

12307/RAH

Cultech Ltd,
Baglan Industrial Park,
Unit 2 Christchurch Rd,
Port Talbot
SA12 7BZ

19 January 2021

For the attention of Mr Stephen Fletcher

Dear Sirs,

Cultech Ltd, Aberavon – Final Gas Monitoring Report

We have now completed the gas monitoring programme at the above site and provide an assessment of our findings.

Intégral Géotechnique (Wales) Limited have previously undertaken an intrusive site investigation at the site and the findings are included within the Site Investigation Report No. 12307/RAH/20/SI dated December 2020.

This report should be read in conjunction with the above report.

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Site Works

An intrusive investigation was carried out in November 2020 comprising seven dynamic windowless sampling boreholes drilled to a maximum depth of 1.0mbgl. Three boreholes were drilled in the footprint of the proposed side extension to Unit 2, three boreholes were located around the new Vehicle Maintenance Workshop and one borehole was located in the vicinity of the workshop, in an area of former vehicle and drum storage.

Shallow ground gas and groundwater monitoring standpipes were installed within boreholes (WS03, WS05 and WS06) to allow both ground gas and groundwater to be monitored.

The intrusive investigation identified made ground to the base of all locations. In the area of the proposed Unit 2 extension, made ground generally comprised dark grey sandy gravel of fine to coarse slag with occasional concrete fragments, brick fragments, timber and scrap metal. In the area

of the vehicle maintenance workshop, made ground generally comprised either compact dark grey slightly silty sandy gravel or stiff dark grey sandy gravelly silty clay. Gravel comprised predominantly slag and mudstone, with limestone, brick, concrete, sandstone, burnt shale and quartz as well as localised ash and occasional anthropogenic materials.

Following the installation of the standpipes, ground gas was monitored on six occasions following completion of the site works (approximately weekly). The purpose of the gas monitoring installations was to check for any evidence of ground gas generating from the significant thicknesses of made ground beneath the site and in the surrounding area.

The gas monitoring programme commenced on 25/11/2020.

Copies of the dynamic windowless sampling boreholes are presented in Appendix A, and their approximate locations shown on Figure 1.

Ground Gas Monitoring

The concentrations of methane, carbon dioxide and oxygen were measured in the standpipes during each visit by using a GA5000 Landfill Gas Analyser. In addition, gas flow rate and the atmospheric pressure at the time of the field measurements were also recorded. Volatile Organic Compounds (VOC vapours) were also measured using a Photo Ionisation Detector during each visit.

Gas monitoring has been carried out over a range of atmospheric pressure to include at least one reading in low and/or falling pressure, in accordance with the recommendation made in CIRIA Report C665.

The results of the field gas monitoring on six occasions are enclosed in Appendix B. A summary of the results is presented below in Table 1.

Table 1: Summary of Ground Gas Monitoring Results				
Borehole	Maximum Methane Concentration (%)	Maximum Carbon Dioxide Concentration (%)	Minimum Oxygen Concentration (%)	Maximum Gas Flow Rate (l/hr)
WS03	0.20	<0.50	19.20	<0.30
WS05	0.10	<0.50	19.40	<0.30
WS06	<0.50	0.30	19.30	<0.30

The results show a maximum methane concentration of 0.20% and a maximum carbon dioxide concentration of 0.3%. A maximum gas flow rate of <0.3l/hr was measured during the gas monitoring programme. Carbon monoxide and Volatile Organic Compound (VOC) were not recorded above the detection limits.

Groundwater Monitoring

Groundwater levels were also measured during visits to site to complete ground gas monitoring. All three boreholes were dry during every monitoring visit.

Ground Gas Risk Assessment

The results of the gas monitoring programme indicate a maximum methane concentration of 0.2% and a maximum carbon dioxide concentration of 0.3%. Gas flow rate has not exceeded the limit of detection during the monitoring programme. Accordingly, the results indicate a Gas Screening Value (GSV) of <0.0009l/hr.

It is therefore considered that there is a very low risk of ground gas migration to the proposed development site.

For the existing and proposed commercial developments and in accordance with CIRIA Report C665 the GSV corresponds to Characteristic Situation 1.

In accordance with BS8485:2015 + A1:2019, and based on the results of the gas monitoring with the site being classified as Characteristic Situation 1 (CS1), for Development Type D (commercial/industrial), the minimum gas protection score required is zero, and therefore no specific gas protective measures are required to be implemented in the new buildings.

The BGS radon report obtained as part of the desk study in 2018 indicates that no radon protective measures are required as part of the development.

We trust that the above is to your satisfaction. However, if you have any queries or require any further information, please do not hesitate to contact us.

Yours faithfully,



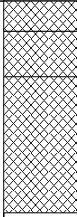
Rebecca Hitt
For
Intégral Géotechnique (Wales) Limited

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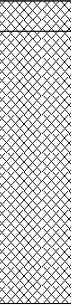
Appendix A Dynamic Windowless Sampling Borehole Logs
Appendix B Gas Monitoring Results
Figure 1 Site Location Plan
Figure 2 Exploratory Hole Location Plan

APPENDIX A

DYNAMIC WINDOWLESS SAMPLING BOREHOLE LOGS

		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Cultech Ltd			Project No.: 12307		Borehole No.: WS01 Sheet 1 of 1	
		Location: Port Talbot			Client: Cultech Ltd			Coordinates:		Hole Type: WLS
Equipment: GEO 26				Diameter of Casing:			Level:		Scale 1:25	
Diameter of Boring: 101mm				Depth of Casing:			Dates 17/11/2020 -		Logged By: RAH	
Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.40	ES		0.10			MADE GROUND: Dark grey medium sub-angular to angular GRAVEL of limestone chippings. Plastic textile membrane. MADE GROUND: Firm to stiff red brown and dark grey slightly sandy gravelly silty CLAY. Gravel comprises fine to coarse sub-angular limestone and slag. (Medium dense becoming dense) MADE GROUND: Compact dark grey GRAVEL of fine to coarse sub-angular slag with occasional cobbles. Frequently slag cement gravel.		
					0.10					
					0.25					
					0.70					
								End of Borehole at 0.70 m		
Remarks: 1. Sampler refusal at 0.7mbgl. 2. No groundwater encountered. Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation										
										

		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Cultech Ltd			Project No.: 12307		Borehole No.: WS02 Sheet 1 of 1	
Location: Port Talbot				Client: Cultech Ltd			Coordinates:		Hole Type: WLS	
Equipment: GEO 26				Diameter of Casing:			Level:		Scale 1:25	
Diameter of Boring: 101mm				Depth of Casing:			Dates 17/11/2020 -		Logged By: RAH	

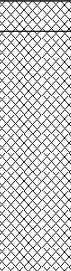
Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10			MADE GROUND: Dark grey fine to medium sub-angular to angular GRAVEL of limestone chippings. MADE GROUND: Compact dark grey sandy GRAVEL of fine to coarse sub-rounded to angular slag with occasional concrete, brick and limestone. Contains occasional scrap metal and timber. (Medium dense becoming dense)	
		0.50	ES						
					1.00			End of Borehole at 1.00 m	1
									2
									3
									4
									5

Remarks: 1. Hand excavated to 0.5mbgl. 2. Sampler refusal at 1.0mbgl. 3. No groundwater encountered.				Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)				W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation			
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Intégral Géotechnique		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Cultech Ltd			Project No.: 12307		Borehole No.: WS02A Sheet 1 of 1	
Location: Port Talbot				Client: Cultech Ltd			Coordinates:		Hole Type: WLS	
Equipment: GEO 26				Diameter of Casing:			Level:		Scale 1:25	
Diameter of Boring:				Depth of Casing:			Dates 17/11/2020 -		Logged By: RAH	
Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
		Depth (m)	Type	Results						
					0.08			PAVING SLABS.		
					0.13			Brown SAND.		
					0.15			CONCRETE SLAB.		
					Borehole repositioned.					
					End of Borehole at 0.15 m					
Remarks: 1. Borehole initiated - concrete slab encountered beneath paving stones.										
Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)							W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation			
AGS										

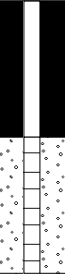
		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Cultech Ltd		Project No.: 12307		Borehole No.: WS03 Sheet 1 of 1	
Location: Port Talbot				Client: Cultech Ltd		Coordinates:		Hole Type: WLS	
Equipment: GEO 26				Diameter of Casing:		Level:		Scale 1:25	
Diameter of Boring: 101mm				Depth of Casing:		Dates 17/11/2020 -		Logged By: RAH	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10		 MADE GROUND: Dark grey fine to medium sub-angular to angular GRAVEL of limestone chippings. MADE GROUND: Compact dark grey very sandy GRAVEL of fine to coarse sub-rounded to angular slag with occasional concrete cobbles and brick fragments. Slag is frequently slag cement and blue grey slag. (Medium dense becoming dense/very dense)		
		0.80	ES		0.90				
End of Borehole at 0.90 m								1	
								2	
								3	
								4	
								5	

Remarks: 1. Sampler refusal at 0.9mbgl. 2. Gas monitoring well installed to base: 0.5m plain pipe and bentonite backfill underlain by 0.5m of slotted pipe with gravel filter. 3. No groundwater encountered.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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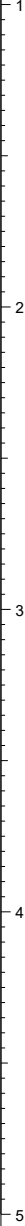
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 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Cultech Ltd		Project No.: 12307		Borehole No.: WS05 Sheet 1 of 1	
Location: Port Talbot		Client: Cultech Ltd		Coordinates:		Hole Type: WLS	
Equipment: GEO 26		Diameter of Casing:		Level:		Scale 1:25	
Diameter of Boring: 101mm		Depth of Casing:		Dates 17/11/2020 -		Logged By: RAH	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	ES		0.20		MADE GROUND: Compact light brown slightly silty sandy GRAVEL of fine to coarse angular to sub-angular limestone, mudstone and concrete.		
					0.30		MADE GROUND: Compact dark blue grey slightly silty to silty GRAVEL of fine to coarse sub-angular mudstone.		
							MADE GROUND: Compact dark grey locally blue grey slightly silty sandy to very sandy ashy GRAVEL of fine to coarse sub-angular slag with occasional cobbles. (Medium dense becoming very dense)		
					0.90		End of Borehole at 0.90 m		
								1	
								2	
								3	
								4	
								5	

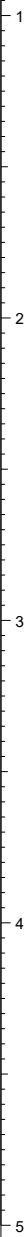
Remarks: 1. Sampler refusal at 0.9mbgl. 2. No groundwater encountered. 3. Gas monitoring well installed to base: 0.45m plain pipe and bentonite backfill underlain by 0.45m of slotted pipe with gravel filter.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Cultech Ltd		Project No.: 12307		Borehole No.: WS06 Sheet 1 of 1	
Location: Port Talbot				Client: Cultech Ltd		Coordinates:		Hole Type: WLS	
Equipment: GEO 26				Diameter of Casing:		Level:		Scale 1:25	
Diameter of Boring: 101mm				Depth of Casing:		Dates 17/11/2020 -		Logged By: RAH	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05		MADE GROUND: Light grey brown sandy GRAVEL of fine to coarse sub-angular to angular limestone and concrete. MADE GROUND: Compact dark grey slightly silty sandy to very sandy ashy GRAVEL of sub-angular to angular slag, sandstone and occasional brick fragments. Contains very occasional timber fragments. (Medium dense)	
		0.30	ES					
		0.60	ES		0.45		MADE GROUND: Stiff dark grey to black slightly sandy gravelly to very gravelly ashy silty CLAY with occasional cobbles. Tending to gravel. Gravel and cobbles comprise fine to coarse sub-angular slag and mudstone.	
					0.80			
End of Borehole at 0.80 m								

Remarks: 1. Sampler refusal at 0.8mbgl. 2. No groundwater encountered. 3. Gas monitoring well installed to base: 0.4m plain pipe and bentonite backfill underlain by 0.4m of slotted pipe with gravel filter.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Integral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Cultech Ltd		Project No.: 12307		Borehole No.: WS07 Sheet 1 of 1	
Location: Port Talbot				Client: Cultech Ltd		Coordinates:		Hole Type: WLS	
Equipment: GEO 26				Diameter of Casing:		Level:		Scale 1:25	
Diameter of Boring: 101mm				Depth of Casing:		Dates 17/11/2020 -		Logged By: RAH	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40	ES		0.10		MADE GROUND: Grey and pinkish brown sandy very gravelly silty CLAY. Gravel comprises fine to coarse sub-angular to angular limestone, brick and concrete. MADE GROUND: Stiff to very stiff dark grey slightly sandy gravelly silty CLAY. Locally ashy. Gravel comprises fine to coarse sub-rounded to angular slag, mudstone, sandstone, burnt shale and brick. ...Becoming darker with depth. ...Grading to gravel of slag at base.	
					0.80			
End of Borehole at 0.80 m								
								

Remarks: 1. Sampler refusal at 0.8mbgl. 2. No groundwater encountered.				Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)				W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation			
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APPENDIX B

GAS MONITORING RESULTS

FIELD GAS MONITORING RESULTS - SUMMARY

Job No.: 12307
 Site: Cultech Port Talbot

Maximum Methane Concentration (%v/v)	Maximum Carbon Dioxide Concentration (%v/v)	Maximum Gas Concentration (%v/v)	Maximum Gas Flow Rate (l/hr)	GSV (l/hr)
<0.5	<0.5	<0.5	<0.3	<0.0015

Methane							
Location	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Maximum
WS 3	0.20	0.10	0.10	0.10	0.10	0.10	0.20
WS 5	0.10	0.10	0.10	0.10	0.10	0.10	0.10
WS 6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50

Carbon Dioxide							
Location	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Maximum
WS 3	<0.5	0.10	0.10	0.10	0.10	0.20	<0.50
WS 5	<0.5	0.10	<0.5	0.20	0.20	<0.5	<0.50
WS 6	0.20	0.30	0.20	0.20	0.20	0.10	0.30

Oxygen							
Location	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Minimum
WS 3	20.80	20.50	19.90	20.10	20.10	19.20	19.20
WS 5	20.60	20.10	19.40	19.80	19.80	19.50	19.40
WS 6	19.30	19.50	20.10	19.80	20.10	20.20	19.30

Gas Flow Rate							
Location	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Maximum
WS 3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.30
WS 5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.30
WS 6	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.30

FIELD GAS MONITORING RESULTS

Job No.: 12307
Site: Cultech Port Talbot
Monitoring Date: 25.11.20
Monitoring Round: 1

Monitoring Conditions

Weather: Sunny
Ambient Temp: 8 °C
Instrument: GA5000

Barometric Pressure (mb)

On Arrival:	993
During Monitoring:	993
End of Monitoring:	993

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH4) %v/v		Methane % LEL		Oxygen (O2) %v/v		Carbon Dioxide (CO2) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H2S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
WS 3	0.73	Dry	0.20	0.20	4.00	4.00	20.80	20.80	<0.5	<0.5	<1	<1	<0.3	0.10
WS 5	0.83	Dry	0.10	0.10	2.00	2.00	20.60	20.60	<0.5	<0.5	<1	<1	<0.3	<0.1
WS 6	0.81	Dry	<0.5	<0.5			19.30	19.30	0.20	0.20	<1	<1	<0.3	<0.1
Typical Instrument Accuracy:														
%CH ₄	0-70% +/- 0.5%		CO	0-500ppm +/- 2% FS										LEL = Lower Explosive Limit
%CO ₂	0-60% +/- 0.5%		H ₂ S	0-5000ppm +/- 2.0% FS										N/R = No Reading Taken
%O ₂	0-25% +/- 1.0%		Flow from borehole	+/- 0.3l/h										FS = Full Scale
Notes:														

FIELD GAS MONITORING RESULTS

Job No.: 12307
Site: Cultech Port Talbot
Monitoring Date: 09.12.20
Monitoring Round: 2

Monitoring Conditions

Weather:	Cloudy	
Ambient Temp:	4	°C
Instrument:	GA5000	

Barometric Pressure (mb)

On Arrival:	1007
During Monitoring:	1007
End of Monitoring:	1007

Location	Well Base Level	Water Level	Methane (CH4) %v/v		Methane % LEL		Oxygen (O2) %v/v		Carbon Dioxide (CO2) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H2S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
	(mbgl)	(mbgl)	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
WS 3	0.73	Dry	0.10	0.10	2.00	2.00	20.50	20.50	0.10	0.10	<1	<1	<0.3	<0.1
WS 5	0.83	Dry	0.10	0.10	2.00	2.00	20.10	20.10	0.10	0.10	<1	<1	<0.3	<0.1
WS 6	0.81	Dry	<0.5	<0.5			19.50	19.50	0.30	0.30	<1	<1	<0.3	<0.1
Typical Instrument Accuracy:														
%CH ₄	0-70% +/- 0.5%		CO	0-500ppm +/- 2% FS										
%CO ₂	0-60% +/- 0.5%		H ₂ S	0-5000ppm +/- 2.0% FS										
%O ₂	0-25% +/- 1.0%		Flow from borehole +/- 0.3l/h											
Notes:														

FIELD GAS MONITORING RESULTS

Job No.: 12307
Site: Cultech Port Talbot
Monitoring Date: 16.12.20
Monitoring Round: 3

Monitoring Conditions

Weather: Cloudy
Ambient Temp: 8 °C
Instrument: GA5000

Barometric Pressure (mb)

On Arrival:	997
During Monitoring:	997
End of Monitoring:	997

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH4) %v/v		Methane % LEL		Oxygen (O2) %v/v		Carbon Dioxide (CO2) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H2S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
WS 3	0.73	Dry	0.10	0.10	2.00	2.00	19.90	19.90	0.10	0.10	<1	<1	<0.3	<0.1
WS 5	0.83	Dry	0.10	0.10	2.00	2.00	19.40	19.90	<0.5	<0.5	<1	<1	<0.3	<0.1
WS 6	0.81	Dry	<0.5	<0.5			20.10	20.10	0.20	0.20	<1	<1	<0.3	<0.1
Typical Instrument Accuracy:														
%CH ₄	0-70% +/- 0.5%		CO	0-500ppm +/- 2% FS										
%CO ₂	0-60% +/- 0.5%		H ₂ S	0-5000ppm +/- 2.0% FS										
%O ₂	0-25% +/- 1.0%		Flow from borehole +/- 0.3l/h											
Notes:														

FIELD GAS MONITORING RESULTS

Job No.: 12307
Site: Cultech Port Talbot
Monitoring Date: 07.01.21
Monitoring Round: 4

Monitoring Conditions

Weather:	Sunny	
Ambient Temp:	1	°C
Instrument:	GA5000	

Barometric Pressure (mb)

On Arrival:	1014
During Monitoring:	1014
End of Monitoring:	1014

Location	Well Base Level	Water Level	Methane (CH4) %v/v		Methane % LEL		Oxygen (O2) %v/v		Carbon Dioxide (CO2) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H2S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>backgroud)
	(mbgl)	(mbgl)	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
WS 3	0.73	Dry	0.10	0.10	2.00	2.00	20.10	20.10	0.10	0.10	<1	<1	<0.3	<0.1
WS 5	0.83	Dry	0.10	0.10	2.00	2.00	19.80	19.80	0.20	0.10	<1	<1	<0.3	<0.1
WS 6	0.81	Dry	<0.5	<0.5			19.80	19.90	0.20	0.20	<1	<1	<0.3	<0.1
Typical Instrument Accuracy:														
%CH ₄	0-70% +/- 0.5%		CO	0-500ppm +/- 2% FS										
%CO ₂	0-60% +/- 0.5%		H ₂ S	0-5000ppm +/- 2.0% FS										LEL = Lower Explosive Limit
%O ₂	0-25% +/- 1.0%		Flow from borehole +/- 0.3l/h										N/R = No Reading Taken	
FS = Full Scale														
Notes:														

FIELD GAS MONITORING RESULTS

Job No.: 12307
 Site: Cultech Port Talbot
 Monitoring Date: 12.01.21
 Monitoring Round: 5

Monitoring Conditions

Weather: Light Rain
 Ambient Temp: 8 °C
 Instrument: GA5000

Barometric Pressure (mb)

On Arrival: 1016
 During Monitoring: 1016
 End of Monitoring: 1016

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH ₄) %v/v		Methane % LEL		Oxygen (O ₂) %v/v		Carbon Dioxide (CO ₂) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H ₂ S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
WS 3	0.73	Dry	0.10	0.10	2.00	2.00	20.10	20.10	0.10	0.10	<1	<1	<0.3	<0.1
WS 5	0.83	Dry	0.10	0.10	2.00	2.00	19.80	19.80	0.20	0.10	<1	<1	<0.3	<0.1
WS 6	0.81	Dry	<0.5	<0.5			20.10	20.00	0.20	0.20	<1	<1	<0.3	<0.1

Typical Instrument Accuracy:

%CH ₄	0-70% +/- 0.5%	CO	0-500ppm +/- 2% FS	LEL = Lower Explosive Limit
%CO ₂	0-60% +/- 0.5%	H ₂ S	0-5000ppm +/- 2.0% FS	N/R = No Reading Taken
%O ₂	0-25% +/- 1.0%	Flow from borehole	+/- 0.3l/h	FS = Full Scale

Notes:

FIELD GAS MONITORING RESULTS

Job No.: 12307
Site: Cultech Port Talbot
Monitoring Date: 15.01.21
Monitoring Round: 6

Monitoring Conditions

Weather: Sunny
Ambient Temp: 8 °C
Instrument: GA5000

Barometric Pressure (mb)

On Arrival:	1018
During Monitoring:	1018
End of Monitoring:	1018

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH4) %v/v		Methane % LEL		Oxygen (O2) %v/v		Carbon Dioxide (CO2) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H2S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
WS 3	0.73	Dry	0.10	0.10	2.00	2.00	19.20	19.20	0.20	0.10	<1	<1	<0.3	<0.1
WS 5	0.83	Dry	0.10	0.10	2.00	2.00	19.50	19.80	<0.5	<0.5	<1	<1	<0.3	<0.1
WS 6	0.81	Dry	<0.5	<0.5			20.20	20.20	0.10	0.10	<1	<1	<0.3	<0.1
Typical Instrument Accuracy:														
%CH ₄	0-70% +/- 0.5%		CO	0-500ppm +/- 2% FS										LEL = Lower Explosive Limit
%CO ₂	0-60% +/- 0.5%		H ₂ S	0-5000ppm +/- 2.0% FS										N/R = No Reading Taken
%O ₂	0-25% +/- 1.0%		Flow from borehole +/- 0.3l/h											FS = Full Scale
Notes:														

FIGURES



NORTH

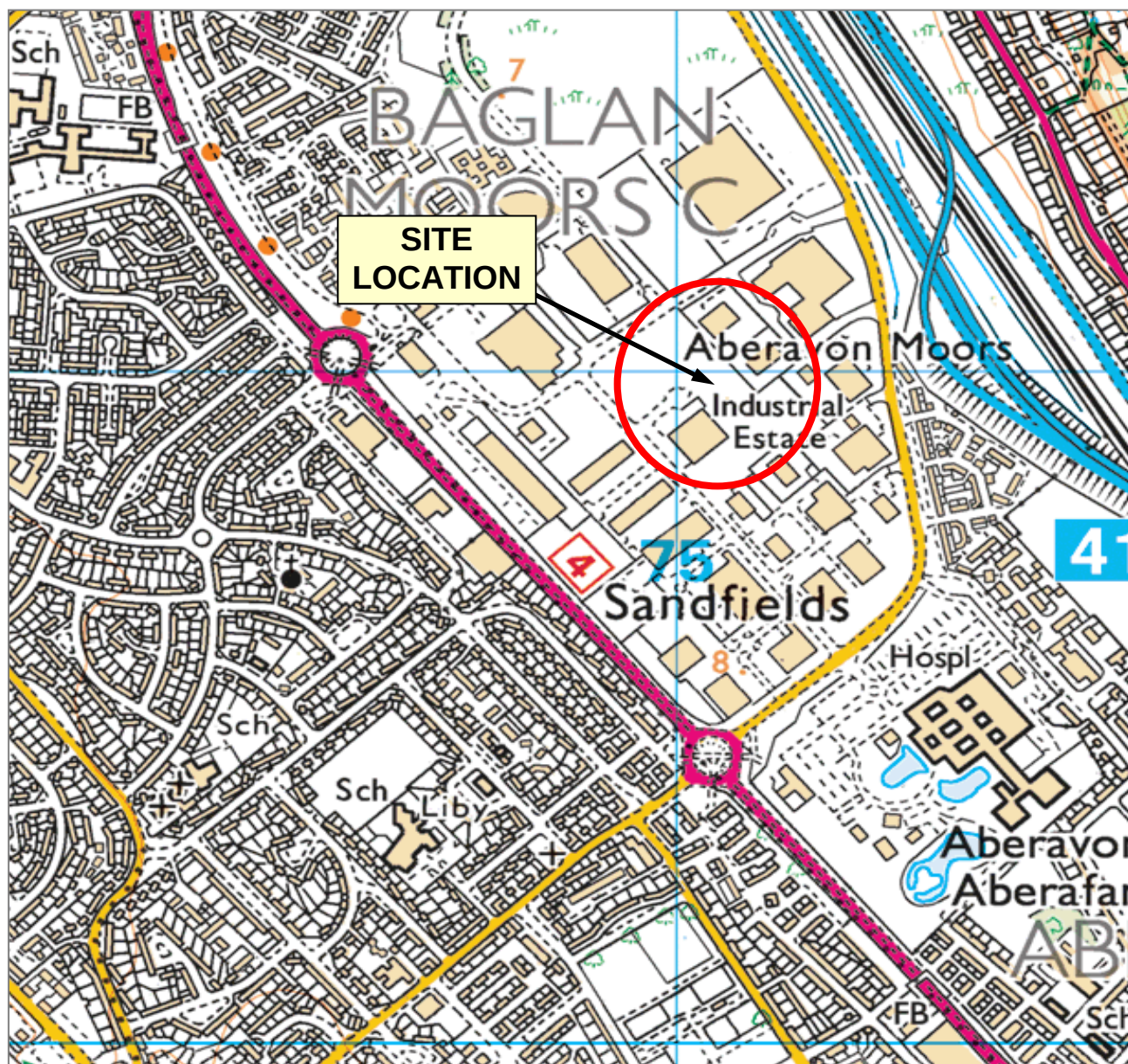


Figure 1: Site Location

12307: Cultech, Port Talbot

Intégral
Géotechnique

Intégral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991

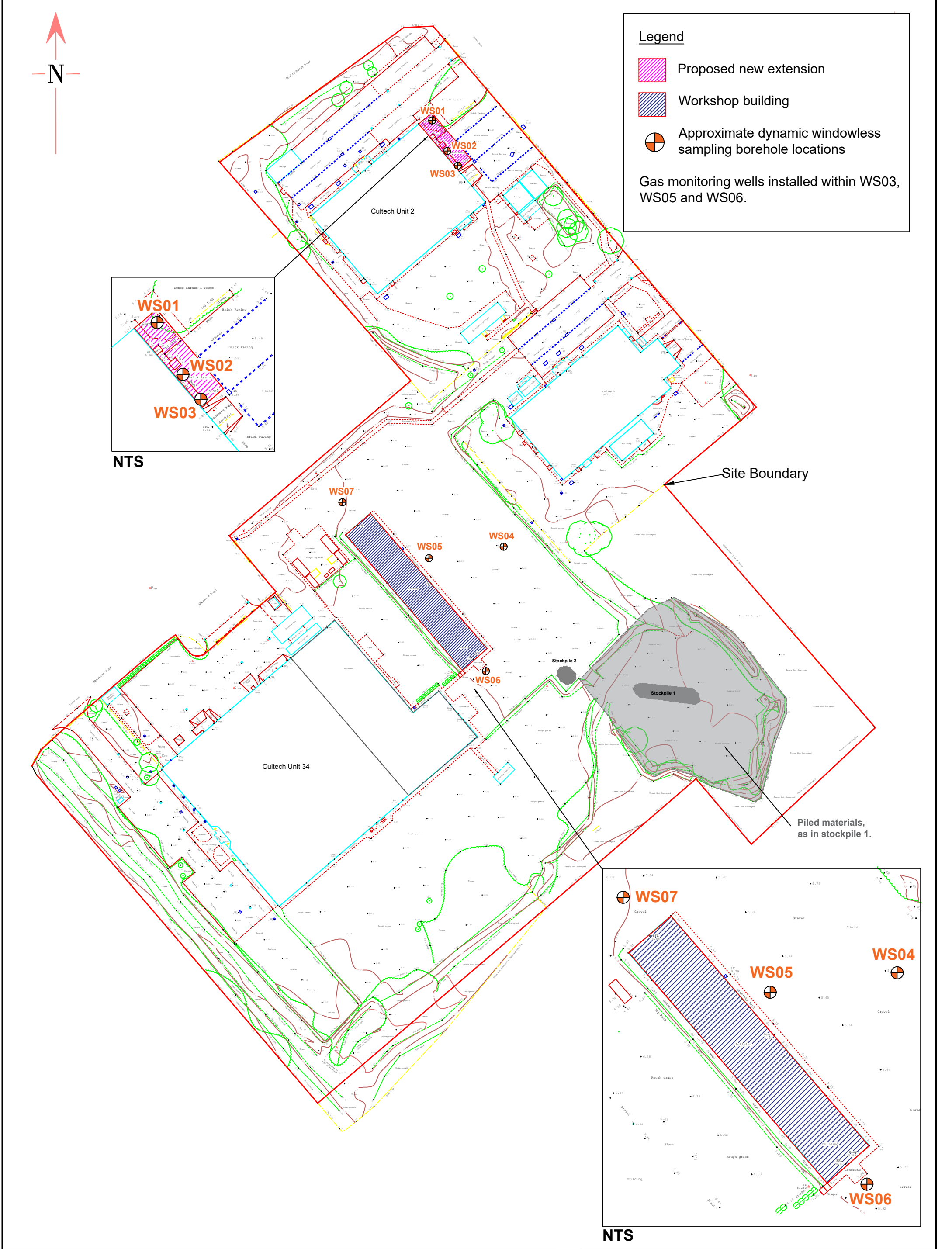


Figure 2: Exploratory Hole Location Plan