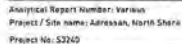
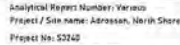


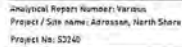
Appendix I Excavation Validation Screening and Chemical Analysis



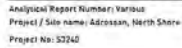
Sample 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Sample ID		2942216		2942217		2942218		2942219		2942220		2942221		2942222		2942223		2942224		2942225		2942226		2942227		2942228		2942229		2942230		118474		118475		118476		118477		118478		118479		118480			
Sample No.		V164		V165		V166		V167		V168		V169		V170		V171		V172		V173		V174		V175		V176		V177		V178		V179		V180		V181		V182		V183		V184		V185			
Sample Name		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30		L734-30			
Core Compact		29422224		29422225		29422226		29422227		29422228		29422229		29422230		29422231		29422232		29422233		29422234		29422235		29422236		29422237		29422238		29422239		29422240		29422241		29422242		29422243		29422244		29422245			
Sanctus Excavation Reference (Drawing D2404/055)		Area 1 Eastern Face		Area 1 Western Face		Area 1 Western Face		Area 2 Basin		Area 2 Basin		Area 2 Basin		Area 2 Northern Face		Area 2 Eastern Face		Area 2 Eastern Face		Area 2 Eastern Face		Area 2 Eastern Face		Area 2 Eastern Face		Area 2 Western Face		Area 2 Western Face		Area 2 Western Face		Area 2 Western Face		Area 2 Basin		Area 3 Basin		Area 3 Basin		Area 3 Basin		Area 3 Basin		Area 3 Basin		Area 3 Basin	
Analytical Parameter (Soil Analysis)		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}	
Soil Content		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%	
Moisture Content		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%	
Total Moisture Content (g/kg)		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%		1%	
Absorbance		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}		K _{sp}	
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected			
Absorbance in Soil (Detected/Not Detected)		Type		N/A		Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected		Not Detected																					



Area 5B		Area 5C		Area 5D		Area 5E		Area 5F		Area 5G		Area 5H		Area 5I		Area 5J		Area 5K		Area 5L		Area 5M		Area 5N		Area 5O		Area 5P		Area 5Q		Area 5R		Area 5S		Area 5T		Area 5U		Area 5V		Area 5W		Area 5X		Area 5Y		Area 5Z																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Project No: 50240

Sample Ref

Sample ID: _____

Date Submitted		24/01/2024	26/02/2024	28/03/2024	24/02/2024	25/02/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024	14/01/2024	14/01/2024	14/01/2024	14/01/2024	14/01/2024	14/01/2024	15/04/2024	
Sanction Exclusion Reference (Drawing D224/005)		Area 07 Eastern Face	Area 07 Eastern Face	Area 07 Eastern Face	Area 07 Eastern Face	Area 07 Southern Face	Area 07 Base	Area 07 Base	Area 07 Base	Area 07 Base	Area 07 Base	Area 07 Base	Area 07 Base	Area 07 Base	Area 07 Southern Face	Area 07 Southern Face	Area 07 Base	Area 07 Base	Area 07 Base	Area 07 Base	Area 07 Northern Face	Area 07 Southern Face	Area 07 Base	
Analytical Parameter (Test Analysis)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Ground Condition	%	ND/NC	8.3	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	
Moisture Content	%	ND/NC	14	15	15	13	13	7.7	7.6	7.8	7.6	7.7	7.9	8	12	8.8	9.1	9.9	10	9.6	10	14	15	
(Test value of sample, if record)	kg	ND/NC	1.5	1.6	1.7	1.6	1.5	0.8	0.7	0.7	0.8	0.7	0.8	0.9	0.8	0.8	0.7	0.9	0.9	1	1.3	1.1	0.9	1.2

Asbestos

[illegible]

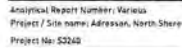
Wang et al. 2007)

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i2 Analytical Science

Analytical Report Number : 23-67417

Project / Site name: Ardrossan North Shore

Samples received on: 08/11/2023

Your job number: 53240

Samples instructed on/
Analysis started on: 08/11/2023

Your order number: 53240

Analysis completed by: 15/11/2023

Report Issue Number: 1

Report issued on: 16/11/2023

Samples Analysed: 5 soil samples

Signed:

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at

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.



4041



Environmental Science

Analytical Report Number: 23-67417

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				2870932	2870933	2870934	2870935	2870936
Sample Reference				V001	V002	V003	V004	V005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	0.70-2.10	0.70-2.10	0.70-2.10	0.70-2.10
Date Sampled				07/11/2023	07/11/2023	07/11/2023	07/11/2023	07/11/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	6.8	7.9	8	7.8	7.8
Total mass of sample received	kg	0.001	NONE	1.4	1.3	1.4	1.4	1.4

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

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH, CU, ID, TOTAL	mg/kg	10	MCERTS	< 10	< 10	130	15	< 10
TPH-CWG - Aliphatic >EC5 - EC6 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC7 - EC8 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC9 - EC10 HS, ID, AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 EH, CU, ID, AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH, CU, ID, AL	mg/kg	2	MCERTS	< 2.0	< 2.0	10	9.5	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH, CU, ID, AL	mg/kg	8	MCERTS	< 8.0	< 8.0	29	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH, CU, ID, AL	mg/kg	8	MCERTS	< 8.0	< 8.0	35	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH, CU, ID, AL	mg/kg	10	NONE	< 10	< 10	74	15	< 10
TPH-CWG - Aromatic >EC5 - EC7 HS, ID, AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 HS, ID, AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 HS, ID, AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 EH, CU, ID, AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 23-67417
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number				2870932	2870933	2870934	2870935	2870936
Sample Reference				V001	V002	V003	V004	V005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	0.70-2.10	0.70-2.10	0.70-2.10	0.70-2.10
Date Sampled				07/11/2023	07/11/2023	07/11/2023	07/11/2023	07/11/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	4.9	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	24	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	28	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10	< 10	57	< 10	< 10

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



Environmental Science

Analytical Report Number : 23-67417

Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2870932	V001	None Supplied	2.1	Brown sandy loam.
2870933	V002	None Supplied	0.70-2.10	Brown sandy loam.
2870934	V003	None Supplied	0.70-2.10	Brown sandy loam.
2870935	V004	None Supplied	0.70-2.10	Brown sandy loam.
2870936	V005	None Supplied	0.70-2.10	Brown sandy loam.

Analytical Report Number : 23-67417
Project / Site name: Ardrossan North Shore

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 °C)	In house method	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Refer to CoA for analyte specific accreditation.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX and HTBE in soil (Nonaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L073D-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID. Refer to CoA for band specific accreditation.	In-house method with silica gel split/clean up.	L088/76-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

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

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

For method numbers ending in 'PL or D' analysis have been carried out in our laboratory in ().

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 30°C.

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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



Analytical Report Number : 24-003294

Project / Site name: Ardrossan North Shore

Samples received on: 13/02/2024

Your job number:

**Samples instructed on/
Analysis started on:** 15/02/2024

Your order number: S3240

Analysis completed by: 26/02/2024

Report Issue Number: 1

Report issued on: 26/02/2024

Samples Analysed: 3 soil samples

Signed:

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at

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: 24-003294
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				118366	118367	118368
Sample Reference				V140A	V142A	V144A
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				4.50	2.00-4.50	2.00-4.50
Date Sampled				12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Acceleration Status			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	11	14
Total mass of sample received	kg	0.1	NONE	0.4	0.3	0.4

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
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Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_CU_10_AL_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH_CU_10_AL_#1_#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 EH_CU_10_AL_#1_#2	mg/kg	8	MCERTS	< 8.0	8.7	16
TPHCWG - Aliphatic >C21 - C35 EH_CU_10_AL_#1_#2	mg/kg	8	MCERTS	59	69	130
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_10_AL_#1_#2	mg/kg	10	NONE	59	78	140

TPHCWG - Aromatic >EC5 - EC7 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_10_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_10_AR_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_10_AR_#1_#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_10_AR_#1_#2	mg/kg	10	MCERTS	< 10	< 10	10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_10_AR_#1_#2	mg/kg	10	MCERTS	41	< 10	55
TPHCWG - Aromatic >EC7 - EC8 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_10_AR_#1_#2	mg/kg	10	NONE	41	< 10	65

TPH (C10 - C40) EH_CU_10_TOTAL_#1_#2	mg/kg	10	MCERTS	120	91	230
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.12	0.07	0.17
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.11	< 0.05	0.12
Fluorene	mg/kg	0.05	MCERTS	0.12	< 0.05	0.12
Phenanthrene	mg/kg	0.05	MCERTS	0.97	0.68	1.1
Anthracene	mg/kg	0.05	MCERTS	0.26	0.17	0.38
Fluoranthene	mg/kg	0.05	MCERTS	1.3	0.96	1.7
Pyrene	mg/kg	0.05	MCERTS	1.1	0.83	1.6
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.65	0.54	1.1
Chrysene	mg/kg	0.05	MCERTS	0.75	0.6	1
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.8	0.79	1.3
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.4	0.26	0.44
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.6	0.53	0.89
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.34	0.27	0.48
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	0.13	0.09	0.17

Analytical Report Number: 24-003294
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				118366	118367	118368
Sample Reference				V140A	V142A	V144A
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				4.50	2.00-4.50	2.00-4.50
Date Sampled				12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.47	0.4	0.65
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	8.09	6.19	11.3

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



Analytical Report Number : 24-003294
Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
118366	V140A	None Supplied	4.5	Brown loam and sand with gravel and vegetation
118367	V142A	None Supplied	2.00-4.50	Brown loam and sand with gravel and vegetation
118368	V144A	None Supplied	2.00-4.50	Brown loam and sand with gravel and vegetation

Analytical Report Number : 24-003294
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L054B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L0768/L088	D/W	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L0768/L088	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom [REDACTED].
For method numbers ending in 'P' analysis have been carried out in our laboratory in the United Kingdom [REDACTED].
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in [REDACTED].
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 30°C.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on data indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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



Analytical Report Number : 24-003315

Project / Site name: Ardrossan North Shore

Samples received on: 13/02/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 15/02/2024

Your order number: S3240

Analysis completed by: 21/02/2024

Report Issue Number: 1

Report issued on: 21/02/2024

Samples Analysed: 1 soil sample

Signature

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at:

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.

4115



4041



Environmental Science

Analytical Report Number: 24-003315

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				118425
Sample Reference				V137a
Sample Number				None Supplied
Depth (m)				4.50
Date Sampled				12/02/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	15
Total mass of sample received	kg	0.1	NONE	1.2

Asbestos

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

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.08
Pyrene	mg/kg	0.05	MCERTS	0.1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.08
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.06
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_CU_ID_AL_#1_#2	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH_CU_ID_AL_#1_#2	mg/kg	2	MCERTS	17
TPHCWG - Aliphatic >C16 - C21 EH_CU_ID_AL_#1_#2	mg/kg	8	MCERTS	52
TPHCWG - Aliphatic >C21 - C35 EH_CU_ID_AL_#1_#2	mg/kg	8	MCERTS	110
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_ID_AL_#1_#2	mg/kg	10	NONE	180

TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	NONE	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.01	NONE	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.05	NONE	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_ID_AR_#1_#2	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR_#1_#2	mg/kg	2	MCERTS	9.1
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR_#1_#2	mg/kg	10	MCERTS	60
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR_#1_#2	mg/kg	10	MCERTS	190
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR_#1_#2	mg/kg	10	NONE	260



Analytical Report Number: 24-003315
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number		118425		
Sample Reference		V137a		
Sample Number		None Supplied		
Depth (m)		4.50		
Date Sampled		12/02/2024		
Time Taken		None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
VOCs				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	5	MCERTS	< 5.0
o-Xylene	µg/kg	5	MCERTS	< 5.0

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



Analytical Report Number : 24-003315

Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
118425	V137a	None Supplied	4.5	Brown sand

Analytical Report Number : 24-003315
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and NCERTS requirements.	L019B	D	NONE
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	NCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	NCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L08B	D/W	NCERTS

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

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

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory

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 300°C.

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.



Environmental Science

Analytical Report Number : 24-003319

Project / Site name: Ardrossan North Shore

Samples received on: 13/02/2024

Your job number:

Samples instructed on/
Analysis started on: 13/02/2024

Your order number: S3240

Analysis completed by: 22/02/2024

Report Issue Number: 1

Report issued on: 22/02/2024

Samples Analysed: 24 soil samples

Signed: [Redacted]

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: [Redacted]

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: 24-003319
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	118474	118475	118476	118477	118478
Sample Reference	V179	V180	V181	V182	V183
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	5.10	5.10	5.10	5.10	5.10
Date Sampled	12/02/2024	12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.3	7.2
Total mass of sample received	kg	0.1	NONE	1	1.2

Asbestos

Asbestos in Soil Detected/Not Detected	Type	II/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_CU_ID_AL_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH_CU_ID_AL_#1_#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 EH_CU_ID_AL_#1_#2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C21 - C35 EH_CU_ID_AL_#1_#2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	43
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_ID_AL_#1_#2	mg/kg	10	NONE	< 10	< 10	< 10	< 10	43

TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_ID_AR_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR_#1_#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR_#1_#2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR_#1_#2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR_#1_#2	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.07	< 0.05	< 0.05	0.41
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.11	< 0.05	< 0.05	0.13
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.13	< 0.05	< 0.05	0.51
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.1	< 0.05	< 0.05	0.52
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.21
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.06	< 0.05	< 0.05	0.24
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.08	< 0.05	< 0.05	0.25
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	0.15
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.07	< 0.05	< 0.05	0.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.13
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.19

Analytical Report Number: 24-003319
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number				118474	118475	118476	118477	118478
Sample Reference				V179	V180	V181	V182	V183
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.10	5.10	5.10	5.10	5.10
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	2.94
Speciated Total EPA-16 PAHs								

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

Analytical Report Number: 24-003319
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number				118479	118480	118481	118482	118483
Sample Reference				V184	V185	V186	V187	V188
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.10	5.10	5.10	5.10	5.10
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.2	6.7	7.5	7	8.4
Total mass of sample received	kg	0.1	NONE	1.3	1.2	1.4	1.2	1.4

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

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

Petroleum Hydrocarbons								
TPHCWG - Aliphatic >C5 - C6 H ₅ _10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 H ₅ _10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 H ₅ _10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 H ₅ _10_AL_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 H ₅ _10_AL_#1_#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 H ₅ _10_AL_#1_#2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C21 - C35 H ₅ _10_AL_#1_#2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C5 - C35 H ₅ _10_AL_#1_#2	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPHCWG - Aromatic >EC5 - EC7 H ₅ _10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 H ₅ _10_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 H ₅ _10_AR_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 H ₅ _10_AR_#1_#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 H ₅ _10_AR_#1_#2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 H ₅ _10_AR_#1_#2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC7 - EC8 H ₅ _10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC5 - EC35 H ₅ _10_AR_#1_#2	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Analytical Report Number: 24-003319
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				118479	118480	118481	118482	118483
Sample Reference				V184	V185	V186	V187	V188
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.10	5.10	5.10	5.10	5.10
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
Speciated Total EPA-16 PAHs								

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

Analytical Report Number: 24-003319
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				118484	118485	118486	118487	118488
Sample Reference				V189	V190	V191	V192	V193
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	25	< 0.1
Moisture Content	%	0.01	NONE	11	11	9.7	11	6.5
Total mass of sample received	kg	0.1	NONE	1.1	1.2	1.3	1.4	1.1

Asbestos

Asbestos in Soil Detected/Not Detected	Type	II/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS ₁₀ AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS ₁₀ AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS ₁₀ AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH _{CU} 10 _{AR} #1,#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH _{CU} 10 _{AR} #1,#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 EH _{CU} 10 _{AR} #1,#2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C21 - C35 EH _{CU} 10 _{AR} #1,#2	mg/kg	8	MCERTS	41	69	< 8.0	15	< 8.0
TPHCWG - Aliphatic >C5 - C35 EH _{CU} HS ₁₀ AL#1,#2	mg/kg	10	NONE	41	69	< 10	15	< 10

TPHCWG - Aromatic >EC5 - EC7 HS ₁₀ AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS ₁₀ AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH _{CU} 10 _{AR} #1,#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH _{CU} 10 _{AR} #1,#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH _{CU} 10 _{AR} #1,#2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH _{CU} 10 _{AR} #1,#2	mg/kg	10	MCERTS	15	23	< 10	< 10	< 10
TPHCWG - Aromatic >EC7 - EC8 HS ₁₀ AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC5 - EC35 EH _{CU} HS ₁₀ AR#1,#2	mg/kg	10	NONE	15	23	< 10	< 10	< 10

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.51	0.78	< 0.05	0.1	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.14	0.18	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.77	1.2	0.14	0.15	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.7	1.1	0.13	0.14	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.32	0.7	0.1	0.07	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.45	0.69	0.11	0.1	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.46	1	0.17	0.12	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.18	0.55	0.06	0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.34	0.93	0.1	0.07	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.23	0.4	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.13	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.29	0.53	< 0.05	< 0.05	< 0.05



Analytical Report Number: 24-003319
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				118484	118485	118486	118487	118488
Sample Reference				V189	V190	V191	V192	V193
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Unit	Limit of detection	Accreditation Status		
Speciated Total EPA-16 PAHs				mg/kg	0.8	ISO 17025	4.39	8.32
							0.81	0.8
								< 0.80

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

Analytical Report Number: 24-003319
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	118489				118490	118491	118492	118493
Sample Reference	V194				V195	V196	V197	V198
Sample Number	None Supplied				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	3.20-5.10				3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10
Date Sampled	12/02/2024				12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken	None Supplied				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	6.6	6.5	6.5	6.1	6.4
Total mass of sample received	kg	0.1	NONE	1.2	1.1	1.1	1.2	1

Asbestos

Asbestos in Soil Detected/Not Detected	Type	II/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 H ₅ 10 _{AR}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 H ₅ 10 _{AR}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 H ₅ 10 _{AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 H ₅ 10 _{AR} #1, #2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 H ₅ 10 _{AR} #1, #2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 H ₅ 10 _{AR} #1, #2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C21 - C35 H ₅ 10 _{AR} #1, #2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C5 - C35 H ₅ 10 _{AR} #1, #2	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPHCWG - Aromatic >EC5 - EC7 H ₅ 10 _{AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 H ₅ 10 _{AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 H ₅ 10 _{AR} #1, #2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 H ₅ 10 _{AR} #1, #2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 H ₅ 10 _{AR} #1, #2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 H ₅ 10 _{AR} #1, #2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC7 - EC8 H ₅ 10 _{AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC5 - EC35 H ₅ 10 _{AR} #1, #2	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Analytical Report Number: 24-003319
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				118489	118490	118491	118492	118493
Sample Reference				V194	V195	V196	V197	V198
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80

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



4041



Environmental Science

Analytical Report Number: 24-003319
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				118494	118495	118496	118497
Sample Reference				V199	V200	V201	V202
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
	%	0.01	NONE	6.8	6.5	6.6	10
	kg	0.1	NONE	1.3	1.4	1.2	1.3
Stone Content							
Moisture Content							
Total mass of sample received							

Asbestos

Asbestos in Soil Detected/Not Detected	Type	II/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_CU_10_AL_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH_CU_10_AL_#1_#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 EH_CU_10_AL_#1_#2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C21 - C35 EH_CU_10_AL_#1_#2	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	36
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_10_AL_#1_#2	mg/kg	10	NONE	< 10	< 10	< 10	36

TPHCWG - Aromatic >EC5 - EC7 HS_10_AL	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_10_AL_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_10_AL_#1_#2	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_10_AL_#1_#2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_10_AL_#1_#2	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC7 - EC8 HS_10_AL	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_10_AL_#1_#2	mg/kg	10	NONE	< 10	< 10	< 10	< 10

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.12
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.26
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.26
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	3.1
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.57
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	3.8
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	3.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.6
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.8
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	1.9
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	1.4
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.8
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.85
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.18
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1

Analytical Report Number: 24-003319
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				118494	118495	118496	118497
Sample Reference				V199	V200	V201	V202
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.20-5.10	3.20-5.10	3.20-5.10	3.20-5.10
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	22.1

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

Analytical Report Number : 24-003319

Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
118474	V179	None Supplied	5.1	Brown sand
118475	V180	None Supplied	5.1	Brown sand
118476	V181	None Supplied	5.1	Brown sand with vegetation
118477	V182	None Supplied	5.1	Brown sand with vegetation
118478	V183	None Supplied	5.1	Brown loam and sand with gravel and vegetation
118479	V184	None Supplied	5.1	Brown sand
118480	V185	None Supplied	5.1	Brown sand
118481	V186	None Supplied	5.1	Brown sand
118482	V187	None Supplied	5.1	Brown sand with vegetation
118483	V188	None Supplied	5.1	Brown sand with vegetation
118484	V189	None Supplied	3.20-5.10	Brown loam and sand with vegetation
118485	V190	None Supplied	3.20-5.10	Brown loam and sand with vegetation
118486	V191	None Supplied	3.20-5.10	Brown sand with vegetation
118487	V192	None Supplied	3.20-5.10	Brown sand with vegetation and stones
118488	V193	None Supplied	3.20-5.10	Brown sand with vegetation
118489	V194	None Supplied	3.20-5.10	Brown sand with vegetation
118490	V195	None Supplied	3.20-5.10	Brown sand with vegetation
118491	V196	None Supplied	3.20-5.10	Brown sand with vegetation
118492	V197	None Supplied	3.20-5.10	Brown sand with vegetation
118493	V198	None Supplied	3.20-5.10	Brown sand with vegetation
118494	V199	None Supplied	3.20-5.10	Brown sand
118495	V200	None Supplied	3.20-5.10	Brown sand
118496	V201	None Supplied	3.20-5.10	Brown sand
118497	V202	None Supplied	3.20-5.10	Brown loam and sand with gravel and vegetation

Analytical Report Number : 24-003319
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A901B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L08	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in
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 30°C.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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



Environmental Science



Analytical Report Number : 24-003382

Project / Site name: Ardrossan North Shore

Samples received on: 13/02/2024

Your job number:

**Samples instructed on/
Analysis started on:** 15/02/2024

Your order number: S3240

Analysis completed by: 26/02/2024

Report Issue Number: 1

Report issued on: 26/02/2024

Samples Analysed: 4 soil samples

Signed

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at

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.



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Environmental Science

Analytical Report Number: 24-003382

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number	118680	118681	118682	118683
Sample Reference	V134A	V138A	V152A	V153A
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	4.50	4.50	2.00-4.50	2.00-4.50
Date Sampled	12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	12
Total mass of sample received	kg	0.1	NONE	0.3

Asbestos

Asbestos in Soil Detected/Not Detected	Type	It/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS ₁₀ AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS ₁₀ AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS ₁₀ AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	2	MCERTS	3.1	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	8	MCERTS	13	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C21 - C35 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	8	MCERTS	110	< 8.0	59	54
TPHCWG - Aliphatic >C5 - C35 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	10	NONE	130	< 10	59	54

TPHCWG - Aromatic >EC5 - EC7 HS ₁₀ AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS ₁₀ AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	2	MCERTS	2.4	< 2.0	< 2.0	3.6
TPHCWG - Aromatic >EC16 - EC21 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	10	MCERTS	12	< 10	< 10	18
TPHCWG - Aromatic >EC21 - EC35 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	10	MCERTS	55	< 10	36	50
TPHCWG - Aromatic >EC7 - EC8 HS ₁₀ AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC5 - EC35 EH _{CU} HS ₁₀ AR ₁ #2	mg/kg	10	NONE	69	< 10	36	71

TPH (C10 - C40) EH _{CU} HS ₁₀ TOTAL ₁ #2	mg/kg	10	MCERTS	220	< 10	130	150
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.13	< 0.05	0.05	0.19
Acenaphthylene	mg/kg	0.05	MCERTS	0.08	< 0.05	0.06	0.18
Acenaphthene	mg/kg	0.05	MCERTS	0.11	< 0.05	0.07	0.39
Fluorene	mg/kg	0.05	MCERTS	0.09	< 0.05	0.06	0.58
Phenanthrene	mg/kg	0.05	MCERTS	1.3	< 0.05	0.73	8.6
Anthracene	mg/kg	0.05	MCERTS	0.4	< 0.05	0.23	2.7
Fluoranthene	mg/kg	0.05	MCERTS	2	< 0.05	1.2	12
Pyrene	mg/kg	0.05	MCERTS	1.8	< 0.05	1.1	9.8
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1	< 0.05	0.67	5.3
Chrysene	mg/kg	0.05	MCERTS	1.2	< 0.05	0.65	4.6
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.4	< 0.05	0.8	4.6
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.52	< 0.05	0.37	2.1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.1	< 0.05	0.17	4.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.65	< 0.05	0.4	2.1
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	0.2	< 0.05	< 0.05	0.58



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Environmental Science

Analytical Report Number: 24-003382

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				118690	118681	118682	118683
Sample Reference				V134A	V138A	V152A	V153A
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				4.50	4.50	2.00-4.50	2.00-4.50
Date Sampled				12/02/2024	12/02/2024	12/02/2024	12/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.82	< 0.05	0.5	2.1
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	12.7	< 0.80	7.1	59.6

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

Analytical Report Number : 24-003382
Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
118680	V134A	None Supplied	4.5	Brown loam and sand with gravel
118681	V138A	None Supplied	4.5	Brown sand
118682	V152A	None Supplied	2.00-4.50	Brown sand with gravel
118683	V153A	None Supplied	2.00-4.50	Brown sand with gravel

Analytical Report Number : 24-003382
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NOIE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NOIE
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L083	D/W	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L076B/L083	D/W	MCERTS

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

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

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 300C.

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

Analytical Report Number : 24-78251

Replaces Analytical Report Number: 24-78251, issue no. 2
Additional analysis undertaken.
PAH and Asbestos analysis added.

Project / Site name:	Ardrossan North Shore	Samples received on:	12/01/2024
Your job number:	S3240	Samples instructed on/ Analysis started on:	15/01/2024
Your order number:	S3240	Analysis completed by:	30/01/2024
Report Issue Number:	2B	Report issued on:	30/01/2024
Samples Analysed:	18 soil samples		

Signed: 

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: 

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: 24-78251
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	2928362	2928363	2928364	2928365	2928366
Sample Reference	V112	V113	V114	V115	V116
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00-4.50	0.00-4.50	0.00-4.50	0.00-4.50	0.00-4.50
Date Sampled	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.6	8.2
Total mass of sample received	kg	0.001	NONE	0.2	0.2

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

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.07	0.08	0.09	0.07
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.05	0.08	< 0.05	0.06	0.06
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.05	0.07	< 0.05	0.12	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.07	0.08	< 0.05	0.19	0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.11	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.11	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.12	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	1.01	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	200	190	230	170	430
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TPH-CWG - Aliphatic >EC5 - EC6 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 _{HS, ID, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 _{EH, CU, ID, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	16	15	11	4.4	17
TPH-CWG - Aliphatic >EC16 - EC21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	40	32	37	18	79
TPH-CWG - Aliphatic >EC21 - EC35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	64	52	75	47	130
TPH-CWG - Aliphatic (EC5 - EC35) _{EH, CU, HS, ID, AL}	mg/kg	10	NONE	120	99	120	70	230

TPH-CWG - Aromatic >EC5 - EC7 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS, ID, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

Analytical Report Number: 24-78251
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number				2928362	2928363	2928364	2928365	2928366
Sample Reference				V112	V113	V114	V115	V116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-4.50	0.00-4.50	0.00-4.50	0.00-4.50	0.00-4.50
Date Sampled				10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_10_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_10_AR	mg/kg	2	MCERTS	3	3.3	< 2.0	2.4	4.5
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_10_AR	mg/kg	10	MCERTS	18	20	21	15	39
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_10_AR	mg/kg	10	MCERTS	39	42	60	53	100
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_10_AR	mg/kg	10	NONE	60	65	83	71	140

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

Analytical Report Number: 24-78251
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	2928367	2928368	2928369	2928370	2928371
Sample Reference	V117	V118	V119	V120	V121
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00-4.50	0.00-4.50	0.00-4.50	4.50	4.50
Date Sampled	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9.6	7.7
Total mass of sample received	kg	0.001	NONE	0.3	0.2

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

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.23
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	< 0.05	0.28
Pyrene	mg/kg	0.05	MCERTS	0.08	0.07	< 0.05	< 0.05	0.22
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.1
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.12
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.05	0.08	< 0.05	< 0.05	0.11
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.05	0.06	< 0.05	< 0.05	0.09
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	1.2
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	230	270	220	230	140
TPH-CWG - Aliphatic >EC5 - EC6 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 _{HS, ID, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 _{EH, CU, ID, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.4	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	8	11	11	11	4.7
TPH-CWG - Aliphatic >EC16 - EC21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	32	40	31	32	21
TPH-CWG - Aliphatic >EC21 - EC35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	70	80	71	74	48
TPH-CWG - Aliphatic (EC5 - EC35) _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	110	130	110	120	74
TPH-CWG - Aromatic >EC5 - EC7 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS, ID, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050



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Environmental Science

Analytical Report Number: 24-78251
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				2928367	2928368	2928369	2928370	2928371
Sample Reference				V117	V118	V119	V120	V121
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-4.50	0.00-4.50	0.00-4.50	4.50	4.50
Date Sampled				10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	TPH-CWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
	TPH-CWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	2.3	3.4	2.3	< 2.0
	TPH-CWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	18	25	17	19
	TPH-CWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	61	76	56	68
	TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_1D_AR	mg/kg	10	NONE	82	100	75	89

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



Analytical Report Number : 24-78251
Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2928362	V112	None Supplied	0.00-4.50	Brown sand.
2928363	V113	None Supplied	0.00-4.50	Brown sand.
2928364	V114	None Supplied	0.00-4.50	Brown sand.
2928365	V115	None Supplied	0.00-4.50	Brown sand.
2928366	V116	None Supplied	0.00-4.50	Brown sand.
2928367	V117	None Supplied	0.00-4.50	Brown sand.
2928368	V118	None Supplied	0.00-4.50	Brown sand.
2928369	V119	None Supplied	0.00-4.50	Brown sand.
2928370	V120	None Supplied	4.5	Brown sand.
2928371	V121	None Supplied	4.5	Brown sand.

Analytical Report Number : 24-78251
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 °C)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Refer to CoA for analyte specific accreditation.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L038-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID. Refer to CoA for band specific accreditation.	In house method with silica gel split/clean up.	L088/76-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
D.O. for Gravimetric Quant. if Screen/ID positive	Dependent option for Gravimetric Quant. if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in
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 30°C.
Unless otherwise indicated, site information, order number, project number, sampling data, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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



Analytical Report Number : 24-78251
Project / Site name: Ardrossan North Shore

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
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+ Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total



Analytical Report Number : 24-78667

Project / Site name: Ardrossan North Shore

Samples received on: 17/01/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 17/01/2024

Your order number: S3240

Analysis completed by: 24/01/2024

Report Issue Number: 1

Report issued on: 24/01/2024

Samples Analysed: 12 soil samples

Signature

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at

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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All 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.



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Environmental Science

Analytical Report Number: 24-78667

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number				2930458	2930459	2930460	2930461	2930462
Sample Reference				V122	V123	V124	V125	V126
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	5.00	5.00	2.60-5.00	2.60-5.00
Date Sampled				16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	11	10	12	13
Total mass of sample received	kg	0.001	NONE	0.2	0.3	0.2	0.2	0.2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile & Crocidolite	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	0.005	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	0.005	-
Asbestos Analyst ID	N/A	N/A	N/A	I2J	I2J	I2J	I2J	I2J

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.06	0.07	< 0.05	0.18	0.68
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	0.15
Fluoranthene	mg/kg	0.05	MCERTS	0.09	0.11	< 0.05	0.35	0.39
Pyrene	mg/kg	0.05	MCERTS	0.08	0.11	< 0.05	0.4	0.39
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.05	0.06	< 0.05	0.21	0.3
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.07	< 0.05	0.2	0.16
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.08	0.09	< 0.05	0.19	0.18
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.1	0.06
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.07	0.09	< 0.05	0.21	0.16
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.05	< 0.05	0.1	0.09
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.08	< 0.05	0.13	0.11

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	2.14	2.67
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH, CU, ID, TOTAL	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
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TPH-CWG - Aliphatic >EC5 - EC6 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 HS, ID, AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 EH, CU, ID, AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH, CU, ID, AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH, CU, ID, AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH, CU, ID, AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH, CU+HS, ID, AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 24-78667
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				2930458	2930459	2930460	2930461	2930462
Sample Reference				V122	V123	V124	V125	V126
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	5.00	5.00	2.60-5.00	2.60-5.00
Date Sampled				16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC5 - EC7 HS, 1D, AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 HS, 1D, AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 HS, 1D, AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 EH, CU, 1D, AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH, CU, 1D, AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH, CU, 1D, AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH, CU, 1D, AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) EH, CU+HS, 1D, AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

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



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Environmental Science

Analytical Report Number: 24-78667
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number				2930463	2930464	2930465	2930466	2930467
Sample Reference				V127	V128	V129	V130	V131
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.60-5.00	2.60-5.00	2.60-5.00	2.60-5.00	2.60-5.00
Date Sampled				16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	%	0.01	NONE	11	11	6.8	8.1	7.7
	kg	0.001	NONE	0.2	0.3	0.5	0.6	0.5
Stone Content								
Moisture Content								
Total mass of sample received								

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile & Crocidolite	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.001	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.001	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	12J	12J	SPU	SPU	SPU

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.12	0.15	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.12	0.12	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.13	0.1	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.07	0.06	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.09	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
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TPH-CWG - Aliphatic >EC5 - EC6 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020#	< 0.020##
TPH-CWG - Aliphatic >EC8 - EC10 _{HS, 1D, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 _{EH, CU, 1D, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH, CU, 1D, AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH, CU, 1D, HS, 1D, AL}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10



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Environmental Science

Analytical Report Number: 24-78667

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				2930463	2930464	2930465	2930466	2930467
Sample Reference				V127	V128	V129	V130	V131
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.60-5.00	2.60-5.00	2.60-5.00	2.60-5.00	2.60-5.00
Date Sampled				16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC5 - EC7 _{HS ID AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 _{HS ID AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS ID AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{EH CU ID AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH CU ID AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH CU ID AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH CU ID AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH CU+HS ID AR}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

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



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Environmental Science

Analytical Report Number: 24-78667

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				2930468	2930469
Sample Reference				V132	V133
Sample Number				None Supplied	None Supplied
Depth (m)				2.60-5.00	2.60-5.00
Date Sampled				16/01/2024	16/01/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	6.6	6.2
Total mass of sample received	kg	0.001	NONE	0.5	0.6

Asbestos in Soil Screen / Identification Name	Type	H/A	ISO 17025	-	-
Asbestos in Soil	Type	H/A	ISO 17025	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-
Asbestos Analyst ID	H/A	H/A	H/A	SPU	SPU

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	< 10	< 10
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TPH-CWG - Aliphatic >EC5 - EC6 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020##	< 0.020##
TPH-CWG - Aliphatic >EC8 - EC10 _{HS, ID, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 _{EH, CU, ID, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH, CU, HS, ID, AL}	mg/kg	10	NONE	< 10	< 10



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Environmental Science

Analytical Report Number: 24-78667

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				2930468	2930469
Sample Reference				V132	V133
Sample Number				None Supplied	None Supplied
Depth (m)				2.60-5.00	2.60-5.00
Date Sampled				16/01/2024	16/01/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
TPH-CWG - Aromatic >EC5 - EC7 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS, 1D, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{EH, CU, 1D, AR}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH, CU, 1D, AR}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	< 10	< 10

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



Analytical Report Number: 24-78667
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2930461	V125	2.60-5.00	158	Loose Fibrous Debris	Chrysotile & Crocidolite	0.005	0.005
2930464	V128	2.60-5.00	161	Loose Fibrous Debris	Chrysotile & Crocidolite	0.001	0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Iss No 2024-01-23_24-78667-1 Ardrossan North ShoreS3240

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The results included within the report are representative of the samples submitted for analysis.



Analytical Report Number : 24-78667
Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2930458	V122	None Supplied	5	Brown sand with gravel.
2930459	V123	None Supplied	5	Brown sand with gravel.
2930460	V124	None Supplied	5	Brown sand with gravel.
2930461	V125	None Supplied	2.60-5.00	Brown sand with gravel.
2930462	V126	None Supplied	2.60-5.00	Brown sand with gravel.
2930463	V127	None Supplied	2.60-5.00	Brown sand with gravel.
2930464	V128	None Supplied	2.60-5.00	Brown sand with gravel.
2930465	V129	None Supplied	2.60-5.00	Brown sand with gravel.
2930466	V130	None Supplied	2.60-5.00	Brown sand.
2930467	V131	None Supplied	2.60-5.00	Brown sand.
2930468	V132	None Supplied	2.60-5.00	Brown sand.
2930469	V133	None Supplied	2.60-5.00	Brown sand.



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Environmental Science

Analytical Report Number : 24-78667
Project / Site name: Ardrossan North Shore

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Refer to CoA for analyte specific accreditation.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX and MTBE in soil (Monosromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L0738-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID. Refer to CoA for band specific accreditation.	In-house method with silica gel split/clean up.	L088/76-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

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

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

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in

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

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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



Analytical Report Number : 24-78667
Project / Site name: Ardrossan North Shore

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
-	Operator - understore to separate acronyms (exception for +)				
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total				

- Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

Sample Deviation Report



Analytical Report Number : 24-78667

Project / Site name: Ardrossan North Shore

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
V129	None Supplied	S	2930465	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
V129	None Supplied	S	2930465	b	TPHCWG (Soil)	L088/76-PL	b
V130	None Supplied	S	2930466	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
V130	None Supplied	S	2930466	b	TPHCWG (Soil)	L088/76-PL	b
V131	None Supplied	S	2930467	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
V131	None Supplied	S	2930467	b	TPHCWG (Soil)	L088/76-PL	b
V132	None Supplied	S	2930468	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
V132	None Supplied	S	2930468	b	TPHCWG (Soil)	L088/76-PL	b
V133	None Supplied	S	2930469	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
V133	None Supplied	S	2930469	b	TPHCWG (Soil)	L088/76-PL	b



Environmental Science

Analytical Report Number : 24-79092

Project / Site name: Ardrossan North Shore

Samples received on: 19/01/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 19/01/2024

Your order number: S3240

Analysis completed by: 29/01/2024

Report Issue Number: 1

Report issued on: 29/01/2024

Samples Analysed: 24 soil samples

Signed:

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at

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

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

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

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

Analytical Report Number: 24-79092
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				2932938	2932939	2932940	2932941	2932942
Sample Reference				V134	V135	V136	V137	V138
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				4.50	4.50	4.50	4.50	4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.8	6.5	6.6	17	17
Total mass of sample received	kg	0.001	NONE	0.8	0.7	0.8	0.7	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile & Crocidolite	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	0.012	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	0.012	-
Asbestos Analyst ID	N/A	N/A	N/A	I2J	I2J	I2J	I2J	I2J

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.09	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.08	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.24	< 0.05	< 0.05	0.42	0.19
Anthracene	mg/kg	0.05	MCERTS	0.09	< 0.05	< 0.05	< 0.05	0.08
Fluoranthene	mg/kg	0.05	MCERTS	0.34	< 0.05	0.12	1.4	0.34
Pyrene	mg/kg	0.05	MCERTS	0.34	< 0.05	0.15	1.5	0.37
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.17	< 0.05	0.06	< 0.05	0.13
Chrysene	mg/kg	0.05	MCERTS	0.28	< 0.05	0.05	< 0.05	0.22
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.13	< 0.05	< 0.05	0.66	0.15
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.12	< 0.05	< 0.05	0.4	0.16
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.25	0.09
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.28	0.08

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.71	< 0.80	< 0.80	5.05	1.86
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH, CU, JD, TOTAL	mg/kg	10	MCERTS	1500	240	150	2300	1000
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TPH-CWG - Aliphatic >EC5 - EC6 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 HS, ID, AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 EH, CU, ID, AL	mg/kg	1	MCERTS	4.6	1.1	< 1.0	5.1	10
TPH-CWG - Aliphatic >EC12 - EC16 EH, CU, ID, AL	mg/kg	2	MCERTS	110	38	15	140	96
TPH-CWG - Aliphatic >EC16 - EC21 EH, CU, ID, AL	mg/kg	8	MCERTS	240	63	30	250	140
TPH-CWG - Aliphatic >EC21 - EC35 EH, CU, ID, AL	mg/kg	8	MCERTS	330	39	23	470	210
TPH-CWG - Aliphatic (EC5 - EC35) EH, CU + HS, ID, AL	mg/kg	10	NONE	690	140	68	860	450

Analytical Report Number: 24-79092
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number					2932938	2932939	2932940	2932941	2932942
Sample Reference					V134	V135	V136	V137	V138
Sample Number					None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)					4.50	4.50	4.50	4.50	4.50
Date Sampled					18/01/2024	18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken					None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status						
TPH-CWG - Aromatic >EC5 - EC7 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS, 1D, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{EH, CU, 1D, AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.2
TPH-CWG - Aromatic >EC12 - EC16 _{EH, CU, 1D, AR}	mg/kg	2	MCERTS	51	14	13	63	41	
TPH-CWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	220	41	38	320	140	
TPH-CWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	360	36	26	680	270	
TPH-CWG - Aromatic (EC5 - EC35) _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	630	91	77	1100	450	

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



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Analytical Report Number: 24-79092
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number				2932943	2932944	2932945	2932946	2932947
Sample Reference				V139	V140	V141	V142	V143
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				4.50	4.50	4.50	2.00-4.50	2.00-4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	12	12	15	4.7
Total mass of sample received	kg	0.001	NONE	0.7	0.8	0.7	0.8	0.7

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	12J	12J	12J	12J	12J

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	0.08
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.1	< 0.05	0.1	< 0.05	0.2
Pyrene	mg/kg	0.05	MCERTS	0.12	< 0.05	0.1	< 0.05	0.21
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	< 0.05	0.07
Chrysene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	< 0.05	0.11
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.06	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 _{EH,CU,TD,TOTAL}	mg/kg	10	MCERTS	380	5300	440	4700	420
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TPH-CWG - Aliphatic >EC5 - EC6 _{HS,TD,AL}	mg/kg	0.02	NONE	< 0.020#	< 0.020#	< 0.020#	< 0.020#	< 0.020#
TPH-CWG - Aliphatic >EC6 - EC8 _{HS,TD,AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 _{HS,TD,AL}	mg/kg	0.05	NONE	< 0.050#	< 0.050#	< 0.050#	< 0.050#	< 0.050#
TPH-CWG - Aliphatic >EC10 - EC12 _{EH,CU,TD,AL}	mg/kg	1	MCERTS	3.8	11	< 1.0	28	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH,CU,TD,AL}	mg/kg	2	MCERTS	40	290	41	320	23
TPH-CWG - Aliphatic >EC16 - EC21 _{EH,CU,TD,AL}	mg/kg	8	MCERTS	56	600	86	480	62
TPH-CWG - Aliphatic >EC21 - EC35 _{EH,CU,TD,AL}	mg/kg	8	MCERTS	57	970	96	800	110
TPH-CWG - Aliphatic (EC5 - EC35) _{EH,CU+HS,TD,AL}	mg/kg	10	NONE	160	1900	220	1600	190



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Environmental Science

Analytical Report Number: 24-79092

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number				2932943	2932944	2932945	2932946	2932947
Sample Reference				V139	V140	V141	V142	V143
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				4.50	4.50	4.50	2.00-4.50	2.00-4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
TPH-CWG - Aromatic >EC5 - EC7 _{HS 1D AR}				mg/kg	0.01	NONE	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 _{HS 1D AR}				mg/kg	0.01	NONE	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS 1D AR}				mg/kg	0.05	NONE	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{EH CU 1D AR}				mg/kg	1	MCERTS	1.3	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH CU 1D AR}				mg/kg	2	MCERTS	26	150
TPH-CWG - Aromatic >EC16 - EC21 _{EH CU 1D AR}				mg/kg	10	MCERTS	62	760
TPH-CWG - Aromatic >EC21 - EC35 _{EH CU 1D AR}				mg/kg	10	MCERTS	91	1900
TPH-CWG - Aromatic (EC5 - EC35) _{EH CU+HS 1D AR}				mg/kg	10	NONE	180	2800
							180	2500
							180	160

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

Analytical Report Number: 24-79092
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number				2932948	2932949	2932950	2932951	2932952
Sample Reference				V144	V145	V146	V147	V148
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	10	6.9	5.4	6.6	14
Total mass of sample received	kg	0.001	NONE	0.8	0.7	0.8	0.7	0.8

Asbestos in Soil Screen / Identification Name	Type	I/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	I/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	I/A	I/A	I/A	MLO	MLO	MLO	MLO	MLO

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.1	0.06	0.09	0.13
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.23	0.21	0.16	0.16
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.21	0.23	0.18	0.16
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.15	0.12	0.09	0.09
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.12	0.15	0.13	0.11
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.16	0.14	0.11	0.1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	0.07	< 0.05	0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.17	0.12	0.08	0.09
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.06	0.07	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.07	0.08	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	1.27	1.25	0.84	0.89
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH, CU, ID, TOTAL	mg/kg	10	MCERTS	4100	< 10	12	670	62
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TPH-CWG - Aliphatic >EC5 - EC6 HS, ID, AL	mg/kg	0.02	NONE	< 0.020#	< 0.020#	< 0.020#	< 0.020#	< 0.020#
TPH-CWG - Aliphatic >EC6 - EC8 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 HS, ID, AL	mg/kg	0.05	NONE	< 0.050#	< 0.050#	< 0.050#	< 0.050#	< 0.050#
TPH-CWG - Aliphatic >EC10 - EC12 EH, CU, ID, AL	mg/kg	1	MCERTS	12	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH, CU, ID, AL	mg/kg	2	MCERTS	250	< 2.0	< 2.0	34	3.5
TPH-CWG - Aliphatic >EC16 - EC21 EH, CU, ID, AL	mg/kg	8	MCERTS	450	< 8.0	< 8.0	76	8.1
TPH-CWG - Aliphatic >EC21 - EC35 EH, CU, ID, AL	mg/kg	8	MCERTS	780	< 8.0	< 8.0	130	11
TPH-CWG - Aliphatic (EC5 - EC35) EH, CU+HS, ID, AL	mg/kg	10	NONE	1500	< 10	< 10	240	23



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Environmental Science

Analytical Report Number: 24-79092

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				2932948	2932949	2932950	2932951	2932952
Sample Reference				V144	V145	V146	V147	V148
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC5 - EC7 _{HS ID AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 _{HS ID AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS ID AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{EH CU ID AR}	mg/kg	1	MCERTS	1.1	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH CU ID AR}	mg/kg	2	MCERTS	130	< 2.0	< 2.0	20	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH CU ID AR}	mg/kg	10	MCERTS	460	< 10	< 10	97	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH CU ID AR}	mg/kg	10	MCERTS	1300	< 10	< 10	220	21
TPH-CWG - Aromatic (EC5 - EC35) _{EH CU+HS ID AR}	mg/kg	10	NONE	1900	< 10	11	330	32

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

Analytical Report Number: 24-79092
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number				2932953	2932954	2932955	2932956	2932957
Sample Reference				V149	V150	V151	V152	V153
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	9.3	8.1	12	5.4
Total mass of sample received	kg	0.001	NONE	0.8	0.7	0.8	0.7	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	MLO	MLO	MLO	MLO	MJN

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.18	0.33	< 0.05	0.2	0.2
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.06	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.23	0.34	0.09	0.23	0.39
Pyrene	mg/kg	0.05	MCERTS	0.25	0.38	0.09	0.35	0.54
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.15	0.19	< 0.05	0.07	0.24
Chrysene	mg/kg	0.05	MCERTS	0.16	0.2	< 0.05	0.14	0.4
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.18	0.18	< 0.05	< 0.05	0.22
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.08	0.06	< 0.05	< 0.05	0.07
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.16	0.14	< 0.05	< 0.05	0.16
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.07	0.07	< 0.05	< 0.05	0.12
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.09	0.09	< 0.05	< 0.05	0.12

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.55	2.04	< 0.80	0.99	2.46
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH, CU, ID, TOTAL	mg/kg	10	MCERTS	110	32	< 10	1300	1600
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TPH-CWG - Aliphatic >EC5 - EC6 HS, ID, AL	mg/kg	0.02	NONE	< 0.020#	< 0.020	< 0.020#	< 0.020#	< 0.020#
TPH-CWG - Aliphatic >EC6 - EC8 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 HS, ID, AL	mg/kg	0.05	NONE	< 0.050#	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 EH, CU, ID, AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	16	4.8
TPH-CWG - Aliphatic >EC12 - EC16 EH, CU, ID, AL	mg/kg	2	MCERTS	7.3	< 2.0	< 2.0	150	120
TPH-CWG - Aliphatic >EC16 - EC21 EH, CU, ID, AL	mg/kg	8	MCERTS	15	< 8.0	< 8.0	200	220
TPH-CWG - Aliphatic >EC21 - EC35 EH, CU, ID, AL	mg/kg	8	MCERTS	24	< 8.0	< 8.0	230	350
TPH-CWG - Aliphatic (EC5 - EC35) EH, CU + HS, ID, AL	mg/kg	10	NONE	46	< 10	< 10	600	690



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Environmental Science

Analytical Report Number: 24-79092

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				2932953	2932954	2932955	2932956	2932957
Sample Reference				V149	V150	V151	V152	V153
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC5 - EC7 _{HS 1D AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 _{HS 1D AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS 1D AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{BH CU 1D AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	3	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{BH CU 1D AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	63	49
TPH-CWG - Aromatic >EC16 - EC21 _{BH CU 1D AR}	mg/kg	10	MCERTS	12	< 10	< 10	180	220
TPH-CWG - Aromatic >EC21 - EC35 _{BH CU 1D AR}	mg/kg	10	MCERTS	33	20	< 10	300	430
TPH-CWG - Aromatic (EC5 - EC35) _{BH CU+HS 1D AR}	mg/kg	10	NONE	47	28	< 10	550	700

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

Analytical Report Number: 24-79092
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				2932958	2932959	2932960	2932961
Sample Reference				V154	V155	V156	V157
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	13	7.4	6.6	7.4
Total mass of sample received	kg	0.001	NONE	0.7	0.8	0.7	0.7

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	IZJ	IZJ	MJN	MJN

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.43	0.07	0.13	0.07
Anthracene	mg/kg	0.05	MCERTS	0.12	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.59	0.09	0.15	0.12
Pyrene	mg/kg	0.05	MCERTS	0.53	0.11	0.17	0.12
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.23	0.06	0.1	0.08
Chrysene	mg/kg	0.05	MCERTS	0.26	0.07	0.11	0.07
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.24	0.08	0.1	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.09	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.18	0.07	0.1	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.1	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.13	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2.9	< 0.80	0.86	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH, CU, ID, TOTAL	mg/kg	10	MCERTS	570	< 10	74	22
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TPH-CWG - Aliphatic >EC5 - EC6 HS, ID, AL	mg/kg	0.02	NONE	< 0.020#	< 0.020#	< 0.020#	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 HS, ID, AL	mg/kg	0.05	NONE	< 0.050#	< 0.050#	< 0.050#	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 EH, CU, ID, AL	mg/kg	1	MCERTS	3.6	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH, CU, ID, AL	mg/kg	2	MCERTS	49	< 2.0	4.4	2.1
TPH-CWG - Aliphatic >EC16 - EC21 EH, CU, ID, AL	mg/kg	8	MCERTS	86	< 8.0	8.2	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH, CU, ID, AL	mg/kg	8	MCERTS	140	< 8.0	11	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH, CU, HS, ID, AL	mg/kg	10	NONE	270	< 10	24	< 10

Analytical Report Number: 24-79092
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number				2932958	2932959	2932960	2932961
Sample Reference				V154	V155	V156	V157
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-4.50	2.00-4.50	2.00-4.50	2.00-4.50
Date Sampled				18/01/2024	18/01/2024	18/01/2024	18/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
TPH-CWG - Aromatic >EC5 - EC7 HS 1D AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 HS 1D AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 HS 1D AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 EH CU 1D AR	mg/kg	1	MCERTS	1.4	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH CU 1D AR	mg/kg	2	MCERTS	20	< 2.0	4	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH CU 1D AR	mg/kg	10	MCERTS	64	< 10	12	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH CU 1D AR	mg/kg	10	MCERTS	130	< 10	26	< 10
TPH-CWG - Aromatic (EC5 - EC35) EH CU+HS 1D AR	mg/kg	10	NONE	210	< 10	42	14

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



4041



Environmental Science

Analytical Report Number: 24-79092
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2932941	V137	4.50	124	Loose Fibrous Debris	Chrysotile & Crocidolite	0.012	0.012

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Iss No 2024-01-26_24-79092-1 Ardrossan North ShoreS3240

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Page 12 of 15

Analytical Report Number : 24-79092
Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2932938	V134	None Supplied	4.5	Brown sand with gravel.
2932939	V135	None Supplied	4.5	Light brown sand.
2932940	V136	None Supplied	4.5	Light brown sand.
2932941	V137	None Supplied	4.5	Brown clay and sand with gravel.
2932942	V138	None Supplied	4.5	Brown clay and sand with gravel.
2932943	V139	None Supplied	4.5	Brown sand with gravel.
2932944	V140	None Supplied	4.5	Brown clay and sand with gravel.
2932945	V141	None Supplied	4.5	Brown clay and sand with gravel.
2932946	V142	None Supplied	2.00-4.50	Brown clay and sand with gravel.
2932947	V143	None Supplied	2.00-4.50	Brown sand with gravel.
2932948	V144	None Supplied	2.00-4.50	Brown clay and sand with gravel.
2932949	V145	None Supplied	2.00-4.50	Brown sand with gravel.
2932950	V146	None Supplied	2.00-4.50	Brown clay and sand with gravel.
2932951	V147	None Supplied	2.00-4.50	Brown sand.
2932952	V148	None Supplied	2.00-4.50	Brown sand.
2932953	V149	None Supplied	2.00-4.50	Brown sand.
2932954	V150	None Supplied	2.00-4.50	Brown sand.
2932955	V151	None Supplied	2.00-4.50	Brown sand with gravel.
2932956	V152	None Supplied	2.00-4.50	Brown clay and sand with gravel.
2932957	V153	None Supplied	2.00-4.50	Brown sand with gravel.
2932958	V154	None Supplied	2.00-4.50	Brown sandy loam with gravel.
2932959	V155	None Supplied	2.00-4.50	Brown sand.
2932960	V156	None Supplied	2.00-4.50	Brown sand.
2932961	V157	None Supplied	2.00-4.50	Brown clay and sand with gravel.

Analytical Report Number : 24-79092
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation status
Asbestos identification in soil	Asbestos identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 °C)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Refer to CoA for analyte specific accreditation.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited.	In-house method based on USEPA 8260. Refer to CoA for analyte specific accreditation.	L0738-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID. Refer to CoA for band specific accreditation.	In-house method with silica gel split/clean up.	L088/76-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/clean up.	L076-PL	D	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in
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 30°C.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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



Analytical Report Number : 24-79092
Project / Site name: Ardrossan North Shore

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
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- Operator - understore to separate acronyms (exception for +)
+ Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
- Data reported unaccredited due to quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.



Environmental Science

Analytical Report Number : 24-80782

Project / Site name: Ardrossan North Shore

Samples received on: 31/01/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 31/01/2024

Your order number: S3240

Analysis completed by: 12/02/2024

Report Issue Number: 1

Report issued on: 13/02/2024

Samples Analysed: 21 soil samples

Sign

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at:

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.



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Environmental Science

Analytical Report Number: 24-80782

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				2942210	2942211	2942212	2942213	2942214
Sample Reference				V158	V159	V160	V161	V162
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				4.30	1.75-4.30	1.75-4.30	1.75-4.30	4.30
Date Sampled				30/01/2024	30/01/2024	30/01/2024	30/01/2024	30/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	%	0.01	NONE	10	11	10	9.4	9.4
	kg	0.001	NONE	0.8	0.8	0.8	0.8	0.8
Stone Content								
Moisture Content								
Total mass of sample received								

Asbestos in Soil Screen / Identification Name	Type	I/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	I/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	I/A	I/A	I/A	KWB	KWB	KWB	KWB	KWB

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.14	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.07	0.06	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.08	< 0.05	0.11	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.09	< 0.05	0.11	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.06	< 0.05	0.09	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.05	< 0.05	0.09	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.06	< 0.05	0.11	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.05	< 0.05	0.09	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.06	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.07	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH, CU, ID, TOTAL	mg/kg	10	MCERTS	120	< 10	< 10	130	33
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TPH-CWG - Aliphatic >EC5 - EC6 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 HS, ID, AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 HS, ID, AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 EH, CU, ID, AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH, CU, ID, AL	mg/kg	2	MCERTS	5.9	< 2.0	< 2.0	17	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH, CU, ID, AL	mg/kg	8	MCERTS	16	< 8.0	< 8.0	36	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH, CU, ID, AL	mg/kg	8	MCERTS	26	< 8.0	< 8.0	28	11
TPH-CWG - Aliphatic (EC5 - EC35) EH, CU+HS, ID, AL	mg/kg	10	NONE	48	< 10	< 10	81	14

TPH-CWG - Aromatic >EC5 - EC7 HS, ID, AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
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Environmental Science

Analytical Report Number: 24-80782

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number				2942210	2942211	2942212	2942213	2942214
Sample Reference				V158	V159	V160	V161	V162
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				4.30	1.75-4.30	1.75-4.30	1.75-4.30	4.30
Date Sampled				30/01/2024	30/01/2024	30/01/2024	30/01/2024	30/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	TPH-CWG - Aromatic >EC7 - EC8 _{HS, 1D, AR}	mg/kg	0.01	ND	< 0.010	< 0.010	< 0.010	< 0.010
	TPH-CWG - Aromatic >EC8 - EC10 _{HS, 1D, AR}	mg/kg	0.05	ND	< 0.050	< 0.050	< 0.050	< 0.050
	TPH-CWG - Aromatic >EC10 - EC12 _{EH, CU, 1D, AR}	mg/kg	1	MCERTS	1.7	< 1.0	< 1.0	< 1.0
	TPH-CWG - Aromatic >EC12 - EC16 _{EH, CU, 1D, AR}	mg/kg	2	MCERTS	6.1	< 2.0	< 2.0	< 2.0
	TPH-CWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	16	< 10	< 10	< 10
	TPH-CWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	32	< 10	< 10	< 10
	TPH-CWG - Aromatic (EC5 - EC35) _{EH, CU+HS, 1D, AR}	mg/kg	10	ND	55	< 10	< 10	50
								20

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



4041



Environmental Science

Analytical Report Number: 24-80782

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	2942215	2942216	2942217	2942218	2942219
Sample Reference	V163	V164	V165	V166	V167
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	1.75-4.30	1.75-4.30	1.75-4.30	1.75-4.30	4.30
Date Sampled	30/01/2024	30/01/2024	30/01/2024	30/01/2024	30/01/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	12
Total mass of sample received	kg	0.001	NONE	0.8	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Amosite	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	< 0.001	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	< 0.001	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	KWB	KWB	KWB	KWB	KWB

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.11	0.42	0.24	0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.07	0.21	0.38	0.34	0.08
Pyrene	mg/kg	0.05	MCERTS	0.08	0.21	0.37	0.32	0.09
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.13	0.17	0.16	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.05	0.11	0.19	0.19	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.05	0.14	0.17	0.16	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.05	0.09	0.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.05	0.12	0.14	0.17	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.06	0.07	0.07	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.11	0.09	0.1	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	1.25	2.09	1.85	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	250	46	< 10	26	25
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TPH-CWG - Aliphatic >EC5 - EC6 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 _{HS, 1D, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 _{EH, CU, 1D, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH, CU, 1D, AL}	mg/kg	2	MCERTS	18	3.5	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	61	12	< 8.0	< 8.0	9.2
TPH-CWG - Aliphatic >EC21 - EC35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	67	11	< 8.0	11	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH, CU, HS, 1D, AL}	mg/kg	10	NONE	150	26	< 10	14	13

TPH-CWG - Aromatic >EC5 - EC7 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
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Analytical Report Number: 24-80782
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number				2942215	2942216	2942217	2942218	2942219
Sample Reference				V163	V164	V165	V166	V167
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.75-4.30	1.75-4.30	1.75-4.30	1.75-4.30	4.30
Date Sampled				30/01/2024	30/01/2024	30/01/2024	30/01/2024	30/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC7 - EC8 HS 1D AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 HS 1D AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 EH CU 1D AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH CU 1D AR	mg/kg	2	MCERTS	4	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH CU 1D AR	mg/kg	10	MCERTS	32	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH CU 1D AR	mg/kg	10	MCERTS	52	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) EH CU FHS 1D AR	mg/kg	10	NONE	87	19	< 10	12	< 10

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



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Environmental Science

Analytical Report Number: 24-80782

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number	2942220	2942221	2942222	2942223	2942224
Sample Reference	V168	V169	V170	V171	V172
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	4.30	4.30	1.75-4.30	1.75-4.3	1.75-4.30
Date Sampled	30/01/2024	30/01/2024	30/01/2024	30/01/2024	30/01/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	10	9.6
Total mass of sample received	kg	0.001	NONE	0.8	0.8

Asbestos in Soil Screen / Identification Name	Type	II/A	ISO 17025	-	-	-	Chrysotile	-
Asbestos in Soil	Type	II/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	0.001	-
Asbestos Analyst ID	II/A	II/A	II/A	MBI	MBI	MBI	MBI	MBI

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH_CU_ID_TOTAL	mg/kg	10	MCERTS	< 10	< 10	33	26	< 10
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TPH-CWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	5.3	4	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	18	13	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	9.8	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	< 10	< 10	33	25	< 10

TPH-CWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
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Analytical Report Number: 24-80782
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				2942220	2942221	2942222	2942223	2942224
Sample Reference				V168	V169	V170	V171	V172
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				4.30	4.30	1.75-4.30	1.75-4.3	1.75-4.30
Date Sampled				30/01/2024	30/01/2024	30/01/2024	30/01/2024	30/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC7 - EC8 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS, 1D, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{EH, CU, 1D, AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH, CU, 1D, AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

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



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Environmental Science

Analytical Report Number: 24-80782

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number				2942225	2942226	2942227	2942228	2942229
Sample Reference				V173	V174	V175	V176	V177
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.75-4.30	1.75-4.30	1.75-4.30	1.75-4.30	1.75-4.30
Date Sampled				30/01/2024	30/01/2024	30/01/2024	30/01/2024	30/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	None	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	None	10	10	14	13	15
Total mass of sample received	kg	0.001	None	0.8	0.8	0.8	0.8	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	MBI	MBI	MBI	MBI	MBI

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.49	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.14	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.16	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.06	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.14	0.51	0.21
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.19	0.6
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.31	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.13	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.29	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.14	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.2	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	3.23	< 0.80
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 _{PH, CU, ID, TOTAL}	mg/kg	10	MCERTS	14	< 10	310	870	700
TPH-CWG - Aliphatic >EC5 - EC6 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 _{HS, ID, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 _{EH, CU, ID, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	4.2	4.8	2.9
TPH-CWG - Aliphatic >EC12 - EC16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	37	90	67
TPH-CWG - Aliphatic >EC16 - EC21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	69	160	120
TPH-CWG - Aliphatic >EC21 - EC35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	99	200	190
TPH-CWG - Aliphatic (EC5 - EC35) _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	14	< 10	210	450	370
TPH-CWG - Aromatic >EC5 - EC7 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Analytical Report Number: 24-80782
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				2942225	2942226	2942227	2942228	2942229
Sample Reference				V173	V174	V175	V176	V177
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.75-4.30	1.75-4.30	1.75-4.30	1.75-4.30	1.75-4.30
Date Sampled				30/01/2024	30/01/2024	30/01/2024	30/01/2024	30/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aromatic >EC7 - EC8 _{HS 1D AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS 1D AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{EH CU 1D AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH CU 1D AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	4.2	26	18
TPH-CWG - Aromatic >EC16 - EC21 _{EH CU 1D AR}	mg/kg	10	MCERTS	< 10	< 10	29	100	80
TPH-CWG - Aromatic >EC21 - EC35 _{EH CU 1D AR}	mg/kg	10	MCERTS	< 10	< 10	46	180	140
TPH-CWG - Aromatic (EC5 - EC35) _{EH CU+HS 1D AR}	mg/kg	10	NONE	< 10	< 10	79	310	240

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

Analytical Report Number: 24-80782
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	2942230			
Sample Reference	V178			
Sample Number	None Supplied			
Depth (m)	4.30			
Date Sampled	30/01/2024			
Time Taken	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	14
Total mass of sample received	kg	0.001	NONE	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Amosite
Asbestos in Soil	Type	N/A	ISO 17025	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001
Asbestos Analyst ID	N/A	N/A	N/A	MBI

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.12
Fluorene	mg/kg	0.05	MCERTS	0.1
Phenanthrene	mg/kg	0.05	MCERTS	0.15
Anthracene	mg/kg	0.05	MCERTS	0.14
Fluoranthene	mg/kg	0.05	MCERTS	0.44
Pyrene	mg/kg	0.05	MCERTS	0.46
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.18
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.06
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.16
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.08
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.11

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2.01
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Monoaromatics & Oxygenates

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

Petroleum Hydrocarbons

TPH C10 - C40 EH, CU, ID, TOTAL	mg/kg	10	MCERTS	990
TPH-CWG - Aliphatic >EC5 - EC6 HS, ID, AL	mg/kg	0.02	NONE	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 HS, ID, AL	mg/kg	0.02	NONE	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 HS, ID, AL	mg/kg	0.05	NONE	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 EH, CU, ID, AL	mg/kg	1	MCERTS	12
TPH-CWG - Aliphatic >EC12 - EC16 EH, CU, ID, AL	mg/kg	2	MCERTS	110
TPH-CWG - Aliphatic >EC16 - EC21 EH, CU, ID, AL	mg/kg	8	MCERTS	180
TPH-CWG - Aliphatic >EC21 - EC35 EH, CU, ID, AL	mg/kg	8	MCERTS	230
TPH-CWG - Aliphatic (EC5 - EC35) EH, CU+HS, ID, AL	mg/kg	10	NONE	540
TPH-CWG - Aromatic >EC5 - EC7 HS, ID, AR	mg/kg	0.01	NONE	< 0.010

Analytical Report Number: 24-80782
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number	2942230			
Sample Reference	V178			
Sample Number	None Supplied			
Depth (m)	4.30			
Date Sampled	30/01/2024			
Time Taken	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
TPH-CWG - Aromatic >EC7 - EC8 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 _{HS, ID, AR}	mg/kg	0.05	NONE	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 _{EH, CU, ID, AR}	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH, CU, ID, AR}	mg/kg	2	MCERTS	24
TPH-CWG - Aromatic >EC16 - EC21 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	110
TPH-CWG - Aromatic >EC21 - EC35 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	200
TPH-CWG - Aromatic (EC5 - EC35) _{BH, CU+HS, ID, AR}	mg/kg	10	NONE	330

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



Analytical Report Number: 24-80782
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2942216	V164	1.75-4.30	128	Loose Fibres	Amosite	< 0.001	< 0.001
2942223	V171	1.75-4.3	129	Loose Fibres	Chrysotile	0.001	0.001
2942230	V178	4.30	151	Loose Fibres	Amosite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

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This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.



Environmental Science

Analytical Report Number : 24-80782
Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2942210	V158	None Supplied	4.3	Brown sand with gravel.
2942211	V159	None Supplied	1.75-4.30	Brown sandy clay.
2942212	V160	None Supplied	1.75-4.30	Brown sandy clay.
2942213	V161	None Supplied	1.75-4.30	Brown sand with gravel.
2942214	V162	None Supplied	4.3	Brown sand with gravel.
2942215	V163	None Supplied	1.75-4.30	Brown sandy clay with gravel.
2942216	V164	None Supplied	1.75-4.30	Brown sandy clay with gravel.
2942217	V165	None Supplied	1.75-4.30	Brown sandy clay with gravel.
2942218	V166	None Supplied	1.75-4.30	Brown sand with gravel.
2942219	V167	None Supplied	4.3	Brown sand.
2942220	V168	None Supplied	4.3	Brown sand.
2942221	V169	None Supplied	4.3	Brown sand.
2942222	V170	None Supplied	1.75-4.30	Brown sand with gravel.
2942223	V171	None Supplied	1.75-4.3	Brown sand with gravel.
2942224	V172	None Supplied	1.75-4.30	Brown sand with gravel.
2942225	V173	None Supplied	1.75-4.30	Brown sand with gravel.
2942226	V174	None Supplied	1.75-4.30	Brown sand with gravel.
2942227	V175	None Supplied	1.75-4.30	Brown clay and sand with gravel.
2942228	V176	None Supplied	1.75-4.30	Brown clay and sand with gravel.
2942229	V177	None Supplied	1.75-4.30	Brown clay and sand with gravel.
2942230	V178	None Supplied	4.3	Brown clay and sand with gravel.

Analytical Report Number : 24-80782
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L010-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Refer to CoA for analyte specific accreditation.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 nm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L015-UK/PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA 8260. Refer to CoA for analyte specific accreditation	L0730-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID. Refer to CoA for band specific accreditation.	In-house method with silica gel split/clean up.	L088/76-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/clean up.	L076-PL	D	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft)	A006-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in [REDACTED]
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted



Analytical Report Number : 24-80782
Project / Site name: Ardrossan North Shore

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
#2	EH_2D_Total but with fatty acids mathematically subtracted				
-	Operator - understore to separate acronyms (exception for +)				
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total				

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



Analytical Report Number : 24-006463

Project / Site name: Ardrossan North Shore

Samples received on: 01/03/2024

Your job number:

**Samples instructed on/
Analysis started on:** 01/03/2024

Your order number: 53240

Analysis completed by: 08/03/2024

Report Issue Number: 1

Report issued on: 08/03/2024

Samples Analysed: 10 soil samples

Signed:

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at

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.



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Environmental Science

Analytical Report Number: 24-006463
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	132770	132771	132772	132773	132774
Sample Reference	V203	V204	V205	V206	V207
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	3.75	3.75	3.75	3.75	2.00-3.75
Date Sampled	29/02/2024	29/02/2024	29/02/2024	29/02/2024	29/02/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	10	9.5
Total mass of sample received	kg	0.1	NONE	1.6	1.5

Asbestos

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

Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	0.38
TPHCWG - Aliphatic >C10 - C12 EH_CU_ID_AL_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	1.3
TPHCWG - Aliphatic >C12 - C16 EH_CU_ID_AL_#1_#2	mg/kg	2	MCERTS	11	24	3.3	15	39
TPHCWG - Aliphatic >C16 - C21 EH_CU_ID_AL_#1_#2	mg/kg	8	MCERTS	28	69	16	39	65
TPHCWG - Aliphatic >C21 - C35 EH_CU_ID_AL_#1_#2	mg/kg	8	MCERTS	18	55	8.1	35	37
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_ID_AL_#1_#2	mg/kg	10	NONE	57	150	27	89	140

TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_ID_AR_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR_#1_#2	mg/kg	2	MCERTS	9.4	8.7	< 2.0	4.5	20
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR_#1_#2	mg/kg	10	MCERTS	30	45	< 10	22	69
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR_#1_#2	mg/kg	10	MCERTS	18	28	< 10	19	47
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR_#1_#2	mg/kg	10	NONE	57	82	< 10	46	140

TPH (C10 - C40) EH_CU_ID_TOTAL_#1_#2	mg/kg	10	MCERTS	110	230	44	140	280
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.06	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.08	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.08	0.21	< 0.05	0.08	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.12	0.25	< 0.05	0.13	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.22	0.81	0.12	0.25	0.31
Anthracene	mg/kg	0.05	MCERTS	0.1	0.23	< 0.05	0.08	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.37	1	0.13	0.3	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.41	1.1	0.16	0.35	0.32
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.21	0.79	< 0.05	0.18	0.08
Chrysene	mg/kg	0.05	MCERTS	0.2	0.72	< 0.05	0.16	0.19
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.2	0.84	< 0.05	0.23	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.07	0.31	< 0.05	0.08	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.19	0.83	< 0.05	0.27	< 0.05

Analytical Report Number: 24-006463
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number				132770	132771	132772	132773	132774			
Sample Reference				V203	V204	V205	V206	V207			
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)				3.75	3.75	3.75	3.75	2.00-3.75			
Date Sampled				29/02/2024	29/02/2024	29/02/2024	29/02/2024	29/02/2024			
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status								
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.07	0.35	< 0.05	0.16	< 0.05			
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.12	< 0.05	< 0.05	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.1	0.39	< 0.05	0.2	< 0.05			
Speciated Total EPA-16 PAHs				mg/kg	0.8	ISO 17025	2.34	8.05	< 0.80	2.53	0.9

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



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Environmental Science

Analytical Report Number: 24-006463

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	132775	132776	132777	132778	132779
Sample Reference	V208	V209	V210	V211	V212
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	2.00-3.75	2.00-3.75	2.00-3.75	2.00-3.75	2.00-3.75
Date Sampled	29/02/2024	29/02/2024	29/02/2024	29/02/2024	29/02/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	14	15
Total mass of sample received	kg	0.1	NONE	1.5	1.6

Asbestos

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

Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 H5_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 H5_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 H5_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_CU_10_AL_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH_CU_10_AL_#1_#2	mg/kg	2	MCERTS	13	16	45	38	28
TPHCWG - Aliphatic >C16 - C21 EH_CU_10_AL_#1_#2	mg/kg	8	MCERTS	34	28	81	100	63
TPHCWG - Aliphatic >C21 - C35 EH_CU_10_AL_#1_#2	mg/kg	8	MCERTS	23	12	67	87	34
TPHCWG - Aliphatic >C5 - C35 EH_CU+H5_10_AL_#1_#2	mg/kg	10	NONE	71	55	190	230	130

TPHCWG - Aromatic >EC5 - EC7 H5_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 H5_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 H5_10_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_10_AR_#1_#2	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_10_AR_#1_#2	mg/kg	2	MCERTS	6.6	11	17	13	14
TPHCWG - Aromatic >EC16 - EC21 EH_CU_10_AR_#1_#2	mg/kg	10	MCERTS	32	29	64	56	50
TPHCWG - Aromatic >EC21 - EC35 EH_CU_10_AR_#1_#2	mg/kg	10	MCERTS	31	19	49	53	49
TPHCWG - Aromatic >EC5 - EC35 EH_CU+H5_10_AR_#1_#2	mg/kg	10	NONE	70	60	130	120	110

TPH (C10 - C40) EH_CU_10_TOTAL_#1_#2	mg/kg	10	MCERTS	140	120	330	360	240
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.15	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.33	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.07	0.49	0.18	0.16	0.31
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.09	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.11	0.2	0.22	0.2	0.24
Pyrene	mg/kg	0.05	MCERTS	0.17	0.39	0.33	0.27	0.37
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.13	0.11	0.11	0.15
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.26	0.15	0.14	0.19
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.09	0.13	0.14	0.15
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.09	0.11	0.11	0.14

Analytical Report Number: 24-006463
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number				132775	132776	132777	132778	132779
Sample Reference				V208	V209	V210	V211	V212
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-3.75	2.00-3.75	2.00-3.75	2.00-3.75	2.00-3.75
Date Sampled				29/02/2024	29/02/2024	29/02/2024	29/02/2024	29/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	2.22	1.23	1.13	1.55

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

Analytical Report Number : 24-006463
Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
132770	V203	None Supplied	3.75	Brown loam and sand with gravel and vegetation
132771	V204	None Supplied	3.75	Brown loam and sand with gravel and vegetation
132772	V205	None Supplied	3.75	Brown loam and sand with gravel and vegetation
132773	V206	None Supplied	3.75	Brown loam and sand with gravel and vegetation
132774	V207	None Supplied	2.00-3.75	Brown sandy clay with gravel and vegetation
132775	V208	None Supplied	2.00-3.75	Brown sandy clay with gravel and vegetation
132776	V209	None Supplied	2.00-3.75	Brown sandy clay with gravel and vegetation
132777	V210	None Supplied	2.00-3.75	Brown loam and sand with gravel and vegetation
132778	V211	None Supplied	2.00-3.75	Brown loam and sand with gravel and vegetation
132779	V212	None Supplied	2.00-3.75	Brown loam and sand with gravel and vegetation

Analytical Report Number : 24-006463
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	LC19B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	LC19B	D	NONE
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	LG64B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	LG73B	W	MCERTS
Total petroleum hydrocarbons with Carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L0768/L086	D/W	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L0768/L086	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory.
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 30°C.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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



Environmental Science

Analytical Report Number : 24-008997

Project / Site name: Ardrossan North Shore

Samples received on: 14/03/2024

Your job number: S3240

Samples instructed on/
Analysis started on: 15/03/2024

Your order number: S3240

Analysis completed by: 21/03/2024

Report Issue Number: 1

Report issued on: 21/03/2024

Samples Analysed: 10 soil samples

Signed:

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at:

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.



Environmental Science

Analytical Report Number: 24-008997
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	145039	145040	145041	145042	145043
Sample Reference	V213	V214	V215	V216	V217
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	3.60	3.60	3.60	3.60	3.60
Date Sampled	12/03/2024	12/03/2024	12/03/2024	12/03/2024	12/03/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.7	7.6
Total mass of sample received	kg	0.1	NONE	0.8	0.7

Asbestos

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

Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 _{HS, 1D, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 _{EH, CU, 1D, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, 1D, AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, 1D, AL}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPHCWG - Aromatic >EC5 - EC7 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS, 1D, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 _{EH, CU, 1D, AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, 1D, AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH (C10 - C40) _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	12	10	< 10	< 10	< 10
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Analytical Report Number: 24-008997
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number				145039	145040	145041	145042	145043
Sample Reference				V213	V214	V215	V216	V217
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.60	3.60	3.60	3.60	3.60
Date Sampled				12/03/2024	12/03/2024	12/03/2024	12/03/2024	12/03/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80

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



4041



Environmental Science

Analytical Report Number: 24-008997

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number	145044	145045	145046	145047	145048
Sample Reference	V218	V219	V220	V221	V222
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	3.60	3.60	3.60	2.20-3.60	2.20-3.60
Date Sampled	12/03/2024	12/03/2024	12/03/2024	12/03/2024	12/03/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.9	8
Total mass of sample received	kg	0.1	NONE	0.8	0.8

Asbestos

Asbestos in Soil Detected/Not Detected	Type	II/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	II/A	II/A	II/A	MLO	MLO	MLO	MLO	MLO

Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 _{HS, 1D, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 _{EH, CU, 1D, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, 1D, AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	12	30	39
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	24	68	73
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	20	76	82
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, 1D, AL}	mg/kg	10	NONE	< 10	< 10	55	170	190

TPHCWG - Aromatic >EC5 - EC7 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS, 1D, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 _{EH, CU, 1D, AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, 1D, AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	5.2	9.8	14
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	< 10	< 10	23	43	49
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	< 10	< 10	40	86	98
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	< 10	< 10	68	140	160

TPH (C10 - C40) _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	< 10	< 10	130	330	380
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.17
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.1
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.14
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	1.1
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.87
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.51	7.4
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.48	5.6
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.23	4.3
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.37	3.8
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.34	4.5
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.21	1.7
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.27	4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.15	1.9



Analytical Report Number: 24-008997
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				145044	145045	145046	145047	145048			
Sample Reference				V218	V219	V220	V221	V222			
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)				3.60	3.60	3.60	2.20-3.60	2.20-3.60			
Date Sampled				12/03/2024	12/03/2024	12/03/2024	12/03/2024	12/03/2024			
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status								
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.48			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.25	2.1			
Speciated Total EPA-16 PAHs				mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	2.81	38

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

Analytical Report Number : 24-008997

Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
145039	V213	None Supplied	3.6	Brown sand
145040	V214	None Supplied	3.6	Brown sand
145041	V215	None Supplied	3.6	Brown sand
145042	V216	None Supplied	3.6	Brown sand
145043	V217	None Supplied	3.6	Brown sand
145044	V218	None Supplied	3.6	Brown sand
145045	V219	None Supplied	3.6	Brown sand
145046	V220	None Supplied	3.6	Brown sand
145047	V221	None Supplied	2.20-3.60	Brown sandy clay with vegetation and gravel
145048	V222	None Supplied	2.20-3.60	Brown sandy clay with vegetation and gravel

Analytical Report Number : 24-008997
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (excluding PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L0766/L088	D/W	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L0766/L088	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory.
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 30°C.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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



Analytical Report Number : 24-009391

Project / Site name: Ardrossan North Shore

Samples received on: 15/03/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 18/03/2024

Your order number: S3240

Analysis completed by: 22/03/2024

Report Issue Number: 1

Report issued on: 22/03/2024

Samples Analysed: 6 soil samples

Signed

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at:

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: 24-009391
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	146617	146618	146619	146620	146621
Sample Reference	V223	V224	V225	V226	V227
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	3.65	3.65	3.65	3.65	2.00-3.65
Date Sampled	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9.9	10
Total mass of sample received	kg	0.1	NONE	0.9	0.9

Asbestos

Asbestos in Soil Detected/Not Detected	Type	I/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	I/A	I/A	I/A	I2J	I2J	I2J	I2J	I2J

Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS ID AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS ID AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS ID AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH CU ID AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH CU ID AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 EH CU ID AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >C21 - C35 EH CU ID AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	45
TPHCWG - Aliphatic >C5 - C35 EH CU+HS ID AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	45

TPHCWG - Aromatic >EC5 - EC7 HS ID AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS ID AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS ID AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH CU ID AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH CU ID AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH CU ID AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH CU ID AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	31
TPHCWG - Aromatic >EC5 - EC35 EH CU+HS ID AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	31

TPH (C10 - C40) EH CU ID TOTAL	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	110
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.07
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.07
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.9
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.33
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	2.7
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	2.6
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	1.5
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	1.6
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	2
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	0.8
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	1.7

Analytical Report Number: 24-009391
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				146617	146618	146619	146620	146621			
Sample Reference				V223	V224	V225	V226	V227			
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)				3.65	3.65	3.65	3.65	2.00-3.65			
Date Sampled				14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024			
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status								
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.88			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.23			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	1.1			
Speciated Total EPA-16 PAHs				mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	16.3

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

Analytical Report Number: 24-009391
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				146622
Sample Reference				V228
Sample Number				None Supplied
Depth (m)				2.00-3.65
Date Sampled				14/03/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	14
Total mass of sample received	kg	0.1	NONE	0.9

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	12J

Monoaromatics

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

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020
TPHCWG - Aliphatic >C6 - C8 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020
TPHCWG - Aliphatic >C8 - C10 _{HS, ID, AL}	mg/kg	0.05	NONE	< 0.050
TPHCWG - Aliphatic >C10 - C12 _{EH, CU, ID, AL}	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	43
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	43

TPHCWG - Aromatic >EC5 - EC7 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS, ID, AR}	mg/kg	0.05	NONE	< 0.050
TPHCWG - Aromatic >EC10 - EC12 _{EH, CU, ID, AR}	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, ID, AR}	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	24
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, ID, AR}	mg/kg	10	NONE	24

TPH (C10 - C40) _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	94
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.39
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.13
Fluorene	mg/kg	0.05	MCERTS	0.11
Phenanthrene	mg/kg	0.05	MCERTS	1.3
Anthracene	mg/kg	0.05	MCERTS	0.4
Fluoranthene	mg/kg	0.05	MCERTS	2.6
Pyrene	mg/kg	0.05	MCERTS	2.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.3
Chrysene	mg/kg	0.05	MCERTS	1.5
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.5
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.86
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.4



Analytical Report Number: 24-009391
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number					146622
Sample Reference					V228
Sample Number					None Supplied
Depth (m)					2.00-3.65
Date Sampled					14/03/2024
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.7	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.19	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.92	
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	15.7	

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

Analytical Report Number : 24-009391
Project / Site name: Ardrossan North Shore

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
146617	V223	None Supplied	3.65	Brown sand with gravel
146618	V224	None Supplied	3.65	Brown sand with gravel
146619	V225	None Supplied	3.65	Brown sand with gravel
146620	V226	None Supplied	3.65	Brown sand
146621	V227	None Supplied	2.00-3.65	Brown clay and sand with vegetation
146622	V228	None Supplied	2.00-3.65	Brown sand with gravel

Analytical Report Number : 24-009391
Project / Site name: Ardrossan North Shore

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos Identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L0769/L088	D/W	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L0769/L088	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory
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 30°C.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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