

Appendix 9.5 – Screened Gas Monitoring Data – Table 1.

Location	Characteristic Situation (CIRIA C665)	Round 1 (02/10/20)										Round 2 (20/10/20)										Round 3 (03/11/20)									
		Gas readings & Calculated Gas Screening Values (CH4 and CO2)										Gas readings & Calculated Gas Screening Values (CH4 and CO2)										Gas readings & Calculated Gas Screening Values (CH4 and CO2)									
		CH4 (%)	CO2 (%)	O2 (%)	CO (%)	H2S (%)	Balance (%)	Barometric Pressure (mb)	Gas Flow (l/hr)	CH4 Screening Value (l/hr)	CO2 Screening Value (l/hr)	CH4 (%)	CO2 (%)	O2 (%)	CO (%)	H2S (%)	Balance (%)	Barometric Pressure (mb)	Gas Flow (l/hr)	CH4 Screening Value (l/hr)	CO2 Screening Value (l/hr)	CH4 (%)	CO2 (%)	O2 (%)	CO (%)	H2S (%)	Balance (%)	Barometric Pressure (mb)	Gas Flow (l/hr)	CH4 Screening Value (l/hr)	CO2 Screening Value (l/hr)
BH207	CS 1 (Very Low Risk)	0.0	0.2	20.6	1.0	0.0	79.3	998.0	0.0	0.0000000	0.0000000	0.0	1.2	19.6	0.0	0.0	79.2	986.0	0.0	0.0000000	0.0000000	0.0	2.4	18.9	0.0	0.0	78.7	1016.0	0.0	0.0000000	0.0000000
WS01A	CS 1 (Very Low Risk)	0.0	1.5	19.2	1.0	0.0	79.3	999.0	0.0	0.0000000	0.0000000	0.0	1.7	19.0	1.0	0.0	79.3	986.0	0.0	0.0000000	0.0000000	0.0	2.1	18.5	0.0	0.0	79.4	1016.0	0.0	0.0000000	0.0000000
WS01B	CS 1 (Very Low Risk)	0.0	1.6	19.3	1.0	0.0	79.1	999.0	0.0	0.0000000	0.0000000	0.0	0.9	19.7	0.0	0.0	79.4	986.0	0.0	0.0000000	0.0000000	0.0	2.1	18.5	0.0	0.0	79.4	1016.0	0.0	0.0000000	0.0000000
WS02A	CS 1 (Very Low Risk)	0.0	3.0	17.8	1.0	0.0	79.1	1001.0	0.0	0.0000000	0.0000000	0.0	3.5	17.8	1.0	0.0	78.6	986.0	-0.1	0.0000000	-0.0035000	0.0	3.5	17.6	0.0	0.0	78.9	1016.0	-0.1	0.0000000	-0.0035000
WS02B	CS 1 (Very Low Risk)	0.0	0.7	19.0	1.0	0.0	80.3	999.0	0.0	0.0000000	0.0000000	0.0	0.6	19.6	1.0	0.0	79.9	986.0	0.0	0.0000000	0.0000000	0.0	0.5	20.0	0.0	0.0	79.5	1016.0	-0.1	0.0000000	-0.0005000
WS03A	CS 2 (Low Risk)	0.0	3.9	16.6	1.0	0.0	79.5	999.0	0.0	0.0000000	0.0000000	0.0	4.2	16.6	1.0	0.0	79.2	986.0	0.0	0.0000000	0.0000000	0.0	4.9	15.1	0.0	0.0	80.0	1016.0	0.0	0.0000000	0.0000000
WS03B	CS 1 (Very Low Risk)	0.0	1.7	19.1	1.0	0.0	79.2	999.0	0.0	0.0000000	0.0000000	0.0	0.9	19.7	1.0	0.0	79.5	986.0	0.0	0.0000000	0.0000000	0.0	2.1	19.3	0.0	0.0	78.6	1016.0	0.0	0.0000000	0.0000000
WS04A	CS 2 (Low Risk)	0.0	15.5	4.2	1.0	0.0	80.3	999.0	0.0	0.0000000	0.0000000	0.0	13.9	6.5	1.0	0.0	79.6	986.0	0.0	0.0000000	0.0000000	0.0	11.5	7.5	0.0	0.0	81.0	1018.0	0.0	0.0000000	0.0000000
WS04B	CS 2 (Low Risk)	0.0	6.6	8.6	1.0	0.0	84.8	999.0	0.0	0.0000000	0.0000000	0.0	6.4	7.7	1.0	0.0	85.9	986.0	0.0	0.0000000	0.0000000	0.0	7.8	4.2	0.0	0.0	87.9	1018.0	0.0	0.0000000	0.0000000
WS05A	CS 1 (Very Low Risk)	0.0	0.4	18.5	0.0	0.0	81.1	999.0	0.0	0.0000000	0.0000000	0.0	0.5	18.9	0.0	0.0	80.6	987.0	0.0	0.0000000	0.0000000	Access Gate Locked									

Location	Characteristic Situation (CIRIA C665)	Round 4 (12/11/20)										Round 5 (25/11/20)										Round 6 (17/12/20)									
		Gas readings & Calculated Gas Screening Values (CH4 and CO2)										Gas readings & Calculated Gas Screening Values (CH4 and CO2)										Gas readings & Calculated Gas Screening Values (CH4 and CO2)									
		CH4 (%)	CO2 (%)	O2 (%)	CO (%)	H2S (%)	Balance (%)	Barometric Pressure (mb)	Gas Flow (l/hr)	CH4 Screening Value (l/hr)	CO2 Screening Value (l/hr)	CH4 (%)	CO2 (%)	O2 (%)	CO (%)	H2S (%)	Balance (%)	Barometric Pressure (mb)	Gas Flow (l/hr)	CH4 Screening Value (l/hr)	CO2 Screening Value (l/hr)	CH4 (%)	CO2 (%)	O2 (%)	CO (%)	H2S (%)	Balance (%)	Barometric Pressure (mb)	Gas Flow (l/hr)	CH4 Screening Value (l/hr)	CO2 Screening Value (l/hr)
BH207	CS 1 (Very Low Risk)	0.0	2.2	18.5	1.0	0.0	79.5	1008.0	0.0	0.0000000	0.0000000	0.0	1.9	18.4	0.0	0.0	79.7	1012.0	0.0	0.0000000	0.0000000	0.0	2.0	18.5	0.0	0.0	80.0	1001.0	0.0	0.0000000	0.0000000
WS01A	CS 1 (Very Low Risk)	0.0	1.6	19.1	0.0	0.0	79.3	1008.0	0.0	0.0000000	0.0000000	0.0	1.8	19.2	0.0	0.0	79.0	1012.0	0.0	0.0000000	0.0000000	0.0	1.6	19.0	0.0	0.0	78.4	1001.0	0.0	0.0000000	0.0000000
WS01B	CS 1 (Very Low Risk)	0.0	2.2	17.3	1.0	0.0	80.4	1008.0	0.0	0.0000000	0.0000000	0.0	1.9	17.6	1.0	0.0	79.5	1012.0	0.0	0.0000000	0.0000000	0.0	1.8	17.9	1.0	0.0	80.3	1001.0	0.0	0.0000000	0.0000000
WS02A	CS 1 (Very Low Risk)	0.0	3.6	17.0	0.0	0.0	79.4	1008.0	0.0	0.0000000	0.0000000	0.0	3.8	17.3	0.0	0.0	78.9	1012.0	-0.1	0.0000000	-0.0038000	0.0	3.5	17.5	0.0	0.0	79.0	1001.0	-0.1	0.0000000	-0.0035000
WS02B	CS 1 (Very Low Risk)	0.0	0.4	19.1	1.0	0.0	80.5	1008.0	0.0	0.0000000	0.0000000	0.0	0.5	19.5	0.0	0.0	80.0	1012.0	0.0	0.0000000	0.0000000	0.0	0.6	19.3	1.0	0.0	79.1	1001.0	0.0	0.0000000	0.0000000
WS03A	CS 2 (Low Risk)	0.0	5.4	13.2	1.0	0.0	81.4	1008.0	0.0	0.0000000	0.0000000	0.0	4.6	16.0	1.0	0.0	78.6	1012.0	0.0	0.0000000	0.0000000	0.0	5.1	15.3	1.0	0.0	79.6	1001.0	0.0	0.0000000	0.0000000
WS03B	CS 1 (Very Low Risk)	0.0	2.3	17.0	1.0	0.0	80.7	1008.0	0.0	0.0000000	0.0000000	0.0	2.3	18.0	0.0	0.0	79.7	1012.0	0.0	0.0000000	0.0000000	0.0	2.2	17.6	1.0	0.0	80.2	1001.0	0.0	0.0000000	0.0000000
WS04A	CS 2 (Low Risk)	0.0	12.0	6.0	1.0	0.0	81.0	1008.0	0.0	0.0000000	0.0000000	0.0	11.1	6.6	0.0	0.0	82.3	1012.0	-0.2	0.0000000	-0.0222000	0.0	11.8	6.3	1.0	0.0	80.9	1001.0	0.0	0.0000000	0.0000000
WS04B	CS 2 (Low Risk)	0.0	2.8	16.2	0.0	0.0	81.0	1008.0	0.0	0.0000000	0.0000000	0.0	7.3	3.3	0.0	0.0	89.4	1012.0	0.0	0.0000000	0.0000000	0.0	7.1	5.3	0.0	0.0	87.6	1001.0	0.0	0.0000000	0.0000000
WS05A	CS 1 (Very Low Risk)	Access Gate Locked										Access Gate Locked										0.0	0.0	18.6	0.0	0.0	81.4	1001.0	0.0	0.0000000	0.0000000

Notes

Gas screening value: litres of gas/hour is calculated by multiplying the gas concentration (/100) by the measured borehole flow rate (l/h)

Screening Criteria (as per CIRIA C665 documentation "Assessing risks posed by hazardous ground gases to Buildings"):

CS 1 (Very Low Risk) = Screening value for CO2 / CH4 <0.07l/hr, and CO2 <5% CH4 <1%. Exceedances denoted in grey shading.

CS 2 (Low Risk) = Screening value for CO2 / CH4 <0.7l/hr, and borehole flow rate <70l/hr. No exceedances.

Characteristic Situation CS 1 (Very Low Risk) - Monitoring Location IDs highlighted green

Characteristic Situation CS 2 (Low Risk) - Monitoring Location IDs highlighted light green