Sedamyl UK

Denison Road, Selby

Quantitative Risk Assessment for Land Contamination

Rev A

January 2020

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting

REPORT TITLE:	**Quantitative Risk Assessment for Land Contamination**
REPORT NUMBER:	**Rev A FINAL**
CLIENT NAME:	**Sedamyl UK**

Author	**Signed**	**Date**
Duncan Scott		23/01/20
QA Approved	**Signed**	**Date**
Claire Lilley		23/01/20

Issue 1	Revision A: Final	23/01/20

Table of Contents

Appendices

1.0 Introduction

1.1 Appointments

1.1.1 Vertase FLI Limited (VertaseFLI) has been appointed by Blyth & Blyth Consulting Engineers Limited (Blyth & Blyth) to undertake a Generic Quantitative Risk Assessment (GQRA) for land contamination based on Phase 2 intrusive site investigation information obtained for areas of land intended for development on the Sedamyl UK (formerly Sedalcol) site at Denison Road, Selby (the Site) (see Drawing D1732_01 in Appendix A).

1.2 Scope of Works

1.2.1 In-keeping with the Land Contamination: Risk Management (LCRM) guidance published by the Environment Agency in June 2019 (which is based on Contaminated Land Report [CLR] 11), the GQRA shall include the following:

- Confirmation of the overall site objectives (Section 1.3);
- Definition of the GQRA objectives, including the pollutant linkages to be assessed (Section 1.4);
- Identification of appropriate Generic Assessment criteria (GAC) or derivation of new GAC (Section 2.0);
- Summarise information obtained for the Site based on intrusive site investigation (Section 3.0 and 4.0);
- Assessment of each pollutant linkage using GAC and evaluation of whether there are unacceptable risks (Section 5.0);
- Presentation of the conclusions and recommendations for any further action (Section 6.0).

1.3 Site Objectives

1.3.1 Areas of land at the Site are intended to undergo development as part of the expansion of production plant. These areas are illustrated in Sketch 1820BLY_01 (Appendix A). A planning application for the expansion of the plant shall be submitted by others on behalf of Sedamyl UK to Selby District Council (SDC).

1.3.2 The duties of local planning authorities with regard to land contamination are described in the National Planning Policy Framework published by the Ministry for Housing, Communities and Local Government. Specifically, planning policies and decisions should ensure that:

- a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);
- after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and
- adequate site investigation information, prepared by a competent person, is available to inform these assessments.

1.4 GQRA Objectives

1.4.1 This GQRA follows on from a Preliminary Risk Assessment (PRA) undertaken by VertaseFLI dated October 2019, which concluded that there were unlikely to be unacceptable risks posed by potential pollutant linkages identified at the Site. This assessment was based on a number of assumptions made within the conceptual site model (CSM) regarding contaminant concentrations within soils/Made Ground and within the underlying groundwater and the geological conditions.

1.4.2 The objective of this GQRA is to provide a quantitative assessment of whether the proposed future development shall create the potential for unacceptable risks arising from contamination that may be present.

1.4.3 Potential pollutant linkages assessed relate to the following receptors:

- Future site users;
- Property;

- Surface water;
- Groundwater.

1.4.4 The GQRA relates to the areas intended for development illustrated in Sketch 1820BLY_01 (Appendix A).

2.0 Generic Assessment Criteria

2.1 Future Site Users – Contaminants in Soil

2.1.1 GAC for contaminants in soil that are protective of future site users have been derived using the CLEA v1.071 model for the standard commercial land use exposure scenario described in SR3 published by the Environment Agency.

2.1.2 GAC that represent 'minimal risk' are published in the following sources:

- *Nathanail, C.P., McCaffrey, C., Gillett, A.G., Ogden, R.C. and Nathanail, J.F. (2015). The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham*
- *CL:AIRE (2010). Soil Generic Assessment Criteria for Human Health Risk Assessment. January 2010. Contaminated Land: Applications in Real Environments (CL:AIRE), London*

2.1.3 GAC that represent a 'low level of toxicological concern' are published in the following:

- *CL:AIRE (2014). SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report (Revision 2). 24th September 2014*

2.1.4 These published GAC for the standard commercial land use exposure scenario are considered to be conservative estimates for the actual exposure scenario at each of the development areas at the Site. This is because many of the proposed development features (e.g. silos and storage building extensions) do not create the potential for the critical receptor exposure durations and frequencies that are assumed in the standard commercial land use exposure scenario. Notwithstanding this, for the purpose of GQRA, these conservative GAC are deemed to be acceptable.

2.2 Property –Ground Gas

2.2.1 Limiting values for total organic carbon (TOC) in Made Ground published in *CL:AIRE (2012) Research Bulletin 17 – A Pragmatic*

Approach to Ground Gas Risk Assessment have been used as a line of evidence in the assessment of potential risks to buildings from ground gas.

2.2.2 GAC for methane and carbon dioxide comprising Gas Screening Values (GSVs) provided in guidance published by CIRIA (*CIRIA C665 – Assessing Risks posed by Hazardous Ground Gases to Buildings, dated 2007*) have been used herein to assess the potential risks to buildings from ground gas concentrations and flows measured in boreholes.

2.3 Property – Contaminants in Soil

2.3.1 GAC for sulphate in soils/Made Ground that are associated with aggressive ground conditions for concrete are provided in *BRE Special Digest 1 Concrete in Aggressive Ground published in 2005*. These values have been used herein to assess the potential for chemical attack on concrete.

2.4 Surface Water – Contaminants in Soil

2.4.1 GAC comprising Environmental Quality Standards (EQS) for surface freshwater have been used to assess risks of surface water pollution from contaminants in soil/Made Ground. EQS have been taken from the Environment Agency's Chemical Standards Database v2.0 (last updated April 2011).

2.5 Groundwater – Contaminants in Soil

2.5.1 GAC comprising Drinking Water Standards (DWS) have been used to assess risks of deep groundwater pollution from contaminants in soil/made Ground. DWS have been taken from the Environment Agency's Chemical Standards Database v2.0 (last updated April 2011).

3.0 Intrusive Site Investigation – Strategy

3.1 Strategy

3.1.1 The Preliminary Risk Assessment (PRA), which was underpinned by an initial CSM, concluded that there was unlikely to be unacceptable risks to receptors from land contamination at the site following the proposed development.

3.1.2 The purpose of the intrusive site investigation was to address key uncertainties in the initial CSM that underpinned the PRA. These uncertainties were:

- Contaminant concentrations within the Made Ground at the locations of proposed development relative to GAC that are protective of human health;
- Contaminant concentrations within the Made Ground / perched groundwater at the locations of proposed development relative to GAC that are protective of surface water quality within the River Ouse;
- Sulphate concentrations (and associated parameters) within Made Ground at the locations of proposed development relative to BRE Special Digest 1 Concrete Design Class criteria;
- The presence of clay (of glaciolacustrine or alluvial origin) beneath Made Ground at the locations of proposed development that may restrict the downward migration of contaminants in perched groundwater;
- Concentrations of organic carbon within the Made Ground relative to those expected to generate significant quantities of ground gas;
- Concentrations of ground gases and flows at the locations of proposed development relative to GAC (gas screening values) that do not pose unacceptable risks buildings;
- Concentrations of petroleum hydrocarbon fractions in samples of deeper groundwater obtained from the sandstone relative to relevant water quality standards (e.g. drinking water standards).

3.2 Trial Pits and Trenches

3.2.1 A total of 35 trial pits (including one trial trench in Area 4) were excavated in the proposed development areas (Table 3-1). All trial pits and trenches were progressed through the Made Ground and into the underlying natural ground.

3.2.2 Trial pits were not undertaken in Area 3 because it comprised a concrete bund for an existing silo. Breakout of the concrete bund to facilitate trial pitting into the underlying ground would have created a potential pathway for contaminant migration in the case that the silo leaked.

3.2.3 Trial pits were also not undertaken in Area 9. This is because Area 9 had been previously investigated, assessed and remediated by VertaseFLI. This work was undertaken in the context of Planning decision 2016/0178/FUL. Documentary evidence of this is provided in the following reports:

- VertaseFLI (2016). Remediation Strategy and Method Statement. Revision 3. September 2016
- VertaseFLI (2017). Denison Road, Selby. Remediation Completion Report. Issue 1. May 2017

Table 3-1. Summary of trial pits and trenches excavated in proposed development areas

Area	Count of Trial Pits / Trenches	Total Depth (mbgl)	Count of Soil Samples
A1	4	1.6 – 2.0	8
A2	2	1.7 – 1.8	4
A2a	1	1.8	2
A3	0	n/a	n/a
A4	2	1.8	6
A5	3	1.5 – 1.9	7
A6	4	2.0 – 2.2	9
A7	3	1.9 – 2.3	7
A7a	3	1.8 – 2.2	7
A8	4	1.5 – 1.6	9
A9	0	n/a	n/a
A10	6	1.6 – 2.0	13
A11	2	1.3 – 1.6	5
A12	1	1.2	2

Notes:
Locations of trial pits and trenches are shown in Drawing 1820_01 in Appendix A

3.3 Boreholes

3.3.1 A total of six boreholes were drilled within a selection of the proposed development areas. This is a greater number of boreholes than that proposed within the PRA report due to an additional requirement to obtain geotechnical information to support foundation design (Table 3-2).

3.3.2 Two 50mm inner diameter standpipes were installed into each borehole (one shallow with a response zone within the Made Ground and one deep with a response zone within the Sandstone). Depth ranges for the response zones for each standpipe are summarised in Table 3-2.

3.3.3 The monitoring wells intended for groundwater sampling were located in Areas 1, 4 and 7. These wells were positioned to provide a spread

of groundwater sampling locations across the Site as recommended in the PRA report.

Table 3-2. Summary of six boreholes within proposed development areas

BH	Development Area	Total Depth (mbgl)	Shallow Standpipe Response Zone depth range (mbgl)	Deep Standpipe Response Zone depth range (mbgl)
A1	1	25.0	1 – 3	20 – 25
A4	4	26.5	1 – 3	23.5 – 26.5
A6	6	21.0	1 – 3	19 – 21
A7	7	25.0	1 – 3	22 – 25
A7a	7a	25.3	1 – 4	19 – 25
A8	8	21.0	0.5 – 3	19 – 21

Notes:
Locations of boreholes are shown in Drawing 1820_01 in Appendix A
Logs for the boreholes are provided in Appendix C
Photographs of the borehole arisings during drilling are provided in Appendix G

3.4 Ground Gases

3.4.1 Ground gas monitoring was undertaken from the standpipes with shallow response zones in each borehole on three separate visits (19th December 2019; 10th January 2020; and 20th January 2020).

3.5 Groundwater

3.5.1 Groundwater monitoring and sampling was undertaken on 19th December 2019. Samples of shallow (perched) groundwater were obtained from all boreholes (A1, A4, A6, A7, A7a and A8). Samples of deep groundwater were obtained from boreholes A1, A4 and A7. The sampling of deep groundwater (from the underlying sandstone aquifer) from three locations across the Site is in-keeping with the recommendations of the preliminary risk assessment report prepared by Vertase FLI.

4.0 Intrusive Site Investigation – Results

4.1 Ground Conditions

4.1.1 Logs for the trial pits and boreholes are provided in Appendix B and Appendix C, respectively. A summary of the ground conditions encountered within each proposed development area are summarised in Table 4-1.

Table 4-1. Summary of ground conditions at each area

Area	Summarised Ground Conditions
A1	Made Ground over sandy clay. Clay pipe land drain at 1.2mbgl in A1/03. No odour or visible contamination
A2	Made Ground over sandy clay. No odour or visible contamination
A2a	Made Ground over sandy clay. Buried historic redundant pipework at 0.8 – 1mbgl. No odour or visible contamination
A3	No trial pitting undertaken due to risk of damage to a concrete bund constructed contain accidental chemical releases from operational plant
A4	Made Ground over clay. No odour or visible contamination
A5	Made Ground over clay. Rubber hoses, ash and visible oil/hydrocarbon contamination noted in Made Ground and underlying clay. Hydrocarbon odour noted
A6	Made Ground over clay. Buried substructures in Made Ground including masonry wall, tarmacadam and concrete slab. No odour or visible contamination
A7	Made Ground over clay. Ash and clinker present in Made Ground. No odour reported
A7a	Made Ground over sandy clay. Organic material including tree stump noted in clay at 1.5 – 2mbgl. No odour or visible contamination
A8	Made Ground over clay. Buried substructures in Made Ground including masonry wall. No odour of visible contamination noted in trial pits except for A4/04 where a hydrocarbon odour was noted
A9	No trial pitting undertaken as the area has been previously investigated
A10	Topsoil over sand over clay. No odour or visible contamination
A11	Topsoil/Made Ground over sandy clay. Plastic drainage pipe encountered at 0.8mbgl in A11/01. No odour or visible contamination
A12	Made Ground over sandy clay. Ash and clinker noted in Made Ground. Slight hydrocarbon odour noted in Made Ground

4.2 Soils/Made Ground

4.2.1 The general properties of shallow soils/Made ground sampled from trial pits and trenches are summarised in Table 4-2. Measured concentrations of contaminants in samples of shallow soils/Made Ground obtained from the trial pits and trenches are summarised in Table 4-3 (asbestos), Table 4-4 (selected metals), Table 4-5 (Total Petroleum Hydrocarbon Criteria Working Group fractions), Table 4-6

(Benzene, Toluene, Ethylbenzene, and Xylenes) and Table 4-7 (Polycyclic Aromatic Hydrocarbons).

Table 4-2. Properties of Made Ground/soils

Analyte	Count	Units	Min	Max
pH	79	SU	7.0	10.3
Total Organic Carbon	79	%	0.1	6.4
Fraction of Organic Carbon	79	fraction	0.0012	0.064
Soil Organic Matter	79	%	0.172	11
Total Sulphate	79	mg/kg	150	17000
Total Potential Sulphate	25	mg/kg	210	21000
Water Soluble Sulphate	25	g/L	0.0069	1.9
Total Sulphur	25	mg/kg	68	6900

Notes:
See Appendix D for certificates of analysis

Table 4-3. Identified presence of asbestos in Made Ground/soils

Analyte	Count	Units	Results
Asbestos	16	%	Chrysotile – loose fibres in two samples

Notes:
See Appendix D for certificates of analysis
Chrysotile fibres identified in samples of Made Ground obtained from Area 5 (Trial Pit 2) and Area 7 (Trial Pit 2)

Table 4-4. Measured concentrations of metals in Made Ground/soils

Contaminant	Count	Units	Max
Arsenic	79	mg/kg	38
Cadmium	79	mg/kg	1.1
Chromium (hexavalent)	79	mg/kg	<4
Chromium (Total)	79	mg/kg	89
Copper	79	mg/kg	430
Lead	79	mg/kg	510
Mercury	79	mg/kg	0.6
Nickel	79	mg/kg	46
Selenium	79	mg/kg	6.4
Zinc	79	mg/kg	1000
Notes: See Appendix D for certificates of analysis			

Table 4-5. Measured concentrations of TPH CWG Fractions in Made Ground/soils

Contaminant	Count	Units	Max
Aliphatic EC5-EC6	79	mg/kg	<0.001
Aliphatic EC6-EC8	79	mg/kg	<0.001
Aliphatic EC8-EC10	79	mg/kg	0.31
Aliphatic EC10-EC12	79	mg/kg	16
Aliphatic EC12-EC16	79	mg/kg	180
Aliphatic EC16-EC21	79	mg/kg	320
Aliphatic EC21-EC35	79	mg/kg	1800
Aromatic EC5-EC7	79	mg/kg	<0.001
Aromatic EC7-EC8	79	mg/kg	<0.001
Aromatic EC8-EC10	79	mg/kg	<0.001
Aromatic EC10-EC12	79	mg/kg	81
Aromatic EC12-EC16	79	mg/kg	450
Aromatic EC16-EC21	79	mg/kg	3800
Aromatic EC21-EC35	79	mg/kg	6100
Notes: See Appendix D for certificates of analysis			

Table 4-6. Measured concentrations of BTEX in Made Ground/soils

Contaminant	Count	Units	Max
Benzene	79	mg/kg	<0.001
Toluene	79	mg/kg	<0.001
Ethylbenzene	79	mg/kg	<0.001
o-xylene	79	mg/kg	<0.001
m-xylene	79	mg/kg	<0.001
p-xylene	79	mg/kg	<0.001
Notes: See Appendix D for certificates of analysis			

Table 4-7. Measured concentrations of PAHs in Made Ground/soils

Contaminant	Count	Units	Max
Acenaphthene	79	mg/kg	71
Acenaphthylene	79	mg/kg	15
Anthracene	79	mg/kg	270
Benz(a)anthracene	79	mg/kg	1100
Benzo(a)pyrene	79	mg/kg	1000
Benzo(b)fluoranthene	79	mg/kg	1300
Benzo(ghi)perylene	79	mg/kg	440
Benzo(k)fluoranthene	79	mg/kg	410
Chrysene	79	mg/kg	860
Dibenz(ah)anthracene	79	mg/kg	140
Fluoranthene	79	mg/kg	1600
Fluorene	79	mg/kg	60
Indeno(123-cd)pyrene	79	mg/kg	430
Naphthalene	79	mg/kg	2.6
Phenanthrene	79	mg/kg	590
Pyrene	79	mg/kg	1400
Notes: See Appendix D for certificates of analysis			

4.3 Ground Gas Regime

4.3.1 Ground gas flows and concentrations measured within the shallow standpipes in each borehole are summarised in Table 4-8. The ground gas monitoring data for each visit and location (comprising flows, gas

concentrations, atmospheric pressures and groundwater levels) are provided in Appendix H.

4.3.2 Groundwater levels measured within the shallow standpipes during ground gas monitoring visits ranged from 0.47 – 1.72mbgl (Table 4-9). Due to the shallow groundwater levels, two of the standpipes had flooded response zones.

4.3.3 The atmospheric pressures measured during the monitoring visits were consistently >1000mb and only exhibited a falling trend on a single visit (20th January 2020).

4.3.4 Methane was not detected at any of the locations with the exception of BH7A, where it was recorded at a concentration of 3%. While no flow was recorded in this well during any of the monitoring visits, if a positive flow of 0.1 L/hour were to be assumed (akin to the maximum flow recorded in other standpipes with non-flooded response zones at the Site), a corresponding GSV for methane of 0.003 L/hour could be possible.

Table 4-8. Summary of ground gas flows and concentrations recorded during three separate visits

BH	Peak Flow Recorded (L/hour)	Peak CH_4 Recorded (%)	Peak CO_2 Recorded (%)	Max GSV for CH_4 (L/hour)	Max GSV for CO_2 (L/hour)
1	0.1	0.0	0.4	0	0.0004
4	<0.1	0.0	0.1	0	0
6	0.1	0.0	0.3	0	0.0003
7	<0.1	0.0	0.1	0	0
7A	<0.1	3.0	3.8	0	0
8	0.1	0.0	0.1	0	0.0001

Notes:
Visit on 19th December 2019 – atmospheric pressure was 1001mb (rising trend)
Visit on 10th January 2020 – atmospheric pressure was 1031 (rising trend)
Visit on 20th January 2020 – atmospheric pressure was 1049 (falling trend)

Table 4-9. Groundwater levels recorded in standpipes used for ground gas monitoring during monitoring visits

BH	Visit	GWL (mbgl)	Top of RZ (mbgl)	Notes
1	19/12/19	1.10	0.5	Response zone not flooded
	10/01/20	1.24		
	20/01/20	1.24		
4	19/12/19	1.72	0.5	Response zone not flooded
	10/01/20	0.92		
	20/01/20	1.05		
6	19/12/19	1.44	1	Response zone not flooded
	10/01/20	1.42		
	20/01/20	1.42		
7	19/12/19	0.62	1	Flooded response zone
	10/01/20	0.70		
	20/01/20	0.76		
7A	19/12/19	0.47	1	Flooded response zone
	10/01/20	0.52		
	20/01/20	0.55		
8	19/12/19	0.90	0.5	Response zone not flooded
	10/01/20	0.98		
	20/01/20	0.98		

Notes:
GWL = Groundwater level
RZ = Response zone

4.4 Groundwater Levels

4.4.1 Groundwater levels measured within monitoring wells are summarised in Table 4-10.

4.4.2 The perched groundwater levels within the shallow monitoring wells were very shallow in boreholes A1, A7, A7a and A8 ranging from 0.21 – 0.74mbgl. The high perched groundwater levels in these areas shall hamper ground gas monitoring as the response zones are fully submerged.

Table 4-10. Measured groundwater levels in monitoring wells

BH	Standpipe	WL (mbgl) 16/12/19
A1	Shallow	0.21
	Deep	0.26
A4	Shallow	1.35
	Deep	6.09
A6	Shallow	1.51
	Deep	3.79
A7	Shallow	0.74
	Deep	5.83
A7a	Shallow	0.53
	Deep	4.42
A8	Shallow	0.36
	Deep	5.67

4.5 Shallow (Perched) Groundwater Quality

4.5.1 The concentrations of metals, PAHs and TPH fractions measured in samples of perched groundwater are summarised in Table 4-11, Table 4-12 and Table 4-13, respectively. Speciated VOCs and BTEX were not present at concentrations above limits of detection within the samples.

Table 4-11. Measured concentrations of metals in samples of shallow groundwater

Contaminant	Count	Units	Max
Arsenic	6	µg/L	12.4
Boron	6	µg/L	94
Cadmium	6	µg/L	0.04
Chromium (Total)	6	µg/L	8.3
Copper	6	µg/L	13
Lead	6	µg/L	1
Mercury	6	µg/L	0.05
Nickel	6	µg/L	19
Selenium	6	µg/L	8.7
Zinc	6	µg/L	25
Notes: See Appendix E for certificates of analysis			

Table 4-12. Measured concentrations of TPH fractions in samples of shallow groundwater

Contaminant	Count	Units	Max
Aliphatic C5-C6	6	µg/L	<1
Aliphatic C6-C8	6	µg/L	<1
Aliphatic C8-C10	6	µg/L	<1
Aliphatic C10-C12	6	µg/L	22
Aliphatic C12-C16	6	µg/L	110
Aliphatic C16-C21	6	µg/L	190
Aliphatic C21-C35	6	µg/L	520
Aromatic C5-C7	6	µg/L	<1
Aromatic C7-C8	6	µg/L	<1
Aromatic C8-C10	6	µg/L	<1
Aromatic C10-C12	6	µg/L	24
Aromatic C12-C16	6	µg/L	38
Aromatic C16-C21	6	µg/L	10
Aromatic C21-C35	6	µg/L	10
Notes: See Appendix E for certificates of analysis			

Table 4-13. Measured concentrations of PAHs in samples of shallow groundwater

Contaminant	Count	Units	Max
Acenaphthene	6	µg/L	<0.01
Acenaphthylene	6	µg/L	<0.01
Anthracene	6	µg/L	0.11
Benz(a)anthracene	6	µg/L	0.33
Benzo(a)pyrene	6	µg/L	0.25
Benzo(b)fluoranthene	6	µg/L	0.34
Benzo(ghi)perylene	6	µg/L	<0.01
Benzo(k)fluoranthene	6	µg/L	0.2
Chrysene	6	µg/L	0.33
Dibenz(ah)anthracene	6	µg/L	<0.01
Fluoranthene	6	µg/L	0.6
Fluorene	6	µg/L	<0.01
Indeno(123-cd)pyrene	6	µg/L	<0.01
Naphthalene	6	µg/L	<0.01
Phenanthrene	6	µg/L	0.5
Pyrene	6	µg/L	0.6
Notes: See Appendix E for certificates of analysis			

4.6 Deep Groundwater Quality

4.6.1 The concentrations of metals and TPH fractions measured in samples of perched groundwater are summarised in Table 4-14 and Table 4-15, respectively. Speciated PAHs, VOCs and BTEX were not present at concentrations above limits of detection within the samples of groundwater.

4.6.2 It is worthy of note that concentrations of TPH fractions above limits of detect were only measured in samples of deep groundwater obtained from Area 4.

Table 4-14. Measured concentrations of metals in samples of deep groundwater

Contaminant	Count	Units	Max
Arsenic	6	µg/L	7.92
Boron	6	µg/L	120
Cadmium	6	µg/L	0.03
Chromium (Total)	6	µg/L	1.2
Copper	6	µg/L	1.8
Lead	6	µg/L	0.4
Mercury	6	µg/L	0.05
Nickel	6	µg/L	23
Selenium	6	µg/L	7.9
Zinc	6	µg/L	170
Notes: See Appendix E for certificates of analysis			

Table 4-15. Measured concentrations of TPH fractions in samples of deep groundwater

Contaminant	Count	Units	Max
Aliphatic C5-C6	6	µg/L	<1
Aliphatic C6-C8	6	µg/L	<1
Aliphatic C8-C10	6	µg/L	<1
Aliphatic C10-C12	6	µg/L	19
Aliphatic C12-C16	6	µg/L	76
Aliphatic C16-C21	6	µg/L	220
Aliphatic C21-C35	6	µg/L	700
Aromatic C5-C7	6	µg/L	<1
Aromatic C7-C8	6	µg/L	<1
Aromatic C8-C10	6	µg/L	<1
Aromatic C10-C12	6	µg/L	<10
Aromatic C12-C16	6	µg/L	<10
Aromatic C16-C21	6	µg/L	<10
Aromatic C21-C35	6	µg/L	<10
Notes: See Appendix E for certificates of analysis			

5.0 Quantitative Assessment of Pollutant Linkages

5.1 Harm to the Health of Future Site Users

5.1.1 For contaminants that were present in samples of soils/Made Ground at concentrations above limits of detection (see Section 4.2), their maximum measured concentrations are compared against appropriate GAC for metals (Table 5-1), TPH fractions (Table 5-2) and PAHs (Table 5-3).

5.1.2 All contaminants present in samples of soils/Made Ground at concentrations above limits of detection were not present at concentrations above their respective GAC, with the exception of a group of five PAHs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, chrysene and dibenzo[ah]anthracene) (see Table 5-3).

5.1.3 The exceedances of GAC, which were observed for the five PAHs, occurred in only three samples, which were obtained from Area 8 and Area 12 (which are in close proximity – see Sketch 1820BLY_01 in Appendix A). The greatest exceedances were recorded in a single sample of Made Ground obtained from Area 12 (trial pit A12/01). A hydrocarbon odour was noted in Made Ground during excavation of trial pit A12/01 (see log in Appendix B). Exceedances recorded in Area 8 were more marginal, occurring in two samples of shallow Made Ground obtained from trial pit A8/04. A hydrocarbon odour was also noted in the Made Ground during excavation of trial pit A8/04 (see log in Appendix B).

5.1.4 Notwithstanding the GAC exceedances, in view of the considerable deviation of the standard commercial land use exposure scenario from the actual post-development exposure scenario for Areas 8 and 12, it is unlikely that the elevated concentrations of PAH compounds measured in Made Ground shall pose an unacceptable risk of harm to the health of future site users. This reflects the absence of direct contact and ingestion pathways upon completion of the proposed development, by virtue of the presence of hardstanding acting as a pathway break.

5.1.5 Evidence to support this is provided by the re-calculated GAC for the five PAHs based on the standard commercial land use exposure scenario where only the inhalation exposure pathways are modelled (Table 5-4). Comparison of the maximum measured concentrations of the PAHs against these re-calculated assessment criteria confirm no exceedances.

5.1.6 With regard to asbestos, chrysotile fibres were identified to be present in two samples of Made Ground. While excavation works within this Made Ground should be undertaken in accordance with measures set out in the Control of Asbestos Regulations (CAR), long-term risks posed by fibres present in Made Ground shall be managed by the presence of hardstanding acting as a pathway break for fibre inhalation.

Table 5-1. Comparison of measured concentrations of metals in soils/Made Ground against appropriate GAC

Contaminant	Count	Units	Max	GAC
Arsenic	79	mg/kg	38	640
Cadmium	79	mg/kg	1.1	190
Chromium (Total)	79	mg/kg	89	8600
Copper	79	mg/kg	430	68000
Lead	79	mg/kg	510	1100
Mercury	79	mg/kg	0.6	1100
Nickel	79	mg/kg	46	980
Selenium	79	mg/kg	6.4	12000
Zinc	79	mg/kg	1000	730000

Notes:

All GAC except for lead are taken from Nathanail, C.P., McCaffrey, C., Gillett, A.G., Ogden, R.C. and Nathanail, J.F. (2015). The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham

GAC for lead taken from CL:AIRE (2014). SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report (Revision 2). 24th September 2014

Table 5-2. Comparison of measured concentrations of TPH CWG fractions measured in soils/Made Ground against appropriate GAC

Contaminant	Count	Units	Max	GAC
Aliphatic EC8-EC10	79	mg/kg	0.31	2000
Aliphatic EC10-EC12	79	mg/kg	16	9700
Aliphatic EC12-EC16	79	mg/kg	180	59000
Aliphatic EC16-EC21	79	mg/kg	320	1600000
Aliphatic EC21-EC35	79	mg/kg	1800	1600000
Aromatic EC10-EC12	79	mg/kg	81	16000
Aromatic EC12-EC16	79	mg/kg	450	36000
Aromatic EC16-EC21	79	mg/kg	3800	28000
Aromatic EC21-EC35	79	mg/kg	6100	28000

Notes:

All GAC are taken from Nathanail, C.P., McCaffrey, C., Gillett, A.G., Ogden, R.C. and Nathanail, J.F. (2015). The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham

Table 5-3. Comparison of measured concentrations of PAHs in soils/Made Ground against appropriate GAC

Contaminant	Count	Units	Max	GAC
Acenaphthene	79	mg/kg	71	84000
Acenaphthylene	79	mg/kg	15	83000
Anthracene	79	mg/kg	270	520000
Benzo(a)anthracene	79	mg/kg	**1100**	170
Benzo(a)pyrene	79	mg/kg	**1000**	35
Benzo(b)fluoranthene	79	mg/kg	**1300**	44
Benzo(ghi)perylene	79	mg/kg	440	3900
Benzo(k)fluoranthene	79	mg/kg	410	1200
Chrysene	79	mg/kg	**860**	350
Dibenz(ah)anthracene	79	mg/kg	**140**	3.5
Fluoranthene	79	mg/kg	1600	23000
Fluorene	79	mg/kg	60	63000
Indeno(123-cd)pyrene	79	mg/kg	430	500
Naphthalene	79	mg/kg	2.6	190
Phenanthrene	79	mg/kg	590	22000
Pyrene	79	mg/kg	1400	54000

Notes:
All GAC are taken from Nathanail, C.P., McCaffrey, C., Gillett, A.G., Ogden, R.C. and Nathanail, J.F. (2015). The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham

Table 5-4. Comparison of measured concentrations of five PAHs in soils/Made Ground against re-calculated GAC based on the standard commercial land use exposure scenario where only the inhalation pathways are modelled

Contaminant	Count	Units	Max	GAC
Benzo(a)anthracene	79	mg/kg	1100	10,000
Benzo(a)pyrene	79	mg/kg	1000	4,480
Benzo(b)fluoranthene	79	mg/kg	1300	5,100
Chrysene	79	mg/kg	860	27,200
Dibenz(ah)anthracene	79	mg/kg	140	528

Notes:
All GAC are based on input parameter values taken from Nathanail, C.P., McCaffrey, C., Gillett, A.G., Ogden, R.C. and Nathanail, J.F. (2015). The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham

5.2 Chemical Attack on Property

5.2.1 The maximum concentrations of total potential sulphate and water-soluble sulphate measured in samples of Made Ground and soils are given in Table 5-5.

5.2.2 Four out of the 25 samples tested exhibited water-soluble sulphate concentrations that were in excess of the upper limit for Design Sulphate Class 1. All these elevated concentrations were in samples of Made Ground.

5.2.3 Furthermore, seven out of the 25 samples tested exhibited total potential sulphate concentrations that were in excess of the upper limit upper limit for Design Sulphate Class 1. All these elevated concentrations were in samples of Made Ground with the exception of one exceedance in a sample of natural clay obtained from Area 10 (Trial Pit 2).

5.2.4 It is worthy of note that total potential sulphate criteria apply only to locations where concrete shall be exposed to sulphate ions which may result from the oxidation of sulphides, such as pyrite, following ground disturbance. Due to the anticipated absence of pyrite from the natural clay, the elevated total potential sulphate recorded in the single sample of natural clay in Area 10 is unlikely to be a concern.

5.2.5 On the basis of the variable and elevated levels of water-soluble sulphate and total potential sulphate within the Made Ground at the Site, it would be prudent to consider the use of concrete (that shall be in direct contact with Made Ground) mixed using cements and combinations that have a greater resistance to sulphate attack based on guidance provided in BRE Special Digest 1.

Table 5-5. Comparison of measured concentrations of sulphate against assessment criterion for concrete

Analyte	Count	Units	Max	GAC
Total Sulphate	79	%	1.7	n/a
Total Potential Sulphate	25	%	2.1	0.24
Water Soluble Sulphate	25	mg/L	1900	500

Notes:
GAC are taken from Table C2 (aggressive chemical environment for concrete classification for brownfield locations) of BRE Special Digest 1 Concrete in Aggressive Ground published in 2005.

5.3 Gas Accumulation in Buildings

5.3.1 The average concentration of TOC within samples of Made Ground was <1% (dry weight). In general, the TOC in samples of the underlying natural soils was slightly higher (1.1% dry weight); albeit the difference was not significant. Elevated measurements of TOC (>1%) were frequently associated with the natural clay underlying the Made Ground.

5.3.2 In view of the low average concentrations of TOC present in Made Ground and underlying natural soils, and indeed the age of the organic carbon (particularly within the natural deposits), it is considered unlikely that the organic carbon shall contribute to the significant generation of ground gases.

5.3.3 Notwithstanding this, it is noteworthy that peat was identified to be present at 1.5mbgl in Area 7A, including a tree stump recorded at 2mbgl (see log for trial pit 02). A sample of this peat material exhibited a TOC of 6.4%. Given the proximity of Area 7A to the River Ouse, it is probable that this material represents a layer of decayed vegetation / peat within Alluvium.

5.3.4 Gas screening values derived using the ground gas monitoring data obtained from the shallow standpipes in boreholes confirms that the risks from ground gas are 'very low' (Characteristic Situation 1) based on guidance published by CIRIA. As such, it is anticipated that no special ground gas protection measures shall be required for buildings.

Table 5-6. Comparison of measured concentrations of TOC in soil and Made Ground against limiting TOC values

Analyte	Count	Units	Max	GAC
Total Organic Carbon	79	%	6.4	1
Soil Organic Matter	79	%	11	n/a

5.4 Pollution of Surface Water

5.4.1 Contaminant concentrations measured in samples of perched (shallow) groundwater did not significantly exceed GAC that are applicable to surface freshwater (Table 5-7), with the exception of the benzo(a)pyrene concentration, which exceeded the GAC by several orders of magnitude.

5.4.2 While benzo(a)pyrene was present at elevated concentrations in the perched groundwater, this elevated concentration was only observed in a single sample from one location (Area 7) and was not ubiquitous in all monitoring wells.

5.4.3 In view of the low solubility and high organic carbon partitioning coefficient of benzo(a)pyrene, it is not considered likely that this contaminant, or indeed other low mobility PAHs, shall migrate into the River Ouse at concentrations that shall constitute pollution by causing harm to aquatic flora and fauna.

5.4.4 Overall, it is considered unlikely that contaminants present in soils/Made Ground at the Site are posing unacceptable risks of pollution of surface water within the River Ouse.

Table 5-7. Comparison of measured concentrations of contaminants in perched groundwater against appropriate GAC that are applicable to surface freshwater

Analyte	Count	Units	Max	GAC
Arsenic	6	µg/L	12.4	50
Boron	6	µg/L	94	-
Cadmium	6	µg/L	0.04	5
Chromium	6	µg/L	8.3	50
Copper	6	µg/L	13	5
Lead	6	µg/L	1	50
Mercury	6	µg/L	<0.05	0.05
Nickel	6	µg/L	19	50
Selenium	6	µg/L	8.7	-
Zinc	6	µg/L	25	30
Benzene	6	µg/L	<1	10
Toluene	6	µg/L	<1	74
Ethylbenzene	6	µg/L	<1	-
Xylenes	6	µg/L	<1	30
Naphthalene	6	µg/L	<0.01	2
Benzo(a)pyrene	6	µg/L	0.25	0.05

Notes:
GAC are environmental quality standards relevant to surface freshwater taken from the Environment Agency's Chemical Standards database and CL:AIRE (2017) Petroleum Hydrocarbons in Groundwater: Guidance on Assessing Petroleum Hydrocarbons using Existing Hydrogeological Risk Assessment Methodologies

5.5 Pollution of Deep Groundwater

5.5.1 Trial pits and boreholes confirmed the presence of clay beneath the Made Ground within all areas of proposed development. This clay is understood to be acting to prevent/limit the downward migration of contaminants into the underlying deep groundwater in the Sherwood Sandstone.

5.5.2 In-keeping with previous investigations, some petroleum hydrocarbon fractions (aliphatic fractions) were present at concentrations above limits of detect in a single sample of deep groundwater obtained from Area 4. However, these measured concentrations were marginal providing evidence that the overlying clay deposits are limiting vertical migration.

5.5.3 Concentrations of contaminants measured in samples of deep groundwater did not exceed drinking water standards for the protection of human health (Table 5-8). It is therefore considered unlikely that contaminants present in soils/Made Ground at the Site are posing unacceptable risks of deep groundwater pollution (when it is considered that the deep groundwater is used as a potable drinking water resource).

Table 5-8. Comparison of measured concentrations of contaminants in deep groundwater against appropriate GAC

Analyte	Count	Units	Max	GAC
Arsenic	3	µg/L	7.92	10
Boron	3	µg/L	120	1000
Cadmium	3	µg/L	0.03	3
Chromium	3	µg/L	1.2	50
Copper	3	µg/L	1.8	2000
Lead	3	µg/L	0.4	10
Mercury	3	µg/L	0.05	1
Nickel	3	µg/L	23	20
Selenium	3	µg/L	7.9	10
Zinc	3	µg/L	170	3000
Aliphatics C10-12	3	µg/L	19	300
Aliphatics C12-16	3	µg/L	76	300
Aliphatics C16-21	3	µg/L	220	n/a
Aliphatics C21-35	3	µg/L	700	n/a

Notes:
GAC are drinking water standards for the protection of human health taken from the Environment Agency's Chemical Standards database

5.6 Assumptions

5.6.1 The assessment of pollutant linkages presented herein is based on a refined conceptual site model, which makes the following assumptions:

- The presence of hardstanding (physical pathway break) upon completion of the development shall prevent future site users

from being exposed to contaminant present in Made Ground via: (a) direct contact; and (b) ingestion of soil and dust.

- Diffusion of contaminants present in Made Ground through drinking water pipelines shall be negated via the adoption of protective measures as set out in the UK Water Industry Research (UKWIR) Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites" (Ref 10/WM/03/21; the 'UKWIR Guidance').
- Chemical attack (sulphate attack) on concrete shall be managed via the use concrete mixed using cements and combinations that have a greater resistance to sulphate attack as set out in BRE Special Digest 1;
- Perched groundwater present within the Made Ground at the Site is in hydraulic connectivity with surface water in the River Ouse. This is a conservative assumption as no evidence of hydraulic connectivity was identified by CCG Ltd. Conversely, it was interpreted by CCG Ltd in their 2016 report that the hydraulic gradient of the perched groundwater was not towards the River Ouse.
- Downward migration of contaminants present within perched groundwater (within the Made Ground) is limited by the presence of low permeability cohesive deposits (either of glaciolacustrine or alluvial origin) beneath the Made Ground. Evidence to support this is provided by the presence of clay beneath the Made Ground identified in all trial pits excavated (see Appendix B).
- Future piles used to transfer building loads onto competent strata shall not create preferential pathways for the downward migration of contaminants.
- Attenuation of dissolved contaminants occurs during advection / dispersion within the saturated zone and significant dilution of dissolved contaminants would occur upon entry into surface water of the River Ouse. This is supported by the absence of an increase in contaminant concentrations within samples of surface

water obtained downstream (with the River Ouse) of the Site, relative to samples obtained upstream of the Site, by CCG Ltd.

5.7 Summary

5.7.1 An updated assessment of risk posed by the potential pollutant linkages identified in the PRA report is provided in Table 5-9 to reflect the findings and interpretation provided herein. The updated assessment also accounts for risk mitigation / management strategies which are assumed to be implemented during the construction phase.

Table 5-9. Updated assessment of risk posed by potential pollutant linkages

Source	Receptor	Pathways	Risk Mitigation / Management	Significance of risk
Contaminants sorbed/dispersed in Made Ground	Future Site Users	Direct Contact	Hardstanding as pathway break	Very Low
		Inhalation	None	Very Low
		Ingestion (of soil particles)	Hardstanding as pathway break	Very Low
		Ingestion (of drinking water)	Use chemically resistant pipes	Very Low
	Property	Direct Contact	Concrete resistant to chemical attack	Very Low
Contaminants dissolved in perched groundwater	Surface water	Saturated Zone Migration	None	Very Low
		Preferential Pathways*	Substructure removal	Very Low
	Groundwater in underlying aquifers	Unsaturated Zone Migration	None	Very Low
		Preferential Pathways**	None	Very Low
Ground gas	Future Site Users	Inhalation	None	Very Low
	Property	Unsaturated Zone Migration	None	Very Low

Notes:

Descriptors based on terminology taken from guidance on qualitative risk assessment for land contamination published by the Nuclear Industry Group for Land Contamination in June 2012

Significance of risk descriptors: very high, high, medium, low, very low, trivial, none

*Preferential pathways are voids and high permeability routes provided in and between substructures present within the Made Ground

**Preferential pathways are previously drilled deep boreholes with faulty installations or piled foundations creating vertical pathways;

6.0 Conclusions and Recommendations

6.1 Conclusions

6.1.1 Based on the updated CSM, which is underpinned by the information available in previous reports and supplemented by site investigation information described herein, it is not unreasonable to conclude the following (subject to the assumptions listed in Section 5.6):

- It is very unlikely that there shall be unacceptable risks of harm posed by land contamination to future site users following construction of the proposed development;
- It is very unlikely that there shall be unacceptable risks of damage to property posed by land contamination following construction of the proposed development, provided that consideration is given to the use of suitable materials that are in direct contact with Made Ground;
- It is very unlikely that there shall be unacceptable risks of pollution posed by land contamination to surface water and deep groundwater present within the underlying Sandstone aquifer following construction of the proposed development.

6.2 Recommendations

6.2.1 It is recommended that the following actions are undertaken prior to construction of the proposed development features:

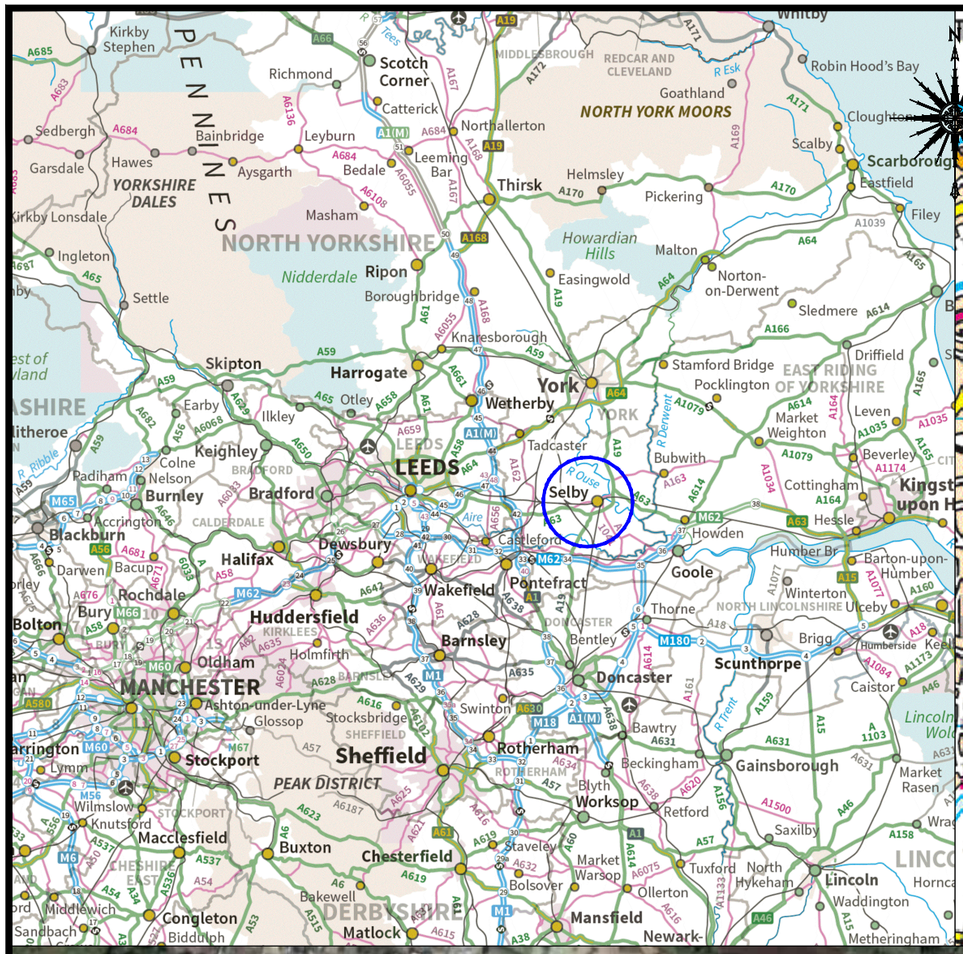
- Substructures identified to be present within Made Ground in proposed development areas should be removed to negate the presence of preferential pathways for contaminant migration and to recover any contaminated materials for treatment and re-use or for off-site disposal. This should be supervised by an appropriately qualified environmental engineer to provide a watching brief.
- Any excavation of Made Ground is undertaken in accordance with the Control of Asbestos Regulations (CAR) 2012 by adopting best practice as set out within CAR-Soil published by CL:AIRE in 2016. The purpose of this is to prevent unacceptable exposure of

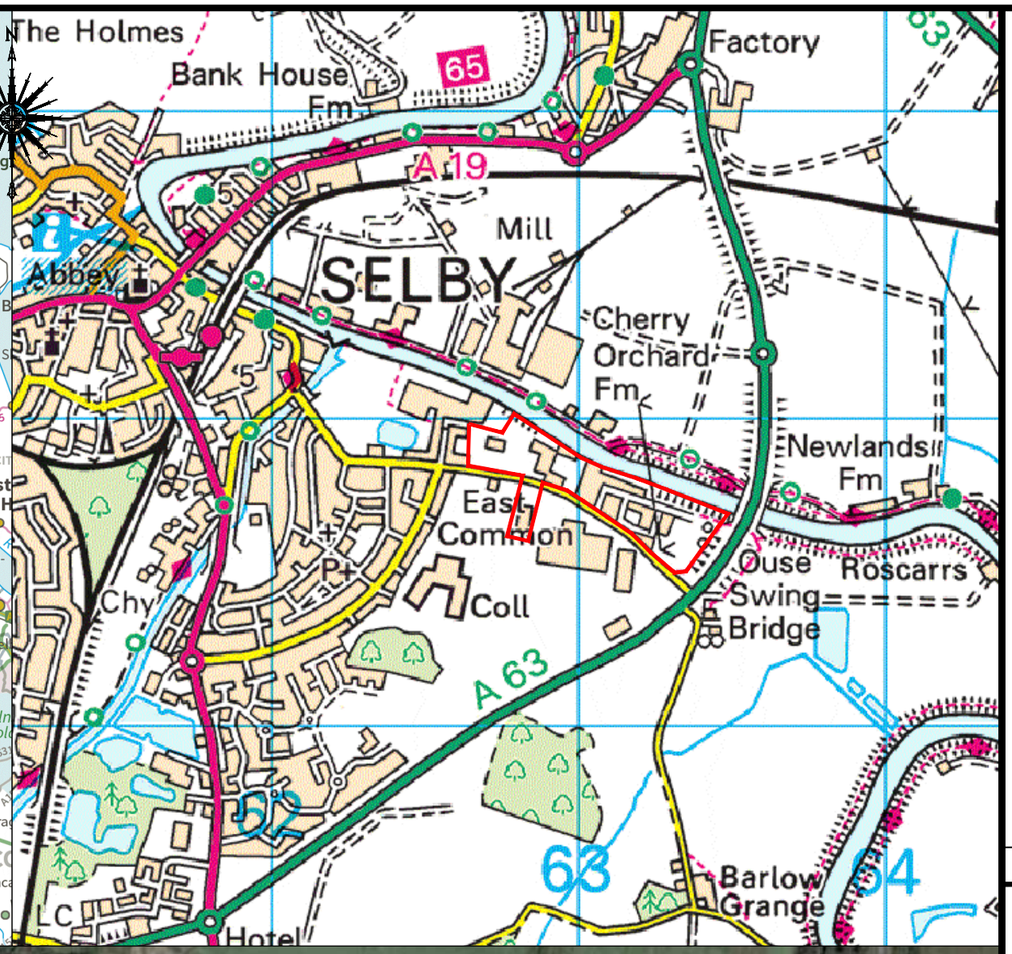
workers to asbestos and to prevent the uncontrolled release of asbestos fibres into the environment.

- Any drinking water pipes or pipelines for potable water that are required to be laid within the Made Ground are formed from materials that are chemically resistant to the contaminants present.
- Concrete that is intended for use in direct contact with the Made Ground should be mixed using cements and combinations that are resistant to chemical attack from sulphate.
- A validation report detailing the removal of substructures and the treatment/reuse or disposal of any unexpected contaminated materials should be prepared as evidence of the works for review by Regulators.
- A separate assessment of the ground/geotechnical properties should be undertaken to inform building/structure foundation design.

Appendix A

Drawings





Legend

Site Boundary

A3

Rev.	Description	Revised By	Date
	FIRST ISSUE		15-01-2018

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting Specialists

email: info@vertasefli.co.uk
www.vertasefli.co.uk

■	Bristol Head Office:	Tel: 01275 397600 Fax: 01275 397601
□	Sheffield Office:	Tel: 01246 813289 Fax: 01246 812963
□	Hertford Office:	Tel: 01992 535757 Fax: 01992 535858
□	Manchester Office:	Tel: 0161 4372708 Fax: 0161 4376300

Site Address:

Sedalcol UK Ltd
Denison Road, Selby
North Yorkshire, YO8 8AN

Rev:

Title: Site Location Plan

Client: Sedalcol UK Ltd

Drawn: SCG	Checked: MC	Approved: MC
Dwg: D1732_01	Contract: 1732SED	Scale: NTS

A4

Key

Rev	Description	Revised by	Date

Vertase FLI

□ Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

■ Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Site Address:

Sedalcol, Selby

Title Site Investigation Areas Plan

Client: Sedalcol

Drawn: CL	Approved: CL
Sketch: 1820BLY_01	Contract: 1820BLY

A1

Legend

- Trial Pit Location
- Borehole Location

Rev.	Description	Revised By	Date
	FIRST ISSUE		16-12-19

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting Specialists

email: info@vertasefli.co.uk
www.vertasefli.co.uk

Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Site Address:

Denison Road
Selby

Rev:

Title: Boreholes & Trial Pit Locations

Client: Sedamyl UK Ltd

Drawn: MRG	Checked: JL	Approved: DS
Dwg:D1820_01	Contract: 1820BLY	Scale: 1:1000

Appendix B

Trial Pit Logs

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A1/01
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462695.28 - 431815.28 Level: 4.99	Date 29/10/2019
Location: Selby		Dimensions (m): Depth 2.00 — 1.50 × 2.00	Scale 1:25
Client: Sedamyl			Logged JE

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.60	ES		0.05	4.94		Grassed TOPSOIL MADE GROUND (Brown sandy GRAVEL of brick and concrete)
	0.60 - 1.00	ES		0.60	4.39		Firm slightly sandy brown CLAY
				1.00	3.99		Firm slightly sandy greyish brown CLAY
				2.00	2.99		End of Pit at 2.00m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A1/02
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462700.76 - 431839.16 Level: 5.03	Date 29/10/2019
Location: Selby		Dimensions (m): 2.00 × 1.50 Depth 1.80	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.40	ES		0.05	4.98		Grassed TOPSOIL MADE GROUND (Brown sandy GRAVEL of brick and concrete)
	0.40 - 0.90	ES		0.40	4.63		Firm slightly sandy brown CLAY
				0.90	4.13		Firm slightly sandy greyish brown CLAY
				1.80	3.23		End of Pit at 1.80m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A1/03
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462736.77 - 431832.10 Level: 5.11	Date 29/10/2019
Location: Selby		Dimensions (m): 2.00 × 1.50 Depth 1.70	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.20	ES		0.05	5.06		Grassed TOPSOIL
				0.20	4.91		MADE GROUND (Brown sandy GRAVEL of brick and concrete)
							Firm slightly sandy brown CLAY
	0.80 - 1.70	ES		0.80	4.31		Firm slightly sandy greyish brown CLAY *Clay Pipe 'Land Drain' Running East/West at 1200mm BGL*
				1.70	3.41		End of Pit at 1.70m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A1/04
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462724.24 - 431802.53 Level: 4.79	Date 29/10/2019
Location: Selby		Dimensions (m): Depth 1.60 — 2.00 × 1.50	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.40	ES		0.05	4.74		Grassed TOPSOIL MADE GROUND (Brown sandy GRAVEL of brick and concrete)
	0.40 - 0.80	ES		0.40	4.39		Firm slightly sandy brown CLAY
				0.80	3.99		Firm slightly sandy greyish brown CLAY
				1.60	3.19		End of Pit at 1.60m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A10/01
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462783.42 - 431475.12 Level: 4.36
Location:	Selby	Dimensions (m): Depth 1.60	2.00 × 0.80
Client:	Sedamyl		

Date: 06/11/2019
Scale: 1:25
Logged:

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.15	4.21		grassed TOPSOIL
							Red coarse SAND
	0.40 - 1.10	ES		0.40	3.96		Yellow coarse SAND with some clay inclusions
	1.10 - 1.60	ES		1.10	3.26		Firm sandy grey CLAY
				1.60	2.76		End of Pit at 1.60m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A10/02
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462806.62 - 431483.98 Level: 4.30	Date 06/11/2019
Location: Selby		Dimensions (m): 2.00 × 0.80 Depth 1.70	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.15 - 1.20	ES		0.15	4.15		Brown slightly sandy TOPSOIL
							Orangy red coarse SAND
	1.20 - 1.70	ES		1.20	3.10		Firm slightly sandy grey CLAY
				1.70	2.60		End of Pit at 1.70m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A10/03
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462789.74 - 431513.22 Level: 4.30	Date 06/11/2019
Location: Selby		Dimensions (m): 2.00 × 0.80 Depth 2.00	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					Brown slightly sandy TOPSOIL
	0.30 - 1.40	ES		0.30	4.00		Yellow coarse SAND
	1.40 - 2.00	ES		1.40	2.90		Firm sandy grey CLAY
				2.00	2.30		End of Pit at 2.00m

1
2
3
4
5

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A10/04
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462822.59 - 431537.26 Level: 4.30
Location:	Selby	Dimensions (m): Depth 1.70	2.00 × 0.80
Client:	Sedamyl		

Date: 07/11/2019
Scale: 1:25
Logged:

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.20 - 1.00	ES		0.20	4.10		Brown slightly sandy TOPSOIL
							Yellow coarse SAND
	1.00 - 1.70	ES		1.00	3.30		Firm slightly sandy grey CLAY
				1.70	2.60		End of Pit at 1.70m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A10/05
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462825.28 - 431565.66 Level: 4.30	Date 07/11/2019
Location: Selby		Dimensions (m): 2.00 × 0.80 Depth 1.70	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.20 - 1.10	ES		0.20	4.10		Brown slightly sandy TOPSOIL
	1.10 - 1.70	ES		1.10	3.20		Yellow coarse SAND
				1.70	2.60		Firm slightly sandy grey CLAY
							End of Pit at 1.70m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A10/06
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462813.74 - 431581.69 Level: 4.37
Location:	Selby	Dimensions (m):	Depth 1.90
Client:	Sedamyl	2.00 / 0.80	

Date: 07/11/2019
Scale: 1:25
Logged:

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.20 - 1.00	ES		0.20	4.17		Brown slightly sandy TOPSOIL
	1.00 - 1.90	ES		1.00	3.37		Yellow coarse SAND
				1.90	2.47		Firm sandy grey CLAY
							End of Pit at 1.90m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A11/01
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462736.54 - 431853.46 Level: 5.03	Date 29/10/2019
Location: Selby		Dimensions (m): 2.00 × 1.50 Depth 1.60	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.05	4.98		Grassed TOPSOIL Soft sandy dark brown CLAY
	0.20 - 0.70	ES		0.20	4.83		Firm slightly sandy brown CLAY
	0.70 - 1.60	ES		0.70	4.33		Firm slightly sandy greyish brown CLAY *Plastic drainage pipe running east/west at 800mm BGL in trench backfilled with aggregate*
				1.60	3.43		End of Pit at 1.60m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A11/02
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462753.95 - 431871.07 Level: 5.05
Location:	Selby	Dimensions (m): Depth 1.30	2.00 × 0.80
Client:	Sedamyl		

Date: 06/11/2019
Scale: 1:25
Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.05	5.00		MADE GROUND (Limestone gravel chippings)
	0.25 - 0.45	ES		0.25	4.80		MADE GROUND (Limestone gravel chippings) MADE GROUND (Stone, sand and concrete)
	0.45 - 0.80	ES		0.45	4.60		Red coarse SAND
	0.80 - 1.30	ES		0.80	4.25		Firm sandy greyish brown CLAY
				1.30	3.75		End of Pit at 1.30m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A12/01
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462958.44 - 431748.74 Level: 4.50	Date 01/11/2019
Location: Selby		Dimensions (m): Depth 1.20 — 2.00 × 1.50	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.20	ES		0.05	4.45		MADE GROUND (Limestone gravel chippings)
				0.20	4.30		MADE GROUND (Coarse angular GRAVEL with brick, coal and ash)
	0.50 - 0.80	ES		0.50	4.00		MADE GROUND (Brick fragments)
				0.80	3.70		MADE GROUND (Firm slightly sandy grey reworked CLAY with brick and concrete)
				1.20	3.30		Firm slightly sandy greyish brown CLAY
							End of Pit at 1.20m

1
2
3
4
5

Remarks: Slight hydrocarbon odour from upper layer of made ground

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A2(A)/01
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462875.49 - 431890.27 Level: 5.33	Date 30/10/2019
Location: Selby		Dimensions (m): Depth 1.80, 2.00 × 1.50	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.12	5.21		MADE GROUND (Limestone gravel chippings)
	0.25	ES		0.25	5.08		MADE GROUND (Concrete slab) *Geotextile Layer* MADE GROUND (Coarse angular GRAVEL of brick and concrete) *Disused historic drainage pipe (clay) encountered at 800mm BGL*
				1.00	4.33		MADE GROUND (Concrete slab) *Top of vertical cast iron pipe (approx 150mm diameter) encountered at 1000mm BGL*
	1.20 - 1.80	ES		1.20	4.13		Firm slightly sandy greyish brown CLAY
				1.80	3.53		End of Pit at 1.80m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A2/01
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462816.06 - 431898.72 Level: 5.19	Date 30/10/2019
Location: Selby		Dimensions (m): 2.00 × 1.50 Depth 1.80	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 1.10	ES		0.10	5.09		MADE GROUND (Limestone gravel chippings)
							MADE GROUND (Coarse angular GRAVEL of brick and concrete)
							Geotextile Layer
	1.10 - 1.80	ES		1.10	4.09		Firm slightly sandy greyish brown CLAY (Glaciolacustrine Deposits)
				1.80	3.39		End of Pit at 1.80m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A2/02
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462816.81 - 431876.85 Level: 5.17	Date 30/10/2019
Location: Selby		Dimensions (m): 2.00 x 1.50 Depth 1.70	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.15 - 0.95	ES		0.15	5.02		MADE GROUND (Limestone gravel chippings)
							MADE GROUND (Coarse angular GRAVEL of brick and concrete) *Geotextile Layer*
	0.95 - 1.70	ES		0.95	4.22		Firm sandy greyish brown CLAY
				1.70	3.47		End of Pit at 1.70m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A4/01
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462986.78 - 431823.04 Level: 4.89	Date 30/10/2019
Location: Selby		Dimensions (m): 2.00 × 1.50 Depth 1.80	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10	4.79		MADE GROUND (Limestone gravel chippings)
							MADE GROUND (Limestone gravel chippings)
							Concrete slab encountered at 200mm below BGL TP relocated eastwards to allow excavation
	0.30 - 0.50	ES		0.30	4.59		MADE GROUND (Coarse angular GRAVEL of brick and concrete)
				0.50	4.39		MADE GROUND (Concrete slab)
				0.60	4.29		*Very weak concrete easily broken out with excavator bucket*
							MADE GROUND (Coarse angular GRAVEL of brick and concrete)
	0.90 - 1.80	ES		0.90	3.99		Firm slightly sandy greyish brown CLAY
				1.80	3.09		End of Pit at 1.80m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A4/02+03
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462953.45 - 431843.68 Level: 4.75
Date	01/11/2019		
Location:	Selby	Dimensions (m): Depth 1.50	0.80
Scale	1:25		
Client:	Sedamyl		
Logged			

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.12	4.63		MADE GROUND (Concrete slab)
	0.20 - 0.50	ES		0.20	4.55		MADE GROUND (Tarmacadam)
							MADE GROUND (Limestone gravel chippings)
	0.50 - 1.50	ES		0.50	4.25		MADE GROUND (Firm slightly sandy grey reworked CLAY with coarse gravel backfill in service trenches)
							Geotextile + Geogrid Layer
				1.50	3.25		End of Pit at 1.50m

1
2
3
4
5

Remarks: No odour. No visible contamination. Samples taken from an excavated trench running north - south through Area 4 (A4/02 - Northern End + A4/03 - Southern End)

Stability: Good

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A5/01
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463001.01 - 431779.23 Level: 4.84	Date 30/10/2019
Location: Selby		Dimensions (m): Depth 1.60 — 2.00 × 1.50	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10 - 0.60	ES		0.10	4.74		MADE GROUND (Limestone gravel chippings)
							MADE GROUND (Coarse angular GRAVEL of brick and concrete)
	0.60 - 1.00	ES		0.60	4.24		MADE GROUND (Coarse angular GRAVEL with brick, coal and ash)
							Rubber hoses entering TP from south at 800mm BGL
	1.00 - 1.20	ES		1.00	3.84		Firm slightly sandy grey CLAY
				1.60	3.24		End of Pit at 1.60m

Remarks: Hydrocarbon odour

Stability: Good

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A5/02
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462997.99 - 431765.31 Level: 4.80	Date 31/10/2019
Location: Selby		Dimensions (m): Depth 1.90 — 2.00 × 1.50	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.08	4.72		MADE GROUND (Limestone gravel chippings)
							MADE GROUND (Coarse angular GRAVEL of brick and concrete)
	0.50 - 1.00	ES		0.50	4.30		MADE GROUND (Firm slightly sandy grey reworked CLAY with brick and concrete)
							Visible contamination oil/hydrocarbon at 900mm BGL
				1.00	3.80		MADE GROUND (Concrete slab)
	1.30 - 1.90	ES		1.30	3.50		Firm slightly sandy grey CLAY
				1.90	2.90		End of Pit at 1.90m

Remarks: Hydrocarbon odour

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A5/03
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463012.37 - 431769.96 Level: 4.94
Location:	Selby	Dimensions (m): Depth 1.50	2.00 × 1.50
Client:	Sedamyl		

Date: 31/10/2019
Scale: 1:25
Logged:

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.05	4.89		MADE GROUND (Limestone gravel chippings)
							MADE GROUND (Coarse angular GRAVEL of brick and concrete)
	0.30 - 0.50	ES		0.30	4.64		MADE GROUND (Coarse angular GRAVEL with brick, coal and ash)
	0.50 - 1.10	ES		0.50	4.44		MADE GROUND (Firm slightly sandy grey reworked CLAY with brick and concrete)
				1.10	3.84		Firm slightly sandy grey CLAY
				1.50	3.44		End of Pit at 1.50m

Remarks: No odour

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A6/01
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463014.22 - 431716.11 Level: 5.60
Location:	Selby	Dimensions (m): Depth 2.00	2.00 × 1.50
Client:	Sedamyl		

Date: 31/10/2019
Scale: 1:25
Logged:

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.15 - 1.15	ES		0.15	5.45		Grassed TOPSOIL
							MADE GROUND (Coarse angular GRAVEL of brick and concrete)
							Top of brick wall at 800mm BGL
				1.15	4.45		
	1.20 - 2.00	ES		1.20	4.40		MADE GROUND (Tarmacadam)
							Firm slightly sandy greyish brown CLAY
							Concrete Slab
				2.00	3.60		End of Pit at 2.00m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A6/02
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463026.82 - 431711.69 Level: 5.67	Date 31/10/2019
Location: Selby		Dimensions (m): 2.00 × 1.50 Depth 2.10	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.00	5.67		Grassed TOPSOIL
	0.15 - 0.50	ES		0.15	5.52		MADE GROUND (Coarse angular GRAVEL of brick and concrete)
				0.50	5.17		MADE GROUND (Ceramic tiles on concrete slab) *Required excavator mounted hydraulic breaker*
	0.80 - 1.30	ES		0.80	4.87		MADE GROUND (Limestone gravel chippings)
				1.30	4.37		MADE GROUND (Concrete slab) *Required excavator mounted hydraulic breaker*
	1.60 - 2.10	ES		1.60	4.07		Firm slightly sandy greyish brown CLAY
				2.10	3.57		End of Pit at 2.10m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A6/03
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463037.11 - 431702.60 Level: 5.56	Date 01/11/2019
Location: Selby		Dimensions (m): 2.00 × 1.50 Depth 2.20	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.15	5.41		Grassed TOPSOIL
							MADE GROUND (Limestone gravel chippings)
				1.00	4.56		MADE GROUND (Tarmacadam)
	1.10 - 1.60	ES		1.10	4.46		MADE GROUND (Coarse angular GRAVEL of brick and concrete) *Top of brick wall running N>S encountered at 1100mm BGL base of wall at 2000mm BGL*
	1.60 - 2.20	ES		1.60	3.96		Firm slightly sandy greyish brown CLAY
				2.20	3.36		End of Pit at 2.20m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A6/04
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463041.50 - 431715.79 Level: 5.49	Date 01/11/2019
Location: Selby		Dimensions (m): Depth 2.00 — 2.00 × 1.50	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10	5.39		Grassed TOPSOIL
							MADE GROUND (Coarse angular GRAVEL of brick and concrete)
	0.60 - 0.90	ES		0.60	4.89		MADE GROUND (Coarse angular GRAVEL with brick fragments)
				0.90	4.59		MADE GROUND (Tarmacadam)
				1.00	4.49		MADE GROUND (Brick fragments)
	1.30 - 1.70	ES		1.30	4.19		MADE GROUND (Firm slightly sandy grey reworked CLAY with brick and concrete)
				1.70	3.79		Firm slightly sandy greyish brown CLAY
				2.00	3.49		End of Pit at 2.00m

Remarks: No odour. No visible contamination.

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A7(a)/01
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463387.55 - 431577.15 Level: 2.81
Location:	Selby	Dimensions (m): Depth 2.00	2.00 × 0.80
Client:	Sedamyl		

Date: 05/11/2019
Scale: 1:25
Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					MADE GROUND (Coarse angular GRAVEL with broken concrete)
	0.30 - 2.00	ES		0.30	2.51		Firm slightly sandy greyish brown CLAY *Geotextile Layer*
				2.00	0.81		End of Pit at 2.00m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A7(a)/02
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463375.14 - 431575.91 Level: 2.83	Date 05/11/2019
Location: Selby		Dimensions (m): Depth 2.20 — 2.00 × 0.80	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					MADE GROUND (Course angular GRAVEL with broken concrete)
	0.30 - 1.50	ES		0.30	2.53		Firm slightly sandy greyish brown CLAY
	1.50 - 2.20	ES		1.50	1.33		Plastic amorphous dark brown PEAT
							Tree Stump at 2000mm BGL
				2.20	0.63		End of Pit at 2.20m

1
2
3
4
5

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A7(a)/03
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463384.54 - 431589.64 Level: 2.72	Date 05/11/2019
Location: Selby		Dimensions (m): 2.00 × 0.80 Depth 1.80	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					MADE GROUND (Coarse angular GRAVEL with broken concrete)
	0.30 - 1.80	ES		0.30	2.42		Firm slightly sandy greyish brown CLAY
				1.80	0.92		End of Pit at 1.80m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A7/01
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463358.21 - 431614.31 Level: 3.76
Location:	Selby	Dimensions (m): Depth 2.30	2.00 × 0.80
Client:	Sedamyl		

Date: 05/11/2019
Scale: 1:25
Logged:

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
							MADE GROUND (Brick, concrete and sand)
	0.60 - 1.20	ES		0.60	3.16		MADE GROUND (Firm slightly sandy grey reworked CLAY with brick, concrete and plastic)
				1.20	2.56		MADE GROUND (Coal, clinker and ash)
				1.30	2.46		MADE GROUND (Limestone gravel chippings)
	1.80 - 2.30	ES		1.80	1.96		Firm slightly sandy greyish brown CLAY
				2.30	1.46		End of Pit at 2.30m

Remarks: No odour

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A7/02
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463368.29 - 431635.43 Level: 3.88	Date 05/11/2019
Location: Selby		Dimensions (m): 2.00 × 0.80 Depth 2.00	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.90	ES					MADE GROUND (Brick, concrete, and sand)
	0.90 - 1.40	ES		0.90	2.98		MADE GROUND (Stone cobbles, coal and concrete fragments) *Geotextile + Geogrid Layer*
	1.40 - 2.00	ES		1.40	2.48		Firm slightly sandy grey CLAY
				2.00	1.88		End of Pit at 2.00m

Remarks: No odour

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A7/03
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463370.93 - 431660.28 Level: 3.65
Location:	Selby	Dimensions (m):	Depth 1.90
Client:	Sedamyl	2.00 / 0.80	

Date: 05/11/2019
Scale: 1:25
Logged:

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.50	ES					MADE GROUND (Brick, concrete and sand)
				0.50	3.15		MADE GROUND (Coal, clinker and ash)
				0.60	3.05		MADE GROUND (Limestone gravel chippings)
							Geotextile Layer
	1.00 - 1.90	ES		1.00	2.65		Firm slightly sandy grey CLAY
				1.90	1.75		End of Pit at 1.90m

Remarks: No odour

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A8/01
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462870.39 - 431761.56 Level: 4.87	Date 06/11/2019
Location: Selby		Dimensions (m): Depth 1.60, 0.80 x 2.00	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.35	ES		0.05	4.82		MADE GROUND (Limestone gravel chippings)
							MADE GROUND (Limestone gravel chippings)
	0.35 - 0.80	ES		0.35	4.52		MADE GROUND (Firm slightly sandy grey reworked CLAY)
				0.80	4.07		Firm sandy greyish brown CLAY
				1.60	3.27		End of Pit at 1.60m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A8/02
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462862.30 - 431769.48 Level: 4.95	Date 06/11/2019
Location: Selby		Dimensions (m): Depth 1.60 — 2.00 × 0.80	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.70	ES		0.05	4.90		MADE GROUND (Limestone gravel chippings)
							MADE GROUND (Limestone gravel chippings)
				0.35	4.60		MADE GROUND (Firm slightly sandy grey reworked CLAY)
							Brick wall with footings
	0.70 - 1.20	ES					
				0.80	4.15		Firm sandy greyish brown CLAY
				1.60	3.35		End of Pit at 1.60m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A8/03
Sheet 1 of 1

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462851.74 - 431777.06 Level: 4.89
Date	06/11/2019		
Location:	Selby	Dimensions (m):	2.00 × 0.80 Depth 1.50
Scale	1:25		
Client:	Sedamyl		
Logged			

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.60	ES		0.05	4.84		MADE GROUND (Limestone gravel chippings) MADE GROUND (Coarse angular GRAVEL with brick and concrete)
							Top of wall
	0.60 - 1.50	ES		0.60	4.29		MADE GROUND (Firm slightly sandy grey reworked CLAY)
				1.50	3.39		STOPPED DUE TO WATER INGRESS
				1.50	3.39		End of Pit at 1.50m

Remarks: No odour, no visible contamination

Stability: Good

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
BS20 6PN

Trial Pit Log

TrialPit No
A8/04
Sheet 1 of 1

Project Name: Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462845.26 - 431770.30 Level: 4.87	Date 06/11/2019
Location: Selby		Dimensions (m): Depth 1.50 — 2.00 × 0.80	Scale 1:25
Client: Sedamyl			Logged

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.05 - 0.15	ES		0.05	4.82		MADE GROUND (Limestone gravel chippings)
	0.15 - 0.40	ES		0.15	4.72		MADE GROUND (Tarmacadam)
							MADE GROUND (Limestone gravel chippings)
	0.40 - 1.00	ES		0.40	4.47		MADE GROUND (Firm slightly sandy grey reworked CLAY)
				1.00	3.87		Firm sandy greyish brown CLAY (Glaciolacustrine Deposits)
				1.50	3.37		End of Pit at 1.50m

1
2
3
4
5

Remarks: Slight hydrocarbon odour

Stability: Good

AGS

Appendix C

Borehole Logs

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 1
Sheet 1 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	462730E - 431818N	Hole Type RO
Location:	Selby		Level:	4.98	Scale 1:50
Client:	Sedamyl		Dates:	12/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.02	4.96		Grassed TOPSOIL
								MADE GROUND (Brown sandy GRAVEL of brick and concrete)
					0.50	4.48		Stiff slightly sandy brown CLAY
		1.20 - 2.70 1.20	C SPT	N=12 (2,3/3,3,3,3)				
		3.00 - 4.50	C					
		4.50	SPT	N=12 (3,3/3,3,3,3)				
		6.00	SPT	N=12 (2,2/3,3,3,3)				
		7.50	SPT	N=20 (1,3/4,4,6,6)				
		9.00	SPT	N=28 (2,4/4,7,8,9)				
					9.50	-4.52		Medium dense brown SAND
								Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 1
Sheet 2 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462730E - 431818N	Hole Type RO
Location:	Selby		Level: 4.98	Scale 1:50
Client:	Sedamyl		Dates: 12/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.50 - 12.00 10.50	C SPT	N=19 (2,2/3,4,6,6)				Medium dense brown SAND
					11.50	-6.52		Stiff to very stiff slightly sandy brown CLAY
		12.00	SPT	N=28 (4,6/6,6,7,9)				
		13.50	SPT	N=14 (2,3/3,3,4,4)				
		15.00	SPT	N=20 (3,3/4,4,6,6)				
		16.50	SPT	N=27 (5,5/5,5,8,9)				
		18.00	SPT	N=28 (2,3/4,7,7,10)	18.00	-13.02		Medium dense red SAND
		19.50	SPT	N=38 (4,6/6,9,11,12)				
					20.00	-15.02		Continued on Next Sheet

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 1
Sheet 3 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	462730E - 431818N	Hole Type RO
Location:	Selby		Level:	4.98	Scale 1:50
Client:	Sedamyl		Dates:	12/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
								Weak SANDSTONE
					25.00	-20.02		End of Borehole at 25.00m

21 22 23 24 25 26 27 28 29 30

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 4
Sheet 1 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	462983E - 431827N	Hole Type CP
Location:	Selby		Level:	4.75	Scale 1:50
Client:	Sedamyl		Dates:	02/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10	4.65		MADE GROUND (Limestone gravel chippings)	
					0.30	4.45		MADE GROUND (Limestone gravel chippings)	
								MADE GROUND (Brown sandy GRAVEL of brick and concrete)	
					0.90	3.85		Soft sandy grey CLAY	1
		2.00	SPT	N=4 (1,1/1,1,1,1)					2
					3.00	1.75		Stiff sandy greyish brown CLAY with sand lenses	3
		4.00	SPT	N=4 (1,1/1,1,1,1)					4
									5
		6.00 - 6.40	U	Ublow=35					6
									7
		8.00	SPT	N=16 (1,3/4,4,4,4)					8
									9
		10.00	SPT	N=12 (2,2/3,3,3,3)					10
								Continued on Next Sheet	

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 4
Sheet 2 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 462983E - 431827N	Hole Type CP
Location:	Selby		Level: 4.75	Scale 1:50
Client:	Sedamyl		Dates: 02/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Stiff sandy greyish brown CLAY with sand lenses
					10.70	-5.95		
								Medium dense brown SAND with clay bands
		12.00 - 12.40	U	Ublow=54	11.90	-7.15		Stiff sandy greyish brown CLAY with sand lenses
		14.00	SPT	N=16 (1,3/4,4,4,4)				
					15.70	-10.95		Dense brownish red SAND
		16.00	SPT	N=22 (2,2/4,6,6,6)				
		18.00	SPT	N=31 (1,5/6,7,9,9)				
					19.00	-14.25		Hard red SANDSTONE
		20.00	SPT	N=57 (4,7/9,9,14,25)	20.00	-15.25		Continued on Next Sheet

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 4
Sheet 3 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	462983E - 431827N	Hole Type CP
Location:	Selby		Level:	4.75	Scale 1:50
Client:	Sedamyl		Dates:	02/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Soft weathered SANDSTONE
		23.50 - 25.00	C		23.00	-18.25		Soft weathered SANDSTONE
					26.50	-21.75		End of Borehole at 26.50m

Remarks

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 6
Sheet 1 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	463022E - 431713N	Hole Type CP
Location:	Selby		Level:	5.61	Scale 1:50
Client:	Sedamyl		Dates:	11/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	5.51		Grassed TOPSOIL
					0.30	5.31		MADE GROUND (Grey fine to course sandy GRAVEL, comprising cobbles of concrete and slag)
					0.50	5.11		MADE GROUND (concrete)
								MADE GROUND (Grey fine to course sandy GRAVEL, comprising cobbles of concrete and slag)
					2.70	2.91		Firm to very stiff sandy greyish brown CLAY
		4.00	SPT	N=8 (1,2/2,2,2,2)				
		6.00 - 6.40	U	Ublow=54				
		8.00	SPT	N=12 (2,2/3,3,3,3)				
		10.00	SPT	N=22 (1,3/4,6,6,6)				

Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 6
Sheet 2 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	463022E - 431713N	Hole Type CP
Location:	Selby		Level:	5.61	Scale 1:50
Client:	Sedamyl		Dates:	11/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		12.00 - 12.40	U	Ublow=57				Firm to very stiff sandy greyish brown CLAY
		14.00	SPT	N=11 (3,2/2,3,2,4)				
		16.00	SPT	N=15 (3,2/2,3,4,6)				
					18.70	-13.09		Weathered SANDSTONE
								Continued on Next Sheet

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 6
Sheet 3 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	463022E - 431713N	Hole Type CP
Location:	Selby		Level:	5.61	Scale 1:50
Client:	Sedamyl		Dates:	11/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Weathered SANDSTONE
					21.00	-15.39		End of Borehole at 21.00m

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 7
Sheet 1 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463368E - 431665N	Hole Type CP
Location:	Selby		Level: 3.68	Scale 1:50
Client:	Sedamyl		Dates: 22/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								MADE GROUND (Brick, concrete and sand)
					0.60	3.08		MADE GROUND (Limestone gravel chippings)
					1.20	2.48		MADE GROUND (Firm slightly sandy reworked clay with brick and concrete)
		1.50	SPT	N=4 (1,1/1,1,1,1)				
					2.00	1.68		Soft slightly sandy grey CLAY
		3.00	SPT	N=6 (1,1/1,1,2,2)				
					4.00	-0.32		Plastic amorphous dark brown PEAT
		4.50	SPT	N=5 (1,1/1,1,1,2)				
		6.00 - 6.40	U	Ublow=27				
		7.50	SPT	N=4 (1,1/1,1,1,1)				
		9.00	SPT	N=5 (1,1/1,1,1,2)				
								Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 7
Sheet 2 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords: 463368E - 431665N	Hole Type CP
Location:	Selby		Level: 3.68	Scale 1:50
Client:	Sedamyl		Dates: 22/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								Plastic amorphous dark brown PEAT	
					10.70	-7.02		Soft to firm greyish brown CLAY	
		11.00 - 11.40	U	Ublow=48					11
		12.00	SPT	N=10 (1,1/2,2,3,3)					12
									13
		14.00	SPT	N=11 (1,2/2,3,3,3)					14
		15.00 - 15.40	U	Ublow=51	15.00	-11.32		Loose to medium dense yellow SAND with clay inclusions	15
									16
		17.00	SPT	N=7 (1,1/1,2,2,2)					17
									18
		18.50	SPT	N=12 (2,3/3,3,2,4)					19
					19.10	-15.42		Weathered red SANDSTONE	
		20.00	SPT	40 (4,7/40 for 150mm)				Continued on Next Sheet	20

Remarks

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 7
Sheet 3 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	463368E - 431665N	Hole Type CP
Location:	Selby		Level:	3.68	Scale 1:50
Client:	Sedamyl		Dates:	22/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		21.00	SPT	0 (25 for 75mm/0 for 0mm)	21.00	-17.32		Weathered red SANDSTONE
								Red SANDSTONE with grey marl
					25.00	-21.32		End of Borehole at 25.00m

21
22
23
24
25
26
27
28
29
30

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 7(a)
Sheet 1 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	463381E - 431579N	Hole Type CP
Location:	Selby		Level:	2.71	Scale 1:50
Client:	Sedamyl		Dates:	26/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.30	2.41		MADE GROUND (Coarse angular GRAVEL with brick and concrete)
		1.50	SPT	N=4 (1,1/1,1,1,1)				Soft greyish brown sandy CLAY
					2.30	0.41		Plastic amorphous dark brown PEAT
		3.00	SPT	N=4 (1,1/1,1,1,1)				
		4.50	SPT	N=8 (1,1/2,2,2,2)	4.50	-1.79		Firm to very stiff sandy greyish brown CLAY
		6.00 - 6.40	U	Ublow=47				
		7.50	SPT	N=8 (1,2/2,2,2,2)				
		9.00 - 9.40	U	Ublow=49				
								Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 7(a)
Sheet 2 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	463381E - 431579N	Hole Type CP
Location:	Selby		Level:	2.71	Scale 1:50
Client:	Sedamyl		Dates:	26/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.50	SPT	N=17 (2,2/3,4,5,5)				Firm to very stiff sandy greyish brown CLAY
		12.00 - 12.40	U	Ublow=66				
		13.50	SPT	N=30 (2,2/4,7,9,10)				
		15.00	SPT	N=35 (2,2/6,9,9,11)				
		16.50	SPT	N=26 (3,3/6,6,6,8)	16.00	-13.29		Medium dense to dense brown SAND
		18.00	SPT	36 (7,8/36 for 150mm)				
					18.20	-15.49		Red SANDSTONE with grey marl
								Continued on Next Sheet

Remarks

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 7(a)
Sheet 3 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	463381E - 431579N	Hole Type CP
Location:	Selby		Level:	2.71	Scale 1:50
Client:	Sedamyl		Dates:	26/11/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Red SANDSTONE with grey marl
					25.30	-22.59		End of Borehole at 25.30m

Remarks

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 8
Sheet 1 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	462851E - 431784N	Hole Type CP
Location:	Selby		Level:	4.92	Scale 1:50
Client:	Sedamyl		Dates:	06/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05	4.87		MADE GROUND (Limestone gravel chippings)
								MADE GROUND (Coarse angular GRAVEL with brick and concrete)
					0.50	4.42		Stiff greyish brown slightly sandy CLAY
		2.00	SPT	N=16 (1,3/4,4,4,4)				
		4.00	SPT	N=12 (1,2/3,3,3,3)				
		6.00	SPT	N=10 (1,2/2,3,2,3)				
		8.00	SPT	N=11 (2,3/3,3,3,2)	8.00	-3.08		Stiff brown slightly sandy CLAY
		10.00 - 10.40	U	Ublow=54				

Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

Vertase FLI

No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 8
Sheet 2 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	462851E - 431784N	Hole Type CP
Location:	Selby		Level:	4.92	Scale 1:50
Client:	Sedamyl		Dates:	06/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Stiff brown slightly sandy CLAY
		12.00	SPT	N=15 (2,3/3,4,4,4)				
		14.00	SPT	N=18 (1,3/4,4,4,6)				
		16.00 - 16.40	U	Ublow=57				
					17.70	-12.78		Dense brown SAND
		18.00	SPT	N=44 (4,7/7,9,13,15)				
					19.00	-14.08		Weathered red SANDSTONE
								Continued on Next Sheet

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

Vertase FLI
No. 1 Middle Bridge Business Park
Bristol Road
Portishead
Bristol
BS20 6PN

Borehole Log

Borehole No.
Area 8
Sheet 3 of 3

Project Name:	Denisons Road, Selby	Project No. 1820BLY	Co-ords:	462851E - 431784N	Hole Type CP
Location:	Selby		Level:	4.92	Scale 1:50
Client:	Sedamyl		Dates:	06/12/2019	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					21.00	-16.08		Weathered red SANDSTONE End of Borehole at 21.00m

Remarks

AGS

Appendix D

Certificates of Chemical Analysis for Soils

Jamie Edmead
Vertase Ltd
1 Middle Bridge Business Park
Bristol Rd
Portishead
BS20 6PN

t:

e:

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

f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 19-69924

Replaces Analytical Report Number : 19-69924, issue no. 1

Project / Site name:	Selby	**Samples received on:**	04/11/2019
Your job number:	1820 BLY	**Samples instructed on:**	04/11/2019
Your order number:		**Analysis completed by:**	12/12/2019
Report Issue Number:	2	**Report issued on:**	12/12/2019
Samples Analysed:	40 soil samples		

Signed:

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351391	1351392	1351393	1351394	1351395
Sample Reference				A1/01/MG	A1/01/C	A1/02/MG	A1/02/C	A1/03/MG
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				29/10/2019	29/10/2019	29/10/2019	29/10/2019	29/10/2019
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	%	N/A	NONE	8.7	20	14	15	16
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	Not-detected	-	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.2	7.6	7.7	7.4	7.8
Total Sulphate as SO_4	mg/kg	50	MCERTS	380	710	380	220	340
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.014	0.11	-	-	-
Total Potential Sulphate	mg/kg	30	NONE	520	650	-	-	-
Total Sulphur	mg/kg	50	MCERTS	170	220	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	< 0.0010	0.0082	0.0062	0.0012	0.0077
Total Organic Carbon (TOC)	%	0.1	MCERTS	< 0.1	0.8	0.6	0.1	0.8
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	2.5	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	1.2	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.25	4.7	0.39	< 0.05	0.49
Pyrene	mg/kg	0.05	MCERTS	0.24	3.9	0.41	< 0.05	0.52
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	1.6	0.19	< 0.05	0.32
Chrysene	mg/kg	0.05	MCERTS	< 0.05	2.3	0.34	< 0.05	0.47
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	2.0	0.30	< 0.05	0.44
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.71	0.17	< 0.05	0.27
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.6	0.21	< 0.05	0.31
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.72	< 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	0.73	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	21.8	2.01	< 0.80	2.82

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351391	1351392	1351393	1351394	1351395
Sample Reference				A1/01/MG	A1/01/C	A1/02/MG	A1/02/C	A1/03/MG
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				29/10/2019	29/10/2019	29/10/2019	29/10/2019	29/10/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	2.8	6.1	3.5	2.9	3.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	7.7	14	8.4	16	8.3
Copper (aqua regia extractable)	mg/kg	1	MCERTS	11	12	9.6	10	10
Lead (aqua regia extractable)	mg/kg	1	MCERTS	10	38	19	11	17
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	7.3	13	8.3	14	9.2
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	30	40	30	33	34
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	12	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	13	19	< 10	11
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	25	24	< 10	14

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351396	1351397	1351398	1351399	1351400
Sample Reference				A1/03/C	A1/04/MG	A1/04/S	A2/01/MG	A2/01/C
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				29/10/2019	29/10/2019	29/10/2019	30/10/2019	30/10/2019
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	%	N/A	NONE	19	12	20	14	18
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.5	9.2	7.4	9.4	7.7
Total Sulphate as SO_4	mg/kg	50	MCERTS	270	740	630	2400	630
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	0.34	0.31
Total Potential Sulphate	mg/kg	30	NONE	-	-	-	4200	1900
Total Sulphur	mg/kg	50	MCERTS	-	-	-	1400	620
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0061	0.0020	0.015	0.022	0.012
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.6	0.2	1.5	2.2	1.2
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.38	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.22	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.56	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.68	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.24	0.81	6.0	0.88
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.26	2.0	0.20
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.50	1.5	16	1.2
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.46	1.4	15	1.0
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.32	0.69	8.6	0.57
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.39	0.74	6.4	0.42
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.46	0.82	7.6	0.58
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.21	0.30	4.1	0.21
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.28	0.67	7.2	0.47
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.37	3.6	0.25
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.35	4.0	0.23
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	2.86	7.89	83.5	6.07

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351396	1351397	1351398	1351399	1351400
Sample Reference				A1/03/C	A1/04/MG	A1/04/S	A2/01/MG	A2/01/C
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				29/10/2019	29/10/2019	29/10/2019	30/10/2019	30/10/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.2	3.4	8.7	38	7.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30	10	18	32	20
Copper (aqua regia extractable)	mg/kg	1	MCERTS	23	12	22	83	21
Lead (aqua regia extractable)	mg/kg	1	MCERTS	20	15	66	510	62
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	9.7	12	42	17
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	59	49	53	190	70
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	2.5	1.4
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	9.4	< 2.0	5.6	2.5
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	16	< 8.0	14	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	54	< 8.0	55	24
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	80	< 10	77	35
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	3.8	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	52	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	140	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	200	< 10

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351401	1351402	1351403	1351404	1351405
Sample Reference				A2/02/MG	A2/02/C	A2(A)/01/MG	A2(A)/01/C	A4/01/MG
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				30/10/2019	30/10/2019	30/10/2019	30/10/2019	30/10/2019
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	%	N/A	NONE	13	18	16	25	9.9
Total mass of sample received	kg	0.001	NONE	0.50	0.45	0.50	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.3	10.0	9.9	8.2	9.9
Total Sulphate as SO_4	mg/kg	50	MCERTS	3100	830	5100	820	1800
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	0.85	-	0.30
Total Potential Sulphate	mg/kg	30	NONE	-	-	12000	-	2200
Total Sulphur	mg/kg	50	MCERTS	-	-	3900	-	750
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.013	0.0073	0.0082	0.018	0.0041
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.3	0.7	0.8	1.8	0.4
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	2.5	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	2.7	0.22	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	25	1.9	0.38	0.50	0.19
Anthracene	mg/kg	0.05	MCERTS	11	0.59	0.11	0.11	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	38	3.1	0.64	0.71	0.35
Pyrene	mg/kg	0.05	MCERTS	32	2.6	0.71	0.66	0.32
Benzo(a)anthracene	mg/kg	0.05	MCERTS	13	1.2	0.33	0.27	0.28
Chrysene	mg/kg	0.05	MCERTS	10	0.90	0.48	0.42	0.23
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	11	0.90	0.39	0.35	0.26
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	3.9	0.60	0.26	0.20	0.14
Benzo(a)pyrene	mg/kg	0.05	MCERTS	9.1	0.88	0.35	0.27	0.24
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	4.1	0.45	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.2	0.13	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	4.3	0.44	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	167	14.0	3.65	3.49	2.01

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351401	1351402	1351403	1351404	1351405
Sample Reference				A2/02/MG	A2/02/C	A2(A)/01/MG	A2(A)/01/C	A4/01/MG
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				30/10/2019	30/10/2019	30/10/2019	30/10/2019	30/10/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.6	5.7	5.6	9.6	3.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.5	0.2	0.3
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	89	15	20	25	13
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	15	20	19	18
Lead (aqua regia extractable)	mg/kg	1	MCERTS	110	54	37	44	22
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	13	13	20	11
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	240	47	140	73	46
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	2.3	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	16	10	18	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	46	17	130	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	200	58	240	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	260	85	380	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	6.5	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	100	< 10	11	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	110	13	25	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	220	22	37	< 10	< 10

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351406	1351407	1351408	1351409	1351410
Sample Reference				A4/01/C	A4/02/MG	A4/02/C	A4/03/MG	A4/03/C
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				30/10/2019	01/11/2019	01/11/2019	01/11/2019	01/11/2019
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	%	N/A	NONE	19	12	23	11	23
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	-	Not-detected	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.2	8.7	7.9	9.3	8.6
Total Sulphate as SO_4	mg/kg	50	MCERTS	460	560	800	720	930
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.17	-	-	-	-
Total Potential Sulphate	mg/kg	30	NONE	1400	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	480	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0090	0.0017	0.012	0.0021	0.0079
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.9	0.2	1.2	0.2	0.8
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.49
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	0.54	0.22
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.44	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.74	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.33	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.33	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.28	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.11	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.27	< 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	MCERTS	< 0.80	< 0.80	< 0.80	3.04	< 0.80

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351406	1351407	1351408	1351409	1351410
Sample Reference				A4/01/C	A4/02/MG	A4/02/C	A4/03/MG	A4/03/C
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				30/10/2019	01/11/2019	01/11/2019	01/11/2019	01/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.3	1.1	7.1	2.2	7.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.7	0.2	1.1	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	5.6	18	8.7	25
Copper (aqua regia extractable)	mg/kg	1	MCERTS	13	8.8	19	13	28
Lead (aqua regia extractable)	mg/kg	1	MCERTS	19	21	22	27	18
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	2.9	18	5.0	33
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	53	47	120	70	52
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	0.31
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	16
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	180
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	230
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	97
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	520
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	8.5
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	100
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	130
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	52
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	17	290

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351411	1351412	1351413	1351414	1351415
Sample Reference				A5/01/MG	A5/01/MG/2	A5/01/C	A5/02/MG	A5/02/C
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				30/10/2019	30/10/2019	30/10/2019	30/10/2019	30/10/2019
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	%	N/A	NONE	11	10	19	16	23
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile- Loose Fibres	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	Detected	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.7	9.9	8.2	7.9	7.3
Total Sulphate as SO_4	mg/kg	50	MCERTS	2400	2800	470	1200	660
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.39	-	0.17	-	-
Total Potential Sulphate	mg/kg	30	NONE	3000	-	1000	-	-
Total Sulphur	mg/kg	50	MCERTS	1000	-	350	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0050	0.0085	0.0055	0.015	0.012
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.5	0.8	0.6	1.5	1.2
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	0.23	0.29	< 0.05	0.38	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.37	0.54	< 0.05	0.41	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.36	0.50	< 0.05	0.35	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.27	0.39	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.22	0.24	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.24	0.32	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.17	0.12	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.24	0.28	< 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	MCERTS	2.10	2.68	< 0.80	1.14	< 0.80

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351411	1351412	1351413	1351414	1351415
Sample Reference				A5/01/MG	A5/01/MG/2	A5/01/C	A5/02/MG	A5/02/C
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				30/10/2019	30/10/2019	30/10/2019	30/10/2019	30/10/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.9	6.9	7.6	6.6	9.0
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.6	0.2	0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	31	21	23	24	32
Copper (aqua regia extractable)	mg/kg	1	MCERTS	33	40	43	29	34
Lead (aqua regia extractable)	mg/kg	1	MCERTS	100	45	45	25	31
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	22	22	28	35
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	140	92	210	63	110
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	2.7	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	2.7	< 2.0	< 2.0	5.5	2.2
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	12	< 8.0	< 8.0	51	13
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	54	110	< 8.0	1800	540
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	69	110	< 10	1800	550
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	3.6
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	16
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	56	< 10	400	280
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	62	< 10	400	300

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351416	1351417	1351418	1351419	1351420
Sample Reference				A5/03/MG	A5/03/C	A6/01/MG	A6/01/C	A6/02/MG
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				31/10/2019	31/10/2019	01/11/2019	01/11/2019	01/11/2019
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	%	N/A	NONE	12	17	14	15	13
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	-	-	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.0	7.9	9.7	7.2	9.7
Total Sulphate as SO_4	mg/kg	50	MCERTS	2500	680	1900	480	2400
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	0.13	0.093	0.32
Total Potential Sulphate	mg/kg	30	NONE	-	-	1800	1000	2300
Total Sulphur	mg/kg	50	MCERTS	-	-	600	340	760
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0096	0.0077	0.011	0.012	0.0050
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.0	0.8	1.1	1.2	0.5
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.34	< 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	0.26	< 0.05	0.46	0.67	0.87
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.12	0.17
Fluoranthene	mg/kg	0.05	MCERTS	0.45	< 0.05	0.67	0.88	1.4
Pyrene	mg/kg	0.05	MCERTS	0.41	< 0.05	0.60	0.77	1.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.31	< 0.05	0.40	0.58	0.84
Chrysene	mg/kg	0.05	MCERTS	0.31	< 0.05	0.41	0.47	0.67
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.32	< 0.05	0.41	0.48	0.85
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.21	< 0.05	0.30	0.36	0.34
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.31	< 0.05	0.36	0.48	0.71
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.19	0.30
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	0.29	0.35
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	2.58	< 0.80	3.95	5.29	7.76

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351416	1351417	1351418	1351419	1351420
Sample Reference				A5/03/MG	A5/03/C	A6/01/MG	A6/01/C	A6/02/MG
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				31/10/2019	31/10/2019	01/11/2019	01/11/2019	01/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	4.2	9.3	7.9	5.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.7	< 0.2	0.6	0.3	0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	15	23	19	18
Copper (aqua regia extractable)	mg/kg	1	MCERTS	51	9.3	43	20	34
Lead (aqua regia extractable)	mg/kg	1	MCERTS	48	14	58	62	130
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	13	25	12	15
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	97	37	370	70	88
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	9.5	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	130	< 8.0	68	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	130	< 10	80	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	49	< 10	46	17	35
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	54	< 10	50	23	45

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351421	1351422	1351423	1351424	1351425
Sample Reference				A6/02/C	A6/02/AGG	A6/03/MG	A6/03/C	A6/04/C
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				01/11/2019	01/11/2019	01/11/2019	01/11/2019	01/11/2019
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	%	N/A	NONE	18	10	17	18	18
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.9	10.3	9.6	8.3	8.4
Total Sulphate as SO_4	mg/kg	50	MCERTS	810	2400	17000	750	1300
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	1.9	-	-
Total Potential Sulphate	mg/kg	30	NONE	-	-	21000	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	6900	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.013	< 0.0010	0.0071	0.0043	0.0061
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.3	< 0.1	0.7	0.4	0.6
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	0.88	0.40	1.4	0.32	0.32
Anthracene	mg/kg	0.05	MCERTS	0.16	0.13	0.33	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.95	0.90	2.2	0.59	0.56
Pyrene	mg/kg	0.05	MCERTS	0.78	0.86	1.9	0.51	0.51
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.57	0.51	1.2	0.36	0.37
Chrysene	mg/kg	0.05	MCERTS	0.51	0.54	1.0	0.40	0.35
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.55	0.62	1.2	0.29	0.34
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.25	0.26	0.58	0.28	0.19
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.47	0.53	1.1	0.31	0.29
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.18	0.27	0.63	< 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	0.24	0.29	0.63	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	5.54	5.31	12.3	3.06	2.93

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351421	1351422	1351423	1351424	1351425
Sample Reference				A6/02/C	A6/02/AGG	A6/03/MG	A6/03/C	A6/04/C
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				01/11/2019	01/11/2019	01/11/2019	01/11/2019	01/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.9	2.3	5.5	5.6	5.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2	0.2	0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	17	22	75	9.6	17
Copper (aqua regia extractable)	mg/kg	1	MCERTS	61	16	21	12	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	44	14	47	27	20
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	7.9	15	9.5	15
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	95	50	85	30	50
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	2.8	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	6.7	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	17	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	98	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	120	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	2.2	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	11	25	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	15	39	94	19	16
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	21	51	120	28	25

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351426	1351427	1351428	1351429	1351430
Sample Reference				A6/04/MG	A11/01/S	A11/01/C	A12/01/MG	A12/01/C
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				01/11/2019	29/10/2019	29/10/2019	01/11/2019	01/11/2019
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	%	N/A	NONE	16	14	18	4.9	17
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	-	Not-detected	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.7	7.3	8.5	10.2	8.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	8000	360	160	3200	630
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.3	-	-	0.27	-
Total Potential Sulphate	mg/kg	30	NONE	9200	-	-	19000	-
Total Sulphur	mg/kg	50	MCERTS	3100	-	-	6300	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0059	0.0092	< 0.0010	0.053	0.014
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.6	0.9	< 0.1	5.3	1.4
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.95
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	15	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.53	71	0.74
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.45	60	0.24
Phenanthrene	mg/kg	0.05	MCERTS	1.2	0.74	3.5	590	1.2
Anthracene	mg/kg	0.05	MCERTS	0.34	0.20	0.90	270	0.23
Fluoranthene	mg/kg	0.05	MCERTS	3.4	1.8	8.3	1600	1.0
Pyrene	mg/kg	0.05	MCERTS	3.1	1.7	7.3	1400	0.88
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.0	0.90	4.5	1100	0.51
Chrysene	mg/kg	0.05	MCERTS	1.7	1.1	3.4	860	0.60
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.7	1.2	4.1	1300	0.48
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.4	0.50	2.7	410	0.35
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.9	1.0	4.1	1000	0.49
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.76	0.48	2.1	430	0.25
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.23	< 0.05	0.50	140	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.99	0.48	2.1	440	0.31
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	18.7	10.0	44.5	9630	8.30

Analytical Report Number: 19-69924

Project / Site name: Selby

Lab Sample Number				1351426	1351427	1351428	1351429	1351430
Sample Reference				A6/04/MG	A11/01/S	A11/01/C	A12/01/MG	A12/01/C
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				01/11/2019	29/10/2019	29/10/2019	01/11/2019	01/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.7	4.5	2.4	7.6	6.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2	< 0.2	< 0.2	0.3	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	8.9	6.5	52	17
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	13	9.5	25	22
Lead (aqua regia extractable)	mg/kg	1	MCERTS	47	25	7.3	23	50
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	7.4	8.8	7.3	15
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	4.8	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	70	32	19	41	53
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	3.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	120	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	8.5	< 8.0	< 8.0	320	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	76	< 8.0	< 8.0	890	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	85	< 10	< 10	1300	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	81	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	6.9	450	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	16	18	80	3800	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	80	32	130	6100	18
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	96	51	210	10000	23

Analytical Report Number : 19-69924

Project / Site name: Selby

* 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 *
1351391	A1/01/MG	None Supplied	None Supplied	Light brown sand with gravel.
1351392	A1/01/C	None Supplied	None Supplied	Grey clay and sand.
1351393	A1/02/MG	None Supplied	None Supplied	Brown sandy clay with gravel and vegetation.
1351394	A1/02/C	None Supplied	None Supplied	Light brown sandy clay.
1351395	A1/03/MG	None Supplied	None Supplied	Brown clay and sand with vegetation and gravel
1351396	A1/03/C	None Supplied	None Supplied	Grey clay and sand.
1351397	A1/04/MG	None Supplied	None Supplied	Brown sandy clay with gravel and vegetation.
1351398	A1/04/S	None Supplied	None Supplied	Brown loam and clay with vegetation and gravel
1351399	A2/01/MG	None Supplied	None Supplied	Brown clay and sand with gravel.
1351400	A2/01/C	None Supplied	None Supplied	Brown clay and sand with vegetation and gravel
1351401	A2/02/MG	None Supplied	None Supplied	Brown clay and sand with brick and rubble.
1351402	A2/02/C	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.
1351403	A2(A)/01/MG	None Supplied	None Supplied	Brown clay and sand with brick and gravel
1351404	A2(A)/01/C	None Supplied	None Supplied	Brown clay and sand.
1351405	A4/01/MG	None Supplied	None Supplied	Light brown sand with rubble.
1351406	A4/01/C	None Supplied	None Supplied	Brown sandy clay.
1351407	A4/02/MG	None Supplied	None Supplied	Light brown clay and sand with gravel.
1351408	A4/02/C	None Supplied	None Supplied	Brown sandy clay.
1351409	A4/03/MG	None Supplied	None Supplied	Light brown clay and sand with gravel.
1351410	A4/03/C	None Supplied	None Supplied	Brown clay and sand with gravel.
1351411	A5/01/MG	None Supplied	None Supplied	Brown sand with brick and rubble.
1351412	A5/01/MG/2	None Supplied	None Supplied	Brown clay and sand with brick and rubble.
1351413	A5/01/C	None Supplied	None Supplied	Brown sandy clay with gravel.
1351414	A5/02/MG	None Supplied	None Supplied	Brown clay and sand with rubble and gravel
1351415	A5/02/C	None Supplied	None Supplied	Grey clay and sand.
1351416	A5/03/MG	None Supplied	None Supplied	Brown clay and sand with brick and rubble.
1351417	A5/03/C	None Supplied	None Supplied	Grey sandy clay.
1351418	A6/01/MG	None Supplied	None Supplied	Brown clay and sand with rubble.
1351419	A6/01/C	None Supplied	None Supplied	Brown loam and clay with vegetation and gravel
1351420	A6/02/MG	None Supplied	None Supplied	Brown clay and sand with rubble and brick.
1351421	A6/02/C	None Supplied	None Supplied	Grey clay and sand.
1351422	A6/02/AGG	None Supplied	None Supplied	Light brown clay and sand with vegetation and gravel.
1351423	A6/03/MG	None Supplied	None Supplied	Brown clay and sand with brick and rubble.
1351424	A6/03/C	None Supplied	None Supplied	Brown sandy clay.
1351425	A6/04/C	None Supplied	None Supplied	Brown sandy clay with gravel.
1351426	A6/04/MG	None Supplied	None Supplied	Brown clay and sand with brick and rubble.
1351427	A11/01/S	None Supplied	None Supplied	Brown loam and sand with vegetation and gravel.
1351428	A11/01/C	None Supplied	None Supplied	Light brown sand.
1351429	A12/01/MG	None Supplied	None Supplied	Black sand with gravel.
1351430	A12/01/C	None Supplied	None Supplied	Brown sandy clay.

Analytical Report Number : 19-69924

Project / Site name: Selby

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L009-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In-house method based on BS1377 Part 2, 1990, Classification tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
Total potential sulphate in soil	Determination of total potential sulphate in soil by calculation from total sulphur.	By calculation - In-house method based on TRL 447 report.	L038-PL	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Jamie Edmead
Vertase Ltd
1 Middle Bridge Business Park
Bristol Rd
Portishead
BS20 6PN

t:

e:

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

f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 19-71488

Replaces Analytical Report Number : 19-71488, issue no. 1

Project / Site name:	Selby	**Samples received on:**	12/11/2019
Your job number:	1820BLY	**Samples instructed on:**	12/11/2019
Your order number:		**Analysis completed by:**	11/12/2019
Report Issue Number:	2	**Report issued on:**	11/12/2019
Samples Analysed:	39 soil samples		

Signed:

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359815	1359816	1359817	1359818	1359819
Sample Reference				A7/01/MG	A7/01/C	A7/02/MG	A7/02/MG/2	A7/02/C
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				05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
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	%	N/A	NONE	16	25	14	24	28
Total mass of sample received	kg	0.001	NONE	0.44	0.52	0.46	0.56	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile - Loose Fibres	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	Detected	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.6	7.8	8.5	8.0	7.3
Total Sulphate as SO_4	mg/kg	50	MCERTS	1200	670	920	580	550
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.51	-	-	-	0.17
Total Potential Sulphate	mg/kg	30	NONE	2400	-	-	-	1500
Total Sulphur	mg/kg	50	MCERTS	790	-	-	-	500
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0087	0.015	0.014	0.0085	0.010
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.9	1.5	1.4	0.9	1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.48	< 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	0.21	< 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	1.4	0.78	0.67	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.22	0.14	0.11	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	2.6	0.97	0.78	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	2.3	0.83	0.75	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.8	0.55	0.57	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	1.2	0.45	0.44	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	2.1	0.55	0.67	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.68	0.23	0.27	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.6	0.45	0.49	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.74	< 0.05	0.25	< 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	0.83	< 0.05	0.33	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	15.7	4.95	5.81	< 0.80	< 0.80

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359815	1359816	1359817	1359818	1359819
Sample Reference				A7/01/MG	A7/01/C	A7/02/MG	A7/02/MG/2	A7/02/C
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				05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	11	6.7	8.8	7.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	0.4	0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	70	24	27	21	25
Copper (aqua regia extractable)	mg/kg	1	MCERTS	430	35	33	8.3	10
Lead (aqua regia extractable)	mg/kg	1	MCERTS	66	59	24	26	25
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	20	17	20	20
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	1000	120	170	63	67
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	2.1	< 1.0	1.5	2.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	6.2	< 2.0	4.6	9.2	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	19	< 8.0	12	20	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	53	< 8.0	47	46	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	81	< 10	65	77	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	15	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	36	11	16	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	50	17	22	< 10	< 10

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359820	1359821	1359822	1359823	1359824
Sample Reference				A7/03/MG	A7/03/C	A7(A)/01/MG	A7(A)/01/C	A7(A)/02/MG
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				05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
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	%	N/A	NONE	13	20	7.6	24	11
Total mass of sample received	kg	0.001	NONE	0.45	0.42	0.46	0.44	0.49
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.7	8.1	9.4	7.8	8.1
Total Sulphate as SO_4	mg/kg	50	MCERTS	1400	530	660	800	700
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	0.033	-	-
Total Potential Sulphate	mg/kg	30	NONE	-	-	1600	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	530	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0087	0.0089	0.0071	0.016	0.0077
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.9	0.9	0.7	1.6	0.8
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.30	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.21	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.58	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.90	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.60	< 0.05	5.5	0.77	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.12	< 0.05	2.1	0.11	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	1.5	< 0.05	9.6	1.0	< 0.05
Pyrene	mg/kg	0.05	MCERTS	1.4	< 0.05	8.4	0.93	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.91	< 0.05	4.6	0.58	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.63	< 0.05	3.5	0.52	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.88	< 0.05	4.3	0.61	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.34	< 0.05	1.5	0.21	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.69	< 0.05	3.5	0.41	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.29	< 0.05	1.4	< 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	0.34	< 0.05	1.5	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	7.71	< 0.80	47.9	5.16	< 0.80

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359820	1359821	1359822	1359823	1359824
Sample Reference				A7/03/MG	A7/03/C	A7(A)/01/MG	A7(A)/01/C	A7(A)/02/MG
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				05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.4	6.9	7.1	12	3.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	< 0.2	0.3	0.3	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	17	22	27	24	14
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	8.5	25	43	18
Lead (aqua regia extractable)	mg/kg	1	MCERTS	36	21	43	71	16
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	0.5	0.6	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	19	24	21	9.8
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	160	63	95	190	64
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.8	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	7.5	5.1	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	25	10	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	59	27	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	92	44	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	3.2	< 2.0	6.1	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	11	< 10	46	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	21	< 10	81	16	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	35	< 10	130	25	< 10

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359825	1359826	1359827	1359828	1359829
Sample Reference				A7(A)/02/C	A7(A)/02/C/2	A7(A)/03/MG	A7(A)/03/C	A8/01/MG
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				05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
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	%	N/A	NONE	22	65	13	23	6.8
Total mass of sample received	kg	0.001	NONE	0.46	0.37	0.48	0.47	0.47
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.0	7.0	9.6	8.0	9.6
Total Sulphate as SO_4	mg/kg	50	MCERTS	580	3400	1900	1700	1700
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	0.12
Total Potential Sulphate	mg/kg	30	NONE	-	-	-	-	1500
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-	500
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0097	0.064	0.024	0.011	0.0030
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.0	6.4	2.4	1.1	0.3
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.6	< 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	1.9	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.37	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2.0	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2.1	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.1	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.1	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.4	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.64	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.2	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.57	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.18	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.73	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	14.7	< 0.80	< 0.80

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359825	1359826	1359827	1359828	1359829
Sample Reference				A7(A)/02/C	A7(A)/02/C/2	A7(A)/03/MG	A7(A)/03/C	A8/01/MG
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				05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.2	4.1	9.2	7.5	3.0
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2	0.4	0.2	0.2	0.6
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	21	25	22	14
Copper (aqua regia extractable)	mg/kg	1	MCERTS	10	15	32	13	8.6
Lead (aqua regia extractable)	mg/kg	1	MCERTS	23	13	35	35	20
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	24	16	18	9.6
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	3.3	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	73	110	130	73	73
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	2.5	3.7	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	6.7	9.5	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	20	15	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	48	55	39	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	48	84	67	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	13	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	44	33	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	44	46	< 10	< 10

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359830	1359831	1359832	1359833	1359834
Sample Reference				A8/01/C	A8/02/MG	A8/02/C	A8/03/MG	A8/03/C
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				05/11/2019	06/11/2019	06/11/2019	06/11/2019	06/11/2019
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	%	N/A	NONE	14	12	17	10	18
Total mass of sample received	kg	0.001	NONE	0.51	0.44	0.49	0.46	0.52
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	Not-detected	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.6	9.8	8.1	10.2	8.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	460	1800	310	4900	410
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.054	-	-	-	-
Total Potential Sulphate	mg/kg	30	NONE	870	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	290	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0081	0.0078	0.0040	0.0064	0.0070
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.8	0.8	0.4	0.6	0.7
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	0.44	0.47	< 0.05	0.49	0.70
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.21
Fluoranthene	mg/kg	0.05	MCERTS	0.71	1.3	< 0.05	0.82	1.2
Pyrene	mg/kg	0.05	MCERTS	0.71	1.4	< 0.05	0.84	1.1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.39	1.1	< 0.05	0.48	0.59
Chrysene	mg/kg	0.05	MCERTS	0.41	1.2	< 0.05	0.42	0.71
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.48	1.4	< 0.05	0.49	0.62
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.24	0.53	< 0.05	0.31	0.38
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.37	1.1	< 0.05	0.41	0.54
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.18	0.61	< 0.05	0.21	0.25
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.23	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.25	0.78	< 0.05	0.26	0.30
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	4.18	10.1	< 0.80	4.73	6.61

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359830	1359831	1359832	1359833	1359834
Sample Reference				A8/01/C	A8/02/MG	A8/02/C	A8/03/MG	A8/03/C
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				05/11/2019	06/11/2019	06/11/2019	06/11/2019	06/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.9	12	4.8	6.7	6.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	< 0.2	0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	24	15	22	15
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	21	7.5	19	12
Lead (aqua regia extractable)	mg/kg	1	MCERTS	49	39	17	24	31
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	12	22	11	18	13
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	47	73	26	71	37
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	12	22	< 10	14	28
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	21	31	< 10	23	38

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359835	1359836	1359837	1359838	1359839
Sample Reference				A8/04/MG	A8/04/C	A8/04/TM	A11/02/MG	A11/02/C
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				06/11/2019	06/11/2019	06/11/2019	07/11/2019	07/11/2019
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	%	N/A	NONE	8.7	21	8.0	7.3	17
Total mass of sample received	kg	0.001	NONE	0.45	0.51	0.41	0.50	0.50
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	-	Not-detected	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.7	7.5	9.1	9.2	7.6
Total Sulphate as SO_4	mg/kg	50	MCERTS	800	430	1500	810	150
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	0.0069	-
Total Potential Sulphate	mg/kg	30	NONE	-	-	-	950	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	320	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.014	0.0071	0.040	0.0021	0.0026
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.4	0.7	4.0	0.2	0.3
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2.6	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.78	< 0.05	1.7	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	6.9	< 0.05	9.8	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	5.1	< 0.05	9.5	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	88	0.29	110	0.57	< 0.05
Anthracene	mg/kg	0.05	MCERTS	21	0.13	25	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	160	1.2	120	0.76	< 0.05
Pyrene	mg/kg	0.05	MCERTS	150	1.3	98	0.68	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	73	0.84	53	0.39	< 0.05
Chrysene	mg/kg	0.05	MCERTS	56	0.75	42	0.46	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	75	0.87	57	0.43	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	22	0.43	20	0.21	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	51	0.78	41	0.28	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	23	0.32	18	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	8.7	< 0.05	6.8	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	23	0.34	20	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	757	7.20	625	3.78	< 0.80

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359835	1359836	1359837	1359838	1359839
Sample Reference				A8/04/MG	A8/04/C	A8/04/TM	A11/02/MG	A11/02/C
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				06/11/2019	06/11/2019	06/11/2019	07/11/2019	07/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.5	7.7	7.5	1.5	6.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	< 0.2	0.7	0.6	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	14	25	36	50	17
Copper (aqua regia extractable)	mg/kg	1	MCERTS	23	14	7.8	5.1	12
Lead (aqua regia extractable)	mg/kg	1	MCERTS	29	29	24	17	12
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	10	22	4.9	22	17
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	6.4	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	46	44	23	59	50
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	1.5	< 1.0	2.3	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	6.6	< 2.0	13	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	15	< 8.0	19	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	27	< 8.0	160	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	50	< 10	200	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	8.2	< 1.0	15	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	99	< 2.0	82	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	930	15	550	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	1200	30	1200	37	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	2200	45	1800	44	< 10

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359840	1359841	1359842	1359843	1359844
Sample Reference				A11/02/SD	A10/01/C	A10/01/SD	A10/02/C	A10/02/SD
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				07/11/2019	06/11/2019	06/11/2019	06/11/2019	06/11/2019
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	%	N/A	NONE	17	20	13	19	13
Total mass of sample received	kg	0.001	NONE	0.48	0.50	0.46	0.62	0.47
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.7	7.6	8.2	7.9	7.8
Total Sulphate as SO_4	mg/kg	50	MCERTS	230	540	190	430	190
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	0.017	0.16	-
Total Potential Sulphate	mg/kg	30	NONE	-	-	210	11000	-
Total Sulphur	mg/kg	50	MCERTS	-	-	68	3700	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0034	0.014	< 0.0010	0.014	< 0.0010
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.3	1.4	< 0.1	1.4	< 0.1
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 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	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359840	1359841	1359842	1359843	1359844
Sample Reference				A11/02/SD	A10/01/C	A10/01/SD	A10/02/C	A10/02/SD
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				07/11/2019	06/11/2019	06/11/2019	06/11/2019	06/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	4.2	12	1.4	6.3	2.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	7.9	42	5.5	32	6.2
Copper (aqua regia extractable)	mg/kg	1	MCERTS	3.0	21	3.2	20	4.6
Lead (aqua regia extractable)	mg/kg	1	MCERTS	12	19	7.0	17	6.4
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.7	46	6.5	35	9.7
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	32	76	20	68	22
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	1.1	< 1.0	2.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	4.9	< 2.0	6.6	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	9.3	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	10	< 8.0	23	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	21	< 10	41	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359845	1359846	1359847	1359848	1359849
Sample Reference				A10/03/S	A10/03/SD	A10/03/C	A10/04/C	A10/04/SD
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				06/11/2019	06/11/2019	07/11/2019	07/11/2019	07/11/2019
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	%	N/A	NONE	16	13	20	24	15
Total mass of sample received	kg	0.001	NONE	0.41	0.46	0.48	0.49	0.47
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.2	7.5	7.7	7.6	7.7
Total Sulphate as SO_4	mg/kg	50	MCERTS	300	220	440	2200	240
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.019	-	-	-	-
Total Potential Sulphate	mg/kg	30	NONE	680	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	230	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.018	< 0.0010	0.014	0.020	0.0013
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.8	< 0.1	1.4	2.0	0.1
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 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	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359845	1359846	1359847	1359848	1359849
Sample Reference				A10/03/S	A10/03/SD	A10/03/C	A10/04/C	A10/04/SD
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				06/11/2019	06/11/2019	07/11/2019	07/11/2019	07/11/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.4	6.0	6.7	10	4.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	8.7	7.1	34	37	6.7
Copper (aqua regia extractable)	mg/kg	1	MCERTS	23	2.0	20	25	1.4
Lead (aqua regia extractable)	mg/kg	1	MCERTS	59	8.1	17	22	7.7
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.0	11	37	45	9.8
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	41	18	74	82	20
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359850	1359851	1359852	1359853	
Sample Reference				A10/05/C	A10/05/SD	A10/06/C	A10/06/SD	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				07/11/2019	07/11/2019	07/11/2019	07/11/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	19	14	20	15	
Total mass of sample received	kg	0.001	NONE	0.47	0.48	0.53	0.48	
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.1	8.4	8.0	8.0	
Total Sulphate as SO_4	mg/kg	50	MCERTS	580	200	640	320	
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	0.016	-	-	
Total Potential Sulphate	mg/kg	30	NONE	-	230	-	-	
Total Sulphur	mg/kg	50	MCERTS	-	77	-	-	
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.015	0.0021	0.015	0.0012	
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.5	0.2	1.5	0.1	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 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	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	

Analytical Report Number: 19-71488

Project / Site name: Selby

Lab Sample Number				1359850	1359851	1359852	1359853	
Sample Reference				A10/05/C	A10/05/SD	A10/06/C	A10/06/SD	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				07/11/2019	07/11/2019	07/11/2019	07/11/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.2	2.8	6.5	2.6	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	34	6.1	35	7.4	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	23	10	24	8.9	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	16	6.8	17	7.7	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	36	9.2	35	14	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	78	25	80	25	
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	6.7	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	13	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	15	< 8.0	< 8.0	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	29	< 8.0	< 8.0	< 8.0	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	64	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	

Analytical Report Number : 19-71488

Project / Site name: Selby

* 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 *
1359815	A7/01/MG	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359816	A7/01/C	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359817	A7/02/MG	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359818	A7/02/MG/2	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359819	A7/02/C	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359820	A7/03/MG	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359821	A7/03/C	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359822	A7(A)/01/MG	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359823	A7(A)/01/C	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359824	A7(A)/02/MG	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359825	A7(A)/02/C	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359826	A7(A)/02/C/2	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1359827	A7(A)/03/MG	None Supplied	None Supplied	Brown clay with gravel.
1359828	A7(A)/03/C	None Supplied	None Supplied	Brown clay with gravel.
1359829	A8/01/MG	None Supplied	None Supplied	Brown clay with gravel.
1359830	A8/01/C	None Supplied	None Supplied	Brown clay and loam.
1359831	A8/02/MG	None Supplied	None Supplied	Light brown sandy clay with gravel and brick.
1359832	A8/02/C	None Supplied	None Supplied	Light grey sandy clay.
1359833	A8/03/MG	None Supplied	None Supplied	Brown sandy clay with gravel and brick.
1359834	A8/03/C	None Supplied	None Supplied	Brown sandy clay.
1359835	A8/04/MG	None Supplied	None Supplied	Brown clay and loam with gravel and brick.
1359836	A8/04/C	None Supplied	None Supplied	Brown clay.
1359837	A8/04/TM	None Supplied	None Supplied	Black gravel with tar.**
1359838	A11/02/MG	None Supplied	None Supplied	Beige clay with gravel.
1359839	A11/02/C	None Supplied	None Supplied	Light brown sandy clay.
1359840	A11/02/SD	None Supplied	None Supplied	Light brown gravelly sand.
1359841	A10/01/C	None Supplied	None Supplied	Light grey clay.
1359842	A10/01/SD	None Supplied	None Supplied	Light brown sand.
1359843	A10/02/C	None Supplied	None Supplied	Grey clay.
1359844	A10/02/SD	None Supplied	None Supplied	Light brown sand.
1359845	A10/03/S	None Supplied	None Supplied	Brown loam with vegetation.
1359846	A10/03/SD	None Supplied	None Supplied	Light brown sand.
1359847	A10/03/C	None Supplied	None Supplied	Grey clay.
1359848	A10/04/C	None Supplied	None Supplied	Grey clay.
1359849	A10/04/SD	None Supplied	None Supplied	Light brown sand with vegetation.
1359850	A10/05/C	None Supplied	None Supplied	Grey clay.
1359851	A10/05/SD	None Supplied	None Supplied	Light brown sand.
1359852	A10/06/C	None Supplied	None Supplied	Brown clay.
1359853	A10/06/SD	None Supplied	None Supplied	Light brown sand.

**Non MCERTS matrix.

Analytical Report Number : 19-71488

Project / Site name: Selby

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L009-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In-house method based on BS1377 Part 2, 1990, Classification tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
Total potential sulphate in soil	Determination of total potential sulphate in soil by calculation from total sulphur.	By calculation - In-house method based on TRL 447 report.	L038-PL	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Appendix E

Certificates of Chemical Analysis for Waters

Testing Bristol
Vertase Ltd
1 Middle Bridge Business Park
Bristol Rd
Portishead
BS20 6PN

t:

e: t

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

f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 19-79015

Project / Site name:	Denison Road	**Samples received on:**	20/12/2019
Your job number:	1820BLY	**Samples instructed on:**	20/12/2019
Your order number:		**Analysis completed by:**	03/01/2020
Report Issue Number:	1	**Report issued on:**	03/01/2020
Samples Analysed:	9 water samples		

Signed:

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 19-79015

Project / Site name: Denison Road

Lab Sample Number				1401393	1401394	1401395	1401396	1401397
Sample Reference				BH1 (Deep)	BH1 (Shallow)	BH4 (Deep)	BH4 (Shallow)	BH6 (Shallow)
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				19/12/2019	19/12/2019	19/12/2019	19/12/2019	19/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	7.92	5.15	5.95	10.5	7.09
Boron (dissolved)	µg/l	10	ISO 17025	57	65	120	54	49
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.03	0.03	0.04	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	1.2	0.8	0.4	1.1	8.3
Copper (dissolved)	µg/l	0.5	ISO 17025	1.4	3.0	1.8	1.7	13
Lead (dissolved)	µg/l	0.2	ISO 17025	0.4	0.2	0.2	0.6	0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	23	19	7.2	9.6	2.0
Selenium (dissolved)	µg/l	0.6	ISO 17025	7.2	5.6	3.2	8.7	7.0
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.1	25	15	12	8.1

Analytical Report Number: 19-79015

Project / Site name: Denison Road

Lab Sample Number				1401393	1401394	1401395	1401396	1401397
Sample Reference				BH1 (Deep)	BH1 (Shallow)	BH4 (Deep)	BH4 (Shallow)	BH6 (Shallow)
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				19/12/2019	19/12/2019	19/12/2019	19/12/2019	19/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	19	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	76	110	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	220	190	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	700	520	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	1000	820	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	24	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	38	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	62	< 10

Analytical Report Number: 19-79015

Project / Site name: Denison Road

Lab Sample Number				1401393	1401394	1401395	1401396	1401397
Sample Reference				BH1 (Deep)	BH1 (Shallow)	BH4 (Deep)	BH4 (Shallow)	BH6 (Shallow)
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				19/12/2019	19/12/2019	19/12/2019	19/12/2019	19/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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

Analytical Report Number: 19-79015

Project / Site name: Denison Road

Lab Sample Number				1401398	1401399	1401400	1401401	
Sample Reference				BH7 (Deep)	BH7 (Shallow)	BH7A (Shallow)	BH8 (Shallow)	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				19/12/2019	19/12/2019	19/12/2019	19/12/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	0.50	< 0.01	< 0.01	
Anthracene	µg/l	0.01	ISO 17025	< 0.01	0.11	< 0.01	< 0.01	
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	0.60	< 0.01	< 0.01	
Pyrene	µg/l	0.01	ISO 17025	< 0.01	0.60	< 0.01	< 0.01	
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	0.33	< 0.01	< 0.01	
Chrysene	µg/l	0.01	ISO 17025	< 0.01	0.33	< 0.01	< 0.01	
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	0.34	< 0.01	< 0.01	
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	0.20	< 0.01	< 0.01	
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	0.25	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	3.26	< 0.16	< 0.16	
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.45	12.4	2.73	0.48	
Boron (dissolved)	µg/l	10	ISO 17025	69	93	94	54	
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.04	< 0.02	0.04	
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.7	0.5	0.5	
Copper (dissolved)	µg/l	0.5	ISO 17025	1.4	2.0	2.8	3.1	
Lead (dissolved)	µg/l	0.2	ISO 17025	0.2	1.0	0.7	< 0.2	
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.7	13	5.1	3.2	
Selenium (dissolved)	µg/l	0.6	ISO 17025	7.9	7.7	6.4	4.2	
Zinc (dissolved)	µg/l	0.5	ISO 17025	170	3.2	11	7.4	

Analytical Report Number: 19-79015

Project / Site name: Denison Road

Lab Sample Number				1401398	1401399	1401400	1401401	
Sample Reference				BH7 (Deep)	BH7 (Shallow)	BH7A (Shallow)	BH8 (Shallow)	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				19/12/2019	19/12/2019	19/12/2019	19/12/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	22	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	51	< 10	15	
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	150	< 10	89	
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	380	< 10	180	
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	600	< 10	280	
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	15	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	22	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	37	< 10	< 10	

Analytical Report Number: 19-79015

Project / Site name: Denison Road

Lab Sample Number				1401398	1401399	1401400	1401401	
Sample Reference				BH7 (Deep)	BH7 (Shallow)	BH7A (Shallow)	BH8 (Shallow)	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				19/12/2019	19/12/2019	19/12/2019	19/12/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	

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

Analytical Report Number : 19-79015

Project / Site name: Denison Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Appendix F

Photographs – Trial Pits

Area 1 TP01

Area 1 TP02

Area 1 TP03

Area 1 TP04

Area 2 TP01

Area 2 TP02

Area 2a TP01

Area 4 TP01

Area 4 TP02 & TP03

Area 5 TP01

Area 5 TP02

Area 5 TP03

Area 6 TP01

Area 6 TP02

Area 6 TP03

Area 6 TP04

Area 7 TP01

Area 7 TP02

Area 7 TP03

Area 7a TP01

Area 7a TP02

Area 7a TP03

Area 8 TP01

Area 8 TP02

Area 8 TP03

Area 8 TP04

Area 10 TP01

Area 10 TP02

Area 10 TP03

Area 10 TP04

Area 10 TP05

Area 10 TP06

Area 11 TP01

Area 11 TP02

Area 12 TP01

Appendix G

Photographs – Borehole Arisings

Area 1 BH 1.2m - 2.7m

Area 1 BH 3.0m - 4.5m

Area 1 BH 10.5m - 12.0m

Area 4 BH Sample at 2.0m

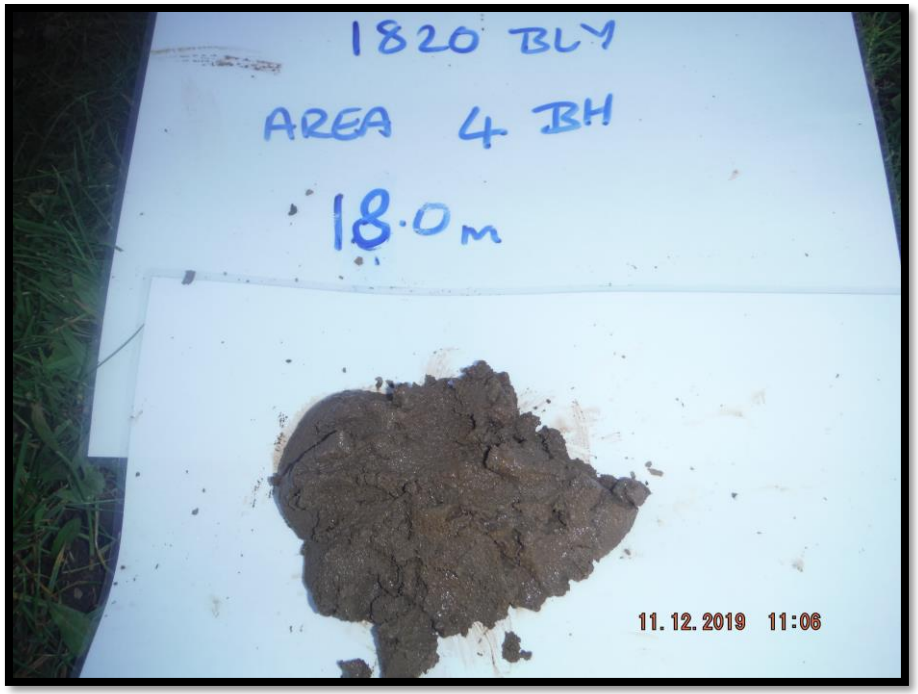
Area 4 BH Sample at 4.0m

Area 4 BH Sample at 8.0m

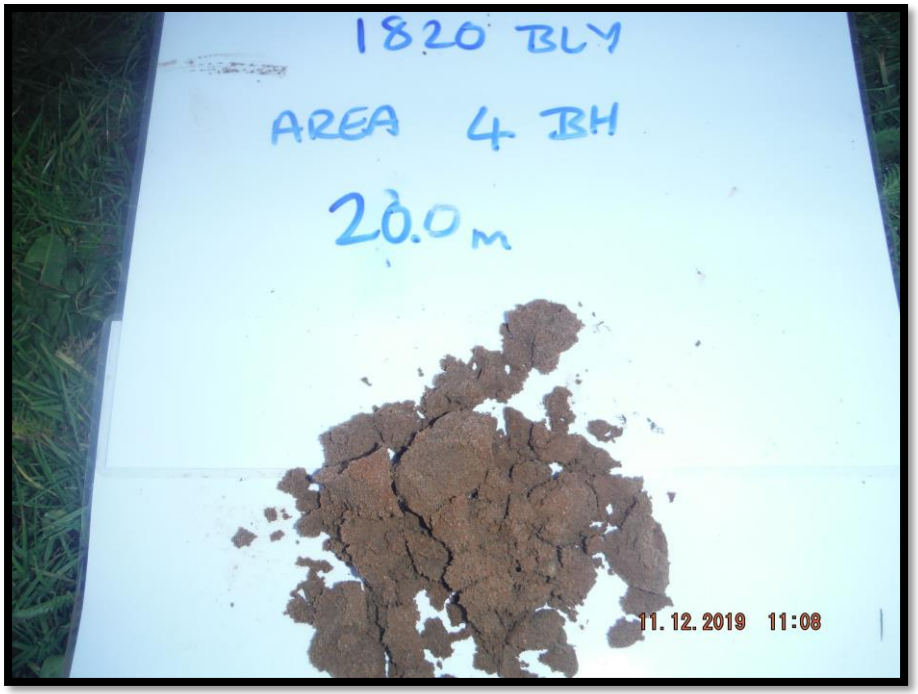
Area 4 BH Sample at 10.0m

Area 4 BH Sample at 14.0m

Area 4 BH Sample at 16.0m



Area 4 BH Sample at 18.0m



Area 4 BH Sample at 20.0m

Area 6 BH Sample at 2.0 - 2.45m

Area 6 BH Sample at 4.0 - 4.45m

Area 6 BH Sample at 8.0 - 8.45m

Area 6 BH Sample at 10.0 - 10.45m

Area 6 BH Sample at 16.0m

Area 6 BH Sample at 18.0m

Area 7 BH Sample at 1.5 - 1.95m

Area 7 BH Sample at 3.0 - 3.4m

Area 7 BH Sample at 4.5 - 4.9m

Area 7 BH Sample at 7.5 - 7.9m

Area 7 BH Sample at 9.0 - 9.4m

Area 7 BH Sample at 10.2m

Area 7 BH Sample at 12.5 - 12.95m

Area 7A BH Sample at 1.5 - 1.95m

Area 7A BH Sample at 3.0 - 3.45m

Area 7A BH Sample at 3.5 - 3.95m

Area 7A BH Sample at 4.5 - 4.95m

Area 7A BH Sample at 10.5 - 10.95m

Area 7A BH Sample at 13.5m

Area 7A BH Sample at 15.0m

Area 8 BH Sample at 2.0m

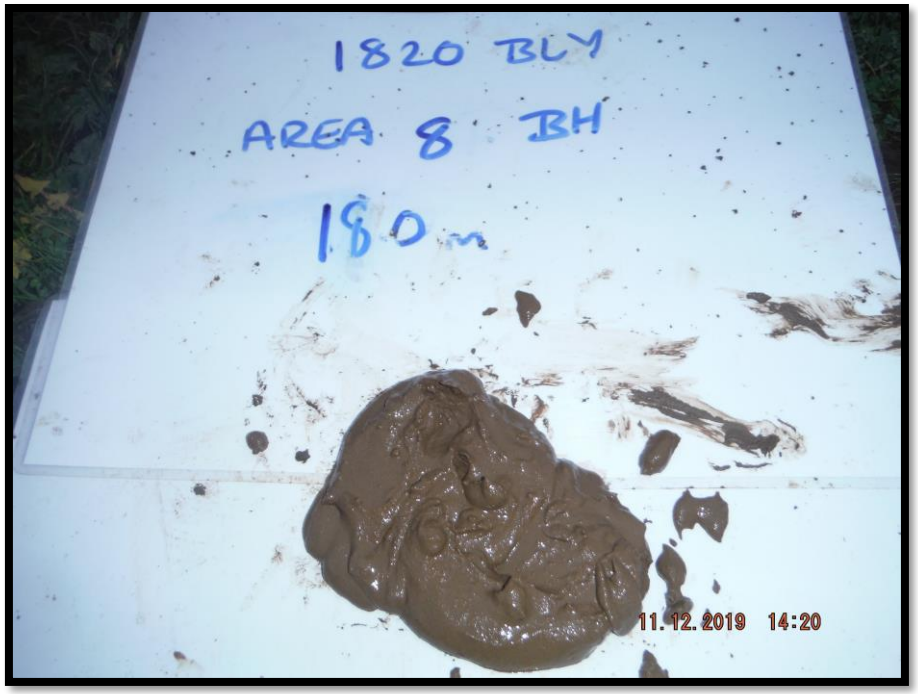
Area 8 BH Sample at 3.0m

Area 8 BH Sample at 6.0m

Area 8 BH Sample at 8.0m

Area 8 BH Sample at 10.0m

Area 8 BH Sample at 12.0m



Area 8 BH Sample at 18.0m

Appendix H

Ground Gas Monitoring

Soil Gas Monitoring Form

Site Location: Selby			Job Number: 1820BLY
Borehole Ref: 1 (shallow)	Date: 19/12/2019		Time: 13:00 / Operator: RD
Weather Conditions/ATM Pressure Trend: Overcast and showers/ Rising ATM trend			Ground Conditions: saturated/ pooling

Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0.1*	*0.1*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1002	1.11	4.05
0	0	0.1	20.9	0	0			
15	0	0.4	20.6	0	0			
30	0	0.4	20.5	0	0			
45	0	0.4	20.5	0	0			
60	0	0.4	20.6	0	0			
90	0	0.4	20.6	0	0			
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.4	20.9	0	0			
Steady	0	0.4	20.6	0	0			

Comments. Gas readings stable at 90s

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 1 (shallow)	Date: 10/01/2020			Time: 10:45		Operator: RD	
Weather Conditions/ATM Pressure Trend: Clear and sun (no cloud) / Rising ATM trend				Ground Conditions: saturated		Relative borehole pressure (mb): 0.31	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0.1*	*0.1*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1031	1.24	4.08
0	0	0.1	20.9	0	0			
15	0	0	20.4	1	0			
30	0	0	20.4	1	0			
45	0	0	20.4	1	0			
60	0	0	20.4	1	0			
90	0	0	20.4	1	0			
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	1	0			
Steady	0	0	20.4	1	0			

Comments. Gas readings stable at 45s

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 1 (shallow)	Date: 20/01/2020			Time: 14:00		Operator: RD	
Weather Conditions/ATM Pressure Trend: Clear and sun (no cloud) / Falling ATM trend				Ground Conditions: wet		Relative borehole pressure (mb): 0.01	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1049	1.24	4.08
0	0	0.1	20.9	0	0			
15	0	0	21.0	0	0			
30	0	0	21.0	0	0			
45	0	0	21.0	0	0			
60	0	0	21.0	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	21.0	0	0			
Steady	0	0	21.0	0	0			

Comments.

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 4 (shallow)	Date: 19/12/2019			Time: 11:00		Operator: RD	
Weather Conditions/ATM Pressure Trend: Overcast and showers/ Rising ATM trend				Ground Conditions: saturated/ pooling		Relative borehole pressure (mb): -0.12	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1002	1.72	3.02
0	0	0.1	20.9	0	0			
15	0	0	20.8	0	0			
30	0	0	20.9	0	0			
45	0	0	20.9	0	0			
60	0	0	20.9	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	0	0			
Steady	0	0	20.9	0	0			

Comments. Gas readings stable at 60s

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 4 (shallow)	Date: 10/01/2020			Time: 10:33		Operator: RD	
Weather Conditions/ATM Pressure Trend: clear and sun (no cloud)/ Rising ATM trend				Ground Conditions: saturated		Relative borehole pressure (mb): 0.34	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1031	0.92	3.00
0	0	0.1	20.9	0	0			
15	0	0	20.6	0	0			
30	0	0	20.6	0	0			
45	0	0	20.6	0	0			
60	0	0	20.6	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	0	0			
Steady	0	0	20.6	0	0			

Comments. Gas readings stable at 45s

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 4 (shallow)	Date: 20/01/2020			Time: 13:45		Operator: RD	
Weather Conditions/ATM Pressure Trend: clear and sun (no cloud)/ Falling ATM trend				Ground Conditions: wet		Relative borehole pressure (mb): 0.19	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1049	1.05	3.00
0	0	0.1	20.9	0	0			
15	0	0	21.0	0	0			
30	0	0	21.0	0	0			
45	0	0	21.0	0	0			
60	0	0	21.0	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	21.0	0	0			
Steady	0	0	21.0	0	0			

Comments.

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 6 (shallow)	Date: 19/12/2019			Time: 13:45		Operator: RD	
Weather Conditions/ATM Pressure Trend: Overcast and showers/ Rising ATM trend				Ground Conditions: saturated/ pooling		Relative borehole pressure (mb): -0.04	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0.1*	*0.1*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1001	1.44	3.00
0	0	0.1	20.9	0	0			
15	0	0.3	20.3	0	0			
30	0	0.3	20.4	0	0			
45	0	0.3	20.4	0	0			
60	0	0.3	20.4	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.3	20.9	0	0			
Steady	0	0.3	20.4	0	0			

Comments. Gas readings stable at 60s

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 6 (shallow)	Date: 10/01/2020			Time: 10:22		Operator: RD	
Weather Conditions/ATM Pressure Trend: clear and sun (no cloud)/ Rising ATM trend				Ground Conditions: saturated		Relative borehole pressure (mb): 3.33	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1031	1.42	3.00
0	0	0.1	20.9	1	0			
15	0	0	20.6	1	0			
30	0	0	20.6	1	0			
45	0	0	20.6	1	0			
60	0	0	20.6	1	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	1	0			
Steady	0	0	20.6	1	0			

Comments. Gas readings stable at 45s

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 6 (shallow)	Date: 20/01/2020			Time: 13:30		Operator: RD	
Weather Conditions/ATM Pressure Trend: clear and sun (no cloud)/ Falling ATM trend				Ground Conditions: saturated		Relative borehole pressure (mb): 0.61	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1049	1.42	3.00
0	0	0.1	20.9	0	0			
15	0	0	20.9	0	0			
30	0	0	20.9	0	0			
45	0	0	20.9	0	0			
60	0	0	20.9	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	0	0			
Steady	0	0	20.9	0	0			

Comments.

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 7 (shallow)	Date: 19/12/2019			Time: 10:15		Operator: RD	
Weather Conditions/ATM Pressure Trend: Overcast and showers/ Rising ATM trend				Ground Conditions: saturated/ pooling		Relative borehole pressure (mb): 0.1	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1002	0.62	2.24
0	0	0.1	20.9	0	0			
15	0	0	20.8	0	0			
30	0	0	20.7	0	0			
45	0	0	20.8	0	0			
60	0	0	20.8	0	0			
90	0	0	20.8	0	0			
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	0	0			
Steady	0	0	20.8	0	0			

Comments. Gas reading stable at 90s

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 7 (shallow)	Date: 10/01/2020			Time: 10:06		Operator: RD	
Weather Conditions/ATM Pressure Trend: clear and sun (no cloud)/ Rising ATM trend				Ground Conditions: saturated		Relative borehole pressure (mb): -0.21	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1031	0.7	2.22
0	0	0.1	20.9	0	0			
15	0	0	20.9	0	0			
30	0	0	20.9	0	0			
45	0	0	20.9	0	0			
60	0	0	20.9	0	0			
90	0	0	20.9	0	0			
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	0	0			
Steady	0	0	20.9	0	0			

Comments. Gas reading stable at 90s

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 7 (shallow)	Date: 20/01/2020			Time: 13:15		Operator: RD	
Weather Conditions/ATM Pressure Trend: clear and sun (no cloud)/ Falling ATM trend				Ground Conditions: wet		Relative borehole pressure (mb): 1.04	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1049	0.76	2.23
0	0	0.1	20.9	0	0			
15	0	0	21.0	0	0			
30	0	0	21.0	0	0			
45	0	0	21.0	0	0			
60	0	0	21.0	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	21.0	0	0			
Steady	0	0	21.0	0	0			

Comments.

Soil Gas Monitoring Form

Site Location: Selby					Job Number: 1820BLY			
Borehole Ref: 7A (shallow)	Date: 19/12/2019				Time: 09:15		Operator: RD	
Weather Conditions/ATM Pressure Trend: Overcast and showers/ Rising ATM trend					Ground Conditions: saturated/ pooling		Relative borehole pressure (mb): 0.01	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*	
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*	

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1001	0.47	3.99
0	0	0.1	20.9	2	0			
15	2.5	2.6	17.6	2	0			
30	2.6	3.6	17.2	2	0			
45	2.5	3.5	17.2	1	0			
60	2.4	3.6	17.2	1	0			
90	3.0	3.8	16.6	2	0			
120	2.0	2.6	17.8	1	0			
150	2.0	2.6	17.8	1	0			
180	2.0	2.6	17.8	1	0			
210								
240								
270								
300								
330								
360								
Peak	3.0	3.8	20.9	2	0			
Steady	2.0	2.6	17.8	1	0			

Comments

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 7A (shallow)	Date: 10/01/2020			Time: 09:52		Operator: RD	
Weather Conditions/ATM Pressure Trend: Clear and sun (no cloud)/ Rising ATM trend				Ground Conditions: saturated		Relative borehole pressure (mb): 0.37	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1031	0.52	3.97
0	0	0	20.8	7	0			
15	0	0	20.8	7	0			
30	0	0	20.8	7	0			
45	0	0	20.8	7	0			
60	0	0	20.8	7	0			
90	0	0	20.8	7	0			
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	7	0			
Steady	0	0	20.8	7	0			

	Comments

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 7A (shallow)	Date: 20/01/2020			Time: 13:00		Operator: RD	
Weather Conditions/ATM Pressure Trend: Clear and sun (no cloud)/ Falling ATM trend				Ground Conditions: wet		Relative borehole pressure (mb): 0.67	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1049	0.55	3.98
0	0	0	20.9	0	0			
15	0	0	21.0	0	0			
30	0	0	21.0	0	0			
45	0	0	21.0	0	0			
60	0	0	21.0	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	21.0	0	0			
Steady	0	0	21.0	0	0			

	Comments

Soil Gas Monitoring Form

Site Location: Selby					Job Number: 1820BLY			
Borehole Ref: 8 (shallow)	Date: 19/12/2019				Time: 12:00		Operator: RD	
Weather Conditions/ATM Pressure Trend: Overcast and showers/ Rising ATM trend					Ground Conditions: saturated/ pooling		Relative Borehole Pressure (mb): 0.00	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*	
Flow Rate	*0*	*0.1*	*0.1*	*0*	*0*	*0*	*0*	
Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1002	0.9	3.04
0	0	0.1	20.6	0	0			
15	0	0.1	20.6	0	0			
30	0	0.1	20.6	0	0			
45	0	0.1	20.6	0	0			
60	0	0.1	20.6	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	0	0			
Steady	0	0.1	20.6	0	0			
	Comments. Gas readings stable at 60s							

Soil Gas Monitoring Form

Site Location: Selby					Job Number: 1820BLY			
Borehole Ref: 8 (shallow)	Date: 10/01/2020				Time: 11:00		Operator: RD	
Weather Conditions/ATM Pressure Trend: Clear and sun (no cloud)/ Rising ATM trend					Ground Conditions: saturated		Relative Borehole Pressure (mb): 0.43	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*	
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1031	0.98	3.02
0	0	0.1	20.9	0	0			
15	0	0	20.4	0	0			
30	0	0	20.4	0	0			
45	0	0	20.4	0	0			
60	0	0	20.4	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	0	0			
Steady	0	0	20.4	0	0			
	Comments. Gas readings stable at 45s							

Soil Gas Monitoring Form

Site Location: Selby				Job Number: 1820BLY			
Borehole Ref: 8 (shallow)	Date: 20/01/2020			Time: 14:15		Operator: RD	
Weather Conditions/ATM Pressure Trend: Clear and sun (no cloud)/ Falling ATM trend				Ground Conditions: wet		Relative Borehole Pressure (mb): 0.79	
Time (s)	*0*	*5*	*10*	*15*	*20*	*25*	*30*
Flow Rate	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Time (s)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	CO (ppm)	H_2S (ppm)	Pressure (mb)	Depth to GW (mBTM)	Depth to Base of Well (mBTM)
Control	0	0.1	20.9	0	0	1049	0.98	3.02
0	0	0.1	20.9	0	0			
15	0	0	20.9	0	0			
30	0	0	20.9	0	0			
45	0	0	20.9	0	0			
60	0	0	20.9	0	0			
90								
120								
150								
180								
210								
240								
270								
300								
330								
360								
Peak	0	0.1	20.9	0	0			
Steady	0	0	20.9	0	0			
	Comments.							

Bristol
Number One, Middle Bridge Business Park
Bristol Road, Portishead, Bristol, BS20 6PN

Phone +44 (0) 1275 397 600
Email info@vertasefli.co.uk
Web www.vertasefli.co.uk

Sheffield
19 Napier Court, Barlborough Links
Barlborough, Sheffield, S43 4PZ

Phone +44 (0) 1246 813 289
Email info@vertasefli.co.uk
Web www.vertasefli.co.uk

Wales
Pencoed Technology Centre,
Pencoed,
CF35 5HZ

Phone +44 (0) 1656 253 345
Email info@vertasefli.co.uk
Web www.vertasefli.co.uk