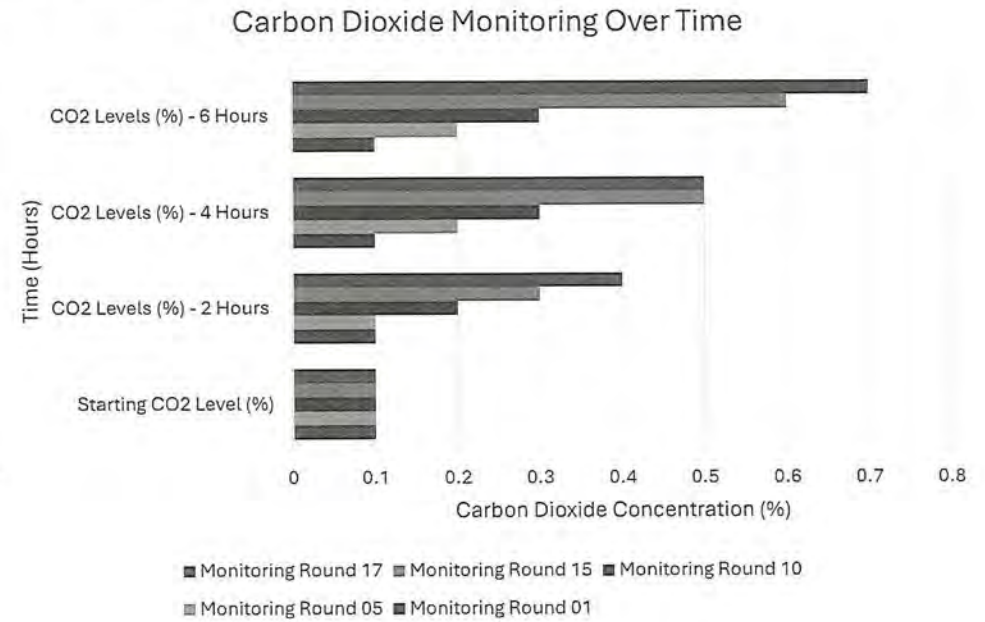
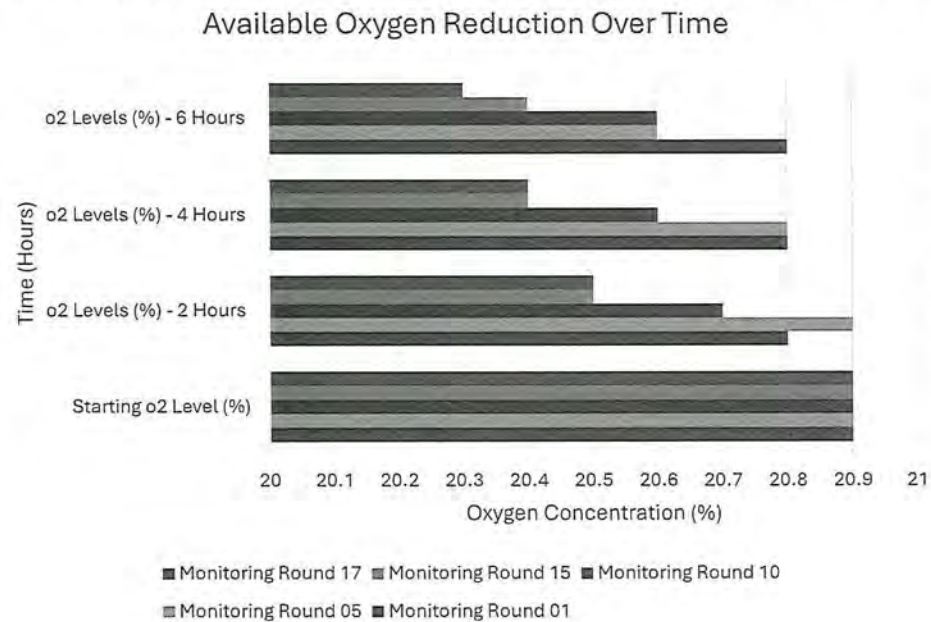
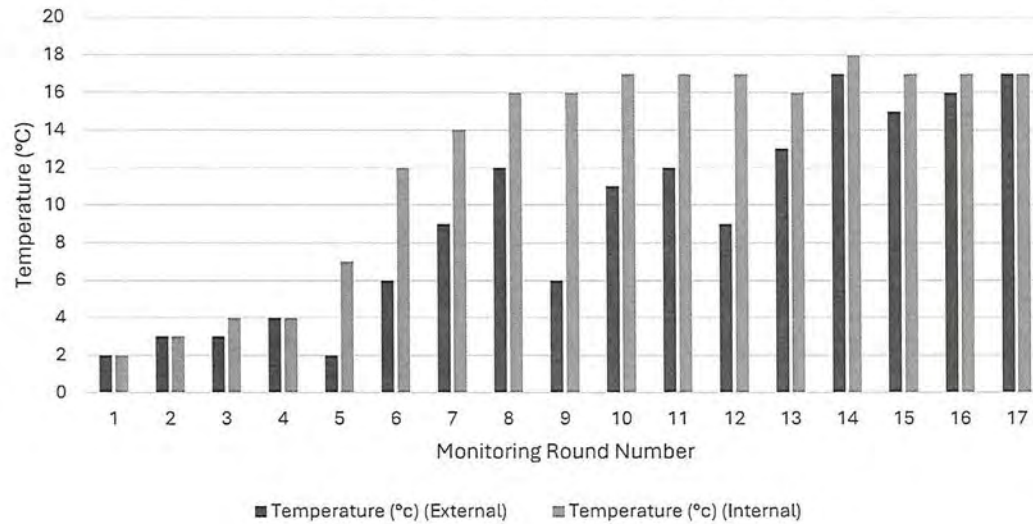


Appendix G Sanctus Bioremediation Stock Pile Monitoring Data

TSP05 Oxygen vs Carbon Dioxide Concentration (%) over time Bar Charts. Data presented within Table 5-2.



TSP05 External vs Internal Stockpile Temperatures

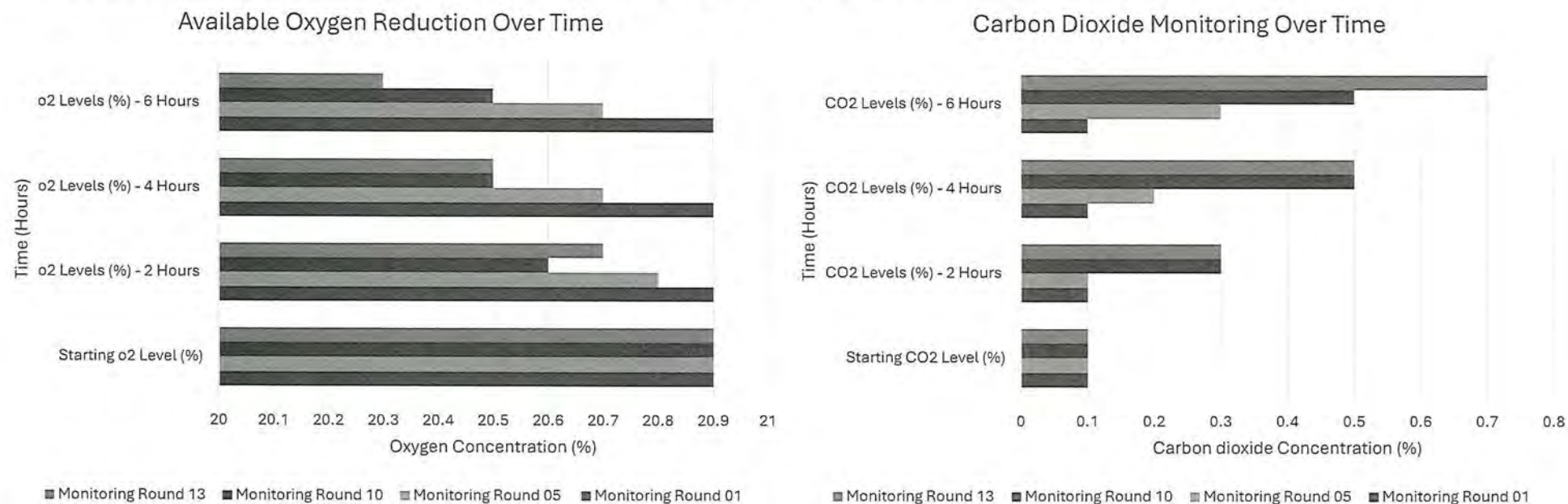


TSP05 Temperature Summary

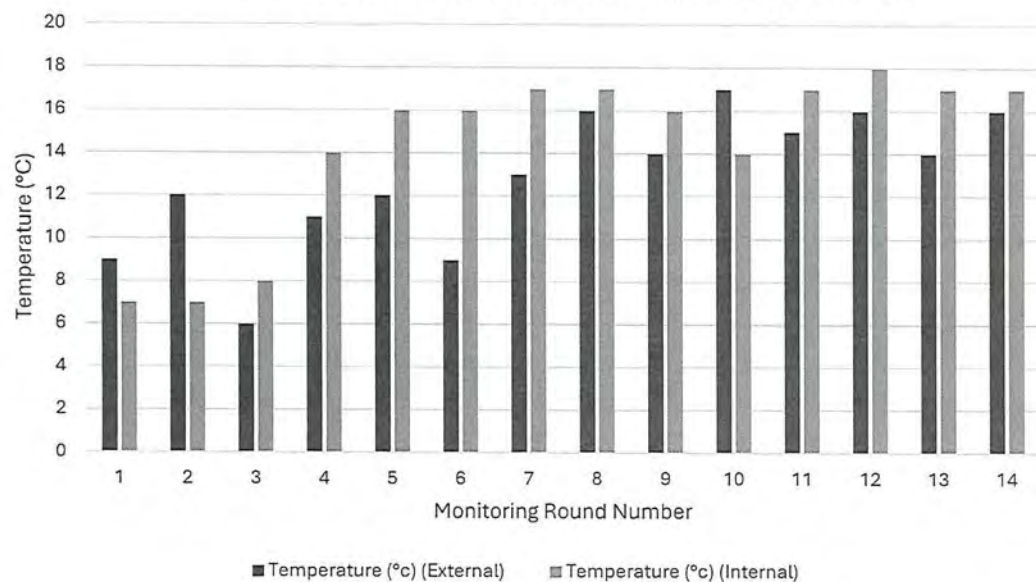
Monitoring Round No	Date	Temperature (°c) (External)	Temperature (°c) (Internal)
1	18-Dec	2	2
2	11-Jan	3	3
3	25-Jan	3	4
4	06-Feb	4	4
5	22-Feb	2	7
6	06-Mar	6	12
7	20-Mar	9	14
8	03-Apr	12	16
9	10-Apr	6	16
10	17-Apr	11	17
11	24-Apr	12	17
12	01-May	9	17
13	08-May	13	16
14	17-Jun	17	18
15	09-Jul	15	17
16	17-Jul	16	17
17	23-Jul	17	17

TSP06

TSP06 Oxygen vs Carbon Dioxide Concentration (%) over time Bar Charts. Data presented within Table 5-3.



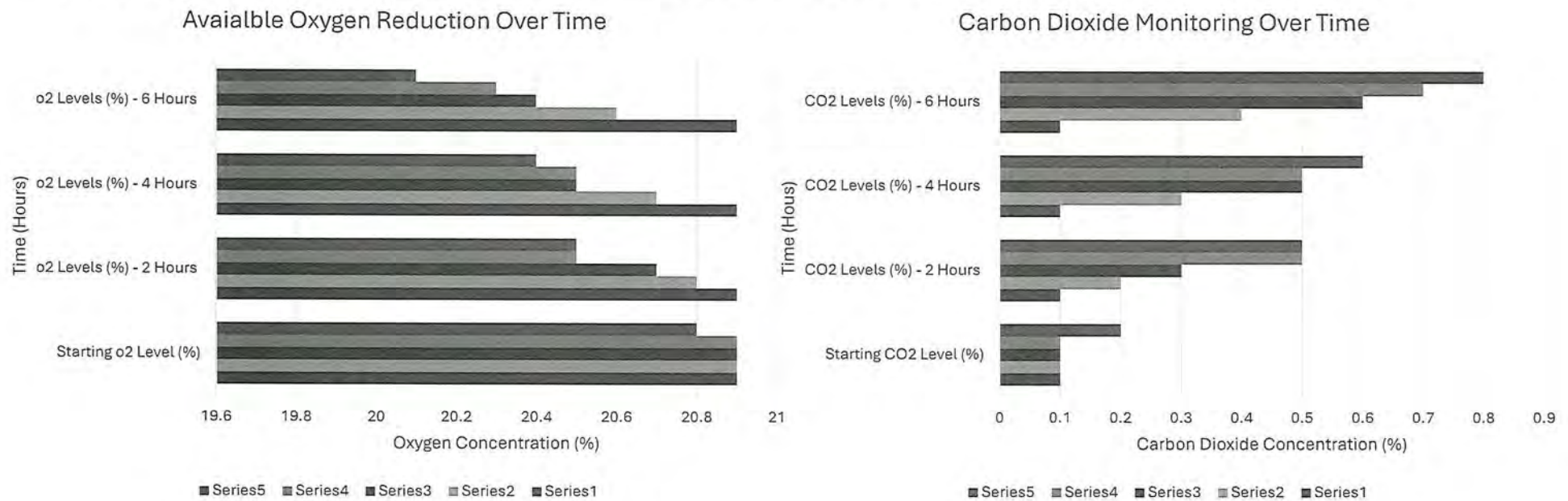
TSP06 External vs Internal Stockpile Temperatures



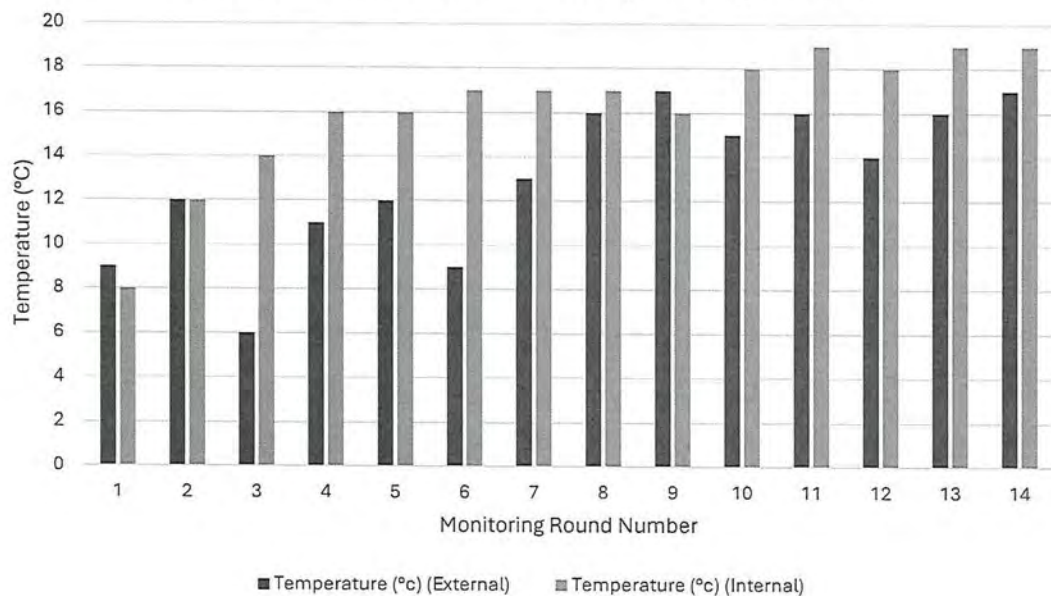
TSP06 Temperature Summary

Monitoring Round No	Date	Temperature (°c) (External)	Temperature (°c) (Internal)
1	21-Mar	9	7
2	03-Apr	12	7
3	10-Apr	6	8
4	17-Apr	11	14
5	24-Apr	12	16
6	01-May	9	16
7	08-May	13	17
8	15-May	16	17
9	22-May	14	16
10	17-Jun	17	14
11	25-Jun	15	17
12	02-Jul	16	18
13	10-Jul	14	17
14	16-Jul	16	17

TSP08 Oxygen vs Carbon Dioxide Concentration [%] over time Bar Charts. Data presented within Table 5-4.



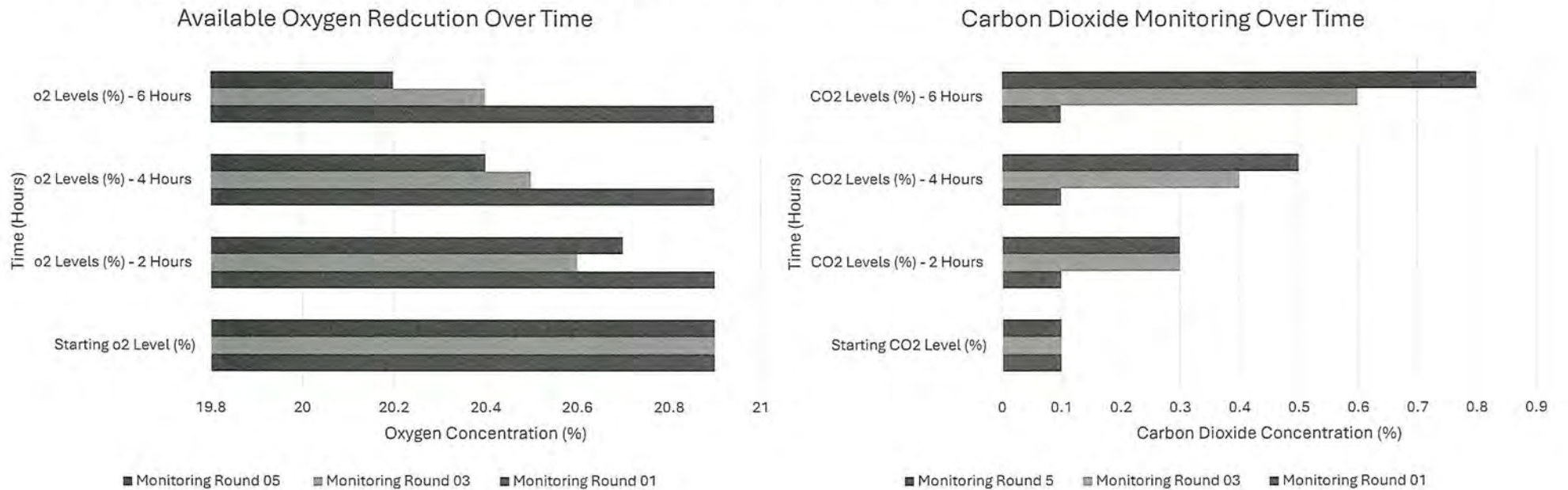
TSP08 External vs Internal Stockpile Temperatures



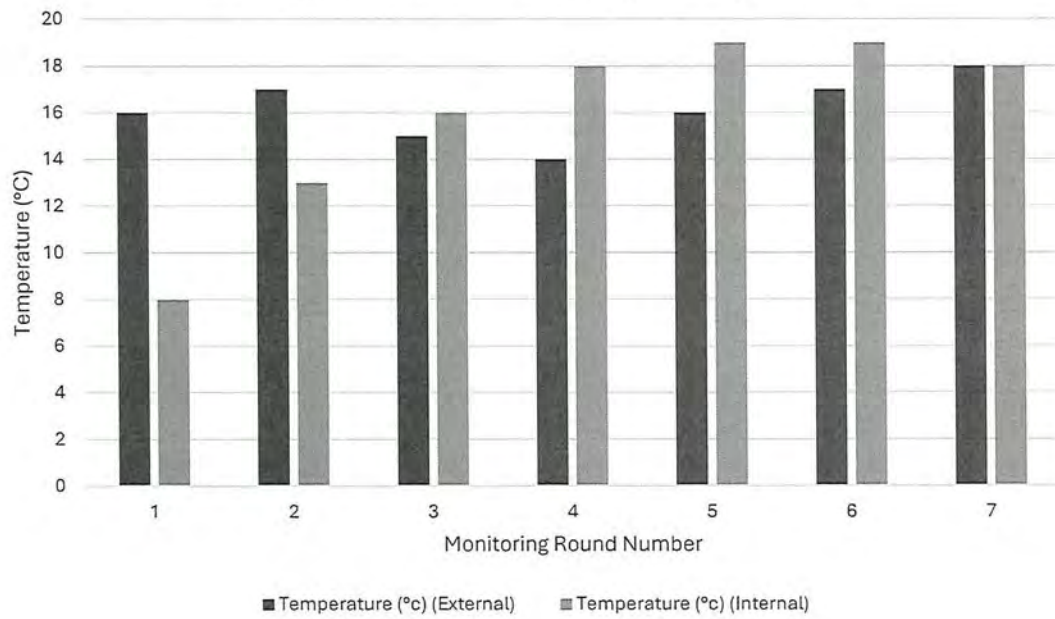
TSP08 Temperature Summary

Monitoring Round No	Date turned	Temperature (°c) (External)	Temperature (°c) (Internal)
1	21-Mar	9	8
2	03-Apr	12	12
3	10-Apr	6	14
4	17-Apr	11	16
5	24-Apr	12	16
6	01-May	9	17
7	08-May	13	17
8	15-May	16	17
9	22-May	17	16
10	17-Jun	15	18
11	25-Jun	16	19
12	09-Jul	14	18
13	17-Jul	16	19
14	30-Jul	17	19

TSP10 Oxygen vs Carbon Dioxide Concentration (%) over time Bar Charts. Data presented within Table 5-5.



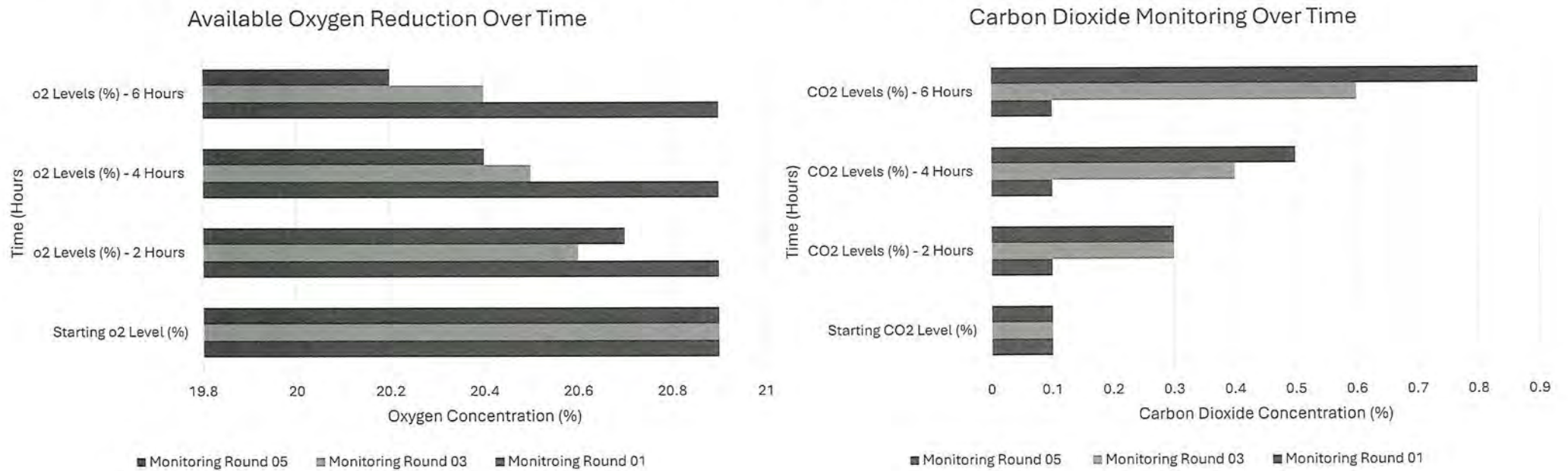
TSP10 External vs Internal Stockpile Temperatures

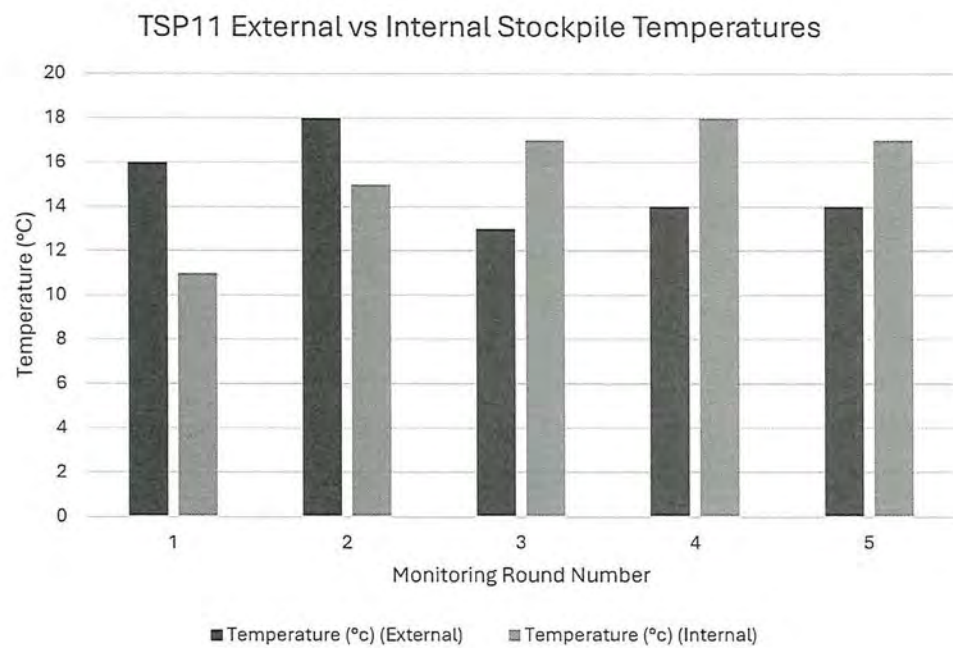


TSP10 Temperature Summary

Monitoring Round No	Date turned	Temperature (°c) (External)	Temperature (°c) (Internal)
1	15-May	16	8
2	22-May	17	13
3	18-Jun	15	16
4	09-Jul	14	18
5	17-Jul	16	19
6	30-Jul	17	19
7	13-Aug	18	18

TSP11 Oxygen vs Carbon Dioxide Concentration (%) over time Bar Charts. Data presented within Table 5-6.





		TSP11 Temperature Summary	
Monitoring Round No	Date	Temperature (°c) (External)	Temperature (°c) (Internal)
1	12-Jun	16	11
2	18-Jun	18	15
3	25-Jun	13	17
4	02-Jul	14	18
5	09-Jul	14	17

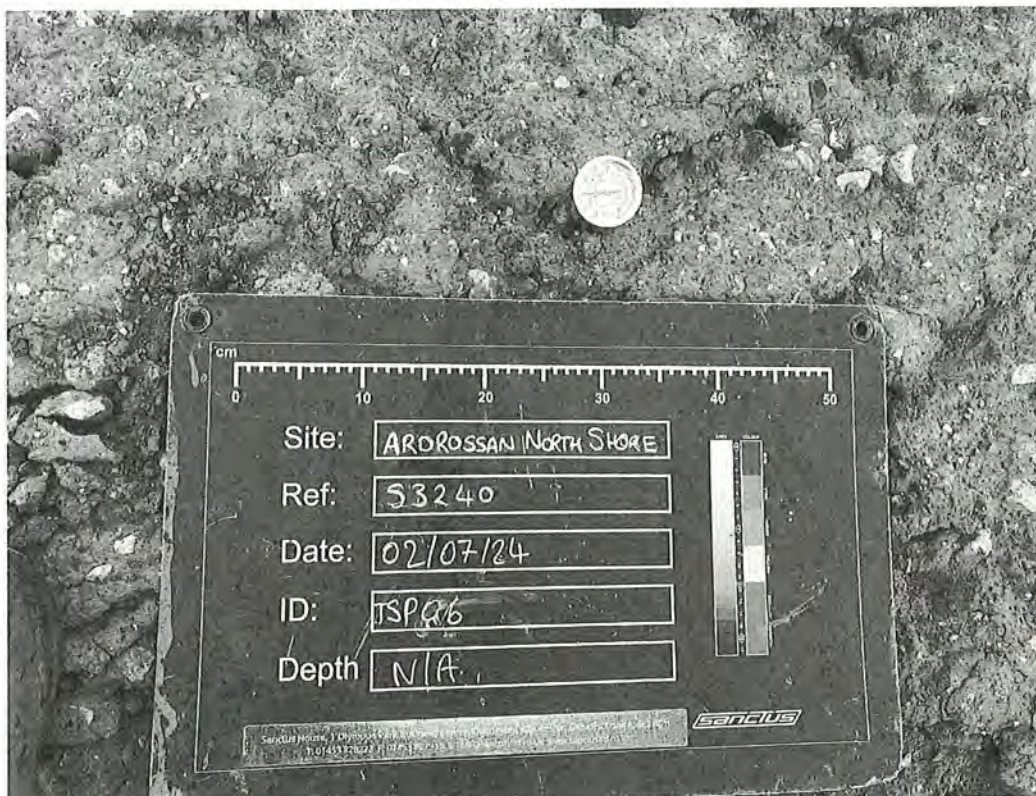


Plate No.: 1

Title: Example internal temperature monitoring with biotreated stockpiles.



Plate No.: 2

Title.: Example turning and Aeration of Biotreated stockpiles.

sanctus

Contract No.: S3240

Date: 17/10/2024

Contract Name: Ardrossan, North Shore



Plate No.: 3

Title.: Example turning and Aeration of Biotreated stockpiles.

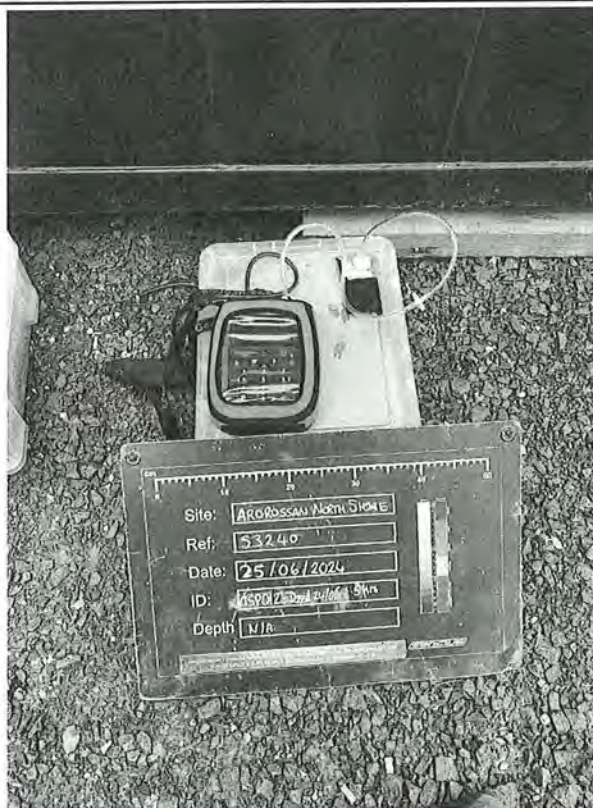


Plate No.: 4

Title.: Available Oxygen and Carbon Dioxide Monitoring of biotreated soils.



Contract No.: S3240

Date: 17/10/2024

Contract Name: Ardrossan, North Shore



Plate No.: 3

Title.: Example internal temperature monitoring with biotreated stockpiles.

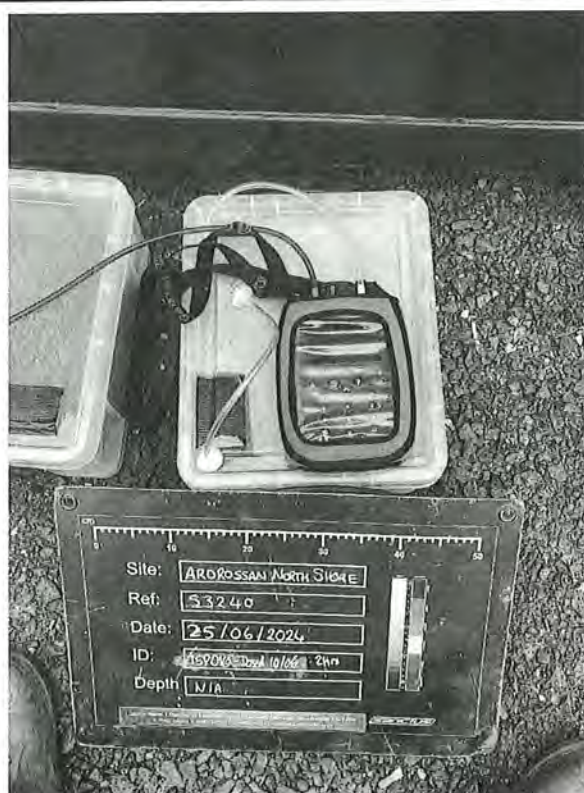


Plate No.: 4

Title.: Available Oxygen and Carbon Dioxide Monitoring of biotreated soils.



Contract No.: S3240

Date: 17/10/2024

Contract Name: Ardrossan, North Shore

BACTERIOLOGICAL TEST REPORT



Client: i2 Analytical LTD

#Address:

#Site:

#FAO:

#Order No: PO_S_C7043

Job Number: M/182/128133

Report No.: 141704.1

#Date Tak'n: Tue, 9th Jul 2024 00:00

Date Rec'd: Fri, 12th Jul 2024



Stansted Laboratories LTD

Items Marked □ are not included in the UKAS Schedule

Sample ID	#Description & Temperatures	Analysis	Result	Tested	Notes / Species
SL579815 <i>Soil</i>	252817 TSP011	TVC @ 37°C - 2 Day □	>300 cfu/g	12/07/2024	Estimated Counts: >30000 cfu/g
	Init Temp □ Temp > 1 Min □ Temp > 2 Min □	TVC @ 22°C - 3 Day □	>300 cfu/g	12/07/2024	Estimated Counts: >30000 cfu/g
		Coliforms □	>242000 MPN/g	12/07/2024	
SL579816 <i>Soil</i>	252818 TSP07	TVC @ 37°C - 2 Day □	>300 cfu/g	12/07/2024	Estimated Counts: >30000 cfu/g
	Init Temp □ Temp > 1 Min □ Temp > 2 Min □	TVC @ 22°C - 3 Day □	>300 cfu/g	12/07/2024	Estimated Counts: >30000 cfu/g
		Coliforms □	>242000 MPN/g	12/07/2024	
SL579817 <i>Soil</i>	252819 TSP08	TVC @ 37°C - 2 Day □	>300 cfu/g	12/07/2024	Estimated Counts: >30000 cfu/g
	Init Temp □ Temp > 1 Min □ Temp > 2 Min □	TVC @ 22°C - 3 Day □	>300 cfu/g	12/07/2024	Estimated Counts: >30000 cfu/g
		Coliforms □	>242000 MPN/g	12/07/2024	
SL579818 <i>Soil</i>	252820 CP-01	TVC @ 37°C - 2 Day □	>300 cfu/g	12/07/2024	Estimated Counts: >30000 cfu/g
	Init Temp □ Temp > 1 Min □ Temp > 2 Min □	TVC @ 22°C - 3 Day □	>300 cfu/g	12/07/2024	Estimated Counts: >30000 cfu/g
		Coliforms □	200 MPN/g	12/07/2024	

Method Codes

SLM/B312/M - Coliforms and Escherichia coli

SLM/B313/M - Total Viable Count at 22°C, Yeasts and Moulds at 25°C

Legend & Footnotes

ctu = Colony Forming Units

mpn = Most Probable Number

TNTC = Too Numerous to Count

#Information supplied by the customer and can affect the validity of results.

Sampling is not included in our UKAS Schedule.

All Samples Analysed as received.

Test report authorised by :

Date: 16/07/2024 13:28:14

Disclaimer

Results relate to samples tested and should not be reproduced except in full, without the written approval of the laboratory. Interpretations and opinions are not included in our UKAS schedule.

00:00 means time not declared.

NON LEGIONELLA SAMPLES RECEIVED OUTSIDE OF 24 HOURS. THEREFORE RESULTS MAY BE INVALID.

BACTERIOLOGICAL TEST REPORT



Client: i2 Analytical LTD



#Order No: PO_S_C7043

Job Number: M/182/128133

Report No.: 141704.1

#Date Tak'n: Tue, 9th Jul 2024 00:00

Date Rec'd: Fri, 12th Jul 2024



Stansted Laboratories LTD

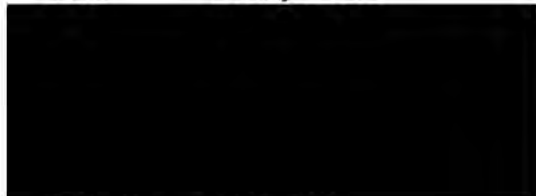


— END OF REPORT —

BACTERIOLOGICAL TEST REPORT



Client: i2 Analytical LTD



#Order No: PO_S_C7157

Job Number: M/182/129056

Report No.: 142760.1

#Date Tak'n: Tue, 20th Aug 2024 00:00

Date Rec'd: Fri, 23rd Aug 2024



Items Marked # are not included in the UKAS Schedule

Sample ID	#Description & Temperatures	Analysis	Result	Tested	Notes / Species
SL584258 <i>Soil</i>	293877 TSP013-05 1.6m	TVC @ 37°C - 2 Day #	>300 cfu/g	23/08/2024	Estimated Counts: >30000 cfu/g
	Init Temp # Temp > 1 Min # Temp > 2 Min #	TVC @ 22°C - 3 Day #	>300 cfu/g	23/08/2024	Estimated Counts: >30000 cfu/g
		Coliforms #	>242000 MPN/g	23/08/2024	
SL584259 <i>Soil</i>	293878 TSP010-17 1.5m	TVC @ 37°C - 2 Day #	>300 cfu/g	23/08/2024	Estimated Counts: >30000 cfu/g
	Init Temp # Temp > 1 Min # Temp > 2 Min #	TVC @ 22°C - 3 Day #	>300 cfu/g	23/08/2024	Estimated Counts: >30000 cfu/g
		Coliforms #	>242000 MPN/g	23/08/2024	
SL584260 <i>Soil</i>	293879 TSP012-27 1.6m	TVC @ 37°C - 2 Day #	>300 cfu/g	23/08/2024	Estimated Counts: >30000 cfu/g
	Init Temp # Temp > 1 Min # Temp > 2 Min #	TVC @ 22°C - 3 Day #	>300 cfu/g	23/08/2024	Estimated Counts: >30000 cfu/g
		Coliforms #	>242000 MPN/g	23/08/2024	

Method Codes

SLM/B312/M - Coliforms and Escherichia coli

SLM/B313/M - Total Viable Count at 22°C, Yeasts and Moulds at 25°C

Legend & Footnotes

cfu = Colony Forming Units

mpn = Most Probable Number

TNTC = Too Numerous to Count

#Information supplied by the customer and can affect the validity of results.

Sampling is not included in our UKAS Schedule.

All Samples Analysed as received.



Disclaimer

Results relate to samples tested and should not be reproduced except in full, without the written approval of the laboratory. Interpretations and opinions are not included in our UKAS schedule.

00:00 means time not declared.

— END OF REPORT —



Appendix H Sanctus Remediation Technical Note and Declaration Forms.

**Treated Stockpile Reuse Validation Form 001 – TSP09 South**

Stockpile ID

Stockpile ID: TSP09 South

Material Volume:

800 m³

Validation Samples Included

8 No.

Tested Location: Treatment Area 01

Stockpile Creation Date: 15/04/2024

Release Date: TBC

Sampling Data (3No. full rounds for validation to release)

Passing Round 1 (Overall Sample Round 3 of 5)	Sample Date: 24/04/2024	Report Number & Date: 24-016293 - 02/05/2024	Lab: Eurofins
Passing Round 2 (Overall Sample Round 4 of 5)	Sample Date: 01/05/2024	Report Number & Date: 24-017477 - 10/05/2024	Lab: Eurofins
Passing Round 3 (Overall Sample Round 5 of 5)	Sample Date: 08/05/2024	Report Number & Date: 24-018602 - 16/05/2024	Lab: Eurofins

Sampling Data**Passing Round 1**

Report Number: 24-016293

Report Date: 02/05/2024

Sample ID (Sample Names): TSP09-01B, TSP09-14B, TSP09-15B, TSP09-16B, TSP09-17B, TSP09-18B, TSP09-19B, TSP09-20B

Report ID (Lab): Eurofins

Comments:

Test Results: PASS / FAIL

Overall, 3rd round of sampling undertaken from the treated Stockpile. No exceedances seen throughout. Average Total TPH = 196 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Passing Round 2

Report Number: 24-017477

Report Date: 10/05/2024

Sample ID (Sample Names): TSP09-01C, TSP09-14C, TSP09-15C, TSP09-16C, TSP09-17C, TSP09-18C, TSP09-19C, TSP09-20C

Report ID (Lab): Eurofins

Comments:

Test Results: PASS / FAIL

Overall, 4th round of sampling undertaken from the treated Stockpile. No exceedances seen throughout. Average Total TPH = 730 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Passing Round 3

Report Number: 24-018602

Report Date: 16/05/2024

Sample ID (Sample Names): TSP09-01D, TSP09-14D, TSP09-15D, TSP09-16D, TSP09-17D, TSP09-18D, TSP09-19D, TSP09-20D

Report ID (Lab): Eurofins

Comments:

Test Results: PASS / FAIL

Overall, 5th round of sampling undertaken from the treated Stockpile. No exceedances seen throughout. Average Total TPH = 284 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Data Review

Material split of treated Stockpile 09 and current testing

Following the sampling rounds which began at the end of April 2024, a significant portion of the treated Stockpile 09 was seen to have 3no.consecutive sampling rounds which passed all of the reuse criteria. 40% of the material (sample locations 01, 14 – 20 as seen in Figure 1 below), grouped together in the south of the stockpile achieved the consecutive rounds. The remaining material was interspersed with material which achieved the majority of the reuse criteria, but not all (failures seen within the Total TPH analytes), in such a fashion that the remaining sample locations which were seen as compliant, could not be easily/accurately separated and reused (samples from location 04, 07, 10, 11 and 12).

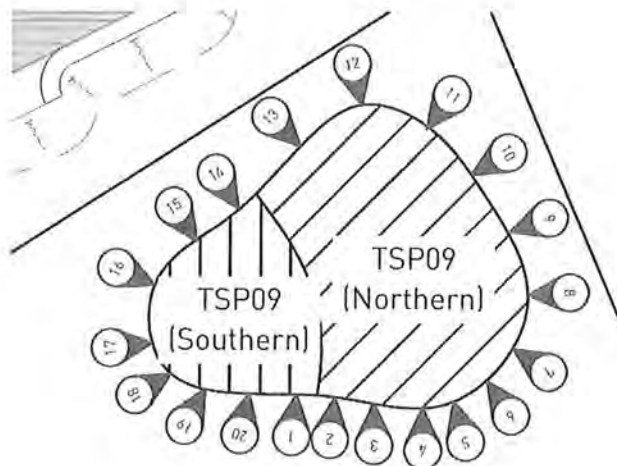
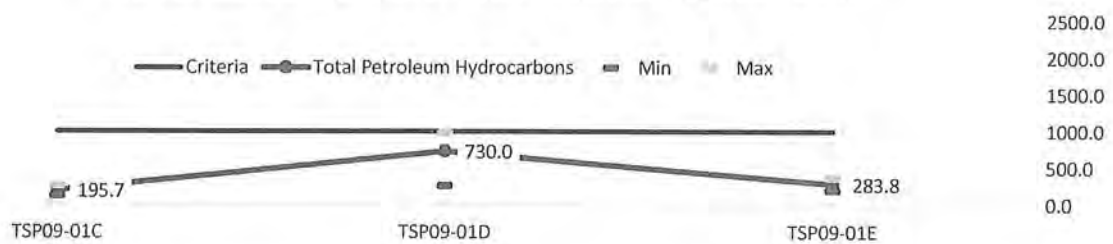


Figure 1 – Sampling locations of treated Stockpile 09

Subsequently, treated Stockpile 09 was split into a northern portion (1,200m³) where treatment and testing will continue and a southern portion (800m³) was deemed as chemically suitable for reuse by Sanctus.

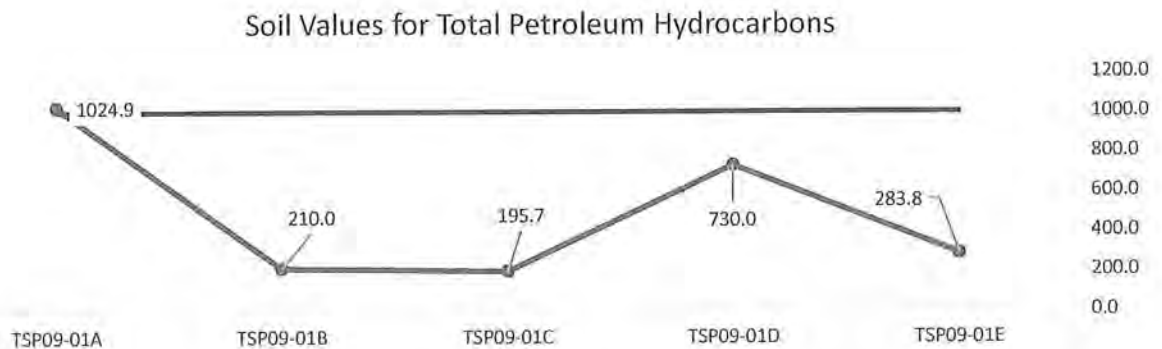
Data Trend for Total TPH levels:

Min & Max Soil Values for Total Petroleum Hydrocarbons



Additional Trendline Data – long term review:

Further to the above spread of data for the final 3 No. rounds, the total TPH levels from April 2024, for the treated stockpile, are shown below. The chart shows a significant decrease in the averaged total TPH levels, and the final result presents a reduction of total TPH level of 72% when compared to the initial material's contents (1,024.9 mg/kg (17th April 2024), compared to 284 mg/kg (29th May 2024)):



Sampling Strategy:

All samples have been taken in compliance with ISO BS 18400, including the following notes:

- Stainless steel/washable sampling devices (trowels, buckets, etc) will be employed for the gathering of the soils samples and cleaned between each sample location so that consecutive samples are not cross-contaminated.
- The sample positions shown above indicate the position relative to the base boundary of the stockpile. All samples are taken from within the body of the Stockpile, retrieved by an excavator. This is done as a safe sample retrieval option as well as to target an internal representative sample location mid-way from the edge to the centre of the Stockpile, as discussed under BS ISO 18400-104:2018 (Sampling Strategies), subsection 9.
- The subsequent sample depths were between 1-2 m below the Stockpile's surface and a minimum of 4No. characteristic subsamples were taken from an area of approximately 1m² of the newly exposed material. The 4No. or more sub-locations were chosen in a X-pattern and the combined testing soil material is described as a composite sample, following a systematic stratified random sub-sampling location of a 3-dimensional source.
- The mechanically retrieved material is then sub-sampled into the required sampling jars/pots by the Sanctus Engineer as a representative sample from the numbered location.



Sanctus Declaration:

We confirm that:

1. The material that this form relates to, has been sampled representatively, as discussed above and in accordance with the client's requirements (Ardrossan Remediation Specification Rev E).
2. The material has been proven to be suitable for REUSE on site as there are 3 No. consecutive rounds, with a statistical insignificant number of exceedances of the accepted reuse criteria. No exceedances are seen within the all three monitoring rounds and each round's average for the total TPH levels have been significantly below the 1,000 mg/kg threshold level.
3. The laboratory analysis results are representative of the materials investigated.
4. The material released will also be recorded spatially at its reuse location



Record of reuse

For Sanctus Use Only:

Approved for reuse:

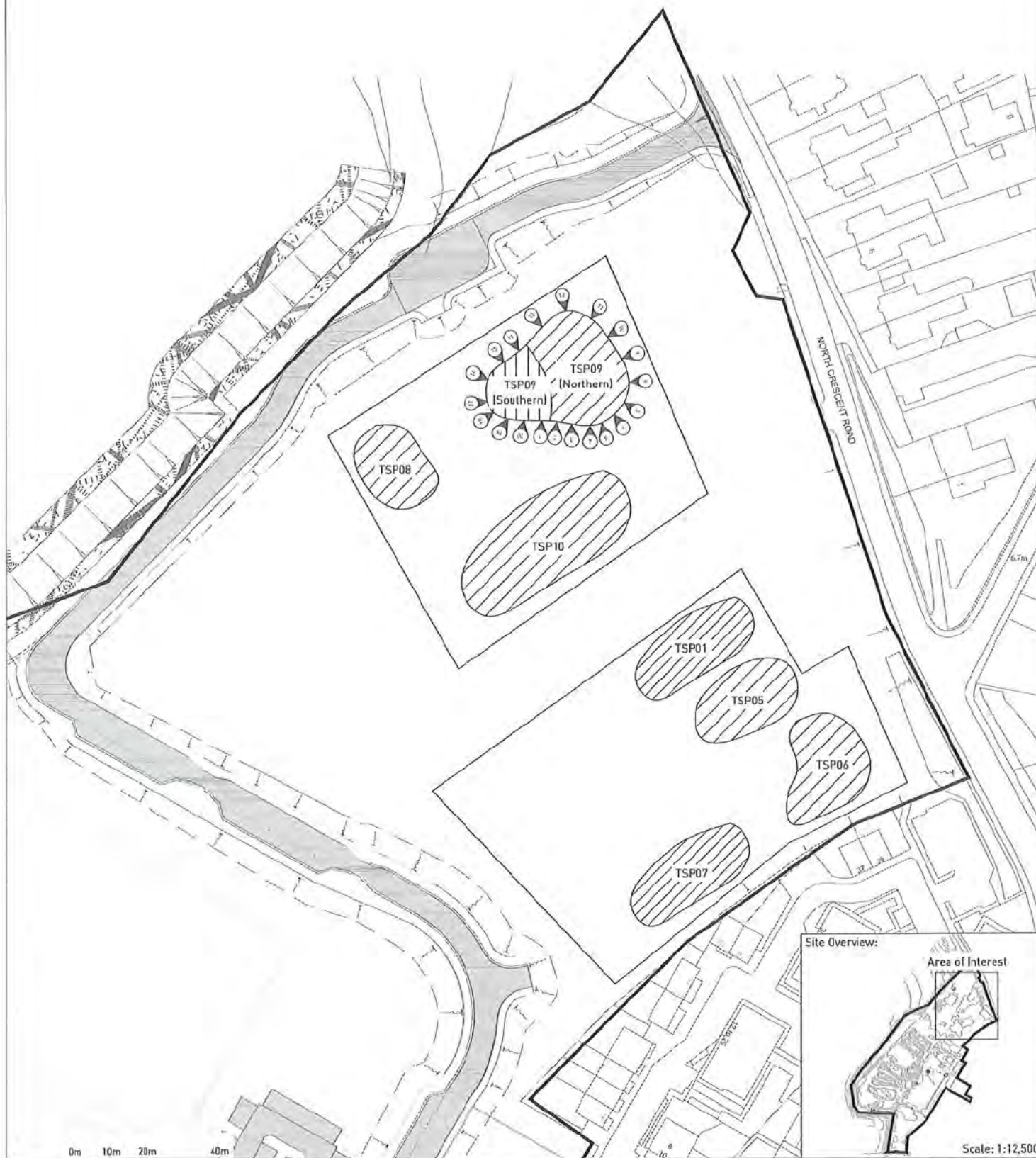
Beginning of Movement from stockpile:

End of Movement into site:



Legend:

- Site Boundary
- ▨ Treated Stockpile 09 Sample Location



Site Overview:



Scale: 1:12,500



Sanctus House, 1 Olympus Park Business Centre,
Quedgeley, Glos, GL2 4DH
T: 01453 828222
E: info@sanctusltd.co.uk www.sanctusltd.com

Drawing Notes:
Based on client supplied DWG -
AR0R055AN 2D produced by Ard Group
23/03/2020. All locations are approximate.
Must be printed in colour.

Site Address:
Raylight Place
Ardrossan
North Ayrshire
Scotland

Rev.	Description	Date
A	First Issue	13/06/2024

APPROVED

Project Name:
North Shire, Ardrossan

Client:
North Ayrshire Council

Drawing Title:
Treated Stockpile 09 Sample Locations

Contract No:
S3240

Drawing No:
D3240/061

Scale: @ A3:
1:1000



Environmental Science



Analytical Report Number : 24-016293-2A

Replaces Analytical Report Number: 24-016293, issue no. 1

Report format change.

Report split as per clients request

Project / Site name: Ardrossan North Shore

Samples received on: 25/04/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 25/04/2024

Your order number: S3240

Analysis completed by: 02/05/2024

Report Issue Number: 2A

Report issued on: 13/06/2024

Samples Analysed: 8 soil samples



For & on behalf of i2 Analytical Ltd.

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: 24-016293-2A
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	181358	181371	181372	181373	181374
Sample Reference	TSP09-01B	TSP09-14B	TSP09-15B	TSP09-16B	TSP09-17B
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024
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	10.2	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	4.9	11	10	11	9.3
Total mass of sample received	kg	0.1	NONE	0.5	0.5	0.6	0.5	0.6

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	3.1	< 1.0	1	< 1.0	1.1
TPHCWG - Aliphatic >C12 - C16 EH_CU_ID_AL	mg/kg	2	MCERTS	39	4.5	9	10	8.1
TPHCWG - Aliphatic >C16 - C21 EH_CU_ID_AL	mg/kg	8	MCERTS	52	18	26	30	28
TPHCWG - Aliphatic >C21 - C35 EH_CU_ID_AL	mg/kg	8	MCERTS	59	45	69	79	73
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_ID_AL	mg/kg	10	NONE	150	67	100	120	110

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	1.6
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	15	2.9	4.1	< 2.0	3.9
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	37	11	22	11	14
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	57	45	62	44	66
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	110	59	88	55	86

TPH (C10 - C40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	280	150	220	200	230
--------------------------------	-------	----	--------	-----	-----	-----	-----	-----

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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

Analytical Report Number: 24-016293-2A
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	181375	181376	181377
Sample Reference	TSP09-18B	TSP09-19B	TSP09-20B
Sample Number	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	24/04/2024	24/04/2024	24/04/2024
Time Taken	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
Moisture Content	%	0.01	NONE	11	10	11
Total mass of sample received	kg	0.1	NONE	0.5	0.6	0.2

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 H ₅ _ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 H ₅ _ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 H ₅ _ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_CU_ID_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	1.4
TPHCWG - Aliphatic >C12 - C16 EH_CU_ID_AL	mg/kg	2	MCERTS	10	5.5	11
TPHCWG - Aliphatic >C16 - C21 EH_CU_ID_AL	mg/kg	8	MCERTS	28	19	29
TPHCWG - Aliphatic >C21 - C35 EH_CU_ID_AL	mg/kg	8	MCERTS	73	47	86
TPHCWG - Aliphatic >C5 - C35 EH_CU+H ₅ _ID_AL	mg/kg	10	NONE	110	71	130

TPHCWG - Aromatic >EC5 - EC7 H ₅ _ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 H ₅ _ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 H ₅ _ID_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	2.6	< 2.0	2.6
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	13	< 10	15
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	49	41	60
TPHCWG - Aromatic >EC5 - EC35 EH_CU+H ₅ _ID_AR	mg/kg	10	NONE	65	41	78

TPH (C10 - C40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	210	140	250
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0
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

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



Environmental Science

Analytical Report Number : 24-016293-2A

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 *
181358	TSP09-01B	None Supplied	None Supplied	Brown sandy loam with vegetation and stones
181371	TSP09-14B	None Supplied	None Supplied	Brown loam and clay with gravel
181372	TSP09-15B	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation
181373	TSP09-16B	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation
181374	TSP09-17B	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation
181375	TSP09-18B	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation
181376	TSP09-19B	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation
181377	TSP09-20B	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation

Analytical Report Number : 24-016293-2A
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
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
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/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	L076B/L088	D/W	MCERTS

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

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

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

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

Analytical Report Number : 24-017477-2A

Replaces Analytical Report Number: 24-017477, issue no. 1

Report format change.

Report split as per clients request

Project / Site name:	Ardrossan North Shore	Samples received on:	02/05/2024
Your job number:	S3240	Samples instructed on/ Analysis started on:	02/05/2024
Your order number:	S3240	Analysis completed by:	10/05/2024
Report Issue Number:	2A	Report issued on:	13/06/2024
Samples Analysed:	8 soil samples		

For & on behalf of i2 Analytical Ltd.

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: 24-017477-2A
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	187499	187512	187513	187514	187515
Sample Reference	TSP09-01C	TSP09-14C	TSP09-15C	TSP09-16C	TSP09-17C
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	01/05/2024	01/05/2024	01/05/2024	01/05/2024	01/05/2024
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	11	9.8	11
Total mass of sample received	kg	0.1	NONE	0.4	0.3	0.3	0.4	0.4

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 H ₅ ,I ₀ ,A ₀	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 H ₅ ,I ₀ ,A ₀	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 H ₅ ,I ₀ ,A ₀	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	1	MCERTS	< 1.0	< 1.0	2.2	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	2	MCERTS	8	6.1	17	< 2.0	< 2.0
TPHCWG - Aliphatic >C16 - C21 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	8	MCERTS	19	14	30	< 8.0	9.1
TPHCWG - Aliphatic >C21 - C35 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	8	MCERTS	52	25	67	< 8.0	38
TPHCWG - Aliphatic >C5 - C35 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	10	NONE	79	45	120	< 10	47

TPHCWG - Aromatic >EC5 - EC7 H ₅ ,I ₀ ,A ₀	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 H ₅ ,I ₀ ,A ₀	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 H ₅ ,I ₀ ,A ₀	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	2	MCERTS	2	< 2.0	3.3	< 2.0	3.9
TPHCWG - Aromatic >EC16 - EC21 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	10	MCERTS	12	11	20	< 10	18
TPHCWG - Aromatic >EC21 - EC35 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	10	MCERTS	50	40	72	< 10	67
TPHCWG - Aromatic >EC5 - EC35 H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	10	NONE	64	51	96	< 10	88

TPH (C10 - C40) H ₁ ,C ₀ ,I ₀ ,A ₀	mg/kg	10	MCERTS	200	120	260	< 10	170
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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



4041



Environmental Science

Analytical Report Number: 24-017477-2A
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	187516	187517	187518
Sample Reference	TSP09-18C	TSP09-19C	TSP09-20C
Sample Number	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	01/05/2024	01/05/2024	01/05/2024
Time Taken	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
Moisture Content	%	0.01	NONE	12	11	10
Total mass of sample received	kg	0.1	NONE	0.4	0.3	0.3

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_CU_ID_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH_CU_ID_AL	mg/kg	2	MCERTS	2.8	4.8	8.1
TPHCWG - Aliphatic >C16 - C21 EH_CU_ID_AL	mg/kg	8	MCERTS	18	16	26
TPHCWG - Aliphatic >C21 - C35 EH_CU_ID_AL	mg/kg	8	MCERTS	60	44	60
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_ID_AL	mg/kg	10	NONE	80	65	93

TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	3.7	4.2	2.6
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	18	19	20
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	63	56	72
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	85	79	94

TPH (C10 - C40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	210	180	230
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0
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

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



Environmental Science

Analytical Report Number : 24-017477-2A

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 *
187499	TSP09-01C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187512	TSP09-14C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187513	TSP09-15C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187514	TSP09-16C	None Supplied	None Supplied	Brown sand with gravel
187515	TSP09-17C	None Supplied	None Supplied	Brown sand with gravel
187516	TSP09-18C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187517	TSP09-19C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187518	TSP09-20C	None Supplied	None Supplied	Brown sand with gravel and vegetation

Analytical Report Number : 24-017477-2A
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
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
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/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	L076B/L088	D/W	MCERTS

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

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

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

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

Analytical Report Number : 24-018602-2A

Replaces Analytical Report Number: 24-018602, issue no. 1
Report format change.
Report split as per clients request

Project / Site name:	Ardrossan North Shore	Samples received on:	09/05/2024
Your job number:	S3240	Samples instructed on/ Analysis started on:	09/05/2024
Your order number:	S3240	Analysis completed by:	16/05/2024
Report Issue Number:	2A	Report issued on:	13/06/2024
Samples Analysed:	8 soil samples		

For & on behalf of i2 Analytical Ltd.

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: 24-018602-2A
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	193699	193712	193713	193714	193715
Sample Reference	TSP09-01D	TSP09-14D	TSP09-15D	TSP09-16D	TSP09-17D
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	7.4	8.6	8	8.1	7.4
Total mass of sample received	kg	0.1	NONE	0.3	0.2	0.3	0.2	0.3

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 HS_ID_AR	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 HS_ID_AR	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 HS_ID_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_CU_ID_AR	mg/kg	1	MCERTS	3.1	< 1.0	1.1	3.2	2.7
TPHCWG - Aliphatic >C12 - C16 EH_CU_ID_AR	mg/kg	2	MCERTS	41	31	22	45	37
TPHCWG - Aliphatic >C16 - C21 EH_CU_ID_AR	mg/kg	8	MCERTS	120	75	68	100	75
TPHCWG - Aliphatic >C21 - C35 EH_CU_ID_AR	mg/kg	8	MCERTS	280	170	170	190	170
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_ID_AR	mg/kg	10	NONE	450	280	260	340	280

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	1.1	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	7.5	11	9.1	5.7	5.2
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	80	66	55	72	49
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	290	220	220	250	190
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	380	300	280	330	240

TPH (C10 - C40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	980	700	670	790	660
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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

Analytical Report Number: 24-018602-2A
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	193716	193717	193718
Sample Reference	TSP09-18D	TSP09-19D	TSP09-20D
Sample Number	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	08/05/2024	08/05/2024	08/05/2024
Time Taken	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
Moisture Content	%	0.01	NONE	9.7	9.3	9.3
Total mass of sample received	kg	0.1	NONE	0.2	0.3	0.3

Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 H ₅ ,I ₀ ,A ₁	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 H ₅ ,I ₀ ,A ₁	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 H ₅ ,I ₀ ,A ₁	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	1	MCERTS	2.4	< 1.0	2
TPHCWG - Aliphatic >C12 - C16 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	2	MCERTS	47	7.3	56
TPHCWG - Aliphatic >C16 - C21 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	8	MCERTS	100	24	120
TPHCWG - Aliphatic >C21 - C35 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	8	MCERTS	230	73	260
TPHCWG - Aliphatic >C5 - C35 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	10	NONE	380	100	430

TPHCWG - Aromatic >EC5 - EC7 H ₅ ,I ₀ ,A ₁	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 H ₅ ,I ₀ ,A ₁	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 H ₅ ,I ₀ ,A ₁	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	2	MCERTS	4.9	< 2.0	9.1
TPHCWG - Aromatic >EC16 - EC21 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	10	MCERTS	55	13	74
TPHCWG - Aromatic >EC21 - EC35 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	10	MCERTS	220	76	280
TPHCWG - Aromatic >EC5 - EC35 H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	10	NONE	280	88	360

TPH (C10 - C40) H ₁ ,C ₀ ,I ₀ ,A ₁	mg/kg	10	MCERTS	810	260	970
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0
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

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

Analytical Report Number : 24-018602-2A
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 *
193699	TSP09-01D	None Supplied	None Supplied	Brown loam with gravel
193712	TSP09-14D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193713	TSP09-15D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193714	TSP09-16D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193715	TSP09-17D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193716	TSP09-18D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193717	TSP09-19D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193718	TSP09-20D	None Supplied	None Supplied	Brown loam with gravel and vegetation

Analytical Report Number : 24-018602-2A
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
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
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/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	L076B/L088	D/W	MCERTS

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

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

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

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

**Treated Stockpile Reuse Validation Form 002 – TSP11**

Stockpile ID

Stockpile ID: TSP11

Material Volume:

1,174 m³

Validation Samples Included

12 No.

Tested Location: Treatment Area 01

Stockpile Creation Date: 13/05/2024

Release Date: TBC

Sampling Data (3No. full rounds for validation to release)

Passing Round 1 (Overall Sample Round 2 of 4)	Sample Date: 18/06/2024	Report Number & Date: 24-026519 - 27/06/2024	Lab: Eurofins
Passing Round 2 (Overall Sample Round 3 of 4)	Sample Date: 25/06/2024	Report Number & Date: 24-027476 - 03/07/2024	Lab: Eurofins
Passing Round 3 (Overall Sample Round 4 of 4)	Sample Date: 01/07/2024	Report Number & Date: 24-028801 - 10/07/2024	Lab: Eurofins

Sampling Data**Passing Round 1**

Report Number: 24-026519

Report Date: 27/06/2024

Sample ID (Sample Names): TSP11-01B – TSP11-13B

Report ID (Lab): Eurofins

Comments:

Test Results: PASS / FAIL

Extra sample taken (Sample TSP11-13B for internal QS), Average Total TPH = 864 mg/kg. For total TPH 12 out of 13 <1,000 mg/kg, with only one exceedance TSP11-07B, 1,100 mg/kg. Following a statistical review, a >95% confidence level is seen with the distribution of total TPH, using the critical value of 1,000mg/kg a normal-normal distribution. With the average total TPH level, with no banded failures. Sanctus deem this round of sampling as chemically suitable for reuse.

Passing Round 2

Report Number: 24-027476

Report Date: 03/07/2024

Sample ID (Sample Names): TSP11-01C – TSP11-12C

Report ID (Lab): Eurofins

Comments:

Test Results: PASS / FAIL

Average Total TPH = 701 mg/kg. For total TPH 11 out of 12 <1,000 mg/kg, with only one exceedance TSP11-08C, 1,200 mg/kg. Following a statistical review, a >95% confidence level is seen with the distribution of total TPH, using the critical value of 1,000mg/kg a normal-normal distribution. With the average total TPH level having decreased to 81% compared to the previous round, only 1 No. banded failures from 192 analyte results, Sanctus deem this round of sampling as chemically suitable for reuse.

Passing Round 3

Report Number: 24-028801

Report Date: 10/07/2024

Sample ID (Sample Names): TSP11-01D – TSP11-12D

Report ID (Lab):

Eurofins

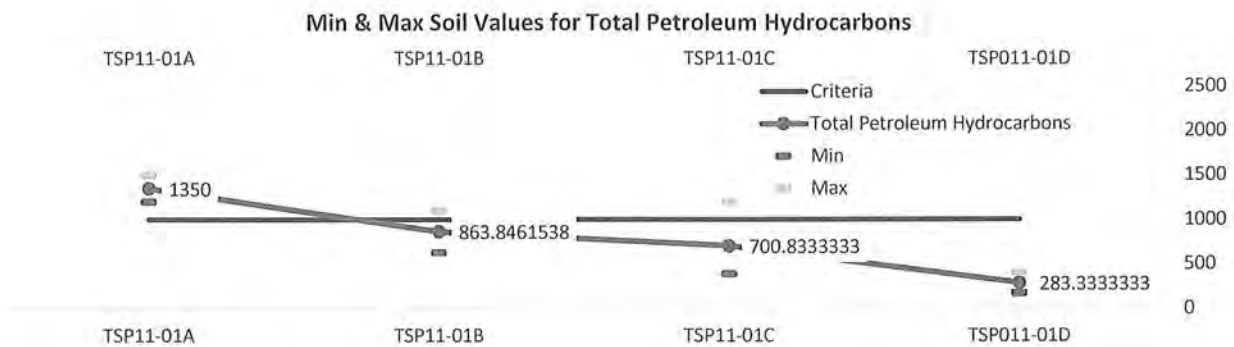
Comments:

Test Results: PASS / FAIL

Average Total TPH = 283 mg/kg. No exceedances in the banded or Total TPH analytes. The decreasing trend for total TPH continues and Round 3 results are now at 32% for the average total TPH when compared to Round 1.

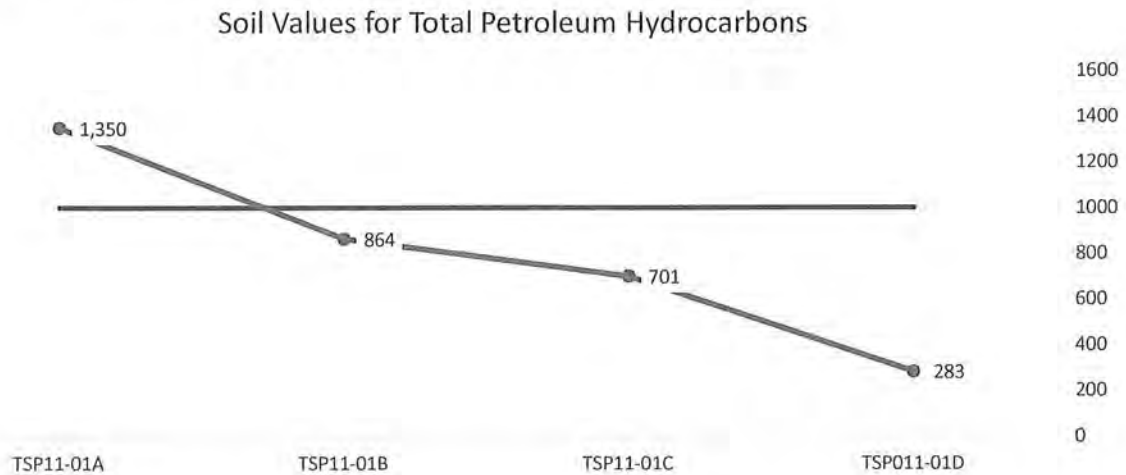
Data Review

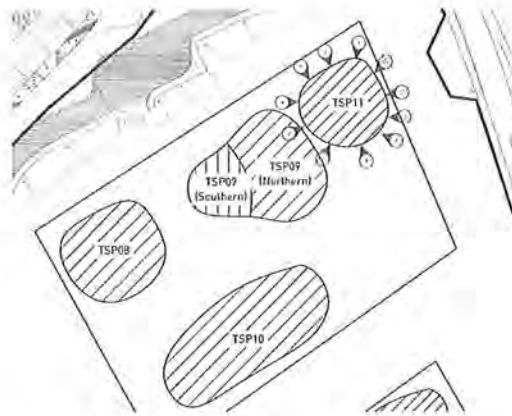
Data Trend for Total TPH levels:



Additional Trendline Data – long term review:

Further to the above spread of data for the final 3 No. rounds, the total TPH levels from June 2024, for the treated stockpile, are shown below. The chart shows a significant decrease in the averaged total TPH levels, and the final result presents a reduction of total TPH level of 89% when compared to the highest material's contents (1,350 mg/kg (12th June 2024), compared to 283 mg/kg (2nd July 2024)):



Treated Stockpile Sample Plan:**Sampling Strategy:**

All samples have been taken in compliance with ISO BS 18400, including the following notes:

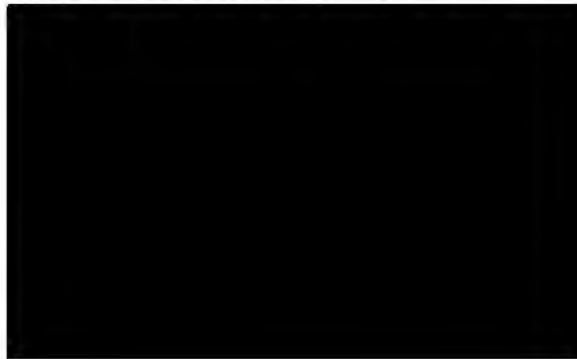
- Stainless steel/washable sampling devices (trowels, buckets, etc) will be employed for the gathering of the soils samples and cleaned between each sample location so that consecutive samples are not cross-contaminated.
- The sample positions shown above indicate the position relative to the base boundary of the stockpile. All samples are taken from a within the body of the Stockpile, retrieved by an excavator. This is done as a safe sample retrieval option as well as to target an internal representative sample location mid-way from the edge to the centre of the Stockpile, as discussed under BS ISO 18400-104:2018 (Sampling Strategies), subsection 9.
- The subsequent sample depths were between 1-2 m below the Stockpile's surface and a minimum of 4No. characteristic subsamples were taken from an area of approximately 1m² of the newly exposed material. The 4No. or more sub-locations were chosen in a X-pattern and the combined testing soil material is described as a composite sample, following a systematic stratified random sub-sampling location of a 3-dimensional source.
- The mechanically retrieved material is then sub-sampled into the required sampling jars/pots by the Sanctus Engineer as a representative sample from the numbered location.



Sanctus Declaration:

We confirm that:

1. The material that this form relates to, has been sampled representatively, as discussed above and in accordance with the client's requirements (Ardrossan Remediation Specification Rev E).
2. The material has been proven to be suitable for REUSE on site as there are 3 No. consecutive rounds, with a statistical insignificant number of exceedances of the accepted reuse criteria. No exceedances are seen within the final monitoring round and all total TPH levels have decreased notably from round 1 to round 3. Round 2 returns a confidence level of >95% confidence when compared to the statistical confidence critical level of 1,000mg/kg for total TPH.
3. The laboratory analysis results are representative of the materials investigated.
4. The material released will also be recorded spatially at its reuse location



Record of reuse

For Sanctus Use Only:

Approved for reuse:

Beginning of Movement from stockpile:

End of Movement into site:



- Legend:
- Site Boundary
 - ▨ Treated Stockpile 09 Sample Location



Sanctus House, 1 Olympus Park Business Centre,
Quedgeley, Glas, GL2 4DH
T: 01453 828222
E: info@sanctusltd.co.uk www.sanctusltd.com

Drawing Notes:
Based on client supplied DWG -
ARDROSSAN 2D produced by Aird Group
23/03/2020. All locations are approximate.
Must be printed in colour.

Site Address:
Raylight Place
Ardrossan
North Ayrshire
Scotland

Rev.	Description	Date
A	First Issue	12/07/2024

APPROVED

Project Name:
North Shore, Ardrossan

Client:
North Ayrshire Council

Drawing Title:
Treated Stockpile 11 Sample Locations

Contract No:
53240

Drawing No:
D3240/072

Scale @ A3:
1:1000

Sample ID	Date Sampled	Total Sulfate mg/kg	Aliphatic TPH mg/kg	Diaphenic TPH mg/kg	Aromatic TPH mg/kg	Aliphatic TPH mg/kg	Diaphenic TPH mg/kg	Aromatic TPH mg/kg	Aliphatic TPH mg/kg	Diaphenic TPH mg/kg	Aromatic TPH mg/kg	Aliphatic TPH mg/kg	Diaphenic TPH mg/kg	Aromatic TPH mg/kg	Aliphatic TPH mg/kg	Diaphenic TPH mg/kg	Aromatic TPH mg/kg	Aliphatic TPH mg/kg	Diaphenic TPH mg/kg	Aromatic TPH mg/kg
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOD		10	0.02	0.02	0.05	1	2	8	8	100	0.01	0.01	0.05	1	2	10	10	100	0.01	0.01
Sampling Criteria		1000	7A	230	45	330	1000	1000	1000	1000	140	200	7.34	89.3	175.47	540	1000	1000	140	200
TSP11-01B	18/06/2024	1000	< 0.020	< 0.020	< 0.050	4.9	95	220	200	620	< 0.010	< 0.010	< 0.050	< 1.0	8.2	75	180	280	< 0.010	< 0.010
TSP11-02B	18/06/2024	750	< 0.020	< 0.020	< 0.050	2.3	70	130	160	390	< 0.010	< 0.010	< 0.050	< 1.0	13	76	160	290	< 0.010	< 0.010
TSP11-03B	18/06/2024	650	< 0.020	< 0.020	< 0.050	2	63	120	170	360	< 0.010	< 0.010	< 0.050	< 1.0	10	62	130	200	< 0.010	< 0.010
TSP11-04B	18/06/2024	830	< 0.020	< 0.020	< 0.050	3.2	71	130	160	360	< 0.010	< 0.010	< 0.050	< 1.0	20	93	200	320	< 0.010	< 0.010
TSP11-05B	18/06/2024	800	< 0.020	< 0.020	< 0.050	6.5	82	150	190	420	< 0.010	< 0.010	< 0.050	< 1.0	17	82	170	270	< 0.010	< 0.010
TSP11-06B	18/06/2024	990	< 0.020	< 0.020	< 0.050	2.8	87	180	260	540	< 0.010	< 0.010	< 0.050	< 1.0	17	92	200	310	< 0.010	< 0.010
TSP11-07B	18/06/2024	1100	< 0.020	< 0.020	< 0.050	4.5	100	190	280	570	< 0.010	< 0.010	< 0.050	< 1.0	18	100	220	340	< 0.010	< 0.010
TSP11-08B	18/06/2024	920	< 0.020	< 0.020	< 0.050	2.1	73	170	250	490	< 0.010	< 0.010	< 0.050	< 1.0	16	97	180	300	< 0.010	< 0.010
TSP11-09B	18/06/2024	740	< 0.020	< 0.020	< 0.050	1.5	54	120	170	340	< 0.010	< 0.010	< 0.050	< 1.0	19	77	170	270	< 0.010	< 0.010
TSP11-10B	18/06/2024	840	< 0.020	< 0.020	< 0.050	2.6	72	140	190	410	< 0.010	< 0.010	< 0.050	< 1.0	22	93	190	310	< 0.010	< 0.010
TSP11-11B	18/06/2024	990	< 0.020	< 0.020	< 0.050	3.9	89	200	270	560	< 0.010	< 0.010	< 0.050	< 1.0	16	94	190	300	< 0.010	< 0.010
TSP11-12B	18/06/2024	630	< 0.020	< 0.020	< 0.050	2.2	53	120	160	330	< 0.010	< 0.010	< 0.050	< 1.0	9.1	59	130	200	< 0.010	< 0.010
TSP11-13B	18/06/2024	990	< 0.020	< 0.020	< 0.050	3.8	100	190	280	580	< 0.010	< 0.010	< 0.050	< 1.0	18	84	200	300	< 0.010	< 0.010
TSP011-01C	25/06/2024	460	< 0.020	< 0.020	< 0.050	< 1.0	20	66	130	220	< 0.010	< 0.010	< 0.050	< 1.0	7.5	44	130	180	< 0.010	< 0.010
TSP011-02C	25/06/2024	940	< 0.020	< 0.020	< 0.050	< 1.0	37	99	180	310	< 0.010	< 0.010	< 0.050	< 1.0	25	130	350	500	< 0.010	< 0.010
TSP011-03C	25/06/2024	1000	< 0.020	< 0.020	< 0.050	< 1.0	41	110	180	320	< 0.010	< 0.010	< 0.050	< 1.0	36	100	410	570	< 0.010	< 0.010
TSP011-04C	25/06/2024	390	< 0.020	< 0.020	< 0.050	< 1.0	26	75	120	230	< 0.010	< 0.010	< 0.050	< 1.0	9.9	57	88	150	< 0.010	< 0.010
TSP011-05C	25/06/2024	560	< 0.020	< 0.020	< 0.050	< 1.0	33	90	150	270	< 0.010	< 0.010	< 0.050	< 1.0	17	76	170	260	< 0.010	< 0.010
TSP011-06C	25/06/2024	780	< 0.020	< 0.020	< 0.050	7.9	62	130	220	430	< 0.010	< 0.010	< 0.050	< 1.0	25	96	190	320	< 0.010	< 0.010
TSP011-07C	25/06/2024	600	< 0.020	< 0.020	< 0.050	5.6	43	100	170	320	< 0.010	< 0.010	< 0.050	< 1.0	14	73	150	240	< 0.010	< 0.010
TSP011-08C	25/06/2024	1200	< 0.020	< 0.020	< 0.050	12	120	210	380	730	< 0.010	< 0.010	< 0.050	< 1.0	24	130	290	440	< 0.010	< 0.010
TSP011-09C	25/06/2024	670	< 0.020	< 0.020	< 0.050	< 1.0	38	100	190	330	< 0.010	< 0.010	< 0.050	< 1.0	17	82	190	290	< 0.010	< 0.010
TSP011-10C	25/06/2024	670	< 0.020	< 0.020	< 0.050	< 1.0	47	110	170	330	< 0.010	< 0.010	< 0.050	< 1.0	29	92	190	310	< 0.010	< 0.010
TSP011-11C	25/06/2024	500	< 0.020	< 0.020	< 0.050	< 1.0	23	70	130	220	< 0.010	< 0.010	< 0.050	< 1.0	8.2	67	170	240	< 0.010	< 0.010
TSP011-12C	25/06/2024	640	< 0.020	< 0.020	< 0.050	< 1.0	45	98	180	320	< 0.010	< 0.010	< 0.050	< 1.0	19	80	180	280	< 0.010	< 0.010
TSP011-01D	02/07/2024	400	< 0.020	< 0.020	< 0.050	< 1.0	22	84	120	230	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	26	82	110	< 0.010	< 0.010
TSP011-02D	02/07/2024	310	< 0.020	< 0.020	< 0.050	1	19	57	85	160	< 0.010	< 0.010	< 0.050	< 1.0	4.1	22	64	90	< 0.010	< 0.010
TSP011-03D	02/07/2024	250	< 0.020	< 0.020	< 0.050	1.1	12	42	62	120	< 0.010	< 0.010	< 0.050	< 1.0	3.3	20	64	87	< 0.010	< 0.010
TSP011-04D	02/07/2024	310	< 0.020	< 0.020	< 0.050	1.4	21	69	92	180	< 0.010	< 0.010	< 0.050	< 1.0	2.7	21	55	79	< 0.010	< 0.010
TSP011-05D	02/07/2024	330	< 0.020	< 0.020	< 0.050	3	21	63	89	180	< 0.010	< 0.010	< 0.050	< 1.0	3.1	25	68	96	< 0.010	< 0.010
TSP011-06D	02/07/2024	250	< 0.020	< 0.020	< 0.050	< 1.0	16	60	78	150	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	13	44	57	< 0.010	< 0.010
TSP011-07D	02/07/2024	290	< 0.020	< 0.020	< 0.050	< 1.0	17	62	72	150	< 0.010	< 0.010	< 0.050	< 1.0	2.8	31	71	100	< 0.010	< 0.010
TSP011-08D	02/07/2024	170	< 0.020	< 0.020	< 0.050	2.9	12	37	50	100	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	11	30	41	< 0.010	< 0.010
TSP011-09D	02/07/2024	310	< 0.020	< 0.020	< 0.050	6.6	21	58	91	180	< 0.010	< 0.010	< 0.050	< 1.0	4.5	23	58	85	< 0.010	< 0.010
TSP011-10D	02/07/2024	200	< 0.020	< 0.020	< 0.050	2.7	17	46	72	140	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	25	25	< 0.010	< 0.010
TSP011-11D	02/07/2024	300	< 0.020	< 0.020	< 0.050	1.2	18	63	100	180	< 0.010	< 0.010	< 0.050	< 1.0	2.3	21	58	81	< 0.010	< 0.010
TSP011-12D	02/07/2024	280	< 0.020	< 0.020	< 0.050	1.6	19	66	94	180	< 0.010	< 0.010	< 0.050	< 1.0	3.2	18	47	68	< 0.010	< 0.010



Environmental Science

Analytical Report Number : 24-026519

Project / Site name: Ardrossan North Shore

Samples received on: 19/06/2024

Your job number: S3240

Samples instructed on/
Analysis started on: 21/06/2024

Your order number: S3240

Analysis completed by: 27/06/2024

Report Issue Number: 1

Report issued on: 27/06/2024

Samples Analysed: 13 soil samples

For & on behalf of i2 Analytical Ltd.

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: 24-026519
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	235170	235171	235172	235173	235174
Sample Reference	TSP11-01B	TSP11-02B	TSP11-03B	TSP11-04B	TSP11-05B
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	18/06/2024	18/06/2024	18/06/2024	18/06/2024	18/06/2024
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	47.4
Moisture Content	%	0.01	NONE	7.9	8.3	8.3	8.1	9.4
Total mass of sample received	kg	0.1	NONE	0.4	0.4	0.4	0.4	0.4

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.39	0.32	0.41	0.47	0.33
Acenaphthylene	mg/kg	0.05	MCERTS	0.1	< 0.05	< 0.05	0.12	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.15	0.09	0.1	0.11	0.12
Fluorene	mg/kg	0.05	MCERTS	0.16	0.09	0.1	0.11	0.13
Phenanthrene	mg/kg	0.05	MCERTS	1.4	0.4	0.34	0.39	0.42
Anthracene	mg/kg	0.05	MCERTS	0.99	0.24	0.38	0.26	0.58
Fluoranthene	mg/kg	0.05	MCERTS	5.5	1.4	1.3	1.2	1.3
Pyrene	mg/kg	0.05	MCERTS	5.1	1.6	1.5	1.6	1.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.8	0.75	0.79	1.2	0.63
Chrysene	mg/kg	0.05	MCERTS	2.8	0.88	0.95	1.3	0.99
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	2.9	1	1.3	1.5	0.86
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	1.4	0.47	0.44	0.67	0.34
Benzo(a)pyrene	mg/kg	0.05	MCERTS	3	0.99	1.2	1.6	0.85
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.5	0.49	0.67	0.69	0.41
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.36	0.12	0.14	0.14	0.12
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.7	0.59	0.78	0.83	0.49

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	30	9.38	10.4	12.3	8.91
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	MCERTS	4.9	2.3	2	3.2	6.5
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	MCERTS	95	70	63	71	82
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	MCERTS	220	130	120	130	150
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	MCERTS	300	180	170	160	190
TPHCWG - Aliphatic >EC35 - EC35 EH_CU+HS_ID_AL	mg/kg	10	NONE	620	390	360	360	420

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	8.2	13	10	20	17
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	75	76	62	93	82
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	180	160	130	200	170
TPHCWG - Aromatic >EC35 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	260	250	200	320	270

TPH (EC10 - EC40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	1000	750	650	830	800
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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



4041



Environmental Science

Analytical Report Number: 24-026519

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				235170	235171	235172	235173	235174
Sample Reference				TSP11-01B	TSP11-02B	TSP11-03B	TSP11-04B	TSP11-05B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				18/06/2024	18/06/2024	18/06/2024	18/06/2024	18/06/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
p & m-Xylene				µg/kg	5	MCERTS	< 5.0	< 5.0
o-Xylene				µg/kg	5	MCERTS	< 5.0	< 5.0

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



4041



Environmental Science

Analytical Report Number: 24-026519
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	235175	235176	235177	235178	235179
Sample Reference	TSP11-06B	TSP11-07B	TSP11-08B	TSP11-09B	TSP11-10B
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	18/06/2024	18/06/2024	18/06/2024	18/06/2024	18/06/2024
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	24.8	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.1	9	7.5	8	8.4
Total mass of sample received	kg	0.1	NONE	0.4	0.4	0.4	0.4	0.4

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.43	0.94	0.5	0.27	0.39
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.1	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.15	0.1	0.45	0.09	0.19
Fluorene	mg/kg	0.05	MCERTS	0.12	0.1	0.48	< 0.05	0.16
Phenanthrene	mg/kg	0.05	MCERTS	0.62	0.36	7.3	0.36	0.46
Anthracene	mg/kg	0.05	MCERTS	0.35	0.27	2.8	0.26	0.27
Fluoranthene	mg/kg	0.05	MCERTS	1.5	1.1	16	1.3	1.3
Pyrene	mg/kg	0.05	MCERTS	1.7	1.3	13	1.4	1.5
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.79	0.63	7	0.66	0.64
Chrysene	mg/kg	0.05	MCERTS	0.91	0.76	7.3	0.76	0.83
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.97	0.78	6.8	0.96	0.89
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.41	0.35	2.6	0.37	0.26
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.94	0.79	6.2	0.87	0.8
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.51	0.39	2.7	0.47	0.38
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.09	0.08	0.82	0.1	0.1
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.54	0.51	3	0.54	0.46

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	10	8.51	76.7	8.35	8.67
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	MCERTS	2.8	4.5	2.1	1.5	2.6
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	MCERTS	87	100	73	54	72
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	MCERTS	180	190	170	120	140
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	MCERTS	260	280	250	170	190
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_ID_AL	mg/kg	10	NONE	540	570	490	340	410

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	1.2	< 1.0	< 1.0	1.5	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	17	18	16	19	22
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	92	100	97	77	93
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	200	220	180	170	190
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	310	340	300	270	310

TPH (EC10 - EC40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	990	1100	920	740	840
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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



4041



Environmental Science

Analytical Report Number: 24-026519

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				235175	235176	235177	235178	235179
Sample Reference				TSP11-06B	TSP11-07B	TSP11-08B	TSP11-09B	TSP11-10B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				18/06/2024	18/06/2024	18/06/2024	18/06/2024	18/06/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
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

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

Analytical Report Number: 24-026519
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	235180	235181	235182
Sample Reference	TSP11-11B	TSP11-12B	TSP11-13B
Sample Number	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	18/06/2024	18/06/2024	18/06/2024
Time Taken	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
Moisture Content	%	0.01	NONE	7.8	7.6	8
Total mass of sample received	kg	0.1	NONE	0.4	0.4	0.4

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.32	0.32	0.29
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.2	0.09	0.13
Fluorene	mg/kg	0.05	MCERTS	0.17	< 0.05	0.12
Phenanthrene	mg/kg	0.05	MCERTS	0.44	0.25	0.42
Anthracene	mg/kg	0.05	MCERTS	0.36	0.15	0.25
Fluoranthene	mg/kg	0.05	MCERTS	1.2	0.88	1.5
Pyrene	mg/kg	0.05	MCERTS	1.4	1.1	1.7
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.55	0.45	0.75
Chrysene	mg/kg	0.05	MCERTS	0.66	0.51	0.81
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.8	0.57	0.88
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.3	0.31	0.38
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.69	0.59	0.86
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.39	0.32	0.43
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.12
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.4	0.36	0.51

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	7.82	5.88	9.17
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	MCERTS	3.9	2.2	3.8
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	MCERTS	89	53	100
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	MCERTS	200	120	190
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	MCERTS	270	160	280
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_ID_AL	mg/kg	10	NONE	560	330	580

TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	16	9.1	18
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	94	59	84
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	190	130	200
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	300	200	300

TPH (EC10 - EC40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	990	630	990
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0
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

Analytical Report Number: 24-026519
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number				235180	235181	235182
Sample Reference				TSP11-11B	TSP11-12B	TSP11-13B
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				18/06/2024	18/06/2024	18/06/2024
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
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

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

Analytical Report Number : 24-026519

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 *
235170	TSP11-01B	None Supplied	None Supplied	Brown loam with gravel and vegetation
235171	TSP11-02B	None Supplied	None Supplied	Brown loam with gravel and vegetation
235172	TSP11-03B	None Supplied	None Supplied	Brown loam with gravel and vegetation
235173	TSP11-04B	None Supplied	None Supplied	Brown loam with gravel and vegetation
235174	TSP11-05B	None Supplied	None Supplied	Brown loam with vegetation and stones
235175	TSP11-06B	None Supplied	None Supplied	Brown loam with vegetation and stones
235176	TSP11-07B	None Supplied	None Supplied	Brown loam with gravel and vegetation
235177	TSP11-08B	None Supplied	None Supplied	Brown loam with gravel and vegetation
235178	TSP11-09B	None Supplied	None Supplied	Brown loam with gravel and vegetation
235179	TSP11-10B	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
235180	TSP11-11B	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
235181	TSP11-12B	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
235182	TSP11-13B	None Supplied	None Supplied	Brown sand with gravel

Analytical Report Number : 24-026519
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
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 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/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	L076B/L088	D/W	MCERTS

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

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

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

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

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution



Environmental Science

Analytical Report Number : 24-027476

Project / Site name: Ardrossan North Shore

Samples received on: 26/06/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 27/06/2024

Your order number: S3240

Analysis completed by: 03/07/2024

Report Issue Number: 1

Report issued on: 03/07/2024

Samples Analysed: 12 soil samples

For & on behalf of i2 Analytical Ltd.

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: 24-027476

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	239958	239959	239960	239961	239962
Sample Reference	TSP011-01C	TSP011-02C	TSP011-03C	TSP011-04C	TSP011-05C
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024
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	17.9	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.3	6.3	7	6.6	6.8
Total mass of sample received	kg	0.1	NONE	1.2	1.2	1.2	1.3	1.3

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	MJN	MJN	MJN	MJN	MJN

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.15	< 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	0.14	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.3	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.36	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.18	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.23	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.22	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.06	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.21	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.1	< 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	0.09	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2.13	< 0.80	< 0.80	< 0.80	< 0.80
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	MCERTS	20	37	41	26	33
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	MCERTS	66	99	110	75	90
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	MCERTS	130	180	180	120	150
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_ID_AL	mg/kg	10	NONE	220	310	320	230	270

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	17	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	7.5	25	36	9.9	17
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	44	130	100	57	76
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	130	350	410	88	170
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	180	500	570	150	260

TPH (EC10 - EC40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	460	940	1000	390	560
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VOCs



4041



Environmental Science

Analytical Report Number: 24-027476

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				239958	239959	239960	239961	239962
Sample Reference				TSP011-01C	TSP011-02C	TSP011-03C	TSP011-04C	TSP011-05C
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
	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

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



4041



Environmental Science

Analytical Report Number: 24-027476

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	239963	239964	239965	239966	239967
Sample Reference	TSP011-06C	TSP011-07C	TSP011-08C	TSP011-09C	TSP011-10C
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024
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	7.5	8.2	7.2	6.5	7.5
Total mass of sample received	kg	0.1	NONE	1.3	1.2	1	1.2	1.2

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	MJN	MJN	MJN	MJN	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	< 0.05	< 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	0.06	< 0.05	0.16	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.1	0.16	0.23	< 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	0.14	< 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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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS 10 AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS 10 AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS 10 AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH CU 10 AL	mg/kg	1	MCERTS	7.9	5.6	12	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH CU 10 AL	mg/kg	2	MCERTS	62	43	120	38	47
TPHCWG - Aliphatic >EC16 - EC21 EH CU 10 AL	mg/kg	8	MCERTS	130	100	210	100	110
TPHCWG - Aliphatic >EC21 - EC35 EH CU 10 AL	mg/kg	8	MCERTS	220	170	380	190	170
TPHCWG - Aliphatic >EC5 - EC35 EH CU + HS 10 AL	mg/kg	10	NONE	430	320	730	330	330

TPHCWG - Aromatic >EC5 - EC7 HS 10 AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 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	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH CU 10 AR	mg/kg	2	MCERTS	25	14	24	17	29
TPHCWG - Aromatic >EC16 - EC21 EH CU 10 AR	mg/kg	10	MCERTS	96	73	130	82	92
TPHCWG - Aromatic >EC21 - EC35 EH CU 10 AR	mg/kg	10	MCERTS	190	150	290	190	190
TPHCWG - Aromatic >EC5 - EC35 EH CU + HS 10 AR	mg/kg	10	NONE	320	240	440	290	310

TPH (EC10 - EC40) EH CU 10 TOTAL	mg/kg	10	MCERTS	780	600	1200	670	670
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VOCs



Environmental Science

Analytical Report Number: 24-027476
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				239963	239964	239965	239966	239967
Sample Reference				TSP011-06C	TSP011-07C	TSP011-08C	TSP011-09C	TSP011-10C
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

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

Analytical Report Number: 24-027476
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				239968	239969
Sample Reference				TSP011-11C	TSP011-12C
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				25/06/2024	25/06/2024
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	7.2	7.2
Total mass of sample received	kg	0.1	NONE	1.2	1.2

Asbestos

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

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	0.11	0.17
Pyrene	mg/kg	0.05	MCERTS	0.18	0.24
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.32
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.33
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.53
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.15
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.38
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.28
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	2.41
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 _{HS, ID, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 _{HS, ID, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 _{EH, CU, ID, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	23	45
TPHCWG - Aliphatic >EC16 - EC21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	70	98
TPHCWG - Aliphatic >EC21 - EC35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	130	180
TPHCWG - Aliphatic >EC35 - EC35 _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	220	320

TPHCWG - Aromatic >EC5 - EC7 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS, ID, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS, ID, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 _{EH, CU, ID, AR}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, ID, AR}	mg/kg	2	MCERTS	8.2	19
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	67	80
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	170	180
TPHCWG - Aromatic >EC35 - EC35 _{EH, CU+HS, ID, AR}	mg/kg	10	NONE	240	280

TPH (EC10 - EC40) _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	500	640
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VOCs

Analytical Report Number: 24-027476
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				239968	239969
Sample Reference				TSP011-11C	TSP011-12C
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				25/06/2024	25/06/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Unit	Limit of detection	Accreditation Status		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0
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

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

Analytical Report Number : 24-027476

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 *
239958	TSP011-01C	None Supplied	None Supplied	Brown sandy loam with vegetation
239959	TSP011-02C	None Supplied	None Supplied	Brown sand with vegetation
239960	TSP011-03C	None Supplied	None Supplied	Brown sand with vegetation and stones
239961	TSP011-04C	None Supplied	None Supplied	Brown sand with vegetation
239962	TSP011-05C	None Supplied	None Supplied	Brown sand with vegetation
239963	TSP011-06C	None Supplied	None Supplied	Brown sand with vegetation
239964	TSP011-07C	None Supplied	None Supplied	Brown sand with vegetation
239965	TSP011-08C	None Supplied	None Supplied	Brown sand with vegetation
239966	TSP011-09C	None Supplied	None Supplied	Brown sand with vegetation
239967	TSP011-10C	None Supplied	None Supplied	Brown sand with vegetation
239968	TSP011-11C	None Supplied	None Supplied	Brown sand with vegetation
239969	TSP011-12C	None Supplied	None Supplied	Brown sand with vegetation

Analytical Report Number : 24-027476
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 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/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	L076B/L088	D/W	MCERTS

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

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

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

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

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution



Samples received on: 03/07/2024

Samples instructed on/ 04/07/2024
Analysis started on:

Analysis completed by: 10/07/2024

Report issued on: 10/07/2024



For & on behalf of i2 Analytical Ltd.

██████████ d ██████████, ██████████ s ██████████ al ██████████ b ██████████ y ██████████ d : ██████████ y ██████████ l ██████████ a ██████████, ██████████

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: 24-028801

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number	247084	247085	247086	247087	247088
Sample Reference	TSP011-01D	TSP011-02D	TSP011-03D	TSP011-04D	TSP011-05D
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
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	4.4	4.2	4.1	4.3	4.3
Total mass of sample received	kg	0.1	NONE	0.6	0.6	0.6	0.6	0.6

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.17	0.1	0.1	0.11	0.08
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	0.06	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.44	0.34	0.21	0.23	0.14
Anthracene	mg/kg	0.05	MCERTS	0.25	0.39	0.09	0.1	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.66	0.57	0.39	0.34	0.28
Pyrene	mg/kg	0.05	MCERTS	0.65	0.51	0.4	0.32	0.28
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.31	0.22	0.18	0.17	0.14
Chrysene	mg/kg	0.05	MCERTS	0.34	0.21	0.22	0.2	0.15
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.38	0.23	0.27	0.25	0.21
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.15	0.11	0.09	0.11	0.06
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.34	0.2	0.24	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.2	0.12	0.15	0.14	0.1
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	0.21	0.13	0.17	0.16	0.11

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	4.15	3.13	2.51	2.14	1.56
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS,1D,AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 _{HS,1D,AL}	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 _{HS,1D,AL}	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	MCERTS	< 1.0	1	1.1	1.4	3
TPHCWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	22	19	12	21	21
TPHCWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	84	57	42	69	63
TPHCWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	120	85	62	92	89
TPHCWG - Aliphatic >EC5 - EC35 _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	230	160	120	180	180

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	4.1	3.3	2.7	3.1
TPHCWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	26	22	20	21	25
TPHCWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	82	64	64	55	68
TPHCWG - Aromatic >EC5 - EC35 _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	110	90	87	79	96

TPH (EC10 - EC40) _{EH,CU,1D,TOTAL}	mg/kg	10	MCERTS	400	310	250	310	330
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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



4041



Environmental Science

Analytical Report Number: 24-028801

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				247084	247085	247086	247087	247088
Sample Reference				TSP011-01D	TSP011-02D	TSP011-03D	TSP011-04D	TSP011-05D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
	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

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



4041



Environmental Science

Analytical Report Number: 24-028801

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	247089	247090	247091	247092	247093
Sample Reference	TSP011-06D	TSP011-07D	TSP011-08D	TSP011-09D	TSP011-10D
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
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	4.3	4.4	4.1	4	4
Total mass of sample received	kg	0.1	NONE	0.6	0.6	0.6	0.6	0.6

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.06	0.12	0.16	0.1	0.08
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	0.25	0.09	0.12	0.06
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.07	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.11	0.5	0.11	0.19	0.06
Pyrene	mg/kg	0.05	MCERTS	0.13	0.45	0.11	0.2	0.06
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.08	0.23	0.06	0.11	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.08	0.25	0.07	0.11	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.11	0.28	0.1	0.16	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.06	0.15	< 0.05	0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.11	0.27	< 0.05	0.11	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.07	0.15	< 0.05	0.09	< 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	0.07	0.16	< 0.05	0.08	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	0.94	2.87	< 0.80	1.32	< 0.80
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_10_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	2.9	6.6	2.7
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_10_AL	mg/kg	2	MCERTS	16	17	12	21	17
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_10_AL	mg/kg	8	MCERTS	60	62	37	58	46
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_10_AL	mg/kg	8	MCERTS	78	72	50	91	72
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_10_AL	mg/kg	10	NONE	150	150	100	180	140

TPHCWG - Aromatic >EC5 - EC7 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 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	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_10_AR	mg/kg	2	MCERTS	< 2.0	2.8	< 2.0	4.5	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_10_AR	mg/kg	10	MCERTS	13	31	11	23	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_10_AR	mg/kg	10	MCERTS	44	71	30	58	25
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_10_AR	mg/kg	10	NONE	57	100	41	85	25

TPH (EC10 - EC40) EH_CU_10_TOTAL	mg/kg	10	MCERTS	250	290	170	310	200
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

Analytical Report Number: 24-028801
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				247089	247090	247091	247092	247093
Sample Reference				TSP011-06D	TSP011-07D	TSP011-08D	TSP011-09D	TSP011-10D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
p & m-Xylene				µg/kg	5	MCERTS	< 5.0	< 5.0
o-Xylene				µg/kg	5	MCERTS	< 5.0	< 5.0

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



4041



Environmental Science

Analytical Report Number: 24-028801

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				247094	247095			
Sample Reference				TSP011-11D	TSP011-12D			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				02/07/2024	02/07/2024			
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	4	3.7
Total mass of sample received	kg	0.1	NONE	0.6	0.6

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.17	0.06
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.08	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.35	0.1
Anthracene	mg/kg	0.05	MCERTS	0.1	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.48	0.1
Pyrene	mg/kg	0.05	MCERTS	0.43	0.1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.24	0.06
Chrysene	mg/kg	0.05	MCERTS	0.24	0.06
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.36	0.09
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.25	0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.15	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.15	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	3.1	< 0.80
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS 1D AL	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS 1D AL	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS 1D AL	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH CU 1D AL	mg/kg	1	MCERTS	1.2	1.6
TPHCWG - Aliphatic >EC12 - EC16 EH CU 1D AL	mg/kg	2	MCERTS	18	19
TPHCWG - Aliphatic >EC16 - EC21 EH CU 1D AL	mg/kg	8	MCERTS	63	66
TPHCWG - Aliphatic >EC21 - EC35 EH CU 1D AL	mg/kg	8	MCERTS	100	94
TPHCWG - Aliphatic >EC5 - EC35 EH CU HS 1D AL	mg/kg	10	NONE	180	180

TPHCWG - Aromatic >EC5 - EC7 HS 1D AR	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS 1D AR	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS 1D AR	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH CU 1D AR	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH CU 1D AR	mg/kg	2	MCERTS	2.3	3.2
TPHCWG - Aromatic >EC16 - EC21 EH CU 1D AR	mg/kg	10	MCERTS	21	18
TPHCWG - Aromatic >EC21 - EC35 EH CU 1D AR	mg/kg	10	MCERTS	58	47
TPHCWG - Aromatic >EC5 - EC35 EH CU HS 1D AR	mg/kg	10	NONE	81	68

TPH (EC10 - EC40) EH CU 1D TOTAL	mg/kg	10	MCERTS	300	280
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0
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

Analytical Report Number: 24-028801
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				247094	247095
Sample Reference				TSP011-11D	TSP011-12D
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				02/07/2024	02/07/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
p & m-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0

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



4041



Environmental Science

Analytical Report Number : 24-028801

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 *
247084	TSP011-01D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247085	TSP011-02D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247086	TSP011-03D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247087	TSP011-04D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247088	TSP011-05D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247089	TSP011-06D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247090	TSP011-07D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247091	TSP011-08D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247092	TSP011-09D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247093	TSP011-10D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247094	TSP011-11D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation
247095	TSP011-12D	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation

Analytical Report Number : 24-028801
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
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 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/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	L076B/L088	D/W	MCERTS

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

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

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

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

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

The result for sum should be interpreted with caution

Test Results

Client/client ref: Sanctus
Project ref: S3240

Site ref: Ardrossan

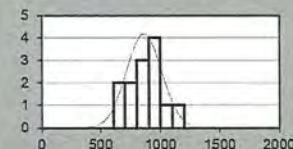
Data description: Total TPH level TSP11 Round 1

Date: 01-Aug-2024

User details: JRA

Dataset	Total TPH
Sample mean, $\bar{x}$	863.85
Sample standard deviation, s	147.11
Sample size, n	13
Critical concentration, Cc	1000

Use Normal distribution to test



Outliers & non-detects

Outliers present?	NO
Significance level	5%
Outliers removed?	0
Non-detects	0

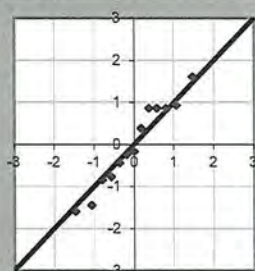


Normality test

Significance level 5%

Normal distribution

Use: Auto: One-sample t



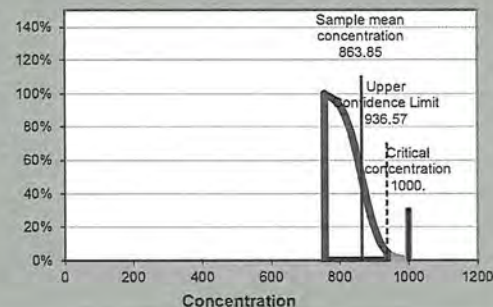
Test scenario:

Planning: is true mean lower than critical concentration ($\mu < C_c$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq C_c$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < C_c$

Probability that true mean exceeds the concentration given on the x axis



Evidence against Null hypothesis:

100%

Base decision on:

evidence level

Evidence level required:

95%

Balance of probability?

N/A

Reject Null Hypothesis?

Yes

$\mu < C_c$ (re this dataset)

Test Results

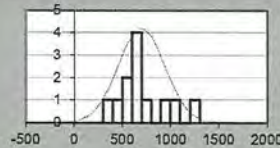
Client/client ref: Sanctus
Project ref: S3240

Site ref: Ardrossan
Data description: Total TPH levels TSP11 Round 2 User details: JRA

Date: 01-Aug-2024

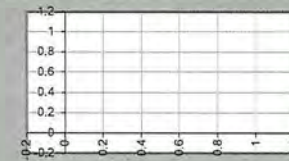
Datase	Total TPH
Sample mean, $\bar{x}$	700.83
Sample standard deviation, s	239.83
Sample size, n	12
Critical concentration, Cc	1000

Use Normal distribution to test



Outliers & non-detects

Outliers present?	NO
Significance level	5%
Outliers removed?	0
Non-detects	0

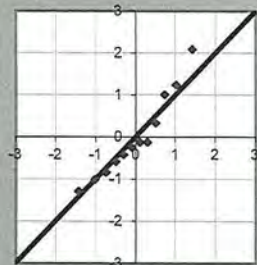


Normality test

Significance level 5%

Normal distribution

Use: Auto: One-sample t

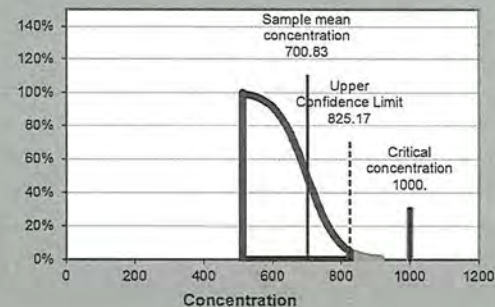


Test scenario: Planning: is true mean lower than critical concentration ($\mu < C_c$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq C_c$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < C_c$

Probability that true mean exceeds the concentration given on the x axis



Evidence against Null hypothesis:

100%

Base decision on: evidence level

Evidence level required: 95%

Balance of probability? N/A

Reject Null Hypothesis? Yes

$\mu < C_c$ (re this dataset)

**Treated Stockpile Reuse Validation Form 003 – TSP05****Stockpile ID**

Stockpile ID: TSP05

Material Volume:

1,200 m³

Validation Samples Included

12 No.

Tested Location: Treatment Area 02

Stockpile Creation Date: 11/01/2024

Release Date: TBC

Sampling Data (3No. full rounds for validation to release)

Passing Round 1 (Overall Sample Round 15 of 17)	Sample Date: 09/07/2024	Report Number & Date: 24-029772 – 17/07/2024	Lab: i2
Passing Round 2 (Overall Sample Round 16 of 17)	Sample Date: 17/07/2024	Report Number & Date: 24-23192 – 24/07/2024	Lab: Eurofins
Passing Round 3 (Overall Sample Round 17 of 17)	Sample Date: 23/07/2024	Report Number & Date: 24-23866 – 30/07/2024	Lab: Eurofins

Sampling Data**Passing Round 1**

Report Number: 24-029772

Report Date: 17/07/2024

Sample ID (Sample Names): TSP05-01G – TSP05-12G

Report ID (Lab): i2

Comments:

Test Results: PASS / ~~FAIL~~

No exceedances seen throughout Average Total TPH = 168 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Passing Round 2

Report Number: 24-23192

Report Date: 24/07/2024

Sample ID (Sample Names): TSP05-01H – TSP05-12H

Report ID (Lab): Eurofins

Comments:

Test Results: PASS / ~~FAIL~~

No exceedances seen throughout Average Total TPH = 254 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Passing Round 3

Report Number: 24-23866

Report Date: 30/07/2024

Sample ID (Sample Names): TSP05-01I – TSP05-12I

Report ID (Lab): Eurofins

Comments:

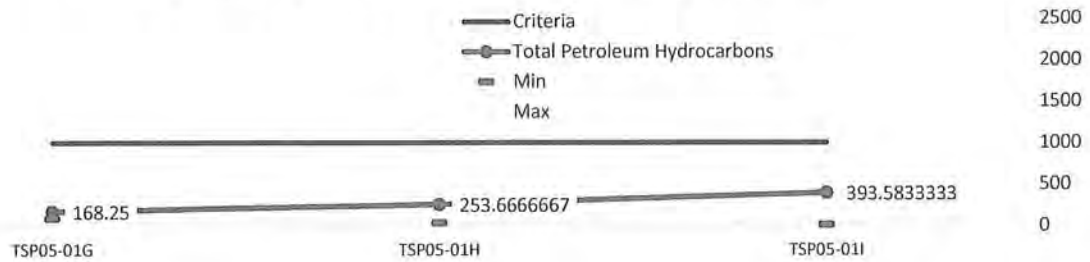
Test Results: PASS / ~~FAIL~~

No exceedances seen throughout Average Total TPH = 394 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Data Review

Data Trend for Total TPH levels:

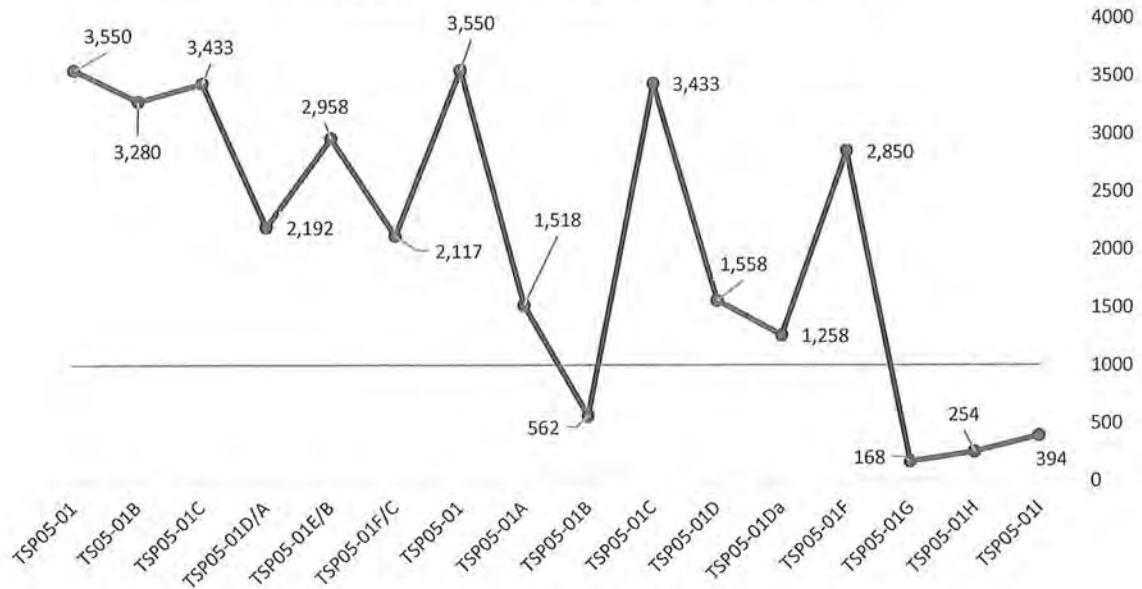
Min & Max Soil Values for Total Petroleum Hydrocarbons

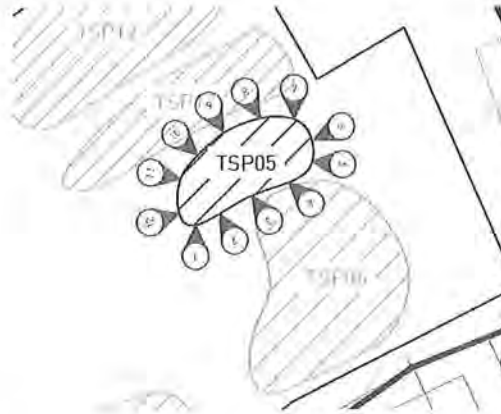


Additional Trendline Data – long term review:

Further to the above spread of data for the final 3 No. rounds, the total TPH levels from January 2024, for the treated stockpile, are shown below. The chart shows a significant decrease in the averaged total TPH levels, and the final result presents a reduction of total TPH level of 89% when compared to the initial material's contents (3,550 mg/kg (11th January 2024), compared to the final level of 394 mg/kg (23/07/2024));

Soil Values for Total Petroleum Hydrocarbons



Treated Stockpile Sample Plan:**Sampling Strategy:**

All samples have been taken in compliance with ISO BS 18400, including the following notes:

- Stainless steel/washable sampling devices (trowels, buckets, etc) will be employed for the gathering of the soils samples and cleaned between each sample location so that consecutive samples are not cross-contaminated.
- The sample positions shown above indicate the position relative to the base boundary of the stockpile. All samples are taken from a within the body of the Stockpile, retrieved by an excavator. This is done as a safe sample retrieval option as well as to target an internal representative sample location mid-way from the edge to the centre of the Stockpile, as discussed under BS ISO 18400-104:2018 (Sampling Strategies), subsection 9.
- The subsequent sample depths were between 1-2 m below the Stockpile's surface and a minimum of 4No. characteristic subsamples were taken from an area of approximately 1m² of the newly exposed material. The 4No. or more sub-locations were chosen in a X-pattern and the combined testing soil material is described as a composite sample, following a systematic stratified random sub-sampling location of a 3-dimensional source.
- The mechanically retrieved material is then sub-sampled into the required sampling jars/pots by the Sanctus Engineer as a representative sample from the numbered location.

Sanctus Declaration:

We confirm that:

1. The material that this form relates to, has been sampled representatively, as discussed above and in accordance with the client's requirements (Ardrossan Remediation Specification Rev E).
2. The material has been proven to be suitable for REUSE on site as there are 3 No. consecutive rounds, with a statistical insignificant number of exceedances of the accepted reuse criteria. No exceedances are seen within the first two monitoring rounds and each round's average for the total TPH levels have been significantly below the 1,000 mg/kg threshold level.
3. The laboratory analysis results are representative of the materials investigated.
4. The material released will also be recorded spatially at its reuse location.



Sanctus Treated Stockpile Validation Form

Ardrossan Site Code: S3240



Record of reuse

For Sanctus Use Only:

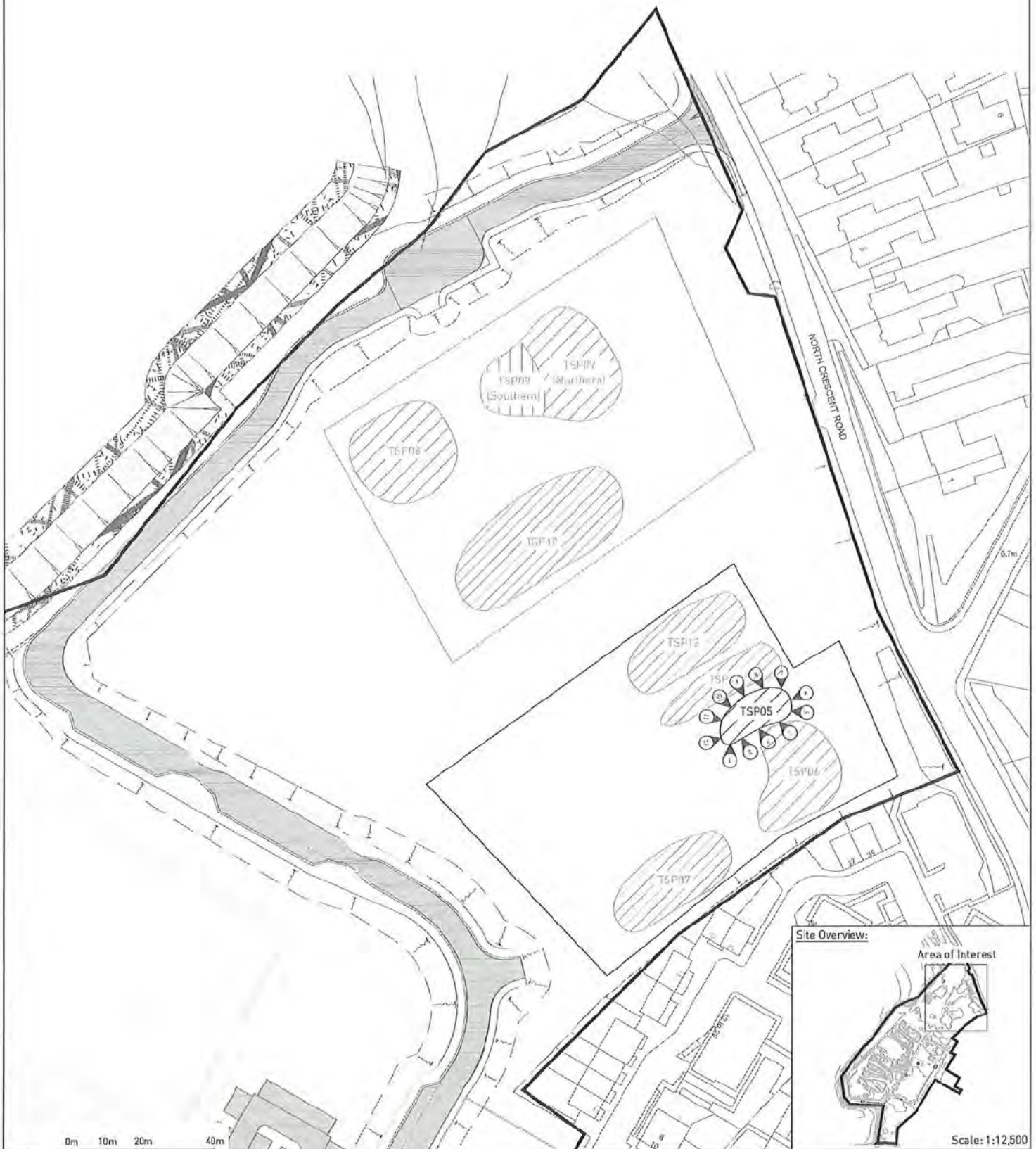
Approved for reuse:

Beginning of Movement from stockpile:

End of Movement into site:



- Legend:
- Site Boundary
 - ▨ Treated Stockpile 05 Sample Location



Site Overview:



Scale: 1:12,500



Sanctus House, 1 Olympus Park Business Centre,
Quedgetley, Glos, GL2 4DH
T: 01453 828222
E: info@sanctusttd.co.uk www.sanctusttd.com

Drawing Notes:
Based on client supplied DWG -
ARDROSSAN 2D produced by Aird Group
23/03/2020. All locations are approximate.
Must be printed in colour.

Site Address:
Raylight Place
Ardrossan
North Ayrshire
Scotland

Rev.	Description	Date
A	First Issue	02/08/2024

APPROVED

Project Name:
North Shore, Ardrossan

Client:
North Ayrshire Council

Drawing Title:
Treated Stockpile 05 Sample Locations

Contract No:
S3240

Drawing No:
D3240/075

Scale @ A3:
1:1000

10/1



Environmental Science

Analytical Report Number : 24-029772

Project / Site name: Ardrossan North Shore

Samples received on: 09/07/2024

Your job number: S3240

Samples instructed on/
Analysis started on: 09/07/2024

Your order number: S3240

Analysis completed by: 17/07/2024

Report Issue Number: 1

Report issued on: 17/07/2024

Samples Analysed: 12 soil samples

For & on behalf of i2 Analytical Ltd.

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: 24-029772
 Project / Site name: Ardrossan North Shore
 Your Order No: 53240

Lab Sample Number	252131	252132	252133	252134	252135
Sample Reference	TSP05-01G	TSP05-02G	TSP05-03G	TSP05-04G	TSP05-05G
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00	0.00	0.00	0.00	0.00
Date Sampled	09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
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	28	26.7	< 0.1	23.2
Moisture Content	%	0.01	NONE	8.4	6.3	8.5	7.1	7.7
Total mass of sample received	kg	0.1	NONE	0.3	0.3	0.3	0.3	0.2

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.08
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	0.1	0.14	0.09	0.3	0.24
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	0.06
Fluoranthene	mg/kg	0.05	MCERTS	0.16	0.29	0.14	0.52	0.28
Pyrene	mg/kg	0.05	MCERTS	0.17	0.35	0.16	0.58	0.33
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.09	0.16	0.1	0.3	0.18
Chrysene	mg/kg	0.05	MCERTS	0.11	0.18	0.07	0.3	0.16
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.18	< 0.05	0.36	0.18
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.1	< 0.05	0.13	0.07
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.2	< 0.05	0.3	0.17
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.09	< 0.05	0.13	0.08
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	0.12	< 0.05	0.18	0.12

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	1.81	< 0.80	3.18	1.96
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 H5,10,AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 H5,10,AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 H5,10,AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH,CU,10,AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH,CU,10,AL	mg/kg	2	MCERTS	12	13	12	5.8	12
TPHCWG - Aliphatic >EC16 - EC21 EH,CU,10,AL	mg/kg	8	MCERTS	35	29	32	19	27
TPHCWG - Aliphatic >EC21 - EC35 EH,CU,10,AL	mg/kg	8	MCERTS	61	43	66	31	55
TPHCWG - Aliphatic >EC35 - EC35 EH,CU+H5,10,AL	mg/kg	10	NONE	110	86	110	55	94

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	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH,CU,10,AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	2.4
TPHCWG - Aromatic >EC16 - EC21 EH,CU,10,AR	mg/kg	10	MCERTS	< 10	13	< 10	11	16
TPHCWG - Aromatic >EC21 - EC35 EH,CU,10,AR	mg/kg	10	MCERTS	30	25	30	25	46
TPHCWG - Aromatic >EC35 - EC35 EH,CU+H5,10,AR	mg/kg	10	NONE	30	38	30	36	65

TPH (EC10 - EC40) EH,CU,10,TOTAL	mg/kg	10	MCERTS	180	150	180	110	200
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

Analytical Report Number: 24-029772
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				252131	252132	252133	252134	252135
Sample Reference				TSP05-01G	TSP05-02G	TSP05-03G	TSP05-04G	TSP05-05G
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00	0.00	0.00	0.00	0.00
Date Sampled				09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
p & m-Xylene				µg/kg	5	MCERTS	< 5.0	< 5.0
o-Xylene				µg/kg	5	MCERTS	< 5.0	< 5.0

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

Analytical Report Number: 24-029772
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	252136	252137	252138	252139	252140
Sample Reference	TSP05-06G	TSP05-07G	TSP05-08G	TSP05-09G	TSP05-10G
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00	0.00	0.00	0.00	0.00
Date Sampled	09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
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	40.2	27.9
Moisture Content	%	0.01	NONE	8.7	9.6	6.6	5.5	7
Total mass of sample received	kg	0.1	NONE	0.3	0.4	0.3	0.3	0.3

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.29	0.08	< 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	0.11	0.13	0.29	0.12	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.1	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.47	0.21	0.57	0.29	0.16
Pyrene	mg/kg	0.05	MCERTS	0.57	0.26	0.68	0.33	0.21
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.36	0.11	0.34	0.15	0.12
Chrysene	mg/kg	0.05	MCERTS	0.34	0.18	0.37	0.24	0.16
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.4	0.15	0.35	0.22	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.17	< 0.05	0.22	0.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.35	0.15	0.43	0.2	0.15
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.18	0.08	0.16	0.1	0.08
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	0.23	0.12	0.2	0.14	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	3.3	1.4	3.91	1.96	0.88
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS ID AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS ID AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS ID AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH CU ID AL	mg/kg	1	MCERTS	1	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH CU ID AL	mg/kg	2	MCERTS	27	14	6.8	6.9	7.2
TPHCWG - Aliphatic >EC16 - EC21 EH CU ID AL	mg/kg	8	MCERTS	36	40	19	25	21
TPHCWG - Aliphatic >EC21 - EC35 EH CU ID AL	mg/kg	8	MCERTS	74	83	26	33	25
TPHCWG - Aliphatic >EC5 - EC35 EH CU+HS ID AL	mg/kg	10	NONE	140	140	51	64	53

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	7	< 2.0	< 2.0	< 2.0	3.2
TPHCWG - Aromatic >EC16 - EC21 EH CU ID AR	mg/kg	10	MCERTS	23	11	11	< 10	14
TPHCWG - Aromatic >EC21 - EC35 EH CU ID AR	mg/kg	10	MCERTS	76	48	28	< 10	24
TPHCWG - Aromatic >EC5 - EC35 EH CU+HS ID AR	mg/kg	10	NONE	110	59	39	< 10	41

TPH (EC10 - EC40) EH CU ID TOTAL	mg/kg	10	MCERTS	320	250	110	89	110
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

Analytical Report Number: 24-029772
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				252136	252137	252138	252139	252140
Sample Reference				TSP05-06G	TSP05-07G	TSP05-08G	TSP05-09G	TSP05-10G
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00	0.00	0.00	0.00	0.00
Date Sampled				09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
p & m-Xylene				µg/kg	5	MCERTS	< 5.0	< 5.0
o-Xylene				µg/kg	5	MCERTS	< 5.0	< 5.0

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

Analytical Report Number: 24-029772
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	252141	252142
Sample Reference	TSP05-11G	TSP05-12G
Sample Number	None Supplied	None Supplied
Depth (m)	0.00	0.00
Date Sampled	09/07/2024	09/07/2024
Time Taken	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection
		Accreditation Status

Stone Content	%	0.1	NONE	< 0.1	23.4
Moisture Content	%	0.01	NONE	7.2	7.9
Total mass of sample received	kg	0.1	NONE	0.3	0.3

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	0.11	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.23	0.11
Pyrene	mg/kg	0.05	MCERTS	0.28	0.12
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.21	0.08
Chrysene	mg/kg	0.05	MCERTS	0.23	0.08
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.27	0.1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.24	0.09
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.13	0.06
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.09

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.8	< 0.80
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	6.1	10
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	25	37
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	39	75
TPHCWG - Aliphatic >EC35 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	69	120

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	13	42
TPHCWG - Aromatic >EC35 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	13	52

TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	100	220
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0
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



Analytical Report Number: 24-029772
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				252141	252142
Sample Reference				TSP05-11G	TSP05-12G
Sample Number				None Supplied	None Supplied
Depth (m)				0.00	0.00
Date Sampled				09/07/2024	09/07/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
p & m-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0

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

Analytical Report Number : 24-029772

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 *
252131	TSP05-01G	None Supplied	0	Brown loam and sand with gravel
252132	TSP05-02G	None Supplied	0	Brown loam and sand with gravel and stones
252133	TSP05-03G	None Supplied	0	Brown loam and sand with vegetation and stones
252134	TSP05-04G	None Supplied	0	Brown loam and sand with gravel and vegetation
252135	TSP05-05G	None Supplied	0	Brown loam and sand with vegetation and stones
252136	TSP05-06G	None Supplied	0	Brown loam and sand with gravel and vegetation
252137	TSP05-07G	None Supplied	0	Brown loam and sand with gravel and vegetation
252138	TSP05-08G	None Supplied	0	Brown loam and sand with gravel and vegetation
252139	TSP05-09G	None Supplied	0	Brown loam and sand with gravel and stones
252140	TSP05-10G	None Supplied	0	Brown loam and sand with gravel and stones
252141	TSP05-11G	None Supplied	0	Brown loam and sand with gravel and vegetation
252142	TSP05-12G	None Supplied	0	Brown loam and sand with gravel and stones

Analytical Report Number : 24-029772
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
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 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/L068	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/L068	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 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.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution



Final Report

Report No.: 24-23192-1

Initial Date of Issue: 24-Jul-2024

Re-Issue Details:

Client Sanctus Limited



Project S3240 Ardrossan North Shore



Date Received: 22-Jul-2024

Date Instructed: 22-Jul-2024

No. of Samples: 12

Turnaround (Wkdays): 3

Results Due: 24-Jul-2024

Date Approved: 24-Jul-2024



For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192
Quotation No.: Q24-35340		Chemtest Sample ID.:				1838810	1838811	1838812	1838813	1838814	1838815	1838816	1838817
Order No.: S3240		Client Sample Ref.:				TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:				TSP05-01H	TSP05-02H	TSP05-03H	TSP05-04H	TSP05-05H	TSP05-06H	TSP05-07H	TSP05-08H
		Sample Location:				TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Bottom Depth (m):				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Date Sampled:				17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Moisture		N	2030	%	0.020	8.4	9.1	7.9	7.3	9.4	8.4	8.6	10
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones	Stones and Roots	Stones and Roots	Roots and Stones	Roots and Stones	Stones	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	2.8	5.3	3.0	5.0	7.6	< 2.0	4.1	9.4
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	43	28	51	52	9.2	40	65
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	100	71	94	80	19	110	140
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	< 3.0	42	42	47	44	13	56	70
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	5.4	200	140	200	180	43	210	280
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	200	140	200	180	43	210	280
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	1.0	2.2	< 1.0	< 1.0	2.5
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	8.6	2.8	5.7	8.4	1.1	4.6	9.9
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	15	34	21	34	34	42	38	43
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	12	18	12	29	17	74	30	25
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	1.1	60	21	59	34	19	53	49
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	28	60	37	70	62	120	73	80
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	29	120	58	130	95	140	130	130
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	33	260	180	270	240	160	280	360
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	34	320	200	330	280	180	340	410
Naphthalene		M	2700	mg/kg	0.10	< 0.10	0.20	0.14	0.25	0.31	0.32	0.17	< 0.10
Acenaphthylene		M	2700	mg/kg	0.10	0.32	0.61	0.53	0.57	0.52	0.42	0.39	0.64
Acenaphthene		M	2700	mg/kg	0.10	0.30	0.71	0.65	0.58	0.58	0.25	0.39	0.61
Fluorene		M	2700	mg/kg	0.10	0.37	1.6	1.0	0.67	0.73	0.48	0.40	0.83
Phenanthrene		M	2700	mg/kg	0.10	0.81	0.95	0.52	0.80	1.2	0.84	0.57	1.7

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192
Quotation No.: Q24-35340		Chemtest Sample ID.:				1838810	1838811	1838812	1838813	1838814	1838815	1838816	1838817
Order No.: S3240		Client Sample Ref.:				TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:				TSP05-01H	TSP05-02H	TSP05-03H	TSP05-04H	TSP05-05H	TSP05-06H	TSP05-07H	TSP05-08H
		Sample Location:				TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Bottom Depth (m):				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Date Sampled:				17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Anthracene		M	2700	mg/kg	0.10	0.33	0.33	0.21	0.58	0.45	0.55	0.26	0.55
Fluoranthene		M	2700	mg/kg	0.10	2.3	2.2	1.8	4.6	3.4	2.2	2.0	3.0
Pyrene		M	2700	mg/kg	0.10	2.4	2.5	2.2	5.7	3.3	2.6	1.9	3.2
Benzo[a]anthracene		M	2700	mg/kg	0.10	< 0.10	2.1	1.6	< 0.10	2.1	1.1	1.9	1.9
Chrysene		M	2700	mg/kg	0.10	< 0.10	0.48	1.1	0.70	1.6	1.5	1.6	1.8
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	2.5	2.4	2.2	5.5	3.1	2.6	2.3	2.7
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	1.1	1.2	0.82	2.0	1.3	0.70	1.1	1.0
Benzo[a]pyrene		M	2700	mg/kg	0.10	1.9	1.8	1.6	4.6	2.3	1.9	1.8	2.2
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	1.7	1.5	1.3	3.2	1.6	1.5	1.7	1.5
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	0.94	0.82	0.78	1.0	0.76	0.35	0.85	0.86
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	2.3	2.2	1.4	4.0	2.0	2.0	1.7	1.8
Total Of 16 PAH's		M	2700	mg/kg	2.0	17	22	18	35	25	19	19	24

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-23192	24-23192	24-23192	24-23192
Quotation No.: Q24-35340		Chemtest Sample ID.:				1838818	1838819	1838820	1838821
Order No.: S3240		Client Sample Ref.:				TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:				TSP05-09H	TSP05-10H	TSP05-11H	TSP05-12H
		Sample Location:				TSP05	TSP05	TSP05	TSP05
		Sample Type:				SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0.00	0.00	0.00	0.00
		Bottom Depth (m):				0.00	0.00	0.00	0.00
		Date Sampled:				17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Moisture		N	2030	%	0.020	10	8.9	9.5	9.8
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones	Stones	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	6.1	2.4	2.8	5.7
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	39	26	25	34
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	89	47	62	87
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	53	29	37	49
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	190	100	130	180
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	190	100	130	180
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	1.3
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	4.6	2.6	2.7	4.2
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	32	24	23	30
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	20	28	21	23
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	32	22	31	52
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	57	54	47	59
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	89	76	78	110
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	240	160	170	230
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	280	180	200	290
Naphthalene		M	2700	mg/kg	0.10	0.13	< 0.10	0.19	0.24
Acenaphthylene		M	2700	mg/kg	0.10	0.36	0.47	0.29	0.32
Acenaphthene		M	2700	mg/kg	0.10	0.32	0.58	0.10	0.26
Fluorene		M	2700	mg/kg	0.10	0.28	0.82	0.29	0.29
Phenanthrene		M	2700	mg/kg	0.10	0.67	< 0.10	0.63	0.80

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23192	24-23192	24-23192	24-23192
Quotation No.: Q24-35340		Chemtest Sample ID.:	1838818	1838819	1838820	1838821
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:	TSP05-09H	TSP05-10H	TSP05-11H	TSP05-12H
		Sample Location:	TSP05	TSP05	TSP05	TSP05
		Sample Type:	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0.00	0.00	0.00	0.00
		Bottom Depth (m):	0.00	0.00	0.00	0.00
		Date Sampled:	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Anthracene		M	2700	mg/kg	0.10	0.27
Fluoranthene		M	2700	mg/kg	0.10	2.0
Pyrene		M	2700	mg/kg	0.10	2.2
Benzo[a]anthracene		M	2700	mg/kg	0.10	1.5
Chrysene		M	2700	mg/kg	0.10	1.3
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	2.5
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	0.99
Benzo[a]pyrene		M	2700	mg/kg	0.10	2.1
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	1.5
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	0.70
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	1.8
Total Of 16 PAH's		M	2700	mg/kg	2.0	19

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request.

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory.

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:





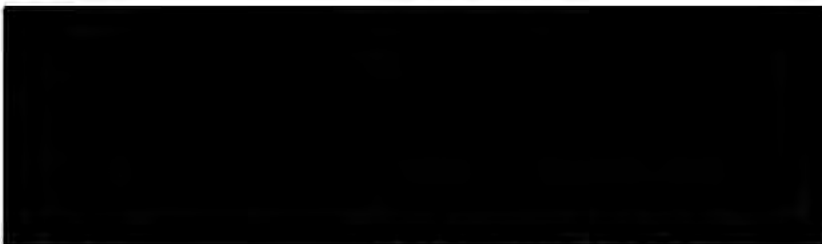
Final Report

Report No.: 24-23866-1

Initial Date of Issue: 31-Jul-2024

Re-Issue Details:

Client Sanctus Limited



Project S3240 Ardossan North Shore



Date Received: 26-Jul-2024

Date Instructed: 26-Jul-2024

No. of Samples: 12

Turnaround (Wkdays): 3

Results Due: 30-Jul-2024

Date Approved: 31-Jul-2024



For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: S3240 Ardossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866
Quotation No.: Q24-35340		Chemtest Sample ID.:	1841202	1841203	1841204	1841205	1841206	1841207	1841208	1841209			
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05			
		Client Sample ID.:	TSP05-01I	TSP05-02I	TSP05-03I	TSP05-04I	TSP05-05I	TSP05-06I	TSP05-07I	TSP05-08I			
		Sample Location:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05			
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
		Top Depth (m):	0	0	0	0	0	0	0	0			
		Bottom Depth (m):	0	0	0	0	0	0	0	0			
		Date Sampled:	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024			
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Moisture		N	2030	%	0.020	7.9	7.2	8.6	7.6	8.5	7.4	7.2	7.2
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones, Roots and Glass	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam	Sand	Sand	Loam	Loam	Loam	Loam
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	7.8	15	6.9	< 2.0	3.7	< 2.0	< 2.0	7.6
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	77	91	51	1.1	62	< 1.0	39	50
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	140	190	140	< 2.0	150	< 2.0	47	110
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	99	95	76	< 3.0	85	< 3.0	38	77
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	24	13	17	11	18	< 10	11	17
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	320	390	270	< 5.0	300	< 5.0	120	240
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	350	400	290	11	320	< 10	140	260
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	27	28	16	< 1.0	26	< 1.0	19	19
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	90	120	57	3.0	85	3.1	91	56
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	54	110	49	< 2.0	55	< 2.0	52	23
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	35	55	17	2.1	16	1.8	14	13
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	170	260	120	< 5.0	170	< 5.0	160	99
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	210	320	140	< 10	180	< 10	180	110
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	500	660	400	< 10	470	< 10	290	340
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	560	720	430	13	500	< 10	310	370
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: S3240 Ardossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866
Quotation No.: Q24-35340		Chemtest Sample ID.:	1841202	1841203	1841204	1841205	1841206	1841207	1841208	1841209		
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05		
		Client Sample ID.:	TSP05-01I	TSP05-02I	TSP05-03I	TSP05-04I	TSP05-05I	TSP05-06I	TSP05-07I	TSP05-08I		
		Sample Location:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05		
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
		Top Depth (m):	0	0	0	0	0	0	0	0		
		Bottom Depth (m):	0	0	0	0	0	0	0	0		
		Date Sampled:	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024		
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.35	0.38	0.30	< 0.10	0.37	0.44	0.44
Anthracene		M	2800	mg/kg	0.10	0.16	0.20	0.20	< 0.10	0.12	0.17	0.19
Fluoranthene		M	2800	mg/kg	0.10	1.2	1.5	1.2	0.13	1.0	1.4	1.5
Pyrene		M	2800	mg/kg	0.10	1.3	1.5	1.1	0.12	1.0	1.4	1.4
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.68	0.82	0.60	< 0.10	0.59	0.85	0.80
Chrysene		M	2800	mg/kg	0.10	0.53	0.87	0.66	< 0.10	0.45	0.90	0.88
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	1.2	1.7	0.85	< 0.10	1.0	1.5	1.4
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.41	0.56	0.37	< 0.10	0.28	0.51	0.63
Benzo[a]pyrene		M	2800	mg/kg	0.10	0.93	1.5	0.72	< 0.10	0.79	1.2	1.1
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	0.85	1.1	0.51	< 0.10	0.60	0.97	1.1
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.15	0.26	< 0.10	< 0.10	< 0.10	< 0.10	0.31
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	0.74	1.1	0.60	< 0.10	0.63	1.0	0.94
Total Of 16 PAH's		N	2800	mg/kg	2.0	8.5	12	7.1	< 2.0	6.9	10	11

Results - Soil

Project: S3240 Ardossan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-23866	24-23866	24-23866	24-23866
Quotation No.: Q24-35340		Chemtest Sample ID.:				1841210	1841211	1841212	1841213
Order No.: S3240		Client Sample Ref.:				TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:				TSP05-09I	TSP05-10I	TSP05-11I	TSP05-12I
		Sample Location:				TSP05	TSP05	TSP05	TSP05
		Sample Type:				SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0	0	0	0
		Bottom Depth (m):				0	0	0	0
		Date Sampled:				23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Moisture		N	2030	%	0.020	6.2	6.8	8.1	7.5
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam	Loam	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	7.4	4.5	5.6	11
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	66	52	54	47
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	150	100	120	120
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	100	62	74	69
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	17	15	18	18
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	330	220	260	250
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	340	240	270	260
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	20	34	22	26
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	94	84	73	77
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	63	49	41	48
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	18	16	12	13
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	180	170	140	150
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	190	180	150	160
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	500	390	390	400
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	540	420	420	430
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: S3240 Ardossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23866	24-23866	24-23866	24-23866
Quotation No.: Q24-35340		Chemtest Sample ID.:	1841210	1841211	1841212	1841213
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:	TSP05-09I	TSP05-10I	TSP05-11I	TSP05-12I
		Sample Location:	TSP05	TSP05	TSP05	TSP05
		Sample Type:	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0	0	0	0
		Bottom Depth (m):	0	0	0	0
		Date Sampled:	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Naphthalene		M	2800	mg/kg	0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.40
Anthracene		M	2800	mg/kg	0.10	0.21
Fluoranthene		M	2800	mg/kg	0.10	1.3
Pyrene		M	2800	mg/kg	0.10	1.5
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.72
Chrysene		M	2800	mg/kg	0.10	0.87
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	1.9
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.52
Benzo[a]pyrene		M	2800	mg/kg	0.10	1.5
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	1.4
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.25
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	1.2
Total Of 16 PAH's		N	2800	mg/kg	2.0	12

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

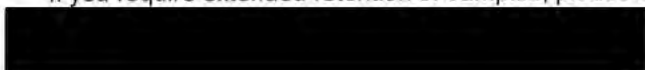
Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:



**Treated Stockpile Reuse Validation Form 004 – TSP07****Stockpile ID**

Stockpile ID: TSP07

Material Volume:

700 m³

Validation Samples Included

7 No.

Tested Location: Treatment Area 02

Stockpile Creation Date: 21/03/2024

Release Date: TBC

Sampling Data (3No. full rounds for validation to release)

Passing Round 1 (Overall Sample Round 9 of 11)	Sample Date: 25/06/2024	Report Number & Date: 24-027484 – 03/07/2024	Lab: i2
Passing Round 1 (Overall Sample Round 10 of 11)	Sample Date: 09/07/2024	Report Number & Date: 24-029826 – 16/07/2024	Lab: i2
Passing Round 1 (Overall Sample Round 11 of 11)	Sample Date: 18/07/2024	Report Number & Date: 24-22823 – 22/07/2024	Lab: Eurofins

Sampling Data**Round 1**

Report Number: 24-027484

Report Date: 03/07/2024

Sample ID (Sample Names): TSP07-01G – TSP07-07G

Report ID (Lab): i2

Comments:

Test Results: PASS / FAIL

No exceedances seen throughout Average Total TPH = 699 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse. Please note that round H was abandoned and no results are published under that round's name.

Round 2

Report Number: 24-029826

Report Date: 16/07/2024

Sample ID (Sample Names): TSP07-01I – TSP07-07I

Report ID (Lab): i2

Comments:

Test Results: PASS / FAIL

No exceedances seen throughout Average Total TPH = 170 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Round 3

Report Number: 24-22823

Report Date: 22/07/2024

Sample ID (Sample Names): TSP07-01J – TSP07-07J

Report ID (Lab): Eurofins

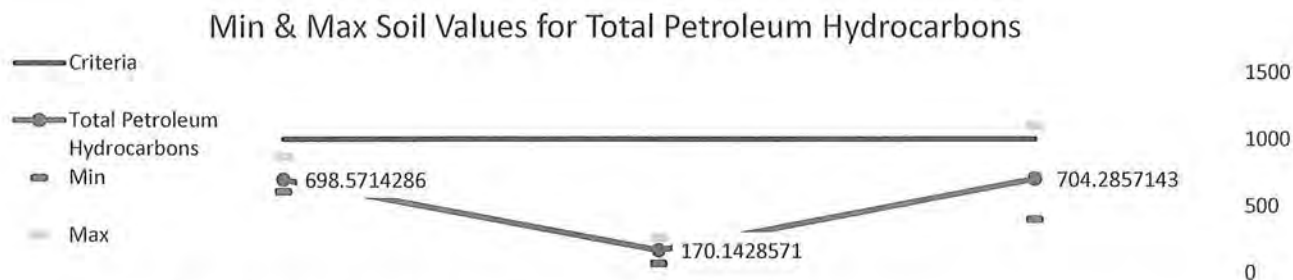
Comments:

Test Results: PASS / FAIL

One exceedance in total TPH (and zero exceedances in the banded TPHs) was noted in TSP07-01J. Following a statistical review, a >95% confidence level is seen with the distribution of total TPH, using the critical value of 1,000mg/kg a normal-normal distribution. Average Total TPH = 704 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

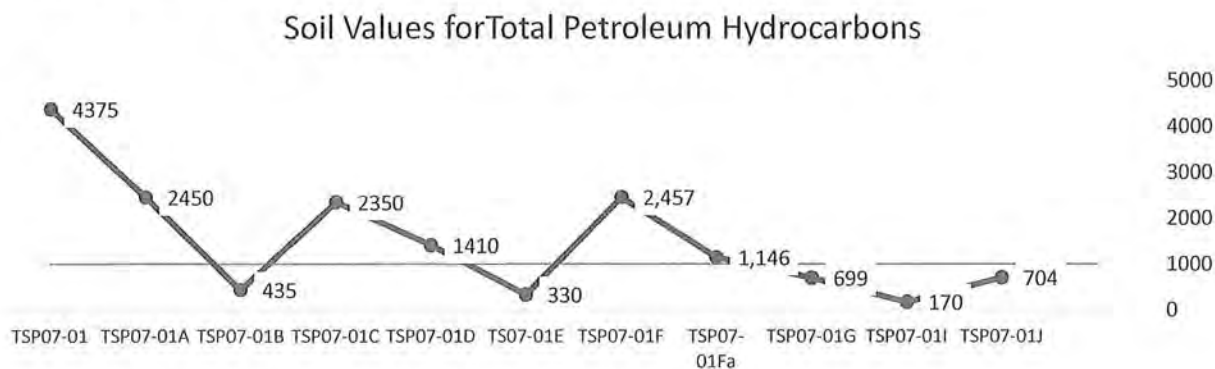
Data Review

Data Trend for Total TPH levels:

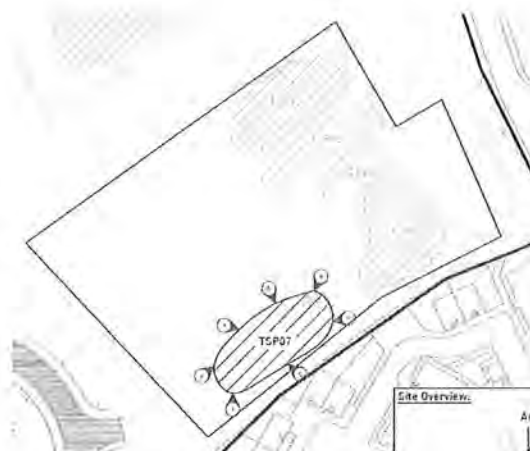


Additional Trendline Data – long term review:

Further to the above spread of data for the final 3 No. rounds, the total TPH levels from March 2024, for the treated stockpile, are shown below. The chart shows a significant decrease in the averaged total TPH levels, and the final result presents a reduction of total TPH level of 84% when compared to the initial material's contents (4,375 mg/kg (21st March 2024), compared to 704 mg/kg (16/07/2024)):



Treated Stockpile Sample Plan:



Sampling Strategy:

All samples have been taken in compliance with ISO BS 18400, including the following notes:

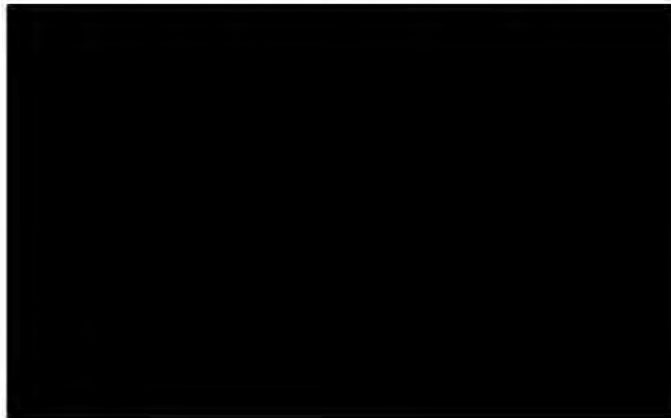
- Stainless steel/washable sampling devices (trowels, buckets, etc) will be employed for the gathering of the soils samples and cleaned between each sample location so that consecutive samples are not cross-contaminated.
- The sample positions shown above indicate the position relative to the base boundary of the stockpile. All samples are taken from a within the body of the Stockpile, retrieved by an excavator. This is done as a safe sample retrieval option as well as to target an internal representative sample location mid-way from the edge to the centre of the Stockpile, as discussed under BS ISO 18400-104:2018 (Sampling Strategies), subsection 9.
- The subsequent sample depths were between 1-2 m below the Stockpile's surface and a minimum of 4No. characteristic subsamples were taken from an area of approximately 1m² of the newly exposed material. The 4No. or more sub-locations were chosen in a X-pattern and the combined testing soil material is described as a composite sample, following a systematic stratified random sub-sampling location of a 3-dimensional source.
- The mechanically retrieved material is then sub-sampled into the required sampling jars/pots by the Sanctus Engineer as a representative sample from the numbered location.



Sanctus Declaration:

We confirm that:

1. The material that this form relates to, has been sampled representatively, as discussed above and in accordance with the client's requirements (Ardrossan Remediation Specification Rev E).
2. The material has been proven to be suitable for REUSE on site as there are 3 No. consecutive rounds, with a statistical insignificant number of exceedances of the accepted reuse criteria. No exceedances are seen within the initial 2No monitoring round and all total TPH levels have decreased notably from round 1 and round 2, with round 3 returning a confidence level of >95% confidence when compared to the statistical confidence critical level of 1,000mg/kg for total TPH.
3. The laboratory analysis results are representative of the materials investigated.
4. The material released will also be recorded spatially at its reuse location



Record of reuse

For Sanctus Use Only:

Approved for reuse:

Beginning of Movement from stockpile:

End of Movement into site:



- Legend:
- Site Boundary
 - ▨ Treated Stockpile 07 Sample Location



Scale: 1:12,500

sanctus

Drawing Notes:
Based on client supplied DWG -
ARDROSSAN 2D produced by Ard Group
23/03/2020. All locations are approximate.
Must be printed in colour.

Site Address:
Raylight Place
Ardrossan
North Ayrshire
Scotland

Rev.	Description	Date
A	First Issue	02/08/2024

APPROVED

Project Name:
North Shore, Ardrossan

Client:
North Ayrshire Council

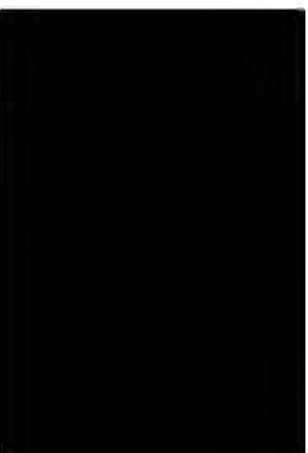
Drawing Title:
Treated Stockpile 07 Sample Locations

Contract No:
S3240

Drawing No:
D3240/077

Scale: B A3:
1:1000

Sample ID	Date Sampled	Total Petroleum Hydrocarbons	Aliphatic TPH C10-C15	Aliphatic TPH C16-C20	Aliphatic TPH C21-C25	Aliphatic TPH C26-C30	Aliphatic TPH C31-C35	Aliphatic TPH C36-C40	Aliphatic TPH C41-C45	Aliphatic TPH C46-C50	Aliphatic TPH C51-C55	Aliphatic TPH C56-C60	Aliphatic TPH C61-C65	Aliphatic TPH C66-C70	Aliphatic TPH C71-C75	Aliphatic TPH C76-C80	Aliphatic TPH C81-C85	Aliphatic TPH C86-C90	Aliphatic TPH C91-C95
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOD		10	0.02	0.02	0.05	1	2	8	8		0.01	0.01	0.05	1	2	10	10		
Screening Criteria		1000	78	239	65	350	1000	1000	1000	1000	140	200	7.74	48.3	133.47	540	1000		1000
TSP07-01G	25/06/2024	610	< 0.020	< 0.020	< 0.050	< 1.0	18	50	160	230	< 0.010	< 0.010	< 0.050	< 1.0	2.7	49	220		270
TSP07-02G	25/06/2024	870	< 0.020	< 0.020	< 0.050	< 1.0	19	65	190	270	< 0.010	< 0.010	< 0.050	< 1.0	8.4	110	340		460
TSP07-03G	25/06/2024	620	< 0.020	< 0.020	< 0.050	< 1.0	16	49	160	220	< 0.010	< 0.010	< 0.050	< 1.0	2.2	48	220		270
TSP07-04G	25/06/2024	730	< 0.020	< 0.020	< 0.050	< 1.0	13	50	180	240	< 0.010	< 0.010	< 0.050	< 1.0	8.2	68	260		340
TSP07-05G	25/06/2024	700	< 0.020	< 0.020	< 0.050	< 1.0	19	65	190	280	< 0.010	< 0.010	< 0.050	< 1.0	3.8	54	220		280
TSP07-06G	25/06/2024	650	< 0.020	< 0.020	< 0.050	< 1.0	12	47	170	230	< 0.010	< 0.010	< 0.050	< 1.0	13	55	220		290
TSP07-07G	25/06/2024	710	< 0.020	< 0.020	< 0.050	< 1.0	14	53	170	240	< 0.010	< 0.010	< 0.050	< 1.0	9.5	64	260		330
TSP07-01I	09/07/2024	110	< 0.020	< 0.020	< 0.050	< 1.0	6.4	15	31	52	< 0.010	< 0.010	< 0.050	< 1.0	3.3	< 10	31		34
TSP07-02I	09/07/2024	210	< 0.020	< 0.020	< 0.050	1.1	22	23	50	96	< 0.010	< 0.010	< 0.050	< 1.0	6	19	61		86
TSP07-03I	09/07/2024	80	< 0.020	< 0.020	< 0.050	< 1.0	2.8	8.8	17	25	< 0.010	< 0.010	< 0.050	< 1.0	3.7	< 10	30		34
TSP07-04I	09/07/2024	230	< 0.020	< 0.020	< 0.050	< 1.0	8.1	28	60	95	< 0.010	< 0.010	< 0.050	< 1.0	7.1	24	72		100
TSP07-05I	09/07/2024	71	< 0.020	< 0.020	< 0.050	< 1.0	3.1	9.8	19	32	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	23		23
TSP07-06I	09/07/2024	230	< 0.020	< 0.020	< 0.050	3.1	17	41	71	130	< 0.010	< 0.010	< 0.050	< 1.0	4.1	20	54		78
TSP07-07I	09/07/2024	260	< 0.020	< 0.020	< 0.050	1.1	9.7	31	68	110	< 0.010	< 0.010	< 0.050	< 1.0	7.2	29	83		120
TSP07-01J	16/07/2024	1100	< 0.05	< 0.10	< 0.05	19	180	370	280	820	< 0.05	< 0.05	< 0.05	2.7	19	100	27		150
TSP07-02J	16/07/2024	750	< 0.05	< 0.10	< 0.05	29	110	220	120	480	< 0.05	< 0.05	< 0.05	3.9	23	81	33		140
TSP07-03J	16/07/2024	480	< 0.05	< 0.10	< 0.05	14	77	170	120	380	< 0.05	< 0.05	< 0.05	< 1.0	12	57	8.7		79
TSP07-04J	16/07/2024	400	< 0.05	0.16	0.3	18	65	120	68	270	< 0.05	< 0.05	< 0.05	2.1	11	42	20		74
TSP07-05J	16/07/2024	1000	< 0.05	< 0.10	< 0.05	31	220	310	220	790	< 0.05	< 0.05	< 0.05	5.4	31	99	19		150
TSP07-06J	16/07/2024	750	< 0.05	< 0.10	< 0.05	24	120	260	140	540	< 0.05	< 0.05	< 0.05	2.6	21	77	12		110
TSP07-07J	16/07/2024	450	< 0.05	< 0.10	< 0.05	13	70	160	100	340	< 0.05	< 0.05	< 0.05	< 1.0	10	48	13		70



Analytical Report Number : 24-029772

Project / Site name:	Ardrossan North Shore	Samples received on:	09/07/2024
Your job number:	S3240	Samples instructed on / Analysis started on:	09/07/2024
Your order number:	S3240	Analysis completed by:	17/07/2024
Report Issue Number:	1	Report issued on:	17/07/2024
Samples Analysed:	12 soil Samples		

For & on behalf of I2 Analytical Ltd.

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: 24-029772

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	252131	252132	252133	252134	252135
Sample Reference	TSP05-01G	TSP05-02G	TSP05-03G	TSP05-04G	TSP05-05G
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00	0.00	0.00	0.00	0.00
Date Sampled	09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
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	28	26.7	< 0.1	23.2
Moisture Content	%	0.01	NONE	8.4	6.3	8.5	7.1	7.7
Total mass of sample received	kg	0.1	NONE	0.3	0.3	0.3	0.3	0.2

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.08
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	0.1	0.14	0.09	0.3	0.24
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	0.06
Fluoranthene	mg/kg	0.05	MCERTS	0.16	0.29	0.14	0.52	0.28
Pyrene	mg/kg	0.05	MCERTS	0.17	0.35	0.16	0.58	0.33
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.09	0.16	0.1	0.3	0.18
Chrysene	mg/kg	0.05	MCERTS	0.11	0.18	0.07	0.3	0.16
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.18	< 0.05	0.36	0.18
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.1	< 0.05	0.13	0.07
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.2	< 0.05	0.3	0.17
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.09	< 0.05	0.13	0.08
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	0.12	< 0.05	0.18	0.12

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	1.81	< 0.80	3.18	1.96
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_10_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_10_AL	mg/kg	2	MCERTS	12	13	12	5.8	12
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_10_AL	mg/kg	8	MCERTS	35	29	32	19	27
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_10_AL	mg/kg	8	MCERTS	61	43	66	31	55
TPHCWG - Aliphatic >EC35 - EC35 EH_CU+HS_10_AL	mg/kg	10	NONE	110	86	110	55	94

TPHCWG - Aromatic >EC5 - EC7 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 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	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_10_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	2.4
TPHCWG - Aromatic >EC16 - EC21 EH_CU_10_AR	mg/kg	10	MCERTS	< 10	13	< 10	11	16
TPHCWG - Aromatic >EC21 - EC35 EH_CU_10_AR	mg/kg	10	MCERTS	30	25	30	25	46
TPHCWG - Aromatic >EC35 - EC35 EH_CU+HS_10_AR	mg/kg	10	NONE	30	38	30	36	65

TPH (EC10 - EC40) EH_CU_10_TOTAL	mg/kg	10	MCERTS	180	150	180	110	200
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

Analytical Report Number: 24-029772
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number					252131	252132	252133	252134	252135
Sample Reference					TSP05-01G	TSP05-02G	TSP05-03G	TSP05-04G	TSP05-05G
Sample Number					None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)					0.00	0.00	0.00	0.00	0.00
Date Sampled					09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
Time Taken					None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)					Units	Limit of detection	Accreditation Status		
p & m-Xylene					µg/kg	5	MCERTS	< 5.0	< 5.0
o-Xylene					µg/kg	5	MCERTS	< 5.0	< 5.0

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



4041



Environmental Science

Analytical Report Number: 24-029772

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	252136	252137	252138	252139	252140
Sample Reference	TSP05-06G	TSP05-07G	TSP05-08G	TSP05-09G	TSP05-10G
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00	0.00	0.00	0.00	0.00
Date Sampled	09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
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	40.2	27.9
Moisture Content	%	0.01	NONE	8.7	9.6	6.6	5.5	7
Total mass of sample received	kg	0.1	NONE	0.3	0.4	0.3	0.3	0.3

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.29	0.08	< 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	0.11	0.13	0.29	0.12	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.1	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.47	0.21	0.57	0.29	0.16
Pyrene	mg/kg	0.05	MCERTS	0.57	0.26	0.68	0.33	0.21
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.36	0.11	0.34	0.15	0.12
Chrysene	mg/kg	0.05	MCERTS	0.34	0.18	0.37	0.24	0.16
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.4	0.15	0.35	0.22	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.17	< 0.05	0.22	0.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.35	0.15	0.43	0.2	0.15
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.18	0.08	0.16	0.1	0.08
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	0.23	0.12	0.2	0.14	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	3.3	1.4	3.91	1.96	0.88
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_10_AL	mg/kg	1	MCERTS	1	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_10_AL	mg/kg	2	MCERTS	27	14	6.8	6.9	7.2
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_10_AL	mg/kg	8	MCERTS	36	40	19	25	21
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_10_AL	mg/kg	8	MCERTS	74	83	26	33	25
TPHCWG - Aliphatic >EC35 - EC35 EH_CU+HS_10_AL	mg/kg	10	NONE	140	140	51	64	53

TPHCWG - Aromatic >EC5 - EC7 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 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	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_10_AR	mg/kg	2	MCERTS	7	< 2.0	< 2.0	< 2.0	3.2
TPHCWG - Aromatic >EC16 - EC21 EH_CU_10_AR	mg/kg	10	MCERTS	23	11	11	< 10	14
TPHCWG - Aromatic >EC21 - EC35 EH_CU_10_AR	mg/kg	10	MCERTS	76	48	28	< 10	24
TPHCWG - Aromatic >EC35 - EC35 EH_CU+HS_10_AR	mg/kg	10	NONE	110	59	39	< 10	41

TPH (EC10 - EC40) EH_CU_10_TOTAL	mg/kg	10	MCERTS	320	250	110	89	110
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

Analytical Report Number: 24-029772
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number	252136				252137	252138	252139	252140
Sample Reference	TSP05-06G				TSP05-07G	TSP05-08G	TSP05-09G	TSP05-10G
Sample Number	None Supplied				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00				0.00	0.00	0.00	0.00
Date Sampled	09/07/2024				09/07/2024	09/07/2024	09/07/2024	09/07/2024
Time Taken	None Supplied				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
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

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

Analytical Report Number: 24-029772
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	252141	252142
Sample Reference	TSP05-11G	TSP05-12G
Sample Number	None Supplied	None Supplied
Depth (m)	0.00	0.00
Date Sampled	09/07/2024	09/07/2024
Time Taken	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection
		Accreditation Status

Stone Content	%	0.1	NONE	< 0.1	23.4
Moisture Content	%	0.01	NONE	7.2	7.9
Total mass of sample received	kg	0.1	NONE	0.3	0.3

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	0.11	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.23	0.11
Pyrene	mg/kg	0.05	MCERTS	0.28	0.12
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.21	0.08
Chrysene	mg/kg	0.05	MCERTS	0.23	0.08
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.27	0.1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.24	0.09
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.13	0.06
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.09

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.8	< 0.80
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_10_AL	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_10_AL	mg/kg	2	MCERTS	6.1	10
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_10_AL	mg/kg	8	MCERTS	25	37
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_10_AL	mg/kg	8	MCERTS	39	75
TPHCWG - Aliphatic >EC35 - EC35 EH_CU+HS_10_AL	mg/kg	10	NONE	69	120

TPHCWG - Aromatic >EC5 - EC7 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_10_AR	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_10_AR	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_10_AR	mg/kg	2	MCERTS	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_10_AR	mg/kg	10	MCERTS	< 10	10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_10_AR	mg/kg	10	MCERTS	13	42
TPHCWG - Aromatic >EC35 - EC35 EH_CU+HS_10_AR	mg/kg	10	NONE	13	52

TPH (EC10 - EC40) EH_CU_10_TOTAL	mg/kg	10	MCERTS	100	220
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0
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

Analytical Report Number: 24-029772
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				252141	252142
Sample Reference				TSP05-11G	TSP05-12G
Sample Number				None Supplied	None Supplied
Depth (m)				0.00	0.00
Date Sampled				09/07/2024	09/07/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
p & m-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0

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

Analytical Report Number : 24-029772

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 *
252131	TSP05-01G	None Supplied	0	Brown loam and sand with gravel
252132	TSP05-02G	None Supplied	0	Brown loam and sand with gravel and stones
252133	TSP05-03G	None Supplied	0	Brown loam and sand with vegetation and stones
252134	TSP05-04G	None Supplied	0	Brown loam and sand with gravel and vegetation
252135	TSP05-05G	None Supplied	0	Brown loam and sand with vegetation and stones
252136	TSP05-06G	None Supplied	0	Brown loam and sand with gravel and vegetation
252137	TSP05-07G	None Supplied	0	Brown loam and sand with gravel and vegetation
252138	TSP05-08G	None Supplied	0	Brown loam and sand with gravel and vegetation
252139	TSP05-09G	None Supplied	0	Brown loam and sand with gravel and stones
252140	TSP05-10G	None Supplied	0	Brown loam and sand with gravel and stones
252141	TSP05-11G	None Supplied	0	Brown loam and sand with gravel and vegetation
252142	TSP05-12G	None Supplied	0	Brown loam and sand with gravel and stones



Environmental Science

Analytical Report Number : 24-029772
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
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 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/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	L076B/L088	D/W	MCERTS

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

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

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

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

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

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

The result for sum should be interpreted with caution



Final Report



Report No.: 24-23192-1

Initial Date of Issue: 24-Jul-2024

Re-Issue Details:

Client Sanctus Limited



Project S3240 Ardrossan North Shore



Date Received: 22-Jul-2024

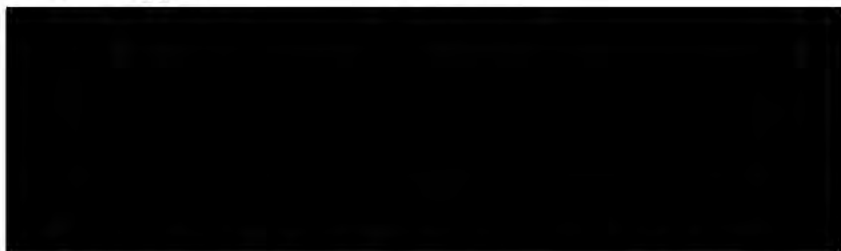
Date Instructed: 22-Jul-2024

No. of Samples: 12

Turnaround (Wkdays): 3

Results Due: 24-Jul-2024

Date Approved: 24-Jul-2024



For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192
Quotation No.: Q24-35340		Chemtest Sample ID.:	1838810	1838811	1838812	1838813	1838814	1838815	1838816	1838817		
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:	TSP05-01H	TSP05-02H	TSP05-03H	TSP05-04H	TSP05-05H	TSP05-06H	TSP05-07H	TSP05-08H		
		Sample Location:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Bottom Depth (m):	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Date Sampled:	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
Moisture		N	2030	%	0.020	8.4	9.1	7.9	7.3	9.4	8.4	8.6
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones	Stones and Roots	Stones and Roots	Roots and Stones	Roots and Stones	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	2.8	5.3	3.0	5.0	7.6	< 2.0	4.1
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	43	28	51	52	9.2	40
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	100	71	94	80	19	110
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	< 3.0	42	42	47	44	13	56
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	5.4	200	140	200	180	43	210
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	200	140	200	180	43	210
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	1.0	2.2	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	8.6	2.8	5.7	8.4	1.1	4.6
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	15	34	21	34	34	42	38
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	12	18	12	29	17	74	30
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	1.1	60	21	59	34	19	53
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	28	60	37	70	62	120	73
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	29	120	58	130	95	140	130
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	33	260	180	270	240	160	280
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	34	320	200	330	280	180	340
Naphthalene		M	2700	mg/kg	0.10	< 0.10	0.20	0.14	0.25	0.31	0.32	0.17
Acenaphthylene		M	2700	mg/kg	0.10	0.32	0.61	0.53	0.57	0.52	0.42	0.39
Acenaphthene		M	2700	mg/kg	0.10	0.30	0.71	0.65	0.58	0.58	0.25	0.39
Fluorene		M	2700	mg/kg	0.10	0.37	1.6	1.0	0.67	0.73	0.48	0.40
Phenanthrene		M	2700	mg/kg	0.10	0.81	0.95	0.52	0.80	1.2	0.84	0.57

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192	24-23192
Quotation No.: Q24-35340		Chemtest Sample ID.:	1838810	1838811	1838812	1838813	1838814	1838815	1838816	1838817			
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:	TSP05-01H	TSP05-02H	TSP05-03H	TSP05-04H	TSP05-05H	TSP05-06H	TSP05-07H	TSP05-08H			
		Sample Location:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Bottom Depth (m):	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Date Sampled:	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Anthracene		M	2700	mg/kg	0.10	0.33	0.33	0.21	0.58	0.45	0.55	0.26	0.55
Fluoranthene		M	2700	mg/kg	0.10	2.3	2.2	1.8	4.6	3.4	2.2	2.0	3.0
Pyrene		M	2700	mg/kg	0.10	2.4	2.5	2.2	5.7	3.3	2.6	1.9	3.2
Benzo[a]anthracene		M	2700	mg/kg	0.10	< 0.10	2.1	1.6	< 0.10	2.1	1.1	1.9	1.9
Chrysene		M	2700	mg/kg	0.10	< 0.10	0.48	1.1	0.70	1.6	1.5	1.6	1.8
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	2.5	2.4	2.2	5.5	3.1	2.6	2.3	2.7
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	1.1	1.2	0.82	2.0	1.3	0.70	1.1	1.0
Benzo[a]pyrene		M	2700	mg/kg	0.10	1.9	1.8	1.6	4.6	2.3	1.9	1.8	2.2
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	1.7	1.5	1.3	3.2	1.6	1.5	1.7	1.5
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	0.94	0.82	0.78	1.0	0.76	0.35	0.85	0.86
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	2.3	2.2	1.4	4.0	2.0	2.0	1.7	1.8
Total Of 16 PAH's		M	2700	mg/kg	2.0	17	22	18	35	25	19	19	24

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.: 24-23192							
Quotation No.: Q24-35340		Chemtest Sample ID.: 1838818							
Order No.: S3240		Client Sample Ref.: TSP05							
		Client Sample ID.: TSP05-09H							
		Sample Location: TSP05							
		Sample Type: SOIL							
		Top Depth (m): 0.00							
		Bottom Depth (m): 0.00							
		Date Sampled: 17-Jul-2024							
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Moisture		N	2030	%	0.020	10	8.9	9.5	9.8
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones	Stones	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	6.1	2.4	2.8	5.7
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	39	26	25	34
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	89	47	62	87
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	53	29	37	49
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	190	100	130	180
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	190	100	130	180
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	1.3
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	4.6	2.6	2.7	4.2
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	32	24	23	30
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	20	28	21	23
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	32	22	31	52
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	57	54	47	59
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	89	76	78	110
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	240	160	170	230
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	280	180	200	290
Naphthalene		M	2700	mg/kg	0.10	0.13	< 0.10	0.19	0.24
Acenaphthylene		M	2700	mg/kg	0.10	0.36	0.47	0.29	0.32
Acenaphthene		M	2700	mg/kg	0.10	0.32	0.58	0.10	0.26
Fluorene		M	2700	mg/kg	0.10	0.28	0.82	0.29	0.29
Phenanthrene		M	2700	mg/kg	0.10	0.67	< 0.10	0.63	0.80

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23192	24-23192	24-23192	24-23192
Quotation No.: Q24-35340		Chemtest Sample ID.:	1838818	1838819	1838820	1838821
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:	TSP05-09H	TSP05-10H	TSP05-11H	TSP05-12H
		Sample Location:	TSP05	TSP05	TSP05	TSP05
		Sample Type:	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0.00	0.00	0.00	0.00
		Bottom Depth (m):	0.00	0.00	0.00	0.00
		Date Sampled:	17-Jul-2024	17-Jul-2024	17-Jul-2024	17-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Anthracene		M	2700	mg/kg	0.10	0.27
Fluoranthene		M	2700	mg/kg	0.10	2.0
Pyrene		M	2700	mg/kg	0.10	2.2
Benzo[a]anthracene		M	2700	mg/kg	0.10	1.5
Chrysene		M	2700	mg/kg	0.10	1.3
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	2.5
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	0.99
Benzo[a]pyrene		M	2700	mg/kg	0.10	2.1
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	1.5
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	0.70
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	1.8
Total Of 16 PAH's		M	2700	mg/kg	2.0	19

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request.

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory.

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:





Final Report

Report No.: 24-23866-1

Initial Date of Issue: 31-Jul-2024

Re-Issue Details:

Client Sanctus Limited



Project S3240 Ardossan North Shore



No. of Samples: 12

Turnaround (Wkdays): 3

Date Approved: 31-Jul-2024

Date Received: 26-Jul-2024

Date Instructed: 26-Jul-2024

Results Due: 30-Jul-2024



For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: S3240 Ardossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866
Quotation No.: Q24-35340		Chemtest Sample ID.:	1841202	1841203	1841204	1841205	1841206	1841207	1841208	1841209			
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:	TSP05-01I	TSP05-02I	TSP05-03I	TSP05-04I	TSP05-05I	TSP05-06I	TSP05-07I	TSP05-08I			
		Sample Location:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0	0	0	0	0	0	0	0	0	0	0
		Bottom Depth (m):	0	0	0	0	0	0	0	0	0	0	0
		Date Sampled:	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Moisture		N	2030	%	0.020	7.9	7.2	8.6	7.6	8.5	7.4	7.2	7.2
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones, Roots and Glass	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam	Sand	Sand	Loam	Loam	Loam	Loam
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	7.8	15	6.9	< 2.0	3.7	< 2.0	< 2.0	7.6
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	77	91	51	1.1	62	< 1.0	39	50
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	140	190	140	< 2.0	150	< 2.0	47	110
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	99	95	76	< 3.0	85	< 3.0	38	77
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	24	13	17	11	18	< 10	11	17
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	320	390	270	< 5.0	300	< 5.0	120	240
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	350	400	290	11	320	< 10	140	260
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	27	28	16	< 1.0	26	< 1.0	19	19
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	90	120	57	3.0	85	3.1	91	56
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	54	110	49	< 2.0	55	< 2.0	52	23
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	35	55	17	2.1	16	1.8	14	13
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	170	260	120	< 5.0	170	< 5.0	160	99
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	210	320	140	< 10	180	< 10	180	110
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	500	660	400	< 10	470	< 10	290	340
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	560	720	430	13	500	< 10	310	370
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: S3240 Ardossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866	24-23866
Quotation No.: Q24-35340		Chemtest Sample ID.:	1841202	1841203	1841204	1841205	1841206	1841207	1841208	1841209			
Order No.: S3240		Client Sample Ref.:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:	TSP05-01I	TSP05-02I	TSP05-03I	TSP05-04I	TSP05-05I	TSP05-06I	TSP05-07I	TSP05-08I			
		Sample Location:	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05	TSP05
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0	0	0	0	0	0	0	0	0	0	0
		Bottom Depth (m):	0	0	0	0	0	0	0	0	0	0	0
		Date Sampled:	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.35	0.38	0.30	< 0.10	0.37	0.44	0.49	0.44
Anthracene		M	2800	mg/kg	0.10	0.16	0.20	0.20	< 0.10	0.12	0.17	0.19	0.22
Fluoranthene		M	2800	mg/kg	0.10	1.2	1.5	1.2	0.13	1.0	1.4	1.5	1.3
Pyrene		M	2800	mg/kg	0.10	1.3	1.5	1.1	0.12	1.0	1.4	1.5	1.4
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.68	0.82	0.60	< 0.10	0.59	0.85	0.80	0.69
Chrysene		M	2800	mg/kg	0.10	0.53	0.87	0.66	< 0.10	0.45	0.90	0.88	0.55
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	1.2	1.7	0.85	< 0.10	1.0	1.5	1.5	1.4
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.41	0.56	0.37	< 0.10	0.28	0.51	0.63	0.48
Benzo[a]pyrene		M	2800	mg/kg	0.10	0.93	1.5	0.72	< 0.10	0.79	1.2	1.1	1.3
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	0.85	1.1	0.51	< 0.10	0.60	0.97	1.1	1.0
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.15	0.26	< 0.10	< 0.10	< 0.10	< 0.10	0.31	0.23
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	0.74	1.1	0.60	< 0.10	0.63	1.0	0.94	0.96
Total Of 16 PAH's		N	2800	mg/kg	2.0	8.5	12	7.1	< 2.0	6.9	10	11	10

Results - Soil

Project: S3240 Ardossan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-23866	24-23866	24-23866	24-23866
Quotation No.: Q24-35340		Chemtest Sample ID.:				1841210	1841211	1841212	1841213
Order No.: S3240		Client Sample Ref.:				TSP05	TSP05	TSP05	TSP05
		Client Sample ID.:				TSP05-09I	TSP05-10I	TSP05-11I	TSP05-12I
		Sample Location:				TSP05	TSP05	TSP05	TSP05
		Sample Type:				SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0	0	0	0
		Bottom Depth (m):				0	0	0	0
		Date Sampled:				23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Moisture		N	2030	%	0.020	6.2	6.8	8.1	7.5
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam	Loam	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	7.4	4.5	5.6	11
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	66	52	54	47
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	150	100	120	120
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	100	62	74	69
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	17	15	18	18
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	330	220	260	250
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	340	240	270	260
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	20	34	22	26
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	94	84	73	77
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	63	49	41	48
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	18	16	12	13
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	180	170	140	150
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	190	180	150	160
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	500	390	390	400
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	540	420	420	430
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: S3240 Ardossan North Shore

Client: Sanctus Limited		Chemtest Job No.: 24-23866 24-23866 24-23866 24-23866							
Quotation No.: Q24-35340		Chemtest Sample ID.: 1841210 1841211 1841212 1841213							
Order No.: S3240		Client Sample Ref.: TSP05 TSP05 TSP05 TSP05							
		Client Sample ID.: TSP05-09I TSP05-10I TSP05-11I TSP05-12I							
		Sample Location: TSP05 TSP05 TSP05 TSP05							
		Sample Type: SOIL SOIL SOIL SOIL							
		Top Depth (m): 0 0 0 0							
		Bottom Depth (m): 0 0 0 0							
		Date Sampled: 23-Jul-2024 23-Jul-2024 23-Jul-2024 23-Jul-2024							
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.40	0.69	0.37	< 0.10
Anthracene		M	2800	mg/kg	0.10	0.21	0.25	0.19	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	1.3	1.6	1.1	0.46
Pyrene		M	2800	mg/kg	0.10	1.5	1.5	1.2	0.52
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.72	0.81	0.59	< 0.10
Chrysene		M	2800	mg/kg	0.10	0.87	0.82	0.53	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	1.9	1.5	1.2	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.52	0.56	0.38	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	1.5	1.3	0.94	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	1.4	1.1	0.79	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.25	0.21	0.16	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	1.2	1.1	0.78	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	12	11	8.2	< 2.0

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request.

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory.

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:



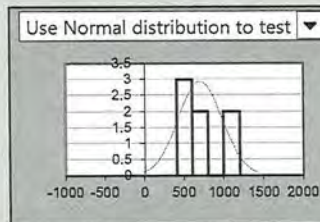
Test Results

Client/client ref: Sanctus
Project ref: S3240

Site ref: Ardrossan

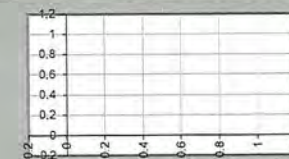
Date: 01-Aug-2024
Data description: Total TPH levels TSP07 Round 3 User details: JRA

Datase	Total TPH
Sample mean, $\bar{x}$	704.29
Sample standard deviation, s	275.61
Sample size, n	7
Critical concentration, Cc	1000



Outliers & non-detects

Outliers present?	NO
Significance level	5%
Outliers removed?	0
Non-detects	0

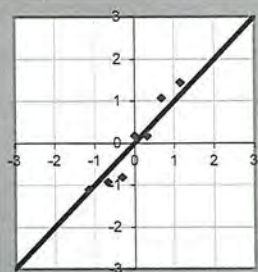


Normality test

Significance level 5%

Normal distribution

Use: Auto: One-sample t



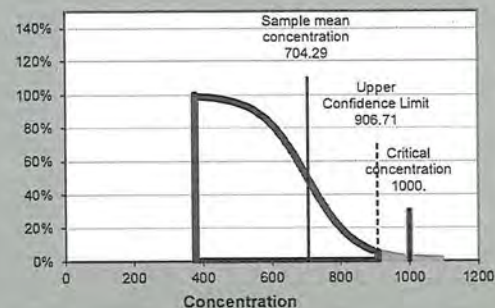
Test scenario:

Planning: is true mean lower than critical concentration ($\mu < C_c$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq C_c$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < C_c$

Probability that true mean exceeds the concentration given on the x axis



Evidence against Null hypothesis:

99%

Base decision on:

evidence level

Evidence level required:

95%

Balance of probability?

N/A

Reject Null Hypothesis?

Yes

$\mu < C_c$ (re this dataset)

**Treated Stockpile Reuse Validation Form 005 – TSP09 North****Stockpile ID**

Stockpile ID: TSP09 North

Material Volume:

1,200 m³

Validation Samples Included

13 No.

Tested Location: Treatment Area 01

Stockpile Creation Date: 10/04/2024

Release Date: TBC

Sampling Data (3No. full rounds for validation to release)

Passing Round 1 (Overall Sample Round 10 of 12)	Sample Date: 01/05/2024 & 09/07/2024	Report Number & Date: 24-017477 – 10/05/2024 & 24-029828 – 16/07/2024	Lab: i2
Passing Round 2 (Overall Sample Round 11 of 12)	Sample Date: 08/05/2024 & 16/07/2024	Report Number & Date: 24-018602 – 16/05/2024 & 24-22820 – 22/07/2024	Lab: i2 & Eurofins
Passing Round 3 (Overall Passing Round 12 of 12)	Sample Date: 29/05/2024 & 23/07/2024	Report Number & Date: 24-022316 – 11/06/2024 & 24-24035 – 01/08/2024	Lab: i2 & Eurofins

Sampling Data**Round 1**

Report Number: 24-017477 & 24-029828

Report Date: 10/05/2024 & 16/07/2024

Sample ID (Sample Names): **24-017477** - TSP09-04C, TSP09-05C, TSP09-07C, TSP09-10C, TSP09-11C, TSP09-12C. **24-029828** - TSP09-02J, TSP09-03J, TSP09-05J, TSP09-06J, TSP09-08J, TSP09-09J, TSP09-13J

Comments:

Test Results: PASS / FAIL

Two main composition rounds for the remaining stockpile TSP09 North, following the previous partial removal of material (previously signed off as TSP09 South, Form 001). No exceedances seen throughout Average Total TPH = 318 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Round 2

Report Number: 24-018602 & 24-22820

Report Date: 16/05/2024 & 22/07/2024

Sample ID (Sample Names): **24-018602** - TSP09-04D, TSP09-05D, TSP09-07D, TSP09-10D, TSP09-11D, TSP09-12D. **24-22820** - TSP09-02K, TSP09-03K, TSP09-05K, TSP09-06K, TSP09-08K, TSP09-09K, TSP09-13K

Comments:

Test Results: PASS / FAIL

No exceedances seen throughout Average Total TPH = 519 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Round 3

Report Number: 24-022316 & 24-24035

Report Date: 29/05/2024 & 01/08/2024

Sample ID (Sample Names): **24-022316** - TSP09-04E, TSP09-05E, TSP09-07E, TSP09-10E, TSP09-11E, TSP09-12E. **24-24035** - TSP09-02L, TSP09-03L, TSP09-05L, TSP09-06L, TSP09-08L, TSP09-09L, TSP09-13L

Comments:

Test Results: PASS / FAIL

No exceedances seen throughout. Average Total TPH = 274 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Data Review

Material split of treated Stockpile 09 and current testing

Following the sampling rounds which began at the end of April 2024, a significant portion of the treated Stockpile 09 was seen to have 3no.consecutive sampling rounds which passed all of the reuse criteria. 40% of the material (sample locations 01, 14 – 20 as seen in Figure 1 below), grouped together in the south of the stockpile achieved the consecutive rounds. The remaining material was interspersed with material which achieved the majority of the reuse criteria, but not all (failures seen within the Total TPH analytes), in such a fashion that the remaining sample locations which were seen as compliant, could not be easily/accurately separated and reused (samples from location 04, 07, 10, 11 and 12).

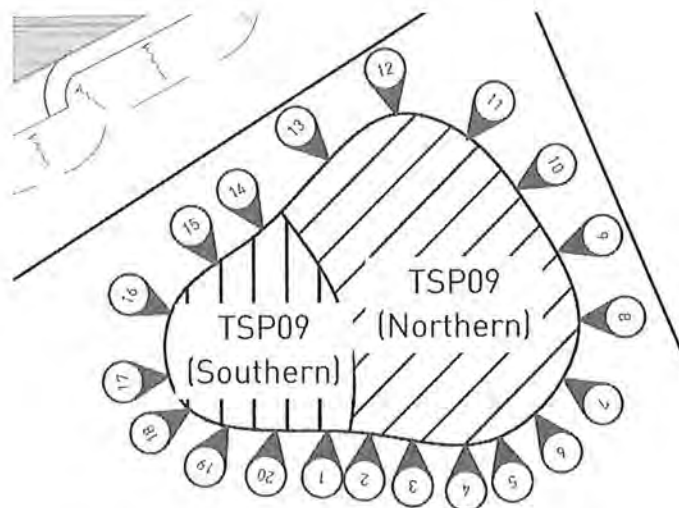
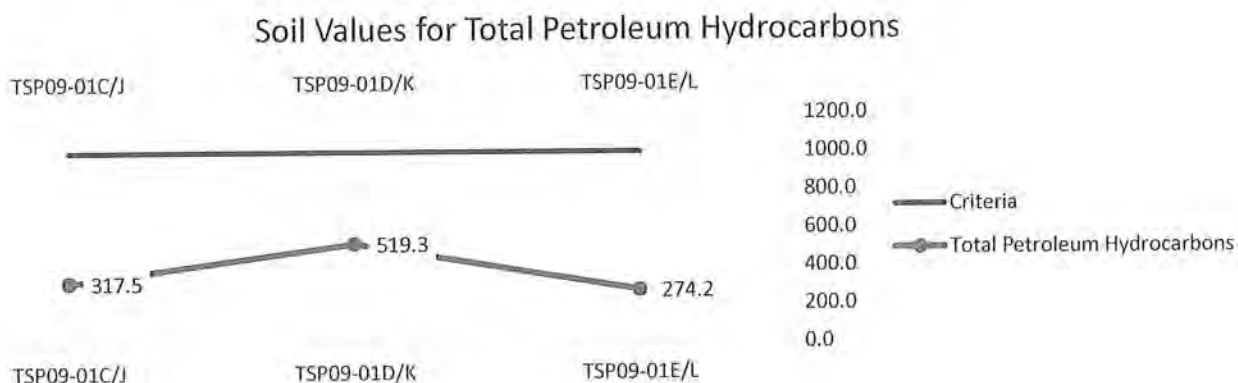


Figure 1 - Sampling locations of treated Stockpile 09

Subsequently, treated Stockpile 09 was split into a northern portion (1,200m³) where treatment and testing will continue and a southern portion (800m³) was deemed as chemically suitable for reuse by Sanctus.

Data Trend for Total TPH levels:



Further to the above spread of data for the final 3 No. rounds, the total TPH levels from May 2024, for the separated treated stockpile, are shown below. Due to the split of the material from the original TSP09, TSP09 North was only created on the 1st May 2024 and as such, a reduction from the initial total TPH level of 1025 mg/kg to a final average total TPH level of 274 mg/kg, a reduction of 73%. Due to its separation, no accurate total trend lines can be provided.

Sampling Strategy:

All samples have been taken in compliance with ISO BS 18400, including the following notes:

- Stainless steel/washable sampling devices (trowels, buckets, etc) will be employed for the gathering of the soils samples and cleaned between each sample location so that consecutive samples are not cross-contaminated.
- The sample positions shown above indicate the position relative to the base boundary of the stockpile. All samples are taken from a within the body of the Stockpile, retrieved by an excavator. This is done as a safe sample retrieval option as well as to target an internal representative sample location mid-way from the edge to the centre of the Stockpile, as discussed under BS ISO 18400-104:2018 (Sampling Strategies), subsection 9.
- The subsequent sample depths were between 1-2 m below the Stockpile's surface and a minimum of 4No. characteristic subsamples were taken from an area of approximately 1m² of the newly exposed material. The 4No. or more sub-locations were chosen in a X-pattern and the combined testing soil material is described as a composite sample, following a systematic stratified random sub-sampling location of a 3-dimensional source.
- The mechanically retrieved material is then sub-sampled into the required sampling jars/pots by the Sanctus Engineer as a representative sample from the numbered location.

**Naming sequence clarification:**

Due to the size of the stockpile and the split of inseparable compliant and non-compliant material, approximately half of this volume (Group α - samples labelled TSP09-04, TSP09-05, TSP09-07, TSP09-10, TSP09-11 and TSP09-12) were deemed as suitable initially - sampled between 01/05/2024 and 29/05/2024, after which, no further samples were required. A second set of sampled locations (Group β , tested between 09/07/2024 and 23/07/2024 - TSP09-02, TSP09-03, TSP09-05, TSP09-06, TSP09-08, TSP09-09, TSP09-13) were seen to exceed the reuse criteria at this time in May 2024, but remained in their original location and unmixed between other suitable materials (Group α). This was only done as there was such a clear physical delineation between the group α and β sections, even though their positions were intermingled within the remaining stockpile and sampling was deemed repeatable in the positions shown on page 2 of this declaration.

As such, the material combined exhibited 3 concurrent suitable rounds, even if the two constituent intermingled parts showed suitable test results in two separate time blocks.

Sanctus confirm that during this time, this Stockpiled material was not turned (as hydrocarbon deterioration levels were deemed sufficient without mechanical aeration during this period) and that all sampling positions were consistent and repeatable from the areas indicated on the attached Treated Stockpile sample plan.



Sanctus Declaration:

We confirm that:

1. The material that this form relates to, has been sampled representatively, as discussed above and in accordance with the client's requirements (Ardrossan Remediation Specification Rev E).
2. The material has been proven to be suitable for REUSE on site as there are 3 No. consecutive rounds, with a statistical insignificant number of exceedances of the accepted reuse criteria. No exceedances are seen within the first two monitoring rounds and each round's average for the total TPH levels have been significantly below the 1,000 mg/kg threshold level.
3. The laboratory analysis results are representative of the materials investigated.
4. The material released will also be recorded spatially at its reuse location



Record of reuse

For Sanctus Use Only:

Approved for reuse:

Beginning of Movement from stockpile:

End of Movement into site:



Legend:

- Site Boundary
- ▨ Treated Stockpile or Sample Location



Site Overview:



Scale: 1:12,500

sanctus

Drawing Notes:
Based on client supplied DWG -
ARDROSSAN 2D produced by Aird Group
23/03/2020. All locations are approximate.
Must be printed in colour.

Site Address:
Raylight Place
Ardrossan
North Ayrshire
Scotland

Rev.	Description	Date
A	First Issue	13/06/2024
APPROVED		

Project Name:
North Shore, Ardrossan

Client:
North Ayrshire Council

Drawing Title:
Treated Stockpile or Sample Locations

Contract No:
53240

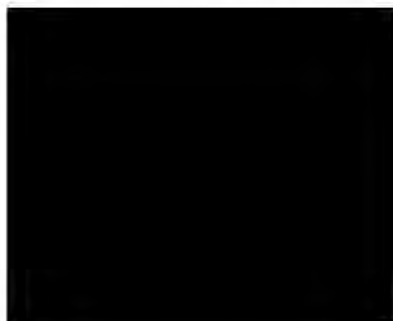
Drawing No:
D3240/061

Scale @ A3:
1:1000

Sample ID	Date Sampled	Aspirate TPH - C1 mg/kg	Aspirate TPH - C2 mg/kg	Aspirate TPH - C3 mg/kg	Aspirate TPH - C4 mg/kg	Aspirate TPH - C5 mg/kg	Aspirate TPH - C6 mg/kg	Aspirate TPH - C7 mg/kg	Aspirate TPH - C8 mg/kg	Aspirate TPH - C9 mg/kg	Aspirate TPH - C10 mg/kg	Aspirate TPH - C11 mg/kg	Aspirate TPH - C12 mg/kg	Aspirate TPH - C13 mg/kg	Aspirate TPH - C14 mg/kg	Aspirate TPH - C15 mg/kg	Aspirate TPH - C16 mg/kg	Aspirate TPH - C17 mg/kg	Aspirate TPH - C18 mg/kg	Aspirate TPH - C19 mg/kg	Aspirate TPH - C20 mg/kg
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOD		10	0.02	0.02	0.05	1	2	8	8	1000	0.01	0.01	0.05	1	2	10	10	1000	0.01	0.01	0.05
Screening Criteria		1000	78	230	95	330	1000	1000	1000	1000	140	200	1.44	48.4	173.4	540	1000	1000	140	200	1.44
Max Value		1000	0	0	0	23	91	150	250	400	0	0	0	5.0	1.0	100	100	400	0	0	0
TSP09-04C	01/05/2024	330	< 0.020	< 0.020	< 0.050	< 1.0	11	30	89		< 0.010	< 0.010	< 0.050	< 1.0	3.2	26	95		< 0.010	< 0.010	< 0.050
TSP09-05C	01/05/2024	160	< 0.020	< 0.020	< 0.050	< 1.0	< 2.0	< 8.0	17		< 0.010	< 0.010	< 0.050	< 1.0	3.2	20	75		< 0.010	< 0.010	< 0.050
TSP09-07C	01/05/2024	770	< 0.020	< 0.020	< 0.050	< 1.0	25	77	220		< 0.010	< 0.010	< 0.050	< 1.0	6.1	52	220		< 0.010	< 0.010	< 0.050
TSP09-10C	01/05/2024	900	< 0.020	< 0.020	< 0.050	< 1.0	31	89	250		< 0.010	< 0.010	< 0.050	< 1.0	8.4	62	260		< 0.010	< 0.010	< 0.050
TSP09-11C	01/05/2024	68	< 0.020	< 0.020	< 0.050	< 1.0	< 2.0	< 8.0			< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	32		< 0.010	< 0.010	< 0.050
TSP09-12C	01/05/2024	510	< 0.020	< 0.020	< 0.050	< 1.0	26	59	140		< 0.010	< 0.010	< 0.050	< 1.0	8.1	40	140		< 0.010	< 0.010	< 0.050
TSP09-02J	09/07/2024	170	< 0.020	< 0.020	< 0.050	< 1.0	12	36	82	130	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	18		< 0.010	< 0.010	< 0.050
TSP09-03J	09/07/2024	340	< 0.020	< 0.020	< 0.050	< 1.0	8.4	39	140	190	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	17		< 0.010	< 0.010	< 0.050
TSP09-05J	09/07/2024	170	< 0.020	< 0.020	< 0.050	< 1.0	10	33	83	130	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	17		< 0.010	< 0.010	< 0.050
TSP09-06J	09/07/2024	170	< 0.020	< 0.020	< 0.050	< 1.0	7.8	28	65	100	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	38		< 0.010	< 0.010	< 0.050
TSP09-08J	09/07/2024	120	< 0.020	< 0.020	< 0.050	< 1.0	7.8	22	56	86	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	15		< 0.010	< 0.010	< 0.050
TSP09-09J	09/07/2024	220	< 0.020	< 0.020	< 0.050	< 1.0	15	42	100	160	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	33		< 0.010	< 0.010	< 0.050
TSP09-13J	09/07/2024	200	< 0.020	< 0.020	< 0.050	< 1.0	13	33	80	130	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	39		< 0.010	< 0.010	< 0.050
TSP09-04D	08/05/2024	490	< 0.020	< 0.020	< 0.050	< 1.0	9.6	31	110	150	< 0.010	< 0.010	< 0.050	< 1.0	10	43	190		< 0.010	< 0.010	< 0.050
TSP09-05D	08/05/2024	1000	< 0.020	< 0.020	< 0.050	< 1.0	40	110	280	400	< 0.010	< 0.010	< 0.050	< 1.0	15	100	330		< 0.010	< 0.010	< 0.050
TSP09-07D	08/05/2024	840	< 0.020	< 0.020	< 0.050	< 1.0	37	100	230	370	< 0.010	< 0.010	< 0.050	< 1.0	12	75	250		< 0.010	< 0.010	< 0.050
TSP09-10D	08/05/2024	730	< 0.020	< 0.020	< 0.050	< 1.0	44	81	160	290	< 0.010	< 0.010	< 0.050	< 1.0	14	73	260		< 0.010	< 0.010	< 0.050
TSP09-11D	08/05/2024	720	< 0.020	< 0.020	< 0.050	< 1.0	22	66	170	260	< 0.010	< 0.010	< 0.050	< 1.0	5.7	60	270		< 0.010	< 0.010	< 0.050
TSP09-12D	08/05/2024	940	< 0.020	< 0.020	< 0.050	< 1.0	2.3	45	99	220	< 0.010	< 0.010	< 0.050	< 1.0	17	90	310		< 0.010	< 0.010	< 0.050
TSP09-02K	16/07/2024	91	< 0.05	< 0.10	< 0.05	5.6	22	36	15	79	< 0.05	< 0.05	< 0.05	< 1.0	1.3	6.3	2.9		< 0.05	< 0.10	< 0.05
TSP09-03K	16/07/2024	210	< 0.05	< 0.10	< 0.05	7.7	37	62	54	160	< 0.05	< 0.05	< 0.05	< 1.0	3.8	18	12		< 0.05	< 0.10	< 0.05
TSP09-05K	16/07/2024	400	< 0.05	< 0.10	< 0.05	10	66	120	89	280	< 0.05	< 0.05	< 0.05	< 1.0	8.9	41	14		< 0.05	< 0.10	< 0.05
TSP09-06K	16/07/2024	240	< 0.05	< 0.10	< 0.05	17	52	69	34	170	< 0.05	< 0.05	< 0.05	< 1.0	9	37	18		< 0.05	< 0.10	< 0.05
TSP09-08K	16/07/2024	420	< 0.05	< 0.10	< 0.05	12	51	100	62	230	< 0.05	< 0.05	< 0.05	< 1.0	10	33	25		< 0.05	< 0.10	< 0.05
TSP09-09K	16/07/2024	450	< 0.05	< 0.10	< 0.05	23	79	140	97	340	< 0.05	< 0.05	< 0.05	< 1.0	13	43	12		< 0.05	< 0.10	< 0.05
TSP09-13K	16/07/2024	220	< 0.05	< 0.10	< 0.05	9.7	35	73	51	170	< 0.05	< 0.05	< 0.05	< 1.0	4.3	18	8.9		< 0.05	< 0.10	< 0.05
TSP09-04E	29/05/2024	77	< 0.020	< 0.020	< 0.050	< 1.0	< 2.0	9.7	32	42	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	< 10	22		< 0.010	< 0.010	< 0.050
TSP09-05E	29/05/2024	230	< 0.020	< 0.020	< 0.050	< 1.0	5.5	25	60	90	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	15	84		< 0.010	< 0.010	< 0.050
TSP09-07E	29/05/2024	230	< 0.020	< 0.020	< 0.050	< 1.0	2.8	24	63	90	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	15	83		< 0.010	< 0.010	< 0.050
TSP09-10E	29/05/2024	410	< 0.020	< 0.020	< 0.050	< 1.0	8.7	47	120	180	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	30	140		< 0.010	< 0.010	< 0.050
TSP09-11E	29/05/2024	390	< 0.020	< 0.020	< 0.050	< 1.0	5	31	110	150	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	28	140		< 0.010	< 0.010	< 0.050
TSP09-12E	29/05/2024	270	< 0.020	< 0.020	< 0.050	< 1.0	4.8	25	67	97	< 0.010	< 0.010	< 0.050	< 1.0	< 2.0	22	95		< 0.010	< 0.010	< 0.050
TSP09-02L	23/07/2024	520	< 0.05	< 0.10	< 0.05	8.1	91	140	65	300	< 0.05	< 0.05	< 0.05	< 1.0	14	84	83		< 0.05	< 0.10	< 0.05
TSP09-03L	23/07/2024	230	< 0.05	< 0.10	< 0.05	2.9	32	54	40	130	< 0.05	< 0.05	< 0.05	< 1.0	9.6	37	23		< 0.05	< 0.10	< 0.05
TSP09-05L	23/07/2024	14	< 0.05	< 0.10	< 0.05	< 2.0	< 1.0	< 2.0	< 3.0	< 5.0	< 0.05	< 0.05	< 0.05	< 1.0	< 1.0	2.8	< 2.0		< 0.05	< 0.10	< 0.05
TSP09-06L	23/07/2024	14	< 0.05	< 0.10	< 0.05	2.1	< 1.0	< 2.0	< 3.0	< 5.0	< 0.05	< 0.05	< 0.05	< 1.0	< 1.0	2.9	< 2.0		< 0.05	< 0.10	< 0.05
TSP09-08L	23/07/2024	320	< 0.05	< 0.10	< 0.05	2.5	47	73	53	180	< 0.05	< 0.05	< 0.05	< 1.0	14	60	36		< 0.05	< 0.10	< 0.05
TSP09-09L	23/07/2024	380	< 0.05	< 0.10	< 0.05	4	44	95	63	210	< 0.05	< 0.05	< 0.05	< 1.0	10	66	44		< 0.05	< 0.10	< 0.05
TSP09-13L	23/07/2024	480	< 0.05	< 0.10	< 0.05	5.6	57	180	57	270	< 0.05	< 0.05	< 0.05	< 1.0	16	84	72		< 0.05	< 0.10	< 0.05



Environmental Science



Analytical Report Number : 24-017477

Project / Site name: Ardrossan North Shore

Samples received on: 02/05/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 02/05/2024

Your order number: S3240

Analysis completed by: 10/05/2024

Report Issue Number: 1

Report issued on: 10/05/2024

Samples Analysed: 32 soil samples



For & on behalf of i2 Analytical Ltd.

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: 24-017477
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	187487	187488	187489	187490	187491
Sample Reference	TSP05-01C	TSP05-02C	TSP05-03C	TSP05-04C	TSP05-05C
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	01/05/2024	01/05/2024	01/05/2024	01/05/2024	01/05/2024
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	9.7
Total mass of sample received	kg	0.1	NONE	0.4	0.3

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	2.5	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	9.8	21	12	26	12
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	29	52	32	63	30
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	83	130	72	150	66
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	120	200	120	240	110

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	5.3	3.4	6.6	4.3	5.4
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	28	39	26	35	28
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	100	150	89	120	86
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, ID, AR}	mg/kg	10	NONE	130	190	120	160	120

TPH (C10 - C40) _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	310	480	280	480	260
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-017477

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number				187492	187493	187494	187495	187496
Sample Reference				TSP05-06C	TSP05-07C	TSP05-08C	TSP05-09C	TSP05-10C
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/05/2024	01/05/2024	01/05/2024	01/05/2024	01/05/2024
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	20.6	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9.3	6.4	7.4	6.8	8.3
Total mass of sample received	kg	0.1	NONE	0.3	0.4	0.3	0.7	0.4

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,AL}	mg/kg	1	MCERTS	< 1.0	1.5	1.6	1.2	2
TPHCWG - Aliphatic >C12 - C16 _{EH,CU,10,AL}	mg/kg	2	MCERTS	9.3	22	24	24	40
TPHCWG - Aliphatic >C16 - C21 _{EH,CU,10,AL}	mg/kg	8	MCERTS	26	36	36	53	82
TPHCWG - Aliphatic >C21 - C35 _{EH,CU,10,AL}	mg/kg	8	MCERTS	67	140	120	230	340
TPHCWG - Aliphatic >C5 - C35 _{EH,CU+HS,10,AL}	mg/kg	10	NONE	100	190	190	310	460

TPHCWG - Aromatic >EC5 - EC7 _{HS,10,AR}	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{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}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	2.5	1.5
TPHCWG - Aromatic >EC12 - EC16 _{EH,CU,10,AR}	mg/kg	2	MCERTS	5	11	9.6	18	15
TPHCWG - Aromatic >EC16 - EC21 _{EH,CU,10,AR}	mg/kg	10	MCERTS	24	38	30	73	74
TPHCWG - Aromatic >EC21 - EC35 _{EH,CU,10,AR}	mg/kg	10	MCERTS	79	160	130	280	310
TPHCWG - Aromatic >EC5 - EC35 _{EH,CU+HS,10,AR}	mg/kg	10	NONE	110	210	170	370	400

TPH (C10 - C40) _{EH,CU,10,TOTAL}	mg/kg	10	MCERTS	250	560	480	1000	1200
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-017477

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	187497	187498	187499	187500	187501
Sample Reference	TSP05-11C	TSP05-12C	TSP09-01C	TSP09-02C	TSP09-03C
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	01/05/2024	01/05/2024	01/05/2024	01/05/2024	01/05/2024
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	39	< 0.1
Moisture Content	%	0.01	NONE	6.8	7.9
Total mass of sample received	kg	0.1	NONE	0.3	0.4

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	26	27	8	15	8.8
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	48	55	19	40	18
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	160	220	52	96	43
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, 1D, AL}	mg/kg	10	NONE	230	300	79	150	70

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	7.3	11	2	5.5	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	37	41	12	32	13
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	150	180	50	110	44
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	190	230	64	150	56

TPH (C10 - C40) _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	630	790	200	390	160
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-017477

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	187502	187503	187504	187505	187506
Sample Reference	TSP09-04C	TSP09-05C	TSP09-06C	TSP09-07C	TSP09-08C
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	01/05/2024	01/05/2024	01/05/2024	01/05/2024	01/05/2024
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	12	13
Total mass of sample received	kg	0.1	NONE	0.4	0.3

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	11	< 2.0	3.3	25	17
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	30	< 8.0	15	77	48
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	89	17	53	220	130
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	130	17	72	320	190

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	3.2	3.2	5.5	6.1	4.8
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	26	20	30	52	31
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	95	75	100	220	120
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, ID, AR}	mg/kg	10	NONE	120	99	140	280	160

TPH (C10 - C40) _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	330	160	270	770	450
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-017477

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				187507	187508	187509	187510	187511
Sample Reference				TSP09-09C	TSP09-10C	TSP09-11C	TSP09-12C	TSP09-13C
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/05/2024	01/05/2024	01/05/2024	01/05/2024	01/05/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Unit	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	13	12	11	10
Total mass of sample received	kg	0.1	NONE	0.3	0.4	0.4	0.3	0.4

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	26	31	< 2.0	26	8
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	68	89	< 8.0	59	18
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	180	250	< 8.0	140	35
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, 1D, AL}	mg/kg	10	NONE	270	370	< 10	220	61

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	7.5	8.4	< 2.0	8.1	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	45	62	< 10	40	16
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	180	260	32	140	60
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	230	330	32	180	76

TPH (C10 - C40) _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	650	900	68	510	180
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-017477

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				187512	187513	187514	187515	187516
Sample Reference				TSP09-14C	TSP09-15C	TSP09-16C	TSP09-17C	TSP09-18C
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/05/2024	01/05/2024	01/05/2024	01/05/2024	01/05/2024
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	9.8	11	12
Total mass of sample received	kg	0.1	NONE	0.3	0.3	0.4	0.4	0.4

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	2.2	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	6.1	17	< 2.0	< 2.0	2.8
TPHCWG - Aliphatic >C16 - C21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	14	30	< 8.0	9.1	18
TPHCWG - Aliphatic >C21 - C35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	25	67	< 8.0	38	60
TPHCWG - Aliphatic >C5 - C35 _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	45	120	< 10	47	80

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	3.3	< 2.0	3.9	3.7
TPHCWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	11	20	< 10	18	18
TPHCWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	40	72	< 10	67	63
TPHCWG - Aromatic >EC5 - EC35 _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	51	96	< 10	88	85

TPH (C10 - C40) _{EH,CU,1D,TOTAL}	mg/kg	10	MCERTS	120	260	< 10	170	210
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-017477

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number				187517	187518
Sample Reference				TSP09-19C	TSP09-20C
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				01/05/2024	01/05/2024
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	11	10
Total mass of sample received	kg	0.1	NONE	0.3	0.3

Monoaromatics

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

TPHCWG - Aliphatic >C5 - C6 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 _{HS, 1D, AL}	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 _{HS, 1D, AL}	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 _{EH, CU, 1D, AL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, 1D, AL}	mg/kg	2	MCERTS	4.8	8.1
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	16	26
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	44	60
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, 1D, AL}	mg/kg	10	NONE	65	93

TPHCWG - Aromatic >EC5 - EC7 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS, 1D, AR}	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS, 1D, AR}	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 _{EH, CU, 1D, AR}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, 1D, AR}	mg/kg	2	MCERTS	4.2	2.6
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	19	20
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	56	72
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	79	94

TPH (C10 - C40) _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	180	230
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number : 24-017477
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 *
187487	TSP05-01C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187488	TSP05-02C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187489	TSP05-03C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187490	TSP05-04C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187491	TSP05-05C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187492	TSP05-06C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187493	TSP05-07C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187494	TSP05-08C	None Supplied	None Supplied	Brown sand with gravel and stones
187495	TSP05-09C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187496	TSP05-10C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187497	TSP05-11C	None Supplied	None Supplied	Brown sand with gravel and stones
187498	TSP05-12C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187499	TSP09-01C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187500	TSP09-02C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187501	TSP09-03C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187502	TSP09-04C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187503	TSP09-05C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187504	TSP09-06C	None Supplied	None Supplied	Brown sand with gravel and stones
187505	TSP09-07C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187506	TSP09-08C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187507	TSP09-09C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187508	TSP09-10C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187509	TSP09-11C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187510	TSP09-12C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187511	TSP09-13C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187512	TSP09-14C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187513	TSP09-15C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187514	TSP09-16C	None Supplied	None Supplied	Brown sand with gravel
187515	TSP09-17C	None Supplied	None Supplied	Brown sand with gravel
187516	TSP09-18C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187517	TSP09-19C	None Supplied	None Supplied	Brown sand with gravel and vegetation
187518	TSP09-20C	None Supplied	None Supplied	Brown sand with gravel and vegetation

Analytical Report Number : 24-017477
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
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
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/L08B	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/L08B	D/W	MCERTS

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

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

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

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 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 : 24-018602

Project / Site name: Ardrossan North Shore

Samples received on: 09/05/2024

Your job number: S3240

Samples instructed on/
Analysis started on: 09/05/2024

Your order number: S3240

Analysis completed by: 16/05/2024

Report Issue Number: 1

Report issued on: 16/05/2024

Samples Analysed: 56 soil samples

For & on behalf of i2 Analytical Ltd.

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: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				193663	193664	193665	193666	193667
Sample Reference				TSP05-01D	TSP05-02D	TSP05-03D	TSP05-04D	TSP05-05D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	41.9	< 0.1
Moisture Content	%	0.01	NONE	7	5.5	6	4.5	6.3
Total mass of sample received	kg	0.1	NONE	0.3	0.2	0.3	0.2	0.3

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	3.8	3.6	5.5
TPHCWG - Aliphatic >C12 - C16 EH CU 1D AL	mg/kg	2	MCERTS	100	140	97	92	110
TPHCWG - Aliphatic >C16 - C21 EH CU 1D AL	mg/kg	8	MCERTS	250	310	200	210	260
TPHCWG - Aliphatic >C21 - C35 EH CU 1D AL	mg/kg	8	MCERTS	390	430	300	340	390
TPHCWG - Aliphatic >C5 - C35 EH CU+HS 1D AL	mg/kg	10	NONE	750	880	600	640	770

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	45	49	34	41	37
TPHCWG - Aromatic >EC16 - EC21 EH CU 1D AR	mg/kg	10	MCERTS	210	220	150	200	190
TPHCWG - Aromatic >EC21 - EC35 EH CU 1D AR	mg/kg	10	MCERTS	420	440	290	460	420
TPHCWG - Aromatic >EC5 - EC35 EH CU+HS 1D AR	mg/kg	10	NONE	670	710	470	700	650

TPH (C10 - C40) EH CU 1D TOTAL	mg/kg	10	MCERTS	1600	1800	1200	1500	1600
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				193668	193669	193670	193671	193672
Sample Reference				TSP05-06D	TSP05-07D	TSP05-08D	TSP05-09D	TSP05-10D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	5.3	6.1	6.6	5.5	5.8
Total mass of sample received	kg	0.1	NONE	0.3	0.3	0.2	0.3	0.2

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 BH CU 1D AL	mg/kg	1	MCERTS	6	4.5	6	3	2.7
TPHCWG - Aliphatic >C12 - C16 BH CU 1D AL	mg/kg	2	MCERTS	140	140	150	92	85
TPHCWG - Aliphatic >C16 - C21 BH CU 1D AL	mg/kg	8	MCERTS	290	310	340	230	210
TPHCWG - Aliphatic >C21 - C35 BH CU 1D AL	mg/kg	8	MCERTS	410	450	500	370	340
TPHCWG - Aliphatic >C5 - C35 BH CU+HS 1D AL	mg/kg	10	NONE	850	900	1000	690	630

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 BH CU 1D AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	3.2	< 1.0
TPHCWG - Aromatic >EC12 - EC16 BH CU 1D AR	mg/kg	2	MCERTS	54	38	46	22	24
TPHCWG - Aromatic >EC16 - EC21 BH CU 1D AR	mg/kg	10	MCERTS	240	200	250	130	140
TPHCWG - Aromatic >EC21 - EC35 BH CU 1D AR	mg/kg	10	MCERTS	470	400	470	280	280
TPHCWG - Aromatic >EC5 - EC35 BH CU+HS 1D AR	mg/kg	10	NONE	770	640	770	430	440

TPH (C10 - C40) BH CU 1D TOTAL	mg/kg	10	MCERTS	1800	1700	2000	1300	1200
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Environmental Science

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number				193673	193674	193675	193676	193677
Sample Reference				TSP05-11D	TSP05-12D	TSP06-01D	TSP06-02D	TSP06-03D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	4.9	5.8	3.4	3.2	2.1
Total mass of sample received	kg	0.1	NONE	0.2	0.3	0.3	0.3	0.3

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	3.9	4.3	6.4	9.9	6.6
TPHCWG - Aliphatic >C12 - C16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	92	130	180	290	190
TPHCWG - Aliphatic >C16 - C21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	170	320	450	650	390
TPHCWG - Aliphatic >C21 - C35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	280	470	520	730	420
TPHCWG - Aliphatic >C5 - C35 _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	550	930	1200	1700	1000

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	1.7	3.4	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH,CU,1D,AR}	mg/kg	2	MCERTS	36	38	63	72	47
TPHCWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	150	210	270	310	200
TPHCWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	290	430	450	500	280
TPHCWG - Aromatic >EC5 - EC35 _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	480	670	790	880	530

TPH (C10 - C40) _{EH,CU,1D,TOTAL}	mg/kg	10	MCERTS	1200	1800	2100	2800	1700
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				193678	193679	193680	193681	193682
Sample Reference				TSP06-04D	TSP06-05D	TSP06-06D	TSP06-07D	TSP06-08D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	2.6	3.3	2.8	2.9	3.7
Total mass of sample received	kg	0.1	NONE	0.2	0.3	0.2	0.3	0.3

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	2.6	11	3.6	8.8	8.1
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	150	240	170	180	180
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	400	550	440	330	290
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	460	630	540	350	320
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	1000	1400	1200	870	800

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	1.4	< 1.0	1.7	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, ID, AR}	mg/kg	2	MCERTS	52	81	62	57	72
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	270	330	310	220	240
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	420	520	490	320	330
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, ID, AR}	mg/kg	10	NONE	740	930	860	600	650

TPH (C10 - C40) _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	1900	2600	2200	1600	1600
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Environmental Science

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	193683	193684	193685	193686	193687
Sample Reference	TSP06-09D	TSP06-10D	TSP06-11D	TSP06-12D	TSP06-13D
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	2.8	2.8
Total mass of sample received	kg	0.1	NONE	0.2	0.2

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	6.6	2.8	1.6	4.9	2.8
TPHCWG - Aliphatic >C12 - C16 EH CU 1D AL	mg/kg	2	MCERTS	220	190	140	170	190
TPHCWG - Aliphatic >C16 - C21 EH CU 1D AL	mg/kg	8	MCERTS	420	420	290	360	390
TPHCWG - Aliphatic >C21 - C35 EH CU 1D AL	mg/kg	8	MCERTS	490	500	330	440	440
TPHCWG - Aliphatic >C5 - C35 EH CU HS 1D AL	mg/kg	10	NONE	1100	1100	770	970	1000

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	1.1
TPHCWG - Aromatic >EC12 - EC16 EH CU 1D AR	mg/kg	2	MCERTS	97	65	81	68	71
TPHCWG - Aromatic >EC16 - EC21 EH CU 1D AR	mg/kg	10	MCERTS	360	270	290	270	250
TPHCWG - Aromatic >EC21 - EC35 EH CU 1D AR	mg/kg	10	MCERTS	530	400	410	450	360
TPHCWG - Aromatic >EC5 - EC35 EH CU HS 1D AR	mg/kg	10	NONE	990	740	780	790	680

TPH (C10 - C40) EH CU 1D TOTAL	mg/kg	10	MCERTS	2300	2000	1700	1900	1900
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-018602

Project / Site name: Ardrossan North Shore

Your Order No: 53240

Lab Sample Number				193688	193689	193690	193691	193692
Sample Reference				TSP06-14D	TSP06-15D	TSP06-16D	TSP06-17D	TSP07-01D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	4.9	2.7	3	2.6	3.8
Total mass of sample received	kg	0.1	NONE	0.3	0.3	0.2	0.3	0.2

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	8.2	4.1	6.5	7	6.8
TPHCWG - Aliphatic >C12 - C16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	220	210	280	320	190
TPHCWG - Aliphatic >C16 - C21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	360	500	630	670	320
TPHCWG - Aliphatic >C21 - C35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	390	580	770	780	330
TPHCWG - Aliphatic >C5 - C35 _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	990	1300	1700	1800	850

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	56	100	98	110	35
TPHCWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	210	460	410	460	140
TPHCWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	290	730	620	710	190
TPHCWG - Aromatic >EC5 - EC35 _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	550	1300	1100	1300	360

TPH (C10 - C40) _{EH,CU,1D,TOTAL}	mg/kg	10	MCERTS	1700	2800	3100	3300	1300
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Environmental Science

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	193693	193694	193695	193696	193697
Sample Reference	TSP07-02D	TSP07-03D	TSP07-04D	TSP07-05D	TSP07-06D
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	3.6	3.7
Total mass of sample received	kg	0.1	NONE	0.3	0.2

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	7	9.5	8.7	6.3	8.4
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, 1D, AL}	mg/kg	2	MCERTS	160	240	200	150	180
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	290	430	360	250	260
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	300	490	380	270	240
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, 1D, AL}	mg/kg	10	NONE	760	1200	940	670	680

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	1.5	3.1	2.1
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, 1D, AR}	mg/kg	2	MCERTS	45	76	69	60	66
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	170	280	260	180	190
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	220	380	380	250	210
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	440	740	710	500	470

TPH (C10 - C40) _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	1300	2100	1800	1300	1200
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				193698	193699	193700	193701	193702
Sample Reference				TSP07-07D	TSP09-01D	TSP09-02D	TSP09-03D	TSP09-04D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	56.4
Moisture Content	%	0.01	NONE	3.1	7.4	9.2	10	6.8
Total mass of sample received	kg	0.1	NONE	0.2	0.3	0.2	0.3	0.2

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	6.1	3.1	1.3	4.2	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	97	41	62	120	9.6
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	190	120	160	270	31
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	180	280	350	550	110
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	470	450	570	950	150

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	1.1	< 1.0	1.3	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, ID, AR}	mg/kg	2	MCERTS	32	7.5	13	13	10
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	160	80	120	160	43
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	180	290	440	580	190
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, ID, AR}	mg/kg	10	NONE	360	380	580	760	240

TPH (C10 - C40) _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	870	980	1400	2000	490
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	193703	193704	193705	193706	193707
Sample Reference	TSP09-05D	TSP09-06D	TSP09-07D	TSP09-08D	TSP09-09D
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	7.7
Total mass of sample received	kg	0.1	NONE	0.3	0.3

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	2	< 1.0	4.6	3.8
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, ID, AL}	mg/kg	2	MCERTS	40	57	37	87	90
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	110	160	100	210	190
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, ID, AL}	mg/kg	8	MCERTS	250	360	230	440	380
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, ID, AL}	mg/kg	10	NONE	400	580	370	730	660

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	1.8	< 1.0	< 1.0	1.5	1.6
TPHCWG - Aromatic >EC12 - EC16 _{EH, CU, ID, AR}	mg/kg	2	MCERTS	19	18	12	20	24
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	100	120	75	140	160
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, ID, AR}	mg/kg	10	MCERTS	330	390	250	480	570
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, ID, AR}	mg/kg	10	NONE	460	530	340	640	760

TPH (C10 - C40) _{EH, CU, ID, TOTAL}	mg/kg	10	MCERTS	1000	1300	840	1600	1700
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Environmental Science

Analytical Report Number: 24-018602

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				193708	193709	193710	193711	193712
Sample Reference				TSP09-10D	TSP09-11D	TSP09-12D	TSP09-13D	TSP09-14D
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	51.6	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9.9	7.2	8	8.6	8.6
Total mass of sample received	kg	0.1	NONE	0.2	0.3	0.2	0.3	0.2

Monoaromatics

	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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	3	< 1.0	2.3	2	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	44	22	45	68	31
TPHCWG - Aliphatic >C16 - C21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	81	66	99	140	75
TPHCWG - Aliphatic >C21 - C35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	160	170	220	310	170
TPHCWG - Aliphatic >C5 - C35 _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	290	260	370	520	280

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	14	5.7	17	16	11
TPHCWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	73	60	90	110	66
TPHCWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	260	270	310	360	220
TPHCWG - Aromatic >EC5 - EC35 _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	340	340	420	480	300

TPH (C10 - C40) _{EH,CU,1D,TOTAL}	mg/kg	10	MCERTS	730	720	940	1200	700
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: 53240

Lab Sample Number	193713	193714	193715	193716	193717
Sample Reference	TSP09-15D	TSP09-16D	TSP09-17D	TSP09-18D	TSP09-19D
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	08/05/2024	08/05/2024	08/05/2024	08/05/2024	08/05/2024
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	8	8.1
Total mass of sample received	kg	0.1	NONE	0.3	0.2

Monoaromatics

	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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	1.1	3.2	2.7	2.4	< 1.0
TPHCWG - Aliphatic >C12 - C16 _{EH, CU, 1D, AL}	mg/kg	2	MCERTS	22	45	37	47	7.3
TPHCWG - Aliphatic >C16 - C21 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	68	100	75	100	24
TPHCWG - Aliphatic >C21 - C35 _{EH, CU, 1D, AL}	mg/kg	8	MCERTS	170	190	170	230	73
TPHCWG - Aliphatic >C5 - C35 _{EH, CU+HS, 1D, AL}	mg/kg	10	NONE	260	340	280	380	100

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	9.1	5.7	5.2	4.9	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	55	72	49	55	13
TPHCWG - Aromatic >EC21 - EC35 _{EH, CU, 1D, AR}	mg/kg	10	MCERTS	220	250	190	220	76
TPHCWG - Aromatic >EC5 - EC35 _{EH, CU+HS, 1D, AR}	mg/kg	10	NONE	280	330	240	280	88

TPH (C10 - C40) _{EH, CU, 1D, TOTAL}	mg/kg	10	MCERTS	670	790	660	810	260
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 24-018602
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	193718			
Sample Reference	TSP09-20D			
Sample Number	None Supplied			
Depth (m)	None Supplied			
Date Sampled	08/05/2024			
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	9.3
Total mass of sample received	kg	0.1	NONE	0.3

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	2
TPHCWG - Aliphatic >C12 - C16 EH CU ID AL	mg/kg	2	MCERTS	56
TPHCWG - Aliphatic >C16 - C21 EH CU ID AL	mg/kg	8	MCERTS	120
TPHCWG - Aliphatic >C21 - C35 EH CU ID AL	mg/kg	8	MCERTS	260
TPHCWG - Aliphatic >C5 - C35 EH CU HS ID AL	mg/kg	10	NONE	430

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	9.1
TPHCWG - Aromatic >EC16 - EC21 EH CU ID AR	mg/kg	10	MCERTS	74
TPHCWG - Aromatic >EC21 - EC35 EH CU ID AR	mg/kg	10	MCERTS	280
TPHCWG - Aromatic >EC5 - EC35 EH CU HS ID AR	mg/kg	10	NONE	360

TPH (C10 - C40) EH CU ID TOTAL	mg/kg	10	MCERTS	970
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 24-018602
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 *
193663	TSP05-01D	None Supplied	None Supplied	Brown loam with vegetation
193664	TSP05-02D	None Supplied	None Supplied	Brown loam with vegetation
193665	TSP05-03D	None Supplied	None Supplied	Brown loam with vegetation
193666	TSP05-04D	None Supplied	None Supplied	Brown loam with stones
193667	TSP05-05D	None Supplied	None Supplied	Brown loam with gravel
193668	TSP05-06D	None Supplied	None Supplied	Brown loam with gravel
193669	TSP05-07D	None Supplied	None Supplied	Brown loam with gravel
193670	TSP05-08D	None Supplied	None Supplied	Brown loam with gravel
193671	TSP05-09D	None Supplied	None Supplied	Brown loam with gravel
193672	TSP05-10D	None Supplied	None Supplied	Brown loam with gravel
193673	TSP05-11D	None Supplied	None Supplied	Brown loam with gravel
193674	TSP05-12D	None Supplied	None Supplied	Brown loam with gravel
193675	TSP06-01D	None Supplied	None Supplied	Brown loam with gravel
193676	TSP06-02D	None Supplied	None Supplied	Brown loam with gravel
193677	TSP06-03D	None Supplied	None Supplied	Brown loam with gravel
193678	TSP06-04D	None Supplied	None Supplied	Brown loam with gravel
193679	TSP06-05D	None Supplied	None Supplied	Brown loam with gravel
193680	TSP06-06D	None Supplied	None Supplied	Brown loam with gravel
193681	TSP06-07D	None Supplied	None Supplied	Brown loam with gravel
193682	TSP06-08D	None Supplied	None Supplied	Brown loam with gravel
193683	TSP06-09D	None Supplied	None Supplied	Brown loam with gravel
193684	TSP06-10D	None Supplied	None Supplied	Brown loam with gravel
193685	TSP06-11D	None Supplied	None Supplied	Brown loam with stones
193686	TSP06-12D	None Supplied	None Supplied	Brown loam with gravel
193687	TSP06-13D	None Supplied	None Supplied	Brown loam with gravel
193688	TSP06-14D	None Supplied	None Supplied	Brown loam with gravel
193689	TSP06-15D	None Supplied	None Supplied	Brown loam with gravel
193690	TSP06-16D	None Supplied	None Supplied	Brown loam with gravel
193691	TSP06-17D	None Supplied	None Supplied	Brown loam with gravel
193692	TSP07-01D	None Supplied	None Supplied	Brown loam with gravel
193693	TSP07-02D	None Supplied	None Supplied	Brown loam with gravel
193694	TSP07-03D	None Supplied	None Supplied	Brown loam with gravel
193695	TSP07-04D	None Supplied	None Supplied	Brown loam with stones
193696	TSP07-05D	None Supplied	None Supplied	Brown loam with gravel
193697	TSP07-06D	None Supplied	None Supplied	Brown loam with gravel
193698	TSP07-07D	None Supplied	None Supplied	Brown loam with gravel
193699	TSP09-01D	None Supplied	None Supplied	Brown loam with gravel
193700	TSP09-02D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193701	TSP09-03D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193702	TSP09-04D	None Supplied	None Supplied	Brown loam with vegetation and stones
193703	TSP09-05D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193704	TSP09-06D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193705	TSP09-07D	None Supplied	None Supplied	Brown loam with stones
193706	TSP09-08D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193707	TSP09-09D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193708	TSP09-10D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193709	TSP09-11D	None Supplied	None Supplied	Brown loam with vegetation and stones
193710	TSP09-12D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193711	TSP09-13D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193712	TSP09-14D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193713	TSP09-15D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193714	TSP09-16D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193715	TSP09-17D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193716	TSP09-18D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193717	TSP09-19D	None Supplied	None Supplied	Brown loam with gravel and vegetation
193718	TSP09-20D	None Supplied	None Supplied	Brown loam with gravel and vegetation

Analytical Report Number : 24-018602
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
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
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/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	L076B/L088	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 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

- 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 : 24-022316

Replaces Analytical Report Number: 24-022316, issue no. 1
Client references/information amended.
Sample ID amended as per client's request.

Project / Site name:	Ardrossan North Shore	Samples received on:	30/05/2024
Your Job number:	S3240	Samples instructed on/ Analysis started on:	31/05/2024
Your order number:	S3240	Analysis completed by:	06/06/2024
Report Issue Number:	2	Report issued on:	11/06/2024
Samples Analysed:	20 soil samples		

For & on behalf of i2 Analytical Ltd.

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: 24-022316

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	213463	213464	213465	213466	213467
Sample Reference	TSP09-01E	TSP09-02E	TSP09-03E	TSP09-04E	TSP09-05E
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	29/05/2024	29/05/2024	29/05/2024	29/05/2024	29/05/2024
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	12	9.2	12	12
Total mass of sample received	kg	0.1	NONE	1.3	1.2	1.3	1.2	1.3

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	12J	12J	12J	12J	12J
Actinolite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Amosite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Anthophyllite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Chrysotile detected	Type	N/A	ISO 17025	-	-	Detected	-	-
Crocidolite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Tremolite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-

Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	-	0.002	-	-
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Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	-	Loose Fibres	-	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.12	< 0.05	0.09	0.08	0.11
Acenaphthylene	mg/kg	0.05	MCERTS	0.06	0.06	< 0.05	< 0.05	0.08
Acenaphthene	mg/kg	0.05	MCERTS	0.08	0.06	0.06	0.06	0.08
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.07
Phenanthrene	mg/kg	0.05	MCERTS	0.89	0.37	0.32	0.21	0.47
Anthracene	mg/kg	0.05	MCERTS	0.3	0.15	0.14	0.1	0.19
Fluoranthene	mg/kg	0.05	MCERTS	2.2	1	0.84	0.56	1.2
Pyrene	mg/kg	0.05	MCERTS	2	1	0.86	0.56	1.2
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.1	0.69	0.5	0.34	0.73
Chrysene	mg/kg	0.05	MCERTS	1.1	0.7	0.64	0.41	0.75
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.3	0.95	0.66	0.51	0.92
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.51	0.37	0.3	0.2	0.39
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.3	0.9	0.65	0.49	0.93
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.74	0.53	0.39	0.28	0.52
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.16	< 0.05	0.09	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.86	0.66	0.46	0.35	0.65

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	12.7	7.51	5.99	4.14	8.35
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >C5 - C6 IIS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C6 - C8 IIS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >C8 - C10 IIS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >C10 - C12 EH_C10_10_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH_C10_10_AL	mg/kg	2	MCERTS	4.6	9.2	2.5	< 2.0	5.5
TPHCWG - Aliphatic >C16 - C21 EH_C10_10_AL	mg/kg	8	MCERTS	22	34	18	9.7	25
TPHCWG - Aliphatic >C21 - C35 EH_C10_10_AL	mg/kg	8	MCERTS	63	100	47	32	60
TPHCWG - Aliphatic >C5 - C35 EH_C10_10_AL	mg/kg	10	NONE	90	140	67	42	90
TPHCWG - Aromatic >EC5 - EC7 IIS_10_AL	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Analytical Report Number: 24-022316
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				213463	213464	213465	213466	213467
Sample Reference				TSP09-01E	TSP09-02E	TSP09-03E	TSP09-04E	TSP09-05E
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/05/2024	29/05/2024	29/05/2024	29/05/2024	29/05/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
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	12	22	< 10	< 10	15
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	65	120	41	22	84
TPHCWG - Aromatic >EC35 - EC40 EH_CU_ID_AR	mg/kg	10	NONE	77	140	41	22	99
TPH (C10 - C40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	200	340	130	77	230

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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



4041



Environmental Science

Analytical Report Number: 24-022316
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	213468	213469	213470	213471	213472
Sample Reference	TSP09-06E	TSP09-07E	TSP09-08E	TSP09-09E	TSP09-10E
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	29/05/2024	29/05/2024	29/05/2024	29/05/2024	29/05/2024
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	30.9	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	11	12	11	13
Total mass of sample received	kg	0.1	NONE	1.3	1.3	1.2	1.3	1.5

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	Not-detected	Detected	Detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	I2J	I2J	I2J	I2J	PDO
Actinolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected	-
Amosite detected	Type	N/A	ISO 17025	Not-detected	-	Detected	Detected	-
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected	-
Chrysotile detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Detected	-
Crocidolite detected	Type	N/A	ISO 17025	Detected	-	Not-detected	Not-detected	-
Tremolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected	-

Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	-	< 0.001	< 0.001	-
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Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	-	Loose Fibres	Loose Fibres	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.14	0.1	0.14	0.12	0.14
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.09	< 0.05	< 0.05	0.14	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	0.11	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.46	0.29	0.41	1.2	0.33
Anthracene	mg/kg	0.05	MCERTS	0.21	0.1	0.18	0.46	0.17
Fluoranthene	mg/kg	0.05	MCERTS	1.4	0.88	1.4	2.3	1.1
Pyrene	mg/kg	0.05	MCERTS	1.4	0.88	1.4	2.2	1.2
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.83	0.47	0.87	1.1	0.76
Chrysene	mg/kg	0.05	MCERTS	0.9	0.56	0.9	1.3	0.77
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.1	0.72	1.3	1.6	1.1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.5	0.31	0.51	0.69	0.45
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.1	0.63	1.1	1.3	0.96
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.62	0.4	0.59	0.71	0.54
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.15	0.09	< 0.05	0.16	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.73	0.49	0.69	0.78	0.68

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	9.72	5.91	9.43	14	8.07
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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 HS_CU_10_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 HS_CU_10_AL	mg/kg	2	MCERTS	9.1	2.8	11	6.4	8.7
TPHCWG - Aliphatic >C16 - C21 HS_CU_10_AL	mg/kg	8	MCERTS	28	24	39	30	47
TPHCWG - Aliphatic >C21 - C35 HS_CU_10_AL	mg/kg	8	MCERTS	65	63	110	86	120
TPHCWG - Aliphatic >C5 - C35 HS_CU+HS_10_AL	mg/kg	10	NONE	100	90	150	120	180

TPHCWG - Aromatic >EC5 - EC7 HS_10_AL	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
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Environmental Science

Analytical Report Number: 24-022316
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				213468	213469	213470	213471	213472
Sample Reference				TSP09-06E	TSP09-07E	TSP09-08E	TSP09-09E	TSP09-10E
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/05/2024	29/05/2024	29/05/2024	29/05/2024	29/05/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
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	17	15	17	17	30
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	78	83	83	89	140
TPHCWG - Aromatic >EC5 - EC35 D_LCU+HS_ID_AR	mg/kg	10	NONE	95	98	100	110	170
TPH (C10 - C40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	240	230	310	290	410
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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

Analytical Report Number: 24-022316
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	213473	213474	213475	213476	213477
Sample Reference	TSP09-11E	TSP09-12E	TSP09-13E	TSP09-14E	TSP09-15E
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	29/05/2024	29/05/2024	29/05/2024	29/05/2024	29/05/2024
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	27.7	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	13	12	13	13
Total mass of sample received	kg	0.1	NONE	1.3	1.2	1.3	1.2	1.3

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	Detected	Detected	Detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	MBI	MBI	MBI	MBI	MBI
Actinolite detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Amosite detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected	Not-detected
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Detected	Detected
Crocidolite detected	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected	Not-detected
Tremolite detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected

Asbestos % by hand picking/weighting	%	0.001	ISO 17025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
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Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	Loose Fibres	Loose Fibres	Loose Fibres	Loose Fibres
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.17	0.17	0.13	0.11	0.15
Acenaphthylene	mg/kg	0.05	MCERTS	0.08	0.06	0.06	0.05	0.06
Acenaphthene	mg/kg	0.05	MCERTS	0.07	0.12	0.09	0.08	0.08
Fluorene	mg/kg	0.05	MCERTS	0.05	0.09	0.06	0.08	0.07
Phenanthrene	mg/kg	0.05	MCERTS	0.58	0.5	0.49	0.56	0.81
Anthracene	mg/kg	0.05	MCERTS	0.31	0.23	0.25	0.17	0.36
Fluoranthene	mg/kg	0.05	MCERTS	2.3	1.4	1.5	1.4	1.9
Pyrene	mg/kg	0.05	MCERTS	2.3	1.4	1.4	1.3	1.8
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.2	0.88	0.71	0.72	0.96
Chrysene	mg/kg	0.05	MCERTS	1.3	0.97	0.8	0.85	1.2
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.9	1.4	1.1	1.1	1.4
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.67	0.54	0.36	0.51	0.6
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.5	1.2	0.95	1	1.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.81	0.69	0.54	0.55	0.64
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.21	0.18	0.13	0.15	0.18
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.97	0.81	0.62	0.65	0.78

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	14.4	10.6	9.21	9.24	12.1
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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	5	4.8	8.9	6	3.9
TPHCWG - Aliphatic >C16 - C21 EH_CU_ID_AL	mg/kg	8	MCERTS	31	25	27	32	22
TPHCWG - Aliphatic >C21 - C35 EH_CU_ID_AL	mg/kg	8	MCERTS	110	67	61	86	56
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_ID_AL	mg/kg	10	NONE	150	97	96	120	82
TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010



4041



Environmental Science

Analytical Report Number: 24-022316
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				213473	213474	213475	213476	213477
Sample Reference				TSP09-11E	TSP09-12E	TSP09-13E	TSP09-14E	TSP09-15E
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/05/2024	29/05/2024	29/05/2024	29/05/2024	29/05/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPHCWG - Aromatic >EC7 - EC8 _{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}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_10_AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_10_AR}	mg/kg	10	MCERTS	28	22	< 10	16	14
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_10_AR}	mg/kg	10	MCERTS	140	95	51	88	78
TPHCWG - Aromatic >EC35 - EC40 _{EH_CU_10_AR}	mg/kg	10	NONE	170	120	51	100	92
TPH (C10 - C40) _{EH_CU_10_TOTAL}				390	270	200	280	220

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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

Analytical Report Number: 24-022316
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	213478	213479	213480	213481	213482
Sample Reference	TSP09-16E	TSP09-17E	TSP09-18E	TSP09-19E	TSP09-20E
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	29/05/2024	29/05/2024	29/05/2024	29/05/2024	29/05/2024
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Unit	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	12	11	13	13
Total mass of sample received	kg	0.1	NONE	1.2	1.3	1.2	1.3	1.2

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	Detected	Detected	Detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	MBI	MBI	MBI	MBI	MBI
Actinolite detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Amosite detected	Type	N/A	ISO 17025	Not-detected	Detected	Detected	Detected	Detected
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected	Not-detected
Crocidolite detected	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Detected	Not-detected
Tremolite detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected

Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	< 0.001	< 0.001	< 0.001	0.001
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Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	Loose Fibres	Loose Fibres	Loose Fibres	Loose Fibrous Debris
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.12	0.13	0.16	0.08	0.08
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.07	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.07	0.05	0.07	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.06	0.06	0.06	0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.5	0.54	0.47	0.41	0.41
Anthracene	mg/kg	0.05	MCERTS	0.21	0.24	0.22	0.17	0.27
Fluoranthene	mg/kg	0.05	MCERTS	1.3	1.4	1.5	1.1	1.4
Pyrene	mg/kg	0.05	MCERTS	1.2	1.4	1.5	1.1	1.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.66	0.69	0.8	0.55	0.73
Chrysene	mg/kg	0.05	MCERTS	0.82	0.87	0.93	0.65	0.8
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.96	1.1	1.2	0.81	1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.39	0.38	0.56	0.3	0.38
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.87	0.95	1.2	0.72	0.95
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.51	0.58	0.73	0.41	0.56
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.09	0.1	0.13	0.08	0.11
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.62	0.73	0.86	0.53	0.66

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	8.38	9.18	10.4	6.92	8.65
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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_ID_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >C12 - C16 EH_ID_AL	mg/kg	2	MCERTS	8.7	4.6	6.5	10	5.7
TPHCWG - Aliphatic >C16 - C21 EH_ID_AL	mg/kg	8	MCERTS	53	27	28	53	41
TPHCWG - Aliphatic >C21 - C35 EH_ID_AL	mg/kg	8	MCERTS	95	71	77	120	80
TPHCWG - Aliphatic >C5 - C35 EH_ID+HS_ID_AL	mg/kg	10	NONE	160	100	110	180	130
TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010



4041



Environmental Science

Analytical Report Number: 24-022316

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				213478	213479	213480	213481	213482
Sample Reference				TSP09-16E	TSP09-17E	TSP09-18E	TSP09-19E	TSP09-20E
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/05/2024	29/05/2024	29/05/2024	29/05/2024	29/05/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
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	4.8
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	19	22	16	24	26
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	75	100	99	98	120
TPHCWG - Aromatic >EC35 - EC40 EH_CU_ID_AR	mg/kg	10	NONE	94	130	120	120	150
TPH (C10 - C40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	310	280	280	370	330

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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



Analytical Report Number: 24-022316
Project / Site name: Ardrossan North Shore
Your Order No: 53240

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 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
213465	TSP09-03E		160	Loose Fibres	Chrysotile	0.002	0.002
213468	TSP09-06E		161	Loose Fibres	Crocidolite	< 0.001	< 0.001
213470	TSP09-08E		172	Loose Fibres	Amosite	< 0.001	< 0.001
213471	TSP09-09E		172	Loose Fibres	Amosite & Chrysotile	< 0.001	< 0.001
213473	TSP09-11E		168	Loose Fibres	Crocidolite	< 0.001	< 0.001
213474	TSP09-12E		169	Loose Fibres	Chrysotile	< 0.001	< 0.001
213475	TSP09-13E		160	Loose Fibres	Amosite	< 0.001	< 0.001
213476	TSP09-14E		188	Loose Fibres	Chrysotile	< 0.001	< 0.001
213477	TSP09-15E		182	Loose Fibres	Chrysotile	< 0.001	< 0.001
213478	TSP09-16E		161	Loose Fibres	Chrysotile	< 0.001	< 0.001
213479	TSP09-17E		160	Loose Fibres	Amosite & Crocidolite	< 0.001	< 0.001
213480	TSP09-18E		158	Loose Fibres	Amosite	< 0.001	< 0.001
213481	TSP09-19E		158	Loose Fibres	Amosite & Crocidolite	< 0.001	< 0.001
213482	TSP09-20E		159	Loose Fibrous Debris	Amosite	0.001	0.001

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



Analytical Report Number : 24-022316
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 *
213463	TSP09-01E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213464	TSP09-02E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213465	TSP09-03E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213466	TSP09-04E	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation
213467	TSP09-05E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213468	TSP09-06E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213469	TSP09-07E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213470	TSP09-08E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213471	TSP09-09E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213472	TSP09-10E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213473	TSP09-11E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213474	TSP09-12E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213475	TSP09-13E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213476	TSP09-14E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213477	TSP09-15E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213478	TSP09-16E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213479	TSP09-17E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213480	TSP09-18E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213481	TSP09-19E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
213482	TSP09-20E	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation

Analytical Report Number : 24-022316
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - In house method based on references	HSE Report No: B3/1996, HSG 248 (2021), HSG 264 (2012) & SCA Blue Book (draft)	A006B	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 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/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	L076B/L088	D/W	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 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 : 24-029828

Project / Site name: Ardrossan North Shore

Samples received on: 09/07/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 09/07/2024

Your order number: S3240

Analysis completed by: 16/07/2024

Report Issue Number: 1

Report issued on: 16/07/2024

Samples Analysed: 7 soil samples

For & on behalf of i2 Analytical Ltd.

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.



4041



Environmental Science

Analytical Report Number: 24-029828
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	252486	252487	252488	252489	252490
Sample Reference	TSP09-02J	TSP09-03J	TSP09-05J	TSP09-06J	TSP09-08J
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
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	27.4	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	16	10	14	13	13
Total mass of sample received	kg	0.1	NONE	0.4	0.3	0.3	0.4	0.4

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.1	0.08	< 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	0.14	< 0.05	< 0.05	0.09
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.17	0.18	0.11	0.15	0.14
Pyrene	mg/kg	0.05	MCERTS	0.18	0.2	0.12	0.17	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.12	0.13	< 0.05	0.09	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.15	0.14	< 0.05	0.13	0.12
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.16	0.19	< 0.05	0.12	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.06	0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.15	0.15	< 0.05	0.08	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.08	0.07	< 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	0.12	0.11	< 0.05	0.08	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.19	1.47	< 0.80	0.82	< 0.80
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	12	8.4	10	7.8	7.8
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	36	39	33	28	22
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	82	140	83	65	56
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	130	190	130	100	86

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	11	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	18	74	17	38	15
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	18	84	17	38	15

TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	170	340	170	170	120
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Environmental Science

Analytical Report Number: 24-029828
 Project / Site name: Ardrossan North Shore
 Your Order No: S3240

Lab Sample Number				252486	252487	252488	252489	252490
Sample Reference				TSP09-02J	TSP09-03J	TSP09-05J	TSP09-06J	TSP09-08J
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/07/2024	09/07/2024	09/07/2024	09/07/2024	09/07/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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

Analytical Report Number: 24-029828
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				252491	252492
Sample Reference				TSP09-09J	TSP09-13J
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				09/07/2024	09/07/2024
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	14	13
Total mass of sample received	kg	0.1	NONE	0.3	0.4

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	0.09	0.08
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.12	0.13
Pyrene	mg/kg	0.05	MCERTS	0.16	0.19
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.13	0.12
Chrysene	mg/kg	0.05	MCERTS	0.08	0.1
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.18	0.16
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.16
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.09
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.11	0.13

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	0.88	1.16
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 BH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 BH_CU_1D_AL	mg/kg	2	MCERTS	15	13
TPHCWG - Aliphatic >EC16 - EC21 BH_CU_1D_AL	mg/kg	8	MCERTS	42	33
TPHCWG - Aliphatic >EC21 - EC35 BH_CU_1D_AL	mg/kg	8	MCERTS	100	80
TPHCWG - Aliphatic >EC5 - EC35 BH_CU+HS_1D_AL	mg/kg	10	NONE	160	130

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 BH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 BH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 BH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 BH_CU_1D_AR	mg/kg	10	MCERTS	33	39
TPHCWG - Aromatic >EC5 - EC35 BH_CU+HS_1D_AR	mg/kg	10	NONE	33	39

TPH (EC10 - EC40) BH_CU_1D_TOTAL	mg/kg	10	MCERTS	220	200
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4041



Environmental Science

Analytical Report Number: 24-029828

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number				252491	252492
Sample Reference				TSP09-093	TSP09-133
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				09/07/2024	09/07/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0
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

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



4041



Environmental Science

Analytical Report Number : 24-029828

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 *
252486	TSP09-02J	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation
252487	TSP09-03J	None Supplied	None Supplied	Brown loam and sand with vegetation and stones
252488	TSP09-05J	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation
252489	TSP09-06J	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation
252490	TSP09-08J	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation
252491	TSP09-09J	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation
252492	TSP09-13J	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation



4041



Environmental Science

Analytical Report Number : 24-029828

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
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 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/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	L076B/L088	D/W	MCERTS

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

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

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

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

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

The result for sum should be interpreted with caution



Final Report

Report No.: 24-22820-1

Initial Date of Issue: 22-Jul-2024

Re-Issue Details:

Client Sanctus Limited



Project S3240 Androssan North Shore



Date Received: 18-Jul-2024

Date Instructed: 18-Jul-2024

No. of Samples: 7

Turnaround (Wkdays): 3

Results Due: 22-Jul-2024

Date Approved: 22-Jul-2024



For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: S3240 Androssan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-22820	24-22820	24-22820	24-22820	24-22820	24-22820	24-22820	24-22820
Quotation No.: Q24-35340		Chemtest Sample ID.:	1837305	1837306	1837307	1837308	1837309	1837310	1837311	
Order No.: S3240		Client Sample Ref.:	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	
		Client Sample ID.:	TSP09-02K	TSP09-03K	TSP09-05K	TSP09-06K	TSP09-08K	TSP09-09K	TSP09-13K	
		Sample Location:	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Date Sampled:	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	
Determinand	HWOL Code	Accred.	SOP	Units	LOD					
Moisture		N	2030	%	0.020	5.8	5.6	6.9	6.9	7.2
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones and Roots	Stones, Roots and Glass	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam	Loam	Loam	Loam
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	5.6	7.7	10	17	12
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	22	37	66	52	51
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	36	62	120	69	100
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	15	54	89	34	62
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	79	160	280	170	230
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	79	160	280	170	230
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	1.9	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	1.3	3.8	8.9	9.0	10
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	6.3	18	41	37	33
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	2.9	12	14	18	25
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	1.2	13	55	5.9	130
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	11	33	64	65	68
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	12	46	120	71	190
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	90	190	350	240	300
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	91	210	400	240	420
Naphthalene		M	2700	mg/kg	0.10	0.18	< 0.10	0.16	0.12	< 0.10
Acenaphthylene		M	2700	mg/kg	0.10	0.27	< 0.10	0.35	0.16	< 0.10
Acenaphthene		M	2700	mg/kg	0.10	0.27	< 0.10	0.40	< 0.10	< 0.10
Fluorene		M	2700	mg/kg	0.10	0.24	< 0.10	0.46	0.29	< 0.10
Phenanthrene		M	2700	mg/kg	0.10	0.66	0.31	0.74	0.46	0.45
Anthracene		M	2700	mg/kg	0.10	0.25	0.22	0.29	0.17	0.16
Fluoranthene		M	2700	mg/kg	0.10	2.1	1.3	2.0	1.5	1.6

Results - Soil

Project: S3240 Androssan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-22820	24-22820	24-22820	24-22820	24-22820	24-22820	24-22820	24-22820
Quotation No.: Q24-35340		Chemtest Sample ID.:	1837305	1837306	1837307	1837308	1837309	1837310	1837311	
Order No.: S3240		Client Sample Ref.:	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	
		Client Sample ID.:	TSP09-02K	TSP09-03K	TSP09-05K	TSP09-06K	TSP09-08K	TSP09-09K	TSP09-13K	
		Sample Location:	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Date Sampled:	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	
Determinand	HWOL Code	Accred.	SOP	Units	LOD					
Pyrene		M	2700	mg/kg	0.10	2.1	1.8	2.6	1.6	1.9
Benzo[a]anthracene		M	2700	mg/kg	0.10	0.72	0.73	0.61	0.59	0.61
Chrysene		M	2700	mg/kg	0.10	0.77	1.0	0.71	1.0	0.77
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	1.8	1.5	1.9	1.6	1.7
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	0.65	0.52	0.58	0.48	0.65
Benzo[a]pyrene		M	2700	mg/kg	0.10	1.5	1.3	1.5	1.4	1.4
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	1.2	1.2	1.5	1.1	1.2
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	< 0.10	0.33	0.41	0.40	< 0.10
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	1.6	1.9	1.7	1.7	1.8
Total Of 16 PAH's		M	2700	mg/kg	2.0	14	12	16	13	12

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2030	Moisture and Stone Content of Soils (Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description (Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35–C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35–C40	Acetone/Heptane extraction / GCxGC FID detection	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenzo[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7, >C7–C8, >C8–C10 Aromatics: >C5–C7, >C7–C8, >C8–C10	Water extraction / Headspace GCxGC FID detection	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request.

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory.

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

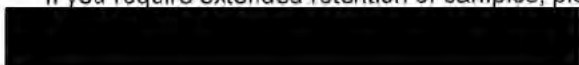
Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:





Final Report

Report No.: 24-24035-1

Initial Date of Issue: 01-Aug-2024

Re-Issue Details:

Client Sanctus Limited

Project S3240 Ardrossan North Shore

Date Received: 29-Jul-2024

Date Instructed: 29-Jul-2024

No. of Samples: 7

Turnaround (Wkdays): 3

Results Due: 31-Jul-2024

Date Approved: 01-Aug-2024

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-24035	24-24035	24-24035	24-24035	24-24035	24-24035	24-24035	24-24035
Quotation No.: Q24-35340		Chemtest Sample ID.:	1842173	1842174	1842175	1842176	1842177	1842178	1842179	
Order No.: S3240		Client Sample Ref.:	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	
		Client Sample ID.:	TSP09-02L	TSP09-03L	TSP09-05L	TSP09-06L	TSP09-08L	TSP09-09L	TSP09-13L	
		Sample Location:	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	TSP09	
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Date Sampled:	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	23-Jul-2024	
Determinand	HWOL Code	Accred.	SOP	Units	LOD					
Moisture		N	2030	%	0.020	6.4	6.9	7.0	8.1	8.0
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones	Stones	Stones and Roots	Stones	Stones and Roots
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	8.1	2.5	< 2.0	2.1	2.5
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	91	32	< 1.0	< 1.0	47
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	140	54	< 2.0	< 2.0	73
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	65	40	< 3.0	< 3.0	53
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	16	18	11	10	17
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	300	130	< 5.0	< 5.0	180
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	320	150	11	10	190
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	14	9.6	< 1.0	< 1.0	14
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	84	37	2.8	2.9	60
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	83	23	< 2.0	< 2.0	36
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	21	11	3.4	3.5	13
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	180	69	< 5.0	< 5.0	110
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	200	80	< 10	< 10	120
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	480	200	< 10	< 10	290
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	520	230	14	14	320
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	< 0.10	0.12	< 0.10	< 0.10	1.0
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.4

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.: 24-24035 24-24035 24-24035 24-24035 24-24035 24-24035 24-24035										
Quotation No.: Q24-35340		Chemtest Sample ID.: 1842173 1842174 1842175 1842176 1842177 1842178 1842179										
Order No.: S3240		Client Sample Ref.: TSP09 TSP09 TSP09 TSP09 TSP09 TSP09 TSP09										
		Client Sample ID.: TSP09-02L TSP09-03L TSP09-05L TSP09-06L TSP09-08L TSP09-09L TSP09-13L										
		Sample Location: TSP09 TSP09 TSP09 TSP09 TSP09 TSP09 TSP09										
		Sample Type: SOIL SOIL SOIL SOIL SOIL SOIL SOIL										
		Date Sampled: 23-Jul-2024 23-Jul-2024 23-Jul-2024 23-Jul-2024 23-Jul-2024 23-Jul-2024 23-Jul-2024										
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.7	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	0.42	0.46	0.39	0.32	5.6	0.28
Anthracene		M	2800	mg/kg	0.10	< 0.10	0.17	0.31	0.18	0.18	2.1	0.12
Fluoranthene		M	2800	mg/kg	0.10	0.66	1.2	1.2	1.0	0.86	7.1	0.88
Pyrene		M	2800	mg/kg	0.10	0.61	1.2	1.1	1.0	0.76	5.5	0.87
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	0.75	1.0	0.53	< 0.10	3.2	0.49
Chrysene		M	2800	mg/kg	0.10	< 0.10	0.66	0.99	0.51	< 0.10	2.6	0.54
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	1.3	1.6	1.0	< 0.10	3.3	0.95
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	0.47	0.93	0.37	< 0.10	1.3	0.37
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	1.1	1.2	0.87	< 0.10	2.5	0.65
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	0.91	1.3	0.64	< 0.10	1.6	0.62
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	0.21	0.79	< 0.10	< 0.10	0.27	0.13
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	0.89	1.2	0.68	< 0.10	1.4	0.54
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0	9.3	12	7.2	2.1	41	6.4

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:



**Treated Stockpile Reuse Validation Form 006 – TSP06****Stockpile ID**

Stockpile ID: TSP06

Material Volume:

1,700 m³

Validation Samples Included

17 No.

Tested Location: Treatment Area 02

Stockpile Creation Date: 07/03/2024

Release Date: TBC

Sampling Data (3No. full rounds for validation to release)

Passing Round 1 (Overall Sample Round 11 of 13)	Sample Date: 02/07/2024 & 10/07/2024	Report Number & Date: 24-028869– 11/07/2024 & 24-22172– 16/07/2024	Lab: i2 & Eurofins
Passing Round 1 (Overall Sample Round 12 of 13)	Sample Date: 10/07/2024 & 16/07/2024	Report Number & Date: 24-22172 – 16/07/2024 & 24-22812 – 22/07/2024	Lab: Eurofins
Passing Round 1 (Overall Sample Round 13 of 13)	Sample Date: 16/07/2024 & 30/07/2024	Report Number & Date: 24-22812 – 22/07/2024 & 24-24570 – 05/08/2024	Lab: Eurofins

Sampling Data**Passing Round 1**

Report Number: 24-028869 & 24-22172

Report Date: 11/07/2024 & 16/07/2024

Sample ID (Sample Names): **24-028869** TSP06-01H, TSP06-02H, TSP06-03H, TSP06-04H, TSP06-05H, TSP06-06H & TSP06-13H, TSP06-14H, TSP06-15H, TSP06-16H, TSP06-17H. **24-22172** – TSP06-07I, TSP06-08I, TSP06-09I, TSP06-10I, TSP06-11I, TSP06-12I

Report ID (Lab): i2 & Eurofins

Comments:

Test Results: PASS / FAIL

No exceedances seen throughout All three rounds are composites of two separate rounds, due to the middle section (locations 7 → 12) having previously been seen as unsuitable. No exceedances seen throughout this round. Average Total TPH = 302 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

Passing Round 2

Report Number: 24-22172 & 24-22812

Report Date: 16/07/2024 & 22/07/2024

Sample ID (Sample Names): **24-22172** - TSP06-01I, TSP06-02I, TSP06-03I, TSP06-04I, TSP06-05I, TSP06-06I & TSP06-13I, TSP06-14I, TSP06-15I, TSP06-16I, TSP06-17I. **24-22812** - TSP06-07J, TSP06-08J, TSP06-09J, TSP06-10J, TSP06-11J, TSP06-12J

Report ID (Lab): Eurofins

Comments:

Test Results: PASS / FAIL

Average Total TPH = 549 mg/kg. For total TPH 15 out of 17 <1,000 mg/kg, with the higher exceedance at TSP06-09J = 1,200 mg/kg. The average total TPH level is significantly below the 1,000 mg/kg threshold and only one other banded TPH failure was recorded (Aromatic TPH >C12-C16 for sample TSP06-16I at 180 mg/kg, only slightly above the modelled threshold of 173.47 mg/kg, with an average level of 37.5 mg/kg for the same band over the 17 No. samples). Following a statistical review, a >95% confidence level is seen with the distribution of total TPH, using the critical value of 1,000mg/kg a normal-normal distribution. Sanctus deem this round of sampling as chemically suitable for reuse.

Passing Round 3

Report Number: 24-22812 & 24-24570

Report Date: 22/07/2024 & 05/08/2024

Sample ID (Sample Names): **24-22812** - TSP06-01J, TSP06-02J, TSP06-03J, TSP06-04J, TSP06-05J, TSP06-06J & TSP06-13J, TSP06-14J, TSP06-15J, TSP06-16J, TSP06-17J. **24-24570** - TSP06-07K, TSP06-08K, TSP06-09K, TSP06-10K, TSP06-11K, TSP06-12K

Report ID (Lab): Eurofins

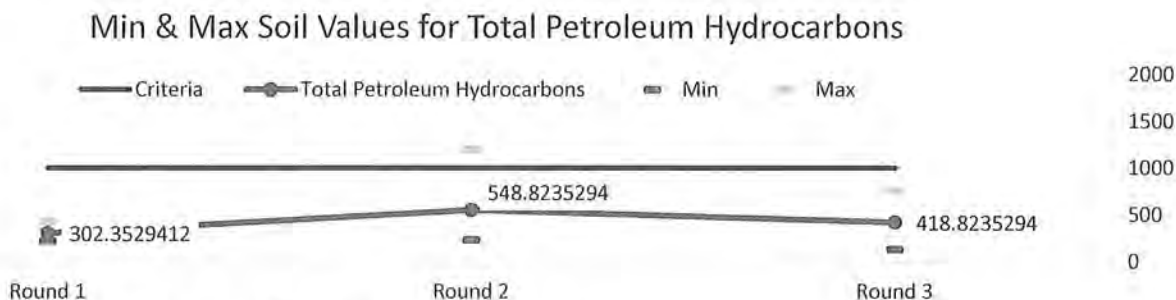
Comments:

Test Results: PASS / FAIL

No exceedances seen throughout this round. Average Total TPH = 419 mg/kg. Sanctus deem this round of sampling as chemically suitable for reuse.

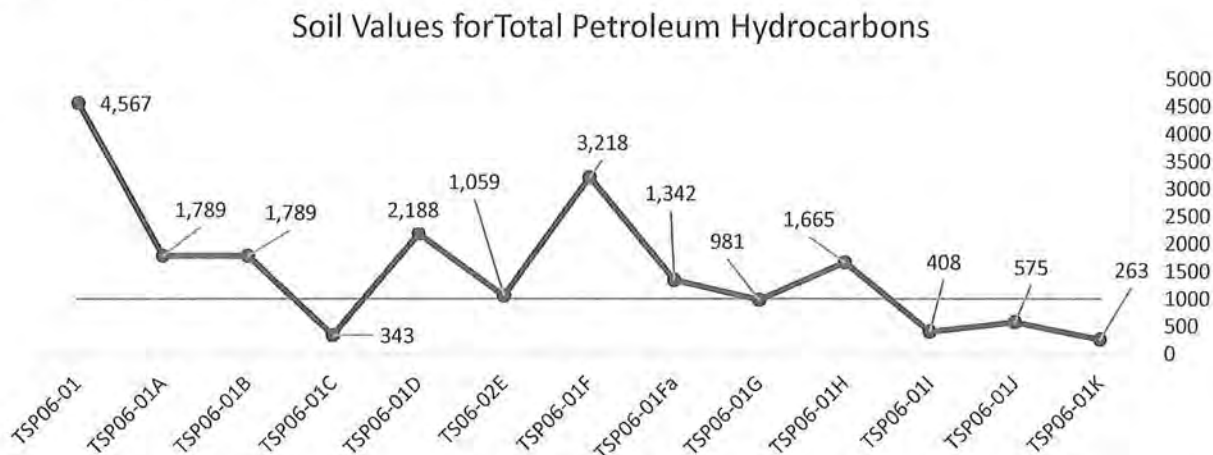
Data Review

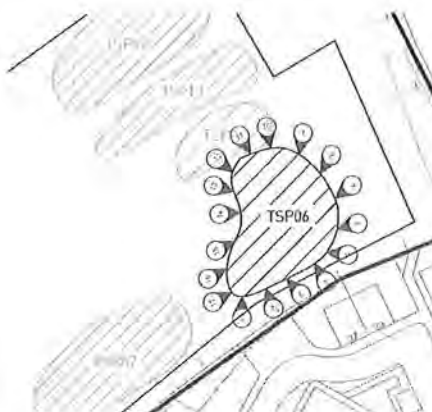
Data Trend for Total TPH levels:



Additional Trendline Data – long term review:

Further to the above spread of data for the final 3 No. rounds, the total TPH levels from March 2024, for the treated stockpile, are shown below. The chart shows a significant decrease in the averaged total TPH levels, and the final result presents a reduction of total TPH level of 94% when compared to the initial material's contents (4,567 mg/kg (7th March 2024), compared to 263 mg/kg (30th July 2024)):



Treated Stockpile Sample Plan:**Sampling Strategy:**

All samples have been taken in compliance with ISO BS 18400, including the following notes:

- Stainless steel/washable sampling devices (trowels, buckets, etc) will be employed for the gathering of the soils samples and cleaned between each sample location so that consecutive samples are not cross-contaminated.
- The sample positions shown above indicate the position relative to the base boundary of the stockpile. All samples are taken from a within the body of the Stockpile, retrieved by an excavator. This is done as a safe sample retrieval option as well as to target an internal representative sample location mid-way from the edge to the centre of the Stockpile, as discussed under BS ISO 18400-104:2018 (Sampling Strategies), subsection 9.
- The subsequent sample depths were between 1-2 m below the Stockpile's surface and a minimum of 4No. characteristic subsamples were taken from an area of approximately 1m² of the newly exposed material. The 4No. or more sub-locations were chosen in a X-pattern and the combined testing soil material is described as a composite sample, following a systematic stratified random sub-sampling location of a 3-dimensional source.
- The mechanically retrieved material is then sub-sampled into the required sampling jars/pots by the Sanctus Engineer as a representative sample from the numbered location.

Naming sequence clarification:

Due to the size of the stockpile and the split of inseparable compliant and non-compliant material, approximately half of this volume (Group α - samples labelled TSP06-01, TSP06-02, TSP06-03, TSP06-04, TSP06-05, TSP06-06 & TSP06-13, TSP06-14, TSP06-15, TSP06-16, TSP06-17) were deemed as suitable initially - sampled between 02/07/2024 and 16/07/2024, after which, no further samples were required. A second set of sampled locations (Group β , tested between 10/07/2024 and 30/07/2024 - TSP06-07, TSP06-08, TSP06-09, TSP06-10, TSP06-11, TSP06-12) were seen to exceed the reuse criteria prior to this later sampling time within TSP06, but remained in their original location and unmixed between other suitable materials (Group α). This was only done as there was such a clear physical delineation between the group α and β sections and sampling was deemed repeatable in the positions shown above.

As such, the material combined exhibited 3 concurrent suitable rounds, even if the two constituent intermingled parts showed suitable test results in two separate time blocks.

Sanctus confirm that during this time, this Stockpiled material was not turned (as hydrocarbon deterioration levels were deemed sufficient without mechanical aeration during this period) and that all sampling positions were consistent and repeatable from the areas indicated on the attached Treated Stockpile sample plan.



Sanctus Declaration:

We confirm that:

1. The material that this form relates to, has been sampled representatively, as discussed above and in accordance with the client's requirements (Ardrossan Remediation Specification Rev E).
2. The material has been proven to be suitable for REUSE on site as there are 3 No. consecutive rounds, with a statistical insignificant number of exceedances of the accepted reuse criteria, with exceedances only seen in round 2. No exceedances are seen within the first and third monitoring rounds and each round's average for the total TPH levels have been significantly below the 1,000 mg/kg threshold level. Round 2 returns a confidence level of >95% confidence when compared to the statistical confidence critical level of 1,000mg/kg for total TPH.
3. The laboratory analysis results are representative of the materials investigated.
4. The material released will also be recorded spatially at its reuse location



Record of reuse

For Sanctus Use Only:
Movement into site:

Approved for reuse:

Beginning of Movement from stockpile:

End of



Legend:
— Site Boundary
▨ Treated Stockpile Or Sample Location



sanctus

Drawing Notes:
Based on client supplied DWG -
ARDROSSAN 20 produced by Aird Group
23/03/2020. All locations are approximate.
Must be printed in colour.

Site Address:
Raylight Place
Ardrossan
North Ayrshire
Scotland

Rev.	Description	Date
A	First Issue	02/08/2024

APPROVED

Project Name:
North Shore, Ardrossan

Client:
North Ayrshire Council

Drawing Title:
Treated Stockpile 06 Sample Locations

Contract No:
53240

Drawing No:
03240/074

Scale @ A3:
1:1000

1 of 1



Analytical Report Number : 24-028869

Project / Site name: Ardrossan North Shore

Samples received on: 03/07/2024

Your job number: S3240

**Samples instructed on/
Analysis started on:** 04/07/2024

Your order number: S3240

Analysis completed by: 10/07/2024

Report Issue Number: 1

Report issued on: 11/07/2024

Samples Analysed: 17 soil samples



For & on behalf of i2 Analytical Ltd.

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: 24-028869

Project / Site name: Ardrossan North Shore

Your Order No: S3240

Lab Sample Number	247369	247370	247371	247372	247373
Sample Reference	TSP06-01H	TSP06-02H	TSP06-03H	TSP06-04H	TSP06-05H
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
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	5.5	6.9	6.5	6	6.4
Total mass of sample received	kg	0.1	NONE	1.3	1.3	1.3	1.3	1.2

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	I2J	I2J	EC	EC	EC
Actinolite detected	Type	N/A	ISO 17025	-	-	-	-	-
Amosite detected	Type	N/A	ISO 17025	-	-	-	-	-
Anthophyllite detected	Type	N/A	ISO 17025	-	-	-	-	-
Chrysotile detected	Type	N/A	ISO 17025	-	-	-	-	-
Crocidolite detected	Type	N/A	ISO 17025	-	-	-	-	-
Tremolite detected	Type	N/A	ISO 17025	-	-	-	-	-

Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	-	-	-	-
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Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	-	-	-	-
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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	0.07	< 0.05	< 0.05	0.13	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.12	0.08	0.08	0.18	0.07
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.14	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	0.15	< 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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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_10_AL	mg/kg	1	MCERTS	< 1.0	3.2	4.4	1.7	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_10_AL	mg/kg	2	MCERTS	18	23	17	18	13
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_10_AL	mg/kg	8	MCERTS	48	50	38	50	45
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_10_AL	mg/kg	8	MCERTS	73	74	55	84	73
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_10_AL	mg/kg	10	NONE	140	150	110	150	130

TPHCWG - Aromatic >EC5 - EC7 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Analytical Report Number: 24-028869
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				247369	247370	247371	247372	247373			
Sample Reference				TSP06-01H	TSP06-02H	TSP06-03H	TSP06-04H	TSP06-05H			
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Date Sampled				02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024			
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status								
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}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
TPHCWG - Aromatic >EC12 - EC16 _{EH,CU,10,AR}	mg/kg	2	MCERTS	7.7	5.3	5.6	14	4.9			
TPHCWG - Aromatic >EC16 - EC21 _{EH,CU,10,AR}	mg/kg	10	MCERTS	34	36	30	56	44			
TPHCWG - Aromatic >EC21 - EC35 _{EH,CU,10,AR}	mg/kg	10	MCERTS	64	69	63	100	94			
TPHCWG - Aromatic >EC5 - EC35 _{EH,CU+HS,10,AR}	mg/kg	10	NONE	110	110	99	170	140			
TPH (EC10 - EC40) _{EH,CU,10,TOTAL}				mg/kg	10	MCERTS	260	270	220	350	290
VOCs											
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
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			

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



Analytical Report Number: 24-028869
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	247374	247375	247376	247377	247378
Sample Reference	TSP06-06H	TSP06-07H	TSP06-08H	TSP06-09H	TSP06-10H
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
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	5.8	8.8	9.2	6.8	8.8
Total mass of sample received	kg	0.1	NONE	1.3	1.3	1.3	1.3	1.2

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	EC	EC	EC	EC	EC
Actinolite detected	Type	N/A	ISO 17025	-	-	Not-detected	Not-detected	-
Amosite detected	Type	N/A	ISO 17025	-	-	Detected	Not-detected	-
Anthophyllite detected	Type	N/A	ISO 17025	-	-	Not-detected	Not-detected	-
Chrysotile detected	Type	N/A	ISO 17025	-	-	Not-detected	Detected	-
Crocidolite detected	Type	N/A	ISO 17025	-	-	Not-detected	Not-detected	-
Tremolite detected	Type	N/A	ISO 17025	-	-	Not-detected	Not-detected	-

Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	-	0.001	< 0.001	-
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Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	-	Bitumen	Loose Fibres	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.17	0.21	0.16	0.18
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.17	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.11	0.14	0.13	0.12
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.09	0.26	< 0.05	0.13
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.19	0.91	0.5	0.31
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.57	< 0.05	0.16
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.32	2.3	0.79	0.51
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.67	3.8	1.2	0.88
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.16	1.7	0.39	0.83
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.52	2	0.66	0.91
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.3	1.8	0.42	0.44
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.06	0.56	0.17	0.44
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.22	1.8	0.42	0.28
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.09	0.83	0.23	0.15
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.31	< 0.05	0.11
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.17	1.1	0.29	0.21

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	3.08	18.5	5.37	5.66
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS ID AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS ID AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS ID AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH CU ID AL	mg/kg	1	MCERTS	< 1.0	27	42	27	66
TPHCWG - Aliphatic >EC12 - EC16 EH CU ID AL	mg/kg	2	MCERTS	13	490	390	620	600
TPHCWG - Aliphatic >EC16 - EC21 EH CU ID AL	mg/kg	8	MCERTS	38	720	630	640	730
TPHCWG - Aliphatic >EC21 - EC35 EH CU ID AL	mg/kg	8	MCERTS	62	870	1200	1100	860
TPHCWG - Aliphatic >EC35 - EC35 EH CU HS ID AL	mg/kg	10	NONE	110	2100	2200	2400	2300

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

Analytical Report Number: 24-028869
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				247374	247375	247376	247377	247378
Sample Reference				TSP06-06H	TSP06-07H	TSP06-08H	TSP06-09H	TSP06-10H
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPHCWG - Aromatic >EC8 - EC10 EH_CU_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	mg/kg	1	MCERTS	< 1.0	2.8	1.2	2.4	8
TPHCWG - Aromatic >EC12 - EC16 EH_CU_10_AR	mg/kg	2	MCERTS	6.1	150	200	210	190
TPHCWG - Aromatic >EC16 - EC21 EH_CU_10_AR	mg/kg	10	MCERTS	34	620	450	500	530
TPHCWG - Aromatic >EC21 - EC35 EH_CU_10_AR	mg/kg	10	MCERTS	68	920	660	740	960
TPHCWG - Aromatic >EC35 - EC35 EH_CU_10_AR	mg/kg	10	NONE	110	1700	1300	1400	1700
TPH (EC10 - EC40) EH_CU_10_TOTAL				230	4000	3800	4100	4200
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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

Analytical Report Number: 24-028869
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	247379	247380	247381	247382	247383
Sample Reference	TSP06-11H	TSP06-12H	TSP06-13H	TSP06-14H	TSP06-15H
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
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	8.4	8.1	6	6.1	6.7
Total mass of sample received	kg	0.1	NONE	1.3	1.2	1.3	1.2	1.3

Asbestos

Asbestos in Soil Detected/Not Detected	Type	I/A	ISO 17025	Not-detected	Detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	I/A	I/A	I/A	EC	EC	EC	EC	EC
Actinolite detected	Type	I/A	ISO 17025	-	Not-detected	-	-	-
Amosite detected	Type	I/A	ISO 17025	-	Detected	-	-	-
Anthophyllite detected	Type	I/A	ISO 17025	-	Not-detected	-	-	-
Chrysotile detected	Type	I/A	ISO 17025	-	Not-detected	-	-	-
Crocidolite detected	Type	I/A	ISO 17025	-	Not-detected	-	-	-
Tremolite detected	Type	I/A	ISO 17025	-	Not-detected	-	-	-

Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	0.003	-	-	-
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Asbestos Containing Material Types Detected (ACM)	Type	I/A	ISO 17025	-	Loose Fibres	-	-	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.23	< 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	0.07	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.61	0.14	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.15	< 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	0.41	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.87	0.95	0.09	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.23	0.25	0.07	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.59	0.68	0.09	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	0.07	< 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	0.17	< 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	0.26	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2.74	2.85	< 0.80	< 0.80	< 0.80
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Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_10_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_10_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_10_AL	mg/kg	1	MCERTS	83	33	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_10_AL	mg/kg	2	MCERTS	470	600	19	9.7	21
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_10_AL	mg/kg	8	MCERTS	700	750	57	34	59
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_10_AL	mg/kg	8	MCERTS	1200	990	89	49	84
TPHCWG - Aliphatic >EC35 - EC35 EH_CU_10_AL	mg/kg	10	NONE	2400	2400	170	93	160
TPHCWG - Aromatic >EC5 - EC7 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_10_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Analytical Report Number: 24-028869
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				247379	247380	247381	247382	247383
Sample Reference				TSP06-11H	TSP06-12H	TSP06-13H	TSP06-14H	TSP06-15H
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
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	9.2	6.7	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_ID_AR}	mg/kg	2	MCERTS	210	230	17	13	16
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_ID_AR}	mg/kg	10	MCERTS	550	560	70	45	59
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_ID_AR}	mg/kg	10	MCERTS	980	890	130	87	130
TPHCWG - Aromatic >EC5 - EC35 _{EH_CU+HS_ID_AR}	mg/kg	10	NONE	1800	1700	220	150	200
TPH (EC10 - EC40) _{EH_CU_ID_TOTAL}	mg/kg	10	MCERTS	4500	4400	430	260	390

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
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

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

Analytical Report Number: 24-028869
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number	247384	247385
Sample Reference	TSP06-16H	TSP06-17H
Sample Number	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied
Date Sampled	02/07/2024	02/07/2024
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	6.3	5.7
Total mass of sample received	kg	0.1	NONE	1.3	1.2

Asbestos					
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	EC	EC
Actinolite detected	Type	N/A	ISO 17025	-	-
Amosite detected	Type	N/A	ISO 17025	-	-
Anthophyllite detected	Type	N/A	ISO 17025	-	-
Chrysotile detected	Type	N/A	ISO 17025	-	-
Crocidolite detected	Type	N/A	ISO 17025	-	-
Tremolite detected	Type	N/A	ISO 17025	-	-

Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	-
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Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	-
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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	0.3	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.37	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.92	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.87	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.3	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.51	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.1	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.56	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.17	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.51	< 0.05

Total PAH					
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	6.61	< 0.80

Petroleum Hydrocarbons					
TPHCWG - Aliphatic >EC5 - EC6 _{H5,1D,AL}	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 _{H5,1D,AL}	mg/kg	0.02	NONE	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 _{H5,1D,AL}	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	MCERTS	2.7	2.9
TPHCWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	18	20
TPHCWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	51	52
TPHCWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	81	79
TPHCWG - Aliphatic >EC5 - EC35 _{EH,CU+H5,1D,AL}	mg/kg	10	NONE	150	150
TPHCWG - Aromatic >EC5 - EC7 _{H5,1D,AR}	mg/kg	0.01	NONE	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{H5,1D,AR}	mg/kg	0.01	NONE	< 0.010	< 0.010



Environmental Science

Analytical Report Number: 24-028869
Project / Site name: Ardrossan North Shore
Your Order No: S3240

Lab Sample Number				247384	247385
Sample Reference				TSP06-16H	TSP06-17H
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				02/07/2024	02/07/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
TPHCWG - Aromatic >EC8 - EC10 EH ₁ CU ₁ ID ₁ AR	mg/kg	0.05	NONE	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH ₁ CU ₁ ID ₁ AR	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH ₁ CU ₁ ID ₁ AR	mg/kg	2	MCERTS	14	5
TPHCWG - Aromatic >EC16 - EC21 EH ₁ CU ₁ ID ₁ AR	mg/kg	10	MCERTS	57	41
TPHCWG - Aromatic >EC21 - EC35 EH ₁ CU ₁ ID ₁ AR	mg/kg	10	MCERTS	92	68
TPHCWG - Aromatic >EC35 - EC40 EH ₁ CU ₁ ID ₁ AR	mg/kg	10	NONE	160	110
TPH (EC10 - EC40) EH ₁ CU ₁ ID ₁ TOTAL				330	280

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0
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

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



Analytical Report Number: 24-028869
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 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
247376	TSP06-08H		164	Bitumen	Amosite	0.001	0.001
247377	TSP06-09H		160	Loose Fibres	Chrysotile	< 0.001	< 0.001
247380	TSP06-12H		177	Loose Fibres	Amosite	0.003	0.003

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

Analytical Report Number : 24-028869
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 *
247369	TSP06-01H	None Supplied	None Supplied	Brown sand with gravel
247370	TSP06-02H	None Supplied	None Supplied	Brown sand with gravel
247371	TSP06-03H	None Supplied	None Supplied	Brown sand with gravel
247372	TSP06-04H	None Supplied	None Supplied	Brown sand with gravel
247373	TSP06-05H	None Supplied	None Supplied	Brown sand with gravel
247374	TSP06-06H	None Supplied	None Supplied	Brown sand with gravel
247375	TSP06-07H	None Supplied	None Supplied	Brown clay and sand with gravel
247376	TSP06-08H	None Supplied	None Supplied	Brown clay and sand with gravel
247377	TSP06-09H	None Supplied	None Supplied	Brown clay and sand with gravel
247378	TSP06-10H	None Supplied	None Supplied	Brown clay and sand with gravel
247379	TSP06-11H	None Supplied	None Supplied	Brown clay and sand with gravel
247380	TSP06-12H	None Supplied	None Supplied	Brown clay and sand with gravel
247381	TSP06-13H	None Supplied	None Supplied	Brown sand with gravel
247382	TSP06-14H	None Supplied	None Supplied	Brown sand with gravel
247383	TSP06-15H	None Supplied	None Supplied	Brown sand with gravel
247384	TSP06-16H	None Supplied	None Supplied	Brown sand with gravel
247385	TSP06-17H	None Supplied	None Supplied	Brown sand with gravel



Analytical Report Number : 24-028869
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references	HSE Report No: 83/1996, HSG 248 (2021), HSG 264 (2012) & SCA Blue Book (draft)	A006B	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 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/L068	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/L068	D/W	MCERTS

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

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

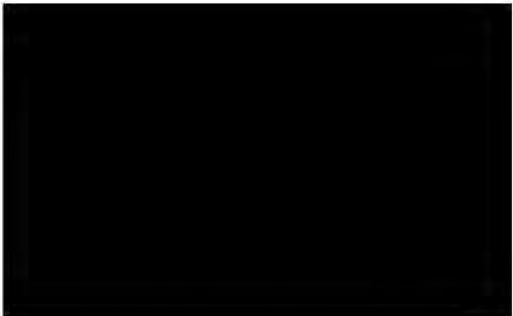
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

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

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

The result for sum should be interpreted with caution



Amended Report

Report No.: 24-22172-3

Initial Date of Issue: 16-Jul-2024 Date of Re-Issue: 29-Jul-2024

Re-Issue Details: This report has been revised and directly supersedes 24-22172-2 in its entirety

Client: Sanctus Limited



Project: S3240 Ardrossan North Shore



No. of Samples: 17

Turnaround (Wkdays): 12

Date Approved: 29-Jul-2024

Date Received: 12-Jul-2024

Date Instructed: 12-Jul-2024

Results Due: 29-Jul-2024



For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:		24-22172	24-22172	24-22172	24-22172	24-22172	24-22172	24-22172	24-22172	24-22172
Quotation No.: Q24-35340		Chemtest Sample ID.:		1834440	1834441	1834442	1834443	1834444	1834445	1834446	1834447	1834447
Order No.: S3240		Client Sample Ref.:		TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06
		Client Sample ID.:		TSP06-01I	TSP06-02I	TSP06-03I	TSP06-04I	TSP06-05I	TSP06-06I	TSP06-07I	TSP06-08I	TSP06-08I
		Sample Location:		TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:		10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
Moisture		N	2030	%	0.020	11	10	11	14	10	11	9.7
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones	Stones and Roots	Stones and Roots	Stones	Stones	Stones and Roots	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	17	40	15	24	20	23	11
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	30	210	40	85	52	86	34
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	17	360	41	95	86	96	32
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	18	110	19	29	20	44	18
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	82	720	120	230	180	250	95
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	82	720	120	230	180	250	95
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	2.4	15	2.6	2.8	5.6	3.2	1.2
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	75	76	22	26	65	19	28
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	190	120	59	49	120	47	76
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	50	85	27	45	67	34	30
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	17	64	4.1	16	43	38	6.2
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	310	290	110	120	260	100	130
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	330	360	120	140	300	140	140
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	400	1000	230	360	440	350	230
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	410	1100	230	370	480	390	240
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	0.88	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.: 24-22172 24-22172 24-22172 24-22172 24-22172 24-22172 24-22172 24-22172 24-22172										
Quotation No.: Q24-35340		Chemtest Sample ID.: 1834440 1834441 1834442 1834443 1834444 1834445 1834446 1834447										
Order No.: S3240		Client Sample Ref.: TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06										
		Client Sample ID.: TSP06-01I TSP06-02I TSP06-03I TSP06-04I TSP06-05I TSP06-06I TSP06-07I TSP06-08I										
		Sample Location: TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06										
		Sample Type: SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL										
		Date Sampled: 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024										
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.40	< 0.10	< 0.10	0.35	< 0.10	< 0.10	0.26
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.17	< 0.10	< 0.10	0.23
Fluoranthene		M	2800	mg/kg	0.10	0.66	< 0.10	< 0.10	0.56	< 0.10	< 0.10	0.66
Pyrene		M	2800	mg/kg	0.10	0.63	< 0.10	< 0.10	0.58	< 0.10	< 0.10	0.70
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	2.6	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-22172	24-22172	24-22172	24-22172	24-22172	24-22172	24-22172	24-22172	24-22172	24-22172
Quotation No.: Q24-35340		Chemtest Sample ID.:	1834448	1834449	1834450	1834451	1834452	1834453	1834454	1834455		
Order No.: S3240		Client Sample Ref.:	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06
		Client Sample ID.:	TSP06-09I	TSP06-10I	TSP06-11I	TSP06-12I	TSP06-13I	TSP06-14I	TSP06-15I	TSP06-16I		
		Sample Location:	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024	10-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
Moisture		N	2030	%	0.020	10	11	10	10	9.5	9.9	11
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	13	13	62	23	12	19	19
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	47	38	86	64	46	54	62
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	47	46	59	62	67	54	67
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	28	25	23	20	26	26	34
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	130	120	230	170	150	150	180
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	130	120	230	170	150	150	180
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	2.1	1.1	4.6	3.2	2.1	3.6	3.3
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	16	22	16	55	22	33	21
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	72	70	36	120	69	84	74
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	35	41	23	55	57	44	46
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	14	9.1	5.5	26	24	11	16
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	120	130	80	240	150	160	140
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	140	140	85	260	170	180	160
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	260	250	310	400	300	320	320
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	270	260	320	430	330	330	340
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	1.1	< 0.10	< 0.10	1.1	< 0.10	1.1	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.: 24-22172 24-22172 24-22172 24-22172 24-22172 24-22172 24-22172 24-22172 24-22172											
Quotation No.: Q24-35340		Chemtest Sample ID.: 1834448 1834449 1834450 1834451 1834452 1834453 1834454 1834455											
Order No.: S3240		Client Sample Ref.: TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06											
		Client Sample ID.: TSP06-09I TSP06-10I TSP06-11I TSP06-12I TSP06-13I TSP06-14I TSP06-15I TSP06-16I											
		Sample Location: TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06											
		Sample Type: SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL											
		Date Sampled: 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024 10-Jul-2024											
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Acenaphthene		M	2800	mg/kg	0.10	0.13	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.29	< 0.10	< 0.10	0.16	< 0.10	< 0.10	2.0	0.30
Anthracene		M	2800	mg/kg	0.10	0.15	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.38	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	0.49	< 0.10	< 0.10	0.16	< 0.10	0.22	1.6	0.43
Pyrene		M	2800	mg/kg	0.10	0.51	< 0.10	< 0.10	0.19	< 0.10	0.25	1.8	0.43
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	0.22	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	0.33	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	0.25	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	0.27	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	4.6	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	5.8	2.2

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-22172
Quotation No.: Q24-35340		Chemtest Sample ID.:				1834456
Order No.: S3240		Client Sample Ref.:				TSP06
		Client Sample ID.:				TSP06-171
		Sample Location:				TSP06
		Sample Type:				SOIL
		Date Sampled:				10-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Moisture		N	2030	%	0.020	11
Soil Colour		N	2040		N/A	Brown
Other Material		N	2040		N/A	Stones
Soil Texture		N	2040		N/A	Sand
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	44
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	130
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	140
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	40
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	360
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	360
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	4.5
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	24
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	54
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	56
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	22
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	140
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	160
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	490
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	520
Benzene		M	2760	µg/kg	1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	0.99
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10

Results - Soil

Project: S3240 Ardrossan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-22172
Quotation No.: Q24-35340		Chemtest Sample ID.:				1834456
Order No.: S3240		Client Sample Ref.:				TSP06
		Client Sample ID.:				TSP06-171
		Sample Location:				TSP06
		Sample Type:				SOIL
		Date Sampled:				10-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Acenaphthene		M	2800	mg/kg	0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.16
Anthracene		M	2800	mg/kg	0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	0.21
Pyrene		M	2800	mg/kg	0.10	0.24
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:

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Final Report

Report No.: 24-22812-1
Initial Date of Issue: 22-Jul-2024

Re-Issue Details:

Client Sanctus Limited

Project S3240 Androssan North Shore

Date Received: 18-Jul-2024

Date Instructed: 18-Jul-2024

No. of Samples: 17

Turnaround (Wkdays): 3

Results Due: 22-Jul-2024

Date Approved: 22-Jul-2024

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: S3240 Androssan North Shore

Client: Sanctus Limited		Chemtest Job No.: 24-22812											
Quotation No.: Q24-35340		Chemtest Sample ID.: 1837275											
Order No.: S3240		Client Sample Ref.: TSP06											
		Client Sample ID.: TSP06-01J											
		Sample Location: TSP06											
		Sample Type: SOIL											
		Date Sampled: 16-Jul-2024											
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Moisture		N	2030	%	0.020	7.4	8.1	8.2	8.4	7.9	7.9	8.6	7.5
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam	Loam	Loam	Loam	Loam	Loam	Loam
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	22	17	13	13	18	40	15	14
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	80	110	76	53	150	180	88	95
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	170	210	150	140	240	230	170	240
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	140	130	90	130	170	130	110	240
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	21	10	< 10	26	< 10	< 10	< 10	47
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	420	470	330	340	570	580	390	590
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	440	480	330	360	570	580	390	640
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	2.5	< 1.0	< 1.0	< 1.0	1.9	16	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	19	15	13	9.0	19	33	9.6	9.3
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	47	60	52	38	88	71	51	65
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	16	18	21	18	18	16	14	25
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	56	43	73	28	56	42	53	33
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	84	94	86	65	130	140	75	99
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	140	140	160	92	180	180	130	130
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	500	560	420	400	700	720	460	690
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	580	610	490	450	760	760	520	770
Naphthalene		M	2700	mg/kg	0.10	0.39	0.38	0.45	0.78	0.16	0.38	0.41	0.41
Acenaphthylene		M	2700	mg/kg	0.10	0.36	0.42	0.22	0.24	0.46	0.52	0.41	0.53
Acenaphthene		M	2700	mg/kg	0.10	0.40	0.26	0.65	0.80	0.36	0.42	0.55	0.46
Fluorene		M	2700	mg/kg	0.10	0.41	0.63	0.55	0.57	0.34	0.93	0.70	0.63
Phenanthrene		M	2700	mg/kg	0.10	1.3	1.5	4.4	4.7	4.8	2.0	0.77	1.2
Anthracene		M	2700	mg/kg	0.10	0.47	0.26	1.2	1.1	1.2	0.75	0.27	0.59
Fluoranthene		M	2700	mg/kg	0.10	3.4	1.9	5.7	4.6	8.7	3.8	2.4	4.0

Results - Soil

Project: S3240 Androssan North Shore

Client: Sanctus Limited		Chemtest Job No.:		24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	
Quotation No.: Q24-35340		Chemtest Sample ID.:		1837275	1837276	1837277	1837278	1837279	1837280	1837281	1837282		
Order No.: S3240		Client Sample Ref.:		TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06		
		Client Sample ID.:		TSP06-01J	TSP06-02J	TSP06-03J	TSP06-04J	TSP06-05J	TSP06-06J	TSP06-07J	TSP06-08J		
		Sample Location:		TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06		
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
		Date Sampled:		16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024		
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Pyrene		M	2700	mg/kg	0.10	3.7	2.0	5.8	4.4	8.0	3.9	3.0	4.4
Benzo[a]anthracene		M	2700	mg/kg	0.10	1.6	0.99	1.9	1.5	2.6	1.5	0.74	2.0
Chrysene		M	2700	mg/kg	0.10	2.0	0.84	2.4	1.9	3.4	1.8	0.91	2.4
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	3.5	1.6	2.5	2.1	3.9	3.6	2.4	4.3
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	1.2	0.55	0.89	0.79	1.4	1.5	0.83	1.4
Benzo[a]pyrene		M	2700	mg/kg	0.10	2.7	1.5	2.0	1.5	2.6	2.9	1.9	3.3
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	2.2	1.0	1.5	0.98	1.7	2.3	1.8	2.7
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	0.69	< 0.10	0.39	0.17	0.47	0.56	0.46	0.83
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	2.8	1.6	1.6	1.0	1.9	2.8	2.5	3.4
Total Of 16 PAH's		M	2700	mg/kg	2.0	27	15	32	27	42	30	20	33

Results - Soil

Project: S3240 Androssan North Shore

Client: Sanctus Limited		Chemtest Job No.:	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812	24-22812
Quotation No.: Q24-35340		Chemtest Sample ID.:	1837283	1837284	1837285	1837286	1837287	1837288	1837289	1837290			
Order No.: S3240		Client Sample Ref.:	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06
		Client Sample ID.:	TSP06-09J	TSP06-10J	TSP06-11J	TSP06-12J	TSP06-13J	TSP06-14J	TSP06-15J	TSP06-16J			
		Sample Location:	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06	TSP06			
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
		Date Sampled:	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024	16-Jul-2024			
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Moisture		N	2030	%	0.020	5.5	7.5	8.4	7.8	7.6	7.3	7.2	7.8
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam	Loam	Loam	Loam	Loam	Loam	Loam
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	18	11	16	20	14	10	8.9	13
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	120	58	110	120	72	65	30	38
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	270	99	210	190	100	190	45	57
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	420	57	63	140	71	210	18	23
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	160	< 10	< 10	11	< 10	37	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	830	230	390	470	260	470	100	130
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	990	230	390	480	260	510	100	130
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	2.4	< 1.0	< 1.0	3.1	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	18	5.0	15	17	9.3	7.7	4.2	5.6
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	72	30	65	67	35	54	15	13
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	89	13	20	12	6.9	13	3.9	4.7
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	75	30	330	38	8.8	22	1.2	1.3
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	180	47	100	99	52	75	23	24
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	260	77	430	140	61	97	24	25
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	1000	270	490	570	310	550	120	160
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	1200	300	820	620	320	610	130	160
Naphthalene		M	2700	mg/kg	0.10	0.68	0.43	0.19	0.35	0.42	0.36	0.56	0.44
Acenaphthylene		M	2700	mg/kg	0.10	0.54	0.60	0.61	0.59	0.55	0.52	0.52	0.57
Acenaphthene		M	2700	mg/kg	0.10	0.63	0.59	0.68	0.51	0.81	0.42	0.67	0.68
Fluorene		M	2700	mg/kg	0.10	0.77	0.54	0.66	0.54	0.99	1.2	1.0	0.92
Phenanthrene		M	2700	mg/kg	0.10	1.2	0.81	1.1	1.5	0.62	1.8	0.90	1.1
Anthracene		M	2700	mg/kg	0.10	0.53	0.44	0.58	0.47	0.12	0.55	0.43	0.45
Fluoranthene		M	2700	mg/kg	0.10	3.4	3.5	2.0	2.9	1.8	3.7	2.8	3.0

Results - Soil

Project: S3240 Androssan North Shore

Client: Sanctus Limited		Chemtest Job No.: 24-22812 24-22812 24-22812 24-22812 24-22812 24-22812 24-22812 24-22812 24-22812 24-22812											
Quotation No.: Q24-35340		Chemtest Sample ID.: 1837283 1837284 1837285 1837286 1837287 1837288 1837289 1837290											
Order No.: S3240		Client Sample Ref.: TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06											
		Client Sample ID.: TSP06-09J TSP06-10J TSP06-11J TSP06-12J TSP06-13J TSP06-14J TSP06-15J TSP06-16J											
		Sample Location: TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06 TSP06											
		Sample Type: SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL											
		Date Sampled: 16-Jul-2024 16-Jul-2024 16-Jul-2024 16-Jul-2024 16-Jul-2024 16-Jul-2024 16-Jul-2024 16-Jul-2024 16-Jul-2024 16-Jul-2024 16-Jul-2024											
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Pyrene		M	2700	mg/kg	0.10	3.3	3.9	2.1	2.9	2.0	4.0	3.3	3.4
Benzo[a]anthracene		M	2700	mg/kg	0.10	1.7	2.0	1.2	1.0	0.50	1.4	1.3	1.9
Chrysene		M	2700	mg/kg	0.10	2.6	2.0	0.97	0.98	0.56	1.7	1.1	1.9
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	3.4	3.3	2.2	2.7	1.8	3.2	3.6	3.5
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	1.3	1.1	0.97	0.98	0.54	1.0	1.5	1.4
Benzo[a]pyrene		M	2700	mg/kg	0.10	2.7	2.9	1.6	2.4	1.5	2.5	2.7	2.7
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	2.4	2.2	1.4	1.7	1.3	2.1	1.9	2.5
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	0.75	0.54	0.16	0.54	0.45	0.47	0.61	0.97
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	2.7	3.2	1.9	2.8	1.8	3.3	2.5	2.8
Total Of 16 PAH's		M	2700	mg/kg	2.0	29	28	18	23	16	28	25	28

Results - Soil

Project: S3240 Androssan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-22812
Quotation No.: Q24-35340		Chemtest Sample ID.:				1837291
Order No.: S3240		Client Sample Ref.:				TSP06
		Client Sample ID.:				TSP06-17J
		Sample Location:				TSP06
		Sample Type:				SOIL
		Date Sampled:				16-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Moisture		N	2030	%	0.020	7.0
Soil Colour		N	2040		N/A	Brown
Other Material		N	2040		N/A	Stones and Roots
Soil Texture		N	2040		N/A	Loam
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	< 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	13
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	110
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	220
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	130
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	470
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	470
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	16
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	88
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	20
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	74
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	120
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	200
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	600
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	670
Naphthalene		M	2700	mg/kg	0.10	0.38
Acenaphthylene		M	2700	mg/kg	0.10	0.41
Acenaphthene		M	2700	mg/kg	0.10	0.47
Fluorene		M	2700	mg/kg	0.10	0.57
Phenanthrene		M	2700	mg/kg	0.10	0.68
Anthracene		M	2700	mg/kg	0.10	0.40
Fluoranthene		M	2700	mg/kg	0.10	2.9

Results - Soil

Project: S3240 Androssan North Shore

Client: Sanctus Limited		Chemtest Job No.:				24-22812
Quotation No.: Q24-35340		Chemtest Sample ID.:				1837291
Order No.: S3240		Client Sample Ref.:				TSP06
		Client Sample ID.:				TSP06-17J
		Sample Location:				TSP06
		Sample Type:				SOIL
		Date Sampled:				16-Jul-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Pyrene		M	2700	mg/kg	0.10	0.87
Benzo[a]anthracene		M	2700	mg/kg	0.10	1.8
Chrysene		M	2700	mg/kg	0.10	1.8
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	3.3
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	1.2
Benzo[a]pyrene		M	2700	mg/kg	0.10	2.5
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	2.1
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	0.85
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	2.5
Total Of 16 PAH's		M	2700	mg/kg	2.0	23

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	