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Vitacress Salads Ltd Lower Lane Farm St Mary Bourne Andover SP11 6AT

Attention: Doreen Hall

CERTIFICATE OF ANALYSIS

Date of report Generation:02 February 2022Customer:Vitacress Salads Ltd

Sample Delivery Group (SDG): 220128-60

Your Reference: Non Micro Water Testing

 Location:
 Alresford

 Report No:
 631783

 Order Number:
 B10109990

We received 15 samples on Friday January 28, 2022 and 15 of these samples were scheduled for analysis which was completed on Wednesday February 02, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan
Operations Manager





CERTIFICATE OF ANALYSIS



SDG: 220128-60
Client Ref.: Non Micro Water Testing

Report Number: 631783 Location: Alresford Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
25720272	ALR 1			27/01/2022
25720269	ALR 2			27/01/2022
25720276	ALR 3A			27/01/2022
25720278	ALR 3B			27/01/2022
25720279	And 1			27/01/2022
25720283	And 2			27/01/2022
25720277	And 3			27/01/2022
25720284	And 4			27/01/2022
25720281	And 5			27/01/2022
25720271	And 6			27/01/2022
25720275	And 7			27/01/2022
25720265	And 8			27/01/2022
25720268	And 9			27/01/2022
25720273	And 10			27/01/2022
25720267	And 11			27/01/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Superseded Report:

CERTIFICATE OF ANALYSIS

ALS

SDG: 220128-60

Client Ref.: Non Micro Water Testing

Report Number: 631783

Location: Alresford

Results Legend X Test N No Determination	Lab Sample No	e(s)					25720272					25720269					25720276				25720278
Possible Sample Types -	Customer Sample Referen	nce					ALR 1					ALR 2					ALR 3A				ALR 3B
S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate	AGS Referenc	e																			
PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage	Depth (m)																				
RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Container		500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)
	Sample Type)	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
Ammoniacal Nitrogen		NDPs: 0 Tests: 15		Х					Х					Х					X		
Anions by Kone (w)		NDPs: 0 Tests: 15	Х					X					Х					X			
Conductivity (at 20 deg.C)		NDPs: 0 Tests: 15	Х					Х					х					Х			
Dissolved Metals by ICP-MS		NDPs: 0 Tests: 15			Х					Х					X					Х	
Nitrite by Kone (w)		NDPs: 0 Tests: 15					X					X					X				
pH Value		NDPs: 0 Tests: 15	Х					Х					Х					Х			
Phosphate by Kone (w)		NDPs: 0 Tests: 15	Х					Х					х					Х			
Suspended Solids		NDPs: 0 Tests: 15	Х					Х					х					Х			
Total Metals by ICP-MS		NDPs: 0 Tests: 15				X					X					X					Х

25720278					25/202/9					25720283					25720277					25720284
ALR 3B					And 1					And 2					And 3					And 4
NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	(ALE204)	(ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)
WS	WS	WS	V	2	S S	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
		X					Х					Х					Х			
	Х					X					Х					Х				
	х					X					Х					х				
			X					Х					Х					Х		
Х					X					X					X					X
	X					X					Х					X				
	Х					X					Х					X				
	Х					X					Х					Х				
				X					X					Х					X	

CERTIFICATE OF ANALYSIS

SDG: 220128-60

Report Number: 631783 Client Ref.: Non Micro Water Testing Location: Alresford

Results Legend X Test No Determination Possible	Lab Sample I	No(s)					25720281					25720271					25720275				25720265
Sample Types -	Custome Sample Refer						And 5					And 6					And 7				And 8
S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate	AGS Refere	nce																			
PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage	Depth (m)																			
RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Containe	r	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)
	Sample Ty	ре	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 15		Х					Х					Х					Х		
Anions by Kone (w)	All	NDPs: 0 Tests: 15	Х					X					Х					X			
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 15	х					Х					Х					Х			
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 15			X					Х					X					Х	
Nitrite by Kone (w)	All	NDPs: 0 Tests: 15					Х					Х					Х				
pH Value	All	NDPs: 0 Tests: 15	Х					х					Х					Х			
Phosphate by Kone (w)	All	NDPs: 0 Tests: 15	Х					х					Х					Х			
Suspended Solids	All	NDPs: 0 Tests: 15	Х					X					х					Х			
Total Metals by ICP-MS	All	NDPs: 0 Tests: 15				X					Х					X					Х

				Х						WS	NaOH (ALE245)		And 8	25720265
	X	Х	Х			X	Х	Х		WS	500ml Plastic (ALE208)			
									Х	WS	ٺ			
					Х					V	(ALE204)			
2										2	(ALE204)			
X										WS	be			
				X						WS	NaOH (ALE245)		And 9	25720268
	X	X	X			X	X	X			(ALE208)			
										WS	500ml Plastic			
									X	WS	H2SO4 (ALE244)			
					X					WS	HNO3 Filtered (ALE204)			
X										WS	HNO3 Unfiltered (ALE204)			
				X						WS	NaOH (ALE245)		And 10	25720273
	X	X	X			X	Х	X		WS	500ml Plastic (ALE208)			
									X	WS	H2SO4 (ALE244)			
					Х					WS	HNO3 Filtered (ALE204)			
X										WS	HNO3 Unfiltered (ALE204)			
				X						WS	NaOH (ALE245)		And 11	25720267



SDG: 220128-60

Client Ref.: Non Micro Water Testing

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Location: Alresford

Results Legend # ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample.		Customer Sample Ref.	ALR 1	ALR 2	ALR 3A	ALR 3B	And 1	And 2
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Depth (m) Sample Type	Surface Water (SW)					
 Subcontracted - refer to subcontractor report for accreditation status. 		Date Sampled	27/01/2022	27/01/2022	27/01/2022	27/01/2022	27/01/2022	27/01/2022
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual		Sample Time Date Received	11:00:00 28/01/2022	11:00:00 28/01/2022	10:00:00 28/01/2022	10:00:00 28/01/2022	08:30:00 28/01/2022	08:30:00 28/01/2022
compounds within samples aren't corrected for the recovery	'	SDG Ref	220128-60	220128-60	220128-60	220128-60	220128-60	220128-60
(F) Trigger breach confirmed 1-4+§@ Sample deviation (see appendix)		Lab Sample No.(s) AGS Reference	25720272	25720269	25720276	25720278	25720279	25720283
Component	LOD/Units		•	2				45
Suspended solids, Total	<2 mg/l	TM022	<2 #	<2 #	<2 #	<2 #	<2 #	15 #
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	<0.2 #	<0.2 #	<0.2 #	<0.2 #	<0.2 #	<0.2 #
Conductivity @ 20 deg.C	<0.02 mS/cm	TM120	0.514 #	0.51 #	0.546 #	0.504 #	0.476 #	0.492 #
Phosphorus (tot.unfilt)	<20 µg/l	TM152	40.9 #	53.1 #	23.7 #	36 #	26.8 #	43.2 #
Zinc (diss.filt)	<1 µg/l	TM152	1.62 #	3.33 #	1.96 #	1.15 #	1.64 #	3.55 #
Magnesium (Dis.Filt)	<0.036 mg	/I TM152	1.74	1.76 #	2.01	1.84	1.55 #	1.68
Potassium (Dis.Filt)	<0.2 mg/l	TM152	0.968	1.06	0.696 #	0.847 #	0.828 #	0.94 #
Iron (Dis.Filt)	<0.019 mg	/I TM152	<0.019 #	<0.019 #	<0.019 #	<0.019 #	<0.019 #	<0.019 #
Nitrite as NO2	<0.05 mg/	I TM184	<0.05	<0.05	<0.05 #	<0.05 #	<0.05	<0.05
Phosphate (Ortho as PO4)	<0.05 mg/	I TM184	0.051	0.092	0.052 #	<0.05 #	<0.05 #	0.077 #
Nitrate as NO3	<0.3 mg/l	TM184	31.4	30.8	33.9	32.7	32.5	35.4
Total Oxidised Nitrogen as N	<0.1 mg/l	TM184	7.11	6.97	7.67	7.4	7.34 #	8.01 #
рН	<1 pH Unit	s TM256	7.4 #	7.98	7.36 #	7.78 #	7.56 #	7.97 #
			#	#	#	#	#	#



SDG: 220128-60

Client Ref.: Non Micro Water Testing

Report Number: 631783 Location: Alresford

Results Legend		Customer Sample Ref.	And 3	And 4	And 5	And 6	And 7	And 8
# ISO17025 accredited. M mCERTS accredited.								
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.		Depth (m)						
tot.unfilt Total / unfiltered sample.		Sample Type	Surface Water (SW)					
 Subcontracted - refer to subcontractor report for accreditation status. 		Date Sampled	27/01/2022	27/01/2022	27/01/2022	27/01/2022	27/01/2022	27/01/2022
** % recovery of the surrogate standard to check the		Sample Time	08:30:00	08:30:00	08:30:00	12:30:00	12:30:00	12:30:00
efficiency of the method. The results of individual compounds within samples aren't corrected for the		Date Received	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
recovery		SDG Ref	220128-60 25720277	220128-60 25720284	220128-60 25720281	220128-60 25720271	220128-60 25720275	220128-60 25720265
(F) Trigger breach confirmed 1-4+§@ Sample deviation (see appendix)		Lab Sample No.(s) AGS Reference	25120211	23/20204	20/20201	20120211	23120213	25120205
Component	LOD/Unit							
Suspended solids, Total	<2 mg/l	TM022	14.6	2.4	4.6	8.05	2.65	<2
			#	#	#	#	#	#
Ammoniacal Nitrogen as N	<0.2 mg/	'I TM099	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	-0.2 mg/	1 1111000	#	#	#	#	#	#
Conductivity @ 20 deg.C	<0.02	TM120	0.531	0.585	0.442	0.482	0.47	0.462
Conductivity @ 20 deg.C		1101120					l	
	mS/cm		#	#	#	#	#	#
Phosphorus (tot.unfilt)	<20 µg/l	I TM152	121	38	749	67.1	105	46
			#	#	#	#	#	#
Zinc (diss.filt)	<1 µg/l	TM152	3.15	3.12	4.75	3.36	2.21	1.79
	13		#	#	#	#	#	#
Magnesium (Dis.Filt)	<0.036 mg	g/l TM152	1.76	1.74	1.49	1.56	1.54	1.44
wagnesium (Dis.r iit)	~0.030 IIIQ	g/i 11V1132					l	
			#	#	#	#	#	#
Potassium (Dis.Filt)	<0.2 mg/	I TM152	1.51	0.702	1.55	1.62	2.02	0.885
			#	#	#	#	#	#
Iron (Dis.Filt)	<0.019 mg	g/l TM152	<0.019	0.0243	<0.019	<0.019	<0.019	<0.019
` ′	3.0.70 1118	·v_	4.015	#	4	4.0.013	40.013	4 4
Nitrite as NO2	ZO OF	// TM404						
Nitrite as NO2	<0.05 mg	/I TM184	0.118	0.068	0.068	<0.05	0.089	<0.05
			#	#	#	#	#	#
Phosphate (Ortho as PO4)	<0.05 mg	/I TM184	0.13	0.088	1.31	0.079	0.128	0.085
			#	#	#	#	#	#
Nitrate as NO3	<0.3 mg/	'I TM184	29.1	39.7	42.8	29.2	29.4	30
	·o.o mg/	1 1111101	20.1	00.1	12.0	20.2	20.1	
T. LO. F. LINE.	0.4		2.00	2.00	0.7	2.2	0.00	0.70
Total Oxidised Nitrogen as N	<0.1 mg/	'I TM184	6.62	8.99	9.7	6.6	6.68	6.78
			#	#	#	#	#	#
pH	<1 pH Uni	its TM256	7.57	7.78	8.11	7.98	7.72	7.84
			#	#	#	#	#	#
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SDG: 220128-60

Client Ref.: Non Micro Water Testing

Report Number: 631783

Location: Alresford

Results Legend		Customer Sample Ref.	And 9	And 10	A-J 11		
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. Subcontracted - refer to subcontractor report for		Depth (m) Sample Type	Surface Water (SW)	Surface Water (SW)	And 11 . Surface Water (SW)		
accreditation status. " % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		Date Sampled Sample Time Date Received SDG Ref	27/01/2022 12:30:00 28/01/2022 220128-60 25720268	27/01/2022 12:30:00 28/01/2022 220128-60 25720273	27/01/2022 12:30:00 28/01/2022 220128-60 25720267		
(F) Trigger breach confirmed 1-4+§@ Sample deviation (see appendix)		Lab Sample No.(s) AGS Reference	23720200	25/202/3	23720207		
Component	LOD/Un	its Method					
Suspended solids, Total	<2 mg/	/I TM022	<2 #	<2 #	2.6 #		
Ammoniacal Nitrogen as N	<0.2 mg	g/I TM099	<0.2	<0.2	<0.2		
Conductivity @ 20 deg.C	<0.02 mS/cm		0.459 #	0.468 #	0.454 #		
Phosphorus (tot.unfilt)	<20 µg	/l TM152	42.9 #	48.6 #	61.9 #		
Zinc (diss.filt)	<1 µg/	/I TM152	1.33 #	7.26 #	3.01 #		
Magnesium (Dis.Filt)	<0.036 n	ng/l TM152	1.41 #	1.46 #	1.41 #		
Potassium (Dis.Filt)	<0.2 mg	g/l TM152	1.07 #	0.843 #	0.869 #		
Iron (Dis.Filt)	<0.019 n	ng/l TM152	<0.019 #	<0.019 #	<0.019 #		
Nitrite as NO2	<0.05 m	g/l TM184	<0.05	<0.05	<0.05 #		
Phosphate (Ortho as PO4)	<0.05 m	g/l TM184	0.09	0.076 #	0.112 #		
Nitrate as NO3	<0.3 mg	g/l TM184	28.9	30.3	29.8		
Total Oxidised Nitrogen as N	<0.1 mg	g/I TM184	6.54 #	6.85 #	6.73 #		
рН	<1 pH Ur	nits TM256	8.33 #	7.86 #	8.06		
			·		<u>"</u>		
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 SDG:
 220128-60
 Report Number:
 631783

 Client Ref.:
 Non Micro Water Testing
 Location:
 Alresford

Superseded Report:

Table of Results - Appendix

Method No	Reference	Description
TM022	Method 2540D, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part120 1981;BS EN 872	Determination of total suspended solids in waters
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM152	ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS



SDG: 220128-60

Client Ref.: Non Micro Water Testing

Report Number: 631783 Location: Alresford Superseded Report:

Test Completion Dates

				p. 0 t. 0 .	. D uto					
Lab Sample No(s)	25720272	25720269	25720276	25720278	25720279	25720283	25720277	25720284	25720281	25720271
Customer Sample Ref.	ALR 1	ALR 2	ALR 3A	ALR 3B	And 1	And 2	And 3	And 4	And 5	And 6
AGS Ref.										
Depth										
Туре	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water				
Ammoniacal Nitrogen	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	02-Feb-2022	01-Feb-2022	01-Feb-2022	02-Feb-2022	02-Feb-2022	01-Feb-2022
Anions by Kone (w)	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022
Conductivity (at 20 deg.C)	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022
Dissolved Metals by ICP-MS	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022
Nitrite by Kone (w)	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022
pH Value	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022
Phosphate by Kone (w)	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022
Suspended Solids	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022
Total Metals by ICP-MS	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022

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Lab Sample No(s)	25720275	25720265	25720268	25720273	25720267
Customer Sample Ref.	And 7	And 8	And 9	And 10	And 11
AGS Ref.					
Depth					
Туре	Surface Water				
Ammoniacal Nitrogen	01-Feb-2022	01-Feb-2022	01-Feb-2022	02-Feb-2022	01-Feb-2022
Anions by Kone (w)	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022
Conductivity (at 20 deg.C)	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022
Dissolved Metals by ICP-MS	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022
Nitrite by Kone (w)	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022
pH Value	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022
Phosphate by Kone (w)	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022	29-Jan-2022
Suspended Solids	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022	30-Jan-2022
Total Metals by ICP-MS	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022	01-Feb-2022



 SDG:
 220128-60
 Client Reference:
 Non Micro Water Testing Report Number:
 Report Number:
 631783

 Location:
 Alresford
 Order Number:
 B10109990
 Superseded Report:

Appendix

General

- 1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.
- 2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.
- 3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.
- 6. NDP No determination possible due to insufficient/unsuitable sample.
- 7. Results relate only to the items tested.
- 8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.
- 9. Surrogate recoveries Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.
- 10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.
- 13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.
- 14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.
- 16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "nixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
•	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbe stos Type	Common Name
Chrysof le	WhiteAsbests
Amosite	Brown Asbestos
Cro a dolite	Blue Asbe stos
Fibrous Act nolite	-
Fib to us Anthop hyll ite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 μ m diameter, longer than 5 μ m and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Unit 7-8 Hawarden Business Park Manor Road (off Manor Lane) Hawarden Deeside CH5 3US

> Tel: (01244) 528700 Fax: (01244) 528701

email: hawardencustomerservices@alsglobal.com

Website: www.alsenvironmental.co.uk

Vitacress Salads Ltd Lower Lane Farm St Mary Bourne Andover SP11 6AT

Attention: Doreen Hall

CERTIFICATE OF ANALYSIS

Date of report Generation:04 March 2022Customer:Vitacress Salads Ltd

Sample Delivery Group (SDG): 220225-54

Your Reference: Non Micro Water Testing

 Location:
 Andover

 Report No:
 636258

 Order Number:
 B10110903

We received 13 samples on Friday February 25, 2022 and 13 of these samples were scheduled for analysis which was completed on Friday March 04, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan
Operations Manager





CERTIFICATE OF ANALYSIS



SDG: 220225-54 Client Ref.: Non Micro Water Testing Report Number: 636258 Location: Andover Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
25879598	ALR 5A			24/02/2022
25879600	ALR 5B			24/02/2022
25879576	AND 1			24/02/2022
25879577	AND 2			24/02/2022
25879579	AND 3			24/02/2022
25879581	AND 4			24/02/2022
25879583	AND 5			24/02/2022
25879585	AND 6			24/02/2022
25879588	AND 7			24/02/2022
25879590	AND 8			24/02/2022
25879591	AND 9			24/02/2022
25879595	AND 10			24/02/2022
25879597	AND 11			24/02/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

Superseded Report:

CERTIFICATE OF ANALYSIS

ALS

SDG: 220225-54 Report Number: 636258
Client Ref.: Non Micro Water Testing Location: Andover

Results Legend 25879598 25879600 25879576 25879577 Lab Sample No(s) X Test No Determination Possible Customer ALR 5A ALR 5B AND 1 AND 2 Sample Reference Sample Types -S - Soil/Solid UNS - Unspecified Solid GW - Ground Water **AGS Reference** SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water Depth (m) TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water HNO3 Unfiltered (ALE204) HNO3 Filtered (ALE204) H2SO4 (ALE244) HNO3 Unfiltered (ALE204) 500ml Plastic (ALE208) NaOH (ALE245) HNO3 Unfiltered (ALE204) HNO3 Filtered (ALE204) H2SO4 (ALE244) HNO3 Unfiltered (ALE204) NaOH (ALE245) H2SO4 (ALE244) H2SO4 (ALE244) NaOH (ALE245) HNO3 Filtered (ALE204) HNO3 Filtered (ALE204) 500ml Plastic (ALE208) 500ml Plastic (ALE208) DW - Drinking Water Non-regulatory 500ml Plastic (ALE208) UNL - Unspecified Liquid SL - Sludge Container G - Gas OTH - Other Sample Type WS Ammoniacal Nitrogen All NDPs: 0 Tests: 13 Х Х Χ Χ Anions by Kone (w) NDPs: 0 Tests: 13 X Χ Χ X Conductivity (at 20 deg.C) All NDPs: 0 Tests: 13 X X X X Dissolved Metals by ICP-MS All NDPs: 0 Tests: 13 Х X Χ Х Nitrite by Kone (w) All NDPs: 0 Tests: 13 Χ Х Χ pH Value All NDPs: 0 Tests: 13 X Х X Х All Phosphate by Kone (w) NDPs: 0 Tests: 13 Х X Х Х Suspended Solids All NDPs: 0 Tests: 13 Χ X Χ Χ Total Metals by ICP-MS All NDPs: 0 Tests: 13 Χ Χ Χ Χ

25879577					25879579					25879581					25879583					25879585
AND 2					AND 3					AND 4					AND 5					AND 6
NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	(ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)
WS	WS	WS	WS	SW	WS	WS	WS	WS	SW	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
		X					X					Х					Х			
	Х					Х					X					Х				
	X					Х					X					X				
			Х					X					Х					Х		
X					X					X					X					X
	Х					X					X					Х				
	**					3.5										Nr.				
	X					Х					X					X				
	X					Х					X					X				
				X					Х					X					X	

Superseded Report:

CERTIFICATE OF ANALYSIS

ALS

 SDG:
 220225-54
 Report Number:
 636258

 Client Ref.:
 Non Micro Water Testing
 Location:
 Andover

Results Legend 25879588 25879590 25879591 25879595 Lab Sample No(s) X Test No Determination Possible Customer AND 9 AND 10 AND 8 AND Sample Reference Sample Types -S - Soil/Solid UNS - Unspecified Solid GW - Ground Water **AGS Reference** SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water Depth (m) TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water HNO3 Filtered (ALE204) H2SO4 (ALE244) HNO3 Unfiltered (ALE204) HNO3 Unfiltered (ALE204) HNO3 Unfiltered (ALE204) HNO3 Filtered (ALE204) 500ml Plastic (ALE208) NaOH (ALE245) HNO3 Unfiltered (ALE204) H2SO4 (ALE244) H2SO4 (ALE244) H2SO4 (ALE244) NaOH (ALE245) HNO3 Filtered (ALE204) NaOH (ALE245) 500ml Plastic (ALE208) HNO3 Filtered (ALE204) 500ml Plastic (ALE208) 500ml Plastic (ALE208) DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge Container G - Gas OTH - Other Sample Type WS Ammoniacal Nitrogen All NDPs: 0 Tests: 13 X X Χ Χ Anions by Kone (w) All NDPs: 0 Tests: 13 Х X Х X Conductivity (at 20 deg.C) All NDPs: 0 Tests: 13 Х Х X Х Dissolved Metals by ICP-MS All NDPs: 0 Tests: 13 Х Х Х Χ Nitrite by Kone (w) All NDPs: 0 Tests: 13 Χ Х Χ All pH Value NDPs: 0 Tests: 13 Χ Х Х Χ Phosphate by Kone (w) All NDPs: 0 Tests: 13 Χ Χ Suspended Solids All NDPs: 0 Tests: 13 X X X X Total Metals by ICP-MS All NDPs: 0 Tests: 13 Χ Х Χ Χ

				X						WS	NaOH (ALE245)		AND 10	25879595
	X	X	X			X	Х			WS	500ml Plastic (ALE208)			
								^	X	WS	H2SO4 (ALE244)			
					X					WS	HNO3 Filtered (ALE204)			
X										WS	HNO3 Unfiltered (ALE204)			
				X						WS	NaOH (ALE245) SW		AND 11	25879597



SDG: 220225-54

Client Ref.: Non Micro Water Testing

Report Number: 636258

Location: Andover

Results Legend # ISO17025 accredited.		Customer Sample Ref.	ALR 5A	ALR 5B	AND 1	AND 2	AND 3	AND 4
M mCERTS accredited. aq Aqueous / settled sample.								
diss.filt Dissolved / filtered sample.		Depth (m)						
tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for		Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
accreditation status.		Date Sampled	24/02/2022	24/02/2022	24/02/2022	24/02/2022	24/02/2022	24/02/2022
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual		Sample Time Date Received	10:00:00 25/02/2022	10:00:00 25/02/2022	08:30:00 25/02/2022	08:30:00 25/02/2022	08:30:00 25/02/2022	08:30:00 25/02/2022
compounds within samples aren't corrected for the	,	SDG Ref	220225-54	220225-54	220225-54	220225-54	220225-54	220225-54
recovery (F) Trigger breach confirmed		Lab Sample No.(s)	25879598	25879600	25879576	25879577	25879579	25879581
1-4+§@ Sample deviation (see appendix)		AGS Reference						
Component	LOD/Units	s Method						
Suspended solids, Total	<2 mg/l	TM022	<4	<2	<4	4.1	9.55	15.2
	_		#	#	#	#	#	#
Ammoniacal Nitrogen as N	<0.2 mg/l	I TM099	<0.2	<0.2	<0.2	<0.2	<0.2	6.87
r annionacean rate egen de re	10.2 mg/i	1 110000	#		**************************************	**************************************	#	#
				#				
Conductivity @ 20 deg.C	<0.02	TM120	0.51	0.504	0.49	0.464	0.51	0.731
	mS/cm		#	#	#	#	#	#
Phosphorus (tot.unfilt)	<20 µg/l	TM152	20.6	27.7	<20	52	139	4980
			#	#	#	#	#	#
Zinc (diss.filt)	<1 ug/l	TM152	3.72	3.33	3.01	2.39	3.2	25
Ziric (diss.iiit)	<1 µg/l	1101152						
			#	#	#	#	#	#
Magnesium (Dis.Filt)	<0.036 mg	g/l TM152	2.03	2.02	1.82	1.74	1.84	3.41
			#	#	#	#	#	#
Potassium (Dis.Filt)	<0.2 mg/l	I TM152	0.856	0.887	0.935	1.13	1.3	13.9
, "	Jg/		#	#	#	#	#	10.5
Iron (Die Filh)	10.010	.0 754450						
Iron (Dis.Filt)	<0.019 mg	g/I TM152	<0.019	<0.019	<0.019	<0.019	<0.019	0.0342
			#	#	#	#	#	#
Nitrite as NO2	<0.05 mg/	/I TM184	<0.05	<0.05	<0.05	<0.05	0.126	0.621
		"	#		#	#	#	#
Phosphate (Ortho as PO4)	حم ٥٠	/I TM404						
FIIOSPITALE (OTLITO AS PO4)	<0.05 mg/	/I TM184	<0.05	0.06	<0.05	0.084	0.163	13.9
			#	#	#	#	#	#
Phosphate (Ortho as P)	<0.02 mg/	/I TM184	< 0.02	<0.02	<0.02	0.0274	0.0532	4.54
	· ·		#	#	#	#	#	#
Nitrate as NO3	<0.3 mg/l	I TM184	27.1	29.1	44	35.5	31.1	41.4
Wildle as 1400	<0.5 mg/i	1 1101104	21.1	23.1	**	33.3	31.1	41.4
Total Oxidised Nitrogen as N	<0.1 mg/l	I TM184	6.12	6.58	9.95	8.04	7.08	9.55
			#	#	#	#	#	#
pH	<1 pH Unit	ts TM256	7.58	8.23	8.1	8.14	8.35	8.01
r	1 pi i oiiii	13 1101200				#		
			#	#	#	#	#	#
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		1 7						
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		+ +						
		 						
		+						
		+						



SDG: 220225-54
Client Ref.: Non Micro Water Testing

Report Number: 636258

Location: Andover

Results Legend # ISO17025 accredited.		Customer Sample Ref.	AND 5	AND 6	AND 7	AND 8	AND 9	AND 10
M mCERTS accredited. aq Aqueous / settled sample.								
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Depth (m)						
* Subcontracted - refer to subcontractor report for		Sample Type Date Sampled	Surface Water (SW) 24/02/2022	Surface Water (SW) 24/02/2022	Surface Water (SW) 24/02/2022	Surface Water (SW) 24/02/2022	Surface Water (SW) 24/02/2022	Surface Water (SW) 24/02/2022
accreditation status. ** % recovery of the surrogate standard to check the		Sample Time	08:30:00	12:30:00	12:30:00	12:30:00	12:30:00	12:30:00
efficiency of the method. The results of individual		Date Received	25/02/2022	25/02/2022	25/02/2022	25/02/2022	25/02/2022	25/02/2022
compounds within samples aren't corrected for the recovery	'	SDG Ref	220225-54	220225-54	220225-54	220225-54	220225-54	220225-54
(F) Trigger breach confirmed 1-4+§@ Sample deviation (see appendix)		Lab Sample No.(s) AGS Reference	25879583	25879585	25879588	25879590	25879591	25879595
Component	LOD/Units							
Suspended solids, Total	<2 mg/l	TM022	9.25	6.05	2.95	<2	<2	<2
	g/.		#	#	#	- #	- #	- #
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
7 thinionadar vitti ogon do 14	<0.2 mg/i	110000	**************************************	*U.Z	**************************************	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	**************************************	\\.\Z
Conductivity @ 20 dos C	-0.00	TN4400						
Conductivity @ 20 deg.C	<0.02	TM120	0.357	0.467	0.424	0.475	0.422	0.448
7	mS/cm		#	#	#	#	#	#
Phosphorus (tot.unfilt)	<20 µg/l	TM152	958	62.4	52.5	31.7	73.7	38.8
			#	#	#	#	#	#
Zinc (diss.filt)	<1 µg/l	TM152	8.11	5.01	3.87	15.7	<1	1.97
			#	#	#	#	#	#
Magnesium (Dis.Filt)	<0.036 mg/	/I TM152	1.33	1.71	1.59	1.54	1.64	1.52
			#	#	#	#	#	#
Potassium (Dis.Filt)	<0.2 mg/l	TM152	2.08	1.67	1.41	0.947	1.1	0.87
` '			#	#	#	#	#	#
Iron (Dis.Filt)	<0.019 mg/	/I TM152	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
(5.6)	יט.טיי וווא	,, 11V1132	~0.019 #	<0.019 #	~0.019 #	<0.019 #	<0.019 #	<0.019 #
Nitrite as NO2	-0.0F "	T14404						
Number as NOZ	<0.05 mg/l	I TM184	0.062	0.076	<0.05	<0.05	<0.05	<0.05
			#	#	#	#	#	#
Phosphate (Ortho as PO4)	<0.05 mg/l	I TM184	2.55	0.116	<0.05	<0.05	0.13	<0.05
			#	#	#	#	#	#
Phosphate (Ortho as P)	<0.02 mg/l	I TM184	0.833	0.0379	<0.02	<0.02	0.0424	<0.02
			#	#	#	#	#	#
Nitrate as NO3	<0.3 mg/l	TM184	48.5	30.7	29.6	31.3	29.8	32.6
						5		
Total Oxidised Nitrogen as N	<0.1 mg/l	TM184	11	6.95	6.69	7.08	6.73	7.38
Total Oxidiod Hillogoli do H	<0.1111g/1	1101104	#	0.95	#	7.00	0.75 #	7.50
-11	4 1111 2	T11050						
рН	<1 pH Unit	s TM256	8.24	8.25	8.37	8.29	8.36	8.08
			#	#	#	#	#	#
		+						
		_						
		+						
		-						
		1						

Superseded Report:

CERTIFICATE OF ANALYSIS



SDG: 220225-54

Client Ref.: Non Micro Water Testing

Report Number: 636258

Location: Andover

Results Legend		Cu	stomer Sample Ref.	AND 44			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. totumfilt Total / unfiltered sample. Subcontracted - refer to subcontractor report for accreditation status. * // recovery of the surrogate standard to check the efficiency of the method. The results of individual		- Cu	Depth (m) Sample Type Date Sampled Sample Time Date Received	AND 11 Surface Water (SW) 24/02/2022 12:30:00 25/02/2022			
compounds within samples aren't corrected for the recovery			SDG Ref	220225-54			
(F) Trigger breach confirmed 1-4+§@ Sample deviation (see appendix)			Lab Sample No.(s) AGS Reference	25879597			
Component	LOD/U	Inits	Method				
Suspended solids, Total	<2 m		TM022	3.2			
Ammoniacal Nitrogen as N	<0.21	mg/l	TM099	<0.2			
Conductivity @ 20 deg.C	<0.0 mS/c		TM120	0.46			
Phosphorus (tot.unfilt)	<20	µg/l	TM152	38.9			
Zinc (diss.filt)	<1 µ	ıg/l	TM152	12.4 #			
Magnesium (Dis.Filt)	<0.036	3 mg/l	TM152	1.58 #			
Potassium (Dis.Filt)	<0.21	mg/l	TM152	0.966 #			
Iron (Dis.Filt)	<0.019	mg/l	TM152	<0.019 #			
Nitrite as NO2	<0.05	mg/l	TM184	<0.05 #			
Phosphate (Ortho as PO4)	<0.05		TM184	<0.05 #			
Phosphate (Ortho as P)	<0.02		TM184	<0.02 #			
Nitrate as NO3	<0.3 ı	mg/l	TM184	32			
Total Oxidised Nitrogen as N	<0.1 ı	_	TM184	7.23 #			
рН	<1 pH	Units	TM256	8.32 #			

Superseded Report:



CERTIFICATE OF ANALYSIS

SDG:220225-54Report Number:636258Client Ref.:Non Micro Water TestingLocation:Andover

Table of Results - Appendix

Method No	Reference	Description
TM022	Method 2540D, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part120 1981;BS EN 872	Determination of total suspended solids in waters
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM152	ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

CERTIFICATE OF ANALYSIS

SDG: 220225-54 Client Ref.: Non Micro Water Testing Report Number: 636258

Location: Andover

Superseded Report:

Test Completion Dates

	_		ot Oom	pictioi	. Dutc.	9				_
Lab Sample No(s)	25879598	25879600	25879576	25879577	25879579	25879581	25879583	25879585	25879588	25879590
Customer Sample Ref.	ALR 5A	ALR 5B	AND 1	AND 2	AND 3	AND 4	AND 5	AND 6	AND 7	AND 8
AGS Ref.										
Depth										
Туре	Surface Water									
Ammoniacal Nitrogen	01-Mar-2022									
Anions by Kone (w)	03-Mar-2022									
Conductivity (at 20 deg.C)	02-Mar-2022									
Dissolved Metals by ICP-MS	28-Feb-2022									
Nitrite by Kone (w)	02-Mar-2022									
pH Value	01-Mar-2022	01-Mar-2022	28-Feb-2022	01-Mar-2022						
Phosphate by Kone (w)	26-Feb-2022									
Suspended Solids	04-Mar-2022	03-Mar-2022	04-Mar-2022	03-Mar-2022	03-Mar-2022	04-Mar-2022	03-Mar-2022	03-Mar-2022	03-Mar-2022	03-Mar-2022
Total Metals by ICP-MS	28-Feb-2022									

Total Metals by 101 -MO	20 1 00 2022	201002022	20 1 00 2022
Lab Sample No(s)	25879591	25879595	25879597
Customer Sample Ref.	AND 9	AND 10	AND 11
AGS Ref.			
Depth			
Туре	Surface Water	Surface Water	Surface Water
Ammoniacal Nitrogen	01-Mar-2022	01-Mar-2022	01-Mar-2022
Anions by Kone (w)	03-Mar-2022	03-Mar-2022	03-Mar-2022
Conductivity (at 20 deg.C)	02-Mar-2022	02-Mar-2022	02-Mar-2022
Dissolved Metals by ICP-MS	28-Feb-2022	28-Feb-2022	28-Feb-2022
Nitrite by Kone (w)	02-Mar-2022	02-Mar-2022	02-Mar-2022
pH Value	01-Mar-2022	01-Mar-2022	01-Mar-2022
Phosphate by Kone (w)	26-Feb-2022	26-Feb-2022	26-Feb-2022
Suspended Solids	03-Mar-2022	03-Mar-2022	03-Mar-2022
Total Metals by ICP-MS	28-Feb-2022	28-Feb-2022	28-Feb-2022



SDG:220225-54Client Reference:Non Micro Water TestingReport Number:636258Location:AndoverOrder Number:B10110903Superseded Report:

Appendix

General

- 1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.
- 2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.
- 3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
- 4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
- 5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.
- 6. NDP No determination possible due to insufficient/unsuitable sample.
- 7. Results relate only to the items tested.
- 8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content
- 9. Surrogate recoveries Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.
- 10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
- 11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
- 12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.
- 13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.
- 14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
- 15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.
- 16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
- 17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. Tentatively Identified Compounds (TICs) are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
•	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central

Asbe stos Type	Common Name
Chrysof le	WhiteAsbests
Amosite	Brown Asbestos
Cro a dolite	Blue Asbe stos
Fibrous Act nolite	-
Fib to us Anthop hyll ite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 μ m diameter, longer than 5 μ m and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.





Doreen Hall

Vitacress Salads Ltd Lower Link Farm St Mary Bourne Hampshire SP11 6DB i2 Analytical Ltd.
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Watford,
Herts,
WD18 8YS

t: 01923 225404 **f:** 01923 237404

e: reception@i2analytical.com

e: doreen.hall@vitacress.com

Analytical Report Number: 22-48076

Project / Site name: Samples received on: 28/03/2022

Your job number: Samples instructed on/ 28/03/2022

Analysis started on:

Your order number: B10111741 Analysis completed by: 01/04/2022

Report Issue Number: 1 **Report issued on:** 04/04/2022

Samples Analysed: 13 water samples

Signed:

Joanna Wawrzeczko

Technical Reviewer (Reporting Team)

For & on behalf of i2 Analytical Ltd.

Dawradio

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are : soils - 4 weeks from reporting

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

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

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

An estimate of measurement uncertainty can be provided on request.





Your Order No: B10111741

Your Order No: B10111741								
Lab Sample Number				2218096	2218097	2218098	2218099	2218100
Sample Reference				And 1	And 2	And 3	And 4	And 5
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled	Deviating	Deviating	Deviating	Deviating	Deviating			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	8.3	7.8	7.8	7.4	7.6
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	440	500	480	570	520
Total Phosphate as P	μg/l	20	ISO 17025	< 20	< 20	< 20	300	1600
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	-	< 15	130	< 15	420
Nitrate as N	mg/l	0.01	ISO 17025	7.84	8.4	6.62	9.75	21.9
Nitrite as N	μg/l	1	ISO 17025	< 1.0	4.2	52	11	440
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.8	8.4	6.7	9.8	22
Total Suspended Solids	mg/l	2	ISO 17025	-	12	3	11	210
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	0.007	0.005	0.005	0.009	0.008
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.7	1.9	2	2	2.2
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.9	1.2	2.1	1.8	4.9
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.6	2.9	3.7	5.3	9.7
Iron (total)	mg/l	0.004	ISO 17025	0.032	0.056	0.091	0.093	0.27
Phosphorus (total)	µg/l	20	ISO 17025	0.032	110	76	360	2300
Zinc (total)	μg/l	0.4	ISO 17025	19	110	34	18	2300 110
Zine (total)	F3/1	···	250 17 025	19	13	34	10	110
Magnesium (total)	mg/l	0.005	ISO 17025	1.9	2	2.1	2.2	2.6
Potassium (total)	mg/l	0.025	ISO 17025	1	2.2	2.1	1.9	5.3

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \ \text{Insufficient Sample}$





Your Order No: B10111741

Your Order No: B10111741								
Lab Sample Number				2218101	2218102	2218103	2218104	2218105
Sample Reference				And 6	And 7	And 8	And 9	ALR 1
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled	Deviating	Deviating	Deviating	Deviating	Deviating			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	7.8	8.1	7.5	7.9	7.5
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	490	450	490	440	540
Total Phosphate as P	μg/l	20	ISO 17025	43	< 20	< 20	< 20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	29	32	< 15	< 15	< 15
Nitrate as N	mg/l	0.01	ISO 17025	7.22	6.62	7.23	6.41	7.72
Nitrite as N	μg/l	1	ISO 17025	26	24	< 1.0	7.7	< 1.0
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.2	6.6	7.2	6.4	7.7
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	3	< 2.0	< 2.0	< 2.0
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	< 0.004	< 0.004	0.005	0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.7	1.7	1.6	1.5	2
Potassium (dissolved)	mg/l	0.025 0.4	ISO 17025 ISO 17025	1.7	1.6	1	1	1.1
Zinc (dissolved)	μg/l	0.4	150 17025	4.5	5	4.4	3	4.9
Iron (total)	mg/l	0.004	ISO 17025	0.016	0.022	0.013	0.02	0.008
Phosphorus (total)	µg/l	20	ISO 17025	55	30	39	38	32
Zinc (total)	μg/I	0.4	ISO 17025	5.2	21	23	50	9.6
zine (otal)	F 31 .	-	1	J.2	21	23	30	5.0
Magnesium (total)	mg/l	0.005	ISO 17025	1.9	1.9	1.7	1.7	2.1
Potassium (total)	mg/l	0.025	ISO 17025	1.8	1.7	1.2	1.1	1.4

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \ \text{Insufficient Sample}$





Your Order No: B10111741

Lab Sample Number	2218106	2218107	2218108			
Sample Reference				ALR 2	ALR 3A	ALR 3B
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status			
General Inorganics						
рН	pH Units	N/A	ISO 17025	7.8	8.1	7.5
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	530	420	540
Total Phosphate as P	μg/l	20	ISO 17025	< 20	< 20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	-	< 15
Nitrate as N	mg/l	0.01	ISO 17025	7.37	7.36	6.71
Nitrite as N	μg/l	1	ISO 17025	6.5	4.7	3.9
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.4	7.4	6.7
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	-	< 2.0
Heavy Metals / Metalloids						
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	0.012	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	2	1.9	2.5
Potassium (dissolved)	mg/l	0.025	ISO 17025	1	1.6	0.96
Zinc (dissolved)	μg/l	0.4	ISO 17025	3.2	4.3	4.4
Iron (total)	mg/l	0.004	ISO 17025	0.013	0.013	0.01
Phosphorus (total)	μg/l	20	ISO 17025	36	< 20	27
Zinc (total)	μg/l	0.4	ISO 17025	9.5	9.7	12
		0.005	**************************************		_	_
Magnesium (total)	mg/l	0.005	ISO 17025	2.1	2	2.5

mg/l

0.025

ISO 17025

1.7

 $\label{eq:U/S} \mbox{U/S} = \mbox{Unsuitable Sample} \hspace{0.5cm} \mbox{I/S} = \mbox{ Insufficient Sample}$

Potassium (total)





Project / Site name:

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C- 04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08,	L078-PL	W	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.	and Wastewater 20th Edition: Clesceri, Greenberg	L082-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

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

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

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

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

Sample Deviation Report



Analytical Report Number: 22-48076

Project / Site name:

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.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
ALR 1	None Supplied	W	2218105	a	None Supplied	None Supplied	None Supplied
ALR 2	None Supplied	W	2218106	a	None Supplied	None Supplied	None Supplied
ALR 3A	None Supplied	W	2218107	a	None Supplied	None Supplied	None Supplied
ALR 3B	None Supplied	W	2218108	a	None Supplied	None Supplied	None Supplied
And 1	None Supplied	W	2218096	a	None Supplied	None Supplied	None Supplied
And 2	None Supplied	W	2218097	a	None Supplied	None Supplied	None Supplied
And 3	None Supplied	W	2218098	a	None Supplied	None Supplied	None Supplied
And 4	None Supplied	W	2218099	a	None Supplied	None Supplied	None Supplied
And 5	None Supplied	W	2218100	a	None Supplied	None Supplied	None Supplied
And 6	None Supplied	W	2218101	a	None Supplied	None Supplied	None Supplied
And 7	None Supplied	W	2218102	a	None Supplied	None Supplied	None Supplied
And 8	None Supplied	W	2218103	a	None Supplied	None Supplied	None Supplied
And 9	None Supplied	W	2218104	a	None Supplied	None Supplied	None Supplied





Doreen Hall

Vitacress Salads Ltd Lower Link Farm St Mary Bourne Hampshire SP11 6DB

Your order number:

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

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e: doreen.hall@vitacress.com e: reception@i2analytical.com

Analytical Report Number: 22-51479

Project / Site name: Samples received on: 13/04/2022

Your job number: Samples instructed on/ 13/04/2022

Analysis started on:

Analysis completed by: 22/04/2022

Report Issue Number: 1 **Report issued on:** 25/04/2022

Samples Analysed: 15 water samples

B10112440

Mertyme denger

Signed:

Martyna Langer 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.





Your Order No: B10112440

Your Order No: B10112440								
Lab Sample Number				2237003	2237004	2237005	2237006	2237007
Sample Reference				AND 1	AND 2	AND 3	AND 4	AND 5
Sample Number				None Supplied				
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Date Sampled		Deviating	Deviating	Deviating	Deviating	Deviating		
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	7.5	7.6	7.6	7.5	7.8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	470	480	440	580	530
Total Phosphate as P	μg/l	20	ISO 17025	< 20	< 20	< 20	1100	2200
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	17	75	5000	300
Nitrate as N	mg/l	0.01	ISO 17025	9.1	8.1	6.22	7.81	20.7
Nitrite as N	μg/l	1	ISO 17025	< 1.0	37	54	77	220
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	9.1	8.1	6.3	7.9	21
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	6	< 2.0	8	54
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	0.006	0.008	0.063	0.018	0.02
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.8	1.8	1.8	2.3	2.6
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.95	1.4	1.5	4.8	7
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.6	4	4.4	13	18
Iron (total)	mg/l	0.004	ISO 17025	0.008	0.022	0.083	0.051	0.13
Phosphorus (total)	μg/l	20	ISO 17025	31	78	73	1300	2600
Zinc (total)	μg/l	0.4	ISO 17025	11	5.2	4.4	23	80
								-
Magnesium (total)	mg/l	0.005	ISO 17025	1.9	1.9	1.9	2.3	2.7
Potassium (total)	mg/l	0.025	ISO 17025	0.99	1.6	1.7	4.9	7.4

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





Your Order No: B10112440

Lab Sample Number				2237008	2237009	2237010	2237011	2237012
Sample Reference				AND 6	AND 7	AND 8	AND 9	AND 10
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled	Deviating	Deviating	Deviating	Deviating	Deviating			
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.9	8	7.4	7.8	7.8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	440	430	440	370	390
Total Phosphate as P	μg/l	20	ISO 17025	< 20	< 20	< 20	< 20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	< 15	< 15	< 15	< 15
Nitrate as N	mg/l	0.01	ISO 17025	7.11	6.88	7.12	6.32	6.63
Nitrite as N	μg/l	1	ISO 17025	< 1.0	12	< 1.0	27	1.5
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.1	6.9	7.1	6.4	6.6
Total Suspended Solids	mg/l	2	ISO 17025	4	2	< 2.0	6	4
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	0.012	0.012	0.005	0.008	0.005
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.6	1.6	1.6	1.5	1.5
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.3	1.4	0.84	0.9	1.1
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.7	3.2	2.6	4.3	3
Iron (total)	mg/l	0.004	ISO 17025	0.026	0.036	0.005	0.018	0.018
Phosphorus (total)	μg/l	20	ISO 17025	64	82	40	96	43
Zinc (total)	μg/l	0.4	ISO 17025	12	12	2.7	6.1	14
Magnesium (total)	mg/l	0.005	ISO 17025	1.8	1.7	1.6	1.6	1.6
Potassium (total)	mg/l	0.025	ISO 17025	1.6	1.4	0.89	0.93	1.2

 $\label{eq:U/S} \mbox{U/S} = \mbox{Unsuitable Sample} \hspace{0.5cm} \mbox{I/S} = \mbox{Insufficient Sample}$





Your Order No: B10112440

Your Order No: B10112440								
Lab Sample Number				2237013	2237014	2237015	2237016	2237017
Sample Reference				AND 11	ALR 1	ALR 2	ALR 3A	ALR 3B
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.9	7.5	7.8	7.4	8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	390	420	410	420	420
Total Phosphate as P	μg/l	20	ISO 17025	< 20	< 20	< 20	< 20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	< 15	16	< 15	< 15
Nitrate as N	mg/l	0.01	ISO 17025	7.29	7.61	7.09	7.85	7.77
Nitrite as N	μg/l	1	ISO 17025	4.3	< 1.0	11	< 1.0	< 1.0
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.3	7.6	7.1	7.8	7.8
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	< 2.0	4	4	2
Heavy Metals / Metalloids Iron (dissolved)	mq/l	0.004	ISO 17025	0.007	0.011	0.016	< 0.004	0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.5	1.9	0.016 1.9	< 0.004	< 0.004 2
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.5	1.9	1.9	0.83	0.64
Zinc (dissolved)	μq/l	0.023	ISO 17025	4.9	3.9	2	2.2	3.3
Zinc (dissolved)	F-57 ·			4.9	3.9	2	2.2	3.3
Iron (total)	mg/l	0.004	ISO 17025	0.011	0.076	0.03	0.009	0.012
Phosphorus (total)	μg/l	20	ISO 17025	76	46	48	29	22
Zinc (total)	μg/l	0.4	ISO 17025	5.6	8.7	2.8	3.7	9.5
Magnesium (total)	mg/l	0.005	ISO 17025	1.7	2	1.9	2.1	2.1
Potassium (total)	mg/l	0.005	ISO 17025	1.7	1.1	1.9	0.9	0.64
rotassium (total)	9/1	1.020	100 17025	1./	1.1	1.1	0.9	0.04

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \ \text{Insufficient Sample}$





Project / Site name:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, Pr.W.(AI, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	w	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN- 82/C-04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton, analysis by discreet analyser.	L082-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

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

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

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

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

Sample Deviation Report



Analytical Report Number: 22-51479

Project / Site name:

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.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
ALR 1	None Supplied	W	2237014	а	None Supplied	None Supplied	None Supplied
ALR 2	None Supplied	W	2237015	а	None Supplied	None Supplied	None Supplied
ALR 3A	None Supplied	W	2237016	а	None Supplied	None Supplied	None Supplied
ALR 3B	None Supplied	W	2237017	а	None Supplied	None Supplied	None Supplied
AND 1	None Supplied	W	2237003	а	None Supplied	None Supplied	None Supplied
AND 10	None Supplied	W	2237012	а	None Supplied	None Supplied	None Supplied
AND 11	None Supplied	W	2237013	а	None Supplied	None Supplied	None Supplied
AND 2	None Supplied	W	2237004	а	None Supplied	None Supplied	None Supplied
AND 3	None Supplied	W	2237005	а	None Supplied	None Supplied	None Supplied
AND 4	None Supplied	W	2237006	а	None Supplied	None Supplied	None Supplied
AND 5	None Supplied	W	2237007	а	None Supplied	None Supplied	None Supplied
AND 6	None Supplied	W	2237008	a	None Supplied	None Supplied	None Supplied
AND 7	None Supplied	W	2237009	а	None Supplied	None Supplied	None Supplied
AND 8	None Supplied	W	2237010	a	None Supplied	None Supplied	None Supplied
AND 9	None Supplied	W	2237011	а	None Supplied	None Supplied	None Supplied





Doreen Hall

Vitacress Salads Ltd Lower Link Farm St Mary Bourne Hampshire SP11 6DB

Your order number:

i2 Analytical Ltd.
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e: doreen.hall@vitacress.com e: reception@i2analytical.com

Analytical Report Number: 22-61279

Project / Site name: Samples received on: 27/05/2022

Your job number: Samples instructed on/ 27/05/2022

Analysis started on:

Analysis completed by: 07/06/2022

Report Issue Number: 1 **Report issued on:** 07/06/2022

Samples Analysed: 15 water samples

B10114189

Mertyme dengin

Signed:

Martyna Langer 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.





Your Order No: B10114189

Tour Order No. B10114189								
Lab Sample Number				2292736	2292737	2292738	2292739	2292740
Sample Reference				AND 1	AND 2	AND 3	AND 4	AND 5
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.3	7.6	7.6	7.5	7.5
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	420	440	430	800	970
Total Phosphate as P	μg/l	20	ISO 17025	< 20	100	140	5500	4200
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	37	130	30000	25000
Nitrate as N	mg/l	0.01	ISO 17025	7.21	7.65	6.75	0.2	0.13
Nitrite as N	μg/l	1	ISO 17025	< 1.0	17	68	1300	2.8
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.2	7.7	6.8	1.5	0.13
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	5	< 2.0	36	2100
Heavy Metals / Metalloids					_			_
Iron (dissolved)	mg/l	0.004	ISO 17025	0.011	0.008	0.009	0.042	0.14
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.8	1.8	2.1	4.7	7.6
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.85	0.84	2.1	18	42
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.6	4.4	5.6	16	20
Iron (total)	mg/l	0.004	ISO 17025	0.029	0.046	0.045	0.071	2.5
Phosphorus (total)	μg/l	20	ISO 17025	20	110	140	7200	7200
Zinc (total)	μg/l	0.4	ISO 17025	5.7	46	70	78	1100
			·					
Magnesium (total)	mg/l	0.005	ISO 17025	2.1	2.1	2.2	4.8	8.5
Potassium (total)	mg/l	0.025	ISO 17025	1	1.3	2.3	22	44

 $\label{eq:U/S} \mbox{U/S} = \mbox{Unsuitable Sample} \hspace{0.5cm} \mbox{I/S} = \mbox{Insufficient Sample}$





Your Order No: B10114189

Tour Order No: B10114189								
Lab Sample Number				2292741	2292742	2292743	2292744	2292745
Sample Reference				AND 6	AND 7	AND 8	AND 9	AND 10
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	8	8.1	7.4	7.9	7.6
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	390	470	500	450	500
Total Phosphate as P	μg/l	20	ISO 17025	32	33	40	47	40
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	< 15	< 15	18	< 15
Nitrate as N	mg/l	0.01	ISO 17025	6.73	6.27	6.82	5.31	6.8
Nitrite as N	μg/l	1	ISO 17025	4.2	8.3	1.3	13	6.4
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	6.7	6.3	6.8	5.3	6.8
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	0.004	0.007	0.007	0.006	0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.7	1.7	1.6	1.6	1.6
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.2	1.2	1	0.57	0.85
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.4	4.6	6.3	8.5	6.1
Iron (total)	mg/l	0.004	ISO 17025	0.023	0.027	0.049	0.015	0.017
Phosphorus (total)	μg/l	20	ISO 17025	51	48	41	44	42
Zinc (total)	μg/l	0.4	ISO 17025	46	5.7	11	18	25
•								
Magnesium (total)	mg/l	0.005	ISO 17025	1.7	1.8	1.7	1.7	1.8
Potassium (total)	mg/l	0.025	ISO 17025	1.5	1.5	1.1	1.1	1.2





Your Order No: B10114189

Your Order No: B10114189								
Lab Sample Number				2292746	2292747	2292748	2292749	2292750
Sample Reference				AND 11	ALR 1	ALR 2	ALR 4A	ALR 4B
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	7.5	7.4	7.7	7.3	7.8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	490	540	530	530	520
Total Phosphate as P	μg/l	20	ISO 17025	38	< 20	42	< 20	31
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	19	< 15	33	< 15	22
Nitrate as N	mg/l	0.01	ISO 17025	6.66	7.55	6.76	9.55	9.09
Nitrite as N	μg/l	1	ISO 17025	17	4.1	48	2	5.9
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	6.7	7.6	6.8	9.6	9.1
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	< 2.0	< 2.0	< 2.0	8
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	0.004	< 0.004	0.006	0.004	0.008
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.7	2	2	2	1.9
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.86	1.1	1.1	1.1	1
Zinc (dissolved)	μg/l	0.4	ISO 17025	7	4.3	4.3	6	8.2
Iron (total)	mg/l	0.004	ISO 17025	0.021	0.018	0.018	0.045	0.024
Phosphorus (total)	μg/l	20	ISO 17025	36	38	43	32	< 20
Zinc (total)	μg/l	0.4	ISO 17025	23	41	12	12	45
Magnesium (total)	mg/l	0.005	ISO 17025	1.7	2.1	2.1	2.1	2
Potassium (total)	mg/l	0.025	ISO 17025	0.87	1.3	1.1	1.5	1.5





Project / Site name:

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(AI, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	w	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN- 82/C-04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton, analysis by discreet analyser.	L082-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

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

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

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

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



Project / Site name:

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.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
ALR 1	None Supplied	W	2292747	a	None Supplied	None Supplied	None Supplied
ALR 2	None Supplied	W	2292748	a	None Supplied	None Supplied	None Supplied
ALR 4A	None Supplied	W	2292749	a	None Supplied	None Supplied	None Supplied
ALR 4B	None Supplied	W	2292750	a	None Supplied	None Supplied	None Supplied
AND 1	None Supplied	W	2292736	a	None Supplied	None Supplied	None Supplied
AND 10	None Supplied	W	2292745	a	None Supplied	None Supplied	None Supplied
AND 11	None Supplied	W	2292746	a	None Supplied	None Supplied	None Supplied
AND 2	None Supplied	W	2292737	a	None Supplied	None Supplied	None Supplied
AND 3	None Supplied	W	2292738	a	None Supplied	None Supplied	None Supplied
AND 4	None Supplied	W	2292739	a	None Supplied	None Supplied	None Supplied
AND 5	None Supplied	W	2292740	a	None Supplied	None Supplied	None Supplied
AND 6	None Supplied	W	2292741	a	None Supplied	None Supplied	None Supplied
AND 7	None Supplied	W	2292742	a	None Supplied	None Supplied	None Supplied
AND 8	None Supplied	W	2292743	a	None Supplied	None Supplied	None Supplied
AND 9	None Supplied	W	2292744	a	None Supplied	None Supplied	None Supplied





Glyndwr Jones

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e: glyndwr.jones@vitacress.com

Your order number:

Analytical Report Number: 22-65424

Project / Site name: Samples received on: 17/06/2022

Your job number: Samples instructed on/ 17/06/2022

Analysis started on:

Analysis completed by: 27/06/2022

Report Issue Number: 1 **Report issued on:** 27/06/2022

Samples Analysed: 14 water samples

B10114974

Signed:

Joanna Wawrzeczko Reporting Specialist

For & on behalf of i2 Analytical Ltd.

Dewradio

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

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

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

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

An estimate of measurement uncertainty can be provided on request.





Your Order No: B10114974

Your Order No: B10114974								
Lab Sample Number				2316698	2316699	2316700	2316701	2316702
Sample Reference				AND1	AND2	AND3	AND4	AND6
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.6	7.9	7.9	7.5	7.8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	490	470	450	600	450
Total Phosphate as P	μg/l	20	ISO 17025	< 20	230	64	1800	30
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	120	25	64	8600	< 15
Nitrate as N	mg/l	0.01	ISO 17025	9.21	7.04	6.21	6.39	6.2
Nitrite as N	μg/l	1	ISO 17025	< 1.0	26	66	1600	28
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	9.2	7.1	6.3	8	6.2
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	< 2.0	< 2.0	3	< 2.0
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	0.007	0.009	0.012	0.017	0.023
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.9	2.3	2	2.5	1.8
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.95	1.1	1.2	5.6	1.8
Zinc (dissolved)	μg/l	0.4	ISO 17025	29	7.2	12	17	8.6
Iron (total)	mg/l	0.004	ISO 17025	0.011	0.012	0.037	0.028	0.046
Phosphorus (total)	μg/l	20	ISO 17025	32	230	92	2000	59
Zinc (total)	μg/l	0.4	ISO 17025	29	14	19	26	15
Magnesium (total)	mg/l	0.005	ISO 17025	1.9	2.5	2.1	2.7	2
Potassium (total)	mg/l	0.025	ISO 17025	1.5	2.1	2.5	6.7	1.8

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \ \text{Insufficient Sample}$





Your Order No: B10114974

Your Order No: B10114974								
Lab Sample Number				2316703	2316704	2316705	2316706	2316707
Sample Reference				AND7	AND8	AND9	AND10	AND11
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.9	7.5	7.9	7.7	7.7
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	400	400	350	390	360
Total Phosphate as P	μg/l	20	ISO 17025	< 20	22	71	28	67
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	30	< 15	75	< 15	54
Nitrate as N	mg/l	0.01	ISO 17025	5.83	6.51	4.09	6.57	5.04
Nitrite as N	μg/l	1	ISO 17025	20	< 1.0	25	2.4	18
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	5.8	6.5	4.1	6.6	5.1
Total Suspended Solids	mg/l	2	ISO 17025	2	< 2.0	< 2.0	< 2.0	3
Heavy Metals / Metalloids			100 17005					
Iron (dissolved)	mg/l	0.004	ISO 17025	0.016	0.005	0.006	0.005	0.005
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.8	1.6	1.6	1.6	1.6
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.3	1.2	1.6	1.1	1.1
Zinc (dissolved)	µg/l	0.4	ISO 17025	6.2	5.9	7.2	16	12
Iron (total)	mg/l	0.004	ISO 17025	0.017	0.016	0.017	0.016	0.02
Phosphorus (total)	μg/l	20	ISO 17025	34	34	97	46	100
Zinc (total)	μg/l	0.4	ISO 17025	15	34	12	21	41
Managaine (Askal)	ma/l	0.005	ISO 17025	1.0	1 7	1.0	1.6	1.0
Magnesium (total)	mg/l mg/l	0.005	ISO 17025	1.9	1.7	1.8	1.6	1.8
Potassium (total)	1119/1	0.023	130 1/023	1.5	2.2	3.6	2.2	2.2





Your Order No: B10114974

Lab Sample Number				2316708	2316709	2316710	2316711
Sample Reference				ALR1	ALR2	ALR 6A	ALR 6B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
General Inorganics							
pH	pH Units	N/A	ISO 17025	7.6	7.8	7.5	7.9
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	410	400	410	480
Total Phosphate as P	μg/l	20	ISO 17025	< 20	43	< 20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	27	< 15	18
Nitrate as N	mg/l	0.01	ISO 17025	7.21	6.16	7.41	6.84
Nitrite as N	μg/l	1	ISO 17025	< 1.0	20	< 1.0	14
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.2	6.2	7.4	6.9
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	< 2.0	< 2.0	3
Heavy Metals / Metalloids	mq/l	0.004	ISO 17025	0.000	0.005	0.04	0.005
Iron (dissolved)	mg/l	0.004	ISO 17025	0.006	0.005	0.01	0.005
Magnesium (dissolved)	mg/l	0.003	ISO 17025	1.2	2 1.5	2.2	2.3 1.7
Potassium (dissolved)	µg/l	0.023	ISO 17025		1.5	0.85	
Zinc (dissolved)	μ9/1	0.1	130 17023	11	16	13	14
Iron (total)	mg/l	0.004	ISO 17025	0.009	0.02	0.015	0.031
Phosphorus (total)	μg/l	20	ISO 17025	31	72	28	24
Zinc (total)	μg/l	0.4	ISO 17025	13	25	31	16
Magnesium (total)	mq/l	0.005	ISO 17025	2.1	2.2	2.3	2.4
Potassium (total)	mg/l	0.005	ISO 17025	1.5	1.7	0.94	3.1
rutassium (tutai)	19/1	0.023	130 17 023	1.5	1./	0.94	5.1

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \ \text{Insufficient Sample}$





Project / Site name:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(AI, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	w	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN- 82/C-04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton, analysis by discreet analyser.	L082-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

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

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

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

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

Sample Deviation Report



Analytical Report Number: 22-65424

Project / Site name:

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.

Sample ID	Other ID		Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
ALR 6A	None Supplied	W	2316710	a	None Supplied	None Supplied	None Supplied
ALR 6B	None Supplied	W	2316711	а	None Supplied	None Supplied	None Supplied
ALR1	None Supplied	W	2316708	а	None Supplied	None Supplied	None Supplied
ALR2	None Supplied	W	2316709	а	None Supplied	None Supplied	None Supplied
AND1	None Supplied	W	2316698	а	None Supplied	None Supplied	None Supplied
AND10	None Supplied	W	2316706	а	None Supplied	None Supplied	None Supplied
AND11	None Supplied	W	2316707	а	None Supplied	None Supplied	None Supplied
AND2	None Supplied	W	2316699	а	None Supplied	None Supplied	None Supplied
AND3	None Supplied	W	2316700	а	None Supplied	None Supplied	None Supplied
AND4	None Supplied	W	2316701	а	None Supplied	None Supplied	None Supplied
AND6	None Supplied	W	2316702	a	None Supplied	None Supplied	None Supplied
AND7	None Supplied	W	2316703	a	None Supplied	None Supplied	None Supplied
AND8	None Supplied	W	2316704	а	None Supplied	None Supplied	None Supplied
AND9	None Supplied	W	2316705	а	None Supplied	None Supplied	None Supplied





Doreen Hall

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Your order number:

Analytical Report Number: 22-74087

Project / Site name: Samples received on: 28/07/2022

Your job number: Samples instructed on/ 28/07/2022

Analysis started on:

Analysis completed by: 05/08/2022

Report Issue Number: 1 **Report issued on:** 05/08/2022

Samples Analysed: 15 water samples

B10116733

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.



Environmental Science

Analytical Report Number: 22-74087

Your Order No: B10116733

Tour Order No: B10116/33								
Lab Sample Number				2366180	2366181	2366182	2366183	2366184
Sample Reference				AND 1	AND 2	AND 3	AND 4	AND 5
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics			100 17005					
pH	pH Units	N/A	ISO 17025	7.5	7.8	7.9	7.8	7.8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	480	490	500	910	580
Total Phosphate as P	μg/l	20	ISO 17025	< 20	100	380	7600	2500
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	64	220	29000	1400
Nitrate as N	mg/l	0.01	ISO 17025	7.54	6.93	7.19	0.39	14.8
Nitrite as N	μg/l	1	ISO 17025	< 1.0	63	43	1600	420
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.5	7	7.2	2	15
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	2	< 2.0	17	< 2.0
Heavy Metals / Metalloids		0.004	ISO 17025					
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	0.006	< 0.004	0.038	0.019
Magnesium (dissolved)	mg/l			1.7	1.9	2	4.2	2.5
Potassium (dissolved)	mg/l μg/l	0.025	ISO 17025 ISO 17025	1	0.94	1.6	20	6.7
Zinc (dissolved)	дд/1	U. 4	130 1/025	2.7	9.2	4.2	12	6.3
Iron (total)	mg/l	0.004	ISO 17025	< 0.004	0.027	0.011	0.086	0.033
Iron (total) Phosphorus (total)	mg/l µg/l	0.004	ISO 17025 ISO 17025	< 0.004 36	0.027 140	0.011 350	0.086 9000	0.033 2500
Phosphorus (total)								
Iron (total) Phosphorus (total) Zinc (total) Magnesium (total)	μg/l	20	ISO 17025	36	140	350	9000	2500





Your Order No: B10116733

Tour Order No: B10116733								
Lab Sample Number				2366185	2366186	2366187	2366188	2366189
Sample Reference				AND 6	AND 7	AND 8	AND 9	AND 10
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	8	8.2	7.5	7.7	7.9
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	480	420	470	470	470
Total Phosphate as P	μg/l	20	ISO 17025	34	1300	23	< 20	23
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	1400	< 15	36	< 15
Nitrate as N	mg/l	0.01	ISO 17025	6.61	3.79	6.55	5.62	6.79
Nitrite as N	μg/l	1	ISO 17025	2.9	120	< 1.0	46	3.5
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	6.6	3.9	6.6	5.7	6.8
Total Suspended Solids	mg/l	2	ISO 17025	3	92	< 2.0	< 2.0	< 2.0
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	0.021	< 0.004	< 0.004	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.6	6.1	1.6	1.6	1.5
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.4	19	0.99	0.58	0.92
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.7	9.5	2.3	2.2	4.6
Iron (total)	mg/l	0.004	ISO 17025	0.021	0.21	0.007	0.009	0.009
Phosphorus (total)	μg/l	20	ISO 17025	580	2600	77	37	36
Zinc (total)	μg/l	0.4	ISO 17025	11	19	2.4	13	11
•								
Magnesium (total)	mg/l	0.005	ISO 17025	1.8	6.4	1.8	1.8	1.8
Potassium (total)	mg/l	0.025	ISO 17025	1.9	19	2.2	0.86	0.97





Your Order No: B10116733

Your Order No: B10116733								
Lab Sample Number				2366190	2366191	2366192	2366193	2366194
Sample Reference				AND 11	ALR 1	ALR 2	ALR 3A	ALR 3B
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.7	7.5	7.8	7.4	7.9
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	470	520	510	540	520
Total Phosphate as P	μg/l	20	ISO 17025	27	< 20	< 20	< 20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	48	< 15	37	< 15	21
Nitrate as N	mg/l	0.01	ISO 17025	5.97	7.16	6.52	7.61	6.9
Nitrite as N	μg/l	1	ISO 17025	49	< 1.0	110	< 1.0	9.2
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	6	7.2	6.6	7.6	6.9
Total Suspended Solids	mg/l	2	ISO 17025	3	< 2.0	< 2.0	< 2.0	2
Heavy Metals / Metalloids			100 17005					
Iron (dissolved)	mg/l	0.004	ISO 17025 ISO 17025	< 0.004	< 0.004	< 0.004	< 0.004	0.005
Magnesium (dissolved)	mg/l	0.005		1.6	1.9	1.9	2.2	2
Potassium (dissolved)	mg/l	0.025	ISO 17025 ISO 17025	0.79	1	1.1	0.8	0.74
Zinc (dissolved)	μg/l	0.4	150 17025	4.8	5.3	4.4	3.1	3.2
Iron (total)	mg/l	0.004	ISO 17025	0.022	0.008	0.014	< 0.004	0.015
Phosphorus (total)	μg/l	20	ISO 17025	58	27	36	22	< 20
Zinc (total)	μg/l	0.4	ISO 17025	9.4	9.9	13	18	8
Manager (Auto)	mg/l	0.005	ISO 17025	4.7	2.2	2.2	2.7	2.5
Magnesium (total)	mg/l	0.005	ISO 17025	1.7	2.2	2.2	2.7	2.5
Potassium (total)	1119/1	0.023	130 1/025	1.1	1.9	1.4	1.1	1.2





Project / Site name:

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN- 82/C-04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08,	L078-PL	w	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.		L082-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	w	ISO 17025

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

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

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

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

Sample Deviation Report



Analytical Report Number: 22-74087

Project / Site name:

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.

Sample ID	Other ID		Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
ALR 1	None Supplied	W	2366191	a	None Supplied	None Supplied	None Supplied
ALR 2	None Supplied	W	2366192	a	None Supplied	None Supplied	None Supplied
ALR 3A	None Supplied	W	2366193	а	None Supplied	None Supplied	None Supplied
ALR 3B	None Supplied	W	2366194	a	None Supplied	None Supplied	None Supplied
AND 1	None Supplied	W	2366180	a	None Supplied	None Supplied	None Supplied
AND 10	None Supplied	W	2366189	a	None Supplied	None Supplied	None Supplied
AND 11	None Supplied	W	2366190	a	None Supplied	None Supplied	None Supplied
AND 2	None Supplied	W	2366181	a	None Supplied	None Supplied	None Supplied
AND 3	None Supplied	W	2366182	а	None Supplied	None Supplied	None Supplied
AND 4	None Supplied	W	2366183	a	None Supplied	None Supplied	None Supplied
AND 5	None Supplied	W	2366184	а	None Supplied	None Supplied	None Supplied
AND 6	None Supplied	W	2366185	а	None Supplied	None Supplied	None Supplied
AND 7	None Supplied	W	2366186	a	None Supplied	None Supplied	None Supplied
AND 8	None Supplied	W	2366187	а	None Supplied	None Supplied	None Supplied
AND 9	None Supplied	W	2366188	a	None Supplied	None Supplied	None Supplied





Doreen Hall

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Analytical Report Number: 22-77184

Project / Site name: Samples received on: 11/08/2022

Your job number: Samples instructed on/ 11/08/2022

Analysis started on:

Your order number: B10117309 Analysis completed by: 17/08/2022

Report Issue Number: 1 **Report issued on:** 17/08/2022

Samples Analysed: 15 water 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

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

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

An estimate of measurement uncertainty can be provided on request.





ır Order No: B10117309

Your Order No: B10117309								
Lab Sample Number				2383398	2383399	2383400	2383401	2383402
Sample Reference				AND 1	AND 2	AND 3	AND 4	AND 5
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	7.4	7.6	7.7	7.8	7.4
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	490	510	490	1200	860
Total Phosphate as P	μg/l	20	ISO 17025	< 20	58	39	8100	5300
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	34	29	39000	38000
Nitrate as N	mg/l	0.01	ISO 17025	7.46	6.94	6.59	0.72	0.17
Nitrite as N	μg/l	1	ISO 17025	< 1.0	34	37	1900	< 1.0
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.5	7	6.6	2.7	0.17
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	5	< 2.0	44	42
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	< 0.004	< 0.004	0.052	0.059
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.7	2	2	4.8	3.9
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.99	1	0.54	21	15
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.9	4.7	5.9	11	6.3
Iron (total)	mg/l	0.004	ISO 17025	0.012	0.028	0.012	0.074	0.13
Phosphorus (total)	μg/l	20	ISO 17025	< 20	86	50	8300	5900
Zinc (total)	μg/l	0.4	ISO 17025	8.5	13	11	20	20
L	1	0.005	100 17025					
Magnesium (total)	mg/l	0.005	ISO 17025 ISO 17025	1.8	2.1	2	5	4.3
Potassium (total)	mg/l	0.025	150 1/025	1.6	1.2	0.55	22	16

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





Your Order No: B1011730

Your Order No: B10117309								
Lab Sample Number				2383403	2383404	2383405	2383406	2383407
Sample Reference				AND 6	AND 7	AND 8	AND 9	AND 10
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	7.9	8.4	7.5	8.1	7.8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	480	250	470	430	480
Total Phosphate as P	μg/l	20	ISO 17025	40	< 20	25	24	35
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	28	< 15	140	21
Nitrate as N	mg/l	0.01	ISO 17025	6.35	0.81	6.56	4.03	5.95
Nitrite as N	μg/l	1	ISO 17025	9.2	15	< 1.0	380	5.8
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	6.4	0.83	6.6	4.4	6
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	45	< 2.0	12	< 2.0
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	< 0.004	< 0.004	0.004	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.8	1.2	1.8	1.8	1.7
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.6	0.15	0.87	0.98	0.95
Zinc (dissolved)	μg/l	0.4	ISO 17025	5.5	3	9.9	3.8	5.1
Iron (total)	mg/l	0.004	ISO 17025	0.012	0.031	0.017	0.016	0.009
Phosphorus (total)	μg/l	20	ISO 17025	45	150	33	110	46
Zinc (total)	μg/l	0.4	ISO 17025	11	12	12	5.2	7.3
Magnesium (total)	mg/l	0.005	ISO 17025	2	1.3	1.8	1.9	1.9
Potassium (total)	mg/l	0.005	ISO 17025	2.1	0.23	0.96	1.1	1.6
r otassium (total)	9/1	5.525	-30 1, 323	2.1	0.23	0.90	1.1	1.0

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





Your	Order	No.	R101	17309

Your Order No: B10117309								
Lab Sample Number				2383408	2383409	2383410	2383411	2383412
Sample Reference				AND 11	ALR 1	ALR 2	ALR SA	ALR SB
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	7.7	7.8	7.8	7.3	7.4
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	470	520	520	520	540
Total Phosphate as P	μg/l	20	ISO 17025	42	< 20	25	20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	21	42	51	< 15	18
Nitrate as N	mg/l	0.01	ISO 17025	5.59	7.51	5.77	6.27	5.97
Nitrite as N	μg/l	1	ISO 17025	20	1.5	36	< 1.0	11
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	5.6	7.5	5.8	6.3	6
Total Suspended Solids	mg/l	2	ISO 17025	13	< 2.0	< 2.0	2	3
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	0.006	< 0.004	0.007	0.005	0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.6	2	2.1	2.1	2.1
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.79	0.95	0.72	0.78	0.93
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.1	3.6	5	5.5	5.2
Iron (total)	mg/l	0.004	ISO 17025	0.043	0.014	0.029	0.013	0.011
Phosphorus (total)	μg/l	20	ISO 17025	150	22	53	25	23
Zinc (total)	μg/l	0.4	ISO 17025	14	35	22	12	7.1
Magnagium (total)	mg/l	0.005	ISO 17025	1.7	2.2	2.2	2.2	2.2
Magnesium (total)	mg/l	0.003	ISO 17025				2.2	2.2
Potassium (total)	1119/1	0.023	130 1/023	0.86	0.97	0.78	1	1.1

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





Project / Site name:

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C- 04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	w	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08,	L078-PL	W	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.	and Wastewater 20th Edition: Clesceri, Greenberg	L082-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

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

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

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

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

Sample Deviation Report



Analytical Report Number : 22-77184 Project / Site name:

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.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
ALR 1	None Supplied	W	2383409	a	None Supplied	None Supplied	None Supplied
ALR 2	None Supplied	W	2383410	a	None Supplied	None Supplied	None Supplied
ALR SA	None Supplied	W	2383411	a	None Supplied	None Supplied	None Supplied
ALR SB	None Supplied	W	2383412	a	None Supplied	None Supplied	None Supplied
AND 1	None Supplied	W	2383398	a	None Supplied	None Supplied	None Supplied
AND 10	None Supplied	W	2383407	a	None Supplied	None Supplied	None Supplied
AND 11	None Supplied	W	2383408	a	None Supplied	None Supplied	None Supplied
AND 2	None Supplied	W	2383399	a	None Supplied	None Supplied	None Supplied
AND 3	None Supplied	W	2383400	a	None Supplied	None Supplied	None Supplied
AND 4	None Supplied	W	2383401	a	None Supplied	None Supplied	None Supplied
AND 5	None Supplied	W	2383402	a	None Supplied	None Supplied	None Supplied
AND 6	None Supplied	W	2383403	a	None Supplied	None Supplied	None Supplied
AND 7	None Supplied	W	2383404	a	None Supplied	None Supplied	None Supplied
AND 8	None Supplied	W	2383405	a	None Supplied	None Supplied	None Supplied
AND 9	None Supplied	W	2383406	a	None Supplied	None Supplied	None Supplied





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Analytical Report Number: 22-82708

Project / Site name: Samples received on: 08/09/2022

Your job number: Samples instructed on/ 08/09/2022

Analysis started on:

Your order number: B10118457 Analysis completed by: 16/09/2022

Report Issue Number: 1 **Report issued on:** 16/09/2022

Samples Analysed: 14 water samples

Signed:

Joanna Wawrzeczko Reporting Specialist

For & on behalf of i2 Analytical Ltd.

Dawradio

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are : soils - 4 weeks from reporting

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

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

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

An estimate of measurement uncertainty can be provided on request.





Your Order No: B10118457

Your Order No: B10118457								
Lab Sample Number				2416742	2416743	2416744	2416745	2416746
Sample Reference				AND 1	AND 2	AND 3	AND 5	AND 6
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	1.3	7.7	7.8	7.6	7.8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	26000	460	490	520	480
Total Phosphate as P	μg/l	20	ISO 17025	< 20	76	100	51	22
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	56	270	50	< 15
Nitrate as N	mg/l	0.01	ISO 17025	7.05	4.49	5.74	7.45	6.57
Nitrite as N	μg/l	1	ISO 17025	< 1.0	72	81	43	< 1.0
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7	4.6	5.8	7.5	6.6
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	2	41	< 2.0	< 2.0
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025 ISO 17025	< 0.004	< 0.004	0.011	< 0.004	< 0.004
Magnesium (dissolved)	mg/l	0.005		1.8	1.9	2	1.9	1.8
Potassium (dissolved)	mg/l	0.025	ISO 17025 ISO 17025	0.8	0.86	1	1.3	1.3
Zinc (dissolved)	μg/l	0.4	150 1/025	3.5	2.8	2.2	3.2	3.1
Iron (total)	mg/l	0.004	ISO 17025	0.013	0.017	0.2	0.017	0.009
Phosphorus (total)	µg/l	20	ISO 17025	500	600	770	560	510
Zinc (total)	µg/l	0.4	ISO 17025	22	35	48	23	22
Magnesium (total)	mg/l	0.005	ISO 17025	2.2	1.9	2	2	2
Potassium (total)	mg/l	0.025	ISO 17025	1.2	2.3	1.3	1.4	1.6

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \text{Insufficient Sample}$



Environmental Science

Analytical Report Number: 22-82708

Your Order No: B10118457

Your Order No: B10118457								
Lab Sample Number				2416747	2416748	2416749	2416750	2416751
Sample Reference				AND 7	AND 8	AND 9	AND 10	AND 11
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	8	7.5	7.8	8.1	7.8
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	430	480	470	470	440
Total Phosphate as P	μg/l	20	ISO 17025	< 20	20	2300	41	81
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	19	< 15	26	15	16
Nitrate as N	mg/l	0.01	ISO 17025	3.09	6.83	5.71	6.11	5.83
Nitrite as N	μg/l	1	ISO 17025	9.8	< 1.0	55	8.5	15
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	3.1	6.8	5.8	6.1	5.8
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	< 2.0	3	< 2.0	2
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	< 0.004	< 0.004	0.006	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.6	1.7	1.7	1.7	1.6
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.14	0.99	0.71	1.5	1
Zinc (dissolved)	μg/l	0.4	ISO 17025	1.6	2.8	5.1	1.5	2.6
Iron (total)	mg/l	0.004	ISO 17025	0.02	0.05	0.017	0.02	0.024
Phosphorus (total)	μg/l	20	ISO 17025	530	660	3100	650	550
Zinc (total)	μg/l	0.4	ISO 17025	15	34	5.9	29	30
Magnesium (total)	mg/l	0.005	ISO 17025	1.6	1.7	1.8	2	1.9
Potassium (total)	mg/l	0.025	ISO 17025	0.32	1.1	0.83	1.6	1.2

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \ \text{Insufficient Sample}$





Your Order No: B10118457

Your Order No: B10118457							
Lab Sample Number				2416752	2416753	2416754	2416755
Sample Reference				ALR 1	ALR 2	ALR 3A	ALR 3B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
General Inorganics							
pH	pH Units	N/A	ISO 17025	7.6	7.9	7.4	7.9
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	540	500	540	530
Total Phosphate as P	μg/l	20	ISO 17025	< 20	< 20	< 20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	36	< 15	27
Nitrate as N	mg/l	0.01	ISO 17025	7.33	6.19	7.51	6.65
Nitrite as N	μg/l	1	ISO 17025	< 1.0	24	< 1.0	13
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.3	6.2	7.5	6.7
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	< 2.0	< 2.0	10
Heavy Metals / Metalloids							
Iron (dissolved)	mg/l	0.004	ISO 17025	0.008	< 0.004	< 0.004	0.006
Magnesium (dissolved)	mg/l	0.005	ISO 17025	2	2	2.4	2.3
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.2	1	0.92	1.5
Zinc (dissolved)	μg/l	0.4	ISO 17025	2.8	2.1	1.8	1.8
T are (take)	/I	0.004	ISO 17025	0.013	0.020	0.011	0.046
Iron (total)	mg/l	20	ISO 17025	0.013	0.029	0.011	0.046
Phosphorus (total)	μg/l μg/l	0.4	ISO 17025	510	570	540	560
Zinc (total)	μ9/1	0.7	130 17023	7.8	65	43	17
Magnesium (total)	mg/l	0.005	ISO 17025	2.1	2.1	2.4	2.3
Potassium (total)	mg/l	0.025	ISO 17025				2.1

 $\label{eq:U/S} \text{U/S} = \text{Unsuitable Sample} \qquad \text{I/S} = \text{Insufficient Sample}$





Project / Site name:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-0ES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(AI, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	w	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN- 82/C-04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.		L082-PL	w	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	w	ISO 17025

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

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

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

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

Sample Deviation Report



Analytical Report Number: 22-82708

Project / Site name:

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.

Sample ID	Other ID		Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
ALR 1	None Supplied	W	2416752	a	None Supplied	None Supplied	None Supplied
ALR 2	None Supplied	W	2416753	a	None Supplied	None Supplied	None Supplied
ALR 3A	None Supplied	W	2416754	a	None Supplied	None Supplied	None Supplied
ALR 3B	None Supplied	W	2416755	a	None Supplied	None Supplied	None Supplied
AND 1	None Supplied	W	2416742	a	None Supplied	None Supplied	None Supplied
AND 10	None Supplied	W	2416750	a	None Supplied	None Supplied	None Supplied
AND 11	None Supplied	W	2416751	a	None Supplied	None Supplied	None Supplied
AND 2	None Supplied	W	2416743	a	None Supplied	None Supplied	None Supplied
AND 3	None Supplied	W	2416744	a	None Supplied	None Supplied	None Supplied
AND 5	None Supplied	W	2416745	a	None Supplied	None Supplied	None Supplied
AND 6	None Supplied	W	2416746	a	None Supplied	None Supplied	None Supplied
AND 7	None Supplied	W	2416747	a	None Supplied	None Supplied	None Supplied
AND 8	None Supplied	W	2416748	а	None Supplied	None Supplied	None Supplied
AND 9	None Supplied	W	2416749	a	None Supplied	None Supplied	None Supplied





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Your order number:

Analytical Report Number: 22-98194

Project / Site name: 23/11/2022

Your job number: Samples instructed on/ 23/11/2022

Analysis started on:

Analysis completed by: 30/11/2022

Report Issue Number: 1 Report issued on: 01/12/2022

Samples Analysed: 14 water samples

B10121344

Dawradio

Signed:

Joanna Wawrzeczko 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

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

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

An estimate of measurement uncertainty can be provided on request.





Analytical Report Number: 22-98194

Tour Order No. DIVIZIS44	Your	Order	No:	B10121344
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Tour Order No. B10121344								
Lab Sample Number				2507957	2507958	2507959	2507960	2507961
Sample Reference				AND 1	AND 2	AND 3	AND 4	AND 5
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.5	8	7.6	7.3	7.6
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	490	490	540	610	550
Total Phosphate as P	μg/l	20	ISO 17025	< 20	< 20	120	520	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	21	980	1800	< 15
Nitrate as N	mg/l	0.01	ISO 17025	7.78	7.36	4.34	6.35	9.21
Nitrite as N	μg/l	1	ISO 17025	< 1.0	21	110	28	5
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.8	7.4	4.5	6.4	9.2
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	< 2.0	< 2.0	5	2
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	0.009	0.023	0.008	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.7	1.8	2.1	2.1	1.9
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.77	1.2	1.8	1.6	1.3
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.9	5.2	3.7	5.2	3.7
	1 - 1		T		1		1	1
Iron (total)	mg/l	0.004	ISO 17025	< 0.004	0.012	0.15	0.02	0.008
Phosphorus (total)	μg/l	20	ISO 17025	570	580	660	830	640
Zinc (total)	μg/l	0.4	ISO 17025	9.8	7.2	7.3	11	5.1
		0.005	100 17025				2.2	
Magnesium (total)	mg/l	0.005 0.025	ISO 17025 ISO 17025	1.8	1.9	2.3	2.3	2.2
Potassium (total)	mg/l	0.025	150 1/025	1	1.3	2	1.9	1.4

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





Analytical Report Number: 22-98194

Your Order No: B10121344	Your	Order	No:	B10121344
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Your Order No: B10121344								
Lab Sample Number				2507962	2507963	2507964	2507965	2507966
Sample Reference				AND 6	AND 7	AND 8	AND 9	AND 11
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
рН	pH Units	N/A	ISO 17025	7.9	8	7.5	8.1	8.1
Electrical Conductivity at 20 °C	μS/cm	10	ISO 17025	490	490	490	480	490
Total Phosphate as P	μg/l	20	ISO 17025	< 20	< 20	< 20	< 20	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	150	< 15	< 15	< 15	20
Nitrate as N	mg/l	0.01	ISO 17025	7.08	6.91	7.49	6.97	7.03
Nitrite as N	μg/l	1	ISO 17025	12	15	< 1.0	35	41
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.1	6.9	7.5	7	7.1
Total Suspended Solids	mg/l	2	ISO 17025	3	< 2.0	< 2.0	< 2.0	< 2.0
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.7	1.7	1.6	1.6	1.6
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.7	1.7	0.87	1	1.4
Zinc (dissolved)	μg/l	0.4	ISO 17025	4.1	4	3.4	2.4	3.9
Iron (total)	mg/l	0.004	ISO 17025	0.006	0.007	< 0.004	0.005	0.015
Phosphorus (total)	μg/l	20	ISO 17025	570	590	590	600	630
Zinc (total)	μg/l	0.4	ISO 17025	15	5.1	4.4	4.6	14
Magnesium (total)	mg/l	0.005	ISO 17025	1.8	1.9	1.7	1.8	1.8
Potassium (total)	mg/l	0.005	ISO 17025	1.9	1.9		1.1	1.8
rotassiuiii (totai)	9/ '	0.023	100 17 025	1.9	1.9	1	1.1	۲.۵

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





Analytical Report Number: 22-98194

Your Order No: B10121344

Lab Sample Number				2507967	2507968	2507969	2507970
Sample Reference				ALR 1	ALR 2	ALR 3A	ALR 3B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
General Inorganics	pH Units	N/A	ISO 17025	7.4	7.8	7.4	7.5
pH	μS/cm	10	ISO 17025	7.4			7.5
Electrical Conductivity at 20 °C	μg/l	20	ISO 17025	540	540	530	550
Total Phosphate as P	μg/l	15	ISO 17025	< 20 < 15	< 20 34	< 20	< 20
Ammoniacal Nitrogen as N	mg/l	0.01	ISO 17025	7.46	7.03	< 15 6.43	< 15
Nitrate as N	μg/l	1	ISO 17025	< 1.0	19	< 1.0	6.16 2.4
Nitrite as N Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.5	7	6.4	6.2
Total Suspended Solids	mg/l	2	ISO 17025	< 2.0	9	5	5
Heavy Metals / Metalloids							
Iron (dissolved)	mg/l	0.004	ISO 17025	0.004	< 0.004	< 0.004	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.9	1.9	2	2.1
Potassium (dissolved)	mg/l	0.025	ISO 17025	1	1.2	0.82	0.81
Zinc (dissolved)	µg/I	0.4	ISO 17025	2.2	2.8	3.1	2.8
Iron (total)	mg/l	0.004	ISO 17025	0.007	0.019	0.006	0.009
Iron (total)	ilig/i	0.001	150 17025	0.007	0.013	0.000	0.009

ISO 17025

ISO 17025

ISO 17025

ISO 17025

530

5.7

2.1

1.1

590

13

2.1

1.3

570

3.1

2.3

0.93

630

13

2.3

0.94

μg/l

μg/l

mg/l

mg/l

0.4

0.005

0.025

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

Phosphorus (total)

Magnesium (total)

Potassium (total)

Zinc (total)





Analytical Report Number: 22-98194

Project / Site name:

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C- 04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08,	L078-PL	W	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.	and Wastewater 20th Edition: Clesceri, Greenberg	L082-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-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.

Sample Deviation Report



Analytical Report Number : 22-98194

Project / Site name:

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.

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
ALR 1	None Supplied	W	2507967	а	None Supplied	None Supplied	None Supplied
ALR 2	None Supplied	W	2507968	a	None Supplied	None Supplied	None Supplied
ALR 3A	None Supplied	W	2507969	a	None Supplied	None Supplied	None Supplied
ALR 3B	None Supplied	W	2507970	a	None Supplied	None Supplied	None Supplied
AND 1	None Supplied	W	2507957	a	None Supplied	None Supplied	None Supplied
AND 11	None Supplied	W	2507966	a	None Supplied	None Supplied	None Supplied
AND 2	None Supplied	W	2507958	a	None Supplied	None Supplied	None Supplied
AND 3	None Supplied	W	2507959	a	None Supplied	None Supplied	None Supplied
AND 4	None Supplied	W	2507960	a	None Supplied	None Supplied	None Supplied
AND 5	None Supplied	W	2507961	a	None Supplied	None Supplied	None Supplied
AND 6	None Supplied	W	2507962	a	None Supplied	None Supplied	None Supplied
AND 7	None Supplied	W	2507963	а	None Supplied	None Supplied	None Supplied
AND 8	None Supplied	W	2507964	a	None Supplied	None Supplied	None Supplied
AND 9	None Supplied	W	2507965	a	None Supplied	None Supplied	None Supplied





Doreen Hall

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Analytical Report Number: 22-14779

Project / Site name: 0 Samples received on: 23/12/2022

Your job number: Samples instructed on/ 23/12/2022

Analysis started on:

Your order number: B10122066 Analysis completed by: 05/01/2023

Report Issue Number: 1 **Report issued on:** 05/01/2023

Samples Analysed: 14 water 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

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

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

An estimate of measurement uncertainty can be provided on request.





Project / Site name: 0

Your Order No: B10122066

Your Order No: B10122066				2542057	2542050	2542050	2542060	2542064		
Lab Sample Number				2542857	2542858	2542859	2542860	2542861		
Sample Reference				AND 1	AND 2	AND 4	AND 5	AND 6		
Sample Number				None Supplied						
Depth (m)				None Supplied						
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating		
Time Taken				None Supplied						
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status							
General Inorganics										
pH	pH Units	N/A	ISO 17025	7.4	7.6	7.2	7.6	7.9		
Electrical Conductivity at 20 °C (L031B)	μS/cm	10	ISO 17025	520	530	640	540	500		
Total Phosphate as P	μg/l	20	ISO 17025	< 20	33	680	< 20	34		
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	< 15	17	4200	< 15	< 15		
Nitrate as N	mg/l	0.01	ISO 17025	9.98	8.87	6.69	9.01	6.49		
Nitrite as N	μg/l	1	ISO 17025	< 1.0	11	250	1.8	4.4		
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	10	8.9	6.9	9	6.5		
Total Suspended Solids (L004B)	mg/l	2	ISO 17025	< 2.0	< 2.0	2	< 2.0	< 2.0		
Speciated PAHs										
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Fluorene	μg/l	0.01	ISO 17025	< 0.01	0.38	< 0.01	< 0.01	< 0.01		
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	0.45	< 0.01	< 0.01	< 0.01		
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Benzo(a)anthracene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Chrysene	μg/l			< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025 ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	μg/l μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01 < 0.01						
	P9/-	0.01	150 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Total PAH Total EPA-16 PAHs	μg/l	0.16	ISO 17025	< 0.16	0.83	< 0.16	< 0.16	< 0.16		
Heavy Metals / Metalloids	mg/l	0.004	ISO 17025	0.005	< 0.004	0.01	< 0.004	- 0.004		
Iron (dissolved)	mg/l	0.004	ISO 17025	0.005 1.9	< 0.004 1.9	0.01 2.1	< 0.004	< 0.004 1.7		
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.9	1.9		1.9 1.1	1.7		
Potassium (dissolved) Zinc (dissolved)	µg/l	0.023	ISO 17025	< 0.4	< 0.4	2.9 3	6.1	< 0.4		
Iron (total)	mg/l	0.004	ISO 17025	0.006	0.042	0.062	0.013	0.015		
Phosphorus (total)	μg/l	20	ISO 17025	29	100	780	68	88		
Zinc (total)	μg/l	0.4	ISO 17025	< 0.4	0.8	8.1	26	9.9		
Magnesium (total)	mg/l	0.005	ISO 17025	2	2	2.2	2	1.8		
Potassium (total)	mg/l	0.025	ISO 17025	1	1.4	2.9	1.2	1.8		

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





Project / Site name: 0

Your Order No: B10122066

Your Order No: B10122066								
Lab Sample Number				2542862	2542863	2542864	2542865	2542866
Sample Reference				AND 7	AND 8	AND 9	AND 10	ALR 1
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
General Inorganics								
pH	pH Units	N/A	ISO 17025	8	7.4	7.9	7.8	7.6
Electrical Conductivity at 20 °C (L031B)	μS/cm	10	ISO 17025	500	490	490	480	540
Total Phosphate as P	μg/l	20	ISO 17025	52	< 20	76	30	< 20
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	30	< 15	67	< 15	< 15
Nitrate as N	mg/l	0.01	ISO 17025	7.24	7.08	7.15	6.92	7.47
Nitrite as N	μg/l	1	ISO 17025	21	< 1.0	75	2.5	< 1.0
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.3	7.1	7.2	6.9	7.5
Total Suspended Solids (L004B)	mg/l	2	ISO 17025	3	6	4	7	3
Speciated PAHs		0.01	ISO 17025					
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	μg/l			< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	μg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.7	1.6	1.7	1.6	2
Potassium (dissolved)	mg/l	0.025	ISO 17025	2	0.91	1.7	1.1	1
Zinc (dissolved)	μg/l	0.4	ISO 17025	1.4	2.3	< 0.4	2.4	< 0.4
Iron (total)	mg/l	0.004	ISO 17025	0.016	0.004	0.014	0.012	0.004
Phosphorus (total)	μg/I	20	ISO 17025	130	53	130	80	53
Zinc (total)	µg/l	0.4	ISO 17025	9.1	12	1	6.9	2.8
and (cour)	1.57.			5.1	12	1	0.7	۷.0
Magnesium (total)	mg/l	0.005	ISO 17025	1.8	1.7	1.7	1.6	2.5
Potassium (total)	mg/l	0.025	ISO 17025	2.1	0.94	1.7	1.2	2.5

 $\label{eq:U/S} \mbox{U/S} = \mbox{Unsuitable Sample} \quad \mbox{I/S} = \mbox{ Insufficient Sample} \quad \mbox{ND} = \mbox{Not detected}$



Environmental Science

Analytical Report Number: 22-14779

Project / Site name: 0

Your Order No: B10122066

Your Order No: B10122066							
Lab Sample Number				2542867	2542868	2542869	2542950
Sample Reference				ALR 2	ALR 3A	ALR 3B	AND 11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
General Inorganics							
pH	pH Units	N/A	ISO 17025	7.3	7.8	7.7	7.7
Electrical Conductivity at 20 °C (L031B)	μS/cm	10	ISO 17025	560	550	520	480
Total Phosphate as P	μg/l	20	ISO 17025	20	< 20	< 20	64
Ammoniacal Nitrogen as N	μg/l	15	ISO 17025	37	< 15	20	27
Nitrate as N	mg/l	0.01	ISO 17025	7.26	7.05	7.84	7.06
Nitrite as N	μg/l	1	ISO 17025	36	< 1.0	5.5	56
Total Oxidised Nitrogen (TON)	mg/l	0.02	NONE	7.3	7	7.9	7.1
Total Suspended Solids (L004B)	mg/l	2	ISO 17025	7	< 2.0	5	< 2.0
Speciated PAHs							
Naphthalene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	μg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH							
Total EPA-16 PAHs	μg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids	<u> </u>						
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	< 0.004	< 0.004	< 0.004
Magnesium (dissolved)	mg/l	0.005	ISO 17025	2	2.3	2.2	1.7
Potassium (dissolved)	mg/l	0.025	ISO 17025	1.3	0.72	0.97	1.4
Zinc (dissolved)	μg/l	0.4	ISO 17025	< 0.4	< 0.4	< 0.4	4.7
Iron (total)	mg/l	0.004	ISO 17025	0.037	0.009	0.024	0.006
Phosphorus (total)	μg/l	20	ISO 17025	99	60	50	110
Zinc (total)	μg/l	0.4	ISO 17025	1.3	0.6	1.2	14
Magnesium (total)	mg/l	0.005	ISO 17025	2	2.6	2.2	1.7
Potassium (total)	mg/l	0.025	ISO 17025	1.3	0.78	0.98	1.4

 $\label{eq:U/S} \mbox{U/S} = \mbox{Unsuitable Sample} \quad \mbox{I/S} = \mbox{ Insufficient Sample} \quad \mbox{ND} = \mbox{Not detected}$





Project / Site name: 0

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (total)	Determination of metals in water by acidification followed by ICP-0ES. Accredited matrices: SW PW GW, PrW (AI, Fe, Cu, Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Suspended solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025
Total oxidised nitrogen in water	Calculation from nitrate and nitrite.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN- 82/C-04579.08	L078/82-PL	W	NONE
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN- 82/C-04579.08,	L078-PL	W	ISO 17025
Total Phosphate as P in water	Determination of ortho phosphate in water by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry. Accredited matrices: SW, PW, GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton, analysis by discreet analyser.	L082-PL	w	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-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.

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.



Project / Site name: 0

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	
ALR 1	None Supplied	W	2542866	a	None Supplied	None Supplied	None Supplied	
ALR 2	None Supplied	W	2542867	a	None Supplied	None Supplied	None Supplied	
ALR 3A	None Supplied	W	2542868	a	None Supplied	None Supplied	None Supplied	
ALR 3B	None Supplied	W	2542869	a	None Supplied	None Supplied	None Supplied	
AND 1	None Supplied	W	2542857	a	None Supplied	None Supplied	None Supplied	
AND 10	None Supplied	W	2542865	a	None Supplied	None Supplied	None Supplied	
AND 11	None Supplied	W	2542950	a	None Supplied	None Supplied	None Supplied	
AND 2	None Supplied	W	2542858	a	None Supplied	None Supplied	None Supplied	
AND 4	None Supplied	W	2542859	a	None Supplied	None Supplied	None Supplied	
AND 5	None Supplied	W	2542860	а	None Supplied	None Supplied	None Supplied	
AND 6	None Supplied	W	2542861	a	None Supplied	None Supplied	None Supplied	
AND 7	None Supplied	W	2542862	a	None Supplied	None Supplied	None Supplied	
AND 8	None Supplied	W	2542863	a	None Supplied	None Supplied	None Supplied	
AND 9	None Supplied	W	2542864	a	None Supplied	None Supplied	None Supplied	