



e3p

Validation Report
Oldham Road, Manchester

Reference: 12-730-R4-2
Date: 16th May 2023



REMEDIATION AND ENABLING WORKS VALIDATION

Oldham Road
Manchester
M4 5FU

Prepared for:

**Ridge and Partners LLP
&
Mulbury City**

**Report Ref: 12-730-R4-2
Date Issued: 16th May 2022**

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QUALITY ASSURANCE

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1. INTRODUCTION

1.1. BACKGROUND

This report details the remediation and enabling works operations that were undertaken by ADM Regeneration under the supervision of E3P to facilitate the preparation of the high-rise residential development on a parcel of land located off Oldham Road, Manchester; herein referred to as the site.

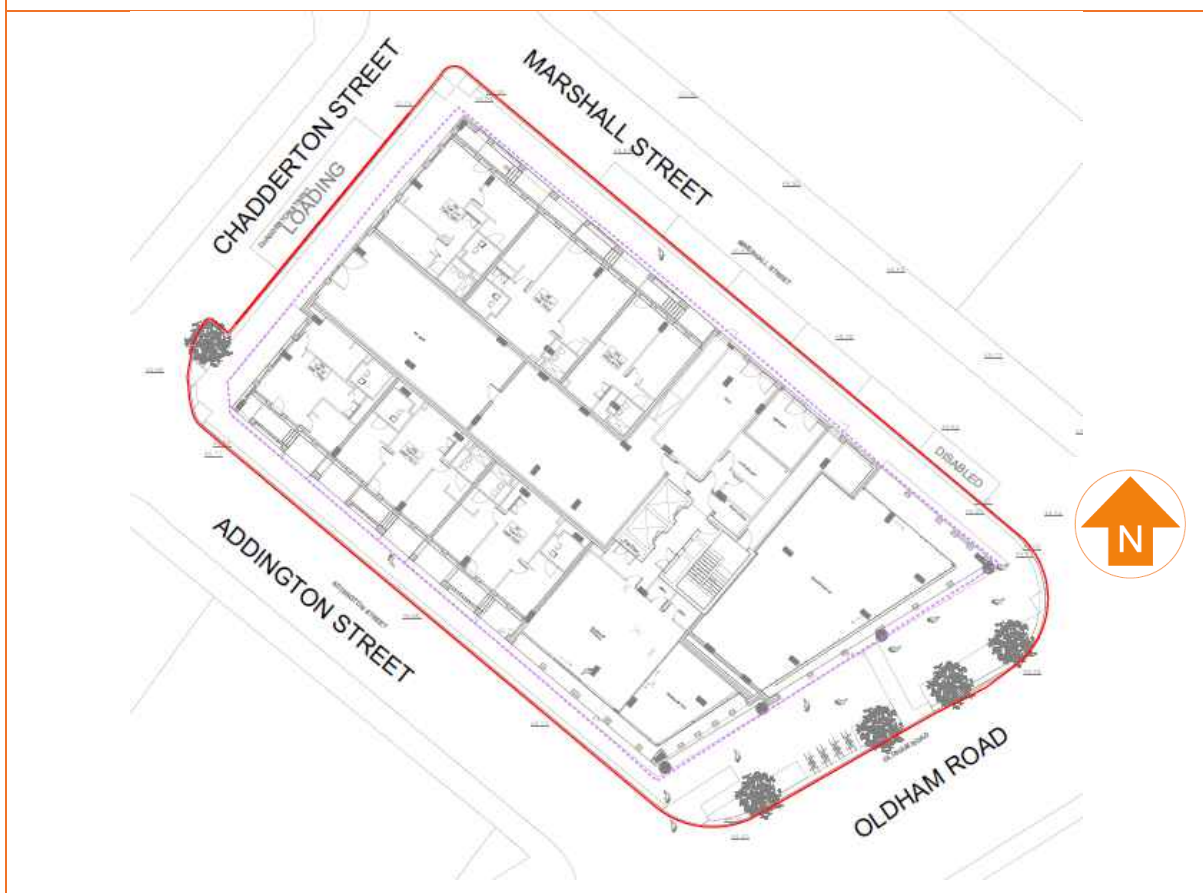
E3P were instructed by Ridge and Partners LLP, on behalf of their client (Mulbury City), as independent Geo-Environmental Consultant for the site remediation, preparation / enabling and validation works and the subsequent production of a suitably detailed report to ensure the satisfaction of the relevant planning conditions and geotechnical engineering requirements for Building Control, warranty providers and the future adoption of infrastructure by the Highways Authority and statutory service providers.

1.2. PROPOSED DEVELOPMENT

The scheme will involve the demolition of existing structures and erection of a 12-storey residential building (Use Class C3) comprising 144 residential units, with ground floor commercial use (Use Class A1, A2, A3, B1, and / or D1 (excluding Places of Worship)), disabled car parking, with highways, landscaping and other associated works.

The Proposed Development Layout is indicated in Figure 1.1.

FIGURE 1.1 SNAPSHOT OF PROPOSED DEVELOPMENT



1.3. SUMMARY OF PARTIES INVOLVED

Function/interest	Name of Party
Local Planning Authority	Manchester City Council
Developer	Mulbury City
Geoenvironmental Consultant	E3P
Main Contractor	ADM Regeneration
Remediation/Enabling Works Contractor	ADM Regeneration
Human Health Regulator	Manchester City Council
Controlled Waters and Waste Regulator	Environment Agency
Highways Adoption Authority	Manchester City Council

1.4. PREVIOUS WORKS

The following previous phases of site investigation and assessment have been completed at the subject site:

-  **E3P** - *Phase I Geo-Environmental Site Assessment*. Ref No: 12-730-R1, dated December 2019. Prepared for Mulbury City; and
-  **E3P** - *Phase II Geo-Environmental Site Assessment*. Ref No: 12-730-R2, dated February 2021. Prepared for Mulbury City.

These documents were utilised to develop the following Remediation and Enabling Works Strategy:

-  **E3P** – *Remediation and Enabling Works Strategy*. Ref No: 12-730-R3, dated February 2021. Prepared for Mulbury City.

The above documents should be read in conjunction with this Validation Report.

1.5. REGULATORY CORRESPONDENCE

E3P understands the Remediation and Enabling Works Strategy was submitted to Manchester City Council by Mulbury City on 8th March 2021.

The Planning Application No. for the scheme is 125686/FO/2019.

Regulatory correspondence confirmed the conditional acceptance of the Remediation and Enabling Works Strategy, subject to completion of the supplementary works detailed in RE-3 and RE-8.



2. SUMMARY OF REMEDIATION AND ENABLING WORKS OBJECTIVES

The proposed remediation activities were detailed within the E3P Remediation and Enabling Works Strategy (12-730-R3; dated February 2021) and supplementary supporting documents provided by E3P.

This report has been prepared to document the completion of all necessary land remediation and enabling works and to record the presence of any variation in ground conditions or previously unidentified sources of potential contamination, environmental impact or potential nuisance to the wider environ.

The Remediation and Enabling Works elements are summarised below:

- ✿ RE-1 – Pre-commencement Regulatory Compliance
- ✿ RE-2 – Risk to Infrastructure
- ✿ RE-3 – Supplementary Trail Pitting and Chemical Analysis of Made Ground
- ✿ RE-4 – Environment and Nuisance Control
- ✿ RE-5 – Identification, Isolation and Treatment of Invasive Plants
- ✿ RE-6 – Site Clearance Operations
- ✿ RE-7 – Excavation, Breaking and Processing of All Above and Below Ground Structures and Made Ground
- ✿ RE-8 – Excavation, Delineation & Validation of Mercury Hotspots
- ✿ RE-9 – Removal of Deleterious Material
- ✿ RE-10 – Construction of Temporary Working Platform
- ✿ RE-11 – Replacement of Materials, Geotechnical Engineering Requirements
- ✿ RE-12 – Preparation of Peripheral Landscaped Areas for Cover System
- ✿ RE-13 – Provision of Subsoil
- ✿ RE-14 – Provision of Topsoil
- ✿ RE-15 – Independent Validation: Watching Brief
- ✿ RE-16 – Waste Soils Surplus to Requirement
- ✿ RE-17 – Validation of Materials for Potable Water Supply Infrastructure
- ✿ RE-18 – Remedial Verification Report

3. SECOND PHASE MITIGATION AND MANAGEMENT – BUILD PHASE

No build phase mitigation works are required. E3P can confirm the client has revised their External Works Plan for the site, as a result no parcels of soft cover (landscaping and tree pits) will be incorporated into the development. These areas will now be capped by hardstand.

Therefore, a cover system is not required as part of the Build Phase Mitigation. The External Works GA Plan (Ref: D464-TGA-XX-00-DR-A-90001) is attached to Appendix III.

Ground gas monitoring indicates the site classification as CS1, and it is considered that gas protection measures will not be required.



4. DETAILED REMEDIATION AND ENABLING WORKS ACTIVITIES

The focus of the remediation and enabling works are to address the contaminant issues previously identified within the site investigations that presented an unacceptable risk to human health following the redevelopment of the site.

For completeness, each of these activities has been discussed below within the context of the actual remediation works that were undertaken on site.

The Remediation & Site Enabling works commenced on the 29th March 2021 and were completed by March 2022

RE-1 – PRE-COMMENCEMENT REGULATORY COMPLIANCE

DATE OF WORKS UNDERTAKEN

Throughout

PHOTOGRAPHS

NA

CHEMICAL TESTING

NA

OVERVIEW OF WORKS

Planning permission has been granted (Application No. 125686/FO/2019) by Manchester City Council for the demolition of existing building and and erection of a 12-storey residential building (Use Class C3) comprising 144 residential units, with ground floor commercial use (Use Class A1, A2, A3, B1, and / or D1 (excluding Places of Worship)), disabled car parking, with highways, landscaping and other associated works.

Regulatory correspondence was obtained confirming the conditional acceptance of the Remediation and Enabling Works Strategy, subject to completion of the supplementary works in relation to further analysis of Made Ground beneath the structure and hotspot analysis at TP101 and WS101.

ADM Regeneration registered the site for both a U1 and T5 exemption (insert ADM reference).

RE-2 – RISK TO INFRASTRUCTURE

DATE OF WORKS UNDERTAKEN

Throughout

OVERVIEW OF WORKS

Works carried out in the vicinity of any boundaries were carefully monitored by the site manager to ensure structures or infrastructure that was to remain on-site or within close proximity to the site such as property boundaries and highways were not undermined to cause unnecessary disturbance.

All utility infrastructure was disconnected prior to works in the area of known services.

Overall, the site works were completed in a manner that ensured no risk of disturbance to the adjacent infrastructure.
--



RE-3 – SUPPLEMENTARY TRAIL PITTING AND CHEMICAL ANALYSIS OF MADE GROUND

DATE OF WORKS UNDERTAKEN

09/05/2021

PHOTOGRAPHS

N/A

CHEMICAL TESTING

I2 Analytical Report 21-73933 (MG101 and MG102)

OVERVIEW OF WORKS

Upon the demolition of the former industrial structure in the western portion of the site, two additional samples of the Made Ground soils were collected from within the footprint of the building.

In addition to the laboratory analysis, on the spot PID measurements were taken across this area. All readings being 0.0, indicating the absence of any volatile contamination within the Made Ground soils underlying the former structure.

The i2 Analytical report for MG101 and MG102 indicates there is no further contamination within these soils and therefore no further remedial action was deemed necessary.

RE-4 – ENVIRONMENT AND NUISANCE CONTROL

DATE OF WORKS UNDERTAKEN

Throughout

OVERVIEW OF WORKS

During remediation, works were restricted to between 8.00am and 5.30pm. A road sweeper was present to keep the access and surroundings highways and clear of debris during the earthworks at the site. Heras fencing was erected around the site boundary.

Dust suppression systems were used during the demolition of the existing structures to reduce the levels of dust and debris.

Temporary works were implemented as necessary to support excavations throughout the duration of the works.

RE-5 – IDENTIFICATION, ISOLATION AND TREATMENT OF INVASIVE PLANTS

DATE OF WORKS UNDERTAKEN

Throughout

OVERVIEW OF WORKS

No invasive species were identified onsite during the remediation and enabling works.



RE-6 – SITE CLEARANCE OPERATIONS

DATE OF WORKS UNDERTAKEN

April to May 2021

PHOTOGRAPHS

Plate 1 - 4

OVERVIEW OF WORKS

The existing building on site was demolished and all concrete slabs and asphalt hardstand lifted. Oversized materials were stockpiled for processing on site.

Throughout the enabling works scrap metal and general waste was separated from demolition materials and placed into allocated skips for subsequent disposal off-site.

RE-7 – EXCAVATION, BREAKING AND PROCESSING OF ALL ABOVE AND BELOW GROUND STRUCTURES AND MADE GROUND

DATE OF WORKS UNDERTAKEN

April to May 2021

PHOTOGRAPHS

Plate 5-8

CHEMICAL TESTING

I2 Analytical Report 21-73933 (CRUSH101 and CRUSH102)

OVERVIEW OF WORKS

All sub-structures were excavated using controlled mechanical techniques under the strict control of the ADM site manager with E3P in part time supervision.

The site was subject to a turnover to the top of natural stratum to ensure the full removal and excavation of all below ground obstructions and relict foundations. This process allowed for the removal of any oversize materials and the identification of any previously unidentified areas of contamination. Oversized materials and concrete were stockpiled prior to crushing/processing to nominal 6F2 grading, with chemical validation in accordance with the validation sampling protocol.

Any steel re-enforcements present within the concrete hardstanding, or waste in the form of wood, scrap metal, plastic was removed prior to the crushing of demolition material stockpiles and allocated to skips for subsequent disposal.

E3P maintained a part time watching brief during the turning and processing of the Made Ground to audit and validate the site enabling works in addition to inspecting all materials turned over and identifying any previously unidentified contamination hotspots, including asbestos containing materials (ACM).

Chemical analysis (Crush 101 and Crush 102) within laboratory report 21-73933 confirmed that the 6F2 was suitable for use within the proposed development. Chemical testing results are included in Appendix IV.



RE-8 – EXCAVATION, DELINEATION & VALIDATION OF MERCURY HOTSPOTS

DATE OF WORKS UNDERTAKEN

30/03/2021 & 01/04/2021

PHOTOGRAPHS

N/A

CHEMICAL TESTING

I2 Analytical Report 21-66279 (WS101)

I2 Analytical Report 21-66749 (TP101)

OVERVIEW OF WORKS

Background

During the Phase II Geo-Environmental Assessment completed in August 2020, marginally elevated mercury was encountered within TP101 and WS101 both at depths of 1.80 mbgl.

Overview of Works

E3P attended site on 30th March to supervise the hotspot removal and further sampling in the vicinity of WS101. Samples of the sidewalls, materials within and base of the excavation were taken for analysis. The analysis confirmed the sidewalls and base to contain <0.3mg/kg of mercury and was therefore confirmed to not pose a vapour risk to future site users and these soils were considered suitable for re-use.

The material from the hotspot was excavated and stockpiled for waste classification.

E3P returned to site the 1st April to undertake the hotspot removal and further analysis in the vicinity of TP101. Samples of the sidewalls, materials within and base of the excavation were taken for analysis. The analysis confirmed marginally elevated concentrations of mercury to be present within the sidewalls (TP101A, TP101C and TP101 Base). This material was subsequently excavated and stockpiled pending analysis in line with WM3 guidance for off-site disposal.

The excavated soils from the hotspots were removed and stockpiled on visqueen. This material was assessed in line with WM3 guidance and confirmed to be non-Hazardous. The hotspot materials were stockpiled with the surplus site won soils and removed off site to a suitable waste facility and waste transfer notes can be made available upon request.

A total of c. 130m² of material was removed by Enviro Skip Hire to Norton Way, Sandbach CW11 3WL.

The WM3 waste classification results are presented in Appendix IV.

RE-9 – REMOVAL OF DELETERIOUS MATERIAL

DATE OF WORKS UNDERTAKEN

Throughout

PHOTOGRAPHS

N/A

CHEMICAL TESTING

PID testing of all excavated and processed soils



OVERVIEW OF WORKS

Due to the nature of the works much of the site won material was reused.

During the demolition and removal of onsite structures and features the material was processed. All bricks and concrete were riddled and crushed onsite by a mobile crushing plant with associated dust suppression system. This crush was then re-used to back fill voids and as part of the engineered pile mat. Waste material such as wooden timbers, glass and steel substructures were stockpiled separately and segregated for recycling off site.

RE-10 – CONSTRUCTION OF TEMPORARY WORKING PLATFORM

DATE OF WORKS UNDERTAKEN

May to June 2021

PHOTOGRAPHS

Plate 9 and 10

CHEMICAL TESTING

Validation of Site Generated Crush - I2 Analytical Report 21-73933 (CRUSH101 and CRUSH102)

OVERVIEW OF WORKS

Overview of Works

ADM completed two CBR tests on the piling mat on April 21st 2021, which achieved an equivalent CBR value of 38.3% and 31.8% (MN4069-44).

E3P can therefore confirm the piling mat has been placed and constructed in accordance with the approved temporary works platform design.

RE-11 – REPLACEMENT OF MATERIALS, GEOTECHNICAL ENGINEERING REQUIREMENTS

DATE OF WORKS UNDERTAKEN

Throughout

PHOTOGRAPHS

N/A

CHEMICAL TESTING

MN4069-29

MN4069-38

MN4069-44

MN4069/49 – PSD Results CR01 & CR02



OVERVIEW OF WORKS

The enabling works required a large-scale turnover to remove constraints to construction. Where applicable, all voids were backfilled with materials in accordance with the E3P Geotechnical Engineering Specification.

CBR tests were undertaken at the remediation levels at formation and on pile mats.

Particle Size Distribution (Ref: MN4069/49) for samples CR01 & CR02 confirm the material placed was geotechnically suitable.

E3P can confirm that all materials were backfilled in strict compliance with the E3P Geotechnical Engineering Specification.

Confirmatory CBR testing was completed to demonstrate compliance with the performance requirements and the testing results are included in Appendix VI;

-  MN4069-29
-  MN4069-38
-  MN4069-44

The Geotechnical testing locations are shown on ADM Drawing (insert reference) (Appendix III).

5. CONCLUSION

The remediation elements identified within the approved Remediation and Enabling Works Strategy have been completed with validation testing confirming that the works have been completed to the required standard.

END OF REPORT



APPENDIX I

LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between E3P and the Client as indicated in Section 1.2.
2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information it has been assumed it is correct. No attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination which are enforced by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.
4. During the site walkover, reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover, no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.
5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.
6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials, this is for indicative purposes only and do not constitute or replace full and proper surveys.
8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
9. E3P cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by E3P is owned by them and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by E3P in this connection without their explicit written agreement there to by E3P.
10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.



APPENDIX II

GLOSSARY

TERMS

ACM	Asbestos-containing material	MMP	Materials management plan
ADS	Acoustic design statement	ND	Not detected
AST	Above-ground storage tank	NDP	Nuclear density probe
BGS	British Geological Survey	NMP	Noise management plan
BSI	British Standards Institute	NPSE	Noise policy statement for England
BTEX	Benzene, toluene, ethylbenzene, xylenes	NR	Not recorded
CA	Coal Authority	PAH	Polycyclic aromatic hydrocarbon
CBR	California bearing ratio	PCB	Polychlorinated biphenyl
CIEH	Chartered Institute of Environmental Health	PI	Plasticity index
CIRIA	Construction Industry Research Association	PID	Photo ionisation detector
CLEA	Contaminated land exposure assessment	POS	Public open space
CML	Council of Mortgage Lenders	PPE	Personnel protective equipment
CoC	Contaminants of concern	ProPG	Professional practice guidance
CSM	Conceptual site model	QA	Quality assurance
DNAPL	Dense non-aqueous phase liquid (chlorinated solvents, PCB)	SGV	Soil guideline value
DWS	Drinking water standard	SPH	Separate-phase hydrocarbon
EA	Environment Agency	SPT	Standard penetration test
EQS	Environmental quality standard	SVOC	Semi-volatile organic compound
FFL	Finished floor level	TPH	Total and speciated petroleum hydrocarbon
GAC	General assessment criteria	TPH CWG	Total Petroleum Hydrocarbon (Criteria Working Group)
GL	Ground level	UKWIR	United Kingdom Water Infrastructure Risk
GSV	Gas screening value	UST	Underground storage tank
HCV	Health criteria value	VCC	Vibro-concrete column



Oldham Road, Manchester

Remediation and Enabling Works Validation

May 2023

ICSM	Initial conceptual site model	VOC	Volatile organic compound
LEL	Lower explosive limit	VRSC	Vibro-replacement stone columns
LMRL	Lower method reporting limit	VSC	Vibro-stone columns
LNAPL	Light non-aqueous phase liquid (petrol, diesel, kerosene)	WHO	World Health Organisation
MCV	Moisture condition value	WRAP	Waste and Resources Action Programme
MIBK	Methyl isobutyl ketone	WTE	Water table elevation
m	Metres	ppm	Parts per million
km	Kilometres	mg/m³	Milligram per metre cubed
% v/v	Percent volume in air	m bgl bgl	Metres below ground level
mb	Millibars (atmospheric pressure)	m bcl	Metre below cover level
l/hr	Litres per hour	mAOD	Metres above ordnance datum (sea level)
µg/l	Micrograms per litre (parts per billion)	kN/m²	Kilonewtons per metre squared
ppb	Parts per billion	µm	Micrometre
mg/kg	Milligrams per kilogram (parts per million)	SSRT	Site Specific Remediation Target
PSD	Particle Size Distribution	DD	Dry Density
CL:AIRE	Contaminated Land: Applications in Real Environments	Mc	Moisture Content
ρ	Bulk Density	GPR	Ground Penetrating Radar
NDP	Nuclear Density Probe	FFL	Finished Floor Level
LEL	Lower Explosive Limit	UKWIR	UK Water Industry Research
CIRIA	Construction Industry Research and Information Association	LOD	Limit of Detection



APPENDIX III

DRAWINGS



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Dimensioning
Figured dimensions only to be taken from these designs and drawings. Work to annotated dimensions only. All dimensions to be checked on site. Architects to be informed immediately of any discrepancies before work proceeds. Drawings are to be read in conjunction with relevant specifications, structural engineers and service engineers' drawings. All data, dimensions and designs contained in this document are confidential to the copyright owner and may not be communicated to any third party save in accordance with a licence for the copyright owner or with the copyright owner's written permission and authority.

Rev	Description	Date	By
C01	For information	04.05.23	

CHADDERTON STREET

OLDHAM ROAD

ADDINGTON STREET

LEGEND AND NOTES

- Site application boundary
- Marshall's Conservation X Paver - Charcoal
- Cycle parking - proprietary hoop stand

For works outside the application boundary, refer to Ridge drawings

Client
Mulbury City

Project
0322 Oldham Road

Title
External Works GA Plan

Status
STAGE 5

Project number
D464

Drawn by
SC

Checked by
DM

Scale
1 : 100@A1

Revision
C01

Drawing No.
D464-TGA-XX-00-DR-A-90001

APPENDIX IV CHEMICAL TESTING RESULTS

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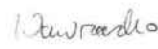
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e: reception@i2analytical.com

Analytical Report Number : 21-66279-2

Replaces Analytical Report Number: 21-66279, issue no. 1
Client references/information amended.

Project / Site name:	Oldham Road	Samples received on:	31/03/2021
Your job number:	12-730	Samples instructed on/ Analysis started on:	31/03/2021
Your order number:	12-730-AS-1	Analysis completed by:	24/01/2022
Report Issue Number:	2	Report issued on:	24/01/2022
Samples Analysed:	5 soil samples		


Signed:

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-66279-2
 Project / Site name: Oldham Road
 Your Order No: 12-730-AS-1

Lab Sample Number				1823523	1823524	1823525	1823526	1823527
Sample Reference				WS101A	WS101B	WS101C	WS101D	WS101 Base
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	1.80	1.80	1.80	2.00
Date Sampled				30/03/2021	30/03/2021	30/03/2021	30/03/2021	30/03/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	10	12	12	9.6
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50

Heavy Metals / Metalloids

Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
----------------------------------	-------	-----	--------	-------	-------	-------	-------	-------

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-66279-2

Project / Site name: Oldham Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1823523	WS101A	None Supplied	1.8	Brown loam and clay.
1823524	WS101B	None Supplied	1.8	Brown loam and clay.
1823525	WS101C	None Supplied	1.8	Brown loam and clay.
1823526	WS101D	None Supplied	1.8	Brown loam and clay.
1823527	WS101 Base	None Supplied	2	Brown loam and clay.

Analytical Report Number : 21-66279-2
Project / Site name: Oldham Road

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.



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Analytical Report Number : 21-66749

Project / Site name:	Oldham Road	Samples received on:	06/04/2021
Your job number:	12 730	Samples instructed on/ Analysis started on:	06/04/2021
Your order number:	12730 JC 1	Analysis completed by:	13/04/2021
Report Issue Number:	1	Report issued on:	13/04/2021
Samples Analysed:	5 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-66749

Project / Site name: Oldham Road

Your Order No: 12730 JC 1

Lab Sample Number				1826347	1826348	1826349	1826350	1826351
Sample Reference				TP101 A	TP101 B	TP101 C	TP101 D	TP101 BASE
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.50	1.50	1.50	1.50	2.00
Date Sampled				01/04/2021	01/04/2021	01/04/2021	01/04/2021	01/04/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	18	17	18	17	20
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50

Heavy Metals / Metalloids

	mg/kg	0.3	MCERTS	1.4	1.0	7.5	1.2	2.7
Mercury (aqua regia extractable)								

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-66749

Project / Site name: Oldham Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1826347	TP101 A	None Supplied	1.5	Brown loam and clay with gravel and vegetation.
1826348	TP101 B	None Supplied	1.5	Brown loam and clay with gravel and vegetation.
1826349	TP101 C	None Supplied	1.5	Brown loam and clay with gravel and vegetation.
1826350	TP101 D	None Supplied	1.5	Brown loam and sand with gravel and vegetation.
1826351	TP101 BASE	None Supplied	2	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 21-66749

Project / Site name: Oldham Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

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Analytical Report Number : 21-73933

Project / Site name:	Oldham Road	Samples received on:	10/05/2021
Your job number:	12-730	Samples instructed on/ Analysis started on:	10/05/2021
Your order number:	12730-MJ-K	Analysis completed by:	18/05/2021
Report Issue Number:	1	Report issued on:	18/05/2021
Samples Analysed:	4 soil samples		

Signed: *Karolina Marek*

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-73933
Project / Site name: Oldham Road
Your Order No: 12730-MJ-K

Lab Sample Number				1865395	1865396	1865397	1865398
Sample Reference				MG101	MG102	CRUSH101	CRUSH102
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				10/05/2021	10/05/2021	10/05/2021	10/05/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	19	16	6.3	10
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.3	8.3	11.8	10.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	940	1900	4300	4700
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.30	0.54	0.12	1.1
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	600	1100	240	2200
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	298	542	120	1110
Sulphide	mg/kg	1	MCERTS	2.9	7.2	15	23
Total Sulphur	mg/kg	50	MCERTS	460	1000	1600	1900

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.22
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.61	0.37	0.41
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.44	0.28	0.32
Phenanthrene	mg/kg	0.05	MCERTS	0.43	3.7	2.3	2.9
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.99	0.62	0.97
Fluoranthene	mg/kg	0.05	MCERTS	0.54	4.5	2.3	6.5
Pyrene	mg/kg	0.05	MCERTS	0.53	4.1	2.1	6.8
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.31	2.1	1.1	3.7
Chrysene	mg/kg	0.05	MCERTS	0.25	2.0	0.87	3.7
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.33	2.4	1.2	5.8
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.14	1.1	0.51	1.7
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.25	2.1	1.0	3.7
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.1	0.54	1.8
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.54
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	1.3	0.68	2.1

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	2.78	26.3	13.8	40.9
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	14	8.5	16
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.6	< 0.2	0.5
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	22	14	18
Copper (aqua regia extractable)	mg/kg	1	MCERTS	26	46	24	58
Lead (aqua regia extractable)	mg/kg	1	MCERTS	43	160	55	220
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	29	24	12	18
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	60	95	81	170

Analytical Report Number: 21-73933

Project / Site name: Oldham Road

Your Order No: 12730-MJ-K

Lab Sample Number				1865395	1865396	1865397	1865398
Sample Reference				MG101	MG102	CRUSH101	CRUSH102
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				10/05/2021	10/05/2021	10/05/2021	10/05/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				

Petroleum Hydrocarbons

TPH (C5 - C6)	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH (C6 - C8)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C8 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C10 - C12)	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0
TPH (C12 - C16)	mg/kg	4	MCERTS	< 4.0	5.0	16	11
TPH (C16 - C21)	mg/kg	1	MCERTS	< 1.0	27	37	46
TPH (C21 - C35)	mg/kg	1	MCERTS	< 1.0	82	150	94
TPH (C35 - C40)	mg/kg	10	MCERTS	< 10	20	20	16
TPH Total C5 - C40	mg/kg	10	MCERTS	< 10	140	230	170

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-73933

Project / Site name: Oldham Road

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1865395	MG101	None Supplied	None Supplied	Brown clay.
1865396	MG102	None Supplied	None Supplied	Brown clay and loam.
1865397	CRUSH101	None Supplied	None Supplied	Non Soil**
1865398	CRUSH102	None Supplied	None Supplied	Brown rubble.**

** Non MCERTS matrix

Analytical Report Number : 21-73933

Project / Site name: Oldham Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS



Analytical Report Number : 21-73933
Project / Site name: Oldham Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Waste Classification Report



G67WX-FFKXS-LNUMT

Job name

12-730

Description/Comments

This Waste Classification is based on the analytical results provided by E3P on the i2 Analytical Ltd 'Analytical Report' Number: 20-26984. Soil Samples Only. During the assessment we have considered the 'worst or most reasonable case' metals compounds as laboratory reports only provide total concentrations of a metal e.g. Cu but not which compound(s) (species) of the metal present within the respective soil samples e.g. CuSO4. If the assessment is non-hazardous based on these worst case species no further 'species' consideration is required. With TPH, WM3 (EA) require assessment of the potential presence of an unknown 'oil' by assessing the TPH range C6 – C40. Where the concentration of TPH is >0.1% (1000mg/kg) the 'soil' will be classed as HP 7 Carcinogenic and HP 11 Mutagenic, unless the concentration of the marker benzo(a)pyrene is <0.01% of the TPH concentration and confirmation is received that the TPH result has not arisen from petrol or diesel sources. Note that samples consider moisture content correction factors. In the case of any samples exceeding the 1000mg/kg TPH value and also the marker benzo(a)pyrene at <0.01% of the TPH concentration, the moisture correction factor could make it 'non-hazardous'. It is the responsibility of the geo-environmental consultant to target the laboratory analysis suite and testing to appropriately reflect the nature of the site, its activities and its impact on surrounding soils. WM3 states that the assessment of asbestos containing waste considers both the presence of asbestos as a) fibres that are free and dispersed, and b) identifiable pieces of asbestos containing material. If the waste contains fibres that are free and dispersed then the waste will be hazardous if the waste as a whole contains 0.1% or more asbestos. Where the waste contains identifiable pieces of asbestos containing material (i.e. any size that can be identified as potentially being asbestos by a competent person by the naked eye) it is deemed hazardous.

Project

Waste Classification

Site

Oldham Road

Related Documents

#	Name	Description
None		

Waste Stream Template

E3P I2 Characterisation Suite 4

Classified by

Name: Daniel Enon	Company: RJT Consulting Partnerships Ltd	HazWasteOnline™ Training Record:	
Date: 25 May 2021 13:57 GMT		Course	Date
Telephone: 0161 706 0402		Hazardous Waste Classification	17 Sep 2019
		Advanced Hazardous Waste Classification	18 Sep 2019

Report

Created by: Daniel Enon
Created date: 25 May 2021 13:57 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	TP101	1.80	Non Hazardous		3
2	WS101	1.80	Non Hazardous		5

Appendices	Page
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Appendix A: Classifier defined and non CLP determinands	7
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Appendix B: Rationale for selection of metal species	8
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Appendix C: Version	9
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Classification of sample: TP101

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP101	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.80 m		
Moisture content:		
25%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 25% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	pH				8.5 pH		8.5 pH	8.5 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				8 mg/kg	1.884	12.058 mg/kg	0.00121 %	✓	
	006-007-00-5									
3	phenol				9.5 mg/kg		7.6 mg/kg	0.00076 %	✓	
	604-001-00-2	203-632-7	108-95-2							
4	naphthalene				0.82 mg/kg		0.656 mg/kg	0.0000656 %	✓	
	601-052-00-2	202-049-5	91-20-3							
5	acenaphthylene				2.7 mg/kg		2.16 mg/kg	0.000216 %	✓	
		205-917-1	208-96-8							
6	acenaphthene				0.24 mg/kg		0.192 mg/kg	0.0000192 %	✓	
		201-469-6	83-32-9							
7	fluorene				0.63 mg/kg		0.504 mg/kg	0.0000504 %	✓	
		201-695-5	86-73-7							
8	phenanthrene				2.4 mg/kg		1.92 mg/kg	0.000192 %	✓	
		201-581-5	85-01-8							
9	anthracene				11 mg/kg		8.8 mg/kg	0.00088 %	✓	
		204-371-1	120-12-7							
10	fluoranthene				4.8 mg/kg		3.84 mg/kg	0.000384 %	✓	
		205-912-4	206-44-0							
11	pyrene				4.2 mg/kg		3.36 mg/kg	0.000336 %	✓	
		204-927-3	129-00-0							
12	benzo[a]anthracene				5.2 mg/kg		4.16 mg/kg	0.000416 %	✓	
	601-033-00-9	200-280-6	56-55-3							
13	chrysene				3.9 mg/kg		3.12 mg/kg	0.000312 %	✓	
	601-048-00-0	205-923-4	218-01-9							
14	benzo[b]fluoranthene				11 mg/kg		8.8 mg/kg	0.00088 %	✓	
	601-034-00-4	205-911-9	205-99-2							

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
15	benzo[k]fluoranthene				1.2	mg/kg		0.96	mg/kg	0.000096 %	✓	
	601-036-00-5	205-916-6	207-08-9									
16	benzo[a]pyrene; benzo[def]chrysene				4.9	mg/kg		3.92	mg/kg	0.000392 %	✓	
	601-032-00-3	200-028-5	50-32-8									
17	indeno[123-cd]pyrene				3.8	mg/kg		3.04	mg/kg	0.000304 %	✓	
		205-893-2	193-39-5									
18	dibenz[a,h]anthracene				1.4	mg/kg		1.12	mg/kg	0.000112 %	✓	
	601-041-00-2	200-181-8	53-70-3									
19	benzo[ghi]perylene				4.6	mg/kg		3.68	mg/kg	0.000368 %	✓	
		205-883-8	191-24-2									
20	arsenic { arsenic trioxide }				74	mg/kg	1.32	78.163	mg/kg	0.00782 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
21	cadmium { cadmium oxide }				<0.2	mg/kg	1.142	<0.228	mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0									
22	chromium in chromium(VI) compounds { chromium(VI) oxide }				<4	mg/kg	1.923	<7.692	mg/kg	<0.000769 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									
23	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				12	mg/kg	1.462	14.031	mg/kg	0.0014 %	✓	
		215-160-9	1308-38-9									
24	copper { dicopper oxide; copper (I) oxide }				71	mg/kg	1.126	63.95	mg/kg	0.0064 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
25	lead { lead chromate }			1	690	mg/kg	1.56	861.018	mg/kg	0.0552 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
26	mercury { mercury dichloride }				4.7	mg/kg	1.353	5.089	mg/kg	0.000509 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
27	nickel { nickel chromate }				21	mg/kg	2.976	50.001	mg/kg	0.005 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
28	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				3.3	mg/kg	1.405	3.709	mg/kg	0.000371 %	✓	
	034-002-00-8											
29	zinc { zinc chromate }				280	mg/kg	2.774	621.409	mg/kg	0.0621 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
30	TPH (C6 to C40) petroleum group				600	mg/kg		480	mg/kg	0.048 %	✓	
			TPH									
Total:										0.195 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because HP3(I) -Flammable relates to liquids. However this analysis was undertaken on solid soil samples and therefore does not apply.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.048%)

Classification of sample: WS101

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS101	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.80 m		
Moisture content:		
24%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 24% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	pH				7.5 pH		7.5 pH	7.5 pH		
2	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
3	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
4	naphthalene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
5	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
6	acenaphthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9							
7	fluorene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		201-695-5	86-73-7							
8	phenanthrene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		201-581-5	85-01-8							
9	anthracene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		204-371-1	120-12-7							
10	fluoranthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-912-4	206-44-0							
11	pyrene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		204-927-3	129-00-0							
12	benzo[a]anthracene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
13	chrysene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
14	benzo[b]fluoranthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-034-00-4	205-911-9	205-99-2							

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
15	benzo[k]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
	601-036-00-5	205-916-6	207-08-9									
16	benzo[a]pyrene; benzo[def]chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
	601-032-00-3	200-028-5	50-32-8									
17	indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		205-893-2	193-39-5									
18	dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
19	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		205-883-8	191-24-2									
20	arsenic { arsenic trioxide }				21	mg/kg	1.32	22.36	mg/kg	0.00224 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
21	cadmium { cadmium oxide }				<0.2	mg/kg	1.142	<0.228	mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0									
22	chromium in chromium(VI) compounds { chromium(VI) oxide }				<4	mg/kg	1.923	<7.692	mg/kg	<0.000769 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									
23	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				24	mg/kg	1.462	28.288	mg/kg	0.00283 %	✓	
		215-160-9	1308-38-9									
24	copper { dicopper oxide; copper (I) oxide }				81	mg/kg	1.126	73.546	mg/kg	0.00735 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
25	lead { lead chromate }			1	170	mg/kg	1.56	213.846	mg/kg	0.0137 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
26	mercury { mercury dichloride }				1.3	mg/kg	1.353	1.419	mg/kg	0.000142 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
27	nickel { nickel chromate }				33	mg/kg	2.976	79.207	mg/kg	0.00792 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
28	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD
	034-002-00-8											
29	zinc { zinc chromate }				79	mg/kg	2.774	176.74	mg/kg	0.0177 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
30	TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH									
Total:										0.0542 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non CLP determinands

▪ pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

▪ salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

CLP index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

▪ acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H302 , Acute Tox. 1 H330 , Acute Tox. 1 H310 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315

▪ acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Aquatic Chronic 2 H411

▪ fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

▪ phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Carc. 2 H351 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Skin Irrit. 2 H315

▪ anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

▪ fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4 H302 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

▪ pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2 H315 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2 H351

■ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H332 , Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 1B H360FD , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3 H226 , Asp. Tox. 1 H304 , STOT RE 2 H373 , Muta. 1B H340 , Carc. 1B H350 , Repr. 2 H361d , Aquatic Chronic 2 H411

Appendix B: Rationale for selection of metal species

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Worst Case

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected.

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case. Pigment cadmium sulphoselenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil.

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.1, May 2018**

HazWasteOnline Classification Engine Version: 2021.138.4779.9121 (18 May 2021)

HazWasteOnline Database: 2021.138.4779.9121 (18 May 2021)

This classification utilises the following guidance and legislation:

WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2019 - UK: 2019 No. 720 of 27th March 2019

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

POPs Regulation 2019 - Regulation (EU) 2019/1021 of 20 June 2019

APPENDIX V

PHOTOGRAPHS

PLATE 1 EXCAVATION AND TURNOVER OF MADE GROUND

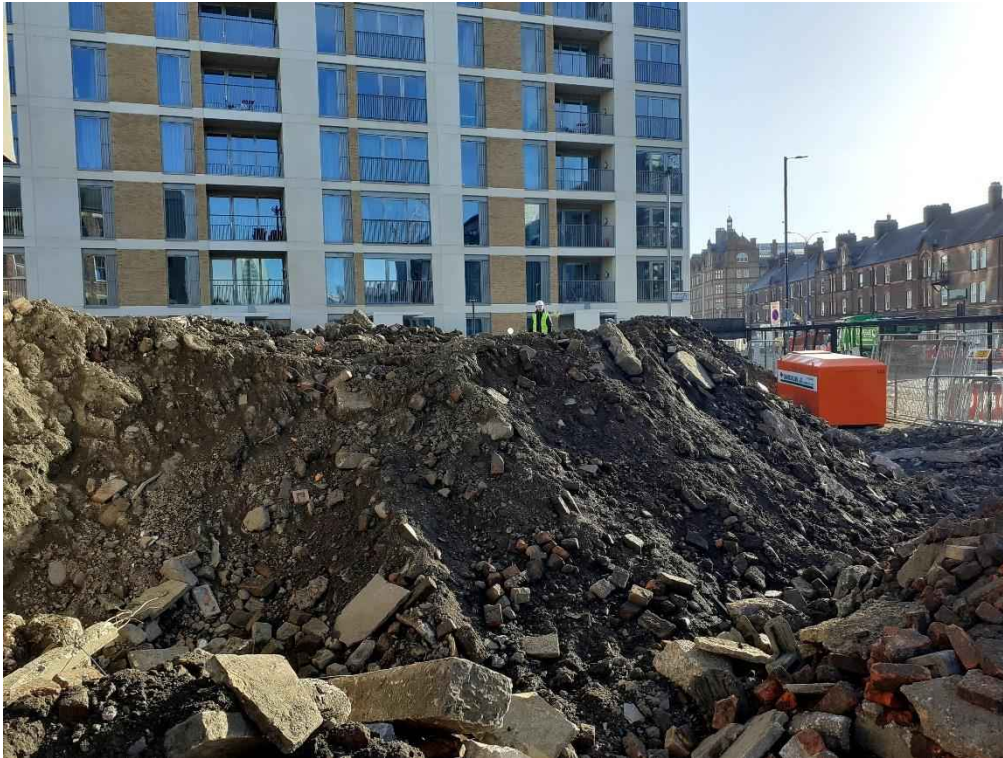


PLATE 2 EXCAVATION AND TURNOVER OF MADE GROUND

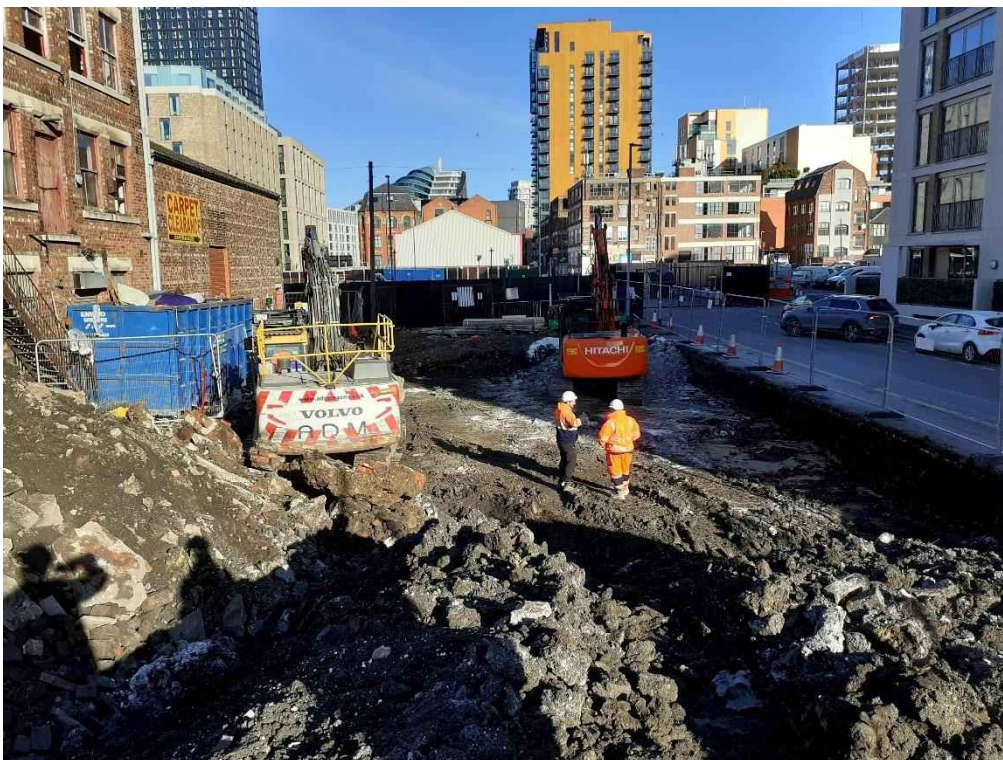


PLATE 3 EXCAVATION AND STOCKPILE OF TIMBER AND STEEL

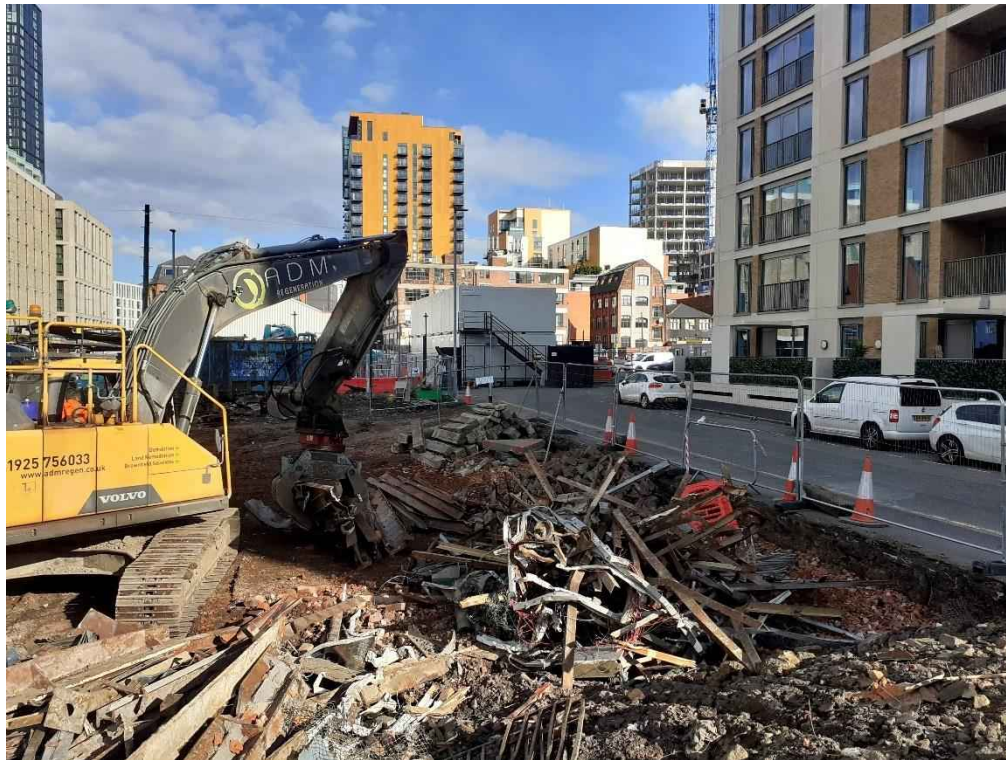


PLATE 4 TURNOVER OF MADE GROUND AND SORTING OF OVERSIZED MATERIAL



PLATE 5 TURNOVER OF MADE GROUND AND SORTING OF OVERSIZED MATERIAL

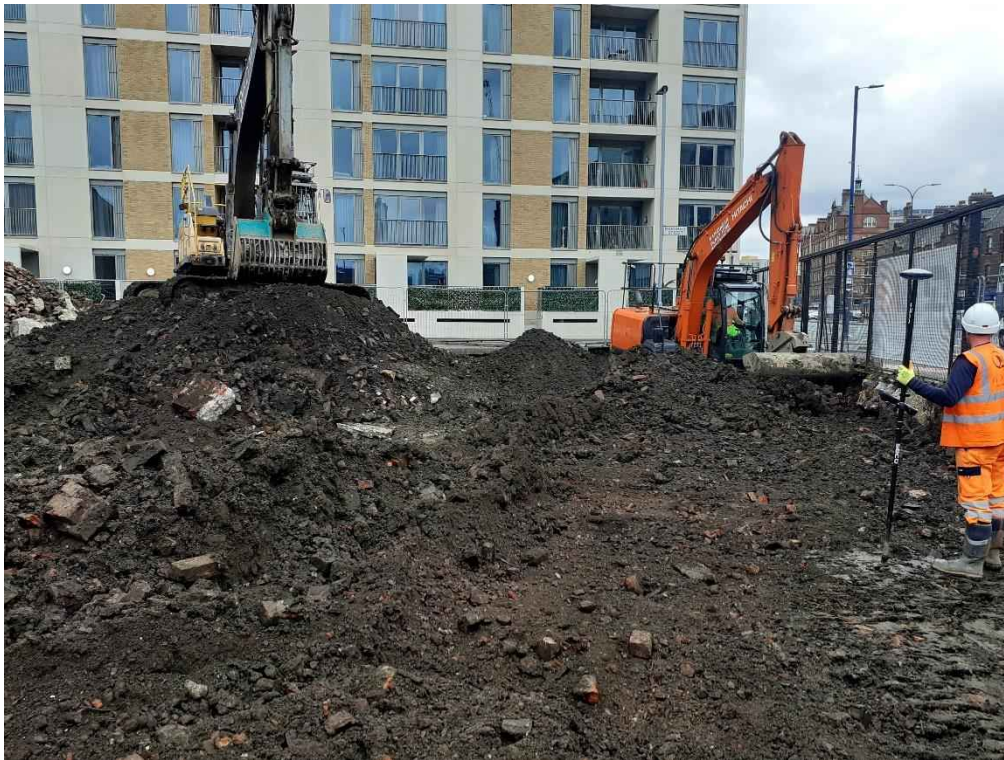


PLATE 6 STOCKPILE OF OVERSIZE MATERIAL AWAITING PROCESSING



PLATE 7 STOCKPILE OF PROCESSED CRUSH



PLATE 8 PID SCREENING OF MADE GROUND DURING TURNOVER



PLATE 9 VIEW OF SITE FACING NORTH



PLATE 10 VIEW OF SITE FACING WEST AND COMMENCEMENT OF PILING



Further photographs can be provided upon request.



APPENDIX VI

GEOTECHNICAL TESTING

RESULTS



All intellectual property rights and copyright of this drawing belongs to ADM Regeneration Ltd. This drawing has been produced from information provided by the Client or other third parties and ADM Regeneration Ltd accept no liability for inaccuracies arising from the interpretation of this data. This drawing is not intended for construction purposes by any other third party. ADM Regeneration Ltd accept no liability to any other person or party from the use of this drawing, whether in whole or in part, without prior written consent from ADM Regeneration Ltd.

CBR Locations & Values			
Number	Easting	Northing	Remark
CBR1 01-04-21	384695.851	398810.446	6.9% - Formation
CBR2 01-04-21	384708.867	398799.418	7.0% - Formation
CBR1 16-04-21	384681.055	398807.055	6.9% - Formation
CBR2 16-04-21	384679.352	398802.701	11.0% - Formation
CBR3 16-04-21	384718.189	398791.906	8.4% - Formation
CBR1 20-04-21	384680.860	398804.526	38.3% - Top of Piling Mat
CBR2 20-04-21	384693.995	398812.978	31.8% - Top of Piling Mat
CBR1-4 11-05-21	384693.357	398792.002	4.8% - Fill
CBR5 11-05-21	384704.513	398782.902	6.8% - Fill
CBR1 12-05-21	384708.008	398783.933	16.0% - Crush
CBR2 12-05-21	384694.259	398793.990	9.2% - Fill Retest
CBR3 12-05-21	384694.846	398789.891	11.9% - Fill Retest

Rev A CBR Locations & Values			
Number	Easting	Northing	Remark
CBR1 14-05-21	384717.066	398793.102	35.6% - Crush
CBR2 14-05-21	384709.611	398800.867	27.4% - Crush
CBR3 14-05-21	384701.232	398807.019	23.1% - Crush

NOTES

- Drawing Overlays:**
- OGL - NO Oliver 9855/001 Rev A
 - External Levels - Scott Hughes Design Enabling Works dwg
 - ORD-SHD-00-F1-DR-S-0100 P1

- Formation Levels:**
- Top of Piling Platform Level = 49.50m

- Assumptions:**
- No allowance made for sub floor voids within existing structures unless explicitly stated on OGL survey / Tender information.
 - No allowance for material bulking/shrinkage during earthworks.
 - No allowance made for temporary works on retaining structures.

- Isopachytes:**
- x.xx = Cut From OGL To Design Formation Levels
 - x.xx = Fill From OGL To Design Formation Levels

A	Final CBR Tests Added	RJM	17/05/21
REV	DESCRIPTION	BY	DATE



ADM Regeneration Ltd
Theatre Buildings
Carrington Business Park
Manchester Road
Carrington
M31 4DN
T: 01925 756033
www.admregen.co.uk

CLIENT

Mulbury City

JOB TITLE

Oldham Road, Manchester

DRAWING TITLE

CBR Location Plan

STATUS

Information

DRAWN BY	RJM	SIGNATURE	DATE
APPROVED	-	SIGNATURE	DATE

SCALE	1:100@A1	DWG No.	11268-010
-------	----------	---------	-----------

TEST REPORT

Client ADM Regeneration Ltd

Address First Floor, Theatre Buildings
Carrington Business Park
Manchester Road
Carrington
Manchester
M31 4DN

Contract Chadderton Street, Manchester

Job Number MRN 4069/29
Date of Issue 07 April 2021
Page 1 of 3

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



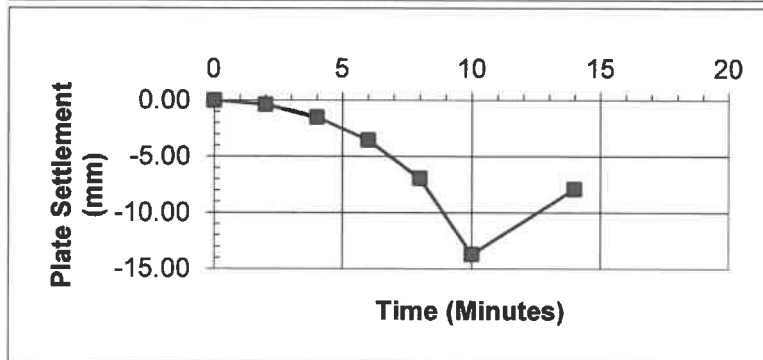
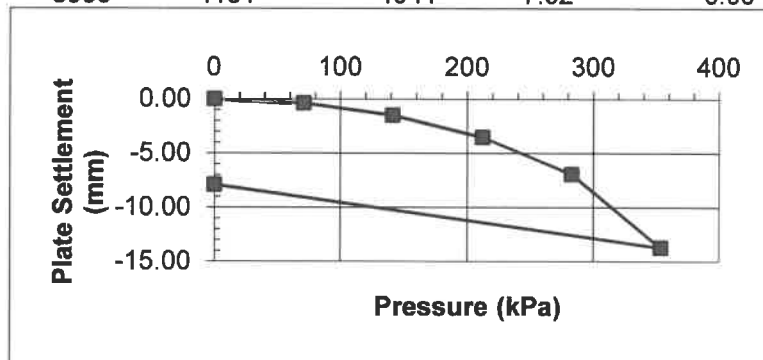
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd					
SITE	Chadderton Street, Manchester					
JOB NUMBER	MRN 4069/29					
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack			
TEST DATE	01-Apr-21	PLATE SIZE (mm)	300 diameter			
TEST DEPTH	-500mm	REACTION LOAD USED	Site Plant			
MATERIAL UNDER TEST	Clay	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	4766	4915	4833	0.00	0.00	0.0
4779	4734	4877	4797	-0.37	5.00	70.7
4670	4610	4771	4684	-1.50	10.00	141.5
4464	4396	4579	4480	-3.54	15.00	212.2
4127	4045	4248	4140	-6.93	20.00	282.9
3459	3342	3582	3461	-13.72	25.00	353.7
4023	3950	4151	4041	-7.92	0.00	0.0



Pressure at 1.25 mm deflexion =	126 kPa
Modulus of subgrade reaction (k) =	101 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 07-Apr-21

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

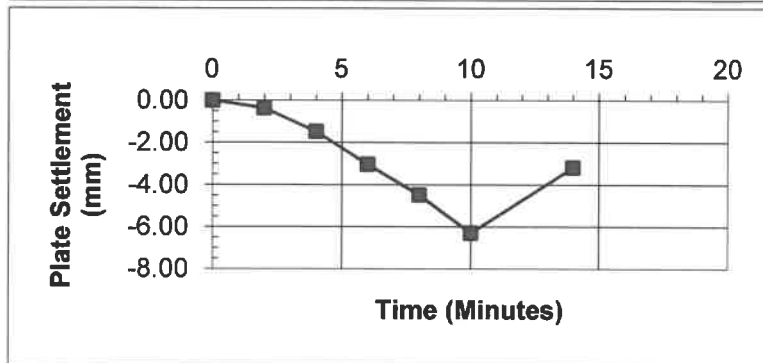
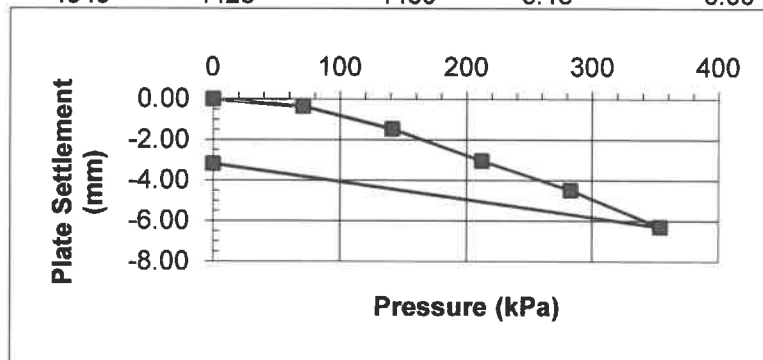


TEST CERTIFICATE

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

CLIENT	ADM Regeneration Ltd		
SITE	Chadderton Street, Manchester		
JOB NUMBER	MRN 4069/29		
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	01-Apr-21	PLATE SIZE (mm)	300 diameter
TEST DEPTH	-1000mm	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Clay	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)
4877	4843	4703	4808	0.00	0.00	0.0
4851	4809	4654	4771	-0.36	5.00	70.7
4721	4705	4554	4660	-1.48	10.00	141.5
4502	4575	4432	4503	-3.05	15.00	212.2
4353	4440	4285	4359	-4.48	20.00	282.9
4171	4235	4127	4178	-6.30	25.00	353.7
4499	4543	4426	4489	-3.18	0.00	0.0



Pressure at 1.25 mm deflexion =	127 kPa
Modulus of subgrade reaction (k) =	102 MPa/m
Equivalent 762 mm plate reaction =	45 MPa/m
Equivalent CBR =	7.0 %

REMARKS

SIGNED

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

DATE 07-Apr-21



TEST REPORT

Client ADM Regeneration Ltd

Address First Floor, Theatre Buildings
Carrington Business Park
Manchester Road
Carrington
Manchester
M31 4DN

Contract Corner of Oldham Road/Marshall Street,
Manchester City Centre M4 5FQ

Job Number MRN 4069/38
Date of Issue 19 April 2021
Page 1 of 4

Approved Signatories

S J Hutchings, O P Davies

Notes

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- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
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Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
Email: enquiries@murrayrix.com Website: www.murrayrix.com

Also at: London: 020 8523 1999

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MURRAY RIX

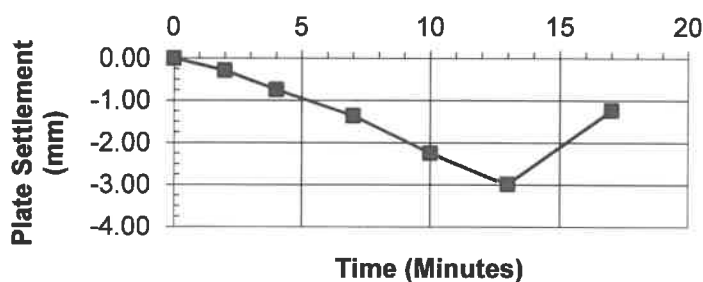
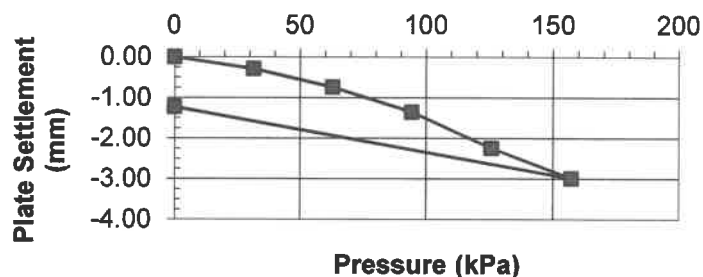
ANDREW HOUSE, HADFIELD STREET
 DUKINFIELD, CHESHIRE SK16 4QX
 TEL 0161 475 0870

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

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/38		
TEST LOCATION	1 - Building A	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	16-Apr-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Formation	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Clay	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)
4866	4863	4871	4867	0.00	0.00	0.0
4838	4831	4845	4838	-0.29	5.00	31.4
4789	4787	4802	4793	-0.74	10.00	62.9
4726	4725	4741	4731	-1.36	15.00	94.3
4642	4635	4649	4642	-2.25	20.00	125.8
4561	4569	4574	4568	-2.99	25.00	157.2
4752	4744	4734	4743	-1.23	0.00	0.0



Pressure at 1.25 mm deflexion =	89 kPa
Modulus of subgrade reaction (k) =	71 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 19-Apr-21

MURRAY RIX

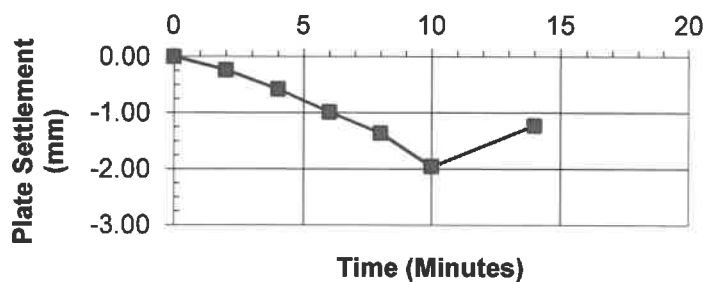
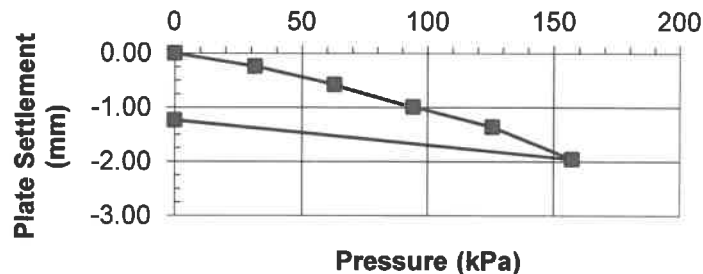
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

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

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/38		
TEST LOCATION	2 - Building A	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	16-Apr-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Formation	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Clay	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)
4733	4664	4741	4713	0.00	0.00	0.0
4712	4637	4718	4689	-0.24	5.00	31.4
4672	4608	4685	4655	-0.58	10.00	62.9
4629	4569	4644	4614	-0.99	15.00	94.3
4593	4530	4607	4577	-1.36	20.00	125.8
4549	4462	4540	4517	-1.96	25.00	157.2
4605	4539	4624	4589	-1.23	0.00	0.0



Pressure at 1.25 mm deflexion =	116 kPa
Modulus of subgrade reaction (k) =	93 MPa/m
Equivalent 762 mm plate reaction =	58 MPa/m
Equivalent CBR =	11.0 %

REMARKS

SIGNED

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

DATE 19-Apr-21

MURRAY RIX

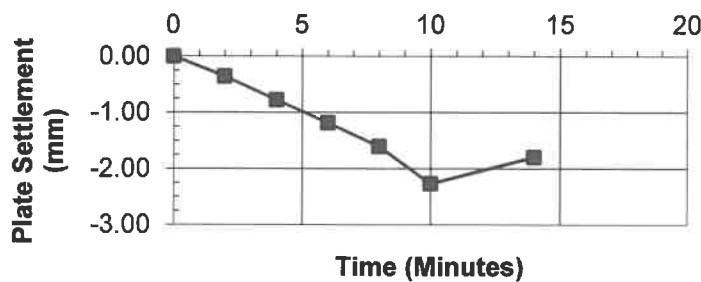
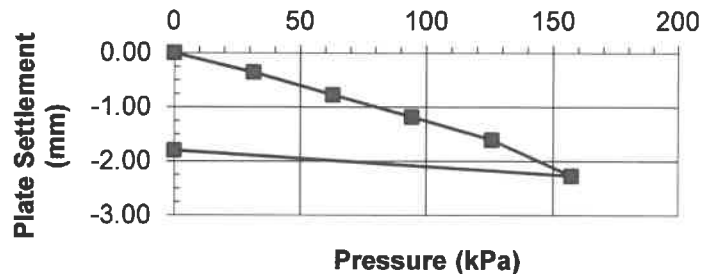
ANDREW HOUSE, HADFIELD STREET
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TEL 0161 475 0870

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

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/38		
TEST LOCATION	3 - Building A	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	16-Apr-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Formation	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Clay	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	4674	4771	4745	0.00	0.00	0.0
4759	4637	4731	4709	-0.36	5.00	31.4
4720	4593	4689	4667	-0.78	10.00	62.9
4662	4560	4658	4627	-1.18	15.00	94.3
4621	4516	4616	4584	-1.61	20.00	125.8
4549	4456	4549	4518	-2.27	25.00	157.2
4540	4524	4631	4565	-1.80	0.00	0.0



Pressure at 1.25 mm deflexion =	99 kPa
Modulus of subgrade reaction (k) =	80 MPa/m
Equivalent 762 mm plate reaction =	50 MPa/m
Equivalent CBR =	8.4 %

REMARKS

SIGNED

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

DATE 19-Apr-21



TEST REPORT

Client ADM Regeneration Ltd

Address First Floor, Theatre Buildings
Carrington Business Park
Manchester Road
Carrington
Manchester
M31 4DN

Contract Corner of Oldham Road/Marshall Street,
Manchester City Centre M4 5FQ

Job Number MRN 4069/44
Date of Issue 21 April 2021
Page 1 of 3

Approved Signatories

S J Hutchings, O P Davies

Notes

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MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



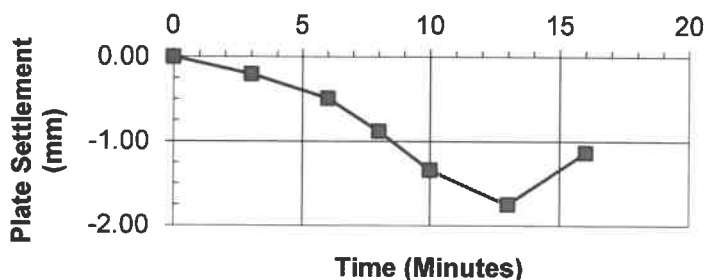
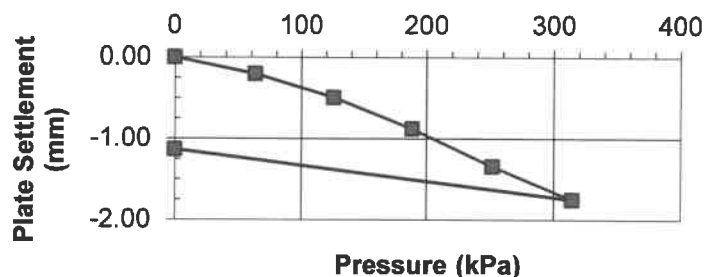
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/44		
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	20-Apr-21	PLATE SIZE (mm)	450 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)
3503	2203	4532	3413	0.00	0.00	0.0
3481	2191	4505	3392	-0.20	10.00	62.9
3451	2158	4481	3363	-0.49	20.00	125.8
3418	2128	4428	3325	-0.88	30.00	188.6
3361	2093	4381	3278	-1.34	40.00	251.5
3310	2058	4345	3238	-1.75	50.00	314.4
3368	2115	4415	3299	-1.13	0.00	0.0



Pressure at 1.25 mm deflexion =	239 kPa
Modulus of subgrade reaction (k) =	191 MPa/m
Equivalent 762 mm plate reaction =	119 MPa/m
Equivalent CBR =	38.3 %

REMARKS

SIGNED

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

DATE 21-Apr-21

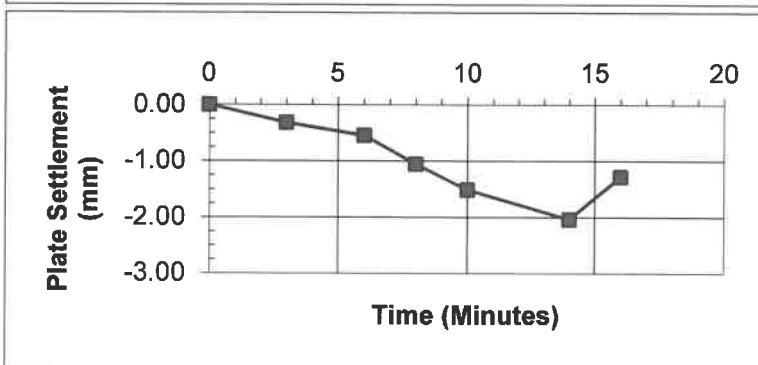
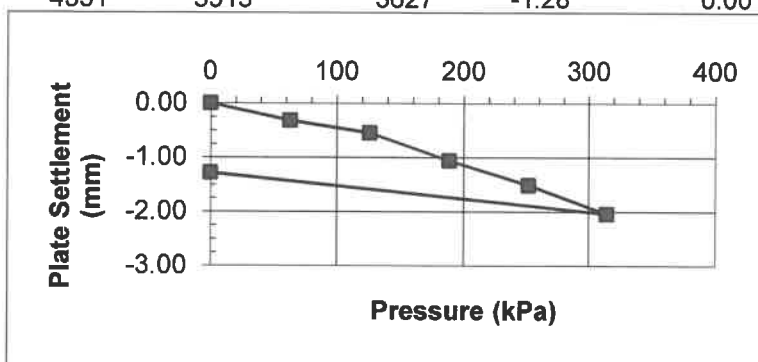
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd					
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ					
JOB NUMBER	MRN 4069/44					
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack			
TEST DATE	20-Apr-21	PLATE SIZE (mm)	450 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)
3161	4473	3632	3755	0.00	0.00	0.0
3118	4448	3605	3724	-0.32	10.00	62.9
3093	4418	3592	3701	-0.54	20.00	125.8
3038	4371	3540	3650	-1.06	30.00	188.6
3010	4310	3492	3604	-1.51	40.00	251.5
2938	4271	3445	3551	-2.04	50.00	314.4
3015	4351	3515	3627	-1.28	0.00	0.0



Pressure at 1.25 mm deflexion =	215 kPa
Modulus of subgrade reaction (k) =	172 MPa/m
Equivalent 762 mm plate reaction =	107 MPa/m
Equivalent CBR =	31.8 %

REMARKS

SIGNED



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

DATE 21-Apr-21



TEST REPORT

Client ADM Regeneration Ltd

Address First Floor, Theatre Buildings
Carrington Business Park
Manchester Road
Carrington
Manchester
M31 4DN

Contract Corner of Oldham Road/Marshall Street,
Manchester City Centre M4 5FQ

Job Number MRN 4069/49
Date of Issue 28 April 2021
Page 1 of 3

Approved Signatories

S J Hutchings, O P Davies

Notes

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MURRAY RIX

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



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

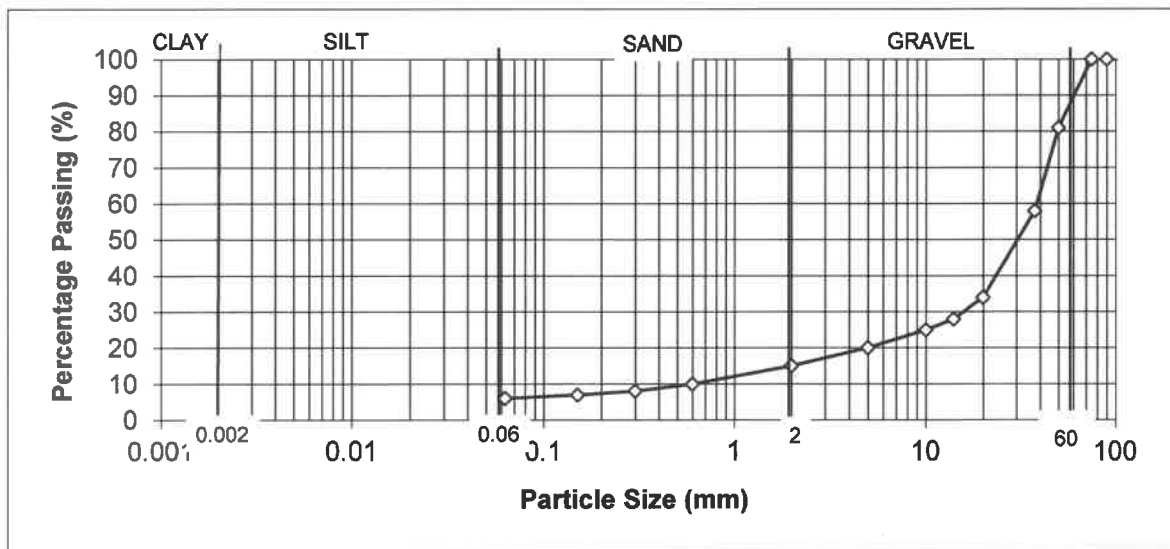
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	ADM Regeneration Ltd
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ
JOB NUMBER	MRN 4069/49

SAMPLE LABEL	CR01	DATE SAMPLED	12-Apr-21
LAB SAMPLE No	97778	DATE RECEIVED	12-Apr-21
DATE TESTED	15-Apr-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	25	15-60
90	100	80-100	5	20	10-45
75	100	65-100	2	15	
50	81		0.6	10	0-25
37.5	58	45-100	0.3	8	
20	34		0.15	7	
14	28		0.063	6	0-12



REMARKS

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

As received moisture content = 8.8%

SIGNED

NAME

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

DATE

28-Apr-21

MURRAY RIX

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



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

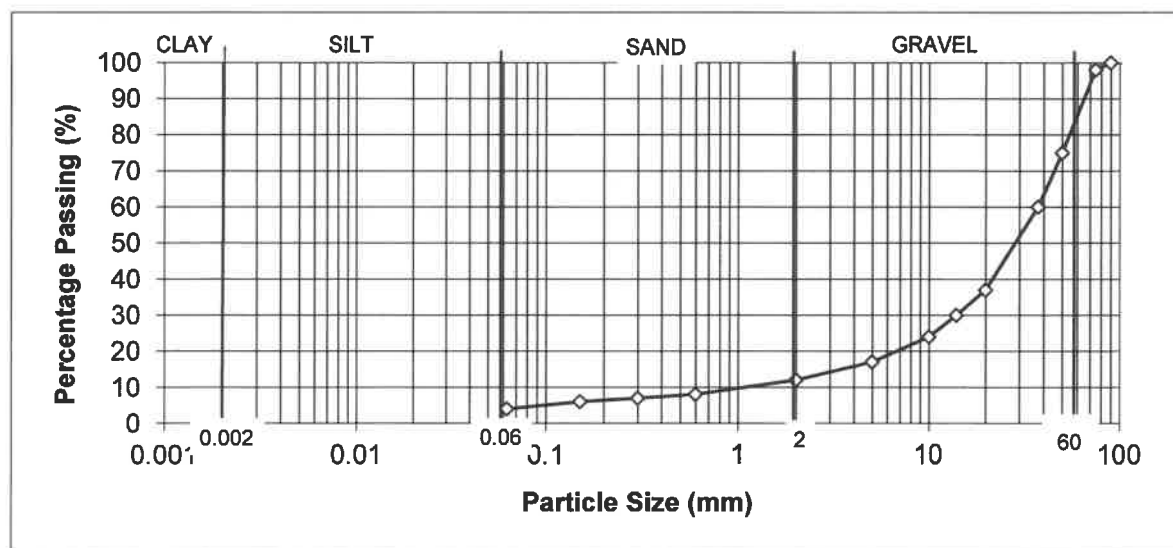
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	ADM Regeneration Ltd
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ
JOB NUMBER	MRN 4069/49

SAMPLE LABEL	CR02	DATE SAMPLED	12-Apr-21
LAB SAMPLE No	97779	DATE RECEIVED	12-Apr-21
DATE TESTED	15-Apr-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	24	15-60
90	100	80-100	5	17	10-45
75	98	65-100	2	12	
50	75		0.6	8	0-25
37.5	60	45-100	0.3	7	
20	37		0.15	6	
14	30		0.063	4	0-12



REMARKS

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

As received moisture content = 8.0%

SIGNED

NAME

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

DATE

28-Apr-21



TEST REPORT

Client ADM Regeneration Ltd

Address First Floor, Theatre Buildings
Carrington Business Park
Manchester Road
Carrington
Manchester
M31 4DN

Contract Corner of Oldham Road/Marshall Street,
Manchester City Centre M4 5FQ

Job Number MRN 4069/60
Date of Issue 13 May 2021
Page 1 of 6

Approved Signatories

S J Hutchings, O P Davies

Notes

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MURRAY RIX

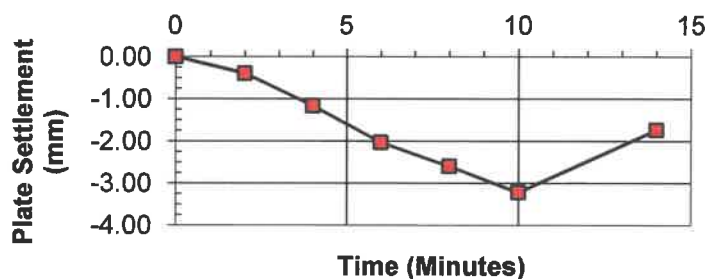
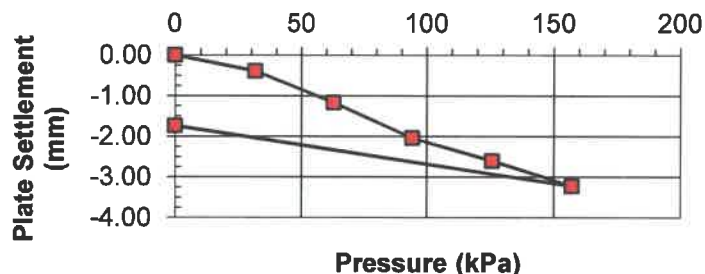
ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

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

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/60		
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	11-May-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Granular 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)
4909	4920	4915	4915	0.00	0.00	0.0
4873	4865	4888	4875	-0.39	5.00	31.4
4728	4806	4860	4798	-1.17	10.00	62.9
4635	4700	4798	4711	-2.04	15.00	94.3
4569	4612	4782	4654	-2.60	20.00	125.8
4503	4518	4756	4592	-3.22	25.00	157.2
4614	4710	4898	4741	-1.74	0.00	0.0



Pressure at 1.25 mm deflexion =	66 kPa
Modulus of subgrade reaction (k) =	53 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 13-May-21

MURRAY RIX

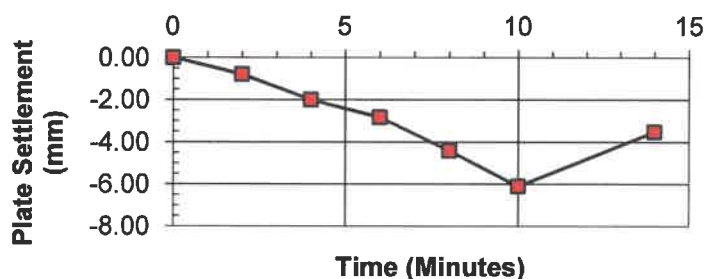
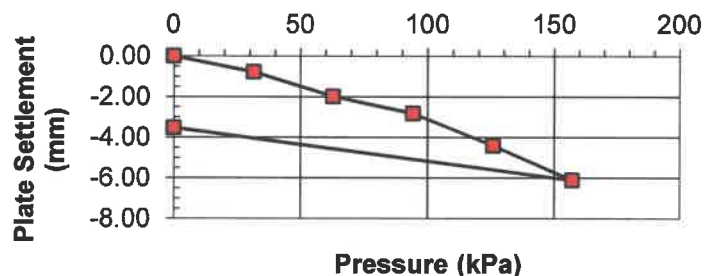
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 DUKINFIELD, CHESHIRE SK16 4QX
 TEL 0161 475 0870

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

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/60		
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	11-May-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Granular 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)
4788	4952	4898	4879	0.00	0.00	0.0
4711	4866	4825	4801	-0.79	5.00	31.4
4584	4727	4728	4680	-2.00	10.00	62.9
4440	4571	4780	4597	-2.82	15.00	94.3
4304	4430	4580	4438	-4.41	20.00	125.8
4177	4305	4322	4268	-6.11	25.00	157.2
4446	4593	4541	4527	-3.53	0.00	0.0



Pressure at 1.25 mm deflexion =	43 kPa
Modulus of subgrade reaction (k) =	35 MPa/m
Equivalent 762 mm plate reaction =	22 MPa/m
Equivalent CBR =	2.0 %

REMARKS

SIGNED

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

DATE 13-May-21

MURRAY RIX

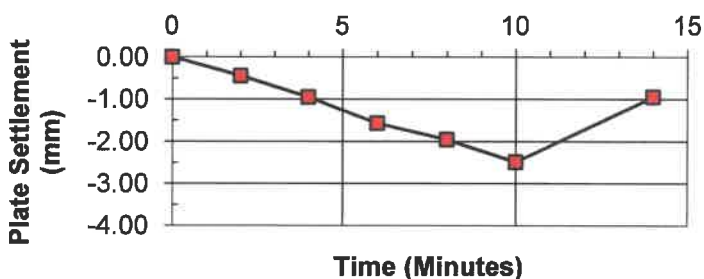
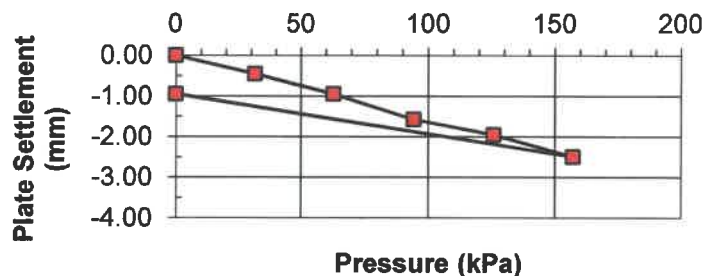
ANDREW HOUSE, HADFIELD STREET
 DUKINFIELD, CHESHIRE SK16 4QX
 TEL 0161 475 0870

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

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/60		
TEST LOCATION	3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	11-May-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Granular 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	4795	4749	4779	0.00	0.00	0.0
4750	4753	4700	4734	-0.45	5.00	31.4
4696	4705	4652	4684	-0.95	10.00	62.9
4641	4632	4593	4622	-1.57	15.00	94.3
4596	4611	4544	4584	-1.96	20.00	125.8
4543	4560	4487	4530	-2.49	25.00	157.2
4695	4710	4649	4685	-0.95	0.00	0.0



Pressure at 1.25 mm deflexion =	64 kPa
Modulus of subgrade reaction (k) =	51 MPa/m
Equivalent 762 mm plate reaction =	32 MPa/m
Equivalent CBR =	3.9 %

REMARKS

SIGNED

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

DATE 13-May-21

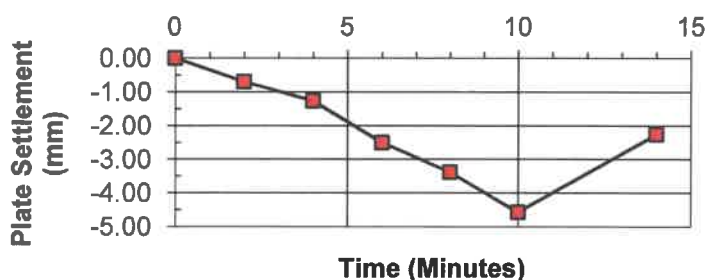
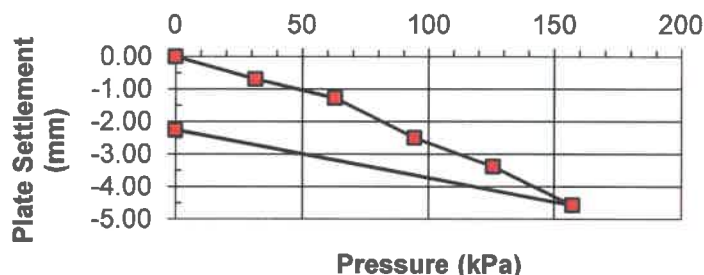
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/60		
TEST LOCATION	4	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	11-May-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Granular 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)
4716	4752	4915	4794	0.00	0.00	0.0
4641	4690	4843	4725	-0.70	5.00	31.4
4584	4633	4785	4667	-1.27	10.00	62.9
4462	4505	4666	4544	-2.50	15.00	94.3
4372	4416	4580	4456	-3.38	20.00	125.8
4253	4293	4464	4337	-4.58	25.00	157.2
4492	4506	4708	4569	-2.26	0.00	0.0



Pressure at 1.25 mm deflexion =	61 kPa
Modulus of subgrade reaction (k) =	49 MPa/m
Equivalent 762 mm plate reaction =	31 MPa/m
Equivalent CBR =	3.6 %

REMARKS

SIGNED



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

DATE 13-May-21

MURRAY RIX

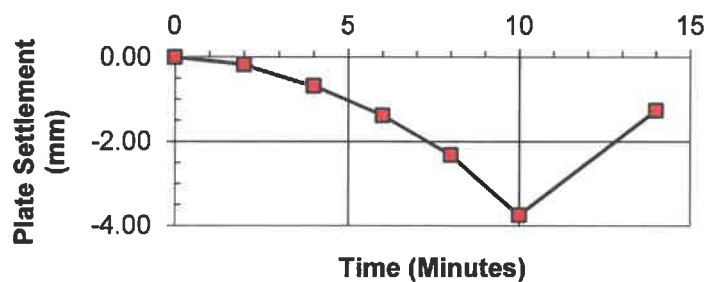
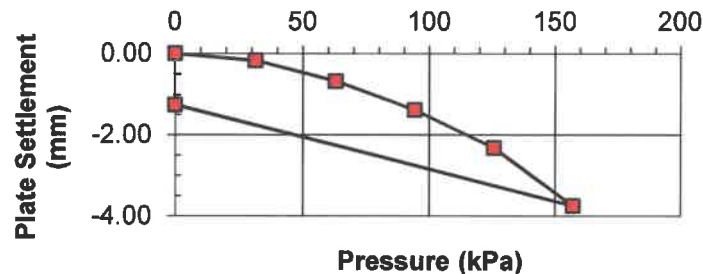
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 TEL 0161 475 0870

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

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/60		
TEST LOCATION	5	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	11-May-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Granular 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)
4871	4626	4841	4779	0.00	0.00	0.0
4857	4605	4824	4762	-0.17	5.00	31.4
4800	4556	4778	4711	-0.68	10.00	62.9
4736	4470	4716	4641	-1.39	15.00	94.3
4642	4389	4611	4547	-2.32	20.00	125.8
4503	4249	4461	4404	-3.75	25.00	157.2
4743	4482	4734	4653	-1.26	0.00	0.0



Pressure at 1.25 mm deflexion =	88 kPa
Modulus of subgrade reaction (k) =	70 MPa/m
Equivalent 762 mm plate reaction =	44 MPa/m
Equivalent CBR =	6.8 %

REMARKS

SIGNED

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

DATE 13-May-21



TEST REPORT

Client ADM Regeneration Ltd

Address First Floor, Theatre Buildings
Carrington Business Park
Manchester Road
Carrington
Manchester
M31 4DN

Contract Corner of Oldham Road/Marshall Street,
Manchester City Centre M4 5FQ

Job Number MRN 4069/61
Date of Issue 13 May 2021
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.



Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
Email: enquiries@murrayrix.com Website: www.murrayrix.com

Also at: London: 020 8523 1999

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



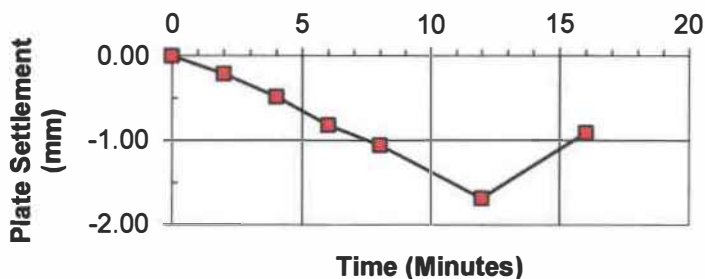
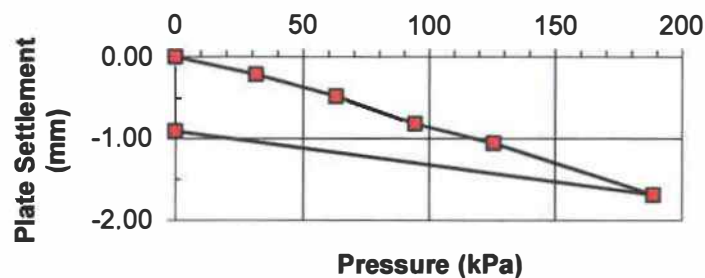
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/61		
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	12-May-21	PLATE SIZE (mm)	450 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)
4720	4988	4847	4852	0.00	0.00	0.0
4698	4964	4829	4830	-0.21	5.00	31.4
4671	4930	4809	4803	-0.48	10.00	62.9
4645	4886	4778	4770	-0.82	15.00	94.3
4624	4856	4758	4746	-1.06	20.00	125.8
4563	4780	4706	4683	-1.69	30.00	188.6
4633	4880	4769	4761	-0.91	0.00	0.0



Pressure at 1.25 mm deflexion =	145 kPa
Modulus of subgrade reaction (k) =	116 MPa/m
Equivalent 762 mm plate reaction =	72 MPa/m
Equivalent CBR =	16.0 %

REMARKS

SIGNED

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

DATE 13-May-21

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ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
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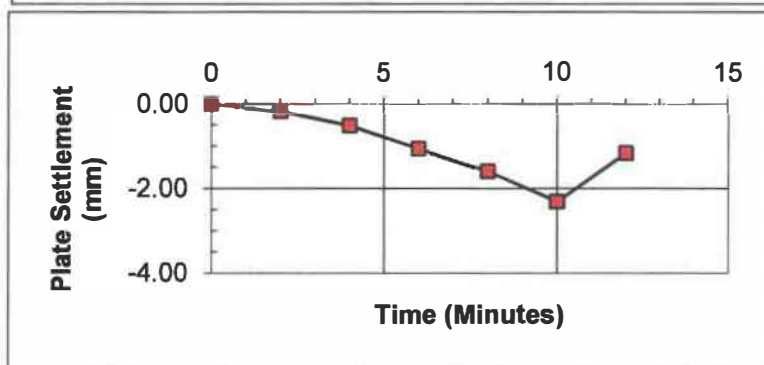
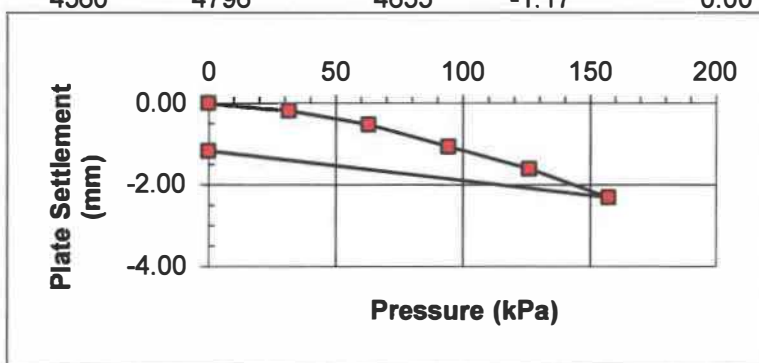
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PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/61		
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	12-May-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Granular 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	4661	4876	4772	0.00	0.00	0.0
4756	4642	4864	4754	-0.18	5.00	31.4
4719	4600	4842	4720	-0.52	10.00	62.9
4664	4551	4783	4666	-1.06	15.00	94.3
4601	4490	4744	4612	-1.61	20.00	125.8
4514	4418	4692	4541	-2.31	25.00	157.2
4610	4560	4796	4655	-1.17	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 =	52 MPa/m
Equivalent CBR =	9.2 %

REMARKS

SIGNED

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

DATE 13-May-21

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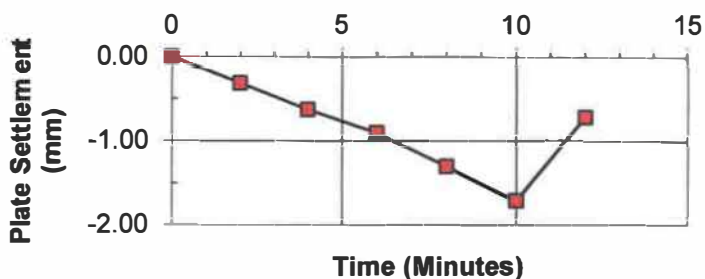
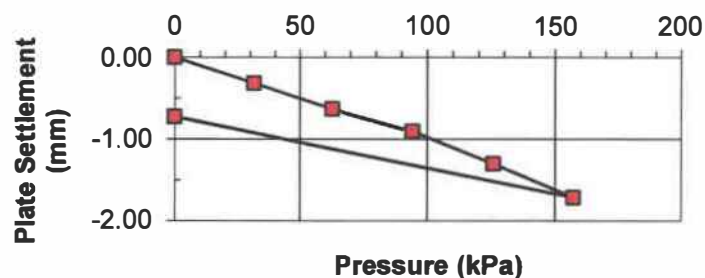
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/61		
TEST LOCATION	3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	12-May-21	PLATE SIZE (mm)	450 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Granular 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)
4851	4895	4766	4837	0.00	0.00	0.0
4815	4863	4739	4806	-0.32	5.00	31.4
4782	4832	4709	4774	-0.63	10.00	62.9
4755	4801	4684	4747	-0.91	15.00	94.3
4716	4762	4643	4707	-1.30	20.00	125.8
4674	4720	4604	4666	-1.71	25.00	157.2
4787	4812	4695	4765	-0.73	0.00	0.0



Pressure at 1.25 mm deflexion =	122 kPa
Modulus of subgrade reaction (k) =	97 MPa/m
Equivalent 762 mm plate reaction =	61 MPa/m
Equivalent CBR =	11.9 %

REMARKS

SIGNED

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

DATE 13-May-21



TEST REPORT

Client ADM Regeneration Ltd

Address First Floor, Theatre Buildings
Carrington Business Park
Manchester Road
Carrington
Manchester
M31 4DN

Contract Corner of Oldham Road/Marshall Street,
Manchester City Centre M4 5FQ

Job Number MRN 4069/62
Date of Issue 17 May 2021
Page 1 of 4

Approved Signatories

S J Hutchings, O P Davies

Notes

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- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
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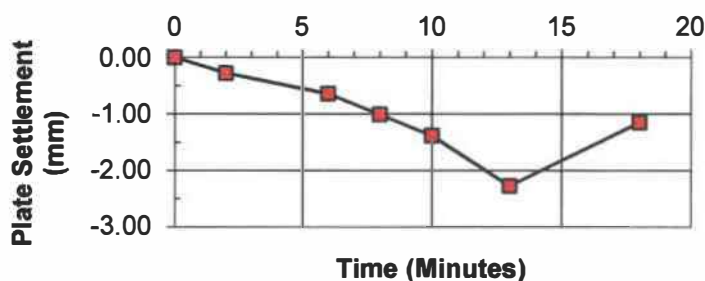
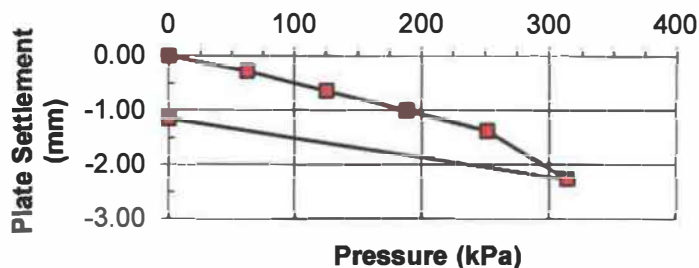
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/62		
TEST LOCATION	1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	14-May-21	PLATE SIZE (mm)	450 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)
3132	3532	4473	3712	0.00	0.00	0.0
3103	3503	4447	3684	-0.28	10.00	62.9
3071	3457	4417	3648	-0.64	20.00	125.8
3045	3417	4373	3612	-1.01	30.00	188.6
3002	3373	4347	3574	-1.38	40.00	251.5
2843	3331	4281	3485	-2.27	50.00	314.4
3017	3417	4357	3597	-1.15	0.00	0.0



Pressure at 1.25 mm deflexion =	229 kPa
Modulus of subgrade reaction (k) =	184 MPa/m
Equivalent 762 mm plate reaction =	114 MPa/m
Equivalent CBR =	35.6 %

REMARKS

SIGNED

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

DATE 17-May-21

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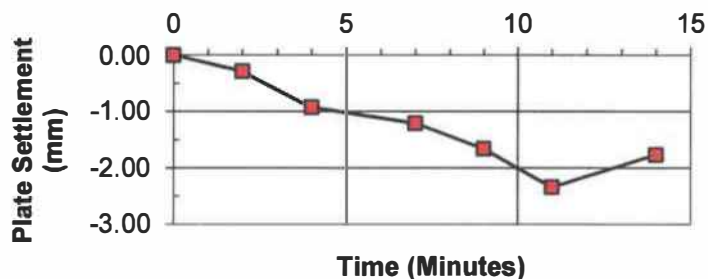
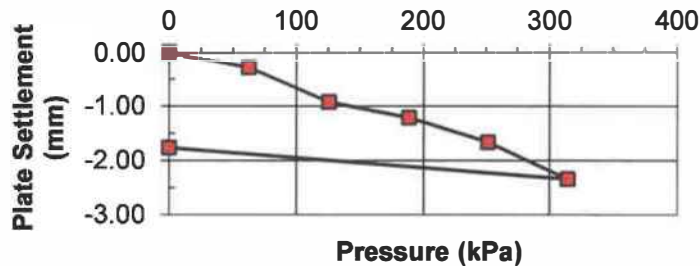
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/62		
TEST LOCATION	2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	14-May-21	PLATE SIZE (mm)	450 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)
2273	2523	3343	2713	0.00	0.00	0.0
2262	2481	3310	2684	-0.29	10.00	62.9
2200	2450	3212	2621	-0.92	20.00	125.8
2165	2410	3201	2592	-1.21	30.00	188.6
2112	2371	3157	2547	-1.66	40.00	251.5
2045	2310	3081	2479	-2.34	50.00	314.4
2137	2301	3171	2536	-1.77	0.00	0.0



Pressure at 1.25 mm deflexion =	197 kPa
Modulus of subgrade reaction (k) =	158 MPa/m
Equivalent 762 mm plate reaction =	98 MPa/m
Equivalent CBR =	27.4 %

REMARKS

SIGNED

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

DATE 17-May-21

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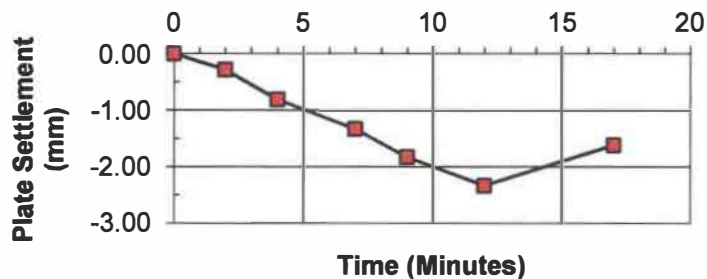
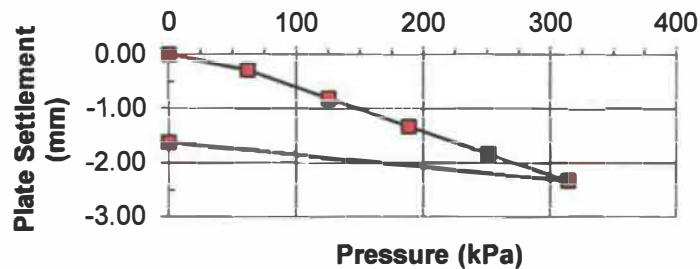
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

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

CLIENT	ADM Regeneration Ltd		
SITE	Corner of Oldham Road/Marshall Street, Manchester City Centre M4 5FQ		
JOB NUMBER	MRN 4069/62		
TEST LOCATION	3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	14-May-21	PLATE SIZE (mm)	450 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)
3603	2653	3243	3166	0.00	0.00	0.0
3571	2631	3211	3138	-0.29	10.00	62.9
3521	2571	3163	3085	-0.81	20.00	125.8
3461	2527	3112	3033	-1.33	30.00	188.6
3417	2471	3061	2983	-1.83	40.00	251.5
3357	2421	3021	2933	-2.33	50.00	314.4
3425	2482	3105	3004	-1.62	0.00	0.0



Pressure at 1.25 mm deflexion =	179 kPa
Modulus of subgrade reaction (k) =	143 MPa/m
Equivalent 762 mm plate reaction =	89 MPa/m
Equivalent CBR =	23.1 %

REMARKS

SIGNED

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

DATE 17-May-21

APPENDIX VII CONTRACTOR COMPLETION CHECK SHEET

GEOTECHNICAL ENABLING WORKS COMPLETION FORM

Upon completion of all site remediation and enabling works, this form will be completed by E3P, in the presence of the appointed contractor, to ensure that all pertinent geotechnical enabling works activities are complete or, where a deviation from the specification has occurred, all future limitations and issues are documented for the client's records.

Activity	Complete			Signature
	Yes	No	N/A	(initial)
Eradication of all invasive plant species			Y	AS
Removal of all vegetation			Y	AS
Removal of all root bulbs and root networks			Y	AS
Stockpiling of topsoil and certification of suitability for reuse			Y	AS
Stockpiling of subsoil and certification of suitability for reuse	Y			AS
Stockpile all recycled aggregate with geotechnical and chemical validation testing	Y			AS
Removal of all relict foundations and infrastructure in their entirety	Y			AS
Decommission of all redundant drainage infrastructure	Y			AS
Decommission of all former interceptors			Y	AS
Decommission of all former above- and below-ground tanks			Y	AS
Removal of all waste materials to a licensed facility	Y			AS
Removal of all asbestos to a licensed facility			Y	AS
Engineering of all plots for shallow spread foundation in accordance with E3P Geotechnical Specification			Y	AS
Engineering of all plots for VSC in accordance with E3P Geotechnical Specification			Y	AS
Engineering of all plots for pile foundation in accordance with E3P Geotechnical Specification	Y			AS
Engineering of all plots for raft foundation in accordance with E3P Geotechnical Specification			Y	AS
Engineering of highways bulk upfill in accordance with E3P Specification with compliant validation testing			Y	AS
Engineering of highways subgrade in accordance with E3P Specification with compliant validation testing			Y	AS
Engineering of highways capping in accordance with E3P Specification with compliant validation testing			Y	AS
Cut-and-fill the development site to client's required elevation with as-built survey	Y			AS



