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BY Email

HUMAN HEALTH ASSESSMENT ADDENDUM
BELLE VUE GREYHOUND STADIUM, LEVENSHULME

Further to the completion of our recent supplementary Ground Investigation works, carried out in October 2021, E3P has altered the scope required for the protection of human health at the site.

Site Address	Belle Vue Greyhound Stadium, Kirkmanshulme Lane, Manchester, M18 7BD
Grid Reference	E387870, N396070
Site Area	4.67 Ha

BACKGROUND

During the initial phase of works in 2018, compiled within the Phase I and II Residential Site Assessment (ref: 12-123-R1, dated August 2019) and in the phase of supplementary works in 2021 (ref: 12-123-L5, dated April 2021) several areas of the site denoted potential hotspots. The hotspot in question for this letter is TP215 in the west of the site, where SVOC and mercury have been identified previously. A hotspot removal of soils was recommended to remove the pathway and receptor linkage and chemical validation of soils remaining in situ was recommended.

Previously a supplementary phase of works was undertaken in September 2021 comprising 8 trial pits under previously existing buildings (TP401-TP408). These are denoted in 12-123-L6, dated October 2021 and should be read as a precursor to this letter. The pertinent trial pits for the purposes of this letter are TP407 and TP408, where SVOC and mercury have been identified. As such, a hotspot removal of soils was recommended to remove the pathway and receptor linkage and chemical validation of soils remaining in situ was recommended.

During the enabling works, the hotspots were excavated with the arisings placed on impermeable membranes and the soils in-situ chemically validated. However, the chemical results showed the residual presence of semi-volatile and naphthalene contamination. As such, the locations were extended and resampled with arisings stockpiled adjacent to the locations on impermeable membranes once again. The results still showed the presence of semi-volatiles, naphthalene and mercury at TP407, TP408 and TP215.

The hotspots were extended for a third time and results still showed the presence of semi-volatile contamination. As such, E3P consider it likely that the soils across these areas all contain SVOC, mercury and naphthalene compounds. Due to the volumes of soil, it is not possible to place these in areas of low sensitivity. As such, a phase of sampling across the two areas was carried out to assess the future plots will likely require vapour resistant membranes.

The soils in these areas were higher in elevation to the rest of the site and are likely fill material that has been built over historically to comprise the scoreboard in the west and viewing steps in the east. The soils encountered are not homogenous with soils encountered across the rest of the site and so we are confident it is only the soils in these isolated areas that are of concern. Furthermore, general backfill sampling of soils across the site confirm this conclusion as exceedances for these compounds have not been identified elsewhere.

The primary purpose of this addendum report is to summarise the results of the supplementary testing, available peer reviewed contaminant risk-based assessment and toxicology data and define the updated build phase mitigation requirements for the site.

For the avoidance of any doubt, the protocols for the site remediation and enabling earthworks have been agreed with Manchester City Council.

It is considered that samples referred to as 'west' cover proposed plot numbers 204 – 214. It is considered that samples referred to as 'east' cover proposed plot numbers 86 – 98 and Block 2. In total there are 23 plots and one apartment block considered within this letter.

ADDITIONAL SAMPLING

E3P returned to site on the 2nd and 16th December 2021 and the 14th February 2022 to sample the shallow soils across the areas in question to determine the extent of SVOC, mercury and naphthalene. A sample plan for these is appended to this letter. A total of 16 samples were taken across the eastern area (former steps) and a total of 6 samples were taken across the western area (former scoreboard).

Supplementary analysis for Volatile Organic Compounds (22 no. Samples) has not detected any results above the laboratory limit of detection. This suite of analysis screened for chlorinated, halogenated, aromatic and aliphatic compounds. In light of this now extensive data set, the risk from volatile phase compounds can be discounted within the context of the developed conceptual site model.

Mercury was speciated from the arisings at TP215 which was originally detected at 2.1 mg/kg of mercury. The speciation results have shown elemental mercury at 0.496 mg/kg which is below the threshold of 1.2 mg/kg and so a volatile mercury risk is not deemed present in the west of the site. All of the samples obtained from the east of the site had mercury values below 2.1 mg/kg and so based on the previous speciation result, it is considered there is no unacceptable risk from volatile mercury in the east of the site.

Laboratory screening for Semi Volatile Organic Compounds (SVOC) (aliphatic, aromatic, chlorinated and halogenated) identified the detectable presence of the following determinants at the corresponding maximum recorded values:

- Aniline (1.5 mg/kg)
- Naphthalene (38 mg/kg)
- 2-Methylnaphthalene (21 mg/kg),
- Dibenzofuran (16 mg/kg),
- Carbazole (11 mg/kg)
- Anthraquinone (5.2 mg/kg)

The detectable concentrations were identified in sampling locations MG-West -001 to 006, denoted in i2 Analytical report 22-40053 and MG-East-001 to 016, denoted in i2 Analytical reports 21-27236 and 21-29895. The chemical reports are appended to this letter.

When considering the identified SVOC contaminants identified, they have been assessed to be present at concentrations above their limits of detection for the analytical method. These limits are set out below:

- Aniline - 0.1 mg/kg
- Naphthalene - 0.05 mg/kg
- 2-Methylnaphthalene - 0.1 mg/kg
- Dibenzofuran - 0.2 mg/kg
- Carbazole - 0.3 mg/kg
- Anthraquinone - 0.3 mg/kg

Aniline was identified within one soil sample in one location and is therefore not considered a contaminant of particular concern within this risk assessment. When considering the risk from the most volatile compound, naphthalene, this has been identified above the chemical threshold of 2.3 mg/kg within all western samples and within all eastern samples apart from 009 and 013.

To further inform our 'lines of evidence' approach to determining the likely risk from the other semi volatile organic compounds detected at or above the limit of detection for the analytical technique, E3P has assessed each compound on an individual basis as set out below.

2-Methylnaphthalene

2-methylnaphthalene is a white crystalline solid compound.

This contaminant is classified as a non-threshold substance, therefore even the smallest amount of exposure is considered to pose a theoretical risk to the critical receptor within the context of the developed CSM.

This compound is detected at a maximum concentration of 21 mg/kg in MG-East-005 within 21 out of 22 samples taken across the areas.

The vapour pressure of 2-methylnaphthalene is (0.055 mm Hg @ 25°C) is slightly lower than that of naphthalene ((0.085 mm Hg @ 25°C), it is therefore determined that the compound is less volatile than naphthalene. This data is obtained from Pub Chem.

The Tier 1 CIEH / LQM S4UL for naphthalene is 2.3 mg/kg for a residential with plant update scenario, however this assessment assumes dermal contact, inhalation of particulate and other direct exposure pathways. The developed CSM for the subject site incorporates clean cover systems to ensure no direct exposure pathways.

There is no justifiable or peer reviewed toxicological data for an inhalation pathway for 2-methylnaphthalene, therefore is it not possible to develop a robust site-specific risk assessment model given the absence of suitable input parameters.

In light of the above, we must consider the lines of evidence to hand and given that the compound is a non-threshold substance with no peer reviewed, robust or justifiable toxicological data the suggested method to ensure safe regeneration is the adoption of the As Low As Reasonably Possible (ALARP) approach.

In this instance, the methodology for the analytical technique is considered to be the lowest reasonably possible method of determining the presence of the non threshold substance and mitigating risk to the lowest practicable level.

The US national library for medicine confirms:

If released into soil, 2-methylnaphthalene is expected to have slight to no mobility based upon log Koc values of 3.00-5.96. Volatilization from moist soil surfaces is expected based upon a Henry's Law constant of 5.18X10-4 atm-cu m/mole. However, adsorption to soil is expected to attenuate volatilization. 2-Methylnaphthalene is not expected to volatilize from dry soil surfaces based on its vapour pressure.

This compound has a very low to no actual volatility, there is no inhalation of dust (indoor or outdoor air) or inhalation of vapour (indoor or outdoor) exposure. The total inhalation background is 1.52%.

As discussed, herein it is highly unlikely that this compound can enter the vapour phase in the soil temperatures furthermore the presence of a passively ventilated sub-floor void with a reasonable volume change potential (24hr) will ensure that in the extremely unlikely event that this compound could volatilise and migrate, the standard mitigation measure would ensure there is absolutely no potential for ingress into the habitable space.

The US EPA has a residential screening value of 24 mg/kg for this compound, while this value cannot be utilised for an SSRT, it must be noted that the risk-based approach assumes significant dermal uptake. Therefore within the context of the developed site CSM and the lines of evidence approach, it can be determined that the residual compound in this instance is highly unlikely to pose any risk in terms of vapour migration and ingress to the dwelling.

Dibenzofuran

This is a white solid compound generally derived from coal tar.

There is little or no toxicological data for dibenzofuran, therefore it is not possible to generate a site-specific risk-based assessment criteria to determine at what concentration the compound would post no unacceptable level of risk when considering a vapour exposure pathway in isolation.

Within the 22 samples, all locations reported the concentration of dibenzofuran above the limit of detection for the analytical technique.

The maximum recorded concentration of dibenzofuran is 16 mg/kg (MG-East-010). The relatively low volatility of this compound within soils that have a temperature of ~10^{o}C all but inhibits any volatilisation potential.

In the absence of any viable peer-reviewed toxicological data, the ALARP principal is adopted, therefore works on-site will ensure removal of this material where possible and incorporation of robust and highly risk-averse mitigation measures in the construction of new dwellings.
The US national library for medicine confirms:

Volatilization from moist soil surfaces is expected to be an important fate process based upon an estimated Henry's Law constant of 2.1X10-4 atm-cu m/mole. However, adsorption to soil is expected to attenuate volatilization.

Dibenzofuran is not expected to volatilize from dry soil surfaces(SRC) based on its vapour pressure

The US EPA has a residential screening value of 7.3mg/kg for this compound, while this value cannot be utilised for an SSRT, it must be noted that the risk-based approach assumes significant dermal uptake. Therefore within the context of the developed site CSM and the lines of evidence approach, it can be determined that the residual compound in this instance is unlikely to pose any risk in terms of vapour migration and ingress to the dwelling.

Carbazole

Carbazole is a non-threshold substance.

Carbazole is a white, crystalline solid. It has a characteristic odour. It is a product of incomplete combustion of organic matter and occurs in petroleum, coal, peat, crude oil and coal tar.

There is no toxicological data available to inform the preparation of robust site-specific risk-based assessment criteria that would model the potential for ingress of vapour into indoor air.

The US national library for medicine confirms:

Carbazole released into the air will also be in or on particles that eventually fall to the ground. It is expected to be broken down by sunlight, depending on environmental conditions. ***It will not move intthe o air from moist soil and water surfaces.***

If released to soil, carbazole can have high to no mobility based upon a Koc range of 114-4980, with most values suggesting low mobility to immobility. Volatilization from moist soil surfaces is not expected to be an important fate process based upon a Henry's Law constant of 1.16X10-7 atm-cu m/mole. Carbazole is not expected to volatilize from dry soil surfaces based on its vapour pressure.

It is accepted that carbazole is a non-threshold substance, however, it will be encapsulated in soils with a temperature in the region of 10°C, furthermore given that it is highly unlikely to move into the ambient air via a vapour phase migratory pathway from soil or water there cannot be a complete pollutant linkage in this instance.

The recorded concentrations are marginally above the limit of detection for the analytical method.

Anthraquinone

Anthraquinone is a polycyclic aromatic hydrocarbon derived from anthracene or phthalic anhydride. Anthraquinone is used in the manufacture of dyes, in the textile and pulp industries, and as a bird repellant.

The US national library for medicine confirms:

If released to soil, anthraquinone is expected to have slight to no mobility based upon a Koc values of 2,755-17,416. Volatilization from moist soil surfaces is not expected to be an important fate process based upon an estimated Henry's Law constant of 2.35X10-8 atm-cu m/mole. ***Anthraquinone is not expected to volatilize from dry soil surfaces based on its vapour pressure of 1.16X10-7 mm Hg.***

The US EPA has a residential screening value of 13mg/kg for this compound, while this value cannot be utilised for an SSRT, it must be noted that the risk-based approach assumes significant dermal uptake. Therefore within the context of the developed site CSM and the lines of evidence approach, it can be determined that the residual compound in this instance is highly unlikely to pose any risk in terms of vapour migration and ingress to the dwelling.

DISCUSSION OF RISK FROM SEMI-VOLATILE ORGANIC COMPOUNDS

The lines of evidence approach demonstrates that while there is an absence of peer-reviewed and justifiable toxicological data for Aniline, 2-Methylnaphthalene, Dibenzofuran, Carbazole, Anthraquinone, these compounds are at the lower limits of the volatile range which is further and significantly inhibited by their encapsulation in soils with a mean temperature in the region of ~10°C.

The US National Library for Medicine confirms that for the contaminants discussed within this addendum specification, the vapour pressure and estimated Henry's Law constant suggest that volatilization is not a theoretical possibility for these compounds.

The proposed remediation solution will be to construct the future dwellings with passively ventilated sub-floor voids that allow a complete volume change potential within a 24hr period.

The remediation solution seeks to ensure that the site is developed in a manner that ensures that the residual concentrations of the determinants of concern post a risk that can be quantified as being As Low As

In light of the above, the derivation of SSRTs is not viable, therefore we have adopted the lines of evidence approach to ensure the remediation solution provides a developed CSM where the identified determinants can be demonstrated as achieving the ALARP principal.

All determinants are identified at concentrations that exceed the limit of detection for the analytical method, furthermore that peer-reviewed SSV's for other phenolic and aromatic compounds of increased volatility and sensitivity are, for the most part, higher than the detected concentrations. While the toxicity and effects on the critical receptor are ultimately different to that of other SVOC compounds, the contributing exposure pathways is either similar or significantly reduced.

In the absence of peer-reviewed toxicological data, the only method of safely assessing the risk from the non-threshold substances of concern is by adopting the ALARP principal. This is considered below:

- Residual concentrations are below US EPA screening criteria, it is fully accepted that these values are not applicable in the UK, however in the absence of other criteria they are a line of evidence to reference;
- The residual concentrations are all above the limit of detection for the analytical technique; and,
- All contaminants are reported by the US National Laboratory for Medicine as not posing a risk in terms of entering the vapour phase from a soil.

REMEDIATION AND MITIGATION

In this instance, it is recommended that within Plots 86-98, Apartment Block 2 and 204-214 where the above SVOC are identified as critical determinants, specialist vapour resistant membranes are included within the construction of the dwelling in addition to any proposed ground gas membranes.

The extent of dwellings that will be constructed with a vapour membrane is indicated within the E3P Vapour Membrane Location Plan Drawing 12-123-015 attached.

It is proposed to utilise the Visqueen Ultimate HC Block membrane (technical details attached) to be installed in accordance with the standards and guidelines as detailed within CIRIA 748. Every dwelling will be subject to independent inspection by a qualified professional which is certified in inspection to CIRIA 748 requirements.

All dwellings listed (without exception) will be constructed with a certified 600mm clean cover system.

All dwellings listed will be constructed to be compliant (as a minimum) to ensure mitigation of hazardous ground gas ingress as required for situation Amber 1 as defined in BS8485. This will include an appropriate membrane and passively ventilated sub-floor void.

I trust this information is satisfactory to your requirements, and should I be able to be of any further assistance, please do not hesitate to contact me.

Yours sincerely,

Olivia Jackson
Senior Geoenvironmental Consultant

For and on behalf of E3P Ltd

Enclosed:
Human Health Tier 1 Table
Remedial Strategy Target Values
Proposed Development Plan
SVOC Sample Location Plan
Vapour Membrane Location Plan
Chemical Testing Certificates

TABLE 1.1 SUMMARY OF INORGANIC AND HYDROCARBON TOXICITY ASSESSMENT FOR A RESIDENTIAL END USE

CONTAMINANT	UNITS	GAC	N	MC	LOC. OF EX	PATHWAY	ASSESSMENT
Arsenic	mg/kg	37	22	55 51 70 48 53 48 48 42 42 47	West-002 West-003 West-004 West-005 West-006 East-005 East-006 East-008 East-014 East-016	1	Further Action
Cadmium	mg/kg	11	22	2.5	-	1	No Further Action
Chromium (VI)	mg/kg	6.1	22	<4.0	-	1	No Further Action
Lead	mg/kg	200	22	590 610 570 710 670 580 450 440 310 760 710 480 550 290 310 500 390 600 250 490	West-001 West-002 West-003 West-004 West-005 West-006 East-002 East-003 East-004 East-005 East-006 East-007 East-008 East-010 East-011 East-012 East-013 East-014 East-015 East-016	1	Further Action
Mercury	mg/kg	1.2	22	2.3 2.4 2.1 2.0 2.2 2.2 1.9 1.7 2.0 1.6 1.6	West-001 West-002 West-003 West-004 West-005 West-006 East-005 East-006 East-008 East-011 East-014	2	Further Action
Nickel	mg/kg	180	22	61	-	1	No Further Action
Selenium	mg/kg	250	22	<1.0	-	1	No Further Action
Copper	mg/kg	2400	22	490	-	1	No Further Action
Zinc	mg/kg	3700	22	710	-	1	No Further Action
Cyanide - Total	mg/kg	791	22	2.2	-	1	No Further Action
Phenols - Total.	mg/kg	210	0	-	-	1	-
Asbestos	Fibres	NFD	0	-	-	4	-
Naphthalene	mg/kg	2.3	22	8 12 4.3 6.3 3.2 14 5 6.3	West-001 West-002 West-003 West-004 West-005 West-006 East-002 East-005	3	Further Action

CONTAMINANT	UNITS	GAC	N	MC	LOC. OF EX	PATHWAY	ASSESSMENT
				4.3	East-006		
				3.7	East-007		
				13	East-008		
				38	East-010		
				4	East-011		
				5.2	East-012		
				4.4	East-014		
				5.3	East-015		
				2.4	East-016		
Acenaphthylene	mg/kg	170	22	8.4	-	2	No Further Action
Acenaphthene	mg/kg	210	22	31	-	1	No Further Action
Fluorene	mg/kg	170	22	30	-	1	No Further Action
				130	West-001		
				120	West-002		
				180	West-006		
Phenanthrene	mg/kg	95	22	120	East-005	2	Further Action
				120	East-008		
				180	East-010		
				110	East-011		
Anthracene	mg/kg	2400	22	43	-	2	No Further Action
Fluoranthene	mg/kg	280	22	190	-	2	No Further Action
Pyrene	mg/kg	620	22	190	-	2	No Further Action
				68	West-001		
				56	West-002		
				41	West-003		
				48	West-004		
				46	West-005		
				71	West-006		
				5.6	East-001		
				29	East-002		
				33	East-003		
				8.3	East-004		
Benzo(a)Anthracene	mg/kg	7.2	22	69	East-005	2	Further Action
				62	East-006		
				48	East-007		
				66	East-008		
				9.2	East-009		
				89	East-010		
				49	East-011		
				47	East-012		
				19	East-013		
				45	East-014		
				18	East-015		
				32	East-016		
				47	West-001		
				45	West-002		
				34	West-003		
				47	West-004		
				35	West-005		
				56	West-006		
				19	East-002		
				21	East-003		
Chrysene	mg/kg	15	22	45	East-005	2	Further Action
				41	East-006		
				42	East-007		
				51	East-008		
				77	East-010		
				45	East-011		
				41	East-012		
				18	East-013		
				38	East-014		

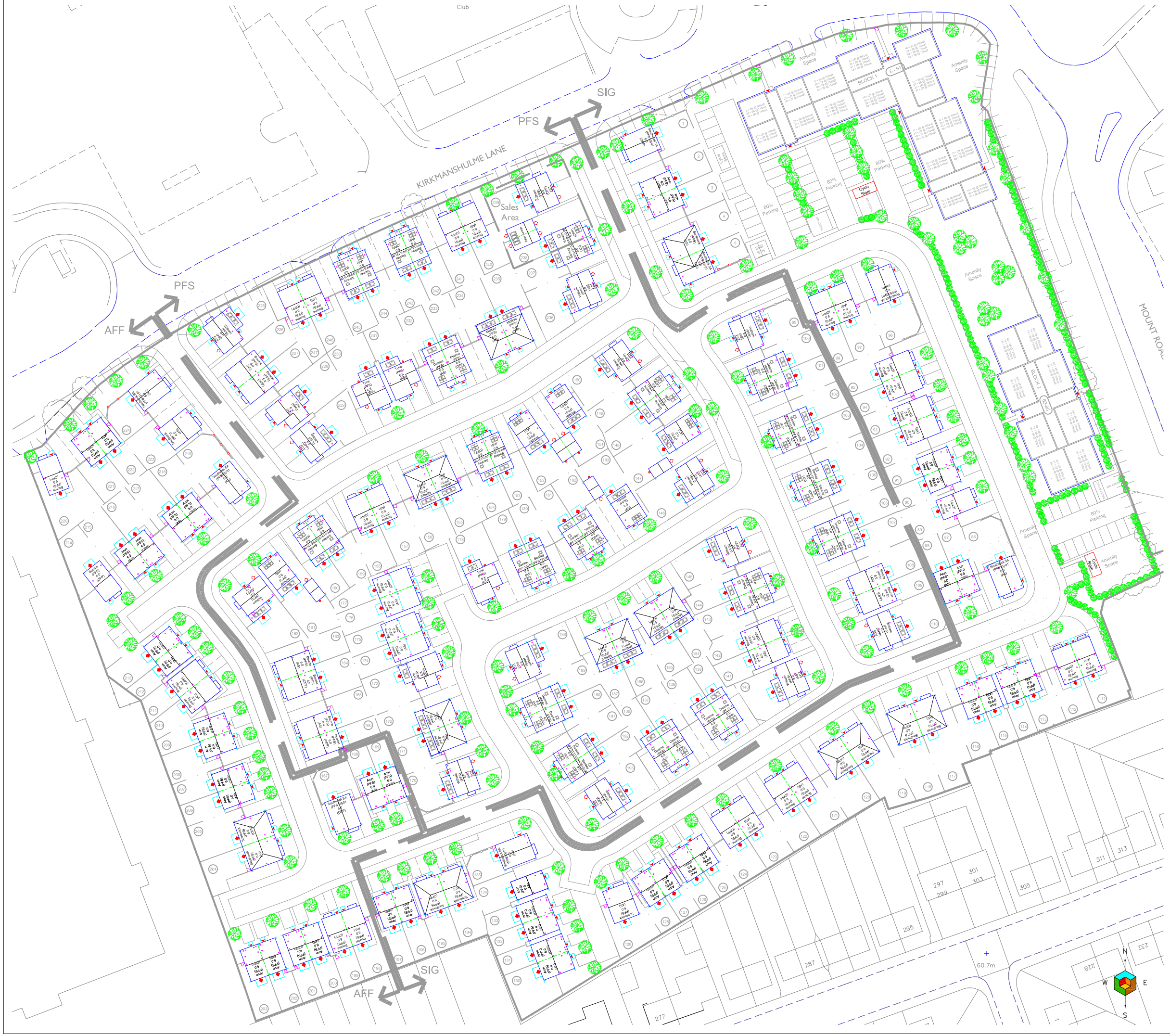
CONTAMINANT	UNITS	GAC	N	MC	LOC. OF EX	PATHWAY	ASSESSMENT
				23	East-016		
Benzo(b)Fluoranthene	mg/kg	2.6	22	53 44 36 39 42 55 4.2 14 18 5.6 37 42 57 75 11 94 61 53 22 47 18 36	West-001 West-002 West-003 West-004 West-005 West-006 East-001 East-002 East-003 East-004 East-005 East-006 East-007 East-008 East-009 East-010 East-011 East-012 East-013 East-014 East-015 East-016	2	Further Action
Benzo(k)Fluoranthene	mg/kg	77	22	32		2	No Further Action
Benzo(a)Pyrene	mg/kg	2.2	22	52 47 37 45 38 56 4.1 18 20 5.9 43 41 45 59 8.7 89 48 44 20 41 15 29	West-001 West-002 West-003 West-004 West-005 West-006 East-001 East-002 East-003 East-004 East-005 East-006 East-007 East-008 East-009 East-010 East-011 East-012 East-013 East-014 East-015 East-016	2	Further Action
Indeno(123-cd)Pyrene	mg/kg	27	22	38	East-010	2	Further Action
Dibenzo(a,h)Anthracene	mg/kg	0.24	22	8.1 7.1 5.6 6.8 6.0 8.2 0.75 3.7 3.6 1.1 8.1 7.2 5.6 8.2	West-001 West-002 West-003 West-004 West-005 West-006 East-001 East-002 East-003 East-004 East-005 East-006 East-007 East-008	2	Further Action

CONTAMINANT	UNITS	GAC	N	MC	LOC. OF EX	PATHWAY	ASSESSMENT
				1.3 12 7.1 6.5 2.7 5.4 2.0 4.0	East-009 East-010 East-011 East-012 East-013 East-014 East-015 East-016		
Benzo(ghi)Perylene	mg/kg	320	22	45	-	2	No Further Action
TPH C5-C6 (aliphatic)*	mg/kg	42	22	<0.001	-	3	No Further Action
TPH C6-C8 (aliphatic)*	mg/kg	100	22	<0.001	-	3	No Further Action
TPH C8-C10 (aliphatic)*	mg/kg	27	22	<0.001	-	3	No Further Action
TPH C10-C12 (aromatic)*	mg/kg	74	22	45	-	3	No Further Action
TPH C12-C16 (aromatic)*	mg/kg	140	22	160	East-010	3	No Further Action
TPH C16-C21 (aromatic)*	mg/kg	260	22	630 620 300 340 430 490 270 320 750 390 570	West-001 West-002 West-003 West-004 West-006 East-005 East-007 East-008 East-010 East-011 East-012	1	**Further Action**
TPH C21-C35 (aromatic)*	mg/kg	1100	22	1200	East-010	1	**Further Action**

Notes
Main Exposure Pathways: 1 = Soil Ingestion, 2 = Dermal Contact & Ingestion, 3 = Vapour Inhalation (indoor), 4 = Dust Inhalation.
Abbreviations: GAC = General Assessment Criteria, n = number of samples, MC = Maximum Concentration; Loc of Ex = Location of Exceedance; NFD = No Fibres Detected
* The Tier 1 GAC for the hydrocarbon fraction is derived from the CIEH assessment for petroleum hydrocarbons Criteria Working Group (CWG) for both aliphatic and aromatic compounds. E3P has utilised the Tier 1 values for aliphatic compounds for the volatile and semi volatile fractions (C_5-C_{12}) and the Tier 1 values for aromatic compound for the non-volatile fractions (C_{12}-C_{35}). The comparison of a total (aliphatic/aromatic) compounds to an individual fraction is considered to be a conservative approach and satisfactory for the protection of human health.

TABLE 1.2 COPY OF REMEDIAL TARGET VALUES

Determinant	Units	Within 600mm Cover System (Garden)	Hard Standing and >600mm of cover system	Public Open Space 300mm Cover	Public Open Space >300mm	Pathway
Arsenic	mg/kg	37(i)	40(ii)	79(iii)	640(iv)	1
Cadmium	mg/kg	11(i)	85(ii)	120(iii)	532(iv)	1
Chromium (Hexavalent)	mg/kg	6(i)	6(ii)	7.7(iii)	220(iv)	1
Lead	mg/kg	210(vi)	330(vii)	760(viii)	760(viii)	1
Elemental Mercury	mg/kg	1.2(i)	1.2(ii)	16(iii)	30(iv)	2
Nickel	mg/kg	180(i)	180(ii)	230(iii)	3400(iv)	1
Selenium	mg/kg	250(i)	430(ii)	1100(iii)	1800(iv)	1
Copper	mg/kg	2400(i)	7100(ii)	12000(iii)	44000(iv)	1
Zinc	mg/kg	3700(i)	40000(ii)	81000(iii)	170000(iv)	1
Phenol	mg/kg	280(i)(xi)	280(xiv)(xi)	760(iii)(xi)	760(iv)(xi)	2
Naphthalene	mg/kg	2.3(i)(xi)	2.3(xiv)(xi)	1200(iv)(xi)	1200(iv)(xi)	2
Acenaphthylene	mg/kg	170(i)(xi)	500(v)	15000(iii)(xi)	29000(iv)(xi)	3
Acenaphthene	mg/kg	210(i)(xi)	500(v)	15000(iii)(xi)	29000(iv)(xi)	1
Fluorene	mg/kg	170(i)(xi)	500(v)	9900(iii)(xi)	20000(iv)(xi)	1
Phenanthrene	mg/kg	95(i)(xi)	500(v)	3100(iii)(xi)	6200(iv)(xi)	3
Anthracene	mg/kg	500(i)(xi)	500(v)	74000(iii)(xi)	150000(iv)(xi)	3
Fluoranthene	mg/kg	280(i)(xi)	500(v)	3100(iii)(xi)	6300(iv)(xi)	3
Pyrene	mg/kg	500(i)(xi)	500(v)	7400(iii)(xi)	15000(iv)(xi)	3
Benzo(a)Anthracene(	mg/kg	7.2(i)(xi)	11(ii)(xi)	29(iii)(xi)	49(iv)(xi)	3
Chrysene	mg/kg	15(i)(xi)	30(ii)(xi)	57(iii)(xi)	93(iv)(xi)	3
Benzo(b)Fluoranthene (iii)	mg/kg	2.6(i)(xi)	3.9(ii)(xi)	7.1(iii)(xi)	13(iv)(xi)	3
Benzo(k)Fluoranthene (iii	mg/kg	77(i)(xi)	110(ii)(xi)	190(iii)(xi)	370(iv)(xi)	3
Benzo(a)Pyrene (vii)	mg/kg	2.2(i)(xi)	3.2(ii)(xi)	5.7(iii)(xi)	11(iv)(xi)	3
Indeno(123-cd)Pyrene	mg/kg	27(i)(xi)	45(ii)(xi)	82(iii)(xi)	150(iv)(xi)	3
Dibenzo(a,h)Anthracene	mg/kg	0.24(i)(xi)	0.31(ii)(xi)	0.57(iii)(xi)	1.1(iv)(xi)	3
Benzo(ghi)Perylene	mg/kg	320(i)(xi)	360(ii)(xi)	640(iii)(xi)	1400(iv)(xi)	3
TPH C_5-C_6 (aliphatic)	mg/kg	42(i)(xi)	42(ii)(xi)	42(ii)(xi)	10000(xiv)(xi)	2
TPH C_6-C_8 (aliphatic)	mg/kg	100(i)(xi)	100(ii)(xi)	100(ii)(xi)	10000(xiv)(xi)	2
TPH C_8-C_{10} (aliphatic)	mg/kg	27(i)(xi)	27(ii)(xi)	27(ii)(xi)	10000(xiv)(xi)	2
TPH C_{10}-C_{12} (aliphatic)	mg/kg	130(i)(xi)	130(ii)(xi)	130(ii)(xi)	10000(xiv)(xi)	2
TPH C_{12}-C_{16} (aliphatic)	mg/kg	1000(xiv)(xi)	1000(xiv)(xi)	1000(xiv)(xi)	10000(xiv)(xi)	1
TPH C_{16}-C_{21} (aliphatic)	mg/kg	1000(xiv)(xi)	1000(xiv)(xi)	1000(xiv)(xi)	10000(xiv)(xi)	1
TPH C_{21}-C_{35} (aliphatic)	mg/kg					1
TPH C_5-C_7 (aromatic)	mg/kg	70(i)(xi)	370(ii)(xi)	370(ii)(xi)	10000(xiv)(xi)	2
TPH C_7-C_8 (aromatic)	mg/kg	130(i)(xi)	860(ii)(xi)	860(ii)(xi)	10000(xiv)(xi)	2
TPH C_8-C_{10} (aromatic)	mg/kg	34(i)(xi)	47(ii)(xi)	47(ii)(xi)	10000(xiv)(xi)	2
TPH C_{10}-C_{12} (aromatic)	mg/kg	74(i)(xi)	250(ii)(xi)	250(ii)(xi)	10000(xiv)(xi)	2
TPH C_{12}-C_{16} (aromatic)	mg/kg	140(i)(xi)	1800(ii)(xi)	1800(ii)(xi)	10000(xiv)(xi)	1
TPH C_{16}-C_{21} (aromatic)	mg/kg	260(i)(xi)	1900(ii)(xi)	1900(ii)(xi)	10000(xiv)(xi)	1
TPH C_{21}-C_{35} (aromatic)	mg/kg	1000(xiv)(xi)	1900(ii)(xi)	1900(ii)(xi)	10000(xiv)(xi)	1
Asbestos	Fibres Volume Weight	NFD	0.001%	NFD	0.001	1



Key:

Notes:

P1	-	27.02.2019	DRAFT	HM	SE
Phase	Revision	Date	Issue	Drawn	Authorised

Client: Countryside Properties	Job No: 12-123	Date: 27.02.2019
	Drawing No: 004	Scale: NTS
Job Title: Belle Vue Stadium	Drawing Title: Proposed Development Layout	

Environmental Engineering Partnerships Ltd
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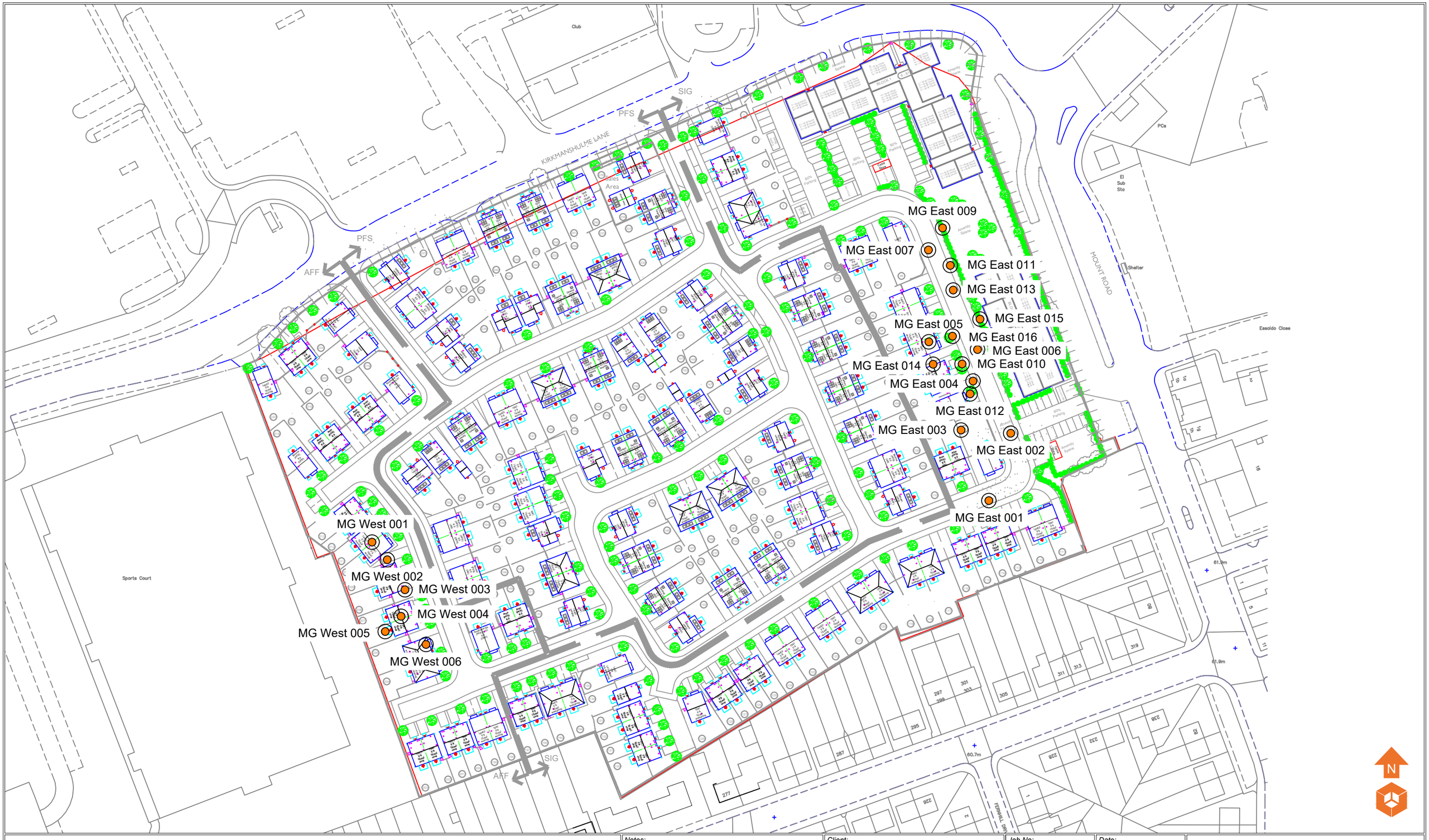

Location Symbols

Approximate Sample Location

Notes:

Phase	Issue	Date	Drawn	Checked
P1	REVB	27.04.2022	HM	OJ
P1	REVA	23.02.2022	EB	GC

Client: Countryside Properties

Job No: 12-123

Date: 27.04.2022

Drawing No: 014

Scale: NTS

Job Title: Belle Vue Stadium

Drawing Title: Semi-Volatile Impact Sampling Plan

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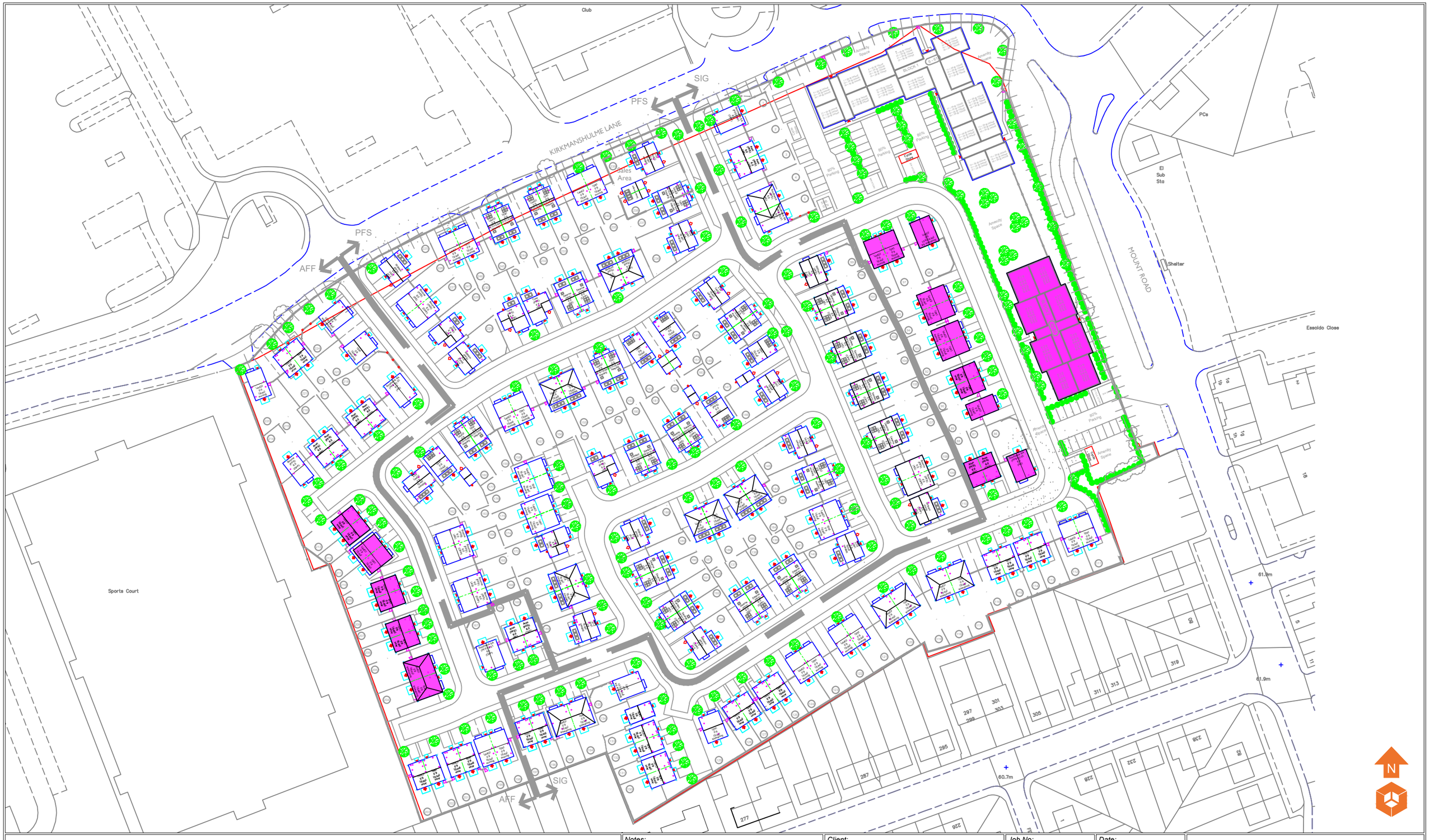

Vapour Membrane

Vapour Membrane Required

Notes:

Client:
Countryside Properties

Job No: 12-123

Date: 03.05.2022

Drawing No: 015

Scale: NTS

Phase	Issue	Date	Drawn	Checked
P1	REVB	03.05.2022	LM	OJ
P1	REVA	25.04.2022	HM	SE

Job Title:
Belle Vue Stadium

Drawing Title:
Vapour Membrane Location Plan

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Analytical Report Number : 21-27236

Project / Site name:	Belle Vue	**Samples received on:**	02/12/2021
Your job number:	12-123	**Samples instructed on/ Analysis started on:**	06/12/2021
Your order number:	00110	**Analysis completed by:**	14/12/2021
Report Issue Number:	1	**Report issued on:**	14/12/2021
Samples Analysed:	6 soil samples		

Signed: [redacted]

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 21-27236
Project / Site name: Belle Vue
Your Order No: 00110

Lab Sample Number				2106479	2106480	2106481	2106482	2106483
Sample Reference				MG-East-001	MG-East-002	MG-East-003	MG-East-004	MG-East-005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	17	18	14	18
Total mass of sample received	kg	0.001	NONE	0.30	0.30	0.30	0.30	0.30
General Inorganics								
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	30	29	24	48
Barium (aqua regia extractable)	mg/kg	1	MCERTS	140	350	370	200	580
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.94	1.2	1.6	1.2	2.9
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5	1.0	0.7	0.5	0.7
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
Copper (aqua regia extractable)	mg/kg	1	MCERTS	85	490	270	130	360
Lead (aqua regia extractable)	mg/kg	1	MCERTS	67	450	440	310	760
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	1.0	< 0.3	1.9
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	54	35	34	56
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	23	42	44	35	63
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	87	280	250	120	420
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 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	< 2.0	2.7	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	< 8.0	75	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	MCERTS	< 10	83	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	2.6	9.6	< 1.0	5.7	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	12	33	46	13	66
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	41	170	250	60	490
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	76	250	440	110	810
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	MCERTS	130	460	740	190	1400

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 21-27236
Project / Site name: Belle Vue
Your Order No: 00110

Lab Sample Number				2106479	2106480	2106481	2106482	2106483
Sample Reference				MG-East-001	MG-East-002	MG-East-003	MG-East-004	MG-East-005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	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
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 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
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	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
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 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
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-27236
Project / Site name: Belle Vue
Your Order No: 00110

Lab Sample Number				2106479	2106480	2106481	2106482	2106483
Sample Reference				MG-East-001	MG-East-002	MG-East-003	MG-East-004	MG-East-005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	5.0	< 0.05	< 0.05	6.3
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	7.5	5.5	2.6	21
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.67	1.1	0.52	3.0
Acenaphthene	mg/kg	0.05	MCERTS	2.3	10	5.8	1.5	21
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	1.2	3.9	2.7	0.8	9.5
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	1.7	7.4	5.3	1.5	17
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	11	42	43	12	120
Anthracene	mg/kg	0.05	MCERTS	2.4	11	12	2.7	31
Carbazole	mg/kg	0.3	MCERTS	0.8	2.8	2.0	0.6	8.1
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	1.4	2.2	0.4	5.2
Fluoranthene	mg/kg	0.05	MCERTS	13	51	58	16	110
Pyrene	mg/kg	0.05	MCERTS	12	48	53	15	110
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Analytical Report Number: 21-27236
Project / Site name: Belle Vue
Your Order No: 00110

Lab Sample Number				2106479	2106480	2106481	2106482	2106483
Sample Reference				MG-East-001	MG-East-002	MG-East-003	MG-East-004	MG-East-005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzo(a)anthracene	mg/kg	0.05	MCERTS	5.6	29	33	8.3	69
Chrysene	mg/kg	0.05	MCERTS	5.0	19	21	7.2	45
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	4.2	14	18	5.6	37
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	2.2	15	14	3.9	32
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.1	18	20	5.9	43
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.8	12	12	3.6	26
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.75	3.7	3.6	1.1	8.1
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	3.2	13	13	4.0	29

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

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Analytical Report Number: 21-27236
Project / Site name: Belle Vue
Your Order No: 00110

Lab Sample Number				2106484
Sample Reference				MG-East-006
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/12/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	17
Total mass of sample received	kg	0.001	NONE	0.30
General Inorganics				
Total Cyanide	mg/kg	1	MCERTS	< 1.0
Heavy Metals / Metalloids				
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	48
Barium (aqua regia extractable)	mg/kg	1	MCERTS	580
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.4
Boron (water soluble)	mg/kg	0.2	MCERTS	1.0
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0
Copper (aqua regia extractable)	mg/kg	1	MCERTS	300
Lead (aqua regia extractable)	mg/kg	1	MCERTS	710
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.7
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	44
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	57
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	390
Monoaromatics & Oxygenates				
Benzene	µg/kg	1	MCERTS	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0
Petroleum Hydrocarbons				
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	3.6
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	23
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	61
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	MCERTS	88
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	4.2
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	59
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	320
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	580
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	MCERTS	960

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Analytical Report Number: 21-27236
Project / Site name: Belle Vue
Your Order No: 00110

Lab Sample Number				2106484
Sample Reference				MG-East-006
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/12/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
VOCs				
Chloromethane	µg/kg	1	ISO 17025	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0

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Analytical Report Number: 21-27236
Project / Site name: Belle Vue
Your Order No: 00110

Lab Sample Number				2106484
Sample Reference				MG-East-006
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/12/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0

SVOCs

Aniline	mg/kg	0.1	NONE	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	4.3
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	10
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	2.0
Acenaphthene	mg/kg	0.05	MCERTS	16
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	6.9
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2
Fluorene	mg/kg	0.05	MCERTS	13
Azobenzene	mg/kg	0.3	MCERTS	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	89
Anthracene	mg/kg	0.05	MCERTS	24
Carbazole	mg/kg	0.3	MCERTS	5.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	4.0
Fluoranthene	mg/kg	0.05	MCERTS	110
Pyrene	mg/kg	0.05	MCERTS	95
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3

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Analytical Report Number: 21-27236
Project / Site name: Belle Vue
Your Order No: 00110

Lab Sample Number				2106484
Sample Reference				MG-East-006
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/12/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	62
Chrysene	mg/kg	0.05	MCERTS	41
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	42
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	21
Benzo(a)pyrene	mg/kg	0.05	MCERTS	41
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	24
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	7.2
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	27

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

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Analytical Report Number : 21-27236
Project / Site name: Belle Vue

* 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 *
2106479	MG-East-001	None Supplied	None Supplied	Brown clay and sand with gravel.
2106480	MG-East-002	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2106481	MG-East-003	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2106482	MG-East-004	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
2106483	MG-East-005	None Supplied	None Supplied	Brown clay and sand with gravel.
2106484	MG-East-006	None Supplied	None Supplied	Brown clay and sand with gravel.

Analytical Report Number : 21-27236
Project / Site name: Belle Vue

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in 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
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
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
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.

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

Analytical Report Number : 21-27236
Project / Site name: Belle Vue

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
_	Operator - understore to separate acronyms (exception for +)				
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total				

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Analytical Report Number : 21-29895

Project / Site name:	Belle Vue	**Samples received on:**	17/12/2021
Your job number:	12 123	**Samples instructed on/ Analysis started on:**	17/12/2021
Your order number:	000172	**Analysis completed by:**	24/12/2021
Report Issue Number:	1	**Report issued on:**	24/12/2021
Samples Analysed:	10 soil samples		

Signed: [redacted]
Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 21-29895
Project / Site name: Belle Vue
Your Order No: 000172

Lab Sample Number				2121034	2121035	2121036	2121037	2121038
Sample Reference				MG-EAST 007	MG-SW 008	MG-EAST 009	MG-SW 010	MG-EAST 011
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				16/12/2021	16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	23	21	21	21	23
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
General Inorganics								
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Organic Matter (automated)	%	0.1	MCERTS	5.4	-	-	4.5	-
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	35	42	19	31	33
Barium (aqua regia extractable)	mg/kg	1	MCERTS	370	510	290	330	340
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.9	2.2	1.2	2.1	1.8
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5	0.7	0.3	0.6	0.6
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
Copper (aqua regia extractable)	mg/kg	1	MCERTS	190	350	78	320	200
Lead (aqua regia extractable)	mg/kg	1	MCERTS	480	550	120	290	310
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.3	2.0	< 0.3	0.6	1.6
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	40	39	24	50	40
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	49	50	35	48	47
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	240	370	100	210	230
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 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	7.0	3.4	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	20	12	< 2.0	16	14
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	36	27	< 8.0	18	34
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	110	82	< 8.0	72	57
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	MCERTS	170	120	< 10	110	100
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	17	16	2.5	45	8.2
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	71	68	8.7	160	96
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	270	320	60	750	390
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	360	420	96	1200	440
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	MCERTS	720	820	170	2100	940

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Your Order No: 000172

Lab Sample Number				2121034	2121035	2121036	2121037	2121038
Sample Reference				MG-EAST 007	MG-SW 008	MG-EAST 009	MG-SW 010	MG-EAST 011
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				16/12/2021	16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	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
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 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
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	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
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 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
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Lab Sample Number				2121034	2121035	2121036	2121037	2121038
Sample Reference				MG-EAST 007	MG-SW 008	MG-EAST 009	MG-SW 010	MG-EAST 011
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				16/12/2021	16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	3.7	13	< 0.05	38	4.0
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	3.3	11	0.8	22	7.7
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	0.86	1.8	< 0.05	8.4	0.79
Acenaphthene	mg/kg	0.05	MCERTS	16	20	1.3	20	20
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	7.4	9.2	1.4	16	10
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	14	17	1.1	30	15
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	86	120	13	180	110
Anthracene	mg/kg	0.05	MCERTS	24	30	3.9	43	21
Carbazole	mg/kg	0.3	MCERTS	6.1	7.9	1.8	10	4.7
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	2.4	4.9	1.7	4.0	4.7
Fluoranthene	mg/kg	0.05	MCERTS	110	140	21	190	120
Pyrene	mg/kg	0.05	MCERTS	97	130	18	190	110
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Sample Reference				MG-EAST 007	MG-SW 008	MG-EAST 009	MG-SW 010	MG-EAST 011
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				16/12/2021	16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzo(a)anthracene	mg/kg	0.05	MCERTS	48	66	9.2	89	49
Chrysene	mg/kg	0.05	MCERTS	42	51	7.1	77	45
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	57	75	11	94	61
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	11	12	2.6	27	11
Benzo(a)pyrene	mg/kg	0.05	MCERTS	45	59	8.7	89	48
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	19	27	4.6	38	23
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	5.6	8.2	1.3	12	7.1
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	22	32	5.2	45	27

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

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Lab Sample Number				2121039	2121040	2121041	2121042	2121043
Sample Reference				MG-SW 012	MG-EAST 013	MG-SW 014	MG-EAST 015	MG-SW 016
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				16/12/2021	16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	20	21	20	19	25
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
General Inorganics								
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Organic Matter (automated)	%	0.1	MCERTS	-	3.8	-	-	8.0
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	36	25	42	22	47
Barium (aqua regia extractable)	mg/kg	1	MCERTS	520	370	570	240	440
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.3	1.5	1.9	1.3	2.6
Boron (water soluble)	mg/kg	0.2	MCERTS	0.2	0.5	0.6	0.9	1.1
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
Copper (aqua regia extractable)	mg/kg	1	MCERTS	260	180	260	140	240
Lead (aqua regia extractable)	mg/kg	1	MCERTS	500	390	600	250	490
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.2	0.8	1.6	0.9	1.1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	47	33	43	27	47
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	51	42	73	45	56
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	360	180	330	180	290
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 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0	2.7	< 1.0	4.4	2.4
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	10	24	7.4	39	10
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	13	52	19	67	16
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	14	57	58	140	53
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	MCERTS	37	140	84	250	81
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	28	5.8	4.9	6.6	2.5
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	120	44	47	53	31
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	570	160	240	190	170
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	580	230	360	280	210
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	MCERTS	1300	440	650	530	410

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Analytical Report Number: 21-29895
Project / Site name: Belle Vue
Your Order No: 000172

Lab Sample Number				2121039	2121040	2121041	2121042	2121043
Sample Reference				MG-SW 012	MG-EAST 013	MG-SW 014	MG-EAST 015	MG-SW 016
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				16/12/2021	16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	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
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 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
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	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
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 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
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-29895
Project / Site name: Belle Vue
Your Order No: 000172

Lab Sample Number				2121039	2121040	2121041	2121042	2121043
Sample Reference				MG-SW 012	MG-EAST 013	MG-SW 014	MG-EAST 015	MG-SW 016
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				16/12/2021	16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	5.2	1.7	4.4	5.3	2.4
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	4.2	1.6	4.2	3.2	1.8
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	0.94	0.97	1.1	0.78	0.98
Acenaphthene	mg/kg	0.05	MCERTS	14	5.8	14	6.5	8.4
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	6.3	2.5	6.5	3.3	3.5
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	11	5.5	11	6.3	7.0
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	82	33	87	34	43
Anthracene	mg/kg	0.05	MCERTS	20	8.6	20	9.5	12
Carbazole	mg/kg	0.3	MCERTS	4.2	2.0	4.5	2.9	2.2
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	4.0	1.3	3.7	0.7	1.9
Fluoranthene	mg/kg	0.05	MCERTS	99	43	100	39	64
Pyrene	mg/kg	0.05	MCERTS	95	43	93	38	62
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Analytical Report Number: 21-29895
Project / Site name: Belle Vue
Your Order No: 000172

Lab Sample Number				2121039	2121040	2121041	2121042	2121043
Sample Reference				MG-SW 012	MG-EAST 013	MG-SW 014	MG-EAST 015	MG-SW 016
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				16/12/2021	16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzo(a)anthracene	mg/kg	0.05	MCERTS	47	19	45	18	32
Chrysene	mg/kg	0.05	MCERTS	41	18	38	13	23
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	53	22	47	18	36
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	13	6.8	15	5.2	6.6
Benzo(a)pyrene	mg/kg	0.05	MCERTS	44	20	41	15	29
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	20	8.5	20	7.3	13
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	6.5	2.7	5.4	2.0	4.0
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	24	10	23	8.6	15

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

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Analytical Report Number : 21-29895
Project / Site name: Belle Vue

* 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 *
2121034	MG-EAST 007	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2121035	MG-SW 008	None Supplied	None Supplied	Brown clay and sand with gravel.
2121036	MG-EAST 009	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2121037	MG-SW 010	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2121038	MG-EAST 011	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2121039	MG-SW 012	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2121040	MG-EAST 013	None Supplied	None Supplied	Brown clay and sand with gravel.
2121041	MG-SW 014	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2121042	MG-EAST 015	None Supplied	None Supplied	Brown clay and sand with gravel.
2121043	MG-SW 016	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.

Analytical Report Number : 21-29895
Project / Site name: Belle Vue

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in 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
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
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
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
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	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.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Analytical Report Number : 21-29895
Project / Site name: Belle Vue

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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Analytical Report Number : 22-40053

Project / Site name:	Belle Vue	**Samples received on:**	15/02/2022
Your job number:	12-123	**Samples instructed on/ Analysis started on:**	15/02/2022
Your order number:	000645	**Analysis completed by:**	22/02/2022
Report Issue Number:	1	**Report issued on:**	22/02/2022
Samples Analysed:	6 soil samples		

Signed [redacted]

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 22-40053
Project / Site name: Belle Vue
Your Order No: 000645

Lab Sample Number				2174895	2174896	2174897	2174898	2174899
Sample Reference				MG-West 001	MG-West 002	MG-West 003	MG-West 004	MG-West 005
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				14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
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	17	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	20	22	20	20	23
Total mass of sample received	kg	0.001	NONE	0.30	0.30	0.30	0.30	0.30
General Inorganics								
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	2.2
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	37	55	51	70	48
Barium (aqua regia extractable)	mg/kg	1	MCERTS	600	580	600	480	680
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.5	3.2	2.3	2.5	2.8
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	0.7	1.7	0.8	1.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	2.5	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	MCERTS	330	250	370	320	260
Lead (aqua regia extractable)	mg/kg	1	MCERTS	590	610	570	710	670
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2.3	2.4	2.1	2.0	2.2
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	41	51	54	61	50
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	59	67	63	59	71
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	370	430	710	400	410
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 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	1.4	< 1.0	4.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	2.9	2.9	3.5	3.9	11
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	19	15	8.1	8.8	13
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	96	78	43	38	51
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	MCERTS	120	96	56	51	80
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	6.9	12	3.3	5.7	8.9
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	100	120	53	66	60
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	630	620	300	340	250
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	930	820	380	440	310
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	MCERTS	1700	1600	740	850	630

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Analytical Report Number: 22-40053
Project / Site name: Belle Vue
Your Order No: 000645

Lab Sample Number				2174895	2174896	2174897	2174898	2174899
Sample Reference				MG-West 001	MG-West 002	MG-West 003	MG-West 004	MG-West 005
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				14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	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
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 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
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	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
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 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
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 22-40053
Project / Site name: Belle Vue
Your Order No: 000645

Lab Sample Number				2174895	2174896	2174897	2174898	2174899
Sample Reference				MG-West 001	MG-West 002	MG-West 003	MG-West 004	MG-West 005
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				14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SVOCs								
Aniline	mg/kg	0.1	NONE	1.5	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	8.0	12	4.3	6.3	3.2
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	4.2	10	4.6	5.1	3.2
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	0.94	0.87	0.82	1.9	1.0
Acenaphthene	mg/kg	0.05	MCERTS	17	22	11	15	16
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	6.1	10	4.4	6.9	7.4
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	15	16	7.6	13	13
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	130	120	67	89	89
Anthracene	mg/kg	0.05	MCERTS	28	27	17	21	24
Carbazole	mg/kg	0.3	MCERTS	8.9	6.8	3.9	4.8	5.0
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	3.1	3.3	2.6	3.0
Fluoranthene	mg/kg	0.05	MCERTS	140	120	94	110	100
Pyrene	mg/kg	0.05	MCERTS	120	110	87	100	95
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Analytical Report Number: 22-40053
Project / Site name: Belle Vue
Your Order No: 000645

Lab Sample Number				2174895	2174896	2174897	2174898	2174899
Sample Reference				MG-West 001	MG-West 002	MG-West 003	MG-West 004	MG-West 005
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				14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzo(a)anthracene	mg/kg	0.05	MCERTS	68	56	41	48	46
Chrysene	mg/kg	0.05	MCERTS	47	45	34	47	35
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	53	44	36	39	42
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	26	22	18	26	12
Benzo(a)pyrene	mg/kg	0.05	MCERTS	52	47	37	45	38
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	26	23	18	21	19
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	8.1	7.1	5.6	6.8	6.0
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	32	28	22	27	24

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

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Analytical Report Number: 22-40053
Project / Site name: Belle Vue
Your Order No: 000645

Lab Sample Number				2174900
Sample Reference				MG-West 006
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				14/02/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	23
Total mass of sample received	kg	0.001	NONE	0.30

General Inorganics

Total Cyanide	mg/kg	1	MCERTS	1.3

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	53
Barium (aqua regia extractable)	mg/kg	1	MCERTS	560
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.3
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0
Copper (aqua regia extractable)	mg/kg	1	MCERTS	230
Lead (aqua regia extractable)	mg/kg	1	MCERTS	580
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2.2
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	46
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	63
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	440

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	6.3
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	20
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	MCERTS	35

TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	7.8
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	93
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	430
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	390
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	MCERTS	920

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Analytical Report Number: 22-40053
Project / Site name: Belle Vue
Your Order No: 000645

Lab Sample Number				2174900
Sample Reference				MG-West 006
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				14/02/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
VOCs				
Chloromethane	µg/kg	1	ISO 17025	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0

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Analytical Report Number: 22-40053
Project / Site name: Belle Vue
Your Order No: 000645

Lab Sample Number				2174900
Sample Reference				MG-West 006
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				14/02/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0

SVOCs

Aniline	mg/kg	0.1	NONE	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	14
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	15
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	1.2
Acenaphthene	mg/kg	0.05	MCERTS	31
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	16
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2
Fluorene	mg/kg	0.05	MCERTS	22
Azobenzene	mg/kg	0.3	MCERTS	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	180
Anthracene	mg/kg	0.05	MCERTS	39
Carbazole	mg/kg	0.3	MCERTS	11
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	5.0
Fluoranthene	mg/kg	0.05	MCERTS	160
Pyrene	mg/kg	0.05	MCERTS	150
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3

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Analytical Report Number: 22-40053
Project / Site name: Belle Vue
Your Order No: 000645

Lab Sample Number				2174900
Sample Reference				MG-West 006
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				14/02/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	71
Chrysene	mg/kg	0.05	MCERTS	56
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	55
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	24
Benzo(a)pyrene	mg/kg	0.05	MCERTS	56
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	27
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	8.2
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	32

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

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Analytical Report Number : 22-40053
Project / Site name: Belle Vue

* 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 *
2174895	MG-West 001	None Supplied	None Supplied	Brown gravelly loam with stones.
2174896	MG-West 002	None Supplied	None Supplied	Brown clay and loam with vegetation and gravel
2174897	MG-West 003	None Supplied	None Supplied	Brown clay and loam with vegetation and gravel
2174898	MG-West 004	None Supplied	None Supplied	Brown clay and loam with vegetation and gravel
2174899	MG-West 005	None Supplied	None Supplied	Brown gravely loam with vegetation and clinker
2174900	MG-West 006	None Supplied	None Supplied	Brown gravely loam with vegetation and clinker

Analytical Report Number : 22-40053
Project / Site name: Belle Vue

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in 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
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-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	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
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
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.

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

Analytical Report Number : 22-40053
Project / Site name: Belle Vue

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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