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Analytical Report Number : 25-036861

Project / Site name:	Baytree Lane, Middleton	Samples received on:	11/07/2025
Your job number:	6143 VBL	Samples instructed on/ Analysis started on:	11/07/2025
Your order number:	2250710	Analysis completed by:	18/07/2025
Report Issue Number:	1	Report issued on:	18/07/2025
Samples Analysed:	3 soil samples		

Signed:



Rafał Szczeparczyk
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
air	- once the analysis is complete

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

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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: 25-036861
Project / Site name: Baytree Lane, Middleton
Your Order No: 2250710

Lab Sample Number	617109	617110	617111
Sample Reference	TPA	TPB	TPC
Sample Number	C1	C1	C1
Water Matrix	N/A	N/A	N/A
Depth (m)	0.30	0.30	0.30
Date Sampled	09/07/2025	09/07/2025	09/07/2025
Time Taken	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	19	18	15
Total mass of sample received	kg	0.1	NONE	0.9	0.9	0.9

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA	SCA	SCA
Analysis completed	N/A	N/A	N/A	18/07/2025	18/07/2025	18/07/2025

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	9.2	9.3	9.6
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	%	0.005	MCERTS	0.03	0.027	0.026
Sulphide	mg/kg	1	MCERTS	1.7	2.4	1.8
Total Sulphur	mg/kg	50	MCERTS	410	290	340
Total Sulphur	%	0.005	MCERTS	0.041	0.029	0.034
Organic Matter (automated)	%	0.1	MCERTS	3.6	4	4.4

Total Phenols

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

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.29
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.2
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.9
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.37
Fluoranthene	mg/kg	0.05	MCERTS	0.07	0.06	2.3
Pyrene	mg/kg	0.05	MCERTS	0.06	< 0.05	1.8
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.06	< 0.05	0.74
Chrysene	mg/kg	0.05	MCERTS	0.06	< 0.05	0.75
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.07	< 0.05	0.76
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.06	< 0.05	0.41
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.06	< 0.05	0.69
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.26
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.34

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.60	< 0.60	10.9
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Analytical Report Number: 25-036861
 Project / Site name: Baytree Lane, Middleton
 Your Order No: 2250710

Lab Sample Number	617109	617110	617111
Sample Reference	TPA	TPB	TPC
Sample Number	C1	C1	C1
Water Matrix	N/A	N/A	N/A
Depth (m)	0.30	0.30	0.30
Date Sampled	09/07/2025	09/07/2025	09/07/2025
Time Taken	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	2.7	2.3	2.6
Barium (aqua regia extractable)	mg/kg	1	MCERTS	34	25	35
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.18	0.13	0.41
Boron (water soluble)	mg/kg	0.2	MCERTS	1.8	2.1	1.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2
Chromium (hexavalent) Low Level	mg/kg	1.2	NONE	< 1.2	< 1.2	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	10	9.2	11
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17	13	14
Lead (aqua regia extractable)	mg/kg	1	MCERTS	17	13	15
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.9	8.5	8.6
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	13	13	13
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	33	34	43

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



Analytical Report Number : 25-036861

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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 soil 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 *
612109	TPA	C1	0.3	Brown loam and sand with gravel and vegetation
612110	TPB	C1	0.3	Brown loam and sand with gravel and vegetation
612111	TPC	C1	0.3	Brown loam and sand with gravel and vegetation

Analytical Report Number : 25-036861

Project / Site name: Baytree Lane, Middleton

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (P/W) DI Process Water (DI P/W)

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, 2021	A0010	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L0290	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	L0110-B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	D 156	W	MCMP
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.	L0198	D	NONE
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	L0388	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by not water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	D16F	D	MCERTS
Total sulphate (as SO ₄) in soil	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L0380	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	D16F	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on US EPA 8270	D16F	D	MCERTS
Hexavalent chromium in soil (low level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCNL
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	L080-PL	W	MCERTS
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	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS

Analytical Report Number : 25-036861

Project / Site name: Baytree Lane, Middleton

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (P:W) DI Process Water (DI P:W)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

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.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Soils Risk Assessment

Site Reference: 6143 VBL
 Project Site: Baytree Lane
 Project Location: Middleton
 Client: J Walker Homes Limited

i2 Reference	Residential With HGP	TPA - C1	TPB - C1	TPC - C1
Customer Sample Ref:	C4SL / S4UL	0.3	0.3	0.3
	SOM 1% GAC	09/07/2025	09/07/2025	09/07/2025
Determinand				
Antimony	-	-	-	-
Arsenic	37	2.7	2.3	2.6
Barium	-	34	29	35
Beryllium	1.7	0.38	0.33	0.41
Boron (water-soluble)	290	1.8	2.1	1.5
Cadmium	9	0.2	0.2	0.2
Chromium VI	21	10	9.2	11
Chromium*	910	1.2	1.2	1.2
Copper	2400	17	13	14
Cyanide(free)**	34	1	1	1
Cyanide(Total)	-	1	1	1
Lead	200	17	13	15
Mercury ¹	199	0.3	0.3	0.3
Nickel	130	8.9	8.5	8.8
pH	-	8.2	8.3	8.6
Phenols(Mono)	280	1	1	1
Selenium	434	1	1	1
SO4(Total)	-	0.03	0.027	0.028
Sulphide	-	1.7	2.4	1.8
Sulphur(Free)	-	410	290	340
Vanadium	410	13	13	13
Zinc	3700	39	35	49
Acenaphthene	210	0.05	0.05	0.29
Acenaphthylene	170	0.05	0.05	0.05
Anthracene	2400	0.05	0.05	0.37
Benzo(a)Anthracene	-	0.06	0.05	0.74
Benzo(a)Pyrene SM	5	0.06	0.05	0.69
Benzo(b)Fluoranthene	-	0.07	0.05	0.78
Benzo(ghi)Perylene	-	0.05	0.05	0.34
Benzo(k)Fluoranthene	-	0.06	0.05	0.41
Chrysene	-	0.06	0.05	0.75
Dibenzo(ah)Anthracene	-	0.05	0.05	0.05
Fluoranthene	280	0.07	0.06	2.3
Fluorene	170	0.05	0.05	0.2
Indeno(123-cd)Pyrene	-	0.05	0.05	0.26
Naphthalene	2.3	0.05	0.05	0.05
Phenanthrene	95	0.05	0.05	1.9
Pyrene	620	0.06	0.05	1.8
PAH(total)	500	0.8	0.8	10.9
Asbestos	Not-detected	Not-detected	Not-detected	Not-detected
SOM [#]	-	4	4	4
All Units mg/kg unless otherwise stated				
Indicates Exceedance of Applicable Level				
Where no SOM is reported 1% SOM Criteria are used. For individual samples SOM value is used to adjust the assessment criteria accordingly that that sample.				
*Criteria Assumes Chromium III SM = Surrogate Marker Approach Culp <i>et al</i>				
**Criteria is derived considering acute effects on 1-2yo Female Receptor ingesting a single dose of 3g of soil				
***Criteria is derived considering Total TPH (C10 to C35) is formed entirely of a 50:50 Aliphatic and Aromatic Split C8-C10 range				
¹ GAC for inorganic mercury can normally be compared with chemical analysis for total mercury content because the equilibrium concentrations of elemental and methylmercury are likely to be very low				
[#] Criteria reported to zero decimal places				
Basis of Assessment Criteria:	CLEA v1.071	EA 2005 WAC (Human Health Value)	C4SL	
		LQM S4UL	Atrisk 06	



A1 Site Plan

Site Name	Baytree Lane
Location	Middleton
GeoAssist Ref	6143VBL
Client	J Walker Homes Limited
	Joshua House 35 Joshua Lane Middleton Manchester M24 2AY
Planning Consultant	
NGR (centre of site)	388560,406020
Production Date	July 2025
Survey Method	
Surveyor	Others
Status	Final v1.00
Base Survey	OSGB36

Do Not Scale