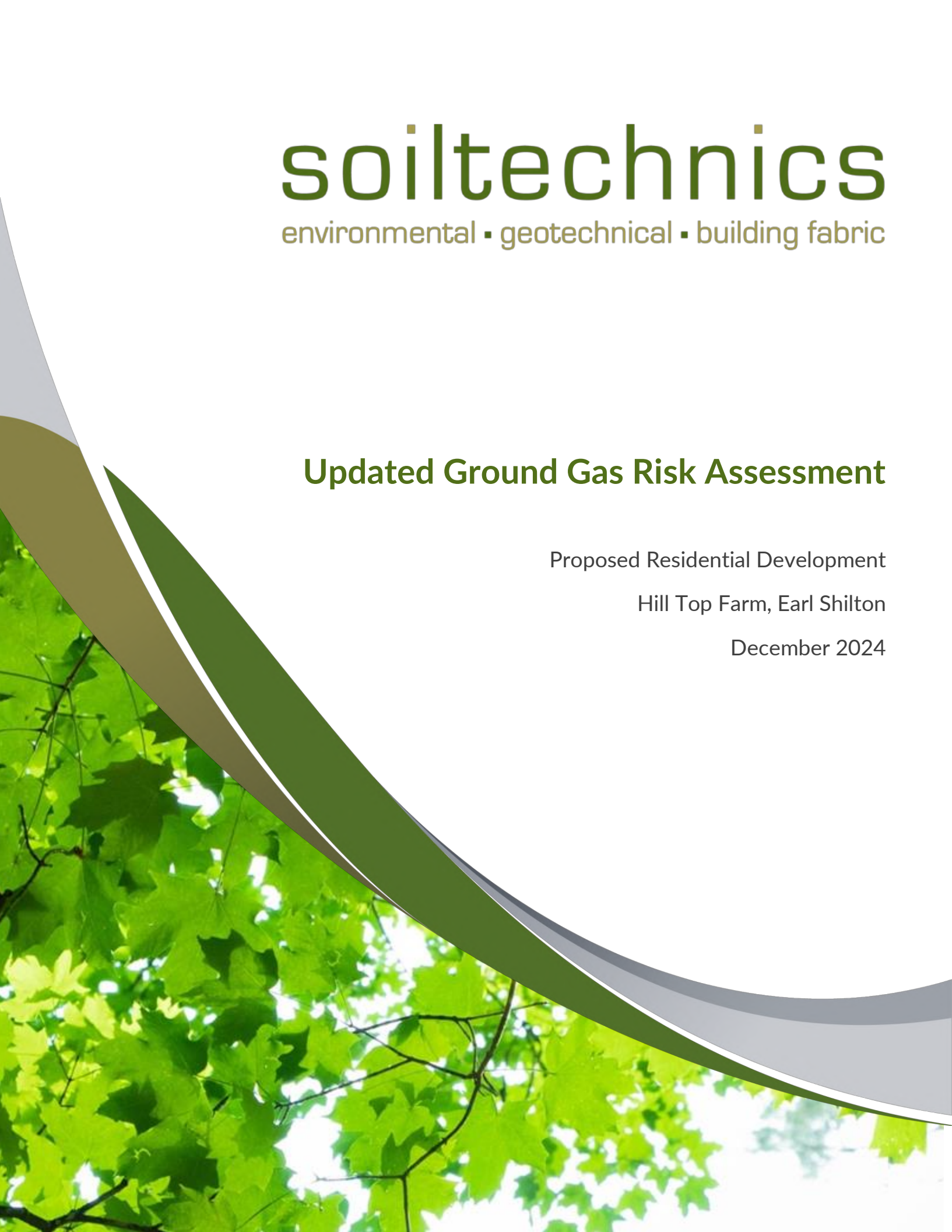




soiltechnics

environmental • geotechnical • building fabric

Updated Ground Gas Risk Assessment

Proposed Residential Development

Hill Top Farm, Earl Shilton

December 2024

Project Details

Site: Hill Top Farm, Earl Shilton
Document Title: Updated Ground Gas Risk Assessment
Document no.: STW6847-R01-Rev_A
Date: December 2024
Client: Snowdon Homes Ltd
Issuing office: Soiltechnics Ltd
Cedar Barn, White Lodge, Walgrave, Northampton. NN6 9PY
Tel: 01604 781 877 E-mail: mail@soiltechnics.net

Document history and status

Revision	Date	Description	Author	Reviewer
A	December 2024	First Issue	JB	MOH



Table of Contents

1	Introduction	1
1.1	Brief	1
1.2	Scheme Outline	1
2	Previous Report Findings	3
2.1	Previous Reports	3
2.2	Arcadis Tier 1 Ground Gas Risk Assessment	3
2.3	Arcadis Tier 2 Ground Gas Risk Assessment	3
2.4	Data-Gap Analysis	4
3	Updated Ground Gas Risk Assessment	6
3.1	General	6
3.2	Ground Gas Sources	6
3.3	Assessment of Monitoring Results	7
3.4	Ternary Plot Assessment	8
3.5	Ground Gas Migration	9
3.6	Conclusions & Recommendations	10

Appendix A Drawings

Appendix B Exploratory Hole Logs

Appendix C Gas Monitoring Results

List of Tables

Table 2:	Previous Reports	3
Table 3:	Desk-Based Gas Sources	3
Table 4:	Summary of ground conditions	4
Table 5:	Summary of peak CO ₂ levels	7
Table 6:	Updated Summary of Gas Monitoring Data	7

List of Figures

Figure 1:	Snapshot of proposed development	1
Figure 2:	Ternary plot with zones indicating the potential gas source	8

1 Introduction

1.1 Brief

1.1.1 This report has been prepared following instructions received from our client, Snowdon Homes Ltd. The overall brief of works is to:

- i) Review and update the existing ground gas risk assessment for the residential development at a parcel of land known as Hill Top Farm, located off Leicester Road, Earl Shilton.
- ii) Confirm whether gas protection measures are required to be installed.

1.1.2 The objectives of this report are outlined below:

- i) Review and summarise desk study information.
- ii) Review and summarise the intrusive investigation works undertaken, including the results of any gas monitoring undertaken.
- iii) Update the Conceptual Site Model and ground gas risk assessment, if appropriate.
- iv) Provide recommendations to inform the Remediation Strategy, should amendments be required.

1.2 Scheme Outline

1.2.1 It is understood that the development is controlled under the Hinckley and Bosworth Borough Council planning regime, under application reference 20/00916/FUL, described as

20/00916/FUL

Demolition of farm buildings and Ashby House and development of 50 dwellings comprising 49 no. affordable houses and 1no. bungalow to replace Ashby House, with access road off Leicester Road, open space, landscaping, drainage basin, and foul pumping station

1.2.2 A snapshot of the proposed development layout is included below in Figure 1.



Figure 1: Snapshot of proposed development

- 1.2.3 The report is based on the project proposals and information outlined above; should the scheme change then it will be necessary to review the conclusions and recommendations presented in this report.

2 Previous Report Findings

2.1 Previous Reports

2.1.1 The table below summarises the ground investigation reports which have informed this updated ground gas risk assessment for the proposed residential development. We understand all documents listed have been submitted to and approved through planning. Extracts appended to this report have been obtained from the planning portal.

Author	Document Title	Date & Document Reference	Report Context
Arcadis	Phase II Geo-environmental Interpretive Report	October 2022 10056074-AUK-XX-XX-RP-ZZ-0003-01	Summary of desk study and preliminary CSM. Tier II GQRA interpretive report which presents the results of ground investigation works completed in October 2022. Evaluation of geoenvironmental contamination issues and geotechnical issues.

Table 1: Previous Reports

2.2 Arcadis Tier 1 Ground Gas Risk Assessment

2.2.1 The findings of the Arcadis desk study is summarised below, in regards to the potential ground gas sources:

Potential Source	Potential Pathway	Potential Receptor
Probable Made Ground; infilled pond(s) and derelict, disused, demolished buildings, and structures	Inhalation of vapours, and generation of hazardous ground gas.	Future Residents
Possible Made Ground (hummocky field)		
Former orchard		
On-site and off-site Made Ground, filled ponds, organic contamination	Lateral migration of ground gases through permeable geology or services/foundation which build up beneath structures causing asphyxiation or explosions / vapour build up.	Future Residents & Neighbouring Residents.

Table 2: Desk-Based Gas Sources

2.2.2 Whilst the initial Conceptual Site Model (iCSM) identified potential contaminant linkages associated with ground gases, no level of risk, likelihood, or severity was provided.

2.2.3 The site was identified as not being in an area affected by radon gas

2.3 Arcadis Tier 2 Ground Gas Risk Assessment

2.3.1 A plan showing the location of exploratory holes and monitoring wells is included in Appendix A, along with the exploratory logs Appendix B.

2.3.2 Gas monitoring was undertaken as part of the ground investigation (Arcadis 2022) and comprised the monitoring of six wells (BH101 to BH106). The data is presented within Appendix C.

2.3.3 Six monitoring visits were undertaken over a two month period between July and September 2022.

2.3.4 Ground conditions across the site comprised topsoil within areas of soft standing, and Made Ground underlying areas of hardstanding around the buildings. Made Ground / topsoil is underlain by the Wigston Member, Thrussington Member and Gunthorpe Member in order of sequence. The table below presents our generalised interpretation of geological conditions at the site.

Stratum	Brief description	Top depth (m bgl)	Thickness
Hard standing	Concrete (no reinforcement noted)	G.L.	0.10m – 0.30m
Natural Topsoil	Brown slightly gravelly, clayey, fine to medium SAND with frequent roots/rootlets. Gravel comprised chert and quartz.	G.L.	0.30m – 0.90m
Made Ground	Predominantly clayey gravelly sand with anthropogenic materials comprising brick, ceramic, metal and concrete. Possible reworked natural soils were reported in BH106 at 0.3-2m as orangish brown mottled cream slightly sandy gravelly (brick, mudstone, sandstone) clay.	G.L– 0.3m	0.30m – 2.00m
Wigston Member	Loose (locally medium dense) brown/orange/red clayey gravelly SAND with gravel comprising flint, chert, siltstone, sandstone, quartzite.	0.30m – 2.0m	1.20m – 8.00m
Thrussington Member	Very soft to firm, brownish red, gravelly, sandy CLAY/SILT with local organic material and odours (BH101 and BH104). Gravel comprised siltstone, sandstone and chert.	1.20m – 8.00m	5.00m – 10.3m
Gunthorpe Member	Firm to very stiff, brown and red, sandy, gravelly CLAY with gravel comprising siltstone, sandstone and mudstone. Localised extremely weak, narrowly bedded, reddish brown mottled grey MUDSTONE, recovered as gravel (BH103).	5.00m – 10.3m	Not proven

Table 3: Summary of ground conditions

2.3.5 The ground gas monitoring results, obtained from six spot visits can be summarised as follows:

- Gas flow rates were detected between 0.1 and 0.2 l/hr.
- Steady and peak concentrations of methane at or below the limit of detection of 0.1%.
- Steady and peak concentrations of carbon dioxide in the range of 0.1% – 10.5%
- Steady concentrations of oxygen were marginally depleted within BH104 down to concentrations of ranging from 8.8 – 15.7 %. Concentrations were within normal ranges in all other wells.
- Atmospheric pressure ranged from 988 – 1015mb.

2.3.6 Gas Screening Values were calculated, and determined to fall within the CS-1 classification. However, the report recommended that a CS-2 classification should be adopted as a precaution based on the CO₂ being >5% v/v in BH101 (1No. occasion), BH103 (1No. occasion) and BH104 (3No. occasions) to a maximum concentration of 10.5%.

2.4 Data-Gap Analysis

2.4.1 The response zones for all six gas monitoring locations were placed within the natural strata (four within the Wigston member and two within the Thrussington member) between depths of 1.00 – 12.00 m bgl. No monitoring wells were placed within the Made Ground.

2.4.2 Shallow groundwater resulted in a number of the monitoring wells being flooded during the monitoring, thus rendering some of the monitoring data unreliable. However, this was not taken into consideration during the gas assessment.

- 2.4.3 The Ground Investigation Report tentatively identified the source of carbon dioxide as potentially being natural soils with pockets of organic matter; however, it also stated that the absence of methane suggests this may not be the case. No alternative source was discussed.
- 2.4.4 The assessment did not discuss ground gas migrations mechanisms, which is critical in understanding the risk of gas migration and ingress into buildings.

3 Updated Ground Gas Risk Assessment

3.1 General

3.1.1 This section presents the updated ground gas risk assessment for the development, and uses guidance and information contained within the following documents:

- CIRIA Report C665 (2007) '*Assessing risks posed by hazardous ground gases to buildings*'
- BS 10175:2011+A2:2017 '*Investigation of potentially contaminated sites- Code of Practice*'
- BS 8576:2013 '*Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)*'
- BS 8485:2015+A1:2019 '*Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings*'
- CL:AIRE Research Bulletin RB17 (2012) '*A pragmatic approach to ground gas risk assessment*'
- Wilson, Collins and Lavery (2018) '*Using ternary plots for interpretation of ground gas monitoring results*'
- Card, Lucas and Wilson (2019) '*Risk and reliability in gas protection design – 20 years on*'
- NHBC (2023) NF94 '*Hazardous ground gas- an essential guide for housebuilders*'

3.2 Ground Gas Sources

3.2.1 Historical mapping shows a pond feature on the northern boundary of the site that was infilled circa early 1900's. A second pond feature that was infilled circa 1960s is located adjacent to the northwest boundary of the site. No other significant off site sources of ground gas have been identified.

3.2.2 The two ponds shown on historical mapping records, have both been infilled circa early 1900s and circa 1960s respectively. Some 60 to 110 years have since passed. For typical landfill gas generation peak gas generation occurs within 10 years of placement, with very low gas generation rates occurring after a period of 50 years. Whilst a pressurised reservoir of gas may present an ongoing risk and source of gas, the absence of methane detected on site demonstrates no gas generation or migration is occurring. Ponds are also relatively shallow, and infilling works would not be subject to engineering controls, therefore any significant gas generation would likely have vented freely to atmosphere, rather than building up a confined gas reservoir.

3.2.3 The nearest recorded landfill is approximately 540 m southwest of the site. The underlying geology is predominantly of low permeability, making migration from the landfill to the site unlikely, particularly over such a distance. Furthermore, the topography slopes upwards to the site from the landfill, further decreasing the likelihood of migration.

3.2.4 Made Ground was typically less than 1.5m thick, with one location recording Made Ground up to 2m thick but comprising or reworked natural soils. Whilst slight organic odours were noted within the top 1.5m, no substantial organic deposits were encountered in natural or anthropogenic strata, except to isolated pockets of organic material within BH104 at 2.40 m to 5.00 m bgl. This is described as black silts and sands. No highly degradable organic materials (e.g. plant matter) were noted.

3.2.5 Based on a desk based review of the CSM, no significant source of ground gas has been identified that could potentially pose a viable risk to the site.

3.3 Assessment of Monitoring Results

3.3.1 CO₂ concentrations were occasionally measured above 5% within the monitoring rounds, the CO₂ results are summarised in the table below, with those exceeding 5% denoted in bold. Blue text with an asterisk refers to a flooded well, where the groundwater level is above the response zone.

Well	Visit 1 Peak CO ₂ (%v/v)	Visit 2 Peak CO ₂ (%v/v)	Visit 3 Peak CO ₂ (%v/v)	Visit 4 Peak CO ₂ (%v/v)	Visit 5 Peak CO ₂ (%v/v)	Visit 6 Peak CO ₂ (%v/v)
BH101	3.5*	2.5*	1.0*	2.6*	2.0*	5.2*
BH102	0.3	0.1	0.1	0.1	0.1*	0.1*
BH103	3.8	3.6	3.9	4.3	4.7	5.5
BH104	2.9	7.1	2.5	6.1	10.5	9.1
BH105	3.4	2.6	2.8	3.1	2.7	3.1
BH106	2.2*	1.8*	1.8*	2.3*	2.2*	2.6*

Table 4: Summary of peak CO₂ levels

3.3.2 Saturated soils typically limits both the migration of ground gases, by flooding any open pathways and void spaces.

3.3.3 Table 5 below presents a summary of the gas monitoring results without data from flooded monitoring well included. Note that BH101 and BH106 were flooded on every visit and have therefore not been included in the updated assessment.

Well	Max Steady Flow (l/hr)	Max Steady CH ₄ (%v/v)	Max GSV for CH ₄	Max Steady CO ₂ (%v/v)	Max GSV for CO ₂	Min steady O ₂ (%v/v)
BH102	0.1	0.1	0.0001	0.3	0.0003	21.1
BH103	0.1	0.1	0.0001	5.5	0.0055	17.1
BH104	0.2	0.1	0.0002	10.5	0.021	8.8
BH105	0.1	0.1	0.0001	3.4	0.0034	19.3

Table 5: Updated Summary of Gas Monitoring Data

3.3.4 Oxygen levels were occasionally depleted in BH104, methane levels were negligible and no discernible steady flow rates were recorded.

3.3.5 A gas screening value (GSV) has been calculated for each borehole using the maximum steady flow rate and both the maximum steady CH₄ and maximum steady CO₂. A maximum GSV of 0.021 l/hr was calculated for CO₂ in BH104. This is also reflective of the site-wide worst case GSV.

3.3.6 BS 8485 (2019) indicates a CS-1 condition applies where the GSV is below 0.07 l/hr.

- 3.3.7 The occasional low levels of oxygen in combination with the absence of methane and flow rates suggests the elevated carbon dioxide is likely due to geological weathering or microbial processes, associated with degradation of organic materials within the underlying soil.
- 3.3.8 In general, when monitoring wells are installed, small volumes of organic material become exposed to oxygen. This can result in biological respiration or oxidation of the material resulting in the production of carbon dioxide, and therefore artificially raising carbon dioxide levels within the monitoring well headspace. Such processes have a low gas generation potential, and do not produce ground gases at speed or in any meaningful volumes.
- 3.3.9 The CL:AIRE Research Bulletin RB17: A Pragmatic Approach To Ground Gas Risk Assessment (2012) document also indicates that natural soils can produce carbon dioxide, but due to the overall small and discrete pore spaces, the volume, migration and generation potential is so low as to not pose a significant risk to buildings. This is particularly common in glacial soils (which the Wigston and Thrussington Members are), where carbon dioxide concentrations can be recorded up to 15% without posing a risk to developments.
- 3.3.10 The same process can often give rise to elevated methane results in Alluvial soils due to the gradual accumulation within pore spaces, and dissociation into the well space.

3.4 Ternary Plot Assessment

- 3.4.1 To support the discussion, we have utilised a ternary plot as an aid to assist in our interpretation of ground gas monitoring results for the site. This process is outlined within the document produced by Wilson S, Collins F and Lavery R (2018) '*Using ternary plots for interpretation of ground gas monitoring results*', which provides a detailed analysis of utilising such plots for determination of characteristic gas situations. The ternary plot allows trends in gas composition to be identified and assists in identifying potential sources of measured ground gases.

The red circle added to the ternary plot above in the figure below shows the approximate range of results obtained for the during the monitoring period.

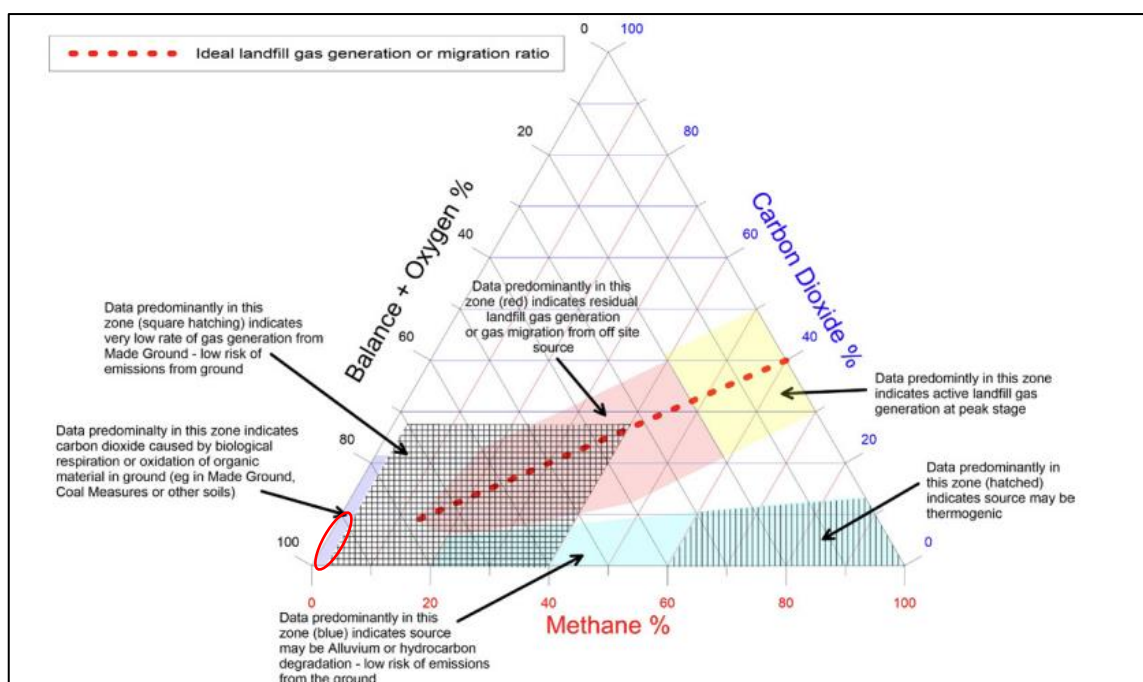


Figure 2: Ternary plot with zones indicating the potential gas source

- 3.4.2 Where aerobic biological respiration oxidises organic material, oxygen is consumed and as the oxygen concentration reduces, the carbon dioxide concentration increases in the same proportion. The zone this occupies on the ternary plot above is depicted as the blue transparent area and is characterised by minimal methane and low flow. The gas monitoring undertaken to date falls within this zone.
- 3.4.3 The 2018 technical paper indicates that microbial respiration of soils with a relatively low organic content can lead to carbon dioxide concentrations up to 21% v/v, and methane concentrations of up to around 3%, with minimal active gas generation. In such cases, the ground gases would be generated so slowly that it will not be emitted from the ground surface at a rate that is sufficient to pose a risk to an overlying development.
- 3.4.4 The recent NHBC NF94 Hazardous Ground Gas (2023) document also confirms the organic-rich soils present a low risk of ground gases as they cannot generate gases at a significant rate. Whilst this guidance document is aimed at housebuilders the principles for the lines of evidence approach to gas risk assessment is directly transferable to all development sites and provides the current best practice approach.
- 3.4.5 Based upon the CSM presented within the Arcadis report, ground gas conditions observed, and absence of any significant nearby source of ground gases identified, we can be confident that the processes resulting in slightly elevated carbon dioxide are not associated with any actively generating material, and therefore the 5% threshold used by Arcadis as a trigger for CS-2 conditions is not appropriate, nor reflective of the risk posed to the site.

3.5 Ground Gas Migration

- 3.5.1 The 2019 technical papers by Card et al. further expands on the subject of gas risk and presents three key migration mechanisms; pressure-driven flow, expansion and diffusion. The first two mechanisms are associated with changes in atmospheric conditions under specific ground models.
- 3.5.2 Pressure driven flow would be of concern where a large volume of gas can be moved through the subsurface at speed due to changes in atmospheric conditions. This mechanism could apply for the migration of gases from landfill sites; however, the pressure differential would need to be sustained across the flow path to drive the gas into a building. For this site, the shallow soils contain frequent clay and clayey materials, and no substantial source of ground gas has been identified in close proximity (<150 m). Therefore, the subsurface is unlikely to provide sufficient permeability ($< 1 \times 10^{-5} \text{m/s}$) to facilitate pressure driven flow, and the migration from distant gas sources are likely to dissipate or vent vertically prior to reaching the site. This is supported by low pressure events being captured in the monitoring rounds, without any discernible increase in flow or ground gases being detected.
- 3.5.3 Furthermore shallow groundwater has been encountered throughout the site, which would significantly inhibit the migration of ground gas onto the site.
- 3.5.4 Given the absence of large underground void spaces and connecting preferential migration pathways, expansion can also be ruled out as a mechanism of concern. Examples of this mechanism are reservoirs of gas in mineworkings or landfills migrating through shafts, faults and service runs. No methane has been detected, and there are no mineworkings or landfill sites within 250 m of the site.

- 3.5.5 From a review of the CSM, ground conditions at the site, and the negligible steady state flow rates detected, the applicable migration mechanism which could affect this development is considered to be via diffuse flow.
- 3.5.6 With a diffuse flow pathway for ground gas, the 2019 technical papers confirms a minimal risk to construction applies, by stating 'when gas flow is by diffusion there is no unsafe concentration in the ground'. This is because ground gases, even if present at elevated levels in the ground, will never migrate at a rate fast enough to create harmful concentrations within a structure.

3.6 Conclusions & Recommendations

- 3.6.1 Based upon our interpretation of the CSM, gas data obtained, and consideration of the onsite and offsite sources which could affect the proposed residential development, it is considered very unlikely that ground gases could migrate into the proposed structures on site at sufficient speed and volume to pose any viable risk.
- 3.6.2 Taking into account current guidance and best practice approach, Soiltechnics considers that a CS-1 classification applies, and on this basis, no ground gas protection measures are required to be installed within the development for the proposed residential development.

Appendix A Drawings



Legend

- Site Boundary
- Completed Site Investigation Locations
 - Cable Percussive Borehole
 - Dynamic Cone Penetration Location
 - Hand Excavated Pit
 - Trial Pit

Notes

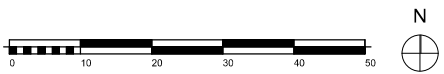
Symbols for investigation locations are representations of location only and unless otherwise specified, do not represent the true size of the feature.

Locations presented are indicative only.

TITLE:		COMPLETED SITE INVESTIGATION LOCATIONS	
SITE:		HILLTOP SHILTON	FARM, EARL
CLIENT:		MIDLAND HEART	
DRG No:		10056074-AUK-XX-XX-SK-ZZ-0004-P1-Completed SI	
PROJECT NUMBER:		10056074	
DATE:	05/07/2022	DRAWN BY:	RL
SCALE:	1:998	PRINT:	A3



Design & Consultancy
for natural and built assets



London | Birmingham | Leicester
0203 327 0381 | 0121 309 0071 | 0116 204 5800
rg-p.co.uk - design@rg-p.co.uk

All dimensions to be checked on site. Do not scale off this drawing for construction purposes.
This drawing is the copyright of the Architect, and not to be reproduced without their permission.
Ordnance Survey map information reproduced with permission of HM/SO Crown Copyright reserved
© 1913 Ltd. Trading as g-p-n.

Appendix B Exploratory Hole Logs

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446728.08

Ground Level (mAOD)
108.11
Northing (OS mN)
298313.52

Start Date
27/06/2022
End Date
28/06/2022

Scale
1:50
Sheet 1 of 2

Progress	Samples	Tests and Measurements				Strata		Depth (Thickness)	Level	Install/ Backfill
Date / Time Casing / DTW	Type - Depth (m)	Type - Depth (m) - Result	Fracture Details	TCR SCR RGD	Description	Legend				
2022/06/27 17:05 - / -	(D6) 0.20 (ES1) 0.20-0.30 (ES2) 0.40-0.50 (B7) 0.50-1.00	PID 0.20m <1ppm PID 0.40m <1ppm			Grass over very loose brown gravelly fine to coarse SAND with abundant rootlets. Gravel is fine to medium subangular to subrounded of flint and chert. [TOPSOIL] Loose dark brownish grey slightly gravelly clayey fine to coarse SAND with occasional rootlets. Gravel is fine to coarse subrounded to rounded of chert. Slight organic odour throughout. [WIGSTON MEMBER] Loose light yellowish orangish brown slightly gravelly clayey fine to coarse SAND. Gravel is fine to medium subrounded to rounded of flint and chert. [WIGSTON MEMBER]			(0.40) 0.40 (0.50) 0.90	107.71 107.21	
	(D8) 1.00 (ES3) 1.00	PID 1.00m <1ppm SPT(C) 1.20m N=5 (1,2/1,1,2,1)								
	(D9) 1.75							(1.70)		
	(B10) 2.00-2.45 (ES4) 2.00	PID 2.00m <1ppm SPT(C) 2.00m N=3 (1,1/1,1,1,0)								
	(D11) 2.75									
	(B12) 3.00-3.45 (SPTLS) 3.00-3.45	PID 3.00m <1ppm SPT(S) 3.00m N=5 (1,2/1,1,1,2)			Soft light brown silty sandy CLAY with occasional gravel. Gravel is fine to medium subrounded of chert and flint. Sand is fine to medium. [THRUSINGTON MEMBER]			2.60	105.51	
	(D13) 3.75									
	(UT14) 4.00-4.45 19 blows 90%rec									
	(D15) 4.45-4.50									
	(B16) 5.00-5.45 (SPTLS) 5.00-5.45	SPT(S) 5.00m N=19 (3,3/4,5,5,5)			Stiff reddish brown slightly gravelly sandy CLAY. Gravel is fine to medium subangular to subrounded of light grey siltstone and chert. [GUNTORPE MEMBER]			5.00	103.11	
	(D17) 5.75									
	(UT18) 6.00-6.45 30 blows 90%rec									
	(D19) 6.45-6.50									
	(B21) 7.00-7.50 (D20) 7.00 (SPTLS) 7.00-7.33	SPT(S) 7.00m N>50 (5,9/14,14,20,6 for 30mm)								
	(D22) 7.75									
2022/06/27 08:58 - / -	(B23) 8.00-8.50 (SPTLS) 8.00-8.38	SPT(S) 8.00m N>50 (5,9/13,16,21,0 for 0mm)								
2022/06/28 08:59 - / -	(D24) 8.75									
	(B25) 9.00-9.50 (SPTLS) 9.00-9.38	SPT(S) 9.00m N>50 (6,9/15,15,20,0 for 0mm)								
	(D26) 9.75									
2022/06/28 09:32 - / -	(SPTLS) 10.00-10.33	SPT(S) 10.00m N>50 (6,11/15,23,12 for 30mm)								

DRILLING TECHNIQUE		HOLE / CASING DIAMETER			CHISELLING			WATER OBSERVATIONS				FLUSH DETAILS				WATER ADDED		
From	To	Type	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Duration	Date/Time	Strike	Rest	Mins	Casing	Sealed	From	To	Litres
0.00	1.20	Inspection Pit Cable Percussion								27/06/2022 13:25	1.50	1.25	20					

INSTRUMENTS			WELL SCREEN DESIGN				REMARKS			
Name	Type	m AGL	Well Name	From	To	Dia.				
BH101	Standpipe	0.000	BH101	1.00	2.50	50	Terminated at target depth following SPT refusals. No visual evidence of contamination. Olfactory evidence limited to organic odour from 0.4-0.9m. No information available for hole/casing diameter, chiselling, flush details or water added.			

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446768.35

Ground Level (mAOD)
105.89
Northing (OS mN)
298355.92

Start Date
23/06/2022
End Date
27/06/2022

Scale
1:50
Sheet 1 of 2

Progress	Samples	Tests and Measurements				Strata		Depth (Thickness)	Level	Install/ Backfill
Date / Time Casing / DTW	Type - Depth (m)	Type - Depth (m) - Result	Fracture Details	TCR SCR RGD	Description	Legend				
2022/06/23 16:23 - / -	(D4) 0.50 (ES1) 0.50	PID 0.50m <1ppm			Grass over loose brown gravelly clayey SAND with abundant rootlets. Gravel is fine to medium subangular to subrounded of chert and flint. [TOPSOIL]			(0.90)		
	(ES2) 0.90-1.00 (D5) 1.00	PID 0.90m <1ppm			Medium dense dark reddish brown very clayey gravelly fine to coarse SAND with occasional rootlets. Gravel is fine to coarse subangular to rounded of chert and flint. [WIGSTON MEMBER]			0.90	104.99	
2022/06/23 17:23 - / -		SPT(C) 1.20m N=21 (2,2/4,6,5,6)						(1.60)		
2022/06/24 08:46 - / -	(D6) 1.75	SPT(C) 2.00m N=13 (3,4/3,3,4,3)						2.50	103.39	
	(ES3) 2.50 (D7) 2.75	PID 2.50m 6.1ppm			Soft brownish red mottled grey slightly gravelly very sandy CLAY. Gravel is fine to medium subrounded to subangular of chert and siltstone. Sand is fine to coarse. Pockets of grey silt throughout. [THRUSINGTON MEMBER]			(1.50)		
	(UT8) 3.00-3.45 13 blows 80%rec									
	(D9) 3.45-3.50 (B10) 3.50-4.00				Becomes firm					
	(SPTLS11) 4.00-4.45	SPT(S) 4.00m N=13 (2,3/3,2,4,4)			Firm dark red mottled grey slightly sandy CLAY with occasional silt pockets Sand is fine to coarse [THRUSINGTON MEMBER]			4.00	101.89	
	(D12) 4.75									
	(U13) 5.00-5.45 32 blows 95%rec							(2.10)		
	(D14) 5.45-5.50									
	(SPTLS15) 6.00-6.38	SPT(S) 6.00m N>50 (6,8/12,13,25,0 for 0mm)			Very stiff friable dark brownish red slightly silty CLAY with rare bands of siltstone throughout. [GUNTORPE MEMBER]			6.10	99.79	
	(D16) 6.75									
	(B18) 7.00-7.50 (SPTLS17) 7.00-7.39	SPT(S) 7.00m N>50 (3,5/10,13,19,8 for 15mm)								
	(D19) 7.75									
	(B21) 8.00-8.50 (SPTLS20) 8.00-8.27	SPT(S) 8.00m N>50 (5,12/23,27 for 45mm)						(4.17)		
	(D22) 8.75									
	(B24) 9.00-9.50 (SPTLS23) 9.00-9.43	SPT(S) 9.00m N>50 (8,11/13,13,13,11 for 45mm)								
2022/06/25 17:12 - / -										
2022/06/27 09:12 - / -	(D25) 9.75									
	(SPTLS26) 10.00-10.26	SPT(S) 10.00m N>50 (6,11/24,26 for 40mm)								

DRILLING TECHNIQUE			HOLE / CASING DIAMETER				CHISELLING			WATER OBSERVATIONS						FLUSH DETAILS				WATER ADDED		
From	To	Type	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Duration	Date/Time	Strike	Rest	Mins	Casing	Sealed	From	To	Rtn%	Type	From	To	Litres
0.00	1.20	Inspection Pit																				
1.20	10.27	Cable Percussion																				

INSTRUMENTS			WELL SCREEN DESIGN				REMARKS			
Name	Type	m AGL	Well Name	From	To	Dia.				
BH102	Standpipe	0.000	BH102	1.00	2.50	50	Terminated at target depth following SPT refusals. No visual or olfactory evidence of contamination identified. No water observations made. No information available for hole/casing diameter, chiselling, flush details, or water added.			

Scale
1:50

Sheet 1 of 2

INSTRUMENTS			WELL SCREEN DESIGN				REMARKS
Name	Type	m AGL	Well Name	From	To	Dia.	
BH103	Standpipe	0.000	BH103	2.00	5.00	50	Terminated at target depth following SPT refusals. No visual or olfactory evidence of contamination identified. No water observations made. No information available for hole/casing diameter, chiselling, flush details, or water added.

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446795.88

Ground Level (mAOD)
114.50
Northing (OS mN)
298258.79

Start Date
28/06/2022
End Date
28/06/2022

Scale
1:50
Sheet 1 of 2

Progress	Samples	Tests and Measurements				Strata		Depth (Thickness)	Level	Install/ Backfill
Date / Time Casing / DTW	Type - Depth (m)	Type - Depth (m) - Result	Fracture Details	TCR SCR RGD	Description	Legend				
2022/06/28 11:34	(B5) 0.10-0.50				CONCRETE no reinforcement			0.10	114.40	
	(ES1) 0.30-0.40	PID 0.30m <1ppm			[MADE GROUND]			(0.50)		
	(B8) 0.60-1.10				MADE GROUND: Very loose light brown very gravelly fine to coarse sand with frequent cobbles of brick and chert. Gravel is fine to coarse subrounded to angular of chert, brick and concrete.			0.60	113.90	
	(ES2) 0.60-0.70	PID 0.70m <1ppm			[MADE GROUND]					
	(D7) 1.20				Loose dark brown slightly gravelly clayey fine to coarse SAND. Gravel is fine to medium subangular to subrounded of chert.			(0.90)		
	(UT8) 1.20-1.65				[WIGSTON MEMBER]					
	13 blows 100%rec							1.50	113.00	
	(B10) 1.50-2.00				Soft dark reddish brown slightly gravelly sandy CLAY. Gravel is fine to medium subangular to subrounded of siltstone. Sand is fine to coarse.			(0.90)		
	(D9) 1.65-1.70				[THRUSINGTON MEMBER]					
	(B11) 2.00-2.45	SPT(S) 2.00m N=6								
	(SPTLS) 2.00-2.45	(1,1/1,1,2,2)								
	(ES3) 2.40-2.50	PID 2.50m <1ppm			Very soft locally soft dark reddish brown slightly gravelly sandy CLAY with rare cobbles of rounded chert. Gravel is fine to medium subrounded to rounded of chert. Sand is fine to coarse. Black organic matter and organic odour noted throughout.			2.40	112.10	
	(D12) 2.70				[THRUSINGTON MEMBER]			(1.40)		
	(UT13) 3.00-3.45									
	20 blows 100%rec									
	(D14) 3.45-3.50									
	(D15) 3.80				Very soft brownish red mottled black and yellow slightly gravelly sandy CLAY. Gravel is fine to coarse subrounded to rounded of chert. Sand is fine to coarse. Pockets of grey silt and black organic matter throughout.			3.80	110.70	
	(B16) 4.00-4.45	PID 4.00m <1ppm			[THRUSINGTON MEMBER]			(1.20)		
	(SPTLS4) 4.00-4.45	SPT(S) 4.00m N=3								
		(2,1/1,1,0,1)								
	(D17) 4.75									
	(B18) 5.00-5.45	SPT(S) 5.00m N=10			Soft brownish red silty very sandy CLAY. Sand is fine to medium. Sand and silt found as pockets throughout.			5.00	109.50	
	(SPTLS) 5.00-5.45	(1,1/2,2,3,3)			[THRUSINGTON MEMBER]			(1.00)		
	(D19) 5.75									
	(B20) 6.00-6.45	SPT(S) 6.00m N=7						6.00	108.50	
	(SPTLS) 6.00-6.45	(1,0/1,2,2,2)			Medium dense dark reddish brown very silty fine to medium SAND.					
					[THRUSINGTON MEMBER]					
	(D21) 6.75									
	(B22) 7.00-7.50									
	(B23) 8.00-8.45	SPT(S) 8.00m N=19								
	(SPTLS) 8.00-8.45	(1,2/3,4,5,7)			Becoming medium dense			(4.30)		
	(D24) 8.75									
	(B25) 9.00-9.45	SPT(S) 9.00m N=23								
	(SPTLS) 9.00-9.45	(1,1/5,5,6,7)								
	(D26) 9.75									
		SPT(S) 10.00m N=28								
		(4,3/5,5,7,11)								

DRILLING TECHNIQUE			HOLE / CASING DIAMETER				CHISELLING			WATER OBSERVATIONS						FLUSH DETAILS				WATER ADDED		
From	To	Type	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Duration	Date/Time	Strike	Rest	Mins	Casing	Sealed	From	To	Rtn%	Type	From	To	Litres
0.00	1.20	Inspection Pit								28/06/2022 14:33	6.00	5.80	20									
1.20	12.40	Cable Percussion																				

INSTRUMENTS			WELL SCREEN DESIGN				REMARKS														
Name	Type	m AGL	Well Name	From	To	Dia.															
BH104	Standpipe	0.000	BH104	2.00	12.00	50	Terminated at target depth. No visual evidence of contamination identified. Olfactory evidence limited to organic odour from 2.4-5m. No information available for hole/casing diameter, chiselling, flush details, or water added.														

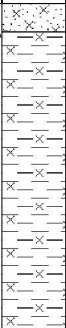
Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446795.88

Ground Level (mAOD)
114.50
Northing (OS mN)
298258.79

Start Date
28/06/2022
End Date
28/06/2022

Scale
1:50
Sheet 2 of 2

Progress	Samples	Tests and Measurements				Strata		Depth (Thickness)	Level	Install/ Backfill
Date / Time Casing / DTV	Type - Depth (m)	Type - Depth (m) - Result	Fracture Details	TCR SCR RGD	Description	Legend				
2022/06/28 18:25 - / -	(D27) 10.75	SPT(S) 11.00m N=38 (5,5/7,9,11,11)			Medium dense dark reddish brown very silty fine to medium SAND. [THRUSSINGTON MEMBER] Very stiff dark brownish red slightly gravelly silty CLAY. Gravel is fine to medium subangular of siltstone. [GUNTORPE MEMBER]			10.30	104.20	
	(SPTLS) 11.00-11.45									
	(B28) 11.50-12.00	SPT(S) 12.00m N>50 (5,7/24,12,11,2 for 65mm)						(2.10)		
	(SPTLS) 12.00-12.40									
								12.40	102.10	

DRILLING TECHNIQUE			HOLE / CASING DIAMETER				CHISELLING			WATER OBSERVATIONS						FLUSH DETAILS				WATER ADDED		
From	To	Type	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Duration	Date/Time	Strike	Rest	Mins	Casing	Sealed	From	To	Rtn%	Type	From	To	Litres
0.00	1.20	Inspection Pit								28/06/2022 14:33	6.00	5.80	20									
1.20	12.40	Cable Percussion																				

INSTRUMENTS			WELL SCREEN DESIGN				REMARKS														
Name	Type	m AGL	Well Name	From	To	Dia.	Terminated at target depth. No visual evidence of contamination identified. Olfactory evidence limited to organic odour from 2.4-5m. No information available for hole/casing diameter, chiselling, flush details, or water added.														
BH104	Standpipe	0.000	BH104	2.00	12.00	50															

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446839.90

Ground Level (mAOD)
111.78
Northing (OS mN)
298323.74

Start Date
21/06/2022
End Date
22/06/2022

Scale
1:50
Sheet 1 of 2

Progress	Samples	Tests and Measurements				Strata		Depth (Thickness)	Level	Install/ Backfill
Date / Time Casing / DTW	Type - Depth (m)	Type - Depth (m) - Result	Fracture Details	TCR SCR RGD	Description	Legend				
2022/06/21 16:18 - / -	(ES1) 0.20-0.30 (D3) 0.30	PID 0.20m <1ppm			MADE GROUND: Grass over dark brown silty gravelly fine sand with abundant rootlets. Gravel is fine to coarse subangular of brick, concrete, siltstone and limestone. [MADE GROUND]			(0.70)		
	(ES2) 0.70-0.80 (D4) 1.00	PID 0.80m <1ppm			Loose orangish brown speckled black silty medium SAND with frequent clay pockets and black silt lenses. [WIGSTON MEMBER]			0.70	111.08	
	(B5) 1.20-1.65 (D6) 1.75	PID 1.20m <1ppm SPT(C) 1.20m N=11 (1,2/2,3,3,3)						(2.30)		
	(B7) 2.00-2.45 (D8) 2.75	PID 1.80m <1ppm								
	(B9) 3.00-3.45 (D10) 3.75	SPT(C) 2.00m N=9 (2,3/2,2,3,2)								
	(B11) 4.00-4.45 (D12) 4.75	SPT(C) 3.00m N=4 (1,1/1,1,1,1)			Very loose orangish brown slightly clayey very silty fine SAND with frequent silt pockets. [WIGSTON MEMBER]			3.00	108.78	
	(B13) 5.00-5.45 (D14) 5.75	SPT(C) 4.00m N=1 (0,0/0,0,0,1)								
	(B16) 6.00-6.45 (SPTLS15) 6.00-6.45	SPT(S) 5.00m N=2 (0,0/0,1,0,1)						(5.00)		
	(D17) 6.75 (B19) 7.00-7.45 (SPTLS18) 7.00-7.45	SPT(S) 6.00m N=0 (0,0/0,0,0,0)								
	(D20) 7.75 (B) 8.00-8.45 (SPTLS21) 8.00-8.45	SPT(S) 7.00m N=10 (1,2/2,2,3,3)								
	(D22) 8.75 (U23) 9.00-9.45 31 blows 100%rec	SPT(S) 8.00m N=14 (1,2/3,3,4,4)						8.00	103.78	
	(D24) 9.45-9.50 (D25) 10.00	SPT(S) 10.00m N=26 (4,4/5,6,6,7)			Firm orangish brown sandy SILT with occasional clay pockets. Sand is fine. [THRUSINGTON MEMBER]			(1.00)		
								9.00	102.78	
					Stiff slightly sandy gravelly CLAY Gravel is fine to medium subrounded of siltstone and quartzite. [GUNTHORPE MEMBER]			(1.45)		

DRILLING TECHNIQUE			HOLE / CASING DIAMETER				CHISELLING			WATER OBSERVATIONS						FLUSH DETAILS				WATER ADDED		
From	To	Type	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Duration	Date/Time	Strike	Rest	Mins	Casing	Sealed	From	To	Rtn%	Type	From	To	Litres
0.00	1.20	Inspection Pit	150	10.45	150	9.00				22/06/2022 14:00	4.00	2.80	20	3.00	5.00							
1.20	10.45	Cable Percussion																				

INSTRUMENTS			WELL SCREEN DESIGN				REMARKS														
Name	Type	m AGL	Well Name	From	To	Dia.															
BH105	Standpipe	0.000	BH105	2.00	8.00	50	Terminated at target depth No visual or olfactory evidence of contamination identified. No information available for chiselling, flush details, or water added.														

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446852.64

Ground Level (mAOD)
114.04
Northing (OS mN)
298292.14

Start Date
22/06/2022
End Date
22/06/2022

Scale
1:50
Sheet 1 of 2

Progress	Samples	Tests and Measurements			Strata		Depth (Thickness)	Level	Install/ Backfill
Date / Time Casing / DTW	Type - Depth (m)	Type - Depth (m) - Result	Fracture Details	TCR SCR RGD	Description	Legend			
	(D4) 0.20 (ES1) 0.20-0.30 (B6) 0.50-1.00 (D5) 0.50 (ES2) 0.80-0.90				MADE GROUND: Grass over brown silty gravelly fine sand. Gravel is fine to coarse subangular to subrounded of brick, concrete, sandstone and mudstone. [MADE GROUND] MADE GROUND: Orangish brown mottled cream slightly sandy gravelly clay. Sand is fine to medium. Gravel is fine to medium subangular to subrounded of brick fragments, mudstone and sandstone. Possible reworked natural material. [MADE GROUND]		(0.30) 0.30	113.74	
	(ES3) 1.55-1.65 (D7) 1.75	SPT(C) 1.20m N=6 (1,2/2,1,2,1)					(1.70)		
		SPT(C) 2.00m N=5 (1,0/1,1,1,2)			Loose reddish brown slightly clayey very gravelly fine to coarse SAND with occasional pockets of light grey silt. Gravel is fine to medium subangular to subrounded of chert and flint. [WIGSTON MEMBER]		2.00	112.04	
	(D8) 2.75 (B9) 3.00-3.45 (SPTLS) 3.00-3.45	SPT(S) 3.00m N=4 (1,0/1,1,1,1)					(3.00)		
	(D10) 3.75 (B11) 4.00-4.45 (SPTLS) 4.00-4.45	SPT(S) 4.00m N=12 (3,3/3,3,3,3)							
	(D12) 4.75 (B16) 5.00-5.45	SPT(S) 5.00m N=0 (0,0/0,0,0,0)			Very soft red very sandy SILT. Sand is fine to medium. [THRUSINGTON MEMBER]		5.00	109.04	
	(D13) 5.75 (B17) 6.00-6.45 (SPTLS) 6.00-6.45	SPT(S) 6.00m N=2 (0,0/0,0,1,1)							
	(D14) 6.75 (B18) 7.00-7.45 (SPTLS) 7.00-7.45	SPT(S) 7.00m N=2 (1,0/1,0,0,1)					(4.50)		
	(D15) 7.75 (B19) 8.00-8.45 (SPTLS) 8.00-8.45	SPT(S) 8.00m N=3 (1,0/0,1,1,1)							
	(D20) 8.75 (B21) 9.00-9.45 (SPTLS) 9.00-9.45	SPT(S) 9.00m N=7 (1,0/1,1,2,3)							
	(D22) 9.75 (SPTLS23) 10.00-10.45	SPT(S) 10.00m N=32 (3,5/7,7,8,10)			Very stiff dark red slightly gravelly sandy CLAY with occasional siltstone inclusions. Gravel is fine to medium sub-rounded of chert. Sand is fine to coarse. [GUNTORPE MEMBER]		9.50 (0.80)	104.54	

DRILLING TECHNIQUE		HOLE / CASING DIAMETER			CHISELLING			WATER OBSERVATIONS				FLUSH DETAILS				WATER ADDED		
From	To	Type	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Duration	Date/Time	Strike	Rest	Mins	Casing	Sealed	From	To	Litres
0.00	1.20	Inspection Pit Cable Percussion								23/06/2022 11:00	7.00	5.70	20					

INSTRUMENTS			WELL SCREEN DESIGN				REMARKS	
Name	Type	m AGL	Well Name	From	To	Dia.		
BH106	Standpipe	0.000	BH106	6.00	7.50	50	Terminated at target depth. No visual or olfactory evidence of contamination identified. No information available for hole/casing diameter, chiselling, flush details, or water added.	

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446852.64

Ground Level (mAOD)
114.04
Northing (OS mN)
298292.14

Start Date
22/06/2022
End Date
22/06/2022

Scale
1:50
Sheet 2 of 2

Progress	Samples	Tests and Measurements				Strata		Depth (Thickness)	Level	Install/ Backfill
Date / Time Casing / DTW	Type - Depth (m)	Type - Depth (m) - Result	Fracture Details	TCR SCR RGD	Description	Legend				
	(B24) 10.30-10.80				Very stiff dark red slightly gravelly sandy CLAY with occasional siltstone inclusions. Gravel is fine to medium sub-rounded of chert. Sand is fine to coarse. [GUNTORPE MEMBER]			10.30	103.74	
	(B25) 11.00-11.45 (SPTLS) 11.00-11.45	SPT(S) 11.00m N=36 (4, 4/7, 10, 9, 10)			Very stiff dark red CLAY with frequent light grey siltstone inclusions. [GUNTORPE MEMBER]			(2.20)		
	(D26) 11.75									
	(B27) 12.00-12.45 (SPTLS) 12.00-12.45	SPT(S) 12.00m N=45 (4, 6/7, 10, 13, 15)						12.50	101.54	

DRILLING TECHNIQUE			HOLE / CASING DIAMETER				CHISELLING			WATER OBSERVATIONS						FLUSH DETAILS				WATER ADDED		
From	To	Type	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Duration	Date/Time	Strike	Rest	Mins	Casing	Sealed	From	To	Rtn%	Type	From	To	Litres
0.00	1.20	Inspection Pit								23/06/2022 11:00	7.00	5.70	20									
1.20	12.50	Cable Percussion																				

INSTRUMENTS			WELL SCREEN DESIGN				REMARKS														
Name	Type	m AGL	Well Name	From	To	Dia.															
BH106	Standpipe	0.000	BH106	6.00	7.50	50	Terminated at target depth. No visual or olfactory evidence of contamination identified. No information available for hole/casing diameter, chiselling, flush details, or water added.														

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446767.22

Ground Level (mAOD)
111.36
Northing (OS mN)
298296.61

Start Date
24/06/2022
End Date
24/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES	TESTS	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description	Legend			
(ES1) 0.30	PID 0.30m <1ppm	MADE GROUND: Grass over brown slightly clayey gravelly fine to coarse sand with frequent rootlets. Gravel is fine to coarse angular to subrounded of chert, brick, concrete, glass, plastic ceramic and rope. Frequent cobbles of brick and concrete. [MADE GROUND]		(0.50)	110.86	
(ES2) 0.80	PID 0.80m <1ppm	MADE GROUND: Dark brown clayey gravelly fine to coarse sand. Gravel is fine to coarse angular to subrounded of chert flint and ceramic. Slight Organic odour noted throughout. [MADE GROUND]		0.50 (0.40)		
(ES3) 1.00	PID 1.00m <1ppm	Dark red very clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to medium of chert and flint. [WIGSTON MEMBER]		0.90 (0.30)	110.46	
				1.20	110.16	

PLAN DETAILS		WATER OBSERVATIONS					INSTRUMENTS			
0.5 0.5 Shoring / Support: N/A Stability: Stable Long Axis Orientation:		Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
		REMARKS								
		Target depth achieved No visual evidence of gross contamination identified within hand pit. Olfactory evidence limited to organic odour in Made Ground from 0.5-0.9m. No water observations made. No available information on instrumentation Long axis orientation not available								

Project
Hilltop Farm
Client
Midland Heart

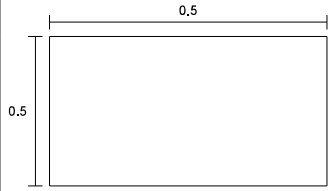
Project No.
10056074
Easting (OS mE)
446794.75

Ground Level (mAOD)
115.02
Northing (OS mN)
298247.32

Start Date
24/06/2022
End Date
24/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description		Legend				
(ES1) 0.40	PID 0.40m <1ppm	CONCRETE no reinforcement [MADE GROUND]			(0.10)	114.92		
		MADE GROUND: Light brown slightly gravelly fine to coarse sand with frequent cobbles of brick. Gravel is fine to medium subangular of concrete. [MADE GROUND]			0.10			
		Dark brownish red slightly clayey gravelly fine to coarse SAND with occasional cobbles of chert. Gravel is fine to coarse subangular to subrounded flint and chert. [WIGSTON MEMBER]			(0.20)	114.72		
					0.30			
					(0.70)			
					1.00	114.02		

PLAN DETAILS		WATER OBSERVATIONS				INSTRUMENTS		
		Date/Time	Strike	Rest	Mins	Remarks	Name	Type
Shoring / Support: N/A Stability: Stable Long Axis Orientation:								
		REMARKS						
		Terminated due to obstruction (large cobble) No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available						

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446815.68

Ground Level (mAOD)
114.01
Northing (OS mN)
298279.89

Start Date
24/06/2022
End Date
24/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description		Legend				
(ES1) 0.50	PID 0.50m <1ppm	CONCRETE no reinforcement [MADE GROUND]			(0.20)	113.81		
		MADE GROUND: Slightly gravelly sandy cobbles of whole and part brick. Gravel is fine to coarse subrounded to angular of brick and plastic. Sand is fine to medium. [MADE GROUND]			0.20			
		MADE GROUND: Light brown slightly clayey gravelly fine to coarse sand. Gravel is fine to medium subangular to subrounded of brick, concrete, ceramic and chert. [MADE GROUND]			(0.20)			
					0.40			
(ES2) 1.00	PID 1.00m <1ppm	Reddish brown slightly clayey gravelly fine to coarse SAND. Gravel is fine to medium subangular to subrounded of flint and chert. [WIGSTON MEMBER]			(0.40)	113.61		
					0.80			
					(0.80)			
					1.30			

PLAN DETAILS		WATER OBSERVATIONS				INSTRUMENTS		
		Date/Time	Strike	Rest	Mins	Remarks	Name	Type
Shoring / Support: N/A Stability: Stable Long Axis Orientation:								
		REMARKS						
		Target depth achieved No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available						

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446817.66

Ground Level (mAOD)
112.61
Northing (OS mN)
298302.36

Start Date
24/06/2022
End Date
24/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result		Description	Legend				
(ES1) 0.40	PID	0.40m	<1ppm	CONCRETE no reinforcement [MADE GROUND]		(0.20)	112.41	
				MADE GROUND: Light brown slightly clayey gravelly fine to coarse sand. Gravel is fine to coarse angular to subrounded of concrete and ceramic. [MADE GROUND]		(0.30)		
(ES2) 0.60	PID	0.60m	<1ppm	Reddish brown clayey gravelly fine to coarse SAND. Gravel is fine to medium subrounded of flint and chert. [WIGSTON MEMBER]		0.50	112.11	
						(0.80)		
						1.30	111.31	
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								

PLAN DETAILS		WATER OBSERVATIONS					INSTRUMENTS			
0.5 0.5 Shoring / Support: N/A Stability: Stable Long Axis Orientation:		Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
		REMARKS								
		Target depth achieved No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available								

Project
Hilltop Farm
Client
Midland Heart

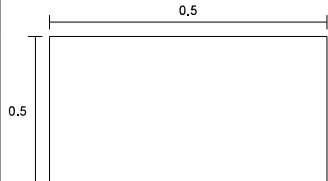
Project No.
10056074
Easting (OS mE)
446751.93

Ground Level (mAOD)
114.10
Northing (OS mN)
298257.20

Start Date
28/06/2022
End Date
28/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES	TESTS	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description	Legend			
(ES1) 0.10-0.20	PID 0.20m <1ppm	MADE GROUND: Very loose dark brown gravelly fine to coarse sand with frequent rootlets and cobbles of metal and concrete. Gravel is fine to coarse angular to subrounded of concrete metal plastic rope and chert. Slight organic odour noted throughout. [MADE GROUND]		(1.50)		
				1.50	112.60	

PLAN DETAILS		WATER OBSERVATIONS				INSTRUMENTS		
 Shoring / Support: N/A Stability: Stable Long Axis Orientation:		Date/Time	Strike	Rest	Mins	Remarks	Name	Type
		REMARKS						
		Inspection pit in material stockpile which is heavily over grown with weeds. Terminated at target depth. No visual evidence of gross contamination. Organic odour noted throughout. Long axis orientation not available No water observations made. No available information on instrumentation						

Project
Hilltop Farm
Client
Midland Heart

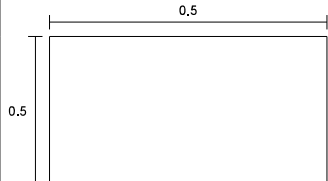
Project No.
10056074
Easting (OS mE)
446745.03

Ground Level (mAOD)
114.10
Northing (OS mN)
298265.55

Start Date
28/06/2022
End Date
28/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES	TESTS	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description	Legend			
(ES1) 0.20-0.30	PID 0.30m <1ppm	MADE GROUND: Dark brown slightly gravelly cobbly fine to coarse sand. Cobbles are sub-rounded to angular of wood, metal, plastic and tyres. Gravel is fine to coarse angular of wood, plastic, metal and rope. Organic odour noted throughout. [MADE GROUND]		(1.50)		
				1.50	112.60	

PLAN DETAILS		WATER OBSERVATIONS				INSTRUMENTS		
		Date/Time	Strike	Rest	Mins	Remarks	Name	Type
Shoring / Support: N/A Stability: Stable Long Axis Orientation:								
		REMARKS						
		Inspection pit in material stockpile which is heavily over grown with weeds. Terminated at target depth. No visual evidence of gross contamination. Organic odour noted throughout. No water observations made. No available information on instrumentation Long axis orientation not available						

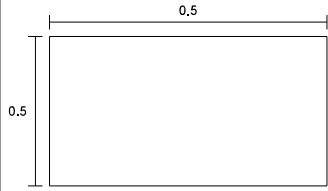
Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446820.29

Ground Level (mAOD)
110.80
Northing (OS mN)
298328.01

Start Date
28/06/2022
End Date
28/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill																
Depth - Type	Type - Depth - Result	Description	Legend																					
(ES1) 0.30	PID 0.30m 1.6ppm	MADE GROUND: Grass over light brown slightly silty slightly gravelly fine to coarse sand. Gravel is fine to medium angular to subrounded of glass and chert. [MADE GROUND]		(0.30)	110.50																			
PLAN DETAILS  Shoring / Support: N/A Stability: Stable Long Axis Orientation: WATER OBSERVATIONS <table border="1"> <thead> <tr> <th>Date/Time</th> <th>Strike</th> <th>Rest</th> <th>Mins</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> INSTRUMENTS <table border="1"> <thead> <tr> <th>Name</th> <th>Type</th> <th>m AGL</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> REMARKS Terminated at target depth. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available									Date/Time	Strike	Rest	Mins	Remarks						Name	Type	m AGL			
Date/Time	Strike	Rest	Mins	Remarks																				
Name	Type	m AGL																						

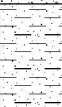
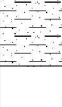
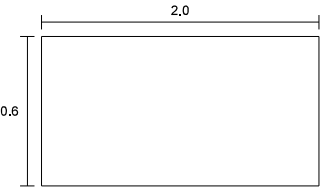
Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446722.01

Ground Level (mAOD)
106.69
Northing (OS mN)
298331.58

Start Date
21/06/2022
End Date
21/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill		
Depth - Type	Type - Depth - Result	Description	Legend							
(B3) 0.40 (D2) 0.40 (ES1) 0.40	PID 0.40m <1ppm	Light greyish brown very gravelly fine to coarse SAND with frequent roots and rootlets Gravel is fine to coarse subangular to subrounded of chert. [TOPSOIL]		(0.40)	106.29					
		Light orangish brown slightly clayey gravelly fine to coarse SAND. Gravel is fine to medium subrounded to rounded of chert and quartz. [WIGSTON MEMBER]					(0.80)			
(B6) 1.20 (D5) 1.20 (ES4) 1.20	PID 1.20m <1ppm	Dark red slightly sandy slightly gravelly CLAY. Gravel is fine subrounded of flint and chert. [THRUSINGTON MEMBER]		1.20	105.49					
(B7) 2.20	PID 2.20m <1ppm				(2.00)					
(B10) 3.20 (D9) 3.20 (ES8) 3.20	HV(1) 3.00m 80 (kPa) HV(2) 3.00m 55 (kPa) HV(3) 3.00m 50 (kPa)	Hand Shear Vane found clay to be firm from 3m		3.20	103.49					
	PID 3.20m <1ppm									
PLAN DETAILS		WATER OBSERVATIONS			INSTRUMENTS					
 Shoring / Support: N/A Stability: Stable Long Axis Orientation:		Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
		REMARKS								
		Hole terminated at hard light grey Siltstone band. Unable to continue excavations. No visual or olfactory evidence of contamination identified. No water observations made. Long axis orientation not available No available information on instrumentation								

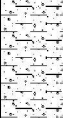
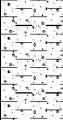
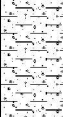
Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446748.83

Ground Level (mAOD)
106.74
Northing (OS mN)
298344.95

Start Date
21/06/2022
End Date
21/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill					
Depth - Type	Type - Depth - Result	Description		Legend									
(B3) 0.30 (D2) 0.30 (ES1) 0.30	PID 0.30m <1ppm	MADE GROUND: Grass over light brown gravelly fine to coarse sand with abundant rootlets. Gravel is fine to coarse subangular to rounded of metal, ceramic and glass. [MADE GROUND]				(0.30)	106.44						
		Light orangish brown slightly clayey gravelly fine to coarse SAND with occasional rootlets. Gravel is fine to coarse subangular to rounded of chert and quartz. [WIGSTON MEMBER]				(0.50)							
	PID 0.80m <1ppm	Dark brownish red slightly gravelly very clayey fine to coarse SAND. Gravel is Fine to coarse subrounded to angular of chert, quartz and light grey siltstone. [WIGSTON MEMBER]				(0.80)	105.94						
		Dark red very sandy gravelly CLAY with rare cobbles of light grey siltstone/sandstone. Gravel is fine to medium subangular to subrounded of chert and siltstone. Sand is fine to coarse. [THRUSINGTON MEMBER]				(0.60)							
(B9) 1.40 (D5) 0.80 (ES4) 0.80	PID 1.40m <1ppm					1.40	105.34						
(B10) 3.00						(2.00)							
	HV(1) 3.30m 68 (kPa) HV(2) 3.30m 55 (kPa) HV(3) 3.30m 80 (kPa)	Hand Shear Vane found clay to be firm from 3.3m				3.40	103.34						
PLAN DETAILS				WATER OBSERVATIONS			INSTRUMENTS						
2.0 0.6 Shoring / Support: N/A Stability: Stable Long Axis Orientation:				Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL		
				REMARKS									
				Hole terminated due to excavator reach and capability. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available									

PLAN DETAILS		WATER OBSERVATIONS					INSTRUMENTS			
2.0 0.6 Shoring / Support: N/A Stability: Stable Long Axis Orientation:		Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
		REMARKS								
		Hole terminated due to excavator reach and capability. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available								

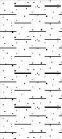
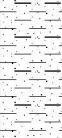
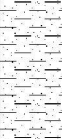
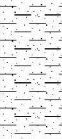
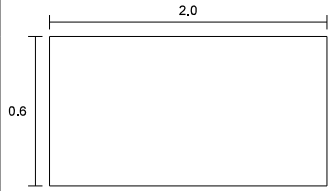
Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446760.71

Ground Level (mAOD)
105.64
Northing (OS mN)
298359.63

Start Date
21/06/2022
End Date
21/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth - Type	Type - Depth - Result	Description	Legend						
(B1) 0.50 (D2) 0.50 (ES3) 0.50	PID 0.50m <1ppm	Grass over orangish brown slightly silty gravelly SAND with frequent rootlets. Gravel is fine to coarse subrounded to rounded of chert and quartz. Sand is fine to coarse. [TOPSOIL]				0.50	105.14		
		Dark brownish red slightly clayey very gravelly fine to coarse SAND with occasional rootlets. Gravel is fine to coarse subangular to rounded of chert and quartz. [WIGSTON MEMBER]				0.50			
(B4) 2.00 (D5) 2.00 (ES6) 2.00	PID 2.00m <1ppm	Dark red very sandy gravelly CLAY. Gravel is fine to coarse subrounded to rounded of chert. Sand is fine to coarse. Occasional pockets of light grey silt throughout. [THRUSSINGTON MEMBER]				2.00	103.64		
		Dark red very sandy gravelly CLAY. Gravel is fine to coarse subrounded to rounded of chert. Sand is fine to coarse. Occasional pockets of light grey silt throughout. [THRUSSINGTON MEMBER]				2.00			
(B7) 3.00 (D8) 3.00 (ES8) 3.00	PID 3.00m <1ppm HV(1) 3.00m 52 (kPa) HV(2) 3.00m 55 (kPa) HV(3) 3.00m 58 (kPa)	Hand Shear Vane found clay to be firm from 3m				3.00	102.04		
						3.00			
PLAN DETAILS		WATER OBSERVATIONS				INSTRUMENTS			
 Shoring / Support: N/A Stability: Stable Long Axis Orientation:		Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL
		REMARKS							
		Hole terminated due to excavator reach and capability. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available							

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446804.33

Ground Level (mAOD)
106.64
Northing (OS mN)
298367.98

Start Date
22/06/2022
End Date
22/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill																
Depth - Type	Type - Depth - Result	Description	Legend																					
(B1) 0.30 (ES3) 0.30	PID 0.30m <1ppm	Light brown slightly gravelly fine to coarse SAND with abundant rootlets. Gravel is fine to coarse subangular to rounded of chert. [TOPSOIL]		(0.30)	106.34																			
(B4) 0.60		Dark red slightly gravelly very clayey fine to coarse SAND with rare cobbles of subrounded chert. Gravel is fine to medium subangular to subrounded of chert. Occasional pockets of silt throughout. [WIGSTON MEMBER]																						
(B5) 1.00 (B6) 1.00 (ES8) 1.00	PID 1.00m <1ppm	Sand found to be loose		(2.30)																				
(B11) 2.00 (B9) 2.00 (ES12) 2.00	PID 2.00m <1ppm				104.04																			
PLAN DETAILS Shoring / Support: N/A Stability: Stable Long Axis Orientation: WATER OBSERVATIONS <table border="1"> <thead> <tr> <th>Date/Time</th> <th>Strike</th> <th>Rest</th> <th>Mins</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> INSTRUMENTS <table border="1"> <thead> <tr> <th>Name</th> <th>Type</th> <th>m AGL</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> REMARKS Hole terminated at target depth for soakaway test No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available									Date/Time	Strike	Rest	Mins	Remarks						Name	Type	m AGL			
Date/Time	Strike	Rest	Mins	Remarks																				
Name	Type	m AGL																						

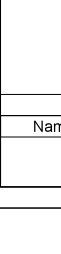
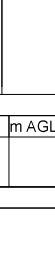
Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446752.01

Ground Level (mAOD)
109.43
Northing (OS mN)
298315.43

Start Date
21/06/2022
End Date
21/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES			TESTS			STRATA				Depth (Thickness)	Level	Install/ Backfill			
Depth - Type		Type - Depth - Result	Description				Legend								
(B1) 0.60 (D2) 0.60 (ES3) 0.60	PID	0.60m <1ppm	MADE GROUND: Grass over light brown very gravelly fine to coarse sand with occasional cobbles of brick and concrete. Gravel is fine to coarse subangular to rounded of concrete, brick, glass, chert and flint. [MADE GROUND]					(0.60)	108.83						
			Dark orangish red slightly silty very gravelly fine to medium SAND. Gravel is fine to coarse subangular to rounded of chert, flint and quartz. [WIGSTON MEMBER]					0.60							
(B4) 2.00 (D5) 2.00 (ES6) 2.00	PID	2.00m <1ppm	Dark red slightly gravelly very clayey fine to medium SAND. Gravel is fine to medium subrounded to rounded of chert. [WIGSTON MEMBER]					2.10	107.33						
								(2.20)							
(B7) 3.00 (D8) 3.00 (ES9) 3.00	PID	3.00m <1ppm													
(B10) 4.00 (D11) 4.00 (ES12) 4.00	PID	4.00m <1ppm						4.30	105.13						
PLAN DETAILS							WATER OBSERVATIONS			INSTRUMENTS					
2.0 0.6 Shoring / Support: N/A Stability: Stable Long Axis Orientation:							Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
							REMARKS								
							Hole terminated due to excavator reach and capability. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available								

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446779.59

Ground Level (mAOD)
110.79
Northing (OS mN)
298310.50

Start Date
22/06/2022
End Date
22/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install Backfill					
Depth - Type	Type - Depth - Result	Description		Legend									
(B1) 0.50 (ES3) 0.50	PID 0.50m <1ppm	MADE GROUND: Grass over dark brown gravelly fine to coarse sand with frequent cobbles of concrete, ceramic, plastic, brick, charcoal and rope. Gravel is fine to coarse angular to subrounded of metal, chert, shale, brick and concrete. [MADE GROUND]				(1.10)	109.69						
		MADE GROUND: Dark grey mottled reddish brown slightly gravelly fine to coarse sand with occasional cobbles of concrete. Gravel is fine to medium subrounded to angular of bituminous material and concrete. Organic odour noted throughout. [MADE GROUND]				1.10							
	(B4) 1.20 (ES6) 1.20	PID 1.20m <1ppm				(0.70)							
(B7) 2.00 (ES9) 2.00	PID 2.00m <1ppm	Dark red slightly gravelly very clayey fine to coarse SAND with occasional silt pockets. Gravel is fine to coarse subrounded to rounded of chert. [WIGSTON MEMBER]				1.80	108.99						
						(2.00)							
						3.80	106.99						
PLAN DETAILS					WATER OBSERVATIONS			INSTRUMENTS					
0.6 2.5 Shoring / Support: N/A Stability: Unstable from 3.5 m onwards Long Axis Orientation:					Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
					22/06/2022 15:05	3.60	3.60	20					
					REMARKS								
					Hole terminated due to excavator reach and capability. No visual evidence of contamination identified. Olfactory evidence limited to organic odour between 1.1m and 1.8m. No available information on instrumentation Long axis orientation not available								

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446814.73

Ground Level (mAOD)
109.17
Northing (OS mN)
298341.41

Start Date
22/06/2022
End Date
22/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description	Legend					
(B1) 0.30 (ES3) 0.30		Grass over light brown slightly gravelly clayey SAND with abundant rootlets. Gravel is fine to coarse subrounded to rounded of chert. Sand is fine to coarse. [TOPSOIL]				(0.30)	108.87	
		Dark red dayey very gravelly fine to coarse SAND with occasional cobbles of chert. Gravel is fine to coarse subangular to rounded of chert, flint and quartz. [WIGSTON MEMBER]						
(B4) 1.00 (ES6) 1.00						(1.10)		
(B7) 2.00 (ES9) 2.00		Dark red very clayey slightly gravelly fine to coarse SAND with occasional silt pockets. Gravel is fine to coarse subrounded of chert. [WIGSTON MEMBER]				1.40	107.77	
		Dark red very sandy CLAY. Sand is fine to coarse. Unit is wet [THRUSSINGTON MEMBER]				2.60	106.57	
		HV(1) 3.00m 5 (kPa) HV(2) 3.00m 20 (kPa) HV(3) 3.00m 40 (kPa)				(0.80)		
		Hand Shear Vane found clay to be soft / very soft from 3m						
						3.40	105.77	

PLAN DETAILS		WATER OBSERVATIONS				INSTRUMENTS		
Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
Shoring / Support: N/A Stability: Unstable from 0-1.4m Long Axis Orientation:								
		REMARKS						
		Hole terminated due to excavator reach and capability. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available						

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446834.31

Ground Level (mAOD)
110.00
Northing (OS mN)
298350.03

Start Date
22/06/2022
End Date
22/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill				
Depth - Type	Type - Depth - Result	Description		Legend								
(B1) 0.30 (ES3) 0.30	PID 0.30m <1ppm	Grass over brown very gravelly fine to coarse SAND with abundant rootlets. Gravel is fine to coarse subangular to rounded of chert and flint. [TOPSOIL]				(0.50)	109.50					
		Light to dark red slightly clayey gravelly fine to coarse SAND. Gravel is fine to coarse subrounded to rounded of chert and flint. [WIGSTON MEMBER]				0.50						
(B4) 1.00 (ES6) 1.00	PID 1.00m <1ppm					(2.50)	107.00					
						3.00						
(B7) 3.00 (ES9) 3.00	PID 3.00m <1ppm	Dark red slightly gravelly very clayey fine to coarse SAND with occasional silt pockets. Gravel is fine to medium subrounded to rounded of chert. Unit is moist [WIGSTON MEMBER]				(0.60)	106.40					
						3.60						
PLAN DETAILS				WATER OBSERVATIONS				INSTRUMENTS				
0.6 2.5  Shoring / Support: N/A Stability: Stable Long Axis Orientation: <td>Date/Time</td> <td>Strike</td> <td>Rest</td> <td>Mins</td> <td>Remarks</td> <td>Name</td> <td>Type</td> <td>m AGL</td>				Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
				REMARKS								
				Hole terminated due to excavator reach and capability. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available								

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446757.04

Ground Level (mAOD)
113.00
Northing (OS mN)
298279.39

Start Date
21/06/2022
End Date
21/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description			Legend				
(B3) 0.30 (D5) 0.30 (ES1) 0.30 (B4) 0.60 (D6) 0.60 (ES2) 0.60 (B7) 1.60 (D8) 1.60 (ES9) 1.60 									

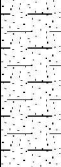
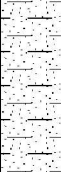
Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446770.04

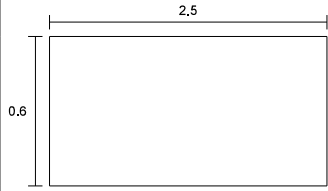
Ground Level (mAOD)
114.55
Northing (OS mN)
298251.31

Start Date
22/06/2022
End Date
22/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description			Legend				
(B1) 0.40 (ES3) 0.40	PID 0.40m <1ppm	CONCRETE [MADE GROUND]				(0.30)	114.25		
		Dark orangish red slightly gravelly clayey fine to coarse SAND with occasional cobbles of chert. Gravel is fine to coarse rounded to subangular of chert and flint. [WIGSTON MEMBER]				0.30			
						(1.10)			
(B4) 1.00 (ES6) 1.00	PID 1.00m <1ppm								
(B7) 1.50 (ES9) 1.50	PID 1.50m <1ppm	Dark red slightly gravelly very clayey fine to coarse SAND. Gravel is fine to medium subrounded of chert. Unit is moist [WIGSTON MEMBER]				1.40	113.15		
						(2.30)			
									
						3.70	110.85		

PLAN DETAILS				WATER OBSERVATIONS				INSTRUMENTS				
2.5 0.6 Shoring / Support: N/A Stability: Stable Long Axis Orientation:				Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
				REMARKS								
Hole terminated due to excavator reach and capability. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available												

PLAN DETAILS		WATER OBSERVATIONS				INSTRUMENTS		
		Date/Time	Strike	Rest	Mins	Remarks	Name	Type
Shoring / Support: N/A Stability: Stable Long Axis Orientation:								
		REMARKS						
		Hole terminated due to excavator reach and capability. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available						

Project
Hilltop Farm
Client
Midland Heart

Project No.
10056074
Easting (OS mE)
446847.86

Ground Level (mAOD)
113.29
Northing (OS mN)
298302.01

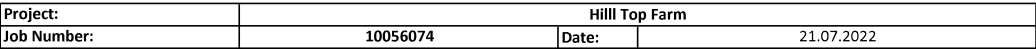
Start Date
22/06/2022
End Date
22/06/2022

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS		STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth - Type	Type - Depth - Result	Description	Legend					
(B1) 0.50 (ES3) 0.50	PID 0.50m <1ppm	MADE GROUND: Grass over brownish red slightly clayey gravelly fine to coarse sand with frequent cobbles of brick and concrete. Gravel is fine to coarse angular to subrounded of ceramic, metal, slate and chert. [MADE GROUND]		(0.80)				
(B4) 1.00 (ES6) 1.00		Dark red slightly clayey slightly gravelly fine to coarse SAND with occasional silt pockets Gravel is fine to medium subangular to subrounded of chert and flint. [WIGSTON MEMBER]		0.80	112.49			
(B7) 1.50 (ES9) 1.50				(2.20)				
				3.00	110.29			

PLAN DETAILS		WATER OBSERVATIONS				INSTRUMENTS		
Date/Time	Strike	Rest	Mins	Remarks	Name	Type	m AGL	
Shoring / Support: N/A Stability: Unstable from 0-1m Long Axis Orientation:					REMARKS Hole terminated at target depth. Top 0.8m of Made Ground found to be very unstable. No visual or olfactory evidence of contamination identified. No water observations made. No available information on instrumentation Long axis orientation not available			

Appendix C Gas Monitoring Results



Weather:	sunny, cloudy and dry
Engineer:	D.Russon

Notes: No odours detected. All standpipe covers in good condition. Dry weather over previous days.	Ambient Concentration	
	CH4	0.0
	CO2	0.1
	O2	21.0
	H2S	0.0
	CO	0.0

Previous weather conditions, Atmospheric pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open tap, datum level, vegetation stress, odours, bubbles, NAPL etc.



Project:	Hilli Top Farm		
Job Number:	10056074	Date:	03.08.2022

Weather:	sunny, cloudy and dry
Engineer:	D.Russon

Monitoring Point Reference	Date/ Time	Atmos. Pressure (mbar)	Temp. (°C)	Flow Rate (l/h)	Time (sec)	CH4 (% v/v)	LEL (%)	CO2 (% v/v)	O2 (% v/v)	H2S (ppm)	CO (ppm)	BAL (%)	Rel. Pressure (mbar)	Depth to Water (m)	Depth to base (m)	Comments (all readings from GL, note datum height if different)
BH101	10:39	1001		0 -1.1	Initial	0.10		2.50	17.30	0.00	3.00	80.10	0.07	0.67	2.37	
					30	0.10		2.50	17.30	0.00	3.00	80.10	0.07			
					60	0.10		2.50	17.30	0.00	3.00	80.10	0.07			
					90	0.10		2.50	17.30	0.00	3.00	80.10	0.07			
					120	0.10		2.50	17.30	0.00	3.00	80.10	0.07			
					150	0.10		2.50	17.30	0.00	3.00	80.10	0.07			
					180	0.10		2.50	17.30	0.00	3.00	80.10	0.07			
BH102	09:47	1001		0 0	Initial	0.10		0.10	21.20	0.00	1.00	78.80	0.03	1.13	2.54	Bung not secure in pipe. Gas can escape
					30	0.10		0.10	21.20	0.00	1.00	78.80	0.03			
					60	0.10		0.10	21.10	0.00	1.00	78.80	0.03			
					90	0.10		0.10	21.10	0.00	1.00	78.80	0.03			
					120	0.10		0.10	21.10	0.00	1.00	78.80	0.03			
					150	0.10		0.10	21.10	0.00	1.00	78.80	0.03			
					180	0.10		0.10	21.10	0.00	1.00	78.80	0.03			
BH103	08:23	1000		0.1 0.1	Initial	0.10		3.60	18.50	0.00	1.00	77.70	-0.10	2.73	4.77	
					30	0.10		3.60	18.50	0.00	1.00	77.70	-0.10			
					60	0.10		3.60	18.50	0.00	1.00	77.70	-0.10			
					90	0.10		3.60	18.50	0.00	1.00	77.70	-0.10			
					120	0.10		3.60	18.50	0.00	1.00	77.70	-0.10			
					150	0.10		3.60	18.50	0.00	1.00	77.70	-0.10			
					180	0.10		3.60	18.50	0.00	1.00	77.70	-0.10			
BH104	12:33	1000		0.1 0.1	Initial	0.10		7.10	11.90	0.00	3.00	80.90	0.28	6.24	11.10	
					30	0.10		7.10	11.90	0.00	3.00	80.90	0.28			
					60	0.10		7.10	12.00	0.00	3.00	80.90	0.28			
					90	0.10		7.10	12.00	0.00	3.00	80.90	0.28			
					120	0.10		7.10	12.00	0.00	3.00	80.90	0.28			
					150	0.10		7.10	12.00	0.00	3.00	80.90	0.28			
					180	0.10		7.10	12.00	0.00	3.00	80.90	0.28			
BH105	11:35	998		0 0	Initial	0.10		2.60	19.80	0.00	1.00	77.60	-0.12	3.85	7.26	
					30	0.10		2.60	19.80	0.00	1.00	77.60	-0.12			
					60	0.10		2.60	19.80	0.00	1.00	77.60	-0.12			
					90	0.10		2.60	19.80	0.00	1.00	77.60	-0.12			
					120	0.10		2.60	19.80	0.00	1.00	77.60	-0.12			
					150	0.10		2.60	19.80	0.00	1.00	77.60	-0.12			
					180	0.10		2.60	19.80	0.00	1.00	77.60	-0.12			
BH106	12:02	1000		0 0	Initial	0.10		1.80	19.30	0.00	3.00	78.80	-0.02	5.64	7.28	
					30	0.10		1.80	19.30	0.00	3.00	78.80	-0.02			
					60	0.00		1.80	19.30	0.00	3.00	78.80	-0.02			
					90	0.00		1.80	19.30	0.00	3.00	78.80	-0.02			
					120	0.00		1.80	19.30	0.00	3.00	78.80	-0.02			
					150	0.00		1.80	19.30	0.00	3.00	78.80	-0.02			
					180	0.00		1.80	19.30	0.00	3.00	78.80	-0.02			

Notes:	No odours detected. All standpipe covers in good condition. Dry weather over previous days.	Ambient Concentration	
		CH4	0.0
		CO2	0.1
		O2	21.0
		H2S	0.0
		CO	0.0
		Previous weather conditions, Atmospheric pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open top, datum level, vegetation stress, odours, bubbles, NAPL etc.	



Project:	Hill Top Farm		
Job Number:	10056074	Date:	17/08/2022

Weather:	cloudy, light rain. Heavy rain night before.
Engineer:	T. Lipscomb

Monitoring Point Reference	Date/ Time	Atmos. Pressure (mbar)	Temp. (°C)	Flow Rate (l/h)	Time (sec)	CH4 (% v/v)	LEL (%)	CO2 (% v/v)	O2 (% v/v)	H2S (ppm)	CO (ppm)	BAL. (%)	Rel. Pressure (mbar)	Depth to Water (m)	Depth to base (m)	Comments (all readings from GL, note datum height if different)
BH101	09:14	1002	16	Peak: -18.2	Initial	0.00		0.10	21.40	0.00	0.00	78.50	0.00	0.53	2.40	Gas analyser showed a 'flow fail' error sign at 100 seconds
				0	30	0.00		1.00	20.30	0.00	0.00	78.80	0.00			
					60	0.00		1.00	20.20	0.00	0.00	78.80	0.00			
					90	0.00		1.00	20.20	0.00	0.00	78.80	0.00			
					100	0.00		1.00	20.20	0.00	0.00	78.80	0.00			
				Steady: 0												
BH102	09:33	1003	16	Peak: 0	Initial	0.00		0.10	21.70	0.00	0.00	78.30	6.25	1.06	2.52	Bung is too small for install - loose fit may casue inaccurate readings
				Steady: 0	30	0.00		0.10	21.70	0.00	0.00	78.20	6.25			
					60	0.00		0.10	21.70	0.00	0.00	78.20	6.25			
					90	0.00		0.10	21.70	0.00	0.00	78.20	6.25			
					120	0.00		0.10	21.70	0.00	0.00	78.20	6.25			
					150	0.00		0.10	21.70	0.00	0.00	78.20	6.25			
					180	0.00		0.10	21.70	0.00	0.00	78.20	6.25			
BH103	08:57	1002	16	Peak: 0.1	Initial	0.00		0.10	21.10	0.00	0.00	78.80	0.07	2.71	4.71	
				Steady: 0	30	0.00		3.90	18.30	0.00	0.00	77.80	0.07			
					60	0.00		3.90	18.20	0.00	0.00	77.90	0.07			
					90	0.00		3.90	18.20	0.00	0.00	77.90	0.07			
					120	0.00		3.90	18.20	0.00	0.00	77.90	0.07			
					150	0.00		3.90	18.20	0.00	0.00	77.90	0.07			
					180	0.00		3.90	18.20	0.00	0.00	77.90	0.07			
BH104	08:31	1001	16	Peak: 0.1	Initial	0.00		0.10	21.10	0.00	0.00	78.80	6.93	5.80	10.90	Equipment not set up properly so final reading not recorded
				Steady: 0.1	30	0.00		1.50	19.50	0.00	0.00	79.00	6.93			
					60	0.00		1.60	19.20	0.00	0.00	79.10	6.93			
					90	0.00		1.40	19.60	0.00	0.00	79.00	6.93			
					120	0.00		2.50	18.30	0.00	0.00	79.20	6.93			
					150	0.00		2.50	18.30	0.00	0.00	79.20	6.93			
					180	0.00										
BH105	09:44	1002	16	Peak: -0.1	Initial	0.00		0.10	21.80	0.00	0.00	78.10	0.02	3.83	7.23	
				Steady: 0	30	0.00		2.70	20.20	0.00	0.00	77.10	0.02			
					60	0.00		2.70	20.20	0.00	0.00	77.10	0.02			
					90	0.00		2.70	20.20	0.00	0.00	77.10	0.02			
					120	0.00		2.80	20.10	0.00	0.00	77.10	0.02			
					150	0.00		2.80	20.10	0.00	0.00	77.10	0.02			
					180	0.00		2.80	20.10	0.00	0.00	77.10	0.02			
BH106	09:55	1002	16	Peak: -0.1	Initial	0.00		0.10	21.80	0.00	0.00	78.20	7.43	5.59	7.28	
				Steady: 0	30	0.00		1.80	20.60	0.00	0.00	77.60	7.43			
					60	0.00		1.80	20.60	0.00	0.00	77.70	7.43			
					90	0.00		1.80	20.50	0.00	0.00	77.70	7.43			
					120	0.00		1.80	20.50	0.00	0.00	77.70	7.43			
					150	0.00		1.80	20.50	0.00	0.00	77.70	7.43			
					180	0.00		1.90	20.50	0.00	0.00	77.60	7.43			

Notes: No odours detected. Heavy rain night before visit.	Ambient Concentration	
	CH4	0.0
	CO2	0.1
	O2	21.0
	H2S	0.0
	CO	0.0

Previous weather conditions, Atmospheric pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open tap, datum level, vegetation stress, odours, bubbles, NAPL etc.

Notes: No odours detected. All standpipe covers in good condition. Dry weather over previous days.	Ambient Concentration	
	CH4	0.0
	CO2	0.1
	O2	21.0
	H2S	0.0
	CO	0.0

Previous weather conditions, Atmospheric pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open top, datum level, vegetation stress, odours, bubbles, NAPI, etc.



Project:	Hilli Top Farm		
Job Number:	10056074	Date:	14/09/2022

Weather:	sunny, cloudy and dry
Engineer:	D. Russon

Monitoring Point Reference	Date/ Time	Atmos. Pressure (mbar)	Temp. (°C)	Flow Rate (l/h)	Time (sec)	CH4 (% v/v)	LEL (%)	CO2 (% v/v)	O2 (% v/v)	H2S (ppm)	CO (ppm)	BAL. (%)	Rel. Pressure (mbar)	Depth to Water (m)	Depth to base (m)	Comments (all readings from GL, note datum height if different)
BH101	12:33	997	----	Peak:0	Initial	0.00		1.90	20.60	2.00	0.00	77.50	-2.87	0.42	2.37	Gas analyser showed a 'flow failure' sign after approx 120 seconds - presumed vacuum in pipe
				30	0.00		1.90	19.80	1.00	0.00	78.30	-2.87				
				60	0.00		1.90	19.70	1.00	0.00	78.30	-2.87				
				90	0.00		1.90	19.70	1.00	0.00	77.80	-2.87				
				120	0.00		2.00	19.40	2.00	0.00	78.60	-2.87				
				150	0.00											
				180	0.00											
BH102	12:18	997	----	Peak:0	Initial	0.00		0.10	21.00	0.00	0.00	78.90	-0.07	0.99	2.52	Bung is too small for install - loose fit may casue inaccurate readings; duct tape appears to be better but not sealed
				30	0.00		0.00	21.00	0.00	0.00	79.00	-0.07				
				60	0.00		0.00	21.00	0.00	0.00	78.90	-0.07				
				90	0.00		0.00	21.10	0.00	0.00	78.90	-0.07				
				120	0.00		0.00	21.10	0.00	0.00	78.90	-0.07				
				150	0.00		0.00	21.10	1.00	0.00	78.90	-0.07				
				180	0.00		0.00	21.10	1.00	0.00	78.90	-0.07				
BH103	11:46	996	----	Peak:0	Initial	0.00		0.10	21.40	0.00	0.00	78.50	0.09	2.74	4.67	install in good conditon.
				30	0.00		4.70	17.20	0.00	0.00	78.10	0.09				
				60	0.00		4.70	17.10	0.00	0.00	78.10	0.09				
				90	0.00		4.70	17.10	0.00	0.00	78.20	0.09				
				120	0.00		4.70	17.10	0.00	0.00	78.20	0.09				
				150	0.00		4.70	17.10	0.00	0.00	78.20	0.09				
				180	0.00		4.70	17.10	0.00	0.00	78.20	0.09				
BH104	10:51	996	----	Peak:0	Initial	0.00		0.10	21.10	0.00	0.00	78.90	-0.03	5.85	10.91	install in good conditon.
				30	0.00		7.90	11.70	0.00	0.00	80.40	-0.03				
				60	0.00		8.00	11.50	0.00	0.00	80.50	-0.03				
				90	0.00		8.30	11.10	0.00	0.00	80.60	-0.03				
				120	0.00		8.60	10.70	0.00	0.00	80.60	-0.03				
				150	0.00		8.90	10.40	0.00	0.00	80.70	-0.03				
				180	0.00		9.10	10.10	0.00	0.00	80.70	-0.03				
BH105	12:59	996	----	Peak:0	Initial	0.00		0.10	21.40	2.00	0.00	78.50	-0.03	3.88	7.20	install in good conditon. Top cover stiff
				30	0.00		2.70	19.50	1.00	0.00	77.80	-0.03				
				60	0.00		2.70	19.50	1.00	0.00	77.80	-0.03				
				90	0.00		2.70	19.50	1.00	0.00	77.80	-0.03				
				120	0.00		2.70	19.50	1.00	0.00	77.80	-0.03				
				150	0.00		2.70	19.50	1.00	0.00	77.80	-0.03				
				180	0.00		2.70	19.50	1.00	0.00	77.80	-0.03				
BH106	12:49	996	----	Peak:0	Initial	0.00		0.10	21.10	2.00	0.00	78.80	-0.16	5.67	7.28	install in good conditon.
				30	0.00		2.10	19.40	1.00	0.00	78.50	-0.16				
				60	0.00		2.10	19.30	1.00	0.00	78.50	-0.16				
				90	0.00		2.10	19.30	1.00	0.00	78.50	-0.16				
				120	0.00		2.10	19.30	1.00	0.00	78.50	-0.16				
				150	0.00		2.10	19.30	1.00	0.00	78.50	-0.16				
				180	0.00		2.20	19.30	1.00	0.00	78.50	-0.16				

Notes:	No odours detected. All standpipe covers in good condition. Slightly wet weather over previous days. Approx 16-18 degrees ambient temp	Ambient Concentration	
		CH4	0.0
		CO2	0.1
		O2	21.0
		H2S	0.0
		CO	0.0
		Previous weather conditions, Atmospheric pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open tap, datum level, vegetation stress, odours, bubbles, NAPL etc.	



Project:	Hilli Top Farm		
Job Number:	10056074	Date:	14/09/2022

Weather:	sunny, cloudy and dry
Engineer:	D. Russon

Monitoring Point Reference	Date/ Time	Atmos. Pressure (mbar)	Temp. (°C)	Flow Rate (l/h)	Time (sec)	CH4 (% v/v)	LEL (%)	CO2 (% v/v)	O2 (% v/v)	H2S (ppm)	CO (ppm)	BAL (%)	Rel. Pressure (mbar)	Depth to Water (m)	Depth to base (m)	Comments (all readings from GL, note datum height if different)
BH104	10:51	996	17	Peak:0 Steady:0	Initial	0.00		0.10	21.10	0.00	0.00	78.90	-0.03	5.85	10.91	install in good conditon.
					30	0.00		7.90	11.70	0.00	0.00	80.40	-0.03			
					60	0.00		8.00	11.50	0.00	0.00	80.50	-0.03			
					90	0.00		8.30	11.10	0.00	0.00	80.60	-0.03			
					120	0.00		8.60	10.70	0.00	0.00	80.60	-0.03			
					150	0.00		8.90	10.40	0.00	0.00	80.70	-0.03			
					180	0.00		9.10	10.10	0.00	0.00	80.70	-0.03			
BH104 - Purge	11:06	996	17	N/A	Initial	0.00		0.10	21.10	0.00	0.00	78.80	0.14			Slight delay at the 15 min point (900secs) as the cycle was restarted
					100	0.00		5.90	14.10	0.00	0.00	80.00	0.14			
					200	0.00		8.70	10.70	0.00	0.00	80.70	0.14			
					300	0.00		9.80	9.30	0.00	0.00	80.90	0.14			
					400	0.00		10.20	8.90	0.00	0.00	80.90	0.14			
					500	0.00		10.40	8.80	0.00	0.00	80.80	0.14			
					600	0.00		10.50	8.90	0.00	0.00	80.60	0.14			
					700	0.00		10.30	9.30	0.00	0.00	80.40	0.14			
					800	0.00		10.20	9.40	0.00	0.00	80.40	0.14			
					900	0.00		10.10	9.60	0.00	0.00	80.30	0.14			
					1000	0.00		10.00	9.80	0.00	0.00	80.30	0.03			
					1100	0.00		9.90	9.80	0.00	0.00	80.30	0.03			
					1200	0.00		9.80	9.90	0.00	0.00	80.30	0.03			
					1300	0.00		9.80	9.90	0.00	0.00	80.30	0.03			
					1400	0.00		9.60	10.00	0.00	0.00	80.30	0.03			
					1500	0.00		9.80	9.80	0.00	0.00	80.30	0.03			
					1600	0.00		9.80	9.90	0.00	0.00	80.30	0.03			
					1700	0.00		9.80	9.80	0.00	0.00	80.30	0.03			
					1800	0.00		9.70	10.00	0.00	0.00	80.30	0.03			
BH104 Re-test 1	12:05	996	17	Peak:0 Steady:0	Initial	0.00		0.30	20.90	1.00	0.00	78.80	0.09			
					30	0.00		8.70	10.80	1.00	0.00	80.40	0.09			
					60	0.00		9.00	10.50	1.00	0.00	80.50	0.09			
					90	0.00		9.10	10.30	1.00	0.00	80.60	0.09			
					120	0.00		9.20	10.20	1.00	0.00	80.60	0.09			
					150	0.00		9.20	10.20	1.00	0.00	80.60	0.09			
					180	0.00		9.20	10.20	1.00	0.00	80.60	0.09			
BH104 Re-test 2	13:28	995	17	Peak:0 Steady:0	Initial	0.00		8.10	21.50	4.00	0.00	70.40	0.02			
					30	0.00		7.70	12.40	2.00	0.00	79.90	0.02			
					60	0.00		8.30	11.70	1.00	0.00	80.00	0.02			
					90	0.00		8.70	11.20	1.00	0.00	80.10	0.02			
					120	0.00		8.90	10.90	1.00	0.00	80.10	0.02			
					150	0.00		9.20	10.60	1.00	0.00	80.20	0.02			
					180	0.00		9.20	10.50	1.00	0.00	80.20	0.02			

Notes:	No odours detected. All standpipe covers in good condition. Dry weather over previous days.	Ambient Concentration	
		CH4	0.0
		CO2	0.1
		O2	21.0
		H2S	0.0
		CO	0.0
		Previous weather conditions, Atmospheric pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open tap, datum level, vegetation stress, odours, bubbles, NAPI, etc.	



Project:	Hill Top Farm		
Job Number:	10056074	Date:	28/09/2022

Weather:	Blue skies, sunny, Day following heavy rains
Engineer:	T. Lipscomb

Monitoring Point Reference	Time	Atmos. Pressure (mbar)	Temp. (°C)	Flow Rate (l/h)	Time (sec)	CH4 (% v/v)	LEL (%)	CO2 (% v/v)	O2 (% v/v)	H2S (ppm)	CO (ppm)	BAL. (%)	Rel. Pressure (mbar)	Depth to Water (m)	Depth to base (m)	Comments (all readings from GL, note datum height if different)
BH101	09:27	989	----	Peak: 0	Initial	0.00		0.20	21.70	0.00	0.00	78.10	7.40	0.42	2.35	flow error after 100s. Flow reading after ranged from -20.9l/h to 0l/h after 6mins
				30	0.00		5.20	18.00	0.00	0.00	76.90	7.40				
				60	0.00		5.20	16.60	0.00	0.00	78.30	7.40				
				90	0.00		5.20	15.70	0.00	0.00	79.10	7.40				
				120	0.00											
				150	0.00											
				180	0.00											
BH102			----	Peak: 0.1	Initial	0.00		0.10	21.50	0.00	0.00	78.30	6.91	0.99	2.50	
				30	0.00		0.10	21.50	0.00	0.00	78.30	6.91				
				60	0.00		0.10	21.50	0.00	0.00	78.40	6.91				
				90	0.00		0.10	21.50	0.00	0.00	78.40	6.91				
				120	0.00		0.10	21.50	0.00	0.00	78.40	6.91				
				150	0.00		0.10	21.50	0.00	0.00	78.40	6.91				
				180	0.00		0.10	21.50	0.00	0.00	78.40	6.91				
BH103	09:11	988	----	Peak: 0.2	Initial	0.00		0.10	22.30	0.00	0.00	77.60	0.00	2.78	4.70	
				30	0.00		5.50	18.20	0.00	0.00	76.30	0.00				
				60	0.00		5.50	18.10	0.00	0.00	76.40	0.00				
				90	0.00		5.50	18.10	0.00	0.00	76.40	0.00				
				120	0.00		5.50	18.10	0.00	0.00	76.40	0.00				
				150	0.00		5.50	18.10	0.00	0.00	76.50	0.00				
				180	0.00		5.50	18.10	0.00	0.00	76.50	0.00				
BH104	08:13	988	----	Peak: 0.2	Initial	0.00		0.10	21.30	0.00	0.00	78.60	1.37	5.88	11.01	
				30	0.00		9.10	11.90	0.00	0.00	79.00	1.37				
				60	0.00		9.00	11.10	0.00	0.00	79.90	1.37				
				90	0.00		8.90	11.20	0.00	0.00	79.90	1.37				
				120	0.00		8.90	11.20	0.00	0.00	79.90	1.37				
				150	0.00		9.00	11.10	0.00	0.00	79.90	1.37				
				180	0.00		9.00	11.10	0.00	0.00	79.90	1.37				
BH105	09:50	989	----	Peak: 0	Initial	0.00		0.10	21.50	0.00	0.00	78.40	8.79	3.91	7.20	
				30	0.00		3.10	19.60	0.00	0.00	77.30	8.79				
				60	0.00		3.10	19.60	0.00	0.00	77.30	8.79				
				90	0.00		3.10	19.60	0.00	0.00	77.30	8.79				
				120	0.00		3.10	19.50	0.00	0.00	77.30	8.79				
				150	0.00		3.10	19.50	0.00	0.00	77.30	8.79				
				180	0.00		3.10	19.50	0.00	0.00	77.30	8.79				
BH106	10:01	989	----	Peak: 0	Initial	0.00		0.10	21.50	0.00	0.00	78.40	5.38	5.69	7.30	
				30	0.00		2.60	19.70	0.00	0.00	77.70	5.38				
				60	0.00		2.60	19.60	0.00	0.00	77.80	5.38				
				90	0.00		2.60	19.60	0.00	0.00	77.80	5.38				
				120	0.00		2.60	19.60	0.00	0.00	77.80	5.38				
				150	0.00		2.60	19.60	0.00	0.00	77.70	5.38				
				180	0.00		2.70	19.60	0.00	0.00	77.70	5.38				

Notes:	No odours detected. All standpipe covers in good condition. Slightly wet weather over previous days. Approx 16-18 degrees ambient temp															Ambient Concentration																
																CH4	0.0															
																CO2	0.1															
																O2	21.3															
																H2S	0.0															
																CO	0.0															
Previous weather conditions, Atmospheric pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open tap, datum level, vegetation stress, odours, bubbles, NAPL etc.																																



Project:	Hill Top Farm		
Job Number:	10056074	Date:	18/09/2022

Weather:	Blue skys, sunny, Day fololowing heavy rains
Engineer:	T. Lipscomb

Monitoring Point Reference	Date/ Time	Atmos. Pressure (mbar)	Temp. (°C)	Flow Rate (l/h)	Time (sec)	CH4 (% v/v)	LEL (%)	CO2 (% v/v)	O2 (% v/v)	H2S (ppm)	CO (ppm)	BAL. (%)	Rel. Pressure (mbar)	Depth to Water (m)	Depth to base (m)	Comments (all readings from GL, note datum height if different)
BH104	08:13	988	----	Peak:0.2 Steady: 0	Initial	0.00		0.10	21.30	0.00	0.00	78.60	1.37			
					30	0.00		9.10	11.90	0.00	0.00	79.00	1.37			
					60	0.00		9.00	11.10	0.00	0.00	79.90	1.37			
					90	0.00		8.90	11.20	0.00	0.00	79.90	1.37			
					120	0.00		8.90	11.20	0.00	0.00	79.90	1.37			
					150	0.00		9.00	11.10	0.00	0.00	79.90	1.37			
					180	0.00		9.00	11.10	0.00	0.00	79.90	1.37			
BH104 - Purge	08:24	988	----	na	Initial	0.00		0.20	21.50	0.00	0.00	78.30	0.30			Slight delay at the 15 min point (900secs) as the cycle was restarted
					100	0.00		8.90	11.50	0.00	0.00	79.60	0.30			
					200	0.00		9.60	10.60	0.00	0.00	79.80	0.30			
					300	0.00		10.20	9.90	0.00	0.00	79.90	0.30			
					400	0.00		10.40	9.80	0.00	0.00	79.80	0.30			
					500	0.00		10.40	9.90	0.00	0.00	79.60	0.30			
					600	0.00		10.30	10.20	0.00	0.00	79.50	0.30			
					700	0.00		10.30	10.40	0.00	0.00	79.30	0.30			
					800	0.00		10.20	10.70	0.00	0.00	79.20	0.30			
					900	0.00		10.00	10.90	0.00	0.00	79.10	0.30			
					1000	0.00		9.90	11.00	0.00	0.00	79.00	0.30			
					1100	0.00		9.90	11.00	0.00	0.00	79.10	0.30			
					1200	0.00		9.90	11.00	0.00	0.00	79.10	0.30			
					1300	0.00		9.70	11.20	0.00	0.00	79.10	0.30			
					1400	0.00		9.70	11.20	0.00	0.00	79.10	0.30			
					1500	0.00		9.90	11.00	0.00	0.00	79.10	0.30			
					1600	0.00		9.90	11.10	0.00	0.00	79.00	0.30			
					1700	0.00		9.80	11.20	0.00	0.00	79.10	0.30			
					1800	0.00		9.70	11.20	0.00	0.00	79.10	0.30			
BH104 Re-test 1				Peak:0 Steady: 0	Initial	0.00		0.10	21.70	0.00	0.00	78.20	5.92			
					30	0.00		5.00	16.30	0.00	0.00	78.80	5.92			
					60	0.00		5.00	16.10	0.00	0.00	78.90	5.92			
					90	0.00		5.20	15.90	0.00	0.00	78.90	5.92			
					120	0.00		5.70	15.40	0.00	0.00	78.90	5.92			
					150	0.00		6.60	14.50	0.00	0.00	78.90	5.92			
					180	0.00		7.40	13.60	0.00	0.00	79.00	5.92			
BH104 Re-test 2				Peak:0 Steady: 0	Initial	0.00		8.10	13.90	0.00	0.00	78.00	0.02			
					30	0.00		8.40	12.60	0.00	0.00	79.00	0.02			
					60	0.00		8.50	12.50	0.00	0.00	79.00	0.02			
					90	0.00		8.80	12.30	0.00	0.00	79.00	0.02			
					120	0.00		9.20	11.70	0.00	0.00	79.10	0.02			
					150	0.00		9.60	11.20	0.00	0.00	79.20	0.02			
					180	0.00		9.80	11.00	0.00	0.00	79.30	0.02			

Notes:	No odours detected. All standpipe covers in good condition. Dry weather over previous days.	Ambient Concentration	
		CH4	0.0
		CO2	0.1
		O2	21.0
		H2S	0.0
		CO	0.0
		Previous weather conditions, Atmospheric pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open tap, datum level, vegetation stress, odours, bubbles, NAPL etc.	