



FACTUAL REPORT ON SITE INVESTIGATION

AT

ASHLEY ROAD DEPOT, ASHLEY ROAD, TOTTENHAM N17 9AZ

IAN BAILEY

KALEX LIMITED

Bridge House

The Ash, Little Hadham

WARE SG11 2DG



Report Title:	Factual Report on Site Investigation- Ashley Road Depot, Ashley Road, Tottenham N17 9AZ
Report Reference No.:	LQ1139-R1

Prepared For:	Konform Ltd, Craycombe, Parsonage Lane, Sawbridgeworth, CM21 0ND
Project Reference No:	LQ1139

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Remarks	1 st Issue	2 nd Issue	3 rd Issue
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Document Control

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All	Version 1	1.0	19/05/2023
2.1.3	Updated laboratory testing	2.0	12/06/2023
2.2	Included Ground Gas results	3.0	14/06/2023



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1. INTRODUCTION

Kalex Limited was commissioned by Konform Ltd to undertake additional ground investigation in support of the redevelopment of the former Ashley Road Depot site, Ashley Road, Tottenham, London, N17 9AZ.

The ground investigation comprised the logging and sampling of twelve (12) trial pits, excavated using mechanical 360 excavator provided by the client's groundworks contractor.

This report presents the factual findings of ground investigation. Where applicable, the investigation was undertaken in accordance with the industry guidance documents: BS:5930:2020 Code of Practice for Site Investigations and BS:10175:2017 Investigation of Potentially Contaminated Sites: Code of Practice.

Our study limitations are presented in **Appendix 01**.

1.1 SITE DETAILS

Table 1-1
Site Details

Site Address:	Ashley Road Depot site, Ashley Road, Tottenham, London, N17 9AZ
National Grid:	534471,190138
Site Area: Elevation:	• 1.62 hectares. • Approximately 8m to 9m AOD.
Geology:	• Superficial Deposits: Enfield Silt Member overlying Kempton Park Gravel Formation. • Bedrock: London Clay Formation.



2. GROUND INVESTIGATION FIELDWORK & LABORATORY TESTING

2.1 TRIAL PITS & SOIL SAMPLING

The trial pit investigation works were undertaken on 4th and 5th May 2023 using plant supplied by the client's groundworks contractor. The site recently underwent demolition and the twelve (12 no.) trial pits were excavated beneath the demolished building bases. The twelve trial pits extended to depths of between 1.1m and 2.2m depth below the existing ground level, extending through made ground and into underlying natural soils. Trial pit logs are presented in **Appendix 02** and photographs are in **Appendix 03**.

A schedule of trial pits is in **Table 2-1** below. Pits STP8, STP10 and STP12 were cancelled due to thick concrete reinforcing in that area.

In addition to the trial pits, two stockpiles of crushed construction and demolition materials were sampled for the presence or absence of asbestos and details of those samples are in **Table 2-2**.

The approximate locations of the trial pits and stockpiles are shown on the appended **Site Plan**.

Table 2-1
Trial Pit Details

Trial Pit Number	Trial Pit Details: Depth in metres (below existing ground level)
STP1	1.7
STP2	1.55
STP3	1.55
STP4	1.5
STP5	1.4
STP6	1.2
STP7	1.4
STP8	Not excavated
STP9	1.7
STP10	Not excavated
STP11	1.1
STP12	Not excavated
STP13	2.2
STP14	2.0
STP15	1.5

Table 2-2
Stockpile Sample Details

Sample Reference	Details
SP/0405/01 SP/0405/02 SP/0405/03 SP/0405/04 SP/0405/05 SP/0405/06	Stockpiled crushed concrete and brick from demolition, in west of site.
SP/0505/01 SP/0505/02	Stockpile containing visible tile fragments in east of site.



Soil samples from trial pits were described by geo-environmental engineers from Kalex in general accordance with BS 5930:2015 +A1 2020) to provide information on the surface ground conditions at the site. Attention was paid to identifying man-made deposits by observing soil structure and by logging the occurrence of inclusions such as brick, concrete, or suspected asbestos containing materials (ACMs).

Samples were placed directly into laboratory supplied containers specific to the suite of contaminants being tested for. Glass jars were used to retain samples for organic analysis, and plastic tubs were used to store soil samples for inorganic analysis including metals and asbestos.

Sample containers for volatile contaminants were entirely filled to minimise headspace. Samples were kept cool before dispatching to the chosen analytical laboratory.

2.1.1 VISUAL AND OLFACTORY EVIDENCE OF CONTAMINATION

Visual observations of contamination were noted in the form of ash in the made ground in trial pits STP7, 9, 11, 13 and 14. Materials suspected to be asbestos were in one stockpile. There were no other observations of contamination.

2.1.2 GROUNDWATER

Groundwater was not encountered in any of the trial pits.

2.1.3 LABORATORY TESTING

The soil samples were submitted to i2, a UKAS and MCERTS accredited laboratory. Details of the testing are in Table 2-3 and summarised below:

- A total of 24 soil samples were taken from the trial pits and tested for a comprehensive testing suite including asbestos, metals, PAHs and TPH CWG.
- 6 of the above samples were also tested for leachable metals.
- A further 8 soil samples were taken from the two stockpiles on site and tested for a soil asbestos screen only. One of the samples contained a visible fragment of suspect asbestos which was tested separately for identification.

Full details are on the laboratory certificates in **Appendix 04**.



Table 2-3
Contamination Testing – Soil

Laboratory Test	Total No. Samples	Sample Reference	Sample Depth
Asbestos presence/absence pH, sulphate, sulphide, cyanide Total Organic Carbon Phenol PAHs speciated USEPA 16 Metals Total Petroleum Hydrocarbons – TPH CWG with BTEX and MTBE.	24	STP1	0.20-0.50
		STP1	1.20-1.50
		STP2	0.20-0.50
		STP2	1.30-1.50
		STP3	0.20-0.40
		STP3	1.00-1.40
		STP4	0.20-0.30
		STP4	1.00-1.20
		STP5	0.25-0.50
		STP5	1.00-1.40
		STP6	0.50-0.90
		STP6	1.00-1.20
		STP7	0.20-0.60
		STP7	1.20-1.40
		STP9	0.50-1.00
		STP9	1.50-1.70
		STP11	0.20-0.50
		STP11	0.80-1.10
		STP13	0.30-0.80
		STP13	1.50-1.90
		STP14	0.50-1.00
		STP14	1.70-2.00
		STP15	0.40-0.60
		STP15	1.20-1.50
Stockpile samples: Asbestos presence/absence	8	SP/0405/1 SP/0405/2 SP/0405/3 SP/0405/4 SP/0405/5 SP/0405/6 SP/0505/01 SP/0505/02	N/A
Asbestos bulk identification	1	SP/0505/02	N/A
Soil Leachate Preparation 1:10 Leachate testing for dissolved arsenic, beryllium, copper, lead, zinc.	6	STP9 STP14 SPT13 STP13 STP11 STP7	0.5-1.0 0.5-1.0 0.3-0.8 1.5-1.9 0.2-0.5 0.2-0.6

2.2 GROUND GAS MONITORING

Monitoring for Ground Gas was undertaken on three occasions on 9th June, 13th June and 14th June 2023. Monitoring was carried out on the three remaining wells BH2, BH5 and BH12 for methane, carbon dioxide, oxygen, carbon monoxide, hydrogen sulphide and volatile organic compounds.

Ground gas data is in **Appendix 05**.



SITE PLAN



Supplementary Trial Pit Location

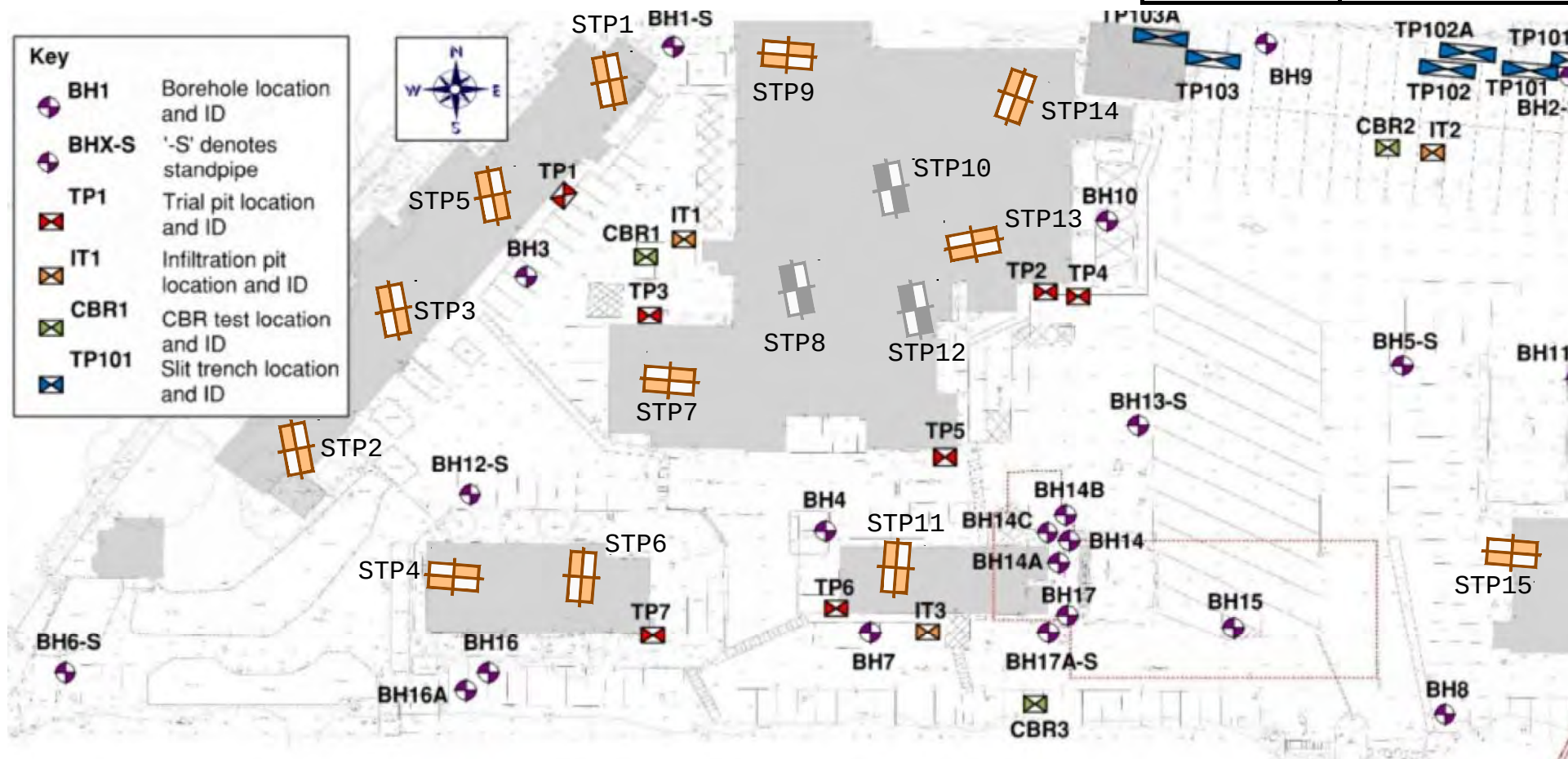


Trial Pit Not Excavated



Ashley Road Depot, Ashley Road,
Tottenham N17 9AZ

Client	Konform Ltd
Plan Reference	LQ1139
Plan Title	Trial Pit Location Plan
Date	19/05/2023
Notes	Not to scale, locations are approximate.





APPENDIX 01

Limitations and Use of this Report

This report has been prepared for the purpose of providing advice to the client pursuant to its appointment of Kalex Limited (Kalex) to act as a consultant.

Save for the client no duty is undertaken or warranty or representation made to any party in respect of the opinions, advice, recommendations or conclusions herein set out.

All work carried out in preparing this report has used, and is based upon, our professional knowledge and understanding of the current relevant English and European Community standards, approved codes of practice, technology and legislation.

Changes in the above may cause the opinion, advice, recommendations or conclusions set out in this report to become inappropriate or incorrect. Following delivery of this report, we will have no obligation to advise the client of any such changes, or of their repercussions.

Kalex acknowledges that it is being retained, in part, because of its knowledge and experience with respect to environmental matters. Kalex will consider and analyse all information provided to it in the context of our knowledge and experience and all other relevant information known to us. To the extent that the information provided to us is not inconsistent or incompatible therewith, Kalex shall be entitled to rely upon and assume, without independent verification, the accuracy and completeness of such information.

The assessments made in this report are based on the ground conditions as revealed by walkover survey and/or intrusive investigations, together with the results of any field or laboratory testing or chemical analysis undertaken and other relevant data which may have been obtained including previous site investigations. In any event, ground contamination often exists as small discrete areas of contamination (hot spots) and there can be no certainty that any or all such areas have been located and/or sampled.

There may be special conditions appertaining to the site which have not been taken into account in the report. The assessment may be subject to amendment in light of additional information becoming available.

Where any data supplied by the client or from other sources, including that from previous site investigations, have been used it has been assumed that the information is correct. No responsibility can be accepted by Kalex for inaccuracies within the data supplied by other parties.

Comments on groundwater conditions are based on observations made at the time of the investigation unless otherwise stated. Groundwater conditions may vary due to seasonal or other effects.

These terms apply in addition to the Kalex standard terms of engagement (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing (In the event of a conflict between these terms and the said standard terms of engagement the said standard terms of engagement shall prevail). In the absence of such a written contract the standard terms of engagement will apply.

Kalex maintains adequate insurance cover for public liability and professional indemnity. However, we are unable to accept liability for asbestos related matters. Our work must not be taken as sufficient to identify the presence or absence of asbestos in or on the ground. In placing a contract with us the client accepts the restriction on asbestos. If we find or strongly suspect asbestos is or may be present in or on the ground we will inform the client and advise specialist investigation. The client agrees that they shall not bring any claim personally against any director / employee or consultant to us in respect of loss or damage suffered by the client arising out of this contract.



APPENDIX 02

Trial Pit Logs

ENVIRONMENTAL TESTPIT STP1

PROJECT NUMBER LQ1139	DATE 04/05/2023	COORDINATES 534425,190168
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5			JT				MADE GROUND: Concrete hardstanding	
							MADE GROUND: Dark brown gravelly CLAY, gravel is brick, flint, clinker, metal, glass.	
1							Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
1.5			JT					
								No groundwater encountered
2							End of Pit	
2.5								

ENVIRONMENTAL TESTPIT STP2

PROJECT NUMBER LQ1139	DATE 04/05/2023	COORDINATES 534385,190122
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS								
Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5							MADE GROUND: Concrete hardstanding	
			JT				MADE GROUND: COBBLES & BOULDERS of brick with much finer material. Fines are dark brown gravelly CLAY, gravel is brick, flint, clinker, metal, glass.	
							Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
			JT					
1.5								No groundwater encountered
2							End of Pit	
2.5								

ENVIRONMENTAL TESTPIT STP3

PROJECT NUMBER LQ1139	DATE 04/05/2023	COORDINATES 534395,190140
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5							MADE GROUND: Concrete hardstanding	
			JT				MADE GROUND: Dark brown gravelly CLAY, gravel is brick, flint, clinker, metal, glass.	
							Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
1			JT					
1.5								No groundwater encountered
2							End of Pit	
2.5								

ENVIRONMENTAL TESTPIT STP4

PROJECT NUMBER LQ1139	DATE 05/05/2023	COORDINATES 534405,190100
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS								
Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5							MADE GROUND: Concrete hardstanding	
			JT				MADE GROUND: COBBLES & BOULDERS of brick, stone and concrete with a little finer material. Fines are brown clayey sandy gravel of concrete, flint, glass, rare metal.	
1			JT				Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
1.5								No groundwater encountered
2							End of Pit	
2.5								

ENVIRONMENTAL TESTPIT STP5

PROJECT NUMBER LQ1139	DATE 04/05/2023	COORDINATES 534415,190162
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5							MADE GROUND: Concrete hardstanding	
			JT				MADE GROUND: Dark brown gravelly CLAY, gravel is brick, flint, clinker, metal, glass.	
							Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
			JT					
1								No groundwater encountered
1.5							End of Pit	
2								
2.5								

ENVIRONMENTAL TESTPIT STP6

PROJECT NUMBER LQ1139	DATE 05/05/2023	COORDINATES 534420,190098
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5			JT				MADE GROUND: Concrete hardstanding	
							MADE GROUND: COBBLES & BOULDERS of brick, stone and concrete with a little finer material. Fines are brown clayey sandy gravel of concrete, flint, glass, rare metal.	
1			JT				Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
								No groundwater encountered
1.5							End of Pit	
2								
2.5								

ENVIRONMENTAL TESTPIT STP7

PROJECT NUMBER LQ1139
PROJECT NAME Ashley Road Depot
CLIENT Konform Ltd
ADDRESS Ashley Road, London N17 9AZ

DATE 05/05/2023
METHOD Mechanical Excavator
PLANT 12 TONNE TRACKED 360

COORDINATES 534436,190128
COORD SYS OS X,Y
SURFACE ELEVATION Not Measured
LOGGED BY JH
CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5							MADE GROUND: Concrete hardstanding	
			JT		MADE GROUND: Dark brown clayey sandy GRAVEL of ash, clinker, metal, brick, concrete, glass, porcelain.			
			JT		Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.			
1								No groundwater encountered
1.5							End of Pit	
2								
2.5								

ENVIRONMENTAL TESTPIT STP9

PROJECT NUMBER LQ1139	DATE 05/05/2023	COORDINATES 534447,190169
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5			JT				MADE GROUND: Concrete hardstanding	
1							MADE GROUND: Dark brown clayey sandy GRAVEL of ash, clinker, metal, brick, concrete, glass, porcelain.	
1.5			JT				Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	No groundwater encountered
2							End of Pit	
2.5								

ENVIRONMENTAL TESTPIT STP11

PROJECT NUMBER LQ1139	DATE 05/05/2023	COORDINATES 534464,190102
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS								
Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5							MADE GROUND: Concrete hardstanding	
			JT				MADE GROUND: Dark brown clayey sandy GRAVEL of ash, clinker, metal, brick, concrete, glass, porcelain.	
							MADE GROUND: Green/black slightly gravelly CLAY with flint gravel and porcelain fragments.	
			JT				Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
1								No groundwater encountered
1.5							End of Pit	
2								
2.5								

ENVIRONMENTAL TESTPIT STP13

PROJECT NUMBER LQ1139	DATE 05/05/2023	COORDINATES 534469,190151
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
							MADE GROUND: Concrete hardstanding	
0.5			JT				MADE GROUND: Dark brown clayey sandy GRAVEL of ash, clinker, metal, brick, concrete, glass, porcelain.	
1								
1.5			JT					
2							Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	No groundwater encountered
2.5							End of Pit	

ENVIRONMENTAL TESTPIT STP14

PROJECT NUMBER LQ1139	DATE 05/05/2023	COORDINATES 534470,190167
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
							MADE GROUND: Concrete hardstanding	
0.5			JT				MADE GROUND: Dark brown clayey sandy GRAVEL of ash, clinker, metal, brick, concrete, glass, porcelain.	
1								
1.5							Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
			JT					
2								No groundwater encountered
							End of Pit	
2.5								

ENVIRONMENTAL TESTPIT STP15

PROJECT NUMBER LQ1139	DATE 04/05/2023	COORDINATES 534534,190101
PROJECT NAME Ashley Road Depot	METHOD Mechanical Excavator	COORD SYS OS X,Y
CLIENT Konform Ltd	PLANT 12 TONNE TRACKED 360	SURFACE ELEVATION Not Measured
ADDRESS Ashley Road, London N17 9AZ		LOGGED BY JH
		CHECKED BY PB

COMMENTS

Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5			JT				MADE GROUND: Concrete hardstanding	
							MADE GROUND: Dark brown clayey sandy GRAVEL of ash, clinker, metal, brick, concrete, glass, porcelain.	
1							MADE GROUND: Dark brown gravelly CLAY, gravel is brick, flint, clinker, metal, glass.	
			JT				Orange brown slightly gravelly CLAY, gravel is fine to coarse angular to subangular flint.	
1.5								No groundwater encountered
2							End of Pit	
2.5								



APPENDIX 03

Photographs



STP1



STP2



STP3



STP3 (2)



STP3 (3)



STP4



STP5



STP6



STP6 (2)



STP6 (3)



STP7



STP9



STP11



STP13



STP13 (2)



STP13 (3)



STP14



STP14 (2)



STP14 (3)



STP15



APPENDIX 04

Laboratory Results

Jeremy Head
Kalex Ltd
Bridge House
The Ash
Little Hadham
Ware
SG11 2DG

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

e: Kalex Group

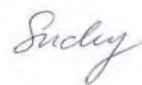
Analytical Report Number : 23-31942

Replaces Analytical Report Number: 23-31942, issue no. 1
Additional analysis undertaken.

Analysis Asbestos undertaken for samples with symbol^ as per client's request

Date Sampled added for all samples as per client's request

Project / Site name:	Ashley Rd	Samples received on:	04/05/2023
Your job number:	LQ1139	Samples instructed on/ Analysis started on:	04/05/2023
Your order number:		Analysis completed by:	19/05/2023
Report Issue Number:	2	Report issued on:	19/05/2023
Samples Analysed:	16 soil samples		



Signed:

Elżbieta Suchy
Junior Reporting Specialist
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: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668728	2668729	2668730	2668731	2668732
Sample Reference				SP/0405/1	SP/0405/2	SP/0405/3	SP/0405/4	SP/0405/5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
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	-	-	-	-	-
Moisture Content	%	0.01	NONE	-	-	-	-	-
Total mass of sample received	kg	0.001	NONE	-	-	-	-	-

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA	SCA	SCA	SCA	SCA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	-	-	-	-
Total Cyanide	mg/kg	1	MCERTS	-	-	-	-	-
Free Cyanide	mg/kg	1	MCERTS	-	-	-	-	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	-	-	-	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Sulphide	mg/kg	1	NONE	-	-	-	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	NONE	-	-	-	-	-
Acenaphthene	mg/kg	0.05	NONE	-	-	-	-	-
Fluorene	mg/kg	0.05	NONE	-	-	-	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-	-	-	-
Anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Chrysene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-	-	-	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	-	-	-	-	-
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Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number	2668728	2668729	2668730	2668731	2668732
Sample Reference	SP/0405/1	SP/0405/2	SP/0405/3	SP/0405/4	SP/0405/5
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	-	-	-	-	-
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	-	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	-	-
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	-	-	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	-	-	-	-	-
Toluene	µg/kg	5	NONE	-	-	-	-	-
Ethylbenzene	µg/kg	5	NONE	-	-	-	-	-
p & m-xylene	µg/kg	5	NONE	-	-	-	-	-
o-xylene	µg/kg	5	NONE	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-	-	-	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	NONE	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	-	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668733^	2668734	2668735^	2668736	2668737^
Sample Reference				STP1	STP1	STP2	STP2	STP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20-0.50	1.20-1.50	0.20-0.50	1.30-1.50	0.20-0.40
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
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	20	18	15	8.8	14
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9	0.9	0.9

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	JBH	N/A	JBH	N/A	JBH

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.4	6.8	7.6	7.8	7.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1200	680	3100	420	1600
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	630	400	1600	310	990
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.31	0.2	0.78	0.15	0.5
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	314	198	776	154	496
Sulphide	mg/kg	1	NONE	1.9	< 1.0	6	< 1.0	< 1.0
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.7	0.5	2	0.2	1.3

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.19	< 0.05	0.16	< 0.05	0.15
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.36	< 0.05	0.41	< 0.05	0.37
Pyrene	mg/kg	0.05	NONE	0.35	< 0.05	0.38	< 0.05	0.35
Benzo(a)anthracene	mg/kg	0.05	NONE	0.25	< 0.05	0.26	< 0.05	0.23
Chrysene	mg/kg	0.05	NONE	0.23	< 0.05	0.25	< 0.05	0.23
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.32	< 0.05	0.36	< 0.05	0.29
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.12	< 0.05	0.13	< 0.05	0.12
Benzo(a)pyrene	mg/kg	0.05	NONE	0.24	< 0.05	0.27	< 0.05	0.22
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.15	< 0.05	0.18	< 0.05	0.13
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.17	< 0.05	0.2	< 0.05	0.13

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	2.38	< 0.80	2.6	< 0.80	2.22
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Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668733^	2668734	2668735^	2668736	2668737^
Sample Reference				STP1	STP1	STP2	STP2	STP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20-0.50	1.20-1.50	0.20-0.50	1.30-1.50	0.20-0.40
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	9.6	< 1.0	29	< 1.0	12
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	22	14	36	18	27
Barium (aqua regia extractable)	mg/kg	1	MCERTS	280	180	1000	94	540
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.7	1.3	2.2	0.83	1.8
Boron (water soluble)	mg/kg	0.2	MCERTS	4.2	4.5	7.2	1.1	4.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	2.1	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	26	40	41	28	34
Copper (aqua regia extractable)	mg/kg	1	MCERTS	410	31	510	21	320
Lead (aqua regia extractable)	mg/kg	1	MCERTS	750	44	1100	23	820
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.4	< 0.3	2.5	< 0.3	1.1
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	2.3	0.73	3.7	0.62	3.1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	34	43	32	29
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	48	68	54	53	58
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	610	100	2200	260	2000

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668738	2668739^	2668740	2668741^	2668742
Sample Reference				STP3	STP5	STP5	STP15	STP15
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00-1.40	0.25-0.50	1.00-1.40	0.40-0.60	1.20-1.50
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
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	15	14	9.1	11	7.7
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9	0.9	0.9

Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	-	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	JBH	N/A	JBH	N/A

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.7	10	6.8	8	7.7
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1200	3800	700	5500	270
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	710	1800	510	3500	210
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.36	0.92	0.25	1.7	0.11
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	357	924	253	1740	106
Sulphide	mg/kg	1	NONE	< 1.0	2.3	< 1.0	14	1.1
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.4	1.3	0.2	1.3	0.2

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	0.29
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	< 0.05	0.14	< 0.05	0.06	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	< 0.05	0.28	< 0.05	0.17	< 0.05
Pyrene	mg/kg	0.05	NONE	< 0.05	0.27	< 0.05	0.19	< 0.05
Benzo(a)anthracene	mg/kg	0.05	NONE	< 0.05	0.17	< 0.05	0.15	< 0.05
Chrysene	mg/kg	0.05	NONE	< 0.05	0.17	< 0.05	0.19	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	< 0.05	0.19	< 0.05	0.35	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	< 0.05	0.08	< 0.05	0.11	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	0.15	< 0.05	0.23	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05	0.09	< 0.05	0.19	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	0.1	< 0.05	0.24	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	< 0.80	1.64	< 0.80	1.88	< 0.80
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Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668738	2668739^	2668740	2668741^	2668742
Sample Reference				STP3	STP5	STP5	STP15	STP15
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00-1.40	0.25-0.50	1.00-1.40	0.40-0.60	1.20-1.50
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	22	< 1.0	18	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	24	15	47	16
Barium (aqua regia extractable)	mg/kg	1	MCERTS	190	920	90	410	57
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2	1.6	0.81	3.4	0.72
Boron (water soluble)	mg/kg	0.2	MCERTS	1.7	1.8	1.1	4.9	2.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	1.4	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	38	34	26	28	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	24	330	18	250	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	55	710	24	550	31
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.6	< 0.3	0.7	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.54	2.2	0.58	6.2	2.6
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	33	45	26	45	20
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	61	46	47	60	41
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	100	1400	47	660	61

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668872
Sample Reference				SP/0405/6
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				04/05/2023
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	-
Moisture Content	%	0.01	NONE	-
Total mass of sample received	kg	0.001	NONE	-

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-
Total Cyanide	mg/kg	1	MCERTS	-
Free Cyanide	mg/kg	1	MCERTS	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-
Sulphide	mg/kg	1	NONE	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	-
Acenaphthylene	mg/kg	0.05	NONE	-
Acenaphthene	mg/kg	0.05	NONE	-
Fluorene	mg/kg	0.05	NONE	-
Phenanthrene	mg/kg	0.05	NONE	-
Anthracene	mg/kg	0.05	NONE	-
Fluoranthene	mg/kg	0.05	NONE	-
Pyrene	mg/kg	0.05	NONE	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-
Chrysene	mg/kg	0.05	NONE	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	-
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Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number		2668872		
Sample Reference		SP/0405/6		
Sample Number		None Supplied		
Depth (m)		None Supplied		
Date Sampled		04/05/2023		
Time Taken		None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Heavy Metals / Metalloids				
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	-
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	-
Toluene	µg/kg	5	NONE	-
Ethylbenzene	µg/kg	5	NONE	-
p & m-xylene	µg/kg	5	NONE	-
o-xylene	µg/kg	5	NONE	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.001	NONE	-
TPH-CWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.001	NONE	-
TPH-CWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.001	NONE	-
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	NONE	-
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	NONE	-
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	NONE	-
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	NONE	-
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	-

TPH-CWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.001	NONE	-
TPH-CWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.001	NONE	-
TPH-CWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.001	NONE	-
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	NONE	-
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	NONE	-
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	NONE	-
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	NONE	-
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 23-31942
Project / Site name: Ashley Rd

* 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 *
2668733	STP1	None Supplied	0.20-0.50	Brown clay and sand with clinker and gravel
2668734	STP1	None Supplied	1.20-1.50	Brown clay and sand with gravel.
2668735	STP2	None Supplied	0.20-0.50	Brown loam and clay with gravel and vegetation.
2668736	STP2	None Supplied	1.30-1.50	Brown clay and sand with gravel.
2668737	STP3	None Supplied	0.20-0.40	Brown clay and loam with gravel and vegetation.
2668738	STP3	None Supplied	1.00-1.40	Brown clay and sand with gravel.
2668739	STP5	None Supplied	0.25-0.50	Brown loam and clay with concrete.
2668740	STP5	None Supplied	1.00-1.40	Brown clay and sand with gravel.
2668741	STP15	None Supplied	0.40-0.60	Brown loam and sand with gravel and vegetation.
2668742	STP15	None Supplied	1.20-1.50	Brown clay and sand with gravel.

Analytical Report Number : 23-31942

Project / Site name: Ashley Rd

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
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
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
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Free cyanide in soil	Determination of free 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
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	NONE
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	NONE
Total sulphate (as SO4 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 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
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS

Analytical Report Number : 23-31942
Project / Site name: Ashley Rd

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
Sulphate, water soluble, in soil	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

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' 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.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Analytical Report Number : 23-31942

Project / Site name: Ashley Rd

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
STP1	None Supplied	S	2668733	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP1	None Supplied	S	2668733	b	TPHCWG (Soil)	L088/76-PL	b
STP1	None Supplied	S	2668734	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP1	None Supplied	S	2668734	b	TPHCWG (Soil)	L088/76-PL	b
STP15	None Supplied	S	2668741	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP15	None Supplied	S	2668741	b	TPHCWG (Soil)	L088/76-PL	b
STP15	None Supplied	S	2668742	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP15	None Supplied	S	2668742	b	TPHCWG (Soil)	L088/76-PL	b
STP2	None Supplied	S	2668735	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP2	None Supplied	S	2668735	b	TPHCWG (Soil)	L088/76-PL	b
STP2	None Supplied	S	2668736	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP2	None Supplied	S	2668736	b	TPHCWG (Soil)	L088/76-PL	b
STP3	None Supplied	S	2668737	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP3	None Supplied	S	2668737	b	TPHCWG (Soil)	L088/76-PL	b
STP3	None Supplied	S	2668738	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP3	None Supplied	S	2668738	b	TPHCWG (Soil)	L088/76-PL	b
STP5	None Supplied	S	2668739	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP5	None Supplied	S	2668739	b	TPHCWG (Soil)	L088/76-PL	b
STP5	None Supplied	S	2668740	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP5	None Supplied	S	2668740	b	TPHCWG (Soil)	L088/76-PL	b



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e: Kalex Group

Analytical Report Number : 23-32267

Project / Site name:	Ashley Rd	Samples received on:	05/05/2023
Your job number:	LQ1139	Samples instructed on/ Analysis started on:	05/05/2023
Your order number:		Analysis completed by:	10/05/2023
Report Issue Number:	1	Report issued on:	11/05/2023
Samples Analysed:	1 bulk sample - 2 soil samples		

Signed: _____

Anna Goc
Junior Reporting Specialist
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: 23-32267
Project / Site name: Ashley Rd

Lab Sample Number				2670539	2672422
Sample Reference				SP/0505/01	SP/0505/02
Sample Number				None Supplied	soil
Depth (m)				None Supplied	None Supplied
Date Sampled				05/05/2023	05/05/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection Accreditation Status

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile, Amosite- Loose Fibres	Chrysotile- Loose Fibres
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	JSW	JSW

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number: 23-32267
Project / Site name: Ashley Rd

Lab Sample Number				2670540
Sample Reference				SP/0505/02
Sample Number				bulk
Depth (m)				None Supplied
Date Sampled				05/05/2023
Time Taken				None Supplied
Analytical Parameter (Bulk Analysis)	Units	Limit of detection	Accreditation Status	

Asbestos Identification	Type	N/A	ISO 17025	No Asbestos Detected
Asbestos Analyst ID	N/A	N/A	N/A	ASE

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number : 23-32267
Project / Site name: Ashley Rd

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
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos identification in Bulks	Asbestos Identification in bulk material with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	W	ISO 17025

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' 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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e: Kalex Group

Analytical Report Number : 23-32271

Project / Site name:	Ashley Road	Samples received on:	05/05/2023
Your job number:	LQ1139	Samples instructed on/ Analysis started on:	05/05/2023
Your order number:		Analysis completed by:	12/05/2023
Report Issue Number:	1	Report issued on:	15/05/2023
Samples Analysed:	10 soil samples		

Signed: _____

Izabela Wójcik

Izabela Wójcik
Reporting Specialist
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.

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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: 23-32271
Project / Site name: Ashley Road

Lab Sample Number				2670552	2670553	2670554	2670555	2670556
Sample Reference				STP9	STP9	STP14	STP14	STP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	1.50-1.70	0.50-1.00	1.70-2.00	0.30-0.80
Date Sampled				05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
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	18	13	17	11
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	EWS	N/A	EWS	N/A	EWS

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.7	6.8	7.6	7.6	8.7
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	5600	800	5100	840	6500
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1700	430	1800	660	2600
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.83	0.22	0.9	0.33	1.3
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	831	217	899	328	1290
Sulphide	mg/kg	1	NONE	30	< 1.0	33	< 1.0	30
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	3.9	0.8	3.5	0.4	1.5

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.1	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.18	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.2	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.15	< 0.05	3.8	< 0.05	0.11
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.93	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.38	< 0.05	7.2	< 0.05	0.13
Pyrene	mg/kg	0.05	NONE	0.33	< 0.05	6.2	< 0.05	0.1
Benzo(a)anthracene	mg/kg	0.05	NONE	0.2	< 0.05	3.9	< 0.05	0.1
Chrysene	mg/kg	0.05	NONE	0.25	< 0.05	3.6	< 0.05	0.14
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.3	< 0.05	4.4	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.13	< 0.05	1.7	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	0.21	< 0.05	3.4	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.14	< 0.05	1.8	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.43	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.17	< 0.05	2.1	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	2.26	< 0.80	39.9	< 0.80	< 0.80
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Analytical Report Number: 23-32271
Project / Site name: Ashley Road

Lab Sample Number	2670552	2670553	2670554	2670555	2670556
Sample Reference	STP9	STP9	STP14	STP14	STP13
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.50-1.00	1.50-1.70	0.50-1.00	1.70-2.00	0.30-0.80
Date Sampled	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	70	< 1.0	82	< 1.0	43
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	160	10	100	21	130
Barium (aqua regia extractable)	mg/kg	1	MCERTS	750	100	880	110	620
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	13	0.86	8	1.3	8.8
Boron (water soluble)	mg/kg	0.2	MCERTS	6.6	3	6.1	3.8	4.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	71	27	49	40	56
Copper (aqua regia extractable)	mg/kg	1	MCERTS	4700	28	1400	30	2700
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1800	72	2400	62	1600
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	24	1.4	14	1.4	16
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	210	15	120	25	130
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	140	45	93	71	98
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	3300	73	2100	65	1700

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	1.9
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	< 2.0	< 2.0	2.3	< 2.0	3.4
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	32	< 8.0	13
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10	< 10	39	< 10	22

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	< 10	20	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	< 10	42	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	< 10	< 10	64	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 23-32271
Project / Site name: Ashley Road

Lab Sample Number				2670557	2670558	2670559	2670560	2670561
Sample Reference				STP13	STP11	STP11	STP7	STP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.50-1.90	0.20-0.50	0.80-1.10	0.20-0.60	1.20-1.40
Date Sampled				05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
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	25	17	16	17	11
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	-	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	EWS	EWS	N/A	EWS	N/A

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.4	7.3	7.8	7.9	7.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	1.6	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	5000	18000	1100	19000	950
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	2100	3300	710	3200	670
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1	1.6	0.35	1.6	0.34
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1040	1640	354	1590	337
Sulphide	mg/kg	1	NONE	33	45	< 1.0	25	36
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	6.9	3.1	0.4	2.5	0.2

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.13	0.24	0.11	0.3	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	0.07	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.48	0.64	0.15	0.49	< 0.05
Pyrene	mg/kg	0.05	NONE	0.54	0.63	0.12	0.46	< 0.05
Benzo(a)anthracene	mg/kg	0.05	NONE	0.36	0.48	< 0.05	0.26	< 0.05
Chrysene	mg/kg	0.05	NONE	0.63	0.58	< 0.05	0.32	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.47	0.73	< 0.05	0.33	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.21	0.28	< 0.05	0.17	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	0.24	0.54	< 0.05	0.25	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.19	0.31	< 0.05	0.18	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.19	0.36	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	3.44	4.86	< 0.80	2.76	< 0.80
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Analytical Report Number: 23-32271
Project / Site name: Ashley Road

Lab Sample Number				2670557	2670558	2670559	2670560	2670561
Sample Reference				STP13	STP11	STP11	STP7	STP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.50-1.90	0.20-0.50	0.80-1.10	0.20-0.60	1.20-1.40
Date Sampled				05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	50	25	< 1.0	30	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	150	75	19	77	16
Barium (aqua regia extractable)	mg/kg	1	MCERTS	660	340	140	370	91
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	13	4.9	1.5	6.3	0.91
Boron (water soluble)	mg/kg	0.2	MCERTS	11	12	4	23	5.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	45	33	42	35	28
Copper (aqua regia extractable)	mg/kg	1	MCERTS	640	360	27	500	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	2600	890	45	940	23
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	1.3	< 0.3	1.1	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	22	9.3	1.4	12	0.87
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	130	55	29	78	29
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	120	79	76	83	53
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	1600	580	72	490	43

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	9.2	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10	11	< 10	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	23	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	< 10	28	< 10	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number : 23-32271
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* 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 *
2670552	STP9	None Supplied	0.50-1.00	Brown loam and sand with gravel and clinker
2670553	STP9	None Supplied	1.50-1.70	Brown clay and sand with gravel.
2670554	STP14	None Supplied	0.50-1.00	Brown loam and sand with gravel and clinker
2670555	STP14	None Supplied	1.70-2.00	Brown clay and sand with gravel.
2670556	STP13	None Supplied	0.30-0.80	Brown loam and sand with gravel and clinker
2670557	STP13	None Supplied	1.50-1.90	Brown loam and sand with clinker and glass.
2670558	STP11	None Supplied	0.20-0.50	Brown loam and sand with gravel.
2670559	STP11	None Supplied	0.80-1.10	Brown clay and sand with gravel.
2670560	STP7	None Supplied	0.20-0.60	Brown clay and sand with gravel.
2670561	STP7	None Supplied	1.20-1.40	Brown clay and sand with gravel.

Analytical Report Number : 23-32271
Project / Site name: Ashley 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
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
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
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Free cyanide in soil	Determination of free 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
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	NONE
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	NONE
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 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
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS



Analytical Report Number : 23-32271
Project / Site name: Ashley 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
Sulphate, water soluble, in soil	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

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' 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.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

- Quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.



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e: Kalex Group

Analytical Report Number : 23-32649

Replaces Analytical Report Number: 23-32649, issue no. 1
Additional analysis undertaken.

TPH C10-C40 added to all samples, and asbestos ID added to samples 2672623 & 2672625 by the lab

Project / Site name:	Ashley Road	Samples received on:	09/05/2023
Your job number:	LQ1139	Samples instructed on / Analysis started on:	09/05/2023
Your order number:		Analysis completed by:	23/05/2023
Report Issue Number:	2	Report issued on:	23/05/2023
Samples Analysed:	4 soil samples		

Signed: _____

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

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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: 23-32649
Project / Site name: Ashley Road

Lab Sample Number	2672622			2672623	2672624	2672625
Sample Reference	STP6			STP6	STP4	STP4
Sample Number	None Supplied			None Supplied	None Supplied	None Supplied
Depth (m)	0.50-0.90			1.00-1.20	0.20-0.30	1.00-1.20
Date Sampled	05/05/2023			05/05/2023	05/05/2023	05/05/2023
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	40	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.2	16	8.2
Total mass of sample received	kg	0.001	NONE	0.7	0.7	0.7

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	JBH	JBH	JBH	JBH

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.5	7.3	10.7	8.1
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	3.1	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	5700	630	12000	730
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	2900	400	3700	440
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.4	0.2	1.9	0.22
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1440	201	1870	220
Sulphide	mg/kg	1	NONE	25	< 1.0	17	< 1.0
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.5	0.6	1.4	0.5

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	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	0.07	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	0.07	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	1	< 0.05	1.3	< 0.05
Anthracene	mg/kg	0.05	NONE	0.23	< 0.05	0.2	< 0.05
Fluoranthene	mg/kg	0.05	NONE	2.7	< 0.05	3.2	0.09
Pyrene	mg/kg	0.05	NONE	2.5	< 0.05	3.2	0.09
Benzo(a)anthracene	mg/kg	0.05	NONE	1.4	< 0.05	2	< 0.05
Chrysene	mg/kg	0.05	NONE	1.6	< 0.05	2.3	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	2	< 0.05	3.4	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.67	< 0.05	1.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	1.4	< 0.05	1.9	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.97	< 0.05	1.6	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	0.27	< 0.05	0.47	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	1.2	< 0.05	1.9	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	16	< 0.80	22.7	< 0.80
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Analytical Report Number: 23-32649
Project / Site name: Ashley Road

Lab Sample Number	2672622	2672623	2672624	2672625
Sample Reference	STP6	STP6	STP4	STP4
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.50-0.90	1.00-1.20	0.20-0.30	1.00-1.20
Date Sampled	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	12	3	12	2.4
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	26	9.4	35	11
Barium (aqua regia extractable)	mg/kg	1	MCERTS	560	150	330	88
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.4	1.5	1.6	0.86
Boron (water soluble)	mg/kg	0.2	MCERTS	5.4	5	1.2	1.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.1	< 0.2	1.7	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	31	41	29	27
Copper (aqua regia extractable)	mg/kg	1	MCERTS	290	34	460	24
Lead (aqua regia extractable)	mg/kg	1	MCERTS	750	31	1600	57
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.3	< 0.3	1.8	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	4.8	1.6	3.3	0.86
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	40	31	39	17
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	54	73	71	48
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	700	72	630	56

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH C10 - C40 _{EH_CU_1D_TOTAL}	mg/kg	10	NONE	33	< 10	79	< 10
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TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	< 2.0	< 2.0	4	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	15	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	31	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10	< 10	50	< 10

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	13	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	21	< 10	19	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	33	< 10	27	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 23-32649

Project / Site name: Ashley 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 *
2672622	STP6	None Supplied	0.50-0.90	Brown sandy loam with gravel and rubble.
2672623	STP6	None Supplied	1.00-1.20	Brown clay and sand with gravel.
2672624	STP4	None Supplied	0.20-0.30	Brown sandy loam with rubble and gravel
2672625	STP4	None Supplied	1.00-1.20	Light brown clay and sand with gravel.

Analytical Report Number : 23-32649

Project / Site name: Ashley 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
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
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
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Free cyanide in soil	Determination of free 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
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	NONE
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	NONE
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 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
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE

Analytical Report Number : 23-32649

Project / Site name: Ashley 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
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Sulphate, water soluble, in soil	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

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' 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 300C.

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.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Sample Deviation Report



Analytical Report Number : 23-32649

Project / Site name: Ashley Road

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
STP4	None Supplied	S	2672624	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP4	None Supplied	S	2672624	b	TPHCWG (Soil)	L088/76-PL	b
STP4	None Supplied	S	2672625	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP4	None Supplied	S	2672625	b	TPHCWG (Soil)	L088/76-PL	b
STP6	None Supplied	S	2672622	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP6	None Supplied	S	2672622	b	TPHCWG (Soil)	L088/76-PL	b
STP6	None Supplied	S	2672623	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP6	None Supplied	S	2672623	b	TPHCWG (Soil)	L088/76-PL	b



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Analytical Report Number : 23-34732

Project / Site name:	Ashley Road	Samples received on:	05/05/2023
Your job number:	LQ1139	Samples instructed on / Analysis started on:	18/05/2023
Your order number:		Analysis completed by:	23/05/2023
Report Issue Number:	1	Report issued on:	23/05/2023
Samples Analysed:	6 leachate samples		

Signed: _____

Adam Fenwick
Technical Reviewer
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: 23-34732

Project / Site name: Ashley Road

Lab Sample Number				2684863	2684864	2684865	2684866	2684867
Sample Reference				STP9	STP14	STP13	STP13	STP11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	0.50-1.00	0.30-0.80	1.50-1.90	0.20-0.50
Date Sampled				05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	4.5	< 1.0	4.4	7	4.7
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Copper (dissolved)	µg/l	0.7	ISO 17025	100	12	52	130	63
Lead (dissolved)	µg/l	1	ISO 17025	23	8.2	14	30	2.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	55	56	34	47	75

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number: 23-34732

Project / Site name: Ashley Road

Lab Sample Number				2684868
Sample Reference				STP7
Sample Number				None Supplied
Depth (m)				0.20-0.60
Date Sampled				05/05/2023
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	5.4
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2
Copper (dissolved)	µg/l	0.7	ISO 17025	58
Lead (dissolved)	µg/l	1	ISO 17025	3.8
Zinc (dissolved)	µg/l	0.4	ISO 17025	24

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number : 23-34732

Project / Site name: Ashley 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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' 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.



APPENDIX 05

Ground Gas Monitoring Results

PA Welburn Limited
Ground Gas Monitoring Sheet



Client: kalex
Site: tottenham
Date: 09/06/2023

Visit No: 1 of
Monitoring Engineer: B welburn

Monitoring Point	PRESSURE AND FLOW DATA				PERMANENT GAS CONCENTRATIONS												VOLATILES	WELL, GROUNDWATER AND NAPL DATA					Comments
	Differential Borehole Pressure (Pa)	Flow Rate (l/hr)			Methane (%v/v)		Carbon dioxide (%v/v)		Oxygen (%v/v)		Carbon monoxide (ppmv)		Hydrogen sulphide (ppmv)		%LEL		PID Reading (ppm)	Cover Level (m agl)	Groundwater r Depth (m bgl)	LNAPL Depth (m bgl)	DNAPL Depth (m bgl)	Depth of Well (m bgl)	
		Peak	Steady	Dissipation Time (sec)	Peak	Steady	Peak	Steady	Min	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Peak						
bh5	-0.09	-0.1		120	0.1	0.1	1.1	0.9	15.4	15.9	2	2	2	2			2.4	flush	2.47	none	none	4.62	
bh2	-0.02	0		120	0	0	3	3	16.6	16.6	4	2	3	2			2.9	flush	2.93	none	none	6.03	
bh12	-0.91	0		120	0	0	10.7	10.7	2.4	2.4	3	3	2	2			2.5	flush	2.06	none	none	2.44	

ND: Not detected
NR: Not recorded
NA: Not applicable

METEROLOGICAL AND SITE INFORMATION

State of ground:	☐ yes	☐ Dry	☐	☐ Moist	☐	☐ Wet	☐	☐ Snow	☐	☐ Frozen
Wind:	☐	☐ Calm	☐ yes	☐ Light	☐	☐ Moderate	☐	☐ Strong		
Cloud Cover:	☐ yes	☐ None	☐	☐ Slight	☐	☐ Cloudy	☐	☐ Overcast		
Precipitation:	☐	☐ None	☐	☐ Slight	☐	☐ Moderate	☐	☐ Heavy	☐	☐ Snow/Sleet
Time monitoring performed:	11:00	Start	12:30	Finish						
Air temperature (deg. C):	14	Start	19	Finish						
Atmospheric pressure (mbar):	1013	Start	1014	Finish						
Pressure trend:	☐	☐ Falling	☐	☐ Steady	☐	☐ Rising				

INSTRUMENT TECHNICAL SPECIFICATIONS

Gas Meter:	GA5000				
Serial Number:	g508944				
Date of last calibration:					
Date of next calibration:					
Gas Range:	0 - 100% CH ₄	0 - 100% CO ₂	0 - 25% O ₂	CO	H ₂ S
Gas Flow range:	-50 to +100 l/hr				
Differential pressure:	(+/-) 1000 Pa				
Ambient Air Check	☐ CH ₄	☐ CO ₂	☐ O ₂		

PA Welburn Limited
Ground Gas Monitoring Sheet



Client: kalax
Site: ashley road
Date: 13/06/2023

Visit No: of
Monitoring Engineer: B welburn

Monitoring Point	PRESSURE AND FLOW DATA				PERMANENT GAS CONCENTRATIONS												VOLATILES	WELL, GROUNDWATER AND NAPL DATA					Comments
	Differential Borehole Pressure (Pa)	Flow Rate (l/hr)			Methane (%v/v)		Carbon dioxide (%v/v)		Oxygen (%v/v)		Carbon monoxide (ppmv)		Hydrogen sulphide (ppmv)		%LEL		PID Reading (ppm)	Cover Level (m agl)	Groundwater Depth (m bgl)	LNAPL Depth (m bgl)	DNAPL Depth (m bgl)	Depth of Well (m bgl)	
		Peak	Steady	Dissipation Time (sec)	Peak	Steady	Peak	Steady	Min	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Peak						
bh5	0.07		2.7	120	0.1	0	3	3	7.5	7.5	3	2	1	1			0.1	flush	2.45	none	none	4.62	
bh2	0.05		0	120	0	0	2.9	2.9	17	17	3	2	1	1			2.1	flush	2.91	none	none	6.04	
bh12	-0.02		0.1	120	0	0	11.3	11.3	2.3	2.3	3	3	2	1			1.4	flush	2.03	none	none	2.48	

ND: Not detected
NR: Not recorded
NA: Not applicable

METEROLOGICAL AND SITE INFORMATION

State of ground:	☐ yes	☐ Dry	☐	☐ Moist	☐	☐ Wet	☐	☐ Snow	☐	☐ Frozen
Wind:	☐	☐ Calm	☐ yes	☐ Light	☐	☐ Moderate	☐	☐ Strong		
Cloud Cover:	☐ yes	☐ None	☐	☐ Slight	☐	☐ Cloudy	☐	☐ Overcast		
Precipitation:	☐	☐ None	☐	☐ Slight	☐	☐ Moderate	☐	☐ Heavy	☐	☐ Snow/Sleet
Time monitoring performed:	07:20	☐ Start	09:15	☐ Finish						
Air temperature (deg. C):	21	☐ Start	23	☐ Finish						
Atmospheric pressure (mbar):	1013	☐ Start	1014	☐ Finish						
Pressure trend:	☐	☐ Falling	☐	☐ Steady	☐	☐ Rising				

INSTRUMENT TECHNICAL SPECIFICATIONS

Gas Meter:	GA5000				
Serial Number:	g508944				
Date of last calibration:					
Date of next calibration:					
Gas Range:	0 - 100% CH<sub>4</sub>	0 - 100% CO<sub>2</sub>	0 - 25% O<sub>2</sub>	CO	H<sub>2</sub>S
Gas Flow range:	-50 to +100 l/hr				
Differential pressure:	(+/-) 1000 Pa				
Ambient Air Check	CH<sub>4</sub>	CO<sub>2</sub>	O<sub>2</sub>		

PA Welburn Limited
Ground Gas Monitoring Sheet



Client: kalex
Site: ashley road tottenham
Date: 14/06/2023

Visit No: 3 of 3
Monitoring Engineer: B welburn

Monitoring Point	PRESSURE AND FLOW DATA				PERMANENT GAS CONCENTRATIONS												VOLATILES		WELL, GROUNDWATER AND NAPL DATA					Comments
	Differential Borehole Pressure (Pa)	Flow Rate (l/hr)			Methane (%v/v)		Carbon dioxide (%v/v)		Oxygen (%v/v)		Carbon monoxide (ppmv)		Hydrogen sulphide (ppmv)		%LEL		PID Reading (ppm)	Cover Level (m agl)	Groundwater Depth (m bgl)	LNAPL Depth (m bgl)	DNAPL Depth (m bgl)	Depth of Well (m bgl)		
		Peak	Steady	Dissipation Time (sec)	Peak	Steady	Peak	Steady	Min	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Peak							
bh5	0.26		-0.2	120	0	0	2.5	2.5	8.3	8.3	6	4	3	3			2.2	flush	2.46	none	none	4.63		
bh2	0.04		0	120	0	0	2.7	2.6	15.4	17	3	3	2	2			2.2	flush	2.92	none	none	6.04		
bh12	-0.12		0	120	0	0	10.6	10.6	3.2	3.2	5	5	3	3			2.1	flush	2.04	none	none	2.48		

ND: Not detected
NR: Not recorded
NA: Not applicable

METEROLOGICAL AND SITE INFORMATION

State of ground:	☐ yes ☐ Dry	☐ Moist	☐ Wet	☐ Snow	☐ Frozen
Wind:	☐ yes ☐ Calm	☐ Light	☐ Moderate	☐ Strong	
Cloud Cover:	☐ yes ☐ None	☐ Slight	☐ Cloudy	☐ Overcast	
Precipitation:	☐ None	☐ Slight	☐ Moderate	☐ Heavy	☐ Snow/Sleet
Time monitoring performed:	10:30 Start	11:10 Finish			
Air temperature (deg. C):	27 Start	36 Finish			
Atmospheric pressure (mbar):	1017 Start	1017 Finish			
Pressure trend:	☐ Falling	☐ Steady	☐ Rising		

INSTRUMENT TECHNICAL SPECIFICATIONS

Gas Meter:	GA5000				
Serial Number:	g508944				
Date of last calibration:					
Date of next calibration:					
Gas Range:	0 - 100% CH<sub>4</sub>	0 - 100% CO<sub>2</sub>	0 - 25% O<sub>2</sub>	CO	H<sub>2</sub>S
Gas Flow range:	-50 to +100 l/hr				
Differential pressure:	(+/-) 1000 Pa				
Ambient Air Check	CH<sub>4</sub>	CO<sub>2</sub>	O<sub>2</sub>		

