Our ref: JER9871

Atholl Exchange
1st Floor, 6 Canning Street
Edinburgh, EH3 8EG
T +44 1315 555 011

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Sarah Hobbs
Community Led Housing Officer
Communities Housing Trust
Suite 4, Second Floor, Moray House, 16-18 Bank Street
Inverness
IV1 1QY

Dear Sarah,

FORMER ABERFELDY SLAUGHTERHOUSE

Contamination Summary

1 INTRODUCTION, SCOPE AND OBJECTIVE

RPS Consulting Services Limited (RPS) were commissioned by the Communities Housing Trust (CHT) in April 2023 to undertake the following in relation to the former Aberfeldy Slaughterhouse site which CHT are developing for affordable housing:

- A brief summary of previous RPS reports (Phase I Environmental Site Assessment December 2007, Phase II Intrusive Site Investigation June 2008 and Supplementary Phase II Intrusive Site Investigation January 2010).
- A screen of the previous RPS data (soil/soil leachate, groundwater, surface water and ground gas) against current screening values (for both residential with and without gardens development scenarios with regards soil data).
- A summary of the findings and provision of recommendations for any remediation considered to be required for each development scenario (residential with and without gardens) based on the findings.

The objective of our deliverable (in the form of this letter report) is to inform CHT's decision making around feasibility/design, mainly communal versus private gardens. This letter report (alongside the previous RPS reports) is unlikely to support a future planning application given the age of the data therefore there is likely to be some form of contamination assessment required by planning, the scope of which should be agreed with the Perth and Kinross Council (PKC) Contaminated Land Officer.

2 SUMMARY OR PREVIOUS RPS REPORTS

RPS was commissioned by Perth and Kinross Council to undertake a Phase I Environmental Site Assessment followed by two phases of Phase II Intrusive Site Investigation at the site between 2007 and 2009 to inform divestment options (a residential end use was assumed for the purposes of RPS's assessment).

Historically the site is believed to have comprised a slaughterhouse and railway, however, it is also understood from consultations with PKC that the site has also served as a depot (of undisclosed nature). In 2008 the site was occupied by derelict former slaughterhouse buildings and heavily vegetated areas, including a disused railway embankment. A partly culverted unclassified water course flowed south to north at the western boundary of the site.

The initial (2008) Phase II intrusive investigation comprised of five boreholes installed with monitoring wells and associated soil sampling/testing, gas monitoring and surface water sampling. The northern area of the site, including the disused railway embankment, was excluded from the scope due to access issues.

Ground conditions encountered predominantly comprised a thin layer of made ground overlying natural strata typically comprising clay. Groundwater was not encountered during the works. No significant visual or olfactory impacts were noted as evident in any of the soils recovered from the boreholes.

Based upon the assessment of risks posed to human health by soil conditions no further investigative or remedial actions were recommended should the site retain its current land use or should future development comprise a commercial land use.

Should any future site development comprise a residential land use (without plant uptake, e.g. flats), the design of the development would need to address risks posed by shallow soils exhibiting elevated arsenic and benzo(a)pyrene concentrations. Should any future site development comprise a residential land use (with plant uptake, e.g. houses with private gardens), the design of the development would need to address risks posed by shallow soils exhibiting elevated arsenic, benzo(a)pyrene and TPH concentrations.

Based upon the assessment of risks posed to the water environment by site conditions there were no recommended further actions, either investigative or remedial. However, it was recommended that the design of any future development should aim to address surface water runoff at the site (i.e. engineered drainage systems) in accordance with best practice to minimise the generation of potential soil leaching.

There were deemed to be no special requirements required by concrete due to aggressive ground conditions, however, it was recommended that any future development should ensure that appropriate precautions are in place to protect potable water services.

There were deemed to be no specialist precautions necessary in relation to the protection of plant life, i.e. possible future landscaping works.

There were deemed to be no specialist precautions necessary in relation to ground gas.

The objective of the supplementary Phase II intrusive investigation in 2009 was to investigate the soil and groundwater conditions in and underlying the disused railway embankment. These works comprised the completion of three boreholes to a maximum depth of 8.4m bgl (of which two were installed as groundwater monitoring wells) with associated soil sampling/testing, gas monitoring and surface water sampling. See below for all borehole and surface water sampling locations relative to pertinent historical and current (2008) site features.

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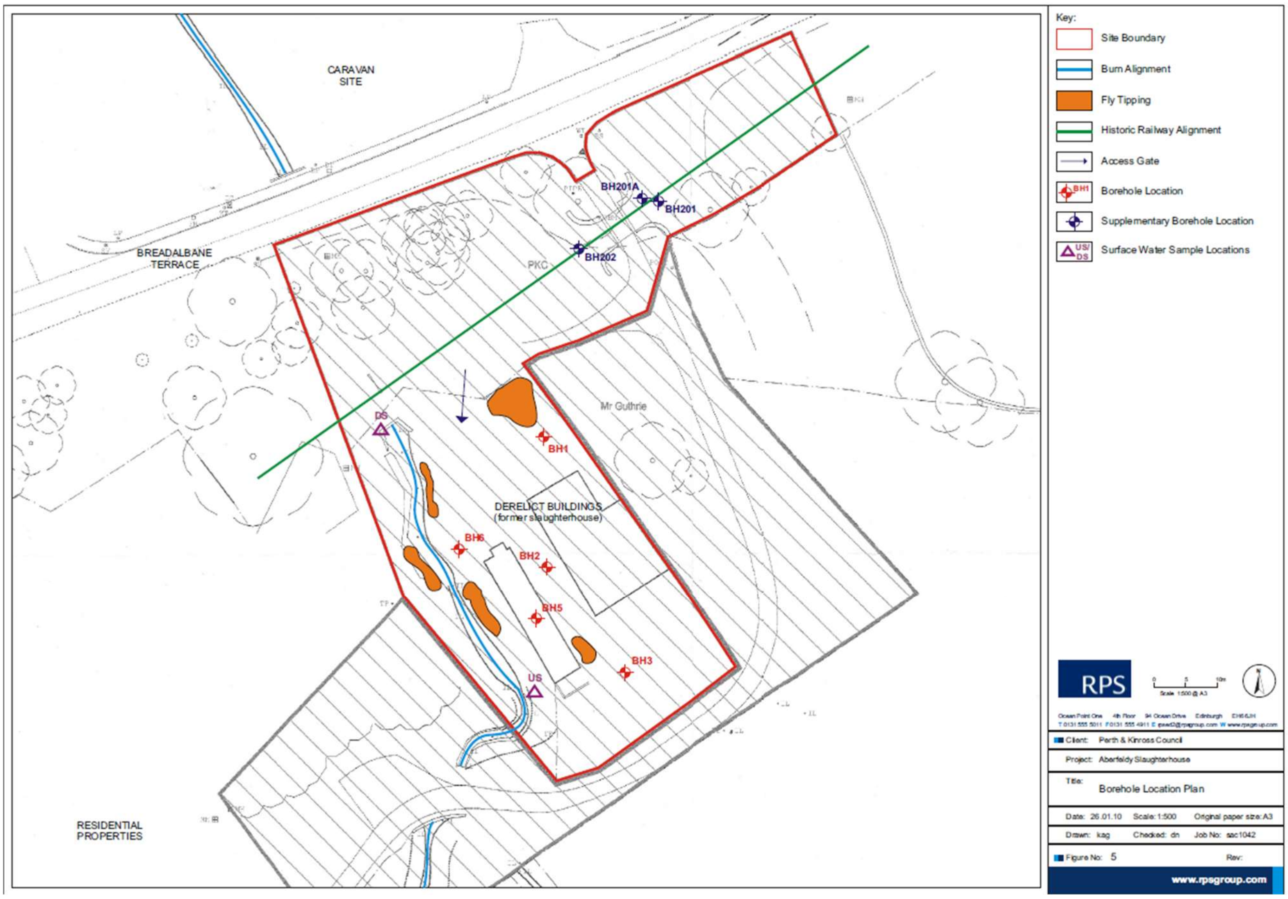

Intrusive investigations identified a shallow (0.1m) layer of topsoil over approximately 0.5m of Made Ground comprising gravelly sands of ash. Given the location and the type of material identified, it was considered this ash layer represents a sub-base associated with the historic railway line. Superficial deposits of sands were identified directly beneath the made ground horizon. These sands were directly underlain by sandy gravelly clay to the base of the excavations.

With the exception of the ash layer, no visual or olfactory indications of impact were noted within any of the soils recovered.

Groundwater samples were recovered from both monitoring wells and were scheduled for analytical assessment. No visual or olfactory indications of impact were evident within any of the groundwater recovered.

Elevated concentrations of chromium, aliphatic fractions (C_{16}-C_{35}) and benzo(a)pyrene were identified within the Made Ground, however only benzo(a)pyrene was considered to represent the potential for a localised significant possibility of significant harm being posed to human health for any proposed residential development.

The soil leachate analytical results indicated the potential for groundwater impacts from benzo(a)pyrene. within the Made Ground. The groundwater analytical results did not indicate any exceedance of the appropriate assessment criteria, and although it was considered that soils potentially have the ability to mobilise contaminants to groundwater via leaching, this was not being realised in practise. Therefore, on-site concentrations of soil leachates were not considered to represent a significant possibility of significant harm to the wider water environment.

Monitoring of soil gases at the site did not identify any concentrations of methane in exceedance of building regulations (1%). A semi-quantitative appraisal of carbon dioxide concentrations was undertaken by conducting Wilson and Card assessment for the low levels exhibited on site. This identified a Characteristic Situation of 1 (no gas protection required).

Assessment of potential contaminants that can pose a risk to construction materials identified four exceedances of the relevant assessment criteria for TPH at BH201 (0.3m and 1.5m) and BH202 (0.4m and 0.8m). It was generally observed that TPH exceedances were restricted to or immediately underlying soils within the made ground horizon with the exception of BH201 (1.5m) which is located with sand deposits.

If any future development in the area of the site adjacent to BH202 comprised a residential with or without plant uptake land use, the design of the development would need to address the risk posed by shallow soils exhibiting elevated benzo(a)pyrene concentrations. It was considered that this could be achieved by either removing the pathway to human health receptors (e.g. covering impacted areas with hardstanding or by importing a layer of acceptable capping material or topsoil cover), or by removing the source of risk, i.e. excavating shallow soils. The depth and lateral extent of any soils to be excavated could be informed by further soil testing in advance of works or during site works.

It was recommended that prior to any future development at the site, the appropriate water authority be consulted to determine the most appropriate type of pipe to be installed in this area.

3 RE-SCREENING OF PREVIOUS RPS DATA

Previous RPS soil, groundwater, surface water and ground gas data have been re-screened against current screening values (for both residential with and without gardens development scenarios with regards soil data). See Appendix 1 for the screening tables.

3.1 Human Health

Soils

The following section summarises the soil analytical data and provides a comparison to published assessment criteria (AC) derived to support the assessment of chronic risk to human health receptors.

The selected AC are Suitable 4 Use Levels (S4UL) published by Land Quality Management: Chartered Institute of Environmental Health (LQM:CIEH) in 2015. In accordance with the copyright notice, the Publication Number for RPS Group is S4UL3177.

Soil Organic Matter (SOM) for samples ranged from 0.35 to 42%. Concentrations of contaminants of concern have therefore been conservatively compared to AC derived for a SOM of 1.0%.

Given the proposed use of the site for affordable housing, either with or without gardens, assessments have been undertaken based upon both residential end use with homegrown produce, and residential end use without homegrown produce.

A notable exclusion from the S4ULs is lead. In the absence of a S4UL for lead, the Category 4 Screening Level (C4SL) has been selected, published by DEFRA in 2014. It is noted that the C4SL are based on the acceptance of a low level of toxicological concern, rather than the more conservative standard adopted in the derivation of S4ULs, which are based on a tolerable or minimal level of risk.

In the absence of available guidance from DEFRA and the Environment Agency for the assessment of acute risks from cyanide, it is considered appropriate to use the methods proposed by the Massachusetts Department of Environmental Protection (MADEP) and the first edition of the SNIFFER Framework, which can be used as a basis for assessing acute risks. Using this method, an AC of 53mg/kg has been derived for the assessment of acute risk.

Soil samples were analysed for a range of contaminants including asbestos, metals, total petroleum hydrocarbons (TPH CWG), polycyclic aromatic hydrocarbons (PAHs), and pesticides.

Residential with Gardens

Based on a proposed residential end use with home grown produce, the following exceedances of the AC were identified:

- Arsenic was recorded at a concentration of 37mg/kg in BH6 at 0.70m bgl, matching its respective AC of 37mg/kg.
- Benzo(a)pyrene was recorded at concentrations of 2.7mg/kg in BH6 at 1.40m bgl and 4.7mg/kg in BH2 at 0.30m bgl, exceeding the respective AC of 2.2mg/kg.
- Dibenz(a,h)anthracene was recorded at concentrations of 0.36mg/kg in BH6 at 1.40m bgl, 0.95mg/kg in BH2 at 0.30m bgl, and 1.30mg/kg in BH202 at 0.40m bgl, exceeding the respective AC of 0.24mg/kg.
- Benzo(b)fluoranthene was recorded at a concentration of 4.1mg/kg in BH2 at 0.30m bgl, exceeding its respective AC of 2.6mg/kg.

Residential without Gardens

Based on a proposed residential end use without home grown produce, the following exceedances of the AC were identified:

- Benzo(a)pyrene was recorded at a concentration of 4.7mg/kg in BH2 at 0.30m bgl, exceeding the respective AC of 3.2mg/kg
- Dibenz(a,h,)anthracene was recorded at concentrations of 0.36mg/kg in BH6 at 1.40m bgl, 0.95mg/kg in BH2 at 0.30m bgl, and 1.30mg/kg in BH202 at 0.40m bgl, exceeding the respective AC of 0.31mg/kg
- Benzo(b)fluoranthene was recorded at concentration of 4.1mg/kg in BH2 at 0.30m bgl, exceeding its respective AC of 3.9mg/kg

3.2 Water Environment

The following section summarises the groundwater and soil leachate analytical data and provides a comparison to published assessment criteria (AC). Upstream and Downstream surface water samples were also analysed and assessed. The 2008 and 2010 Water Environment Risk Assessment considered the direct risk to groundwater based upon groundwater analytical results and via leaching and subsequent lateral/vertical mitigation bases on soil leachate analysis. As the site was identified to be located within a drinking water protected area, the data was compared to Drinking Water Standards for the UK, and by EQS freshwater and WHO guidelines for Drinking Water Quality depending on availability for respective determinands.

- Chromium was recorded at concentrations exceeding the EQS AC (4.7ug/l) in groundwater samples collected from BH201A (5ugl) and BH202 (7ugl), a leachate sample derived from soil collected from BH5 at 0.5m (8ugl) and the downstream surface water sample (8ugl).
- Lead was recorded at a concentration exceeding the EQS AC (7.2ug/l) in the downstream surface water sample (11ugl).
- Fluoranthene was recorded at a concentration exceeding its EQS AC (0.1ug/l) in the upstream surface water sample (0.14ug/l).
- A number of Laboratory Limit of Detection Values exceed their respective AC, including for benzo(ghi)perylene, fluoranthene, indeno(1,2,3-cd)pyrene, vinyl chloride and cyanide.

3.3 Ground Gas

CIRIA Report C665 ‘Assessing risks posed by hazardous ground gases to buildings’ outlines indicative guideline concentrations for carbon dioxide and methane in association with gas flow rates for which gas protection measures may be required in new residential or commercial developments. The methodology is based on the Modified Wilson and Card approach that characterises the gas regime into a series of Characteristic Situations (1 to 5), with corresponding indicative gas protection measures.

BS8485:2015+A1:2019 ‘Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings’ recommends calculation of borehole hazardous gas flow rates (Borehole Qhg) for each individual borehole and for each monitoring event multiplying the maximum recorded stabilised flow in any standpipe in a strata with the maximum peak gas concentration. BS8485 also indicates that the worst case Qhg should be calculated for each hazardous gas by multiplying the maximum recorded stabilised flow in any standpipe in a strata (and zone) with the maximum peak gas concentration in any other standpipe in that strata (and zone).

Based on the ground gas monitoring associated with both phases of investigation, the maximum Borehole Qhg for methane is 0.0006l/hr (based on a maximum concentration and flow of 0.1% and 0.6l/hr respectively) and for carbon dioxide is 0.0216l/hr (based on a maximum concentration and flow of 3.6% and 0.6l/hr respectively).

The calculated worst case Qhg, combining the maximum steady flow rate from any standpipe (0.6l/hr) with the highest gas concentrations from any borehole (carbon dioxide of 3.6%) is 0.0216l/hr. This is indicative of CIRIA Report C665 Characteristic Situation 1 (Qhg <0.7), very low risk, indicating no gas protections measures are required.

4 DISCUSSION

Whilst the residential with and without gardens exceedances are considered to be marginal they are located at a number of locations within the Made Ground across the site. Given Made Ground is present across most of the site, it is likely that mitigation (i.e. capping) will be required for both private gardens and communal areas. Typically (i.e. in accordance with NHBC guidance), a 600mm capping layer comprising a geotextile membrane base to prevent mixing overlain by subsoil then topsoil is required for private gardens and a 300m capping layer comprising of subsoil/topsoil is required for communal areas, however any capping requirements will likely be subject to further assessment given the age of the current data and agreement with the PKC Contaminated Land Officer via the planning process.

If the railway embankment in the northern area of the site is removed during site enabling then the site may be re-zoned such that the northern area requires no capping (on the basis all Made Ground in this area is removed) however this would likely require to be validated by additional soil sampling and testing. Any surplus excavated material would require to be disposed off-site in accordance with relevant waste management legislation.

The groundwater and soil leachate exceedances are very marginal and there was no obvious deterioration in water quality downstream of the site. As such it is considered that the site does not represent a risk to the wider water environment.

Although no specialist precautions are considered necessary in relation to ground gas further confirmatory monitoring may be required by planning give the age of the current data.

Once potable water pipe routes are known a UK Water Industry Research (UKWIR) compliant assessment should be undertaken to establish whether any precautions are required to protect water pipes from potential contamination.

5 CONCLUSIONS AND RECOMMENDATIONS

The previous RPS data has been re-screened against current screening criteria (for both residential with and without private gardens) and whilst there were no unacceptable risks associated with the water environment and ground gas, unacceptable risks were identified in relation to human health from soil impacts. Mitigation in the form of capping (in general accordance with NHBC Cover Systems for Land Regeneration guidance) is recommended however there may be an opportunity to avoid capping in areas depending on the proposed development layout and any associated earthworks i.e. cut/filling. Any remedial requirements will likely be subject to further assessment and agreement with the PKC Contaminated Land Officer via the planning process given the age of the current data.

Although no specialist precautions are considered necessary in relation to ground gas further confirmatory monitoring may be required by planning give the age of the current data.

Once potable water pipe routes are known a UKWIR compliant assessment should be undertaken to establish whether any precautions are required to protect water pipes from potential contamination.

RPS would welcome the opportunity to discuss development proposals with CHT with a view to optimising the design cognisant to the known contamination constraints. This would result in lower further assessment/remedial (abnormal) requirements and therefore costs. RPS would also welcome the opportunity to discuss the above findings with the PKC Contaminated Land Officer to understand what further (if any) data would be required to support a future planning application.

Yours sincerely,
for RPS Consulting Services Ltd

David Gemmell
Director - Ground Risk and Remediation
david.gemmell@rpsgroup.com

APPENDICES

Appendix A - Screening Tables

Appendix A
Screening Tables

Project Name	Former Aberfeldy Slaughterhouse	
Project Number	JER9871	
Date	May-23	
Assessment Criteria	Residential with homegrown (SOM 1%)	

Chemcial Of Concern	Units	Limit of detection	Number of samples	min	max	mean	GAC	Number exceed GAC	BH 1	BH 1	BH 1	BH 1	BH 2	BH 2	BH 2	BH 2	BH 3	BH 3	BH 3	BH 5	BH 5	BH 6	BH 6	BH 6	BH 6	BH201	BH201	BH201	BH202	BH202	BH202
								Depth (m)	0.30	0.50	1.20	2.00	0.30	0.80	1.50	2.50	0.30	0.70	1.50	0.50	1.50	0.40	0.70	1.40	2.50	0.30	0.70	1.50	0.40	0.80	2.60
								Date Sampled	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	19/10/2009	19/10/2009	19/10/2009	20/10/2009	20/10/2009	20/10/2009
Asbetsos																															
Asbestos Fibres	Type	N/A	7	N/A	N/A	N/A	If Present	-		NAD			NAD				NAD			NAD		NAD				NAD			NAD		
Asbestos ACM	Type	N/A	0	N/A	N/A	N/A	-	-																							
Asbestos Type	Type	N/A	0	N/A	N/A	N/A	-	-																							
Asbestos Level Screen	Type	N/A	0	N/A	N/A	N/A	-	-																							
pH - Automated	pH Units	1	23	5.45	8.41	7.17	-	-	7.69	7.55	7.01	8.1	7.66	6.67	8.23	8.41	7.47	7.03	6.8	7.48	7.43	8.03	7.4	5.45	6.22	6.31	6.6	7.34	6.44	6.82	6.86
Total Cyanide	mg/kg	1	23	1.00	7.00	1.43	53	0	5	1	1	1	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	1	1	1	1
Total Sulphate as SO_4	g/l	1.50	23	0.00	0.16	0.02	-	-	0.011	0.003	0.003	0.006	0.005	0.003	0.003	0.056	0.006	0.008	0.008	0.16	0.006	0.072	0.038	0.02	0.011	0.01	0.007	0.03	0.016	0.005	0.026
Sulphide	mg/kg	10	6	15.00	15.00	15.00	-	-																		15	15	15	15	15	15
Organic Matter	%	0.35	23	0.35	42.00	5.36	-	-	5.9	0.35	0.35	0.35	1.5	0.35	0.35	0.35	0.5	0.35	0.35	1	0.35	15	10	1.2	0.88	42	3	4.7	32	2.1	0.37
Total Phenols (monohydric)	mg/kg	0.15	23	0.15	0.46	0.16	120	0	0.46	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Metals																															
Arsenic	mg/kg	3	23	4.00	37.00	12.83	37	1	24	6	17	17	6	20	16	15	7	18	15	4	18	8	37	15	16	9	5	6	6	5	5
Cadmium	mg/kg	0.3	23	0.20	0.70	0.30	11	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Chromium	mg/kg	4.5	23	21.00	87.00	33.22	910	0	26	29	37	38	23	87	32	33	27	40	42	31	33	32	38	26	27	23	30	30	21	29	30
Copper	mg/kg	6	23	27.00	340.00	67.87	2400	0	41	34	40	44	40	43	45	34	40	30	51	35	39	180	340	32	27	130	45	47	150	50	44
Lead	mg/kg	2	23	2.00	170.00	31.57	200	0	47	5	3	2	36	3	2	2	6	2	2	38	2	170	120	17	11	110	9	12	100	22	5
Mercury	mg/kg	0.6	23	0.40	0.60	0.55	1.2	0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4
Nickel	mg/kg	0.9	23	18.00	75.00	35.17	130	0	28	29	31	32	20	53	28	26	26	33	34	25	27	58	51	18	19	73	30	35	75	31	27
Selenium	mg/kg	3	23	3.00	3.00	3.00	250	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Zinc	mg/kg	2.5	23	53.00	800.00	124.57	3700	0	140	53	72	70	78	75	65	59	53	65	69	88	62	470	800	74	53	120	54	56	160	75	54
PAH MS																															
Naphthalene	mg/kg	0.01	23	0.01	0.96	0.12	2.3	0	0.073	0.043	0.011	0.01	0.11	0.01	0.01	0.01	0.039	0.01	0.01	0.05	0.01	0.22	0.21	0.18	0.022	0.6	0.009	0.06	0.96	0.1	0.009
Acenaphthylene	mg/kg	0.005	23	0.01	0.32	0.06	170	0	0.093	0.005	0.009	0.005	0.12	0.005	0.005	0.005	0.036	0.005	0.005	0.016	0.005	0.2	0.17	0.045	0.005	0.16	0.012	0.032	0.32	0.017	0.012
Acenaphthene	mg/kg	0.014	23	0.01	0.15	0.04	210	0	0.014	0.019	0.014	0.028	0.12	0.029	0.027	0.027	0.053	0.028	0.028	0.022	0.028	0.073	0.037	0.15	0.014	0.042	0.008	0.008	0.08	0.008	0.008
Fluorene	mg/kg	0.012	23	0.01	0.21	0.05	170	0	0.039	0.018	0.012	0.012	0.1	0.012	0.012	0.012	0.061	0.012	0.012	0.022	0.012	0.088	0.1	0.21	0.012	0.072	0.01	0.015	0.19	0.01	0.01
Phenanthrene	mg/kg	0.021	23	0.02	3.60	0.49	95	0	0.5	0.029	0.14	0.021	0.89	0.021	0.021	0.021	0.34	0.021	0.021	0.12	0.021	0.84	1.2	2.2	0.044	0.73	0.034	0.21	3.6	0.12	0.015
Anthracene	mg/kg	0.009	23	0.01	1.40	0.18	2400	0	0.14	0.009	0.031	0.009	0.43	0.009	0.009	0.009	0.13	0.009	0.009	0.045	0.009	0.36	0.36	0.81	0.009	0.27	0.016	0.069	1.4	0.057	0.016
Fluoranthene	mg/kg	0.025	23	0.02	5.20	0.92	280	0	0.77	0.025	0.21	0.025	4.9	0.028	0.025	0.025	0.68	0.025	0.025	0.24	0.025	2.3	2.1	3.1	0.053	0.87	0.05	0.33	5.2	0.11	0.017
Pyrene	mg/kg	0.022	23	0.02	5.00	0.84	620	0	0.76	0.022	0.15	0.022	5	0.024	0.022	0.022	0.57	0.022	0.022	0.2	0.022	2	1.9	3	0.047	0.66	0.043	0.27	4.4	0.09	0.015
Benzo(a)anthracene	mg/kg	0.012	23	0.01	2.70	0.51	7.2	0	0.49	0.026	0.1	0.035	2.7	0.037	0.025	0.022	0.31	0.023	0.023	0.15	0.016	1.4	1.1	2	0.037	0.38	0.043	0.17	2.5	0.053	0.014
Chrysene	mg/kg	0.01	23	0.01	2.70	0.49	15	0	0.57	0.015	0.11	0.02	2.7	0.02	0.01	0.011	0.31	0.01	0.01	0.17	0.01	1.4	1.2	2	0.04	0.49	0.027	0.17	2	0.052	0.01
Benzo(bk)fluoranthene	mg/kg	0.07	23	0.00	2.90	0.17	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.04	0.24	2.9	0.071	0.015
Benzo(a)pyrene	mg/kg	0.012	23	0.01	4.70	0.58	2.2	2	0.79	0.013	0.084	0.016	4.7	0.017	0.012	0.012	0.42	0.012	0.012	0.16	0.012	1.5	1.4	2.7	0.022	0.18	0.014	0.083	1.2	0.032	0.014
Indeno(1,2,3-cd)pyrene	mg/kg	0.011	23	0.01	3.00	0.43	27	0	0.53	0.011	0.05	0.011	3	0.011	0.011	0.011	0.27	0.011	0.011	0.095	0.011	0.76	0.78	1.2	0.011	0.31	0.03	0.16	2.6	0.065	0.015
Dibenz(a,h)anthracene	mg/kg	0.008	23	0.01	1.30	0.16	0.24	3	0.13	0.008	0.009	0.008	0.95	0.008	0.008	0.008	0.076	0.008	0.008	0.021	0.008	0.23	0.18	0.36	0.008	0.2	0.018	0.1	1.3	0.044	0.018
Benzo(ghi)perylene	mg/kg	0.01	23	0.01	3.40	0.37	320	0	0.67	0.013	0.052	0.011	3.4	0.016	0.01	0.01	0.31	0.01	0.01	0.12	0.01	0.85	0.9	1.6	0.014	0.065	0.023	0.03	0.35	0.023	0.023
Benzo(b)fluoranthene	mg/kg	0.001	23	0.02	4.10	0.57	2.6	1	0.86	0.023	0.087	0.016	4.1	0.021	0.016	0.016	0.36	0.016	0.016	0.25	0.016	2	1.2	2	0.026	0.29	0.024	0.14	1.5	0.066	0.024
Benzo(k)fluoranthene	mg/kg	0.025	23	0.03	31.00	2.06	77	0	0.57	0.025	0.072	0.025	2.2	0.025	0.025	0.025	0.3	0.025	0.025	0.12	0.025	1.1	0.92	1.5	0.025	5.9	0.27	2.1	31	0.88	0.118
TPH CWG																															
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	6	0.01	0.01	0.01	42	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	6	0.01	0.01	0.01	100	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	6	0.01	0.01	0.01	27	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	0.2	6	0.01	0.01	0.01	130	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	4	6	3.60	14.00	6.98	1100	0					5.3				4.2			3.6		9				5.8			14		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	7	6	6.10	44.00	21.52	65000	0					13				12			6.1		34				20			44		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	7	6	19.00	180.00	84.83	65000	0					83				19			39		58				130			180		
Total aliphatics C5-35	mg/kg	19	6	36.00	240.00	114.17	-	-					100				36			49		100				160			240		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	6	0.01	0.01	0.01	70	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	6	0.01	0.01	0.01	130	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	6	0.01	0.01	0.01	34	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	0.2	6	0.01	0.01	0.01	74	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	4	6	0.10	12.00	6.40	140	0					5.8				5.4			0.1		8.9				6.2			12		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	7	6	0.10	41.00	21.18	260	0					26				13			0.1		29				18			41		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	7	6	55.00	280.00	149.50	1100	0					280				82			55		140				110			230		
Total aromatics C5-35	mg/kg	19	6	55.00	320.00	177.50	-	-					320				100			55		180				130			280		
Total TPH	mg/kg	10	19	10.00	510.00	115.89	-	-	170	10	10	10	420	10	10	14	140	10	10	100	10	280	120	54	24	290			510		
MTBE	ug/kg	10	6	10.00	10.00	10.00	-	-					10				10			10		10				10			10		
Benzene	ug/kg	10	6	10.00	10.00	10.00	87	0					10				10			10		10				10			10		
Toluene	µg/kg	10	6	10.00	10.00	10.00	130000	0					10				10			10		10				10			10		
Ethylbenzene	µg/kg	10	6	10.00	10.00	10.00	47000	0					10				10			10		10				10			10		
p & m-xylene	µg/kg	10	6	10.00	10.00	10.00	56000	0					10				10			10		10				10			10		
o-xylene	µg/kg	10	6	10.00	10.00	10.00	60000	0					10				10			10		10				10			10		
Pesticides																															
Aldrin	mg/uk	0.001	8	0.00	0.01	0.01	5.7	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
Dieldrin	mg/uk	0.001	8	0.00	0.01	0.01	0.97	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
Dichlorvos	mg/uk	0.001	8	0.00	0.01	0.01	0.032	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
Endosulfan (alpha)	mg/uk	0.001	8	0.00	0.01	0.01	7.4	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
Endosulfan (beta)	mg/uk	0.001	8	0.00	0.01	0.01	7	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
PCBs																															
Total PCBs	ug/kg	3	1	3.00	3.00	3.00	8000	0																					3		

Less than laboratory detection
Greater than LOD with no AC
Greater than GAC

Project Name	Former Aberfeldy Slaughterhouse
Project Number	JER9871
Date	May-23
Assessment Criteria	Residential no homegrown (SOM 1%)

Sample Reference									BH 1	BH 1	BH 1	BH 1	BH 2	BH 2	BH 2	BH 2	BH 3	BH 3	BH 3	BH 5	BH 5	BH 6	BH 6	BH 6	BH 6	BH201	BH201	BH201	BH202	BH202	BH202
Depth (m)									0.30	0.50	1.20	2.00	0.30	0.80	1.50	2.50	0.30	0.70	1.50	0.50	1.50	0.40	0.70	1.40	2.50	0.30	0.70	1.50	0.40	0.80	2.60
Date Sampled									04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	04/02/2008	19/10/2009	19/10/2009	19/10/2009	20/10/2009	20/10/2009	20/10/2009
Chemcial Of Concern	Units	Limit of detection	Number of samples	min	max	mean	GAC	Number exceed GAC																							
Asbetsos																															
Asbestos Fibres	Type	N/A	7	N/A	N/A	N/A	If Present	-		NAD			NAD				NAD			NAD		NAD				NAD			NAD		
Asbestos ACM	Type	N/A	0	N/A	N/A	N/A	-	-																							
Asbestos Type	Type	N/A	0	N/A	N/A	N/A	-	-																							
Asbestos Level Screen	Type	N/A	0	N/A	N/A	N/A	-	-																							
pH - Automated	pH Units	1	23	5.45	8.41	7.17	-	-	7.69	7.55	7.01	8.1	7.66	6.67	8.23	8.41	7.47	7.03	6.8	7.48	7.43	8.03	7.4	5.45	6.22	6.31	6.6	7.34	6.44	6.82	6.86
Total Cyanide	mg/kg	1	23	1.00	7.00	1.43	53	0	5	1	1	1	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	1	1	1	1
Total Sulphate as SO_4	g/l	1.50	23	0.00	0.16	0.02	-	-	0.011	0.003	0.003	0.006	0.005	0.003	0.003	0.056	0.006	0.008	0.008	0.16	0.006	0.072	0.038	0.02	0.011	0.01	0.007	0.03	0.016	0.005	0.026
Sulphide	mg/kg	10	6	15.00	15.00	15.00	-	-																		15	15	15	15	15	15
Organic Matter	%	0.35	23	0.35	42.00	5.36	-	-	5.9	0.35	0.35	0.35	1.5	0.35	0.35	0.35	0.5	0.35	0.35	1	0.35	15	10	1.2	0.88	42	3	4.7	32	2.1	0.37
Total Phenols (monohydric)	mg/kg	0.15	23	0.15	0.46	0.16	440	0	0.46	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Metals																															
Arsenic	mg/kg	3	23	4.00	37.00	12.83	40	0	24	6	17	17	6	20	16	15	7	18	15	4	18	8	37	15	16	9	5	6	6	5	5
Cadmium	mg/kg	0.3	23	0.20	0.70	0.30	85	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Chromium	mg/kg	4.5	23	21.00	87.00	33.22	910	0	26	29	37	38	23	87	32	33	27	40	42	31	33	32	38	26	27	23	30	30	21	29	30
Copper	mg/kg	6	23	27.00	340.00	67.87	7100	0	41	34	40	44	40	43	45	34	40	30	51	35	39	180	340	32	27	130	45	47	150	50	44
Lead	mg/kg	2	23	2.00	170.00	31.57	310	0	47	5	3	2	36	3	2	2	6	2	2	38	2	170	120	17	11	110	9	12	100	22	5
Mercury	mg/kg	0.6	23	0.40	0.60	0.55	1.2	0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4
Nickel	mg/kg	0.9	23	18.00	75.00	35.17	180	0	28	29	31	32	20	53	28	26	26	33	34	25	27	58	51	18	19	73	30	35	75	31	27
Selenium	mg/kg	3	23	3.00	3.00	3.00	430	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Zinc	mg/kg	2.5	23	53.00	800.00	124.57	40000	0	140	53	72	70	78	75	65	59	53	65	69	88	62	470	800	74	53	120	54	56	160	75	54
PAH MS																															
Naphthalene	mg/kg	0.01	23	0.01	0.96	0.12	2.6	0	0.073	0.043	0.011	0.01	0.11	0.01	0.01	0.01	0.039	0.01	0.01	0.05	0.01	0.22	0.21	0.18	0.022	0.6	0.009	0.06	0.96	0.1	0.009
Acenaphthylene	mg/kg	0.005	23	0.01	0.32	0.06	2900	0	0.093	0.005	0.009	0.005	0.12	0.005	0.005	0.005	0.036	0.005	0.005	0.016	0.005	0.2	0.17	0.045	0.005	0.16	0.012	0.032	0.32	0.017	0.012
Acenaphthene	mg/kg	0.014	23	0.01	0.15	0.04	3000	0	0.014	0.019	0.014	0.028	0.12	0.029	0.027	0.027	0.053	0.028	0.028	0.022	0.028	0.073	0.037	0.15	0.014	0.042	0.008	0.008	0.08	0.008	0.008
Fluorene	mg/kg	0.012	23	0.01	0.21	0.05	2800	0	0.039	0.018	0.012	0.012	0.1	0.012	0.012	0.012	0.061	0.012	0.012	0.022	0.012	0.088	0.1	0.21	0.012	0.072	0.01	0.015	0.19	0.01	0.01
Phenanthrene	mg/kg	0.021	23	0.02	3.60	0.49	1300	0	0.5	0.029	0.14	0.021	0.89	0.021	0.021	0.021	0.34	0.021	0.021	0.12	0.021	0.84	1.2	2.2	0.044	0.73	0.034	0.21	3.6	0.12	0.015
Anthracene	mg/kg	0.009	23	0.01	1.40	0.18	31000	0	0.14	0.009	0.031	0.009	0.43	0.009	0.009	0.009	0.13	0.009	0.009	0.045	0.009	0.36	0.36	0.81	0.009	0.27	0.016	0.069	1.4	0.057	0.016
Fluoranthene	mg/kg	0.025	23	0.02	5.20	0.92	1500	0	0.77	0.025	0.21	0.025	4.9	0.028	0.025	0.025	0.68	0.025	0.025	0.24	0.025	2.3	2.1	3.1	0.053	0.87	0.05	0.33	5.2	0.11	0.017
Pyrene	mg/kg	0.022	23	0.02	5.00	0.84	3700	0	0.76	0.022	0.15	0.022	5	0.024	0.022	0.022	0.57	0.022	0.022	0.2	0.022	2	1.9	3	0.047	0.66	0.043	0.27	4.4	0.09	0.015
Benzo(a)anthracene	mg/kg	0.012	23	0.01	2.70	0.51	11	0	0.49	0.026	0.1	0.035	2.7	0.037	0.025	0.022	0.31	0.023	0.023	0.15	0.016	1.4	1.1	2	0.037	0.38	0.043	0.17	2.5	0.053	0.014
Chrysene	mg/kg	0.01	23	0.01	2.70	0.49	30	0	0.57	0.015	0.11	0.02	2.7	0.02	0.01	0.011	0.31	0.01	0.01	0.17	0.01	1.4	1.2	2	0.04	0.49	0.027	0.17	2	0.052	0.01
Benzo(bk)fluoranthene	mg/kg	0.07	23	0.00	2.90	0.17	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.04	0.24	2.9	0.071	0.015
Benzo(a)pyrene	mg/kg	0.012	23	0.01	4.70	0.58	3.2	1	0.79	0.013	0.084	0.016	4.7	0.017	0.012	0.012	0.42	0.012	0.012	0.16	0.012	1.5	1.4	2.7	0.022	0.18	0.014	0.083	1.2	0.032	0.014
Indeno(1,2,3-cd)pyrene	mg/kg	0.011	23	0.01	3.00	0.43	45	0	0.53	0.011	0.05	0.011	3	0.011	0.011	0.011	0.27	0.011	0.011	0.095	0.011	0.76	0.78	1.2	0.011	0.31	0.03	0.16	2.6	0.065	0.015
Dibenz(a,h)anthracene	mg/kg	0.008	23	0.01	1.30	0.16	0.31	3	0.13	0.008	0.009	0.008	0.95	0.008	0.008	0.008	0.076	0.008	0.008	0.021	0.008	0.23	0.18	0.36	0.008	0.2	0.018	0.1	1.3	0.044	0.018
Benzo(ghi)perylene	mg/kg	0.01	23	0.01	3.40	0.37	360	0	0.67	0.013	0.052	0.011	3.4	0.016	0.01	0.01	0.31	0.01	0.01	0.12	0.01	0.85	0.9	1.6	0.014	0.065	0.023	0.03	0.35	0.023	0.023
Benzo(b)fluoranthene	mg/kg	0.001	23	0.02	4.10	0.57	3.9	1	0.86	0.023	0.087	0.016	4.1	0.021	0.016	0.016	0.36	0.016	0.016	0.25	0.016	2	1.2	2	0.026	0.29	0.024	0.14	1.5	0.066	0.024
Benzo(k)fluoranthene	mg/kg	0.025	23	0.03	31.00	2.06	110	0	0.57	0.025	0.072	0.025	2.2	0.025	0.025	0.025	0.3	0.025	0.025	0.12	0.025	1.1	0.92	1.5	0.025	5.9	0.27	2.1	31	0.88	0.118
TPH CWG																															
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	6	0.01	0.01	0.01	42	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	6	0.01	0.01	0.01	100	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	6	0.01	0.01	0.01	27	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	0.2	6	0.01	0.01	0.01	130	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	4	6	3.60	14.00	6.98	1100	0					5.3				4.2			3.6		9				5.8			14		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	7	6	6.10	44.00	21.52	65000	0					13				12			6.1		34				20			44		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	7	6	19.00	180.00	84.83	65000	0					83				19			39		58				130			180		
Total aliphatics C5-35	mg/kg	19	6	36.00	240.00	114.17	-	-					100				36			49		100				160			240		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	6	0.01	0.01	0.01	370	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	6	0.01	0.01	0.01	860	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	6	0.01	0.01	0.01	47	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	0.2	6	0.01	0.01	0.01	250	0					0.01				0.01			0.01		0.01				0.01			0.01		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	4	6	0.10	12.00	6.40	1800	0					5.8				5.4			0.1		8.9				6.2			12		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	7	6	0.10	41.00	21.18	1900	0					26				13			0.1		29				18			41		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	7	6	55.00	280.00	149.50	1900	0					280				82			55		140				110			230		
Total aromatics C5-35	mg/kg	19	6	55.00	320.00	177.50	-	-					320				100			55		180				130			280		
Total TPH	mg/kg	10	19	10.00	510.00	115.89	-	-	170	10	10	10	420	10	10	14	140	10	10	100	10	280	120	54	24	290			510		
MTBE	ug/kg	10	6	10.00	10.00	10.00	-	-					10				10			10		10				10			10		
Benzene	ug/kg	10	6	10.00	10.00	10.00	380	0					10				10			10		10				10			10		
Toluene	µg/kg	10	6	10.00	10.00	10.00	880000	0					10				10			10		10				10			10		
Ethylbenzene	µg/kg	10	6	10.00	10.00	10.00	83000	0					10				10			10		10				10			10		
p & m-xylene	µg/kg	10	6	10.00	10.00	10.00	79000	0					10				10			10		10				10			10		
o-xylene	µg/kg	10	6	10.00	10.00	10.00	88000	0					10				10			10		10				10			10		
Pesticides																															
Aldrin	mg/uk	0.001	8	0.00	0.01	0.01	7.3	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
Dieldrin	mg/uk	0.001	8	0.00	0.01	0.01	7	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
Dichlorvos	mg/uk	0.001	8	0.00	0.01	0.01	6.4	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
Endosulfan (alpha)	mg/uk	0.001	8	0.00	0.01	0.01	160	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
Endosulfan (beta)	mg/uk	0.001	8	0.00	0.01	0.01	190	0		0.001			0.01		0.001		0.01			0.01		0.01				0.002			0.01		
PCBs																															
Total PCBs	ug/kg	3	1	3.00	3.00	3.00	8000	0																					3		

Less than laboratory detection
Greater than LOD with no AC
Greater than GAC

Project Name **Aberfeldy Former Slaughterhouse**
Project Number **JER9871**
Data Type **Groundwater / Surface Water / Leachate**
Receiving Water Receptor

Analytical Parameter (Groundwater / Surface Water / Leachate Analysis)	Units	Limit of detection	number of samples	Min	Max	EQS	DWS	WHO DWS	Comments	Groundwater		Surface Water		Leachate										
									Sample Reference	**BH201A**	**BH202**	**DS**	**US**	**BH 1**	**BH 2**	**BH 2**	**BH 2**	**BH 3**	**BH 3**	**BH 5**	**BH 5**	**BH 6**	**BH 6**	**BH 6**
									Depth (m)					**0.30**	**0.30**	**0.80**	**2.50**	**0.30**	**1.50**	**0.50**	**1.50**	**0.40**	**0.70**	**1.40**
									Date Sampled	**17/11/2009**	**17/11/2009**	**########**	**19/03/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**	**04/02/2008**
Arsenic (dissolved)	µg/l	0.15	15	0.75	7.8	50	-	-		0.75	0.75	7.5	0.87	7.8	3.4	2.1	0.75	0.75	2.3	3.5	0.75	3.6	3.5	0.75
Cadmium (dissolved)	µg/l	0.02	15	0.22	4.5	5	-	-		0.22	0.22	4.5	0.22	0.22	0.22	1.3	0.22	0.22	1.6	0.22	0.22	0.22	0.22	0.22
Chromium (dissolved)	µg/l	1	15	1	8	4.7	-	-		5	7	6	1	1	1	1	1	1	1	8	1	1	2	1
Copper (dissolved)	µg/l	0.5	15	1.6	12	40	-	-		1.6	2.3	12	1.7	4.9	4.8	1.6	1.6	1.6	1.6	8.5	1.6	9.9	8	3.3
Lead (dissolved)	µg/l	0.2	15	0.4	11	7.2	-	-		0.5	0.4	11	0.4	1.2	1.8	0.6	0.4	0.4	0.6	2.7	0.4	2.1	1.4	0.4
Magnesium (dissolved)	mg/l	0.005	2	2900	3900	-	-	-				3900	2900											
Mercury (dissolved)	µg/l	0.05	14	0.01	0.02	0.05	-	-		0.01	0.01	0.01	0.01	0.02	0.01		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Nickel (dissolved)	µg/l	0.5	15	1.5	5.3	20	-	-		3.6	1.8	5.3	1.5	2.5	1.5	1.5	1.5	1.5	2.5	2.1	1.5	1.7	3.7	1.5
Selenium (dissolved)	µg/l	0.6	15	1	6	-	10	-		3	2	6	1	1	3	3	1	1	2	1	1	2	1	1
Zinc (dissolved)	µg/l	5	15	5	98	300	-	-		5	5	58	22	98	5	5	5	5	5	8	5	19	5	7
Acenaphthene	µg/l	0.015	4	0.015	0.015	-	-	-		0.015	0.015	0.015	0.015											
Acenaphthylene	µg/l	0.011	4	0.011	0.011	-	-	-		0.011	0.011	0.011	0.011											
Anthracene	µg/l	0.015	4	0.015	0.07	0.1	-	-		0.015	0.015	0.027	0.07											
Benzo(a)anthracene	µg/l	0.017	4	0.017	0.017	-	-	-		0.017	0.017	0.017	0.017											
Benzo(a)pyrene	µg/l	0.009	4	0.009	0.009	0.05	-	-		0.009	0.009	0.009	0.009											
Benzo(b)fluoranthene	µg/l	0.023	4	0.023	0.023	0.03	-	-		0.023	0.023	0.023	0.023											
Benzo(ghi)perylene	µg/l	0.016	4	0.016	0.016	0.002	-	-		0.016	0.016	0.016	0.016											
Benzo(k)fluoranthene	µg/l	0.027	4	0.027	0.027	0.03	-	-		0.027	0.027	0.027	0.027											
Chrysene	µg/l	0.013	4	0.013	0.017	-	-	-		0.013	0.013	0.013	0.017											
Dibenz(a,h)anthracene	µg/l	0.016	4	0.016	0.016	-	-	-		0.016	0.016	0.016	0.016											
Fluoranthene	µg/l	0.017	4	0.017	0.14	0.1	-	-		0.017	0.017	0.04	0.14											
Fluorene	µg/l	0.014	4	0.014	0.032	-	-	-		0.014	0.014	0.015	0.032											
Indeno(1,2,3-cd)pyrene	µg/l	0.014	4	0.014	0.014	0.002	-	-		0.014	0.014	0.014	0.014											
Naphthalene	µg/l	0.1	4	0.1	0.1	-	-	-		0.1	0.1	0.1	0.1											
Phenanthrene	µg/l	0.022	4	0.022	0.24	-	-	-		0.022	0.022	0.075	0.24											
Pyrene	µg/l	0.015	4	0.015	0.1	-	-	-		0.015	0.015	0.033	0.1											
pH (max)	pH Units	N/A	4	7.48	7.93	9	-	-		7.52	7.48	7.87	7.93											
Total Phenols (monohydric)	µg/l	10	14	10	50	-	-	-		10	10	10	10	10	10		30	10	20	20	20	50	20	20
Total Cyanide	µg/l	50	14	50	50	1	-	-	Lod >EQS	50	50	50	50	50	50		50	50	50	50	50	50	50	50
Sulphate as SO_4	mg/l	0.045	14	3	60	-	250000	-		15	21	8	7	3	3		4	3	3	60	3	5	3	3
Sulphide	µg/l	5	14	0.5	100	-	-	-		100	100	5	5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Chloride	mg/l	0.15	14	1	15	250000	-	-		9	7	15	15	1	1		1	1	1	9	1	1	1	1
Ammonia as NH_3	µg/l	15	14	0.11	140	-	-	-		90	140	120	50	0.11	0.11		100	80	90	120	40	90	130	110
Chloromethane	µg/l	1	2	1	1	-	-	-				1	1											
Vinyl Chloride	µg/l	1	2	1	1	-	0.5	-	Lod >EQS			1	1											
Trichloromethane	µg/l	1	2	1	1	2.5	-	-				1	1											
1,1,1-Trichloroethane	µg/l	1	2	1	1	100	-	-				1	1											
1,2-Dichloroethane	µg/l	1	2	1	1	10	-	-				1	1											
Benzene	µg/l	1	2	1	1	10	-	-				1	1											
Toluene	µg/l	1	2	1	1	50	-	-				1	1											
1,1,2-Trichloroethane	µg/l	1	2	1	1	400	-	-				1	1											
Tetrachloroethene	µg/l	1	2	1	1	10	-	-				1	1											
p & m-Xylene	µg/l	1	2	1	1	30	-	-				1	1											
Styrene	µg/l	1	2	1	1	50	-	-				1	1											

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