



# **APPENDIX J GROUND GAS AND GROUNDWATER MONITORING DATA**



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## IN-SITU GAS MONITORING RESULTS

	Start Date	End Date	[Pressures]	Previous	During	Start	End	Equipment Used & Remarks
Round 1	08/03/2019	08/03/2019		Rising	Falling	1011	1010	Aquaread SN-SSL1 + Dipmeter + GA5000 + Weather: Cloudy + Ground: Dry + Wind: Light + Air Temp: 5DegC + Round Summary: Gas and groundwater
Round 2	12/04/2019	12/04/2019		Rising	Constant	1025	1025	Dipmeter + GA5000 + Weather: Sunny + Ground: Dry + Wind: Light + Air Temp: 4DegC + Round Summary: Gas and groundwater
Round 3	20/05/2019	20/05/2019		-	Constant	1011	1011	Aquaread SN-SSL1 + Dipmeter + GA5000 + Weather: Overcast + Ground: Dry + Wind: None + Air Temp: 13DegC + Round Summary: Gas and groundwater
Round 4	06/06/2019	06/06/2019		-	Rising	1008	1009	Dipmeter + GA5000 + Weather: Overcast - light rain intermittent + Ground: Dry + Air Temp: 16DegC + Round Summary: Gas and groundwater
Round 5	08/07/2019	08/07/2019		-	Constant	1019	1019	Dipmeter + GA5000 + Weather: Overcast + Ground: Dry + Air Temp: 15DegC + Round Summary: Gas and groundwater
Round 6	07/08/2019	07/08/2019		-	Rising	1003	1004	Dipmeter + GA5000 + Weather: Overcast + Ground: Dry + Air Temp: 19DegC + Round Summary: Gas and groundwater

Exploratory Position ID	Monitoring Round	Measured Installation Depth (mbgl)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH12A	1	5.08	08/03/2019 08:14:00	1011	1011	0.0 <sub>(SS)</sub>	4.95	0.1	0.0	21.0	0.0	0	0
BH12A	1	---	15 secs	-	-	-	-	0.1	0.0	21.0	0.0	0	0
BH12A	1	---	30 secs	-	-	-	-	0.1	0.0	21.0	0.0	0	0
BH12A	1	---	60 secs	-	-	-	-	0.1	0.0	21.0	0.0	0	0
BH12A	1	---	90 secs	-	-	-	-	0.1	0.0	21.0	0.0	0	0
BH12A	1	---	120 secs	-	-	-	-	0.1	0.0	21.0	0.0	0	0
BH12A	1	---	180 secs	-	-	-	-	0.1	0.0	21.0	0.0	0	0
BH12A	1	---	240 secs	-	-	-	-	0.1	0.0	21.0	0.0	0	0
BH12A	1	---	300 secs	-	-	-	-	0.1	0.0	21.0	0.0	0	0
BH12A	2	5.07	12/04/2019 07:49:00	1025	1025	0.2 <sub>(SS)</sub>	4.26	0.2	0.0	21.0	-	0	0
BH12A	2	---	15 secs	-	-	-	-	0.2	0.0	20.9	-	0	0
BH12A	2	---	30 secs	-	-	-	-	0.3	0.0	20.8	-	0	0
BH12A	2	---	60 secs	-	-	-	-	0.3	0.0	20.8	-	0	0
BH12A	2	---	90 secs	-	-	-	-	0.3	0.0	20.8	-	0	0
BH12A	2	---	120 secs	-	-	-	-	0.3	0.0	20.8	-	0	0
BH12A	2	---	180 secs	-	-	-	-	0.2	0.0	20.9	-	0	0
BH12A	2	---	240 secs	-	-	-	-	0.2	0.0	20.9	-	0	0
BH12A	2	---	300 secs	-	-	-	-	0.2	0.0	20.9	-	0	0

Key: I = Initial, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.



 <b>RSK Environment Ltd</b> 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Compiled By	Date	Checked By	Date	Contract Ref:
		09/08/19			<b>371654</b>
Contract: <b>Ugly Brown Building</b>					Page: <b>1 of 8</b>



## IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Monitoring Round	Installation Depth (mbgl)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH12A	3	5.07	20/05/2019 10:08:00	1011	1011	0.0 <sub>(SS)</sub>	4.27	0.1	0.0	20.7	-	0	0
BH12A	3	---	15 secs	-	-	-	-	0.1	0.0	20.7	-	0	0
BH12A	3	---	30 secs	-	-	-	-	0.1	0.0	20.7	-	0	0
BH12A	3	---	60 secs	-	-	-	-	0.1	0.0	20.6	-	0	0
BH12A	3	---	90 secs	-	-	-	-	0.1	0.0	20.6	-	0	0
BH12A	3	---	120 secs	-	-	-	-	0.1	0.0	20.6	-	0	0
BH12A	3	---	180 secs	-	-	-	-	0.1	0.0	20.6	-	0	0
BH12A	3	---	240 secs	-	-	-	-	0.1	0.0	20.6	-	0	0
BH12A	3	---	300 secs	-	-	-	-	0.1	0.0	20.6	-	0	0
BH12A	4	5.08	06/06/2019 10:45:00	1008	1008	0.0 <sub>(I)</sub>	4.31	0.1	0.0	20.9	0.0	1	0
BH12A	4	---	15 secs	-	-	0.1 <sub>(SS)</sub>	-	0.1	0.0	20.8	0.0	0	0
BH12A	4	---	30 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	4	---	60 secs	-	-	-	-	0.1	0.0	20.7	0.0	0	0
BH12A	4	---	90 secs	-	-	-	-	0.1	0.0	20.7	0.0	0	0
BH12A	4	---	120 secs	-	-	-	-	0.1	0.0	20.7	0.0	0	0
BH12A	4	---	180 secs	-	-	-	-	0.1	0.0	20.7	0.0	0	0
BH12A	4	---	240 secs	-	-	-	-	0.1	0.0	20.7	0.0	0	0
BH12A	4	---	300 secs	-	-	-	-	0.1	0.0	20.7	0.0	0	0
BH12A	5	5.08	08/07/2019 07:43:00	1019	1019	0.0 <sub>(I)</sub>	4.23	0.1	0.0	20.9	0.0	0	0
BH12A	5	---	15 secs	-	-	0.1 <sub>(SS)</sub>	-	0.1	0.0	20.8	0.0	0	0
BH12A	5	---	30 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	5	---	60 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	5	---	90 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	5	---	120 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	5	---	180 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0

Key: I = Initial, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.



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## IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Monitoring Round	Installation Depth (mbgl)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH12A	5	---	240 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	5	---	300 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	6	5.08	07/08/2019 08:15:00	1004	1004	0.0 <sub>(SS)</sub>	4.20	0.1	0.0	20.9	0.0	0	0
BH12A	6	---	15 secs	-	-	-	-	0.1	0.0	20.9	0.0	0	0
BH12A	6	---	30 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	6	---	60 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	6	---	90 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	6	---	120 secs	-	-	-	-	0.1	0.0	20.8	0.0	0	0
BH12A	6	---	180 secs	-	-	-	-	0.0	0.0	20.9	0.0	0	0
BH12A	6	---	240 secs	-	-	-	-	0.0	0.0	20.9	0.0	0	0
BH12A	6	---	300 secs	-	-	-	-	0.0	0.0	20.9	0.0	0	0
BH13	1	5.56	08/03/2019 09:54:00	1011	1011	0.0 <sub>(SS)</sub>	4.50	0.1	0.0	20.8	0.0	0	0
Remarks: Borehole purged and groundwater sample taken.													
BH13	1	---	15 secs	-	-	-	-	0.3	0.0	19.7	0.0	0	1
BH13	1	---	30 secs	-	-	-	-	0.4	0.0	18.7	0.0	0	1
BH13	1	---	60 secs	-	-	-	-	0.5	0.0	18.4	0.0	0	1
BH13	1	---	90 secs	-	-	-	-	0.5	0.0	18.4	0.0	0	1
BH13	1	---	120 secs	-	-	-	-	0.5	0.0	18.4	0.0	0	1
BH13	1	---	180 secs	-	-	-	-	0.5	0.0	18.3	0.0	0	1
BH13	1	---	240 secs	-	-	-	-	0.5	0.0	18.2	0.0	0	1
BH13	1	---	300 secs	-	-	-	-	0.5	0.0	18.2	0.0	0	1
BH13	2	5.59	12/04/2019 08:10:00	1025	1025	0.0 <sub>(SS)</sub>	4.53	0.1	0.0	21.0	-	0	0
BH13	2	---	15 secs	-	-	-	-	0.5	0.0	20.3	-	0	0
BH13	2	---	30 secs	-	-	-	-	0.5	0.0	19.6	-	0	0

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## IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Monitoring Round	Installation Depth (mbgl)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH13	2	---	60 secs	-	-	-	-	0.5	0.0	19.3	-	0	0
BH13	2	---	90 secs	-	-	-	-	0.5	0.0	19.3	-	0	0
BH13	2	---	120 secs	-	-	-	-	0.5	0.0	19.3	-	0	0
BH13	2	---	180 secs	-	-	-	-	0.5	0.0	19.7	-	0	0
BH13	2	---	240 secs	-	-	-	-	0.4	0.0	19.6	-	0	0
BH13	2	---	300 secs	-	-	-	-	0.4	0.0	19.8	-	0	0
BH13	2	---	360 secs	-	-	-	-	0.4	0.0	19.9	-	0	0
BH13	3	5.61	20/05/2019 08:22:00	1011	1011	0.0 <sub>(I)</sub>	4.55	0.1	0.0	20.8	-	0	0
Remarks: Borehole purged and groundwater sample taken.													
BH13	3	---	15 secs	-	-	0.0 <sub>(SS)</sub>	-	0.6	0.0	19.9	-	0	0
BH13	3	---	30 secs	-	-	-	-	0.6	0.0	19.1	-	0	0
BH13	3	---	60 secs	-	-	-	-	0.6	0.0	19.0	-	0	0
BH13	3	---	90 secs	-	-	-	-	0.6	0.0	18.9	-	0	0
BH13	3	---	120 secs	-	-	-	-	0.6	0.0	18.9	-	0	0
BH13	3	---	180 secs	-	-	-	-	0.6	0.0	18.9	-	0	0
BH13	3	---	240 secs	-	-	-	-	0.6	0.0	18.9	-	0	0
BH13	3	---	300 secs	-	-	-	-	0.6	0.0	18.9	-	0	0
BH13	3	---	360 secs	-	-	-	-	0.6	0.0	18.9	-	0	0
BH13	4	5.62	06/06/2019 11:45:00	1009	1009	0.0 <sub>(I)</sub>	4.58	0.1	0.0	20.9	0.0	1	0
BH13	4	---	15 secs	-	-	0.0 <sub>(SS)</sub>	-	0.7	0.0	19.1	0.0	1	0
BH13	4	---	30 secs	-	-	-	-	0.7	0.0	18.7	0.0	0	0
BH13	4	---	60 secs	-	-	-	-	0.7	0.0	18.6	0.0	0	0
BH13	4	---	90 secs	-	-	-	-	0.7	0.0	18.6	0.0	0	0
BH13	4	---	120 secs	-	-	-	-	0.7	0.0	18.5	0.0	0	0
BH13	4	---	180 secs	-	-	-	-	0.7	0.0	18.4	0.0	0	0

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## IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Monitoring Round	Installation Depth (mbgl)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH13	4	---	240 secs	-	-	-	-	0.7	0.0	18.5	0.0	0	0
BH13	4	---	300 secs	-	-	-	-	0.7	0.0	18.5	0.0	0	0
BH13	5	5.61	08/07/2019 08:16:00	1019	1019	0.0(I)	4.53	0.1	0.0	20.9	0.0	0	0
BH13	5	---	15 secs	-	-	0.2(SS)	-	0.6	0.0	19.4	0.0	0	0
BH13	5	---	30 secs	-	-	-	-	0.6	0.0	19.2	0.0	0	0
BH13	5	---	60 secs	-	-	-	-	0.6	0.0	19.1	0.0	0	0
BH13	5	---	90 secs	-	-	-	-	0.6	0.0	19.0	0.0	0	0
BH13	5	---	120 secs	-	-	-	-	0.6	0.0	18.9	0.0	0	0
BH13	5	---	180 secs	-	-	-	-	0.7	0.0	18.8	0.0	0	0
BH13	5	---	240 secs	-	-	-	-	0.9	0.0	18.7	0.0	0	0
BH13	5	---	300 secs	-	-	-	-	0.9	0.0	18.6	0.0	0	0
BH13	6	5.60	07/08/2019 07:21:00	1003	1003	0.0(I)	4.51	0.1	0.0	20.9	0.0	0	0
BH13	6	---	15 secs	-	-	0.0(SS)	-	0.9	0.0	18.7	0.0	0	0
BH13	6	---	30 secs	-	-	-	-	0.9	0.0	18.2	0.0	0	0
BH13	6	---	60 secs	-	-	-	-	0.9	0.0	18.2	0.0	0	0
BH13	6	---	90 secs	-	-	-	-	0.9	0.0	18.2	0.0	0	0
BH13	6	---	120 secs	-	-	-	-	0.9	0.0	18.0	0.0	0	0
BH13	6	---	180 secs	-	-	-	-	0.9	0.0	17.5	0.0	0	0
BH13	6	---	240 secs	-	-	-	-	1.0	0.0	17.4	0.0	0	0
BH13	6	---	300 secs	-	-	-	-	1.0	0.0	17.4	0.0	0	0
WS05	1	2.01	08/03/2019 11:06:00	1010	1010	0.1(SS)	DRY	0.1	0.0	20.9	0.0	0	0
WS05	1	---	15 secs	-	-	-	-	0.6	0.0	20.3	0.0	0	0
WS05	1	---	30 secs	-	-	-	-	0.6	0.0	19.9	0.0	0	0
WS05	1	---	60 secs	-	-	-	-	0.6	0.0	19.8	0.0	0	0

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## IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Monitoring Round	Installation Depth (mbgl)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS05	1	---	90 secs	-	-	-	-	0.6	0.0	19.8	0.0	0	0
WS05	1	---	120 secs	-	-	-	-	0.6	0.0	19.8	0.0	0	0
WS05	1	---	180 secs	-	-	-	-	0.6	0.0	19.7	0.0	0	1
WS05	1	---	240 secs	-	-	-	-	0.6	0.0	19.7	0.0	0	1
WS05	1	---	300 secs	-	-	-	-	0.6	0.0	19.7	0.0	0	1
WS05	2	2.00	12/04/2019 08:23:00	1025	1025	0.0 <sub>(SS)</sub>	DRY	0.1	0.0	20.7	-	0	0
WS05	2	---	15 secs	-	-	-	-	0.6	0.0	20.5	-	0	0
WS05	2	---	30 secs	-	-	-	-	0.6	0.0	20.0	-	0	0
WS05	2	---	60 secs	-	-	-	-	0.6	0.0	19.9	-	0	0
WS05	2	---	90 secs	-	-	-	-	0.6	0.0	19.9	-	0	0
WS05	2	---	120 secs	-	-	-	-	0.6	0.0	19.9	-	0	0
WS05	2	---	180 secs	-	-	-	-	0.6	0.0	19.9	-	0	0
WS05	2	---	240 secs	-	-	-	-	0.6	0.0	19.8	-	0	0
WS05	2	---	300 secs	-	-	-	-	0.6	0.0	19.8	-	0	0
WS05	3	2.00	20/05/2019 09:59:00	1011	1011	0.0 <sub>(SS)</sub>	DRY	0.1	0.0	20.7	-	0	0
WS05	3	---	15 secs	-	-	-	-	0.4	0.0	20.4	-	0	0
WS05	3	---	30 secs	-	-	-	-	0.4	0.0	20.1	-	0	0
WS05	3	---	60 secs	-	-	-	-	0.4	0.0	20.1	-	0	0
WS05	3	---	90 secs	-	-	-	-	0.4	0.0	20.1	-	0	0
WS05	3	---	120 secs	-	-	-	-	0.4	0.0	20.1	-	0	0
WS05	3	---	180 secs	-	-	-	-	0.4	0.0	20.1	-	0	0
WS05	3	---	240 secs	-	-	-	-	0.4	0.0	20.1	-	0	0
WS05	3	---	300 secs	-	-	-	-	0.4	0.0	20.1	-	0	0
WS05	4	2.01	06/06/2019 12:00:00	1009	1009	0.0 <sub>(SS)</sub>	DRY	0.1	0.0	20.9	0.0	0	0
WS05	4	---	15 secs	-	-	-	-	0.2	0.0	20.7	0.0	0	0

Key: I = Initial, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.


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## IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Monitoring Round	Installation Depth (mbgl)	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS05	4	---	30 secs	-	-	-	-	0.2	0.0	20.7	0.0	0	0
WS05	4	---	60 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	4	---	90 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	4	---	120 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	4	---	180 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	4	---	240 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	4	---	300 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	5	2.01	08/07/2019 08:37:00	1019	1019	0.0 <sub>(I)</sub>	DRY	0.1	0.0	20.9	0.0	0	0
WS05	5	---	15 secs	-	-	0.1 <sub>(SS)</sub>	-	0.2	0.0	20.4	0.0	0	0
WS05	5	---	30 secs	-	-	-	-	0.2	0.0	20.4	0.0	0	0
WS05	5	---	60 secs	-	-	-	-	0.2	0.0	20.4	0.0	0	0
WS05	5	---	90 secs	-	-	-	-	0.2	0.0	20.4	0.0	0	0
WS05	5	---	120 secs	-	-	-	-	0.2	0.0	20.4	0.0	0	0
WS05	5	---	180 secs	-	-	-	-	0.2	0.0	20.4	0.0	0	0
WS05	5	---	240 secs	-	-	-	-	0.2	0.0	20.4	0.0	0	0
WS05	5	---	300 secs	-	-	-	-	0.2	0.0	20.3	0.0	0	0
WS05	6	2.00	07/08/2019 07:39:00	1004	1004	0.0 <sub>(SS)</sub>	DRY	0.1	0.0	20.9	0.0	0	0
WS05	6	---	15 secs	-	-	-	-	0.1	0.0	20.7	0.0	0	0
WS05	6	---	30 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	6	---	60 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	6	---	90 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	6	---	120 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	6	---	180 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	6	---	240 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0
WS05	6	---	300 secs	-	-	-	-	0.2	0.0	20.6	0.0	0	0

Key: I = Initial, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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## IN-SITU WATER MONITORING RESULTS

	<u>Weather</u>	<u>Ground Conditions</u>	<u>Wind Conditions</u>	<u>Air Temperature (°C)</u>	<u>Equipment Used &amp; Remarks</u>
Round 1	Cloudy	Dry	Light	5	Aquaread SN-SSL1 + Dipmeter + GA5000
Round 2	Sunny	Dry	Light	4	Dipmeter + GA5000
Round 3	Overcast	Dry	None	13	Aquaread SN-SSL1 + Dipmeter + GA5000
Round 4	Overcast - light rain intermittent	Dry	-	16	Dipmeter + GA5000
Round 5	Overcast	Dry	-	15	Dipmeter + GA5000
Round 6	Overcast	Dry	-	19	Dipmeter + GA5000

Exploratory Position ID	Pipe Ref	Pipe Diameter	Monitoring Round / Test Number	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m)	Remarks
BH03	1	33	1 / 1	7.00	7.70	1.00 to 7.00	08/03/2019 09:27	1.53	20.23	Operator: EOBrien, General Remarks: Groundwater sample taken. Borehole purged afterwards.
BH03	1	33	2 / 1	7.00	7.72	1.00 to 7.00	12/04/2019 07:23	1.56	20.21	Operator: EOBrien, General Remarks: Borehole flooded.
BH03	1	33	3 / 1	7.00	7.80	1.00 to 7.00	20/05/2019 07:47	3.87	17.89	Operator: EOBrien, General Remarks: Groundwater sample taken.
BH03	1	33	4 / 1	7.00	7.85	1.00 to 7.00	06/06/2019 11:14	2.34	19.43	Operator: JSheridan
BH03	1	33	5 / 1	7.00	7.93	1.00 to 7.00	08/07/2019 08:09	1.61	20.15	Operator: JSheridan
BH03	1	33	6 / 1	7.00	7.95	1.00 to 7.00	07/08/2019 07:16	1.54	20.22	Operator: JSheridan
BH05	1	50	1 / 1	10.00	9.10	1.00 to 10.00	08/03/2019 10:19	1.51	20.31	Operator: EOBrien, General Remarks: Groundwater sample taken. Borehole purged afterwards.
BH05	1	50	2 / 1	10.00	8.97	1.00 to 10.00	12/04/2019 08:43	1.55	20.27	Operator: EOBrien
BH05	1	50	3 / 1	10.00	8.86	1.00 to 10.00	20/05/2019 09:15	1.52	20.30	Operator: EOBrien, General Remarks: Groundwater sample taken.
BH05	1	50	4 / 1	10.00	8.87	1.00 to 10.00	06/06/2019 11:33	1.58	20.24	Operator: JSheridan
BH05	1	50	5 / 1	10.00	8.86	1.00 to 10.00	08/07/2019 09:01	1.59	20.23	Operator: JSheridan
BH05	1	50	6 / 1	10.00	8.83	1.00 to 10.00	07/08/2019 08:02	1.60	20.22	Operator: JSheridan
BH11	1	35	1 / 1	7.00	4.16	2.00 to 7.00	08/03/2019 08:38	2.21	19.49	Operator: EOBrien, General Remarks: Groundwater sample taken. Borehole purged afterwards.
BH11	1	35	2 / 1	7.00	4.81	2.00 to 7.00	12/04/2019 07:41	2.29	19.41	Operator: EOBrien
BH11	1	35	3 / 1	7.00	5.07	2.00 to 7.00	20/05/2019 10:48	3.09	18.61	Operator: EOBrien, General Remarks: Groundwater sample taken.
BH11	1	35	4 / 1	7.00	4.84	2.00 to 7.00	06/06/2019 10:40	3.37	18.34	Operator: JSheridan

Key: NDA denotes 'no data available'.

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## IN-SITU WATER MONITORING RESULTS

<u>Weather</u>	<u>Ground Conditions</u>	<u>Wind Conditions</u>	<u>Air Temperature (°C)</u>	<u>Equipment Used &amp; Remarks</u>
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Exploratory Position ID	Pipe Ref	Pipe Diameter	Monitoring Round / Test Number	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m)	Remarks
BH11	1	35	5 / 1	7.00	4.83	2.00 to 7.00	08/07/2019 08:00	3.29	18.41	Operator: JSheridan
BH11	1	35	6 / 1	7.00	4.82	2.00 to 7.00	07/08/2019 08:24	3.33	18.37	Operator: JSheridan
BH12A	1	50	1 / 1	5.00	5.08	1.00 to 5.00	08/03/2019 08:14	4.95	16.32	Operator: JSheridan
BH12A	2	35	1 / 1	24.00	22.60	23.50 to 24.00	08/03/2019 08:56	4.77	16.51	Operator: EOBrien, General Remarks: Groundwater sample taken. Borehole purged afterwards.
BH12A	2	35	2 / 1	24.00	22.60	23.50 to 24.00	12/04/2019 07:48	4.67	16.61	Operator: EOBrien
BH12A	1	50	2 / 1	5.00	4.98	1.00 to 5.00	12/04/2019 07:49	4.17	17.10	Operator: EOBrien
BH12A	1	50	3 / 1	5.00	5.07	1.00 to 5.00	20/05/2019 10:08	4.27	17.00	Operator: EOBrien
BH12A	2	35	3 / 1	24.00	22.61	23.50 to 24.00	20/05/2019 10:17	4.61	16.66	Operator: EOBrien, General Remarks: Groundwater sample taken.
BH12A	1	50	4 / 1	5.00	5.08	1.00 to 5.00	06/06/2019 10:54	4.31	16.96	Operator: JSheridan
BH12A	2	35	4 / 1	24.00	22.61	23.50 to 24.00	06/06/2019 11:00	4.67	16.61	Operator: JSheridan
BH12A	2	35	5 / 1	24.00	22.60	23.50 to 24.00	08/07/2019 07:49	4.63	16.64	Operator: JSheridan
BH12A	1	50	5 / 1	5.00	5.08	1.00 to 5.00	08/07/2019 07:52	4.23	17.05	Operator: JSheridan
BH12A	2	35	6 / 1	24.00	22.60	23.50 to 24.00	07/08/2019 08:14	4.62	16.65	Operator: JSheridan
BH12A	1	50	6 / 1	5.00	5.08	1.00 to 5.00	07/08/2019 08:24	4.20	17.07	Operator: JSheridan
BH13	1	50	1 / 1	5.00	5.56	1.00 to 5.00	08/03/2019 09:54	4.50	17.33	Operator: EOBrien, General Remarks: Groundwater sample taken over readings. Borehole purged afterwards.
BH13	1	50	2 / 1	5.00	5.59	1.00 to 5.00	12/04/2019 08:10	4.53	17.30	Operator: EOBrien

Key: NDA denotes 'no data available'.

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## IN-SITU WATER MONITORING RESULTS

<u>Weather</u>	<u>Ground Conditions</u>	<u>Wind Conditions</u>	<u>Air Temperature (°C)</u>	<u>Equipment Used &amp; Remarks</u>
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Exploratory Position ID	Pipe Ref	Pipe Diameter	Monitoring Round / Test Number	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m)	Remarks
BH13	1	50	3 / 1	5.00	5.61	1.00 to 5.00	20/05/2019 08:33	4.55	17.28	Operator: EOBrien, General Remarks: Groundwater sample taken over readings. Borehole purged afterwards. Operator: JSheridan
BH13	1	50	4 / 1	5.00	5.62	1.00 to 5.00	06/06/2019 11:53	4.58	17.25	
BH13	1	50	5 / 1	5.00	5.61	1.00 to 5.00	08/07/2019 08:26	4.53	17.31	Operator: JSheridan
BH13	1	50	6 / 1	5.00	5.60	1.00 to 5.00	07/08/2019 07:30	4.51	17.32	Operator: JSheridan
WS03	1	50	1 / 1	2.00	1.73	1.00 to 2.00	08/03/2019 10:57	1.45	20.59	Operator: EOBrien
WS03	1	50	2 / 1	2.00	1.72	1.00 to 2.00	12/04/2019 08:39	1.46	20.58	Operator: EOBrien
WS03	1	50	3 / 1	2.00	1.74	1.00 to 2.00	20/05/2019 09:06	DRY	NA	Operator: EOBrien
WS03	1	50	4 / 1	2.00	1.72	1.00 to 2.00	06/06/2019 11:37	1.54	20.51	Operator: JSheridan
WS03	1	50	5 / 1	2.00	1.74	1.00 to 2.00	08/07/2019 09:03	1.54	20.50	Operator: JSheridan
WS03	1	50	6 / 1	2.00	1.73	1.00 to 2.00	07/08/2019 08:07	1.56	20.48	Operator: JSheridan
WS05	1	50	1 / 1	2.00	2.01	1.00 to 2.00	08/03/2019 11:06	DRY	NA	Operator: JSheridan
WS05	1	50	2 / 1	2.00	2.00	1.00 to 2.00	12/04/2019 08:23	DRY	NA	Operator: JSheridan
WS05	1	50	3 / 1	2.00	2.00	1.00 to 2.00	20/05/2019 09:59	DRY	NA	Operator: JSheridan
WS05	1	50	4 / 1	2.00	2.01	1.00 to 2.00	06/06/2019 12:09	DRY	NA	Operator: JSheridan
WS05	1	50	5 / 1	2.00	2.01	1.00 to 2.00	08/07/2019 08:47	DRY	NA	Operator: JSheridan
WS05	1	50	6 / 1	2.00	2.00	1.00 to 2.00	07/08/2019 07:47	DRY	NA	Operator: JSheridan

Key: NDA denotes 'no data available'.

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# IN-SITU WATER MONITORING RESULTS

<u>Weather</u>	<u>Ground Conditions</u>	<u>Wind Conditions</u>	<u>Air Temperature (°C)</u>	<u>Equipment Used &amp; Remarks</u>
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Exploratory Position ID	Pipe Ref	Pipe Diameter	Monitoring Round / Test Number	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m)	Remarks

Key: NDA denotes 'no data available'.

<b>RSK Environment Ltd</b> 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Compiled By	Date	Checked By	Date	Contract Ref:
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# **APPENDIX K**

## **GROUNDWATER SAMPLING RECORDS**

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# FIELD CALIBRATION RECORD SHEET

Contract Name: <i>Ugly Brown Building</i>	Contract Reference: <i>371654-01</i>	Device Type: <i>GAS000</i>	Serial Number: <i>GSC03701</i>
Technician Name: <i>Jack Sheridan</i>	Date of Visit: <i>8/3/19</i>	Manufacturers Calibration Due: <i>07/05/19</i>	
Please initial to confirm that you've received, read and signed the SHE Plan (or equivalent document) for this site:			Initials: <i>J.S</i> <span style="float: right;"><i>EOB</i></span>

## Daily Field Calibration

To ensure accuracy, **prior** to each monitoring visit, a mixture of 4%v/vCH<sub>4</sub>; 5%v/vCO<sub>2</sub>; 50ppmCO; 0%v/v O<sub>2</sub> is used to calibrate the gas analyser.  
The results are recorded below:-

	CH <sub>4</sub> (%v/v)	CO <sub>2</sub> (%v/v)	O <sub>2</sub> (%v/v)	CO (ppm)
Mixture 1 (Target)	4.0	5.0	0.0	50
Achieved	<i>4.0</i>	<i>5.0</i>	<i>0.0</i>	<i>50</i>
Mixture 2 (Target)	0.0	0.0	20.9	0
Achieved	<i>0.0</i>	<i>0.1</i>	<i>20.9</i>	<i>0</i>

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## Post Monitoring Verification

**Before** leaving site, the same mixture is passed through the analyser. The actual reading is recorded to evidence any drift which may have taken place.  
The results are recorded below:-

	CH <sub>4</sub> (%v/v)	CO <sub>2</sub> (%v/v)	O <sub>2</sub> (%v/v)	CO (ppm)
Mixture 1 (Target)	4.0	5.0	0.0	50
Achieved	<i>3.9</i>	<i>4.9</i>	<i>-0.3</i>	<i>50</i>
Mixture 2 (Target)	0.0	0.0	20.9	0
Achieved	<i>0.0</i>	<i>0.0</i>	<i>20.9</i>	<i>0</i>



Calibration / Verification Performed By:

*J Sheridan + EOBrien*

Calibration / Verification Checked By:

*sg*

4.653  
22.487

## Groundwater Sampling Data Form

<b>Project Information</b>	Project Name: <u>Ugly Brown Building</u>	
	Project Number: <u>371654</u>	
	Sampling Date: <u>8/3/19</u>	Sampled by: <u>EOB</u>
	Weather: <u>6°C →, sunny, light winds</u>	
	Well Notes - e.g. Condition, Access, Safety:	

<b>Monitoring Information</b>	Water Quality Meter Used: <u>Aquaveed</u>	Water Level Meter Used (as applicable):	Interface Probe:	
	Water Quality Meter Last Calibrated:	Dissolved Oxygen: <u>8/3/19</u>	pH, ORP, Specific Conductivity: <u>8/3/19</u>	
	Typical Parameter Stabilisation Criteria for Low-Flow Sampling	Dissolved Oxygen (D.O.):		0.3 mg/l
		Specific Conductivity (Sp.Cond):		3%
		p.H		0.1 unit
Oxygen Reduction Potential (ORP)		10mV		
* For REDOX correction, see separate guidance				

Well Location	Purge Start Time	Purge Start Time						Depth to Water (mTOC)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
		Time (HH:mm)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)			
<u>BH11</u>	<u>08:34</u>									
Well Diameter (mm)	<u>19</u>									
Well Material	<u>—</u>	<u>08:38</u>	<u>9.70</u>	<u>3385</u>	<u>5.78</u>	<u>8.80</u>	<u>-20.1</u>	<u>1.988</u>		<u>TOP 27.2cm BGL</u>
Static Water Level (mTOC)	<u>1.934</u>	<u>08:41</u>	<u>11.50</u>	<u>3370</u>	<u>4.35</u>	<u>8.73</u>	<u>-48.8</u>	<u>2.010</u>		
LNAPL Present?	<u>Y   N   A</u>	<u>08:44</u>	<u>11.75</u>	<u>3377</u>	<u>3.17</u>	<u>8.71</u>	<u>-50.7</u>	<u>2.048</u>		<u>25 s to fill 40ml vial.</u>
LNAPL Level (mTOC)	<u>—</u>	<u>08:47</u>	<u>11.90</u>	<u>3378</u>	<u>3.00</u>	<u>8.70</u>	<u>-44.8</u>	<u>2.080</u>		
Well Headspace Reading (PID/FID)	<u>—</u>	<u>08:50</u>	<u>11.93</u>	<u>3386</u>	<u>3.08</u>	<u>8.70</u>	<u>-43.7</u>	<u>2.109</u>		
Purge Method	Low Flow <input checked="" type="checkbox"/> Other: <input type="checkbox"/>									
Sampling Method	Peristaltic Bladder <input checked="" type="checkbox"/> Other: <input type="checkbox"/>									
Pump Intake Depth (mTOC)	<u>2.934</u>	Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored		<u>HC odour, opaque, brown. Silty.</u>						
Well Depth (mTOC)	<u>3.889</u>	Sample Containers Obtained		<u>2 x 1L, 1 x 500ml, 1 x 40ml vial, 1 x 100ml HDPE</u>						
DNAPL Present?	<u>Y   N   A</u>	Sample Collection Time		<u>08:51</u>						
DNAPL Level (mTOC)	<u>—</u>									

Well Location	Purge Start Time	Purge Start Time						Depth to Water (mTOC)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
		Time (HH:mm)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)			
<u>BH03</u>	<u>09:24</u>									
Well Diameter (mm)	<u>19</u>									
Well Material	<u>—</u>	<u>09:27</u>	<u>10.10</u>	<u>3330</u>	<u>2.10</u>	<u>8.73</u>	<u>+41.0</u>	<u>1.420</u>		<u>TOP 16.7cm BGL</u>
Static Water Level (mTOC)	<u>1.366</u>	<u>09:30</u>	<u>10.40</u>	<u>3306</u>	<u>1.21</u>	<u>8.66</u>	<u>+38.8</u>	<u>1.450</u>		
LNAPL Present?	<u>Y   N   A</u>	<u>09:33</u>	<u>10.50</u>	<u>3338</u>	<u>1.07</u>	<u>8.64</u>	<u>+35.6</u>	<u>1.500</u>		<u>32 s to fill 40ml vial</u>
LNAPL Level (mTOC)	<u>—</u>	<u>09:36</u>	<u>10.50</u>	<u>3370</u>	<u>1.04</u>	<u>8.65</u>	<u>+28.9</u>	<u>1.550</u>		
Well Headspace Reading (PID/FID)	<u>—</u>	<u>09:39</u>	<u>10.60</u>	<u>3376</u>	<u>1.00</u>	<u>8.65</u>	<u>+29.5</u>	<u>1.600</u>		
Purge Method	Low Flow <input checked="" type="checkbox"/> Other: <input type="checkbox"/>									
Sampling Method	Peristaltic Bladder <input checked="" type="checkbox"/> Other: <input type="checkbox"/>									
Pump Intake Depth (mTOC)	<u>2.366</u>	Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored		<u>No odour, brown / yellow ringed. Opaque.</u>						
Well Depth (mTOC)	<u>7.528</u>	Sample Containers Obtained		<u>As above</u>						
DNAPL Present?	<u>Y   N   A</u>	Sample Collection Time		<u>09:40</u>						
DNAPL Level (mTOC)	<u>—</u>									

Checked / signed by:

*Sg*

2/37



Well Location	Purge Start Time	Time (HH:mm)	Temp (oC)	Sp. Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (mTOC)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
BH05	10-16									
Well Diameter (mm)	50									
Well Material		10:19	12.78	4683	2.98	8.72	-57.4	1.420		Silty base
Static Water Level (mTOC)	1.377	10:22	13.70	4705	1.63	8.69	-68.2	1.480		
LNAPL Present?	Y     N	10:25	14.10	4740	1.03	8.68	-69.9	1.550		
LNAPL Level (mTOC)		10:28	14.50	4760	0.96	8.68	-68.8	1.620		Btl inside no light!
Well Headspace Reading (PID/FID)		10:31	14.60	4771	0.89	8.68	-68.2	1.680		TOP 13.3m BGL
Purge Method	Low Flow <input type="checkbox"/> Other: <input type="checkbox"/>									35 to fill 40ml vial.
Sampling Method	Peristaltic <input checked="" type="checkbox"/> Other: <input type="checkbox"/> Bladder <input type="checkbox"/>									
Pump Intake Depth (mTOC)	2.377	Sampling Notes (e.g. oil/colour/odour), HC odour, opaque, yellowy frige.								
Well Depth (mTOC)	8.965	Reasons if not monitored								
DNAPL Present?	Y     N	Sample Containers Obtained Standard as on prev. pg								
DNAPL Level (mTOC)		Sample Collection Time 10:32								

**RSK**

Well Location	Purge Start Time	Time (HH:mm)	Temp (oC)	Sp. Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (mTOC)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
WS03	10:57									
Well Diameter (mm)	50									
Well Material										TOP 23.9m AGL
Static Water Level (mTOC)	1.693									
LNAPL Present?	Y     N									
LNAPL Level (mTOC)										
Well Headspace Reading (PID/FID)										
Purge Method	Low Flow <input type="checkbox"/> Other: <input type="checkbox"/>									
Sampling Method	Peristaltic <input type="checkbox"/> Other: <input type="checkbox"/> Bladder <input type="checkbox"/>									
Pump Intake Depth (mTOC)		Sampling Notes (e.g. oil/colour/odour),								
Well Depth (mTOC)	1.472	Reasons if not monitored								
DNAPL Present?	Y     N	Sample Containers Obtained								
DNAPL Level (mTOC)		Sample Collection Time								

**RSK**

Well Location	Purge Start Time	Time (HH:mm)	Temp (oC)	Sp. Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (mTOC)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
Well Diameter (mm)										
Well Material										
Static Water Level (mTOC)										
LNAPL Present?	Y     N									
LNAPL Level (mTOC)										
Well Headspace Reading (PID/FID)										
Purge Method	Low Flow <input type="checkbox"/> Other: <input type="checkbox"/>									
Sampling Method	Peristaltic <input type="checkbox"/> Other: <input type="checkbox"/> Bladder <input type="checkbox"/>									
Pump Intake Depth (mTOC)		Sampling Notes (e.g. oil/colour/odour),								
Well Depth (mTOC)		Reasons if not monitored								
DNAPL Present?	Y     N	Sample Containers Obtained								
DNAPL Level (mTOC)		Sample Collection Time								

**RSK**

Checked / signed by:

Sg

3/87

Well Location	BHI2 A (D)	Purge Start Time						Depth to Water (mTOC)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
		Time (HH:mm)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)			
Well Diameter (mm)	19	8:56	11.10	5877	3.63	6.57	-3.2	5.060		Time to fill 40ml via = 22 S  OFFSEE = -0.112m RGL
Well Material	-	8:59	11.60	5892	2.40	6.55	-53.0	5.575		
Static Water Level (mTOC)	4.653	9:02	12.00	5954	0.96	6.52	-80.1	5.870		
LNAPL Present?	Y   N	9:05	12.20	5933	0.71	6.50	-90.3	6.171		
LNAPL Level (mTOC)	-	9:08	12.18	5952	0.47	6.49	-93.2	6.437		
Well Headspace Reading (PID/FID)	-	9:11	12.20	5927	0.43	6.50	-102.3	6.755		
Purge Method	Low Flow	9:17	12.10	5927	0.32	6.50	-109.1	7.301		
	Other:	9:20	12.10	5927	0.30	6.51	-110.0	7.555		
Sampling Method	Peristaltic Bladder									
	Other:									
Pump Intake Depth (mTOC)	22.000	Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored						cloudy grey, no oil, no odour		
Well Depth (mTOC)	22.487	Sample Containers Obtained						2x1 litre, 1x500ml, 1x900ml, 1x100ml		
DNAPL Present?	Y   N	Sample Collection Time						9:20		
DNAPL Level (mTOC)	-							RSK		


Well Location	BHI3	Purge Start Time						Depth to Water (mTOC)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
		Time (HH:mm)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)			
Well Diameter (mm)	50	10:25	15.13	1638	4.95	7.31	-58.4	4.388		Prioritised samples over readings (spoke to Claire)  OFFSEE = -0.142m RGL
Well Material	-									
Static Water Level (mTOC)	4.355									
LNAPL Present?	Y   N									
LNAPL Level (mTOC)	-									
Well Headspace Reading (PID/FID)	-									
Purge Method	Low Flow									
	Other:									
Sampling Method	Peristaltic Bladder									
	Other:									
Pump Intake Depth (mTOC)	5.350	Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored						Slightly cloudy, no oil, no odour		
Well Depth (mTOC)	5.414	Sample Containers Obtained						2x1 litre, 1x500ml, 1x yellow, 1x100ml		
DNAPL Present?	Y   N	Sample Collection Time						10:26		
DNAPL Level (mTOC)	-							RSK		

Well Location		Purge Start Time						Depth to Water (mTOC)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
		Time (HH:mm)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)			
Well Diameter (mm)										
Well Material										
Static Water Level (mTOC)										
LNAPL Present?	Y   N									
LNAPL Level (mTOC)										
Well Headspace Reading (PID/FID)										
Purge Method	Low Flow									
	Other:									
Sampling Method	Peristaltic Bladder									
	Other:									
Pump Intake Depth (mTOC)		Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored								
Well Depth (mTOC)		Sample Containers Obtained								
DNAPL Present?	Y   N	Sample Collection Time								
DNAPL Level (mTOC)								RSK		

Checked / signed by:


Sg

# GAS MONITORING FIELD SHEET

Monitoring Date: <u>8/3/19</u>		Measurement datum: GL <input checked="" type="checkbox"/> Top of pipe / Other		Offset to GL (m) <u>-0.091</u>		Device: <u>GP5000</u>		Serial Number: <u>G503701</u>		Daily Check: <input checked="" type="checkbox"/>
Pre-Testing Remarks:				Air Temperature: <u>5 °C REC</u>		Weather: <u>cloudy</u>		Ground Conditions: <u>Dry pavement</u>		
				Wind: <u>NONE / LIGHT / MEDIUM / STRONG</u>		Tidal State: (if applicable) High / Low / Rising / Falling				
Exploratory Position ID: <u>BHQA (5)</u>				Monitoring Round Number: <u>1</u>		Test Number:				
Install Type: <u>SINGLE</u> / DOUBLE		Pipe Ref: 1) Shallow 2) Deep		Pipe Diameter: 19mm / 40mm / <u>50mm</u> Other _____ (mm)						
Test Sequence	Time of Monitoring		Gas Flow (l/hr)	Atmospheric Pressure (mb)	Differential Pressure (mb)	Gas tap: <u>SINGLE</u> / DOUBLE		Observations:		
	hh:mm	sec								
STAGE 1 GAS FLOW	Initial	<u>8:11</u>	<u>0.0</u>	<u>1011</u>	<u>-0.02</u>					
	Steady State	<u>8:11</u>	<u>0.0</u>							
STAGE 2 GAS CONCENTRATION READINGS	Time of Monitoring		Methane (%/vol)	Carbon Dioxide (%/vol)	Oxygen (%/vol)	Hydrogen Sulphide (ppm)	Carbon Monoxide (ppm)	LEL (%)	PID (ppm)	
		hh:mm	sec							
		<u>8:14</u>	<u>0</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>15</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>30</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>60</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>90</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>120</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>180</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>240</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>300</u>	<u>0.0</u>	<u>0.1</u>	<u>21.0</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
		:	<u>360</u>							
		:	<u>420</u>							
	:	<u>480</u>								
	:	<u>540</u>								
	:	<u>600</u>								
STAGE 3 WATER LEVEL OBSERVATION		Depth (from datum) to water: <u>4.262</u> (m)		Time: _____		LNAPL Top (from datum): _____ (m)				
		Depth (from datum) to well base: <u>4.985</u> (m)				DNAPL Top (from datum): _____ (m)				
		Hole Purged: Yes / <u>No</u>		Purge Start: _____						
		Purge Volume: (ltrs) _____		Purge End: _____						
Post Testing Remarks:					Samples Taken: Yes / <u>No</u>		Gas / Water			
					Depth (from datum)	Sample Ref	Type	Container		
							EW / G			
		Contract Name: <u>agly brown building</u>			Contract Ref: <u>37654-01</u>		Data Collected By: <u>S.S</u>			
		Project Manager / Engineer: <u>Mike Meann</u>			Page: <u>5</u> of <u>7</u>		Checked:			

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# GAS MONITORING FIELD SHEET

Monitoring Date: <u>8/3/19</u>	Measurement datum: GL / Top of pipe / Other _____	Offset to GL (m) <u>-0.142</u>	Device: <u>GF5000</u>	Serial Number: <u>G503701</u>	Daily Check: <input checked="" type="checkbox"/>			
Pre-Testing Remarks:	Air Temperature: <u>20</u> °C	Weather: <u>N/A</u> (inside building)						
	Ground Conditions: <u>concrete</u>	Tidal State: (if applicable) High / Low / Rising / Falling						
Exploratory Position ID: <u>BH13</u>	Wind: <u>(NONE)</u> / LIGHT / MEDIUM / STRONG	Monitoring Round Number: <u>1</u>	Test Number: _____					
Install Type: <u>(SINGLE)</u> / DOUBLE	Pipe Ref: 1) Shallow 2) Deep	Pipe Diameter: 19mm / 40mm / <u>(50mm)</u> / Other _____ (mm)						
Test Sequence	Time of Monitoring hh:mm    sec	Gas Flow (l/hr)	Atmospheric Pressure (mb)	Differential Pressure (mb)	Gas tap: <u>(SINGLE)</u> / DOUBLE			
STAGE 1 GAS FLOW	Initial <u>9:50</u>	<u>-0.0</u>	<u>1011</u>	<u>-0.02</u>	Observations:			
	Steady State <u>9:51</u>	<u>+0.0</u>						
STAGE 2 GAS CONCENTRATION READINGS	Time of Monitoring hh:mm    sec	Methane (%/vol)	Carbon Dioxide (%/vol)	Oxygen (%/vol)	Hydrogen Sulphide (ppm)	Carbon Monoxide (ppm)	LEL (%)	PID (ppm)
	<u>9:54</u> 0	<u>0.0</u>	<u>0.1</u>	<u>20.8</u>	<u>0</u>	<u>0</u>	<u>0.0</u>	
	:    15	<u>0.0</u>	<u>0.3</u>	<u>19.7</u>	<u>1</u>	<u>0</u>	<u>0.0</u>	
	:    30	<u>0.0</u>	<u>0.4</u>	<u>18.7</u>	<u>1</u>	<u>0</u>	<u>0.0</u>	
	:    60	<u>0.0</u>	<u>0.5</u>	<u>18.4</u>	<u>1</u>	<u>0</u>	<u>0.0</u>	
	:    90	<u>0.0</u>	<u>0.5</u>	<u>18.4</u>	<u>1</u>	<u>0</u>	<u>0.0</u>	
	:    120	<u>0.0</u>	<u>0.5</u>	<u>18.4</u>	<u>1</u>	<u>0</u>	<u>0.0</u>	
	:    180	<u>0.0</u>	<u>0.5</u>	<u>18.3</u>	<u>1</u>	<u>0</u>	<u>0.0</u>	
	:    240	<u>0.0</u>	<u>0.5</u>	<u>18.2</u>	<u>1</u>	<u>0</u>	<u>0.0</u>	
	:    300	<u>0.0</u>	<u>0.5</u>	<u>18.2</u>	<u>1</u>	<u>0</u>	<u>0.0</u>	
	:    360							
	:    420							
	:    480							
:    540								
:    600								
STAGE 3 WATER LEVEL OBSERVATION	Depth (from datum) to water: <u>4.365</u> (m)	Time: _____	LNAPL Top (from datum): _____ (m)					
	Depth (from datum) to well base: <u>5.416</u> (m)		DNAPL Top (from datum): _____ (m)					
	Hole Purged: <u>(Yes)</u> / No	Purge Start: <u>10:23</u>						
	Purge Volume: (ltrs) <u>0.5</u>	Purge End: <u>10:25</u>						
Post Testing Remarks:	Samples Taken: <u>(Yes)</u> / No	Gas / <u>(Water)</u>						
	Depth (from datum)	Sample Ref	Type	Container				
			EW / G	<u>2x1 litre</u>				
				<u>1x500ml</u>				
				<u>1xyellow</u>				
				<u>1xvial</u>				
	Contract Name: <u>Ugly brown building</u>	Contract Ref: <u>371654-01</u>	Data Collected By: <u>J.S</u>					
	Project Manager / Engineer: <u>Mike Mcann</u>	Page: <u>6</u> of <u>7</u>	Checked: _____					

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# GAS MONITORING FIELD SHEET

Monitoring Date: <b>8/3/19</b>	Measurement datum: GL / Top of pipe / Other	Offset to GL (m) <b>0.00m</b>	Device: <b>GAS000</b>	Serial Number: <b>G503701</b>	Daily Check: <input checked="" type="checkbox"/>				
Pre-Testing Remarks:		Air Temperature: <b>20 °C</b>	Weather: <b>N/A</b> Ground Conditions: <b>concrete building</b> inside						
		Weather: <b>N/A</b>							
Exploratory Position ID: <b>WS05</b>		Wind: <b>NONE</b> / LIGHT / MEDIUM / STRONG	Tidal State: (if applicable) High / Low / Rising / Falling						
		Monitoring Round Number: <b>1</b>	Test Number:						
Install Type: <b>SINGLE</b> / DOUBLE		Pipe Ref: 1) Shallow 2) Deep	Pipe Diameter: 19mm / 40mm / <b>50mm</b> / Other _____ (mm)						
Test Sequence	Time of Monitoring		Gas Flow (l/hr)	Atmospheric Pressure (mb)	Differential Pressure (mb)	Gas tap: <b>SINGLE</b> / DOUBLE			
	hh:mm	sec				Observations:			
STAGE 1 GAS FLOW	Initial	<b>11:02</b>	<b>0.0</b>	<b>1010</b>	<b>0.02</b>				
	Steady State	<b>11:03</b>	<b>0.01</b>						
STAGE 2 GAS CONCENTRATION READINGS	Time of Monitoring		Methane (%/vol)	Carbon Dioxide (%/vol)	Oxygen (%/vol)	Hydrogen Sulphide (ppm)	Carbon Monoxide (ppm)	LEL (%)	PID (ppm)
	hh:mm	sec							
	<b>11:06</b>	<b>0</b>	<b>0.0</b>	<b>0.1</b>	<b>20.9</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
	:	<b>15</b>	<b>0.0</b>	<b>0.6</b>	<b>20.3</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
	:	<b>30</b>	<b>0.0</b>	<b>0.6</b>	<b>19.9</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
	:	<b>60</b>	<b>0.0</b>	<b>0.6</b>	<b>19.8</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
	:	<b>90</b>	<b>0.0</b>	<b>0.6</b>	<b>19.8</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
	:	<b>120</b>	<b>0.0</b>	<b>0.6</b>	<b>19.8</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
	:	<b>180</b>	<b>0.0</b>	<b>0.6</b>	<b>19.7</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	
	:	<b>240</b>	<b>0.0</b>	<b>0.6</b>	<b>19.7</b>	<b>1</b>	<b>0</b>	<b>0.0</b>	
	:	<b>300</b>	<b>0.0</b>	<b>0.6</b>	<b>19.7</b>	<b>1</b>	<b>0</b>	<b>0.0</b>	
	:	<b>360</b>							
	:	<b>420</b>							
:	<b>480</b>								
:	<b>540</b>								
:	<b>600</b>								
STAGE 3 WATER LEVEL OBSERVATION		Depth (from datum) to water: <b>Dry</b> (m)	Time: _____	LNAPL Top (from datum): _____ (m)					
		Depth (from datum) to well base: <b>1.920</b> (m)		DNAPL Top (from datum): _____ (m)					
		Hole Purged: Yes / <b>No</b>	Purge Start: _____						
		Purge Volume: (ltrs) _____	Purge End: _____						
Post Testing Remarks: <b>WS Dry</b>		Samples Taken: Yes / <b>No</b>		Gas / Water					
		Depth (from datum)	Sample Ref	Type	Container				
				EW / G					
RSK	Contract Name: <b>bigly brown building</b>		Contract Ref: <b>3716S4-01</b>		Data Collected By: <b>JS</b>				
	Project Manager / Engineer: <b>Mike McAM</b>		Page: <b>7 of 7</b>		Checked: <b>sg</b>				