



APPENDIX C – CHEMICAL TESTING RESULTS

COMPLEX CHALLENGES ... MADE SIMPLE



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 18/09822
Issue Number: 1

Date: 28 November, 2018

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Elizabeth Stewart
Project Name: Plot P1 Rem Strategy
Project Ref: 3580
Order No: 1372
Date Samples Received: 22/11/18
Date Instructions Received: 23/11/18
Date Analysis Completed: 28/11/18

Prepared by:



Melanie Marshall
Laboratory Coordinator

Approved by:



Danielle Brierley
Client Manager

Envirolab Job Number: 18/09822

Client Project Name: Plot P1 Rem Strategy

Client Project Ref: 3580

Lab Sample ID	18/09822/1	18/09822/2	18/09822/3	18/09822/4	18/09822/5	18/09822/6	18/09822/7	18/09822/8	Units	Method ref
Client Sample No										
Client Sample ID	VAL01	VAL02	VAL03	VAL04	VAL05	VAL06	VAL07	VAL07A		
Depth to Top	0.80	0.80	0.70	0.70	0.60					
Depth To Bottom										
Date Sampled	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	21-Nov-18	21-Nov-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	5A	5A	5A	5A	5A	5A	5A	6A		
% Stones >10mm _A	0.8	14.6	<0.1	4.7	8.3	10.3	<0.1	7.0	% w/w	A-T-044
pH _D ^{M#}	9.12	9.11	8.14	8.49	8.72	7.64	9.01	10.00	pH	A-T-031s
Sulphate BRE (water sol 2:1) _D ^{M#}	84	59	60	35	11	<10	40	158	mg/l	A-T-026s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	A-T-050s
Fraction of organic carbon _D [#]	0.0039	0.0036	0.0033	0.0032	0.0044	0.0124	0.0051	0.0024	N/A	A-T-032 FOC
Antimony _D	<5	<5	<5	<5	<5	<5	<5	<5	mg/kg	A-T-024s
Arsenic _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	A-T-024s
Barium _D	78	81	121	85	94	87	64	64	mg/kg	A-T-024s
Beryllium _D [#]	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	mg/kg	A-T-027s
Cadmium _D ^{M#}	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	mg/kg	A-T-024s
Copper _D ^{M#}	10	7	4	8	12	13	9	9	mg/kg	A-T-024s
Chromium _D ^{M#}	15	18	17	23	17	16	14	12	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	A-T-040s
Chromium (trivalent)	15	18	17	23	17	16	14	12	mg/kg	Calc
Lead _D ^{M#}	13	10	8	10	8	20	4	11	mg/kg	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	A-T-024s
Molybdenum _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	A-T-024s
Nickel _D ^{M#}	16	15	13	22	16	13	15	13	mg/kg	A-T-024s
Selenium _D [#]	<1	<1	<1	<1	<1	<1	<1	2	mg/kg	A-T-024s
Vanadium _D ^{M#}	19	20	24	27	19	20	17	15	mg/kg	A-T-024s
Zinc _D ^{M#}	29	23	17	32	26	25	32	25	mg/kg	A-T-024s

Envirolab Job Number: 18/09822

Client Project Name: Plot P1 Rem Strategy

Client Project Ref: 3580

Lab Sample ID	18/09822/1	18/09822/2	18/09822/3	18/09822/4	18/09822/5	18/09822/6	18/09822/7	18/09822/8	Units	Method ref
Client Sample No										
Client Sample ID	VAL01	VAL02	VAL03	VAL04	VAL05	VAL06	VAL07	VAL07A		
Depth to Top	0.80	0.80	0.70	0.70	0.60					
Depth To Bottom										
Date Sampled	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	21-Nov-18	21-Nov-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	5A	5A	5A	5A	5A	5A	5A	6A		
PAH-16MS										
Acenaphthene _A ^{M#}	0.08	0.02	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	0.15	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.06	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.08	<0.03	0.16	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.29	0.08	<0.03	<0.03	<0.03	0.06	<0.03	<0.03	mg/kg	A-T-019s
Pyrene _A ^{M#}	0.12	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	A-T-019s
Total PAH-16MS _A ^{M#}	0.83	0.11	0.22	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	A-T-019s

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Lab Sample ID	18/09822/1	18/09822/2	18/09822/3	18/09822/4	18/09822/5	18/09822/6	18/09822/7	18/09822/8	Units	Method ref
Client Sample No										
Client Sample ID	VAL01	VAL02	VAL03	VAL04	VAL05	VAL06	VAL07	VAL07A		
Depth to Top	0.80	0.80	0.70	0.70	0.60					
Depth To Bottom										
Date Sampled	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	20-Nov-18	21-Nov-18	21-Nov-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	5A	5A	5A	5A	5A	5A	5A	6A		
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	2.5	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	8.7	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	31.9	<0.1	<0.1	mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1	<0.1	<0.1	<0.1	2.4	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	<0.1	<0.1	<0.1	43.4	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	<0.1	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	2.6	<0.1	<0.1	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	22.8	<0.1	<0.1	mg/kg	A-T-023s
Aro >C35-C44 _A	<0.1	<0.1	<0.1	<0.1	<0.1	3.1	<0.1	<0.1	mg/kg	A-T-023s
Total Aromatics _A	<0.1	<0.1	<0.1	<0.1	<0.1	25.9	<0.1	<0.1	mg/kg	A-T-023s
TPH (Ali & Aro) _A	<0.1	<0.1	<0.1	<0.1	<0.1	69.3	<0.1	<0.1	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s

Envirolab Job Number: 18/09822

Client Project Name: Plot P1 Rem Strategy

Client Project Ref: 3580

Lab Sample ID	18/09822/9	18/09822/10							Units	Method ref
Client Sample No										
Client Sample ID	VAL08	VAL09								
Depth to Top										
Depth To Bottom										
Date Sampled	21-Nov-18	21-Nov-18								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	5A	5A								
% Stones >10mm _A	<0.1	<0.1							% w/w	A-T-044
pH _D ^{M#}	8.95	8.67							pH	A-T-031s
Sulphate BRE (water sol 2:1) _D ^{M#}	19	<10							mg/l	A-T-026s
Cyanide (total) _A ^{M#}	<1	<1							mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2							mg/kg	A-T-050s
Fraction of organic carbon _D [#]	0.0037	0.0046							N/A	A-T-032 FOC
Antimony _D	<5	<5							mg/kg	A-T-024s
Arsenic _D ^{M#}	<1	<1							mg/kg	A-T-024s
Barium _D	70	80							mg/kg	A-T-024s
Beryllium _D [#]	<0.5	<0.5							mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0							mg/kg	A-T-027s
Cadmium _D ^{M#}	<0.5	<0.5							mg/kg	A-T-024s
Copper _D ^{M#}	10	9							mg/kg	A-T-024s
Chromium _D ^{M#}	15	18							mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1							mg/kg	A-T-040s
Chromium (trivalent)	15	18							mg/kg	Calc
Lead _D ^{M#}	5	4							mg/kg	A-T-024s
Mercury _D	<0.17	<0.17							mg/kg	A-T-024s
Molybdenum _D ^{M#}	<1	<1							mg/kg	A-T-024s
Nickel _D ^{M#}	17	19							mg/kg	A-T-024s
Selenium _D [#]	<1	1							mg/kg	A-T-024s
Vanadium _D ^{M#}	18	20							mg/kg	A-T-024s
Zinc _D ^{M#}	28	29							mg/kg	A-T-024s

Envirolab Job Number: 18/09822

Client Project Name: Plot P1 Rem Strategy

Client Project Ref: 3580

Lab Sample ID	18/09822/9	18/09822/10							Units	Method ref
Client Sample No										
Client Sample ID	VAL08	VAL09								
Depth to Top										
Depth To Bottom										
Date Sampled	21-Nov-18	21-Nov-18								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	5A	5A								
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01							mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01							mg/kg	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02							mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04							mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04							mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05							mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05							mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07							mg/kg	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06							mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04							mg/kg	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08							mg/kg	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01							mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03							mg/kg	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03							mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.04	<0.03							mg/kg	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07							mg/kg	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	<0.08							mg/kg	A-T-019s

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Lab Sample ID	18/09822/9	18/09822/10							Units	Method ref
Client Sample No										
Client Sample ID	VAL08	VAL09								
Depth to Top										
Depth To Bottom										
Date Sampled	21-Nov-18	21-Nov-18								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	5A	5A								
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1							mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1							mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	0.01							mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	0.01							mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Aro >C16-C21 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Aro >C21-C35 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Aro >C35-C44 _A	<0.1	<0.1							mg/kg	A-T-023s
Total Aromatics _A	<0.1	<0.1							mg/kg	A-T-023s
TPH (Ali & Aro) _A	<0.1	<0.1							mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01							mg/kg	A-T-022s

REPORT NOTES

General:

This report shall not be reproduced, except in full, without written approval from Envirolab.

All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 18/09875

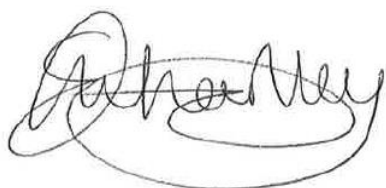
Issue Number: 1

Date: 29 November, 2018

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Elizabeth Stewart
Project Name: Plot P7
Project Ref: 3580
Order No: 1372
Date Samples Received: 23/11/18
Date Instructions Received: 26/11/18
Date Analysis Completed: 29/11/18

Prepared by:



Elisha Hartley
Admin Assistant

Approved by:



Georgia King
Admin & Client Services Supervisor

Envirolab Job Number: 18/09875

Client Project Name: Plot P7

Client Project Ref: 3580

Lab Sample ID	18/09875/1	18/09875/2	18/09875/3						Units	Method ref
Client Sample No			Under Tank							
Client Sample ID	VAL 10	VAL 11	VAL 12							
Depth to Top	2.00	2.00								
Depth To Bottom										
Date Sampled	23-Nov-18	23-Nov-18	23-Nov-18							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	6A	1	5							
% Stones >10mm _A	28.2	<0.1	<0.1						% w/w	A-T-044
pH _D ^{M#}	11.61	10.80	8.64						pH	A-T-031s
Sulphate BRE (water sol 2:1) _D ^{M#}	115	168	-						mg/l	A-T-026s
Cyanide (total) _A ^{M#}	<1	<1	-						mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	-						mg/kg	A-T-050s
Fraction of organic carbon _D [#]	0.0019	0.0019	-						N/A	A-T-032 FOC
Antimony _D	<5	<5	-						mg/kg	A-T-024s
Arsenic _D ^{M#}	<1	<1	-						mg/kg	A-T-024s
Barium _D	69	67	-						mg/kg	A-T-024s
Beryllium _D [#]	<0.5	<0.5	-						mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	-						mg/kg	A-T-027s
Cadmium _D ^{M#}	<0.5	<0.5	-						mg/kg	A-T-024s
Copper _D ^{M#}	9	8	-						mg/kg	A-T-024s
Chromium _D ^{M#}	13	11	-						mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	-						mg/kg	A-T-040s
Chromium (trivalent)	13	11	-						mg/kg	Calc
Lead _D ^{M#}	14	196	-						mg/kg	A-T-024s
Mercury _D	<0.17	<0.17	-						mg/kg	A-T-024s
Molybdenum _D ^{M#}	<1	<1	-						mg/kg	A-T-024s
Nickel _D ^{M#}	12	12	-						mg/kg	A-T-024s
Selenium _D [#]	<1	<1	-						mg/kg	A-T-024s
Vanadium _D ^{M#}	13	11	-						mg/kg	A-T-024s
Zinc _D ^{M#}	27	26	-						mg/kg	A-T-024s

Envirolab Job Number: 18/09875

Client Project Name: Plot P7

Client Project Ref: 3580

Lab Sample ID	18/09875/1	18/09875/2	18/09875/3						Units	Method ref
Client Sample No			Under Tank							
Client Sample ID	VAL 10	VAL 11	VAL 12							
Depth to Top	2.00	2.00								
Depth To Bottom										
Date Sampled	23-Nov-18	23-Nov-18	23-Nov-18							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	6A	1	5							
PAH-16MS										
Acenaphthene _A ^{M#}	0.07	0.06	-						mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	-						mg/kg	A-T-019s
Anthracene _A ^{M#}	0.08	0.07	-						mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.14	0.16	-						mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.14	0.12	-						mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.16	0.15	-						mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.08	<0.05	-						mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	-						mg/kg	A-T-019s
Chrysene _A ^{M#}	0.19	0.20	-						mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	-						mg/kg	A-T-019s
Fluoranthene _A ^{M#}	0.37	0.34	-						mg/kg	A-T-019s
Fluorene _A ^{M#}	0.05	0.05	-						mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.11	0.07	-						mg/kg	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	-						mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.16	0.38	-						mg/kg	A-T-019s
Pyrene _A ^{M#}	0.44	0.31	-						mg/kg	A-T-019s
Total PAH-16MS _A ^{M#}	1.99	1.91	-						mg/kg	A-T-019s

Envirolab Job Number: 18/09875

Client Project Name: Plot P7

Client Project Ref: 3580

Lab Sample ID	18/09875/1	18/09875/2	18/09875/3						Units	Method ref
Client Sample No			Under Tank							
Client Sample ID	VAL 10	VAL 11	VAL 12							
Depth to Top	2.00	2.00								
Depth To Bottom										
Date Sampled	23-Nov-18	23-Nov-18	23-Nov-18							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	6A	1	5							
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	-						mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	-						mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	-						mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	-						mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1	-						mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	-						mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	-						mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	<0.1	-						mg/kg	A-T-023s
Aro >C16-C21 _A [#]	<0.1	<0.1	-						mg/kg	A-T-023s
Aro >C21-C35 _A [#]	<0.1	<0.1	-						mg/kg	A-T-023s
Aro >C35-C44 _A	<0.1	<0.1	-						mg/kg	A-T-023s
Total Aromatics _A	<0.1	<0.1	-						mg/kg	A-T-023s
TPH (Ali & Aro) _A	<0.1	<0.1	-						mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	-						mg/kg	A-T-022s

REPORT NOTES

General:

This report shall not be reproduced, except in full, without written approval from Envirolab.

All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed.

Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Final Test Report

Envirolab Job Number: 18/09875
Issue Number: 1

Date: 29-Nov-18

Client: ROCP LIMITED
Commercial Wharf 6 Commercial Street
Castlefield
Manchester
M15 4PZ

Project Manager: Elizabeth Stewart
Project Name: Plot P7
Project Ref: 3580
Order No: 1372

Date Samples Received: 23-Nov-18
Date Instructions Received: 26-Nov-18
Date Analysis Completed: 29-Nov-18

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

Superscript "M" indicates method accredited to MCERTS.

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Superscript # indicates method accredited to ISO 17025.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

Prepared by:



Elisha Hartley
Admin Assistant

Approved by:



Georgia King
Admin & Client Services Supervisor



Sample Details					Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/09875/2				
Client Sample Number					Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				VAL 11				
Depth to Top				2				
Depth to Bottom								
Date Sampled				23/11/2018				
Sample Type				Soil - ES				
Sample Matrix Code				1				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	Y	Y	10.80	-	>6	-	
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	0.38	-	to be evaluated	to be evaluated	
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.1	-	to be evaluated	to be evaluated	
Loss on Ignition (%) _D	A-T-030	Y	Y	2.7	-	-	10	
Total Organic Carbon (%) _D	A-T-032	Y	Y	0.19	3	5	6	
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	1.93	100	-	-	
Mineral Oil (mg/kg) _A	A-T-007	N	N	<10	500	-	-	
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007	1	-	-	
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01	6	-	-	
Eluate Analysis				10:1 mg/l	10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.003	0.030	0.5	2	25
Barium	A-T-025	N	N	0.017	0.170	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	1	5
Chromium	A-T-025	N	N	0.002	0.020	0.5	10	70
Copper	A-T-025	N	N	0.004	0.040	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	<0.01	0.5	10	30
Nickel	A-T-025	N	N	<0.001	<0.01	0.4	10	40
Lead	A-T-025	N	N	<0.001	<0.01	0.5	10	50
Antimony	A-T-025	N	N	0.001	0.010	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	<0.001	<0.01	4	50	200
Chloride	A-T-026	N	N	8	79	800	15000	25000
Fluoride	A-T-026	N	N	<0.10	<1	10	150	500
Sulphate as SO ₄	A-T-026	N	N	26	261	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	212	2120	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<0.2	<200	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	10.8				
Conductivity (µS/cm)	A-T-037	N	N	424				
Mass Sample (kg)				0.214				
Dry Matter (%)	A-T-044	N	N	81.7				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

Sample Details					Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	18/09875/3			
Client Sample Number				Under Tank	Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				VAL 12			
Depth to Top							
Depth to Bottom							
Date Sampled				23/11/2018			
Sample Type				Soil - ES			
Sample Matrix Code				5			
Solid Waste Analysis							
pH (pH Units) _D	A-T-031	Y	Y	8.64	-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	0.39	-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.11	-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	Y	1.2	-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	0.72	3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	<0.08	100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	<10	500	-	-
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007	1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01	6	-	-
Eluate Analysis					Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
				10:1 mg/l	10:1 mg/kg		
Arsenic	A-T-025	N	N	0.008	0.080	0.5	2
Barium	A-T-025	N	N	0.181	1.810	20	100
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	1
Chromium	A-T-025	N	N	0.001	0.010	0.5	10
Copper	A-T-025	N	N	0.002	0.020	2	50
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2
Molybdenum	A-T-025	N	N	<0.001	<0.01	0.5	10
Nickel	A-T-025	N	N	<0.001	<0.01	0.4	10
Lead	A-T-025	N	N	<0.001	<0.01	0.5	10
Antimony	A-T-025	N	N	<0.001	<0.01	0.06	0.7
Selenium	A-T-025	N	N	<0.001	<0.01	0.1	0.5
Zinc	A-T-025	N	N	0.005	0.050	4	50
Chloride	A-T-026	N	N	6	56	800	15000
Fluoride	A-T-026	N	N	0.4	4.0	10	150
Sulphate as SO ₄	A-T-026	N	N	13	129	1000	20000
Total Dissolved Solids	A-T-035	N	N	40	400	4000	60000
Phenol Index	A-T-050	N	N	<0.01	<0.1	1	-
Dissolved Organic Carbon	A-T-032	N	N	<0.2	<200	500	800
Leach Test Information							
pH (pH Units)	A-T-031	N	N	8.7			
Conductivity (µS/cm)	A-T-037	N	N	80			
Mass Sample (kg)				0.199			
Dry Matter (%)	A-T-044	N	N	88			
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation							



APPENDIX D – SITE RECORD EVIDENCE

COMPLEX CHALLENGES ... MADE SIMPLE



BLOCK AID

24 HOUR DRAIN CLEANING

Telephone: 0161 273 3133
293-297 Newbank Street,
Longsight, Manchester
M12 4HW.

DUTY OF CARE WASTE TRANSFER DOCUMENT

No.

JOB No.

101263

CLIENT REF.

T2 1007

THIS DOCUMENT APPLIES ONLY TO THE COLLECTION, TRANSPORTATION AND TRANSFER FOR DISPOSAL OF THE WASTE DESCRIBED. THIS DOCUMENT, OR AN EXACT COPY MUST ACCOMPANY THE WASTE AT ALL TIMES. BLOCK-AID DRAIN CLEANING LTD. IS A REGISTERED WASTE CARRIER WITH E.A. NORTH WEST REGION - SOUTH AREA. REGISTRATION No. NSO/544296

WASTE PRODUCER T2 PETROL STATION	CONTACT KEVIN MC NALLY		COLLECTION SITE T2 PETROL STATION
	TEL:	DATE. 7-12-2018	
	DISPOSAL REF. 7487		
JOB DESCRIPTION EMPTY 3 STAGE INTERCEPTOR OF ALL LIQUIDS			
TYPE OF WASTE SURFACE WATER			

HOW WASTE IS TO BE TRANSPORTED.			
LOOSE ☐	SACK ☐	SKIPS ☐	DRUMS ☐ TANKER ☒ OTHER ☐
QUANTITY OF WASTE. 8,000 LTS			
DESCRIPTIONS / SAFETY NOTES			

WASTE COLLECTION BY BLOCKAID	VEHICLE REG. V718 DDK	COMPANY REP. P. Taylor PRINT NAME P. TAYLOR
REPORTS / COMMENTS.		CUSTOMER REP Leo Dowd PRINT NAME LEO DOWD

BLOCK AID

HAULIER & DRAINAGE SPECIALISTS

Drains, Sewers & Tanks Excavation or Installation, Drainage Repairs.
Interceptor Tank and Surface Cleaning, Descaling and High Pressure Cleaning.
C.C.T.V. Surveys.

Block Aid House
296 Newbank Street, Longsight, Manchester M12 4HW
Telephone: 0161- 273 3133 Mobile: 07900 266 645
Email: blockaid1@btconnect.com Web: www.blockaidltd.com

CALL OUT

DATE (work carried out) 7-12-2018

INVOICE NO.

WEEK ENDING 7-12-2018

ENGINEER PAUL
ATTENDING FAZOR

CLIENT REF.

CUSTOMER NAME KEVIN McNALLY
ADDRESS

R+D DEVELOPMENTS
MANCHESTER AIRPORT

INVOICE ADDRESS IF DIFFERENT

TELEPHONE NO: MOBILE NO: EMAIL ADDRESS:

DETAILS OF WORK CARRIED OUT

EMPTYING OF LIQUIDS OUT OF 3 STAGE INTERCEPTOR
AT T2 PETROL STATION BY US OF VACUUM
TANKER & OPERATIVES

Time on Job Hours Minutes

PLANT/HAULAGE USED

TOTAL

MATERIALS USED

TOTAL

VACUUM
TANKER

Comments

Engineer:

Print Name P. Taylor

Signature P. Taylor

Customer Rep:

Print Name ILO JONES

Signature ILO JONES

Date 7-12-18

Banksman Paul Taylor

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

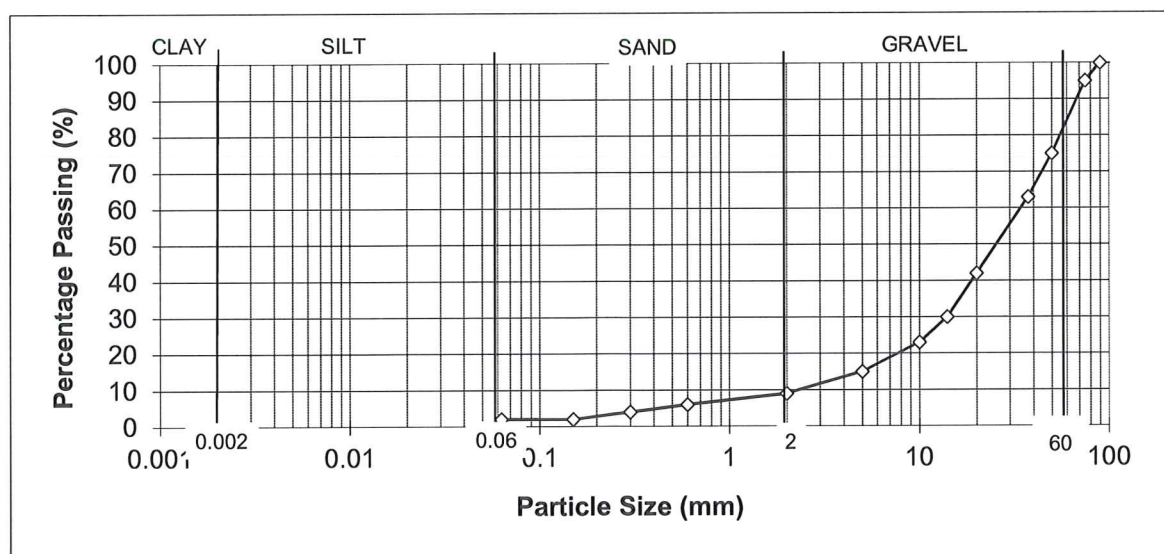
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	R & M Developments Ltd
SITE	Terminal 1, Manchester Airport
JOB NUMBER	MRN 3327/12

SAMPLE LABEL	6F2 - Sample 1	DATE SAMPLED	26-Nov-18
LAB SAMPLE No	80323	DATE RECEIVED	26-Nov-18
DATE TESTED	26-Nov-18	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	23	15-60
90	100	80-100	5	15	10-45
75	95	65-100	2	9	
50	75		0.6	6	0-25
37.5	63	45-100	0.3	4	
20	42		0.15	2	
14	30		0.063	2	0-12



REMARKS

Sample complies with the grading requirements for a 6F2 material (SHW 2016)

As received moisture content = 5.8%

NAME

S.J. Hutchings
(Director)

DATE

30-Nov-18

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

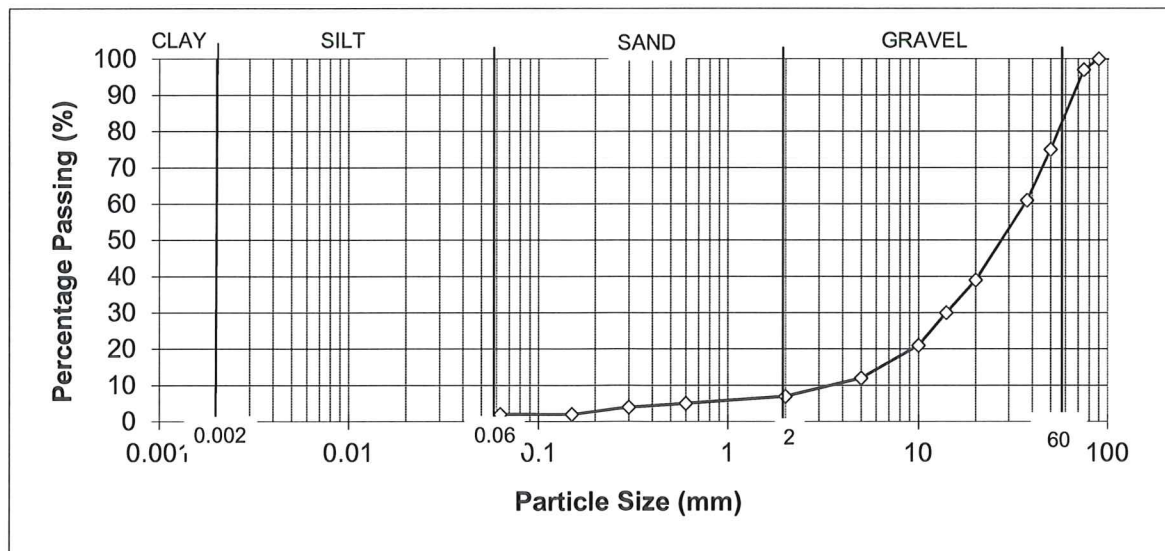
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	R & M Developments Ltd
SITE	Terminal 1, Manchester Airport
JOB NUMBER	MRN 3327/12

SAMPLE LABEL	6F2 - Sample 2	DATE SAMPLED	26-Nov-18
LAB SAMPLE No	80324	DATE RECEIVED	26-Nov-18
DATE TESTED	26-Nov-18	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	21	15-60
90	100	80-100	5	12	10-45
75	97	65-100	2	7	
50	75		0.6	5	0-25
37.5	61	45-100	0.3	4	
20	39		0.15	2	
14	30		0.063	2	0-12



REMARKS

Sample complies with the grading requirements for a 6F2 material (SHW 2016)

As received moisture content = 5.5%

NAME

S.J. Hutchings
(Director)

DATE

30-Nov-18

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

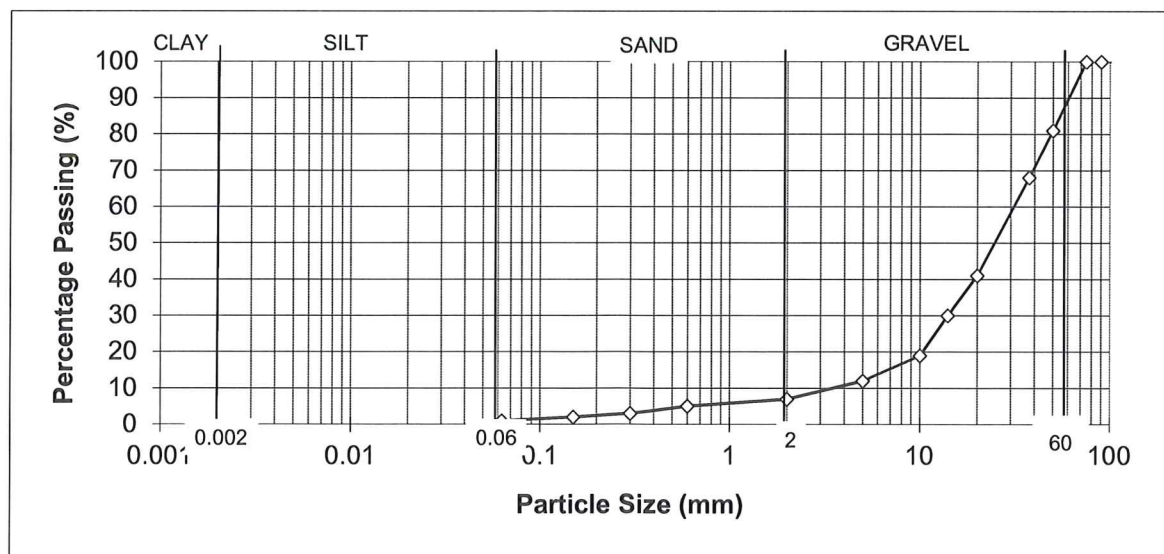
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	R & M Developments Ltd
SITE	Terminal 1, Manchester Airport
JOB NUMBER	MRN 3327/12

SAMPLE LABEL	6F2 - Sample 3	DATE SAMPLED	26-Nov-18
LAB SAMPLE No	80325	DATE RECEIVED	26-Nov-18
DATE TESTED	26-Nov-18	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	19	15-60
90	100	80-100	5	12	10-45
75	100	65-100	2	7	
50	81		0.6	5	0-25
37.5	68	45-100	0.3	3	
20	41		0.15	2	
14	30		0.063	1	0-12



REMARKS

Sample complies with the grading requirements for a 6F2 material (SHW 2016)

As received moisture content = 5.6%

NAME

S.J. Hutchings
(Director)

DATE

30-Nov-18

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

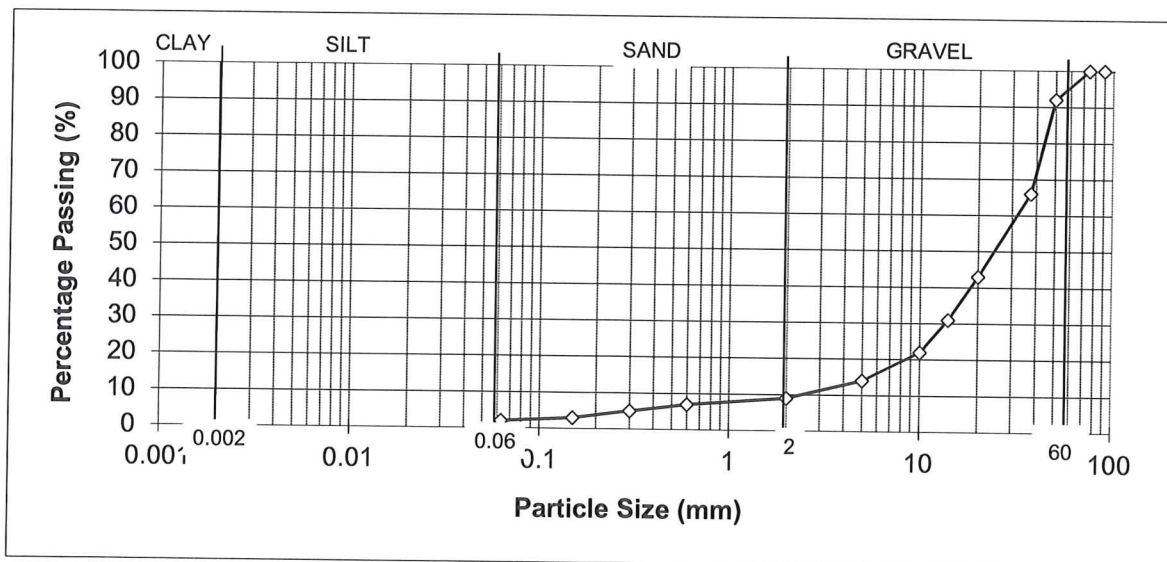
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	R & M Developments Ltd
SITE	Terminal 1, Manchester Airport
JOB NUMBER	MRN 3327/12

SAMPLE LABEL	6F2 - Sample 4	DATE SAMPLED	26-Nov-18
LAB SAMPLE No	80326	DATE RECEIVED	26-Nov-18
DATE TESTED	26-Nov-18	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	22	15-60
90	100	80-100	5	14	10-45
75	100	65-100	2	9	
50	92		0.6	7	0-25
37.5	66	45-100	0.3	5	
20	43		0.15	3	
14	31		0.063	2	0-12



REMARKS

Sample complies with the grading requirements for a 6F2 material (SHW 2016)

As received moisture content = 5.6%

NAME

S.J. Hutchings
(Director)

DATE

30-Nov-18



Customer: R & M
Address: Palma Ave T2 Petrol Station
m/c Airport
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV65UCT No. of Loads: 1
Material: MUCK
Additional info:
Date: 29-11-18

452662

Signed: [Signature]
Carriers Licence: CBDU 90839
Excavation & Recycling 0161 925 9800



Customer: R & M
Address: m/c Airport
PALMER AVE T2
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV65 PUX No. of Loads: 1
Material: MUCK
Additional info:
Date: 29/11/18

450940

Signed: [Signature]
Carriers Licence: CBDU 90839
Excavation & Recycling 0161 925 9800



Customer: R & M
Address: m/c Airport
PETROL STATION T2
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV65 PUX No. of Loads: 1
Material: MUCK
Additional info:
Date: 29/11/18

450943

Signed: [Signature]
Carriers Licence: CBDU 90839
Excavation & Recycling 0161 925 9800



Customer: R & M
Address: Palma Ave T2 Petrol Station
m/c Airport
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV65UCT No. of Loads: 1
Material: m/a
Additional info:
Date: 29-11-18

452659

Signed: [Signature]
Carriers Licence: CBDU 90839
Excavation & Recycling 0161 925 9800



Customer: R & M
Address: M/C AIR PORT, PETROL STATION
WC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV64 PUX No. of Loads: 1
Material: MUCK
Additional info:
Date: 29/11/18

450942

Signed: [Signature]
Carriers Licence: CBDU 90839
Excavation & Recycling 0161 925 9800



Customer: R & M
Address: Palma Ave T2 Petrol Station M/C Airport
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV65UCT No. of Loads: 1
Material: M/A
Additional info:
Date: 29-11-18

452661

Signed: [Signature]
Carriers Licence: CBDU 90839
Excavation & Recycling 0161 925 9800



Customer: R & M
Address: Palma Ave T2 Petrol Station M/C Airport
VC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV65UCT No. of Loads: 1
Material: M/A
Additional info:
Date: 29-11-18

452660

Signed: [Signature]
Carriers Licence: CBDU 90839
Excavation & Recycling 0161 925 9800



Customer: R & M
Address: MANCHESTER AIR PORT T2 PETROL STATION
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV64 PUX No. of Loads: 1
Material: MUCK
Additional info:
Date: 29/11/18

450941

Signed: [Signature]
Carriers Licence: CBDU 90839
Excavation & Recycling 0161 925 9800



Customer: Rm Development
Address: Palma Ave
T2 MCR Airport
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV16 RVU No. of Loads: 1
Material: Muck
Additional info:
Date: 30-11-18

Signed: [Signature]
Carriers Licence: CBDU 90839

Excavation & Recycling 0161 925 9800

451501



Customer: Rm
Address: Palma Ave T2 Petrol Station
m/c Airport
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV6SUCJ No. of Loads: 1
Material: muck
Additional info:
Date: 30-11-18

Signed: [Signature]
Carriers Licence: CBDU 90839

Excavation & Recycling 0161 925 9800

452665



Customer: Rm Development
Address: Palma Ave
T2 MCR Airport
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV16 RVU No. of Loads: 1
Material: Muck
Additional info:
Date: 30-11-18

Signed: [Signature]
Carriers Licence: CBDU 90839

Excavation & Recycling 0161 925 9800

451502



Customer: Rm
Address: Palma Ave T2 Petrol Station
m/c Airport
EWC: 17.05.04 ☐ 17.01.07 ☐
WML50093 ☐
Grab: ☐ Vehicle Size: 8W ☒
Vehicle Reg: MV6SUCJ No. of Loads: 1
Material: muck
Additional info:
Date: 30-11-18

Signed: [Signature]
Carriers Licence: CBDU 90839

Excavation & Recycling 0161 925 9800

452666



Customer: R+M Development

Address: PALMA AVE
T2 MCL Airport

EWC: 17.05.04 ☐ 17.01.07 ☐

WML50093 ☐

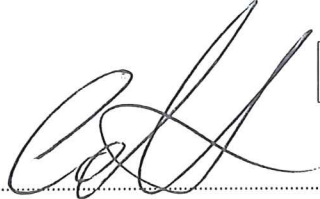
Grab: ☐ Vehicle Size: 8W ☒

Vehicle Reg: MW16 RUU No. of Loads: 1

Material: Muck

Additional info: _____

Date: 30.11.18

Signed: 

451503

Carriers Licence: CBDU 90839

Excavation & Recycling 0161 925 9800



Customer: R&M
Address: Palma Ave T2 Petrol Station
m/c Airport

EWC: 17.05.04 ☐ 17.01.07 ☐

WML50093 ☐

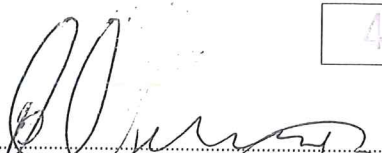
Grab: ☐ Vehicle Size: 8W ☒

Vehicle Reg: MV65UCT No. of Loads: 1

Material: Muck

Additional info: _____

Date: 30-11-18

Signed: 

452667

Carriers Licence: CBDU 90839

Excavation & Recycling 0161 925 9800

DUTY OF CARE-CONTROLLED WASTE TRANSFER NOTE

SECTION A - DESCRIPTION OF WASTE

- PLEASE DESCRIBE THE WASTE BEING TRANSFERRED *AS PER ANALYSIS*
- EUROPEAN WASTE CODE: EWC *17-01-07 17-05-04*
- WHAT IS THE QUANTITY OF WASTE (M³ / TONNES) *TBC*

SECTION B - PRODUCER OF THE WASTE

- FULL NAME (BLOCK CAPITALS) *REM DEVELOPMENTS LTD*
- ADDRESS *55 CUPTON ST, MILES PHARMACY, MANCHESTER*
M40 8HF SIC CODE *43120*

By signing in SECTION E below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of The Waste (England and Wales) Regulations 2011 ☒ YES

SECTION C - CARRIER OF THE WASTE

FULL NAME: J O'SHEA & SONS LTD. ORCHARD STREET. PENDLETON, SALFORD, MANCHESTER M6 6FL

REGISTERED WASTE CARRIER NUMBER: CBDU90839 - ISSUED BY ENVIRONMENT AGENCY

SECTION D - DISPOSER OF THE WASTE

- COMPANY NAME (BLOCK CAPITALS)
- COMPANY ADDRESS
- WML / PERMIT NUMBER ISSUED BY
- ☒ J O'SHEA & SONS LTD, ORCHARD STREET, PENDLETON, SALFORD, MANCHESTER M6 6FL
WASTE MANAGEMENT LICENCE NUMBER: EAWML50093

SECTION E - FIRST TRANSFER (Producer to Carrier)

- SITE ADDRESS *T2 RETAIL STATION, PALMA AVE, MANCHESTER AIRPORT*
- DATE OF TRANSFER *12-11-2018* 3) TIME(S) OF TRANSFER (FOR MULTIPLE TRANSFERS, GIVE BETWEEN DATES) *31-01-2019*
- PRODUCERS REPRESENTATIVE 5) CARRIERS REPRESENTATIVE
- NAME (PRINT) *S HOGG* NAME (PRINT) *JES O'SHEA*
- SIGNATURE *[Signature]* SIGNATURE *[Signature]*

SECTION F - SECOND TRANSFER (Carrier to Disposer)

- DISPOSAL SITE ☒ J O'SHEA & SONS LTD. ORCHARD STREET, PENDLETON, SALFORD, MANCHESTER M6 6FL
- DATE OF TRANSFER 3) TIME(S) OF TRANSFER (FOR MULTIPLE TRANSFERS, GIVE BETWEEN DATES)
- CARRIERS REPRESENTATIVE 5) DISPOSERS REPRESENTATIVE
- NAME (PRINT) *JES O'SHEA* NAME (PRINT) *K. O'Shea*
- SIGNATURE *[Signature]* SIGNATURE *K. O'Shea*



TEST REPORT

Client R & M Developments

Address 55 Clifton Street
Miles Platting
Manchester
M40 8HF

Contract Palma Avenue, Manchester Airport
M90 4ZY

Job Number MRN 3543/3

Date of Issue 20 February 2019

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.



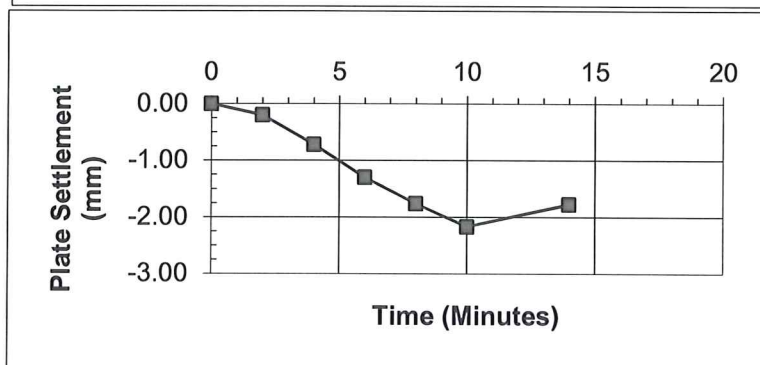
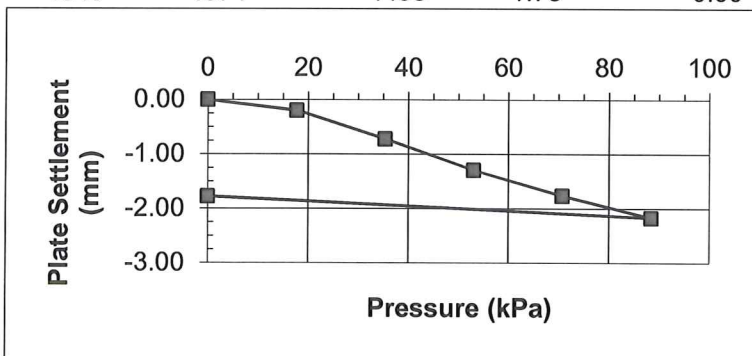
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	R & M Developments		
SITE	Palma Avenue, Manchester Airport M90 4ZY		
JOB NUMBER	MRN 3543/3		
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	19-Feb-19	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Subbase, Type-1	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)
4743	4740	4543	4675	0.00	0.00	0.0
4728	4717	4522	4656	-0.20	5.00	17.7
4678	4657	4475	4603	-0.72	10.00	35.4
4627	4590	4420	4546	-1.30	15.00	53.1
4584	4544	4369	4499	-1.76	20.00	70.7
4545	4497	4333	4458	-2.17	25.00	88.4
4570	4549	4374	4498	-1.78	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 20-Feb-19

MURRAY RIX

33C VAUXHALL INDUSTRIAL ESTATE, GREG STREET
REDDISH, STOCKPORT SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



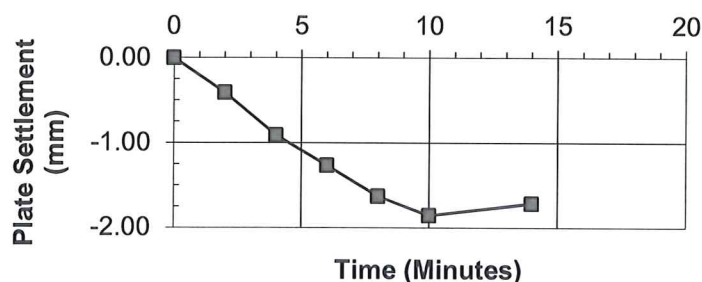
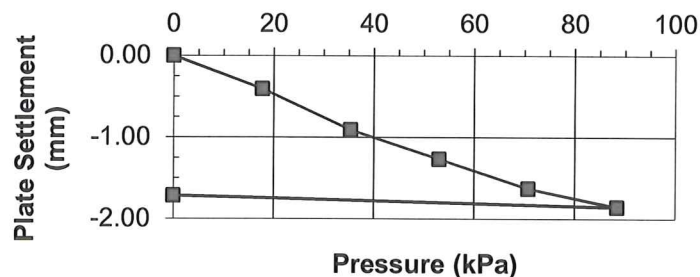
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	R & M Developments		
SITE	Palma Avenue, Manchester Airport M90 4ZY		
JOB NUMBER	MRN 3543/3		
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	19-Feb-19	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Subbase, Type-1	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)
4674	4761	4517	4651	0.00	0.00	0.0
4623	4726	4481	4610	-0.41	5.00	17.7
4560	4691	4428	4560	-0.91	10.00	35.4
4522	4666	4384	4524	-1.27	15.00	53.1
4486	4633	4344	4488	-1.63	20.00	70.7
4459	4618	4318	4465	-1.86	25.00	88.4
4473	4637	4327	4479	-1.72	0.00	0.0



Pressure at 1.25 mm deflexion =	52 kPa
Modulus of subgrade reaction (k) =	42 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 20-Feb-19

MURRAY RIX

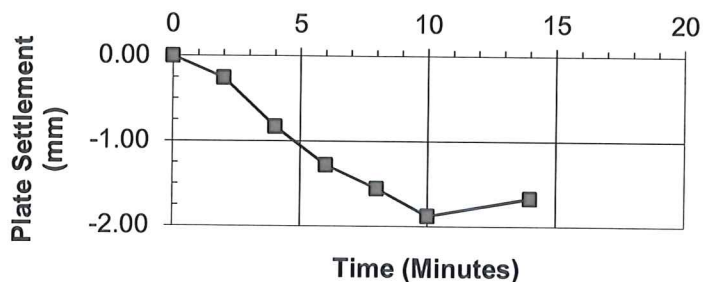
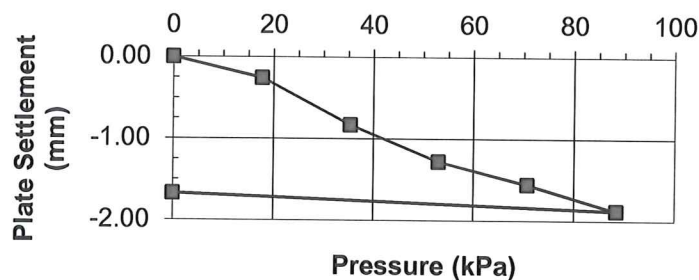
33C VAUXHALL INDUSTRIAL ESTATE, GREG STREET
REDDISH, STOCKPORT SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871

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

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

CLIENT	R & M Developments		
SITE	Palma Avenue, Manchester Airport M90 4ZY		
JOB NUMBER	MRN 3543/3		
TEST LOCATION	3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	19-Feb-19	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Subbase, Type-1	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)
4554	4763	4768	4695	0.00	0.00	0.0
4511	4745	4752	4669	-0.26	5.00	17.7
4419	4701	4716	4612	-0.83	10.00	35.4
4366	4661	4674	4567	-1.28	15.00	53.1
4336	4634	4648	4539	-1.56	20.00	70.7
4300	4604	4617	4507	-1.88	25.00	88.4
4318	4639	4627	4528	-1.67	0.00	0.0



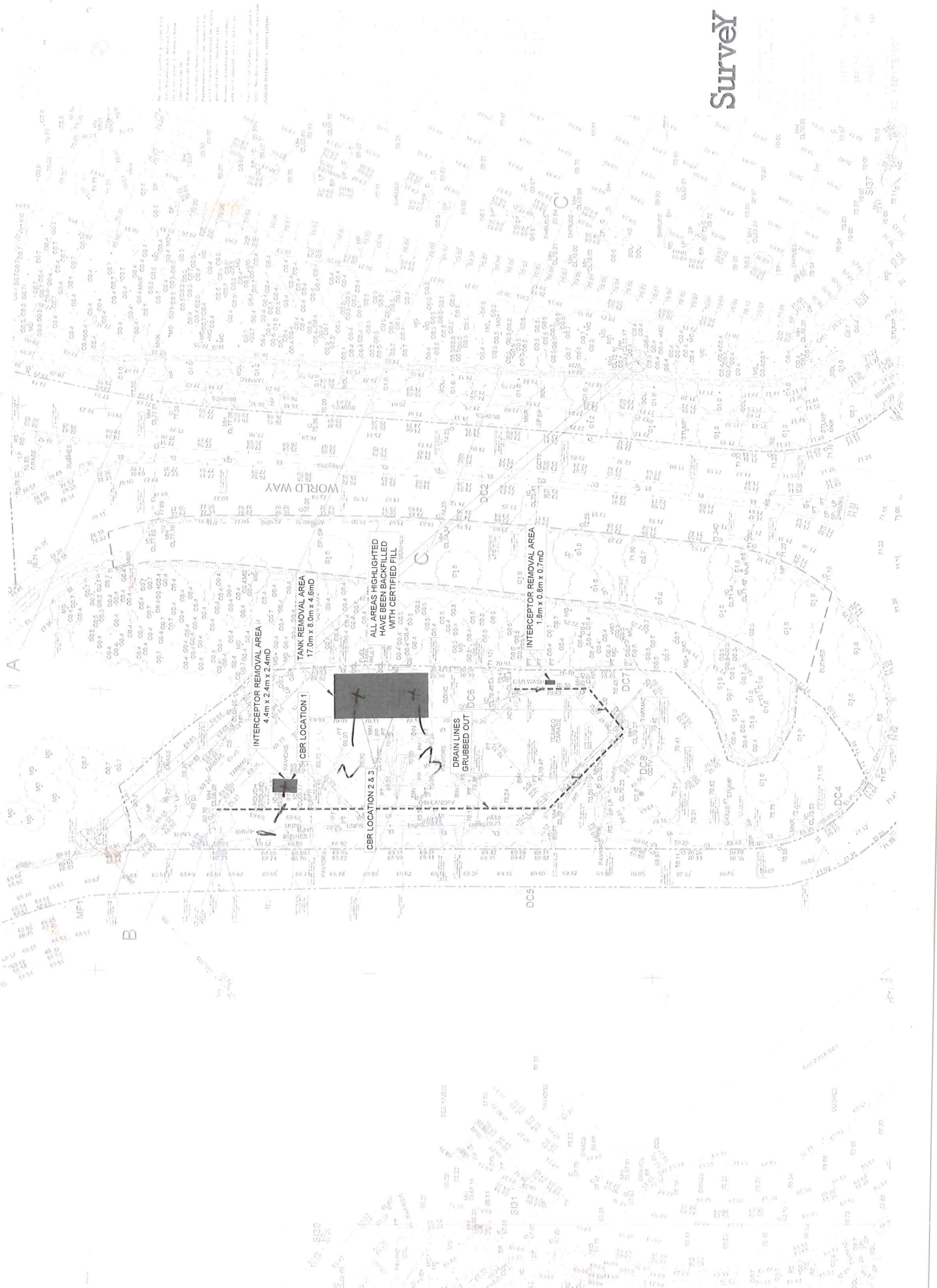
Pressure at 1.25 mm deflexion = 52 kPa
Modulus of subgrade reaction (k) = 42 MPa/m
Equivalent 762 mm plate reaction = 33 MPa/m
Equivalent CBR = 4.2 %

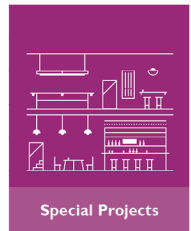
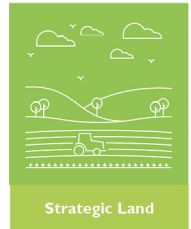
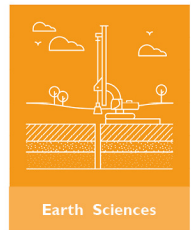
REMARKS

SIGNED

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

DATE 20-Feb-19





Commercial Wharf
6 Commercial Street
Manchester
M15 4PZ

T 0161 214 5390
W www.rocconsulting.com

Plot P1 Phase 3b Site Validation Strategy