1.61	50.00	176.8
4786	4750	4821	4786	-0.93	0.00	0.0



Pressure at 1.25 mm deflexion =	137 kPa
Modulus of subgrade reaction (k) =	109 MPa/m
Equivalent 762 mm plate reaction =	88 MPa/m
Equivalent CBR =	22.5 %

REMARKS

SIGNED

NAME S.J. Hutchings
(Director)

DATE 24-Apr-20

MURRAY RIX

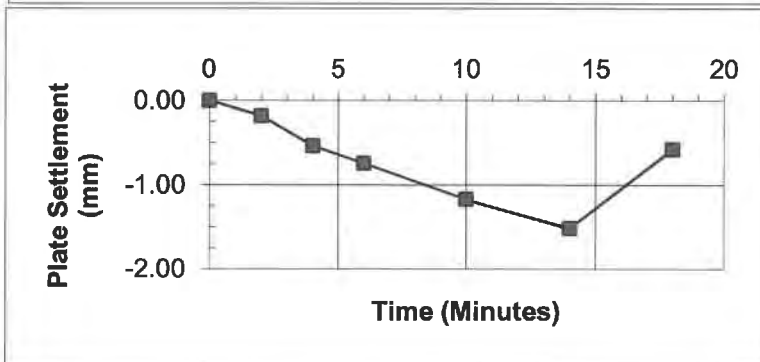
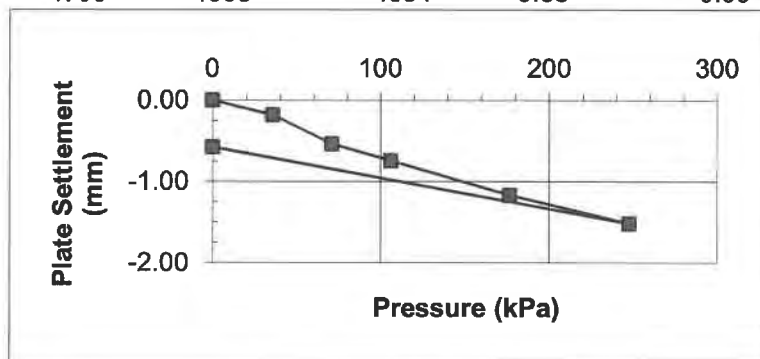
ANDREW HOUSE, HADFIELD STREET
 DUKINFIELD, CHESHIRE SK16 4QX
 TEL 0161 475 0870

**TEST CERTIFICATE****PLATE INCREMENTAL LOAD TEST**

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/7		
TEST LOCATION	3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	23-Apr-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4783	4768	4705	4752	0.00	0.00	0.0
4758	4747	4697	4734	-0.18	10.00	35.4
4715	4715	4665	4698	-0.54	20.00	70.7
4697	4682	4654	4678	-0.74	30.00	106.1
4647	4630	4628	4635	-1.17	50.00	176.8
4610	4591	4600	4600	-1.52	70.00	247.6
4710	4705	4668	4694	-0.58	0.00	0.0



Pressure at 1.25 mm deflexion =	193 kPa
Modulus of subgrade reaction (k) =	154 MPa/m
Equivalent 762 mm plate reaction =	124 MPa/m
Equivalent CBR =	41.1 %

REMARKS

SIGNED

NAME S.J. Hutchings
 (Director)

DATE 24-Apr-20

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



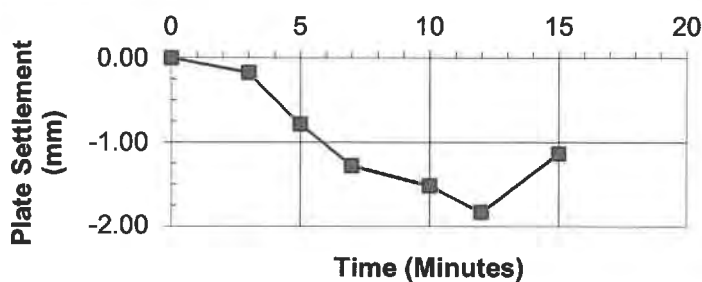
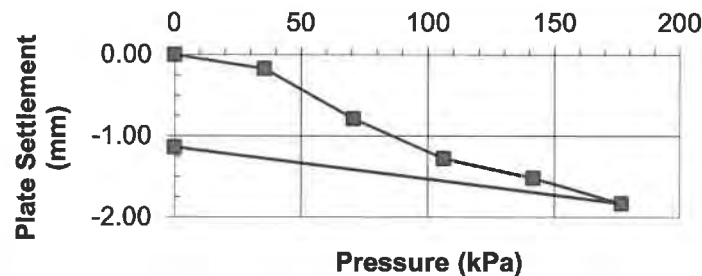
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/7		
TEST LOCATION	4	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	23-Apr-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
3981	3934	3985	3967	0.00	0.00	0.0
3968	3907	3973	3949	-0.17	10.00	35.4
3918	3841	3905	3888	-0.79	20.00	70.7
3877	3769	3870	3839	-1.28	30.00	106.1
3847	3743	3854	3815	-1.52	40.00	141.5
3826	3696	3828	3783	-1.83	50.00	176.8
3898	3802	3859	3853	-1.14	0.00	0.0



Pressure at 1.25 mm deflexion =	104 kPa
Modulus of subgrade reaction (k) =	83 MPa/m
Equivalent 762 mm plate reaction =	67 MPa/m
Equivalent CBR =	14.1 %

REMARKS

SIGNED

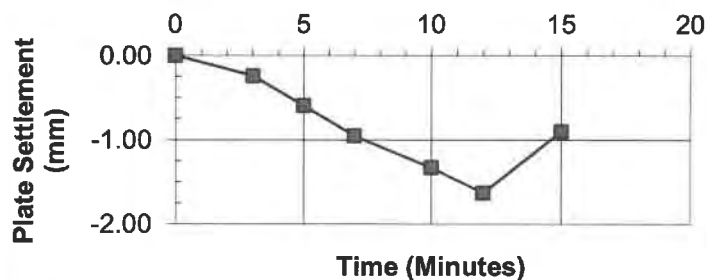
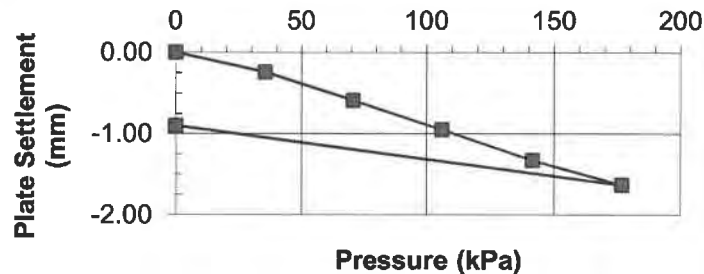
NAME S.J. Hutchings
(Director)

DATE 24-Apr-20

TEST CERTIFICATE
PLATE INCREMENTAL LOAD TEST
BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate		
SITE	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT		
JOB NUMBER	MRN 3817/7		
TEST LOCATION	5	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	23-Apr-20	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
3927	3913	4094	3978	0.00	0.00	0.0
3903	3881	4077	3954	-0.24	10.00	35.4
3850	3852	4054	3919	-0.59	20.00	70.7
3808	3818	4022	3883	-0.95	30.00	106.1
3773	3769	3993	3845	-1.33	40.00	141.5
3746	3732	3966	3815	-1.63	50.00	176.8
3823	3837	4004	3888	-0.90	0.00	0.0



Pressure at 1.25 mm deflexion =	134 kPa
Modulus of subgrade reaction (k) =	107 MPa/m
Equivalent 762 mm plate reaction =	86 MPa/m
Equivalent CBR =	21.8 %

REMARKS

SIGNED

NAME S.J. Hutchings
(Director)

DATE 24-Apr-20

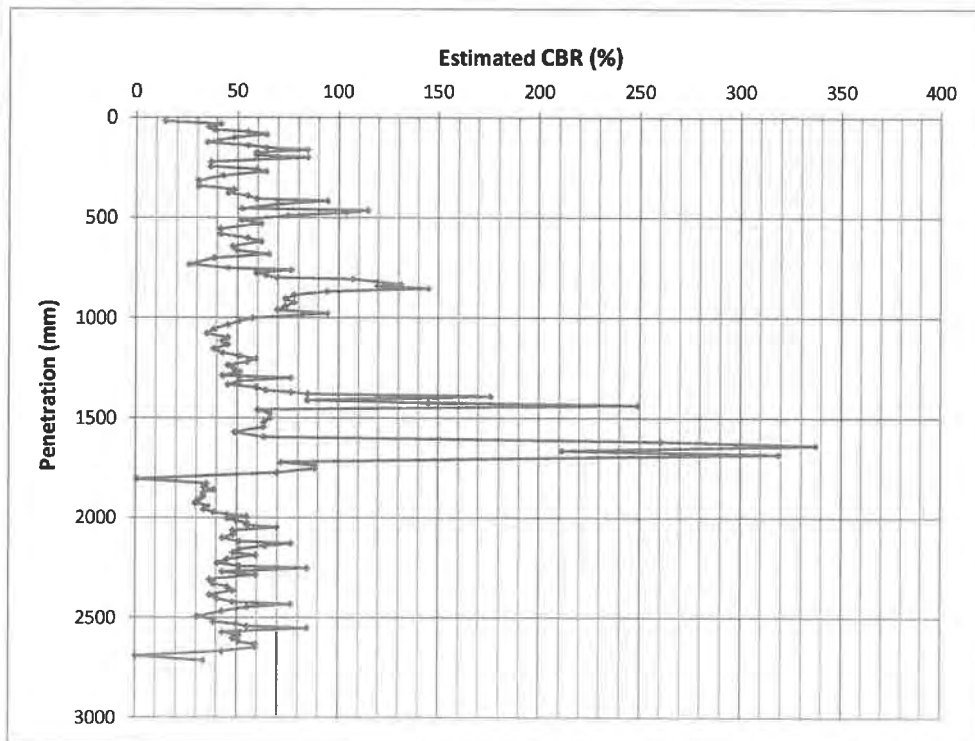
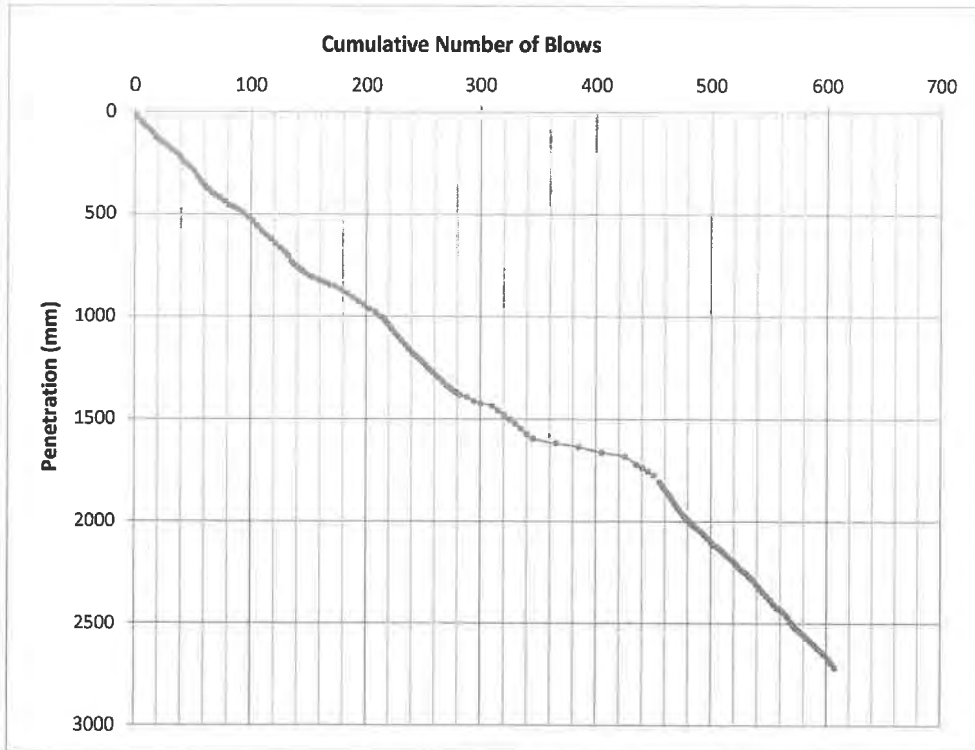
Murray Rix (Northern Ltd) Andrew House Hadfield Street Dukinfield Cheshire SK16 4QX				Client	LK Remediate	
				Site:	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT	
				Date tested (by):	23-Apr-20	
				Checked by:	S.J. Hutchings	
				Material:	Existing Ground	
				Location:	1	
				Job Number	MRN 3817/7	
TRL Dynamic Cone Penetrometer Test Report (in-situ measurement of the structural properties of unbound materials)						
No. of blows	Total No of Blows	Penetration depth (mm)	Corrected penetration depth (mm)	Depth tested (mm)	Pen rate (mm/blow)	Approx. CBR (%)*
Zero reading		82				
1	1	100	18	18	18	14
2	3	113	31	13	7	42
2	5	128	46	15	8	36
2	7	142	60	14	7	39
2	9	152	70	10	5	55
3	12	165	83	13	4	64
3	15	182	100	17	6	48
3	18	205	123	23	8	35
3	21	220	138	15	5	55
3	24	233	151	13	4	64
3	27	243	161	10	3	85
3	30	257	175	14	5	59
3	33	271	189	14	5	59
3	36	281	199	10	3	85
3	39	303	221	22	7	37
3	42	325	243	22	7	37
3	45	339	257	14	5	59
3	48	352	270	13	4	64
3	51	371	289	19	6	43
3	54	397	315	26	9	31
3	57	423	341	26	9	31
3	60	440	358	17	6	48
3	63	458	376	18	6	45
3	66	473	391	15	5	55
3	69	487	405	14	5	59
4	73	499	417	12	3	95
4	77	515	433	16	4	70
4	81	536	454	21	5	52
4	85	546	464	10	3	115
4	89	557	475	11	3	104
4	93	572	490	15	4	75
4	97	593	511	21	5	52
4	101	611	529	18	5	62
4	105	637	555	26	7	42
4	109	663	581	26	7	42
4	113	683	601	20	5	55
4	117	701	619	18	5	62
4	121	724	642	23	6	48
4	125	746	664	22	6	50
4	129	763	681	17	4	65
3	132	784	702	21	7	39
3	135	814	732	30	10	26
3	138	832	750	18	6	45
3	141	843	761	11	4	76
3	144	857	775	14	5	59
3	147	870	788	13	4	64

3	150	882	800	12	4	70
3	153	890	808	8	3	107
5	158	902	820	12	2	120
5	163	913	831	11	2	131
5	168	925	843	12	2	120
5	173	935	853	10	2	145
5	178	950	868	15	3	95
5	183	968	886	18	4	78
5	188	987	905	19	4	74
5	193	1005	923	18	4	78
5	198	1024	942	19	4	74
5	203	1044	962	20	4	70
5	208	1059	977	15	3	95
5	213	1083	1001	24	5	58
3	216	1099	1017	16	5	51
3	219	1117	1035	18	6	45
3	222	1138	1056	21	7	39
3	225	1161	1079	23	8	35
3	228	1179	1097	18	6	45
3	231	1198	1116	19	6	43
3	234	1216	1134	18	6	45
3	237	1237	1155	21	7	39
3	240	1256	1174	19	6	43
3	243	1272	1190	16	5	51
3	246	1286	1204	14	5	59
3	249	1301	1219	15	5	55
3	252	1319	1237	18	6	45
3	255	1336	1254	17	6	48
3	258	1352	1270	16	5	51
3	261	1371	1289	19	6	43
3	264	1382	1300	11	4	76
3	267	1398	1316	16	5	51
3	270	1416	1334	18	6	45
3	273	1430	1348	14	5	59
3	276	1443	1361	13	4	64
3	279	1454	1372	11	4	76
3	282	1464	1382	10	3	85
6	288	1474	1392	10	2	176
6	294	1494	1412	20	3	85
6	300	1506	1424	12	2	145
10	310	1518	1436	12	1	249
5	315	1541	1459	23	5	60
5	320	1562	1480	21	4	66
5	325	1583	1501	21	4	66
5	330	1605	1523	22	4	63
5	335	1627	1545	22	4	63
5	340	1655	1573	28	6	49
5	345	1677	1595	22	4	63
20	365	1700	1618	23	1	261
20	385	1718	1636	18	1	338
20	405	1746	1664	28	1	212
20	425	1765	1683	19	1	319
10	435	1804	1722	39	4	72
5	440	1820	1738	16	3	88
5	445	1836	1754	16	3	88
5	450	1856	1774	20	4	70

5	455	1888	1806	1806	361	1
3	458	1911	1829	23	8	35
2	460	1927	1845	16	8	34
2	462	1941	1859	14	7	39
2	464	1957	1875	16	8	34
2	466	1973	1891	16	8	34
2	468	1990	1908	17	9	31
2	470	2008	1926	18	9	30
2	472	2023	1941	15	8	36
2	474	2039	1957	16	8	34
2	476	2053	1971	14	7	39
2	478	2065	1983	12	6	45
2	480	2075	1993	10	5	55
2	482	2087	2005	12	6	45
2	484	2098	2016	11	6	50
2	486	2108	2026	10	5	55
2	488	2118	2036	10	5	55
3	491	2130	2048	12	4	70
3	494	2147	2065	17	6	48
3	497	2164	2082	17	6	48
3	500	2183	2101	19	6	43
3	503	2199	2117	16	5	51
3	506	2210	2128	11	4	76
3	509	2223	2141	13	4	64
3	512	2239	2157	16	5	51
3	515	2256	2174	17	6	48
3	518	2270	2188	14	5	59
3	521	2288	2206	18	6	45
3	524	2308	2226	20	7	41
3	527	2324	2242	16	5	51
3	530	2334	2252	10	3	85
3	533	2353	2271	19	6	43
3	536	2367	2285	14	5	59
3	539	2389	2307	22	7	37
3	542	2410	2328	21	7	39
3	545	2428	2346	18	6	45
3	548	2445	2363	17	6	48
3	551	2467	2385	22	7	37
3	554	2487	2405	20	7	41
3	557	2504	2422	17	6	48
3	560	2515	2433	11	4	76
3	563	2530	2448	15	5	55
3	566	2549	2467	19	6	43
3	569	2575	2493	26	9	31
2	571	2589	2507	14	7	39
2	573	2603	2521	14	7	39
2	575	2614	2532	11	6	50
2	577	2624	2542	10	5	55
3	580	2634	2552	10	3	85
3	583	2653	2571	19	6	43
3	586	2669	2587	16	5	51
3	589	2686	2604	17	6	48
3	592	2702	2620	16	5	51
3	595	2716	2634	14	5	59
3	598	2730	2648	14	5	59
3	601	2749	2667	19	6	43

[illegible]

Remarks:



*Calculation of CBR: estimated from the following TRL relationship: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$
Ref - Interim Advice Note 73/06 Revision 1 (2009) Design Guidance for Road Pavement Foundations (Draft HD25)

SIGNED

NAME S.J. Hutchings
(Director)

DATE

24-Apr-20

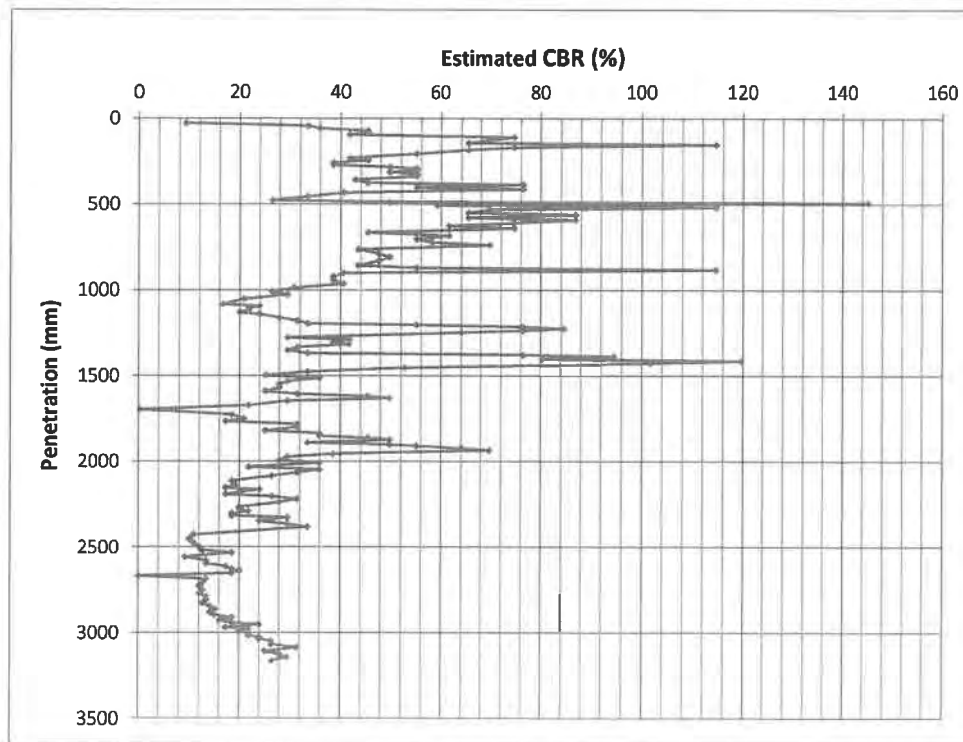
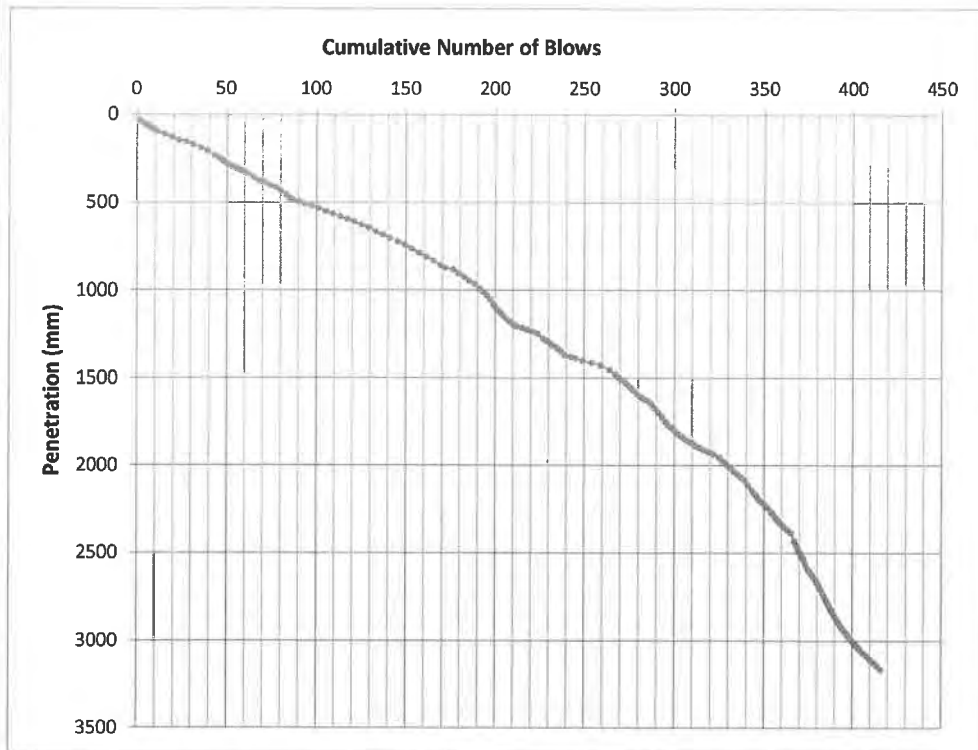
Murray Rix (Northern Ltd) Andrew House Hadfield Street Dukinfield Cheshire SK16 4QX				Client	LK Remediate	
				Site	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT	
				Date tested (by):	23-Apr-20	
				Checked by:	S.J. Hutchings	
				Material:	Existing Ground	
				Location:	2	
				Job Number	MRN 3817/7	
TRL Dynamic Cone Penetrometer Test Report (in-situ measurement of the structural properties of unbound materials)						
No. of blows	Total No of Blows	Penetration depth (mm)	Corrected penetration depth (mm)	Depth tested (mm)	Pen rate (mm/blow)	Approx. CBR (%)*
Zero reading		100				
1	1	127	27	27	27	9
2	3	143	43	16	8	34
2	5	158	58	15	8	36
2	7	170	70	12	6	45
2	9	182	82	12	6	45
2	11	195	95	13	7	42
4	15	210	110	15	4	75
4	19	226	126	16	4	70
4	23	243	143	17	4	65
4	27	253	153	10	3	115
4	31	268	168	15	4	75
4	35	285	185	17	4	65
4	39	305	205	20	5	55
4	43	331	231	26	7	42
2	45	343	243	12	6	45
2	47	357	257	14	7	39
2	49	371	271	14	7	39
2	51	382	282	11	6	50
2	53	392	292	10	5	55
2	55	402	302	10	5	55
2	57	413	313	11	6	50
2	59	423	323	10	5	55
3	62	438	338	15	5	55
3	65	457	357	19	6	43
3	68	475	375	18	6	45
3	71	486	386	11	4	76
3	74	501	401	15	5	55
3	77	512	412	11	4	76
3	80	532	432	20	7	41
3	83	556	456	24	8	34
2	85	576	476	20	10	26
2	87	587	487	11	6	50
3	90	593	493	6	2	145
3	93	607	507	14	5	59
4	97	617	517	10	3	115
4	101	633	533	16	4	70
4	105	650	550	17	4	65
4	109	663	563	13	3	87
4	113	680	580	17	4	65
4	117	693	593	13	3	87
4	121	708	608	15	4	75
4	125	726	626	18	5	62
4	129	741	641	15	4	75
4	133	765	665	24	6	45
4	137	783	683	18	5	62
4	141	803	703	20	5	55

4	145	822	722	19	5	58
4	149	838	738	16	4	70
4	153	863	763	25	6	44
4	157	886	786	23	6	48
4	161	908	808	22	6	50
4	165	931	831	23	6	48
4	169	956	856	25	6	44
3	172	971	871	15	5	55
4	176	981	881	10	3	115
3	179	1001	901	20	7	41
3	182	1022	922	21	7	39
3	185	1043	943	21	7	39
3	188	1063	963	20	7	41
3	191	1089	989	26	9	31
2	193	1109	1009	20	10	26
2	195	1127	1027	18	9	30
2	197	1152	1052	25	13	21
2	199	1183	1083	31	16	17
1	200	1194	1094	11	11	24
1	201	1206	1106	12	12	22
1	202	1218	1118	12	12	22
1	203	1231	1131	13	13	20
1	204	1242	1142	11	11	24
2	206	1261	1161	19	10	28
2	208	1278	1178	17	9	31
2	210	1294	1194	16	8	34
2	212	1304	1204	10	5	55
3	215	1315	1215	11	4	76
3	218	1325	1225	10	3	85
3	221	1336	1236	11	4	76
3	224	1349	1249	13	4	64
3	227	1376	1276	27	9	30
2	229	1389	1289	13	7	42
2	231	1403	1303	14	7	39
2	233	1416	1316	13	7	42
2	235	1433	1333	17	9	31
2	237	1451	1351	18	9	30
2	239	1467	1367	16	8	34
3	242	1478	1378	11	4	76
3	245	1487	1387	9	3	95
4	249	1501	1401	14	4	80
5	254	1513	1413	12	2	120
5	259	1527	1427	14	3	102
5	264	1553	1453	26	5	53
3	267	1577	1477	24	8	34
2	269	1598	1498	21	11	25
2	271	1613	1513	15	8	36
2	273	1631	1531	18	9	30
2	275	1650	1550	19	10	28
2	277	1669	1569	19	10	28
2	279	1690	1590	21	11	25
2	281	1707	1607	17	9	31
2	283	1719	1619	12	6	45
2	285	1730	1630	11	6	50
2	287	1748	1648	18	9	30
2	289	1772	1672	24	12	22

2	291	1797	1697	1697	849	0
2	293	1825	1725	28	14	19
2	295	1850	1750	25	13	21
1	296	1865	1765	15	15	17
2	298	1882	1782	17	9	31
2	300	1899	1799	17	9	31
2	302	1920	1820	21	11	25
2	304	1935	1835	15	8	36
2	306	1950	1850	15	8	36
2	308	1962	1862	12	6	45
2	310	1973	1873	11	6	50
2	312	1989	1889	16	8	34
2	314	2000	1900	11	6	50
2	316	2010	1910	10	5	55
3	319	2023	1923	13	4	64
3	322	2035	1935	12	4	70
3	325	2056	1956	21	7	39
2	327	2074	1974	18	9	30
2	329	2093	1993	19	10	28
2	331	2108	2008	15	8	36
2	333	2132	2032	24	12	22
2	335	2147	2047	15	8	36
2	337	2164	2064	17	9	31
2	339	2184	2084	20	10	26
2	341	2212	2112	28	14	19
2	343	2239	2139	27	14	19
1	344	2254	2154	15	15	17
1	345	2265	2165	11	11	24
1	346	2278	2178	13	13	20
1	347	2293	2193	15	15	17
1	348	2303	2203	10	10	26
2	350	2320	2220	17	9	31
2	352	2339	2239	19	10	28
2	354	2365	2265	26	13	20
1	355	2378	2278	13	13	20
1	356	2390	2290	12	12	22
1	357	2404	2304	14	14	19
1	358	2418	2318	14	14	19
1	359	2427	2327	9	9	30
1	360	2437	2337	10	10	26
1	361	2448	2348	11	11	24
2	363	2466	2366	18	9	30
2	365	2482	2382	16	8	34
2	367	2528	2428	46	23	11
1	368	2553	2453	25	25	10
1	369	2576	2476	23	23	11
1	370	2597	2497	21	21	12
1	371	2617	2517	20	20	13
1	372	2631	2531	14	14	19
1	373	2658	2558	27	27	9
1	374	2677	2577	19	19	13
1	375	2696	2596	19	19	13
1	376	2711	2611	15	15	17
1	377	2725	2625	14	14	19
1	378	2738	2638	13	13	20
1	379	2752	2652	14	14	19

[illegible]

Remarks:



*Calculation of CBR: estimated from the following TRL relationship: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$
Ref - Interim Advice Note 73/06 Revision 1 (2009) Design Guidance for Road Pavement Foundations (Draft HD25)

SIGNED

NAME S.J. Hutchings
(Director)

DATE

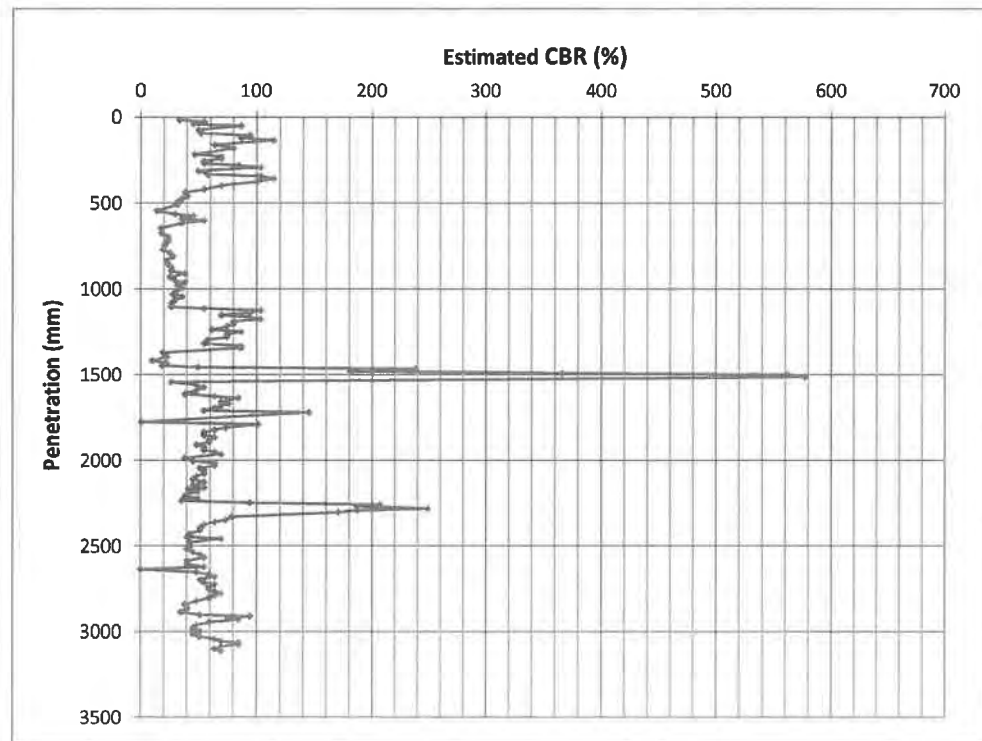
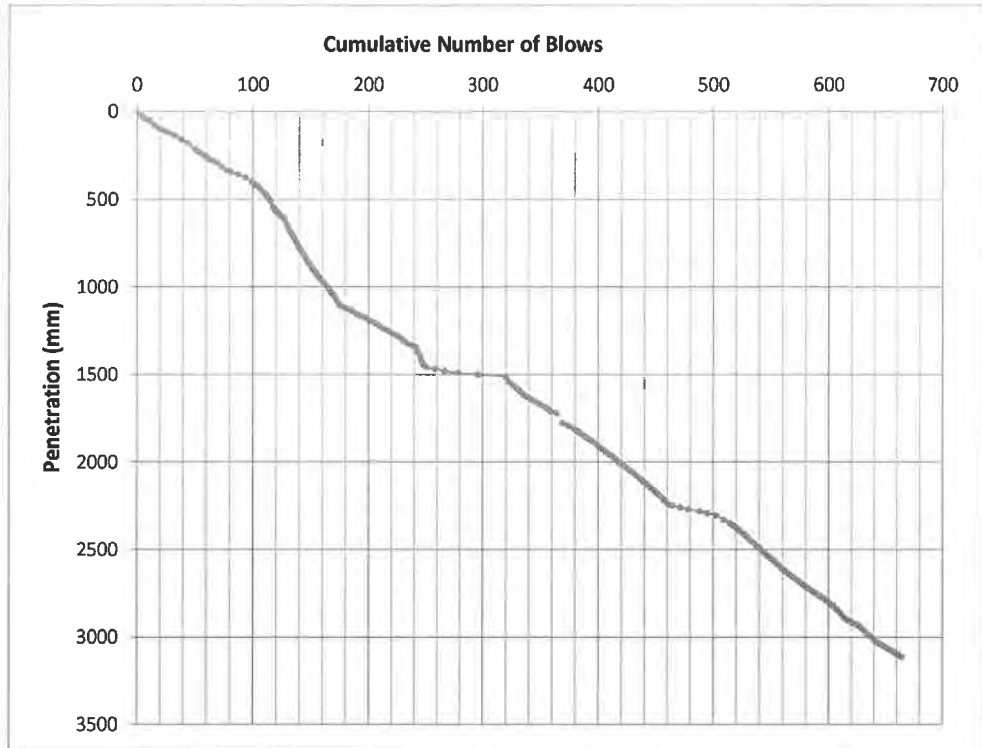
24-Apr-20

Murray Rix (Northern Ltd) Andrew House Hadfield Street Dukinfield Cheshire SK16 4QX				Client	LK Remediate	
				Site	Former Boddington's Brewery, Gt Ducle Street, Cheetham Hill, Manchester M3 1PT	
				Date tested (by):	23-Apr-20	
				Checked by:	S.J. Hutchings	
				Material:	Existing Ground	
				Location:	3	
				Job Number	MRN 3817/7	
TRL Dynamic Cone Penetrometer Test Report (in-situ measurement of the structural properties of unbound materials)						
No. of blows	Total No of Blows	Penetration depth (mm)	Corrected penetration depth (mm)	Depth tested (mm)	Pen rate (mm/blow)	Approx. CBR (%)*
Zero reading		87				
2	2	103	16	16	8	34
2	4	113	26	10	5	55
2	6	125	38	12	6	45
4	10	138	51	13	3	87
4	14	160	73	22	6	50
4	18	181	94	21	5	52
4	22	193	106	12	3	95
4	26	206	119	13	3	87
6	32	221	134	15	3	115
6	38	247	160	26	4	64
6	44	268	181	21	4	80
6	50	303	216	35	6	47
3	53	315	228	12	4	70
3	56	327	240	12	4	70
3	59	342	255	15	5	55
3	62	357	270	15	5	55
3	65	367	280	10	3	85
4	69	378	291	11	3	104
4	73	400	313	22	6	50
4	77	419	332	19	5	58
4	81	430	343	11	3	104
6	87	445	358	15	3	115
6	93	462	375	17	3	100
6	99	486	399	24	4	70
4	103	506	419	20	5	55
3	106	527	440	21	7	39
3	109	547	460	20	7	41
2	111	562	475	15	8	36
2	113	579	492	17	9	31
2	115	596	509	17	9	31
2	117	633	546	37	19	14
2	119	651	564	18	9	30
2	121	663	576	12	6	45
2	123	678	591	15	8	36
2	125	688	601	10	5	55
2	127	703	616	15	8	36
2	129	733	646	30	15	17
2	131	762	675	29	15	18
2	133	784	697	22	11	24
2	135	806	719	22	11	24
2	137	831	744	25	13	21
2	139	858	771	27	14	19
2	141	879	792	21	11	25
2	143	898	811	19	10	28
2	145	921	834	23	12	23
2	147	943	856	22	11	24

2	149	963	876	20	10	26
2	151	983	896	20	10	26
2	153	997	910	14	7	39
2	155	1018	931	21	11	25
2	157	1036	949	18	9	30
2	159	1050	963	14	7	39
2	161	1067	980	17	9	31
2	163	1082	995	15	8	36
2	165	1099	1012	17	9	31
2	167	1118	1031	19	10	28
2	169	1133	1046	15	8	36
2	171	1151	1064	18	9	30
2	173	1171	1084	20	10	26
2	175	1191	1104	20	10	26
2	177	1201	1114	10	5	55
4	181	1212	1125	11	3	104
4	185	1224	1137	12	3	95
4	189	1240	1153	16	4	70
4	193	1252	1165	12	3	95
4	197	1263	1176	11	3	104
4	201	1277	1190	14	4	80
4	205	1291	1204	14	4	80
4	209	1306	1219	15	4	75
4	213	1324	1237	18	5	62
4	217	1337	1250	13	3	87
4	221	1352	1265	15	4	75
4	225	1367	1280	15	4	75
4	229	1386	1299	19	5	58
4	233	1406	1319	20	5	55
4	237	1419	1332	13	3	87
4	241	1432	1345	13	3	87
2	243	1459	1372	27	14	19
2	245	1482	1395	23	12	23
1	246	1507	1420	25	25	10
1	247	1519	1432	12	12	22
1	248	1533	1446	14	14	19
2	250	1544	1457	11	6	50
8	258	1554	1467	10	1	239
8	266	1567	1480	13	2	181
12	278	1577	1490	10	1	366
18	296	1587	1500	10	1	562
24	320	1600	1513	13	1	577
3	323	1630	1543	30	10	26
3	326	1647	1560	17	6	48
3	329	1662	1575	15	5	55
3	332	1679	1592	17	6	48
3	335	1700	1613	21	7	39
3	338	1713	1626	13	4	64
3	341	1723	1636	10	3	85
3	344	1734	1647	11	4	76
3	347	1746	1659	12	4	70
3	350	1757	1670	11	4	76
3	353	1769	1682	12	4	70
3	356	1782	1695	13	4	64
3	359	1797	1710	15	5	55
5	364	1807	1720	10	2	145

5	369	1863	1776	1776	355	1
5	374	1877	1790	14	3	102
5	379	1896	1809	19	4	74
3	382	1909	1822	13	4	64
3	385	1924	1837	15	5	55
3	388	1939	1852	15	5	55
3	391	1952	1865	13	4	64
3	394	1966	1879	14	5	59
3	397	1980	1893	14	5	59
3	400	1997	1910	17	6	48
3	403	2012	1925	15	5	55
3	406	2027	1940	15	5	55
3	409	2040	1953	13	4	64
3	412	2052	1965	12	4	70
3	415	2073	1986	21	7	39
3	418	2091	2004	18	6	45
3	421	2104	2017	13	4	64
3	424	2117	2030	13	4	64
3	427	2133	2046	16	5	51
3	430	2148	2061	15	5	55
3	433	2163	2076	15	5	55
3	436	2180	2093	17	6	48
3	439	2198	2111	18	6	45
3	442	2213	2126	15	5	55
3	445	2231	2144	18	6	45
3	448	2246	2159	15	5	55
2	450	2259	2172	13	7	42
2	452	2270	2183	11	6	50
2	454	2283	2196	13	7	42
2	456	2297	2210	14	7	39
2	458	2308	2221	11	6	50
2	460	2323	2236	15	8	36
4	464	2335	2248	12	3	95
7	471	2345	2258	10	1	207
7	478	2356	2269	11	2	187
10	488	2368	2281	12	1	249
7	495	2379	2292	11	2	187
7	502	2391	2304	12	2	171
7	509	2416	2329	25	4	79
5	514	2435	2348	19	4	74
3	517	2448	2361	13	4	64
3	520	2463	2376	15	5	55
3	523	2479	2392	16	5	51
3	526	2495	2408	16	5	51
3	529	2514	2427	19	6	43
3	532	2534	2447	20	7	41
3	535	2546	2459	12	4	70
3	538	2565	2478	19	6	43
3	541	2584	2497	19	6	43
3	544	2604	2517	20	7	41
3	547	2622	2535	18	6	45
3	550	2638	2551	16	5	51
3	553	2653	2566	15	5	55
3	556	2673	2586	20	7	41
3	559	2693	2606	20	7	41
3	562	2708	2621	15	5	55

Remarks:



*Calculation of CBR: estimated from the following TRL relationship: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$
Ref - Interim Advice Note 73/06 Revision 1 (2009) Design Guidance for Road Pavement Foundations (Draft HD25)

SIGNED

NAME S.J. Hutchings
(Director)

DATE 24-Apr-20

Murray Rix (Northern Ltd) Andrew House Hadfield Street Dukinfield Cheshire SK16 4QX				Client	LK Remediate	
				Site	Former Boddington's Brewery, Gt Ducie Street, Cheetham Hill, Manchester M3 1PT	
				Date tested (by):	23-Apr-20	
				Checked by:	S.J. Hutchings	
				Material:	Existing Ground	
				Location:	4	
				Job Number	MRN 3817/7	
TRL Dynamic Cone Penetrometer Test Report (in-situ measurement of the structural properties of unbound materials)						
No. of blows	Total No of Blows	Penetration depth (mm)	Corrected penetration depth (mm)	Depth tested (mm)	Pen rate (mm/blow)	Approx. CBR (%)*
Zero reading		90				
1	1	102	12	12	12	22
2	3	117	27	15	8	36
2	5	127	37	10	5	55
3	8	137	47	10	3	85
3	11	156	66	19	6	43
3	14	172	82	16	5	51
3	17	188	98	16	5	51
3	20	200	110	12	4	70
3	23	213	123	13	4	64
3	26	234	144	21	7	39
3	29	252	162	18	6	45
3	32	272	182	20	7	41
3	35	293	203	21	7	39
3	38	323	233	30	10	26
3	41	341	251	18	6	45
3	44	357	267	16	5	51
3	47	373	283	16	5	51
3	50	390	300	17	6	48
3	53	402	312	12	4	70
3	56	412	322	10	3	85
6	62	425	335	13	2	133
8	70	437	347	12	2	197
8	78	453	363	16	2	145
6	84	467	377	14	2	123
6	90	477	387	10	2	176
6	96	492	402	15	3	115
3	99	506	416	14	5	59
3	102	517	427	11	4	76
3	105	533	443	16	5	51
3	108	551	461	18	6	45
3	111	561	471	10	3	85
5	116	572	482	11	2	131
3	119	591	501	19	6	43
3	122	606	516	15	5	55
3	125	616	526	10	3	85
3	128	629	539	13	4	64
3	131	642	552	13	4	64
3	134	652	562	10	3	85
3	137	662	572	10	3	85
3	140	676	586	14	5	59
3	143	687	597	11	4	76
3	146	698	608	11	4	76
3	149	710	620	12	4	70
3	152	724	634	14	5	59
3	155	745	655	21	7	39
3	158	762	672	17	6	48

3	161	773	683	11	4	76
3	164	787	697	14	5	59
3	167	804	714	17	6	48
3	170	825	735	21	7	39
3	173	846	756	21	7	39
3	176	863	773	17	6	48
3	179	885	795	22	7	37
3	182	909	819	24	8	34
3	185	931	841	22	7	37
2	187	944	854	13	7	42
2	189	961	871	17	9	31
2	191	981	891	20	10	26
2	193	999	909	18	9	30
2	195	1011	921	12	6	45
2	197	1021	931	10	5	55
2	199	1031	941	10	5	55
4	203	1043	953	12	3	95
6	209	1055	965	12	2	145
6	215	1070	980	15	3	115
4	219	1083	993	13	3	87
4	223	1095	1005	12	3	95
4	227	1106	1016	11	3	104
4	231	1117	1027	11	3	104
4	235	1127	1037	10	3	115
11	246	1139	1049	12	1	275
15	261	1153	1063	14	1	325
10	271	1168	1078	15	2	197
12	283	1189	1099	21	2	167
8	291	1200	1110	11	1	216
8	299	1218	1128	18	2	128
6	305	1239	1149	21	4	80
4	309	1258	1168	19	5	58
4	313	1276	1186	18	5	62
4	317	1294	1204	18	5	62
4	321	1315	1225	21	5	52
4	325	1339	1249	24	6	45
2	327	1356	1266	17	9	31
2	329	1370	1280	14	7	39
2	331	1386	1296	16	8	34
2	333	1398	1308	12	6	45
2	335	1414	1324	16	8	34
2	337	1435	1345	21	11	25
2	339	1455	1365	20	10	26
2	341	1478	1388	23	12	23
2	343	1496	1406	18	9	30
2	345	1509	1419	13	7	42
2	347	1520	1430	11	6	50
2	349	1530	1440	10	5	55
2	351	1546	1456	16	8	34
2	353	1565	1475	19	10	28
2	355	1584	1494	19	10	28
2	357	1606	1516	22	11	24
2	359	1633	1543	27	14	19
1	360	1646	1556	13	13	20
1	361	1659	1569	13	13	20
1	362	1674	1584	15	15	17

1	363	1684	1594	1594	1594	0
2	365	1700	1610	16	8	34
2	367	1715	1625	15	8	36
2	369	1730	1640	15	8	36
2	371	1756	1666	26	13	20
1	372	1773	1683	17	17	15
1	373	1793	1703	20	20	13
1	374	1813	1723	20	20	13
1	375	1832	1742	19	19	13
1	376	1854	1764	22	22	12
1	377	1876	1786	22	22	12
1	378	1896	1806	20	20	13
1	379	1916	1826	20	20	13
1	380	1935	1845	19	19	13
1	381	1951	1861	16	16	16
1	382	1964	1874	13	13	20
1	383	1979	1889	15	15	17
1	384	2000	1910	21	21	12
1	385	2021	1931	21	21	12
1	386	2044	1954	23	23	11
1	387	2069	1979	25	25	10
1	388	2093	2003	24	24	10
1	389	2114	2024	21	21	12
1	390	2136	2046	22	22	12
1	391	2159	2069	23	23	11
1	392	2183	2093	24	24	10
1	393	2205	2115	22	22	12
1	394	2227	2137	22	22	12
1	395	2254	2164	27	27	9
1	396	2277	2187	23	23	11
1	397	2300	2210	23	23	11
1	398	2313	2223	13	13	20
1	399	2340	2250	27	27	9
1	400	2359	2269	19	19	13
1	401	2374	2284	15	15	17
1	402	2393	2303	19	19	13
1	403	2404	2314	11	11	24
1	404	2419	2329	15	15	17
1	405	2435	2345	16	16	16
1	406	2454	2364	19	19	13
1	407	2466	2376	12	12	22
1	408	2491	2401	25	25	10
1	409	2515	2425	24	24	10
1	410	2541	2451	26	26	10
1	411	2552	2462	11	11	24
4	415	2561	2471	9	2	128
4	419	2575	2485	14	4	80
4	423	2591	2501	16	4	70
4	427	2616	2526	25	6	44
4	431	2661	2571	45	11	23
1	432	2681	2591	20	20	13
1	433	2701	2611	20	20	13
1	434	2718	2628	17	17	15
1	435	2732	2642	14	14	19
1	436	2748	2658	16	16	16
1	437	2764	2674	16	16	16

