Land Science

THE STUDIO, NEP TOWN ROAD, HENFIELD, BN5 9DY

GROUND GAS RISK ASSESSMENT

SUSIE WARNER

26TH NOVEMBER 2025

LS8889.1

Site:	**THE STUDIO, NEP TOWN ROAD, HENFIELD, BN5 9DY**
Title:	**GROUND GAS RISK ASSESSMENT**
Project:	**CONVERSION OF HISTORIC CHAPEL/CARPENTRY BUSINESS INTO A ONE BEDROOM RESIDENTIAL UNIT WITH GARDEN**
Client:	**SUSIE WARNER**
Date:	**26TH NOVEMBER 2025**
Reference:	**LS8889**
Version:	**A – final for issue**

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1.0 EXECUTIVE SUMMARY

This summary is a brief precis of the main findings and conclusions of the investigation. For detailed information, the reader is referred to the main report.

The existing site is an historic chapel and more recently a carpentry business within a two-storey structure. The proposed redevelopment is a conversion into a one-bedroom residential unit with garden. The recent intrusive investigation included two window sampler boreholes, a trial pit and two foundation exposures. Previous field works confirmed the following ground conditions:

Strata	Base Depth Range	Summary
Hardstanding	0.07mbgl	Concrete (WS02 only)
Made Ground	0.25-0.40mbgl	Brown to orange-brown / dark brown silty gravelly Sand with brick, concrete, ash, charcoal, clinker, ceramic tile, slate, hardcore, flint, chalk and glass. TP01 also included 0.05m of pea shingle over geotextile.
Reworked Ground	0.50-0.90mbgl	Yellow-orange to brown / orange-brown gravelly silty Sand with brick, ash, charcoal, metal, flint sandstone and ironstone.
Folkestone Formation	1.00-4.00mbgl+	Yellow-orange/brown to brown Sand. WS02 was terminated on sandstone and ironstone at 1.50mbgl.

Groundwater was not encountered within 4.00mbgl depth during the site works. However, during the monitoring visits groundwater was recorded at between 3.72m and 3.82mbgl in WS01.

Six ground gas monitoring visits were undertaken at WS01 and WS02. Methane was not detected, whilst maximum carbon dioxide was recorded between 0.1 and 2.7%. In summary, no ground gas protection with regards to methane and carbon dioxide is necessary for the proposed redevelopment.

However, as detailed in sections 4.4 and 4.5, in line with the recommendations from the recent Phase II Contamination Assessment provision should be made for a vapour membrane within the footprint of the building to protect end-users from vapours and radon.

This report should be submitted to relevant authorities etc. in good time for consideration and approval.

2.0 INTRODUCTION

2.1 General

Land Science was instructed to undertake a Ground Gas Risk Assessment in relation to the proposed redevelopment at The Studio, Nep Town Road, Henfield BN5 9DY. The location is shown on Figure 1, which is centred at grid reference TQ 21110 15707.

2.2 Client

The Client for this appointment was Susie Warner. This report may only be used by this named client and their project team for the purposes set out and subject to the report conditions. It was understood that the Client already owned the property, and that this investigation was not a pre-purchase appraisal.

2.3 Area Under Investigation

The area under investigation comprised a small timber framed, corrugated metal panelled former chapel, with a hardstanding path around the eastern and southern boundaries. It also comprised a section of the adjacent property known as 'Byways' including the land east of the existing garage, in total forming an area of approximately 0.015 hectares. The layout is indicated on Figure 2.

2.4 Proposed Development

The proposed development was understood to comprise the conversion and extension of a vacant light industrial building to a one-bedroom dwelling with associated external alterations. The proposed development was covered under planning application number DC/23/1734. Figure 3 illustrates the layout of the proposed redevelopment. The findings of this report may not be valid if the proposed development is altered.

2.5 Previous Investigations

The following previous Land Science investigations relevant to the site were made available:

- Phase I Geo-Environmental Assessment (report), by Land Science, LS1425, dated November 2014
- Updated Phase I Geo-Environmental Assessment (letter), by Land Science, LS7490, dated February 2024
- Phase II Contamination Assessment, by Land Science, LS8889, dated October 2025

This Ground Gas Risk Assessment has been carried out as an addendum to the previous Phase II Contamination Assessment, and in accordance with the recommendations of the previous Phase I Geo-Environmental Assessments and all reports must be read in conjunction with each other.

2.6 Scope of Work

The work carried out is described in detail in the following sections but in summary included:

- Six monitoring visits;
- Ground Gas Risk Assessment.

The six return monitoring visits were conducted between 15th October and 19th November 2025, under the supervision of Land Science.

2.7 Geo-Environmental Objectives

The monitoring was required to provide a ground gas risk assessment report. This follows the initial two monitoring visits carried out on 15th and 22nd October 2025, under LS8889 as the previous Phase II Contamination Assessment.

The addendum report was required to assess risks associated with end users, the proposed redevelopment, adjacent land uses, and the wider environment, in the context of the planning regime.

2.8 Standards

Where practicable, the investigation was undertaken in accordance with the following primary standards and guidance:

- Land Contamination Risk Management (LCRM) Environment Agency June 2025.
- BS10175:2011+A2:2017, Investigation of Potentially Contaminated Sites.
- National Planning Policy Framework, December 2024.
- Building Regulations Approved Document C: Site preparation and resistance to contaminants and moisture, HM Government, September 2013.
- NHBC Standards Chapter 4.1: Land Quality - Managing Ground Conditions, 2024.

Other technical sources have been cited in respect of specific aspects of the investigation, as referenced throughout the text.

3.0 MONITORING DATA

3.1 Groundwater Monitoring

Groundwater was not encountered within 4.00m depth during the site works.

Whilst WS02 remained dry, groundwater was recorded during some of the return monitoring visits at WS01 between 15th October and 19th November 2025, with levels noted between 3.72m and 3.82bgl. There was not enough water to be purged, remaining as brown and silty.

3.2 Ground Gas Monitoring

The results of the ground gas monitoring (including the initial and further two visits) are summarised below:

Date: 15/10/2025

Measurement	WS01	Notes	WS02	Notes
Carbon Dioxide %	2.2>2.7	Level rising steadily for 4 minutes and falling by 5 minutes	0.8>1.1	Level rising over 30 seconds and levelling to 5 minutes
Methane %	0.0	N/A	0.0	N/A
Oxygen %	18.9<16.9	Level falling sharply then steadily over 4 minutes and rising by 5 minutes	19.7<19.2	Level falling sharply then steadily over 1 minute and levelling by 5 minutes
VOCs ppm	0.0	N/A	0.0	N/A
Flow rate l/hr	0.0	N/A	0.0	N/A

Date: 22/10/2025

Measurement	WS01	Notes	WS02	Notes
Carbon Dioxide %	0.9<0.6	Level falling steadily to 5 minutes	0.9>1.0	Level rising to 30 seconds and levelling to 4 minutes and falling to 5 minutes
Methane %	0.0	N/A	0.0	N/A
Oxygen %	19.1>19.6	Level fluctuating to 1 minute and rising steadily to 4 minutes and levelling to 5 minutes	19.7<19.2	Level falling sharply then steadily to 1 minute then fluctuating to 4 minutes and levelling to 5 minutes
VOCs ppm	0.0	N/A	0.0*	N/A
Flow rate l/hr	0.0	N/A	0.0	N/A

*7.8ppm was written in the previous report LS8889 by error.

Date: 29/10/2025

Measurement	WS01	Notes	WS02	Notes
Carbon Dioxide %	1.9<1.6	Level falling sharply then steadily over 5 minutes	0.9	Level remaining level to 5 minutes
Methane %	0.0	N/A	0.0	N/A
Oxygen %	17.8>18.0	Level rising steadily over 5 minutes	19.8<19.5	Level falling steadily to 3 minutes and rising then levelling to 5 minutes
VOCs ppm	0.0	N/A	0.0	N/A
Flow rate l/hr	0.0	N/A	0.0	N/A

Date: 05/11/2025

Measurement	WS01	Notes	WS02	Notes
Carbon Dioxide %	0.0>0.2	Level remaining level to 2 minutes then steadily rising to 5 minutes	0.9>1.0	Level rising steadily to 1 minute and levelling to 5 minutes
Methane %	0.0	N/A	0.0	N/A
Oxygen %	20.5<20.2	Level fluctuating to 2 minutes and steadily rising to 5 minutes	19.7<19.2	Level falling sharply then steadily to 2 minutes and levelling to 5 minutes
VOCs ppm	0.0	N/A	0.0	N/A
Flow rate l/hr	0.0	N/A	0.0	N/A

Date: 12/11/2025

Measurement	WS01	Notes	WS02	Notes
Carbon Dioxide %	0.9<0.7	Level falling steadily to 5 minutes	1.0>1.1	Level rising to 30 seconds and levelling to 4 minutes and falling to 5 minutes
Methane %	0.0	N/A	0.0	N/A
Oxygen %	19.4>19.6	Level remaining level to 1 minute and steadily rising to 4 minutes then falling to 5 minutes	19.7<19.2	Level falling sharply then steadily to 1 minute, level to 4 minutes and rising to 5 minutes
VOCs ppm	0.0	N/A	0.0	N/A
Flow rate l/hr	0.0	N/A	0.0	N/A

Date: 19/11/2025

Measurement	WS01	Notes	WS02	Notes
Carbon Dioxide %	0.1	Level remaining level to 5 minutes	0.7>0.9	Level rising steadily over 1 minute and levelling to 5 minutes
Methane %	0.0	N/A	0.0	N/A
Oxygen %	20.0<19.9	Level falling to 30 seconds, levelling to 2 minute and fluctuating to 5 minutes	20.2<19.0	Level falling sharply then steadily to 1 minute and remining level to 5 minutes
VOCs ppm	0.0	N/A	0.0	N/A
Flow rate l/hr	0.0	N/A	0.0	N/A

Below is a summary of the atmospheric pressure conditions during the monitoring visits:

Visit	Pressure (recorded on site)	Published pressure trend
15/10/2025	1024mB	Falling/steady high pressure (Gatwick Airport)
22/10/2025	992mB	Fluctuating low pressure (Gatwick Airport)
29/10/2025	994mB	Fluctuating intermediate/low pressure (Gatwick Airport)
05/11/2025	1003mB	Fluctuating intermediate-high pressure (Gatwick Airport)
12/11/2025	1000mB	Falling/steady high-intermediate pressure (Gatwick Airport)
19/11/2025	1005mB	Falling high pressure (Gatwick Airport)

4.0 GROUND GAS ASSESSMENT

4.1 General

The risks associated with ground gases in respect of end users have been evaluated in general accordance with BS8485:2015+A1:2019 *Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings* and CIRIA C665 (2007) entitled *Assessing Risks Posed by Hazardous Ground Gases to Buildings*.

The conceptual site model identified the following source-pathway-receptor linkages in respect of potential ground gases and vapours:

Source	Pathway	Receptor
Ground gases/vapours arising from: Made Ground and both on and off-site commercial land uses including the possible joinery works (on-site), historic builder's yard and commercial estate (off-site to south-east)	Inhalation, explosion	End users

In total six return monitoring visits were undertaken to assess the recorded ground gas levels.

4.2 Gas Monitoring Rounds

It should be noted that the presence of a gas does not necessarily imply that a site or area is contaminated or that there is any unacceptable risk.

Concentrations of ground gases recorded may be affected by a variety of factors including atmospheric pressure, groundwater, rainfall and temperature, as well as the gas generation potential of the source. CIRIA C665 prescribe typical periods and frequency of monitoring visits required, as summarised on the following table (after CIRIA C665 Tables 5.5a and 5.5b):

Based on the results and the requirements of BS8485:2015+A1:2019, it is concluded that the monitoring visits undertaken to date are sufficient to broadly characterise gas situation likely to be present at the site.

Generation Potential [1,2]		**Very Low**	**Low**	**Moderate**	**High**	**Very High**
Example		Inert Made Ground	Alluvium or dock silt	Pre-1960 landfill	Shallow mine workings	Post '60's domestic landfill
Sensitivity of development	Low	4/1	6/2	6/3	12/6	12/12
	Moderate	6/2	6/3	9/6	12/12	24/24
	High	6/3	9/6	12/6	24/12 [3]	24/24 [3]

Notes:
1 - First digit is number of visits and second digit is number of months, e.g. 9/6 means nine visits in total over a period of 6 months
2 - At least two sets of readings should ideally be undertaken during low and falling atmospheric pressure <1000mB
3 - High sensitivity development on high gas hazard land is not normally acceptable unless the source is removed or otherwise treated.

4.3 Monitoring Data

BS8485:2015+A1:2019 categorises sites into one of six characteristic situations based on gas concentrations, flow rates and a calculated gas screening value, as summarised on the following table:

CS	Hazard Potential	CH_4	CO_2	Flow	Gas Screening Value (GSV)
1	Very low	<1.0%	<5.0%	-	<0.07l/hr
2	Low	-	-	<70l/hr	<0.7l/hr
3	Moderate	-	-	-	<3.5l/hr
4	Moderate to high	-	-	-	<15l/hr
5	High	-	-	-	<70l/hr
6	Very high	-	-	-	>70l/hr

The monitoring data has been appraised as follows:

Exploratory Hole and Round	Target Stratum	Max CH_4 (%)	Max CO_2 (%)	Max Flow (L/Hr)^	GSV CH_4 (L/Hr)	CS CH_4	GSV CO_2 (L/Hr)	CS CO_2	Was response zone fully flooded?
WS01 – R1	Folkestone Formation	0.0	2.7	0.1	0.0	CS1	0.0027	CS1	No
WS01 – R2		0.0	0.9	0.1	0.0	CS1	0.0009	CS1	No
WS01 – R3		0.0	1.9	0.1	0.0	CS1	0.0019	CS1	No
WS01 – R4		0.0	0.2	0.1	0.0	CS1	0.0002	CS1	No
WS01 – R5		0.0	0.9	0.1	0.0	CS1	0.0009	CS1	No
WS01 – R6		0.0	0.1	0.1	0.0	CS1	0.0001	CS1	No
WS02 – R1		0.0	1.1	0.1	0.0	CS1	0.0011	CS1	No
WS02 – R2		0.0	1.0	0.1	0.0	CS1	0.0010	CS1	No
WS02 – R3		0.0	0.9	0.1	0.0	CS1	0.0009	CS1	No
WS02 – R4		0.0	1.0	0.1	0.0	CS1	0.0010	CS1	No
WS02 – R5		0.0	1.1	0.1	0.0	CS1	0.0011	CS1	No
WS02 – R6		0.0	0.9	0.1	0.0	CS1	0.0009	CS1	No

R1 / R2 etc = Monitoring round 1 or 2 etc; S=Shallow; D=Deep; ^assume 0.1 L/hr (instrument detection limit) when no flow is recorded; GSV = Gas Situation Value; CS = Characteristic Situation; + raised to a GSV 2, as methane/carbon dioxide above the trigger concentration of 1% v/v or 5% v/v; value in [ ] recorded approximately 'stable' after 180 seconds

No positive or negative flow readings were recorded during the return monitoring, despite fluctuations of atmospheric pressures (high and trends of rising, fluctuating or falling pressure).

The results obtained to date correspond to a gas characteristic situation CS1.

No positive or negative flow readings were recorded during the return monitoring, despite fluctuations of atmospheric pressures (including low and high pressures and falling and fluctuating pressure).

The wells were not flooded with only WS01 recording minor quantities of brown silty water at the base of the installation, whilst WS02 remained dry throughout the monitoring period.

Overall, based on the maximum carbon dioxide level of 2.7% at WS01 in the first monitoring round and no significant flow rate recorded during the monitoring rounds at site the characteristic situation CS1 is considered appropriate, suggesting a very low gas hazard potential, with no ground gas protection required for the proposed site.

4.4 Radon

As part of the Phase II Contamination Assessment a new radon report was obtained. The new development contains a sublevel / lower ground floor across the majority of the site and this would increase the potential risk from radon and radon protective measures should be included within the building design as basements and cellar areas are considered to be at additional risk from high radon levels.

4.5 Vapours

VOCs were not recorded above detection level during the site works or during the monitoring. However, PAH analysis was undertaken as part of the recent soil contamination testing, and a detailed qualitative risk assessment has been undertaken in respect of the generation of vapours and ingress into proposed structures.

The following elevated benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene and di-benzo(a,h)anthracene and metals lead and zinc were identified at WS01 0.80m and FE02 0.10m within the hardstanding. The previous report's conclusion recommended the provision of a vapour membrane within the footprint of the building to protect end users from inhalation of vapours.

4.6 Adjacent Land Users

Possible on-site sources of ground gases were originally identified in the CSM as:

- Made Ground and on-site commercial land uses including the possible joinery works

Land uses surrounding the site were identified to comprise both residential and commercial. However, with reference to section 4.3, the source of gases was identified as not posing a significant risk to the on-site development. Therefore, no significant risk is posed to adjacent land users.

4.7 Conclusions

On the basis that a very low ground gas contamination risk (CS1) was identified, it was concluded that no ground gas protection (with regards to methane and carbon dioxide) is necessary for the proposed redevelopment.

However, as detailed in sections 4.4 and 4.5, in line with the recommendations from the recent Phase II Contamination Assessment provision should be made for a vapour membrane within the footprint of the building to protect end-users from vapours and radon.

A copy of this report should be submitted to the relevant authorities for approval in sufficient time prior to commencement on site.

A suitably qualified Environmental Consultant should prepare a full *Remediation Method Statement*. An appropriate level of supervision and testing will be required, to form part of a formal *Verification Report*.

REFERENCES

A number of technical references have been referred to in the preparation of this document, including:

- Smith, I. (2014) Smith's Elements of Soil Mechanics. Chichester. Wiley Blackwell. 9th edition.
- BRE Design Guide 365. Soakaway design ("DG365").
- Radon: Guidance on protective measures for new buildings, BRE Report BR 211, 2023 6th edition.
- The Environment Agency's approach to groundwater protection. February 2018 Version 1.2.
- Revised EU Waste Framework Directive 2008 2008/98/EC [transposed into English law under The Waste (England and Wales) Regulations 2011].
- European Community (EC) Directive 1999/31/EC [transposed into English law under the Landfill (England and Wales) Regulations 2002].
- Defining Waste Recovery - Permanent Deposit of Waste on Land, EPR13 v1.0, EA 2010.
- The definition of waste: Development Industry Code of Practice, v2, CL:AIRE 2011.
- Guidance on the classification and assessment of waste Technical Guidance WM3 ("WM3") EA publication (1st edition v1.2GB) dated 2021.

REPORT CONDITIONS

The Client

This report may also be used only by the client named in section 1 and their appointed project team for the purpose of design, obtaining planning, building regulations approval, and in connection with finance. This report must not be used by any other persons or for other purposes without express written agreement of Land Science.

General

Land Science takes all reasonable professional care in preparation of this report, using current standards and industry practice. However, the evaluation of ground conditions depends on an interpretation and extrapolation of the conditions revealed by a limited data set. The level of risk is related to the extent of investigation and no site is ever free of risk. The client should understand their risks and liabilities. We accept no liability whatsoever in respect of:

- The scope, extent or design of an investigation.
- Any conditions not directly revealed by the investigation.
- Published standards or methodologies used or adopted in this report.
- The opinion of any other party including any regulator, authority or stakeholder.
- Any dispute, claim or consequential loss arising from any findings of this report.
- Third party information and data.

This report relates solely to ground-related matters as set out in the objectives and makes no representation on other matters such as ecology, arboriculture, invasive plant species, the condition of buildings and structures, hazardous building materials such as insulation or asbestos, the locations of boundaries, unexploded ordnance, and or planning constraints etc. Further reports should be commissioned in this respect as appropriate.

Regulators and Approvals

This (and any other) report should be submitted to relevant authorities for their own assessments and to provide their approval or comments accordingly. This should be in good time before commencing on site in case additional work is to be carried out.

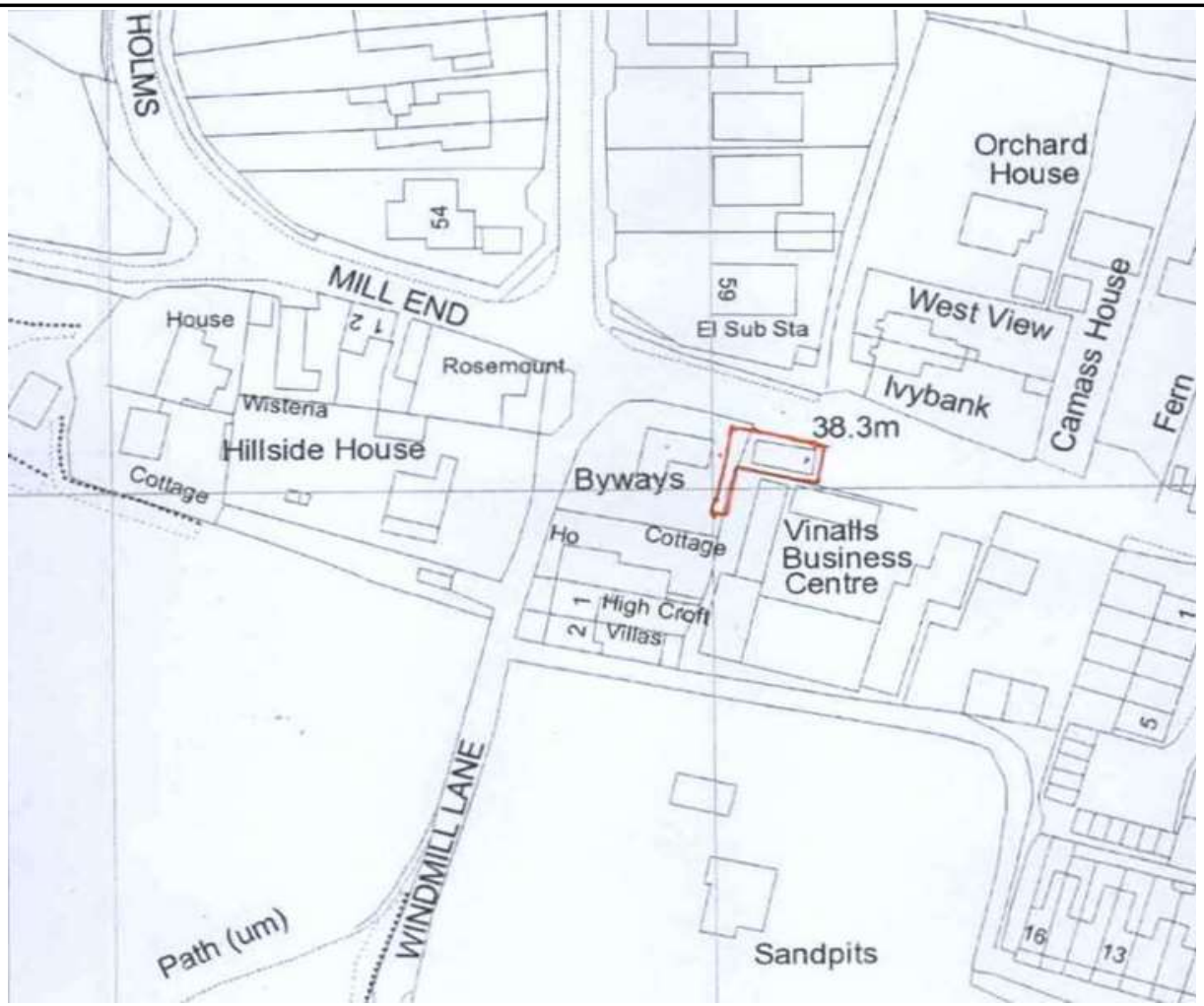
Standards, technical guidance and regulatory positions change over time and which may therefore affect the findings and recommendations made in this report; this should be verified by the client prior to any critical project milestones. Where this information is used in design, the designer should verify that the information is appropriate and has been used correctly.

Variations with time

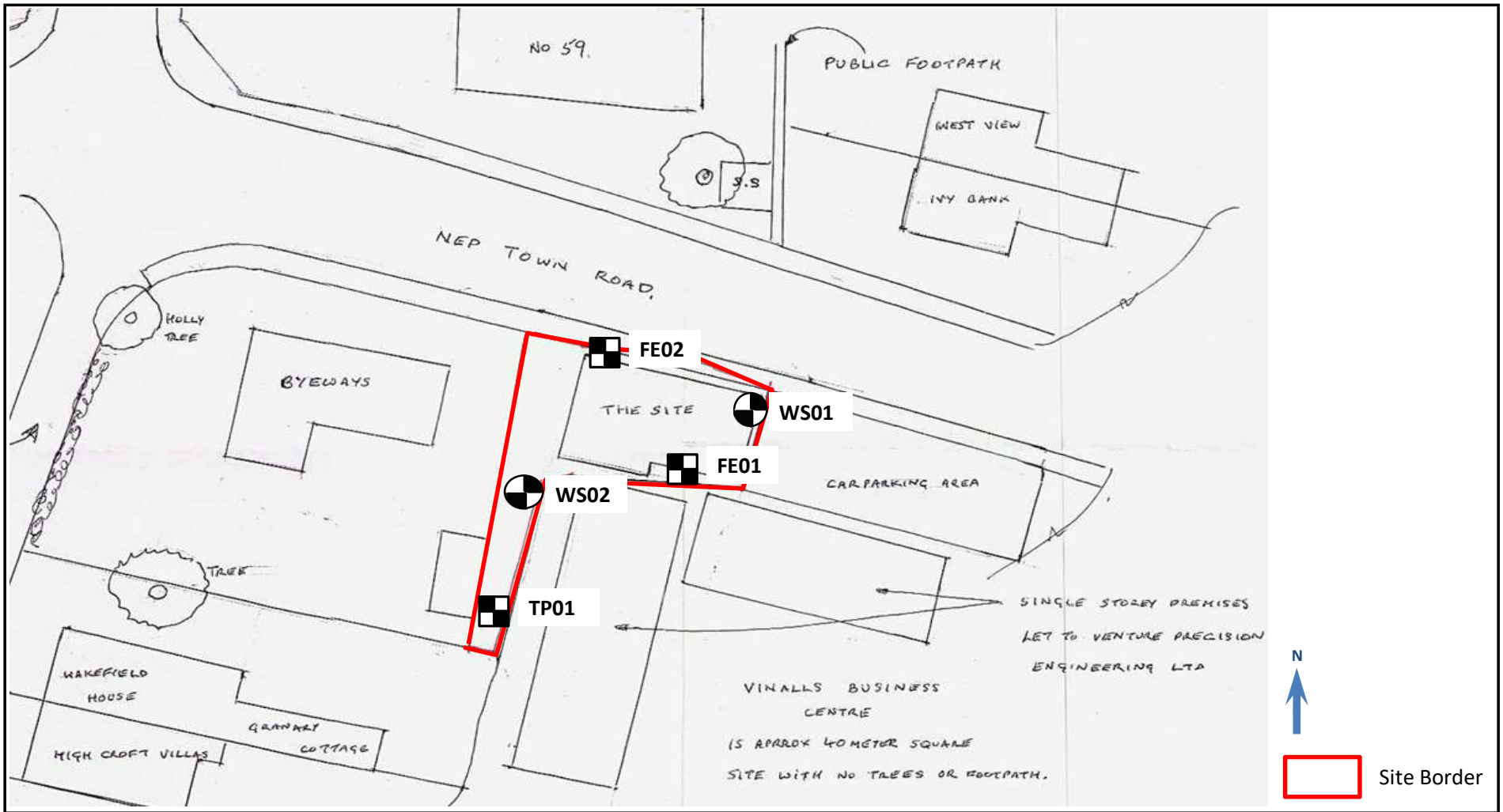
The report relates to conditions revealed at the time of the investigation and any monitoring visits. Some parameters may vary over time or seasonally; groundwater levels, ground gas compositions, or concentrations of contaminants are particularly variable in this respect. Further monitoring or verification should be considered as appropriate.

GLOSSARY OF TERMS

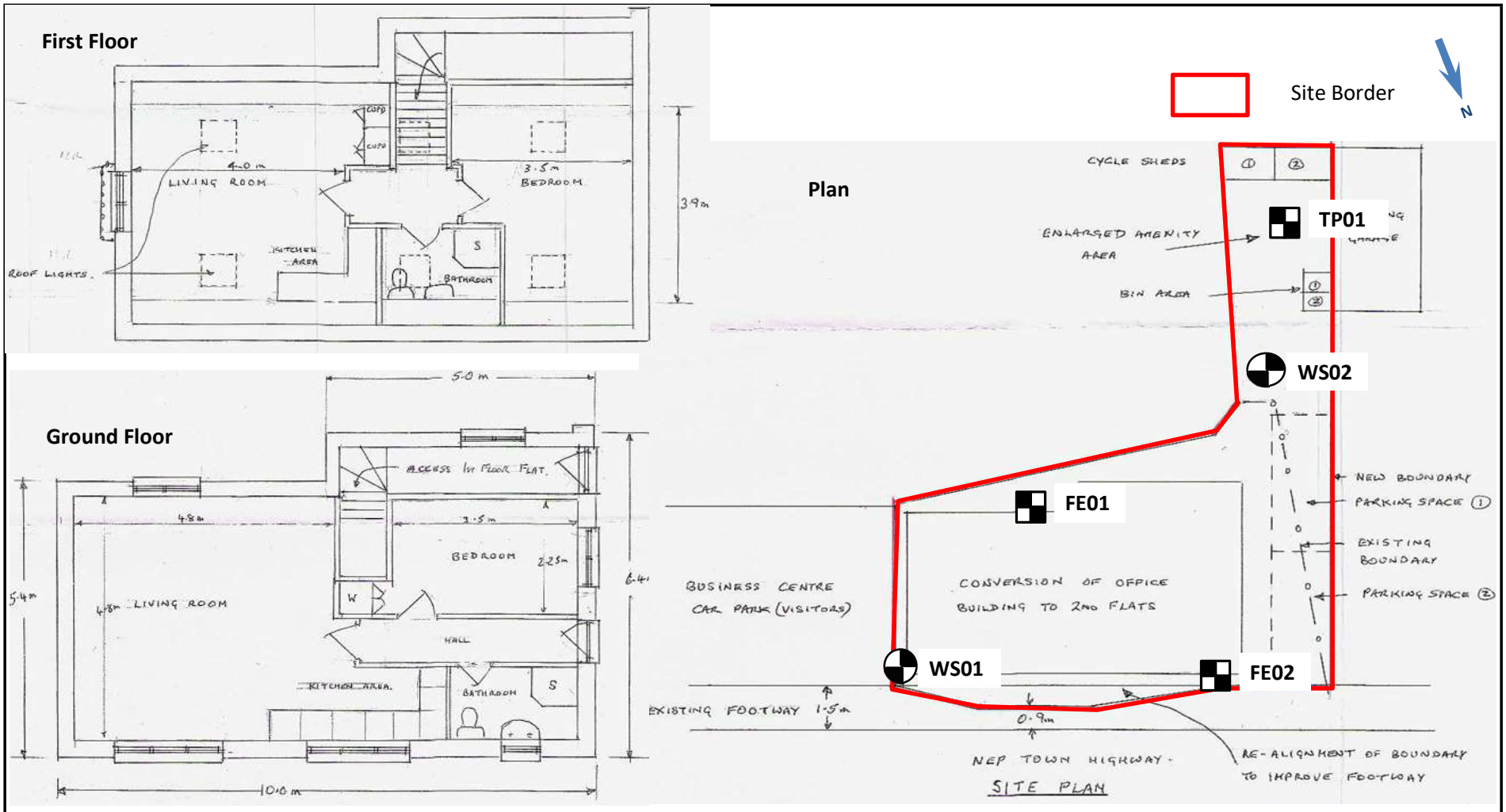
ACM	Asbestos Containing Material
BGS	British Geological Survey
BRE	Building Research Establishment
BS	British Standard
C4SL	Category 4 Screening Level
CBR	California Bearing Ratio
CDM	Construction Design and Management regulations
CIRIA	Construction Industry Research and Information Association
CL:AIRE	Contaminated Land: Applications in Real Environments
CLEA	Contaminated Land Exposure Assessment model
CSM	Conceptual Site Model
EA	Environment Agency
EQS	Environmental Quality Standards
FOC	Fraction of Organic Carbon
GAC	Generic Assessment Criterion
GQRA	Generic Quantitative Risk Assessment
mbgl	Meters Below Ground Level
NHBC	National House Building Council
mOD	Metres above Ordnance Datum
PAH's	Polycyclic Aromatic Hydrocarbons
PHE	Public Health England
PID	Photo-Ionisation Detector
PQRA	Preliminary Quantitative Risk Assessment
PSD	Particle Size Distribution Test
RMS	Remediation Method Statement
S4UL	Suitable for Use Level
SOM	Soil Organic Matter
SPZ	Source Protection Zone
SPT	Standard Penetration Test
SSSI	Sites of Special Scientific Interest
ST-WEL	Short Term Workplace Exposure Limit
SVOC's	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
TRRL / TRL	Transport Road Research Laboratory
TWA-WEL	Time Weighted Average Workplace Exposure Limit
UK HBF	United Kingdom House Building Federation
VOC's	Volatile Organic Compounds
WAC	Waste Acceptance Criteria



Land Science	**TITLE:**	Site Location Plan	**REF:** LS8889	**PREPARED:**	JM
	PROJECT:	The Studio, Nep Town Road, Henfield BN5 9DY	**FIGURE:** 1	**CHECKED:**	MR
	CLIENT:	Susie Warner	**DATE:** 03/10/2025	**VERSION**	V1



Land Science	**TITLE:**	Existing Site Plan	**REF:** LS8889	**PREPARED:**	JM
	PROJECT:	The Studio, Nep Town Road, Henfield BN5 9DY	**FIGURE:** 2	**CHECKED:**	MR
	CLIENT:	Susie Warner	**DATE:** 08/10/2025	**VERSION**	V1



Land Science	**TITLE:**	Proposed Site Plan	**REF:** LS8889	**PREPARED:**	JM
	PROJECT:	The Studio, Nep Town Road, Henfield BN5 9DY	**FIGURE:** 3	**CHECKED:**	MR
	CLIENT:	Susie Warner	**DATE:** 03/10/2025	**VERSION**	V1

APPENDIX A

Land Science
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Site	Number
The Studio, Nep Town Road, Henfield, BN5 9DY	WS01

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler			Susie Warner	LS8889
	Location	**Dates** 07/10/2025	**Engineer** Landscience	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.15	D		PID = 0.1ppm		(0.25) 0.25	Dark brown gravelly silty SAND. Sand is fine to coarse. Gravel is fine to coarse flint and hardcore, rare chalk, ash, coal/clinker, brick and organic material. (MADE GROUND)			
0.50	D		PID = 0.0ppm		(0.65)	Reworked brown to orange-brown slightly gravelly silty SAND. Sand is fine to coarse. Gravel is fine to medium flint, with rare metal, ash, charcoal, sandstone and ironstone cobbles with organic material. (REWORKED GROUND)			
0.80	D		PID = 0.1ppm		0.90	Loose orange to yellow-brown SAND. Sand is fine to medium. (FOLKESTONE FORMATION)			
1.20	D		PID = 0.0ppm						
1.80	D		PID = 0.3ppm		(3.10)				
2.50	D		PID = 0.2ppm			2.50-4.00m: locally red-brown with occasional bands of sandstone.			
3.50-3.70	D		PID = 0.2ppm		4.00	Complete at 4.00m			

Remarks
NOTES: Borehole completed at target depth of 4.00mbgl.
STABILITY: Stable.
GROUNDWATER:None encountered.
INSTALLATION: HDPE standpipe to 4.00mbgl; plain to 1.00m and slotted 1.00 to 4.00mbgl, with bentonite/shingle surround.
CASING: None used.

Scale (approx)	Logged By
1:25	TM

Figure No. LS8889.WS01

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Site	Number
The Studio, Nep Town Road, Henfield, BN5 9DY	WS02

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Windowless Sampler			Susie Warner	LS8889
	Location	**Dates** 07/10/2025	**Engineer** Landscience	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
					(0.07) 0.07	(CONCRETE)			
0.20	D		PID = 0.1ppm		(0.33)	Brown to orange-brown slightly gravelly slightly silty SAND. Sand is fine to coarse. Gravel is fine to coarse brick, ceramic tile, ash/charcoal and concrete fragments from above. (MADE GROUND)			
					0.40 (0.10) 0.50	Brown to orange-brown slightly silty SAND. Sand is fine to coarse. (REWORKED GROUND)			
0.50	D		PID = 0.1ppm			Loose yellow-orange to brown SAND. Sand is fine to medium. (FOLKESTONE FORMATION)			
0.90	D		PID = 0.0ppm		(1.00)				
1.30	D		PID = 0.0ppm						
					1.50	1.50m: Sandstone and ironstone.			
						Complete at 1.50m			

Remarks
NOTES: Borehole terminated at 1.50m with refusal in sandstone/ironstone.
STABILITY: Stable.
GROUNDWATER: None encountered.
INSTALLATION: HDPE Standpipe to 1.50mbgl: plain to 0.50m and slotted 0.50m to 1.50mbgl with bentonite/shingle surround.
CASING: None used.

Scale (approx)	Logged By
1:25	TM

Figure No. LS8889.WS02

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Site	Trial Pit Number
The Studio, Nep Town Road, Henfield, BN5 9DY	FE01

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit			Susie Warner	LS8889
	Location	**Dates** 07/10/2025	**Engineer** Landscience	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	(CONCRETE)		
					0.20			
					(0.20)	Brown slightly gravelly slightly silty SAND. Sand is fine to coarse. Gravel is brick, ash and charcoal and glass with concrete fragments from above. (MADE GROUND)		
0.30	D		PID = 0.0ppm		0.40			
					(0.35)	Loose brown to orange-brown slightly gravelly SAND. Sand is fine to medium. Gravel is fine to coarse sandstone. (REWORKED GROUND)		
0.60	D		PID = 0.0ppm		0.75			
						Complete at 0.75m		

Plan

Remarks

BACKFILL: Backfilled with arisings and bentonite sealing pellets.
GROUNDWATER: None encountered.
STABILITY: Slight spalling.

Scale (approx)	Logged By	Figure No.
1:25	TM	LS8889.FE01

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Site	Trial Pit Number
The Studio, Nep Town Road, Henfield, BN5 9DY	FE02

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit			Susie Warner	LS8889
	Location	**Dates** 01/10/2025	**Engineer** Landscience	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D		PID = 0.0ppm		(0.20) 0.20	Sparse vegetation over dark brown slightly gravelly slightly silty SAND. Sand is fine to coarse. Gravel is fine to medium sandstone and flint, rare brick, ash, charcoal/clinker, metal nail, ceramic tile and concrete. (MADE GROUND)		
0.40	D		PID = 0.0ppm		(0.40) 0.60	Loose brown slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to medium flint with coal. (REWORKED GROUND) 0.20-0.60m: damp.		
						Complete at 0.60m		

Plan

Remarks

BACKFILL: Backfilled with arisings and bentonite sealing pellets.
STABILITY: Slight spalling.
GROUNDWATER: None.

Scale (approx)	Logged By	Figure No.
1:50	TM	LS8889.FE02

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Site	Trial Pit Number
The Studio, Nep Town Road, Henfield, BN5 9DY	TP01

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit			Susie Warner	LS8889
	Location	**Dates** 07/10/2025	**Engineer** Landscience	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					0.05	Pea shingle over Geotextile. (MADE GROUND)		
0.15	D		PID = 0.0ppm		(0.30)	Dark brown slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse brick, concrete, ash, charcoal, ceramic tile, slate, chalk and glass. (MADE GROUND)		
					0.35			
0.50	D		PID = 0.1ppm		(0.45)	Loose yellow-orange to brown slightly gravelly silty SAND. Sand is fine to coarse brick, ash, charcoal and sandstone. (REWORKED GROUND)		
					0.80			
0.90	D		PID = 0.0ppm		(0.20)	Loose yellow-orange/brown to brown SAND. Sand is fine to medium. (FOLKESTONE FORMATION)		
					1.00	Complete at 1.00m		

Plan

Remarks

BACKFILL: Backfilled with arisings and bentonite sealing pellets.
STABILITY: Stable.
GROUNDWATER: None encountered.

Scale (approx)	Logged By	Figure No.
1:25	TM	LS8889.TP01

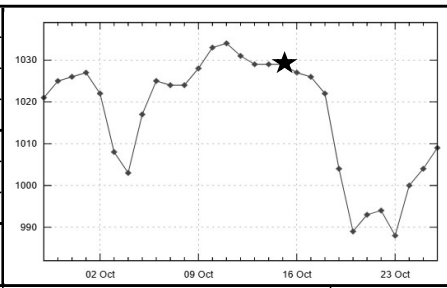
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APPENDIX B

GROUND GAS AND GROUNDWATER MONITORING

Project:	The Studio	**Ref:**	LS8889
Date:	15/10/2025	**Visit:**	1/6
Engineer:	JM	**Check:**	MR
Weather:	Overcast	**Page:**	1 of 1

Atmospheric Pressure	**before:**	1024 mB	Time	3:15
	after:	1024 mB	Time	3:45
Published pressure trend:	Falling/steady high pressure. (Gatwick Airport)			
Remarks:	Equipment used: GFM 435, PhoCheck Tiger PID, Dipmeter			



Position	Flow (l/hr)		Common Gases (%)				VOC's (ppm)	Groundwater (m)				Remarks
	High	Low	Time	CO2	CH4	O2		LNAPL	Water	DNAPL	Base	
Calibration Check	0.0	0.0	15s	0.0	0.0	21.0	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	21.0						
			60s	0.0	0.0	21.0						
WS01	0.0	0.0	15s	2.2	0.0	18.9	0.0	-	Dry	-	3.84	Completely dry and no silt residue
			30s	2.2	0.0	17.6						
			60s	2.4	0.0	17.3						
			120s	2.5	0.0	17.1						
			180s	2.6	0.0	17.0						
			240s	2.7	0.0	16.9						
			300s	2.5	0.0	17.1						
WS02	0.0	0.0	15s	0.8	0.0	19.7	0.0	-	Dry	-	1.38	Completely dry and no silt residue
			30s	1.1	0.0	19.3						
			60s	1.1	0.0	19.2						
			120s	1.1	0.0	19.2						
			180s	1.1	0.0	19.2						
			240s	1.1	0.0	19.2						
			300s	1.1	0.0	19.2						
Calibration Check	0.0	0.0	15s	0.0	0.0	21.0	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	21.0						
			60s	0.0	0.0	21.0						

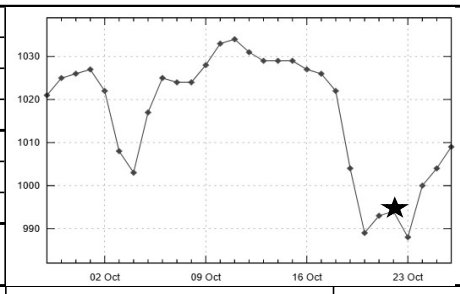
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GROUND GAS AND GROUNDWATER MONITORING

Project:	The Studio	**Ref:**	LS8889
Date:	22/10/2025	**Visit:**	2/6
Engineer:	JM	**Check:**	MR
Weather:	Overcast and damp	**Page:**	1 of 1

Atmospheric Pressure	**before:**	992 mB	Time	3:20
	after:	992 mB	Time	4:00
Published pressure trend:	Fluctuating low pressure. (Gatwick Airport)			
Remarks:	Equipment used: GFM 435, PhoCheck Tiger PID, Dipmeter			



Position	Flow (l/hr)		Common Gases (%)				VOC's (ppm)	Groundwater (m)				Remarks
	High	Low	Time	CO2	CH4	O2		LNAPL	Water	DNAPL	Base	
Calibration Check	0.0	0.0	15s	0.0	0.0	20.5	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.5						
			60s	0.0	0.0	20.5						
WS01	0.0	0.0	15s	0.9	0.0	19.1	0.0	-	3.80	-	3.85	Silt residue
			30s	0.8	0.0	19.3						
			60s	0.8	0.0	19.2						
			120s	0.7	0.0	19.4						
			180s	0.7	0.0	19.5						
			240s	0.6	0.0	19.6						
			300s	0.6	0.0	19.6						
WS02	0.0	0.0	15s	0.9	0.0	19.7	0.0	-	Dry	-	1.38	Completely dry and no silt residue
			30s	1.0	0.0	19.3						
			60s	1.0	0.0	19.2						
			120s	1.0	0.0	19.5						
			180s	1.0	0.0	19.2						
			240s	1.0	0.0	19.3						
			300s	0.9	0.0	19.3						
Calibration Check	0.0	0.0	15s	0.0	0.0	19.5	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.5						
			60s	0.0	0.0	20.5						

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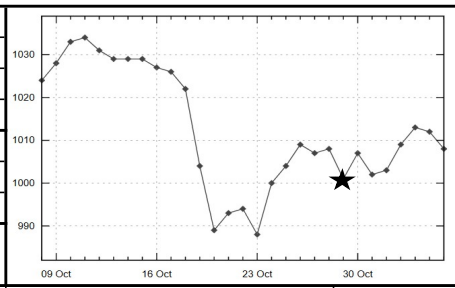
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GROUND GAS AND GROUNDWATER MONITORING

Project:	The Studio	**Ref:**	LS8889
Date:	29/10/2025	**Visit:**	3/6
Engineer:	JM	**Check:**	MR
Weather:	Heavy rain	**Page:**	1 of 1

Atmospheric Pressure	**before:**	994 mB	Time	3:45
	after:	994 mB	Time	4:30
Published pressure trend:	Fluctuating intermediate/low pressure. (Gatwick Airport)			

Remarks: Equipment used: GFM 435, PhoCheck Tiger PID, Dipmeter



Position	Flow (l/hr)		Common Gases (%)				VOC's (ppm)	Groundwater (m)				Remarks
	High	Low	Time	CO2	CH4	O2		LNAPL	Water	DNAPL	Base	
Calibration Check	0.0	0.0	15s	0.0	0.0	20.5	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.5						
			60s	0.0	0.0	20.5						
WS01	0.0	0.0	15s	1.9	0.0	17.8	0.0	-	3.82	-	3.84	Silty residue
			30s	1.7	0.0	17.9						
			60s	1.7	0.0	17.9						
			120s	1.7	0.0	17.9						
			180s	1.6	0.0	17.9						
			240s	1.6	0.0	17.9						
			300s	1.6	0.0	18.0						
WS02	0.0	0.0	15s	0.9	0.0	19.8	0.0	-	Dry	-	1.38	Completely dry and no silt residue
			30s	0.9	0.0	19.6						
			60s	0.9	0.0	19.5						
			120s	0.9	0.0	19.4						
			180s	0.9	0.0	19.4						
			240s	0.9	0.0	19.5						
			300s	0.9	0.0	19.5						
Calibration Check	0.0	0.0	15s	0.0	0.0	20.5	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.5						
			60s	0.0	0.0	20.5						

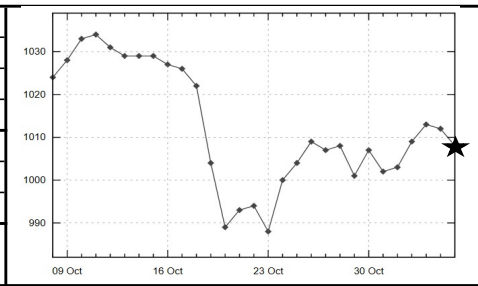
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GROUND GAS AND GROUNDWATER MONITORING

Project:	The Studio	**Ref:**	LS8889
Date:	05/11/2025	**Visit:**	4/6
Engineer:	JM	**Check:**	MR
Weather:	Overcast	**Page:**	1 of 1

Atmospheric Pressure	**before:**	1003 mB	Time	3:20
	after:	1003 mB	Time	3:45
Published pressure trend:	Fluctuating intermediate-high pressure.(Gatwick Airport)			
Remarks:	Equipment used: GFM 435, PhoCheck Tiger PID, Dipmeter			



Position	Flow (l/hr)		Common Gases (%)				VOC's (ppm)	Groundwater (m)				Remarks
	High	Low	Time	CO2	CH4	O2		LNAPL	Water	DNAPL	Base	
Calibration Check	0.0	0.0	15s	0.0	0.0	20.4	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.4						
			60s	0.0	0.0	20.4						
WS01	0.0	0.0	15s	0.0	0.0	20.5	0.0	-	3.79	-	3.84	Silt residue
			30s	0.0	0.0	20.4						
			60s	0.0	0.0	20.5						
			120s	0.0	0.0	20.4						
			180s	0.1	0.0	20.3						
			240s	0.1	0.0	20.3						
			300s	0.2	0.0	20.2						
WS02	0.0	0.0	15s	0.9	0.0	19.7	0.0	-	Dry	-	1.38	Completely dry and no silt residue
			30s	0.9	0.0	19.4						
			60s	1.0	0.0	19.3						
			120s	1.0	0.0	19.2						
			180s	1.0	0.0	19.2						
			240s	1.0	0.0	19.2						
			300s	1.0	0.0	19.2						
Calibration Check	0.0	0.0	15s	0.0	0.0	20.4	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.4						
			60s	0.0	0.0	20.4						

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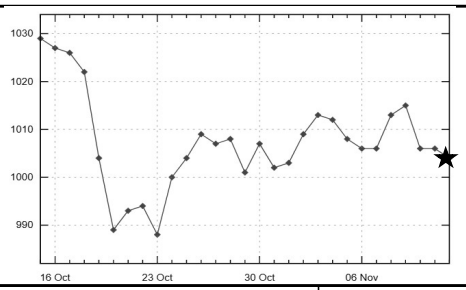
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GROUND GAS AND GROUNDWATER MONITORING

Project:	The Studio	**Ref:**	LS8889
Date:	12/11/2025	**Visit:**	5/6
Engineer:	JM	**Check:**	MR
Weather:	Sunny and cool	**Page:**	1 of 1

Atmospheric Pressure	**before:**	1000 mB	Time	3:25
	after:	1000 mB	Time	4:10
Published pressure trend:	Falling/steady high-intermediate pressure. (Gatwick Airport)			

Remarks: Equipment used: GFM 435, PhoCheck Tiger PID, Dipmeter



Position	Flow (l/hr)		Common Gases (%)				VOC's (ppm)	Groundwater (m)				Remarks
	High	Low	Time	CO2	CH4	O2		LNAPL	Water	DNAPL	Base	
Calibration Check	0.0	0.0	15s	0.0	0.0	20.4	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.5						
			60s	0.0	0.0	20.5						
WS01	0.0	0.0	15s	0.9	0.0	19.4	0.0	-	3.78	-	3.90	Silt residue
			30s	0.8	0.0	19.4						
			60s	0.8	0.0	19.4						
			120s	0.7	0.0	19.5						
			180s	0.7	0.0	19.5						
			240s	0.7	0.0	19.6						
			300s	0.7	0.0	19.5						
WS02	0.0	0.0	15s	1.0	0.0	19.7	0.0	-	Dry	-	1.47	Completely dry and no silt residue
			30s	1.1	0.0	19.3						
			60s	1.1	0.0	19.2						
			120s	1.1	0.0	19.2						
			180s	1.1	0.0	19.2						
			240s	1.1	0.0	19.2						
			300s	1.0	0.0	19.3						
Calibration Check	0.0	0.0	15s	0.0	0.0	20.4	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.4						
			60s	0.0	0.0	20.4						

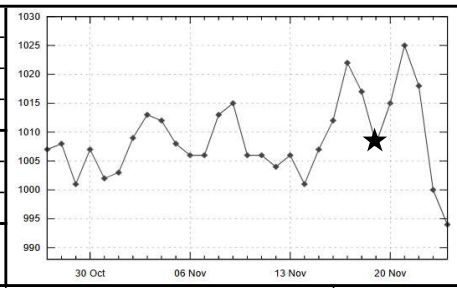
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GROUND GAS AND GROUNDWATER MONITORING

Project:	The Studio	**Ref:**	LS8889
Date:	19/11/2025	**Visit:**	6/6
Engineer:	JM	**Check:**	MR
Weather:	Cold following snow flurry	**Page:**	1 of 1

Atmospheric Pressure	**before:**	1005 mB	Time	3:20
	after:	1005 mB	Time	4:00
Published pressure trend:	Falling high pressure. (Gatwick Airport)			
Remarks:	Equipment used: GFM 435, PhoCheck Tiger PID, Dipmeter			



Position	Flow (l/hr)		Common Gases (%)				VOC's (ppm)	Groundwater (m)				Remarks
	High	Low	Time	CO2	CH4	O2		LNAPL	Water	DNAPL	Base	
Calibration Check	0.0	0.0	15s	0.0	0.0	19.2	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.1						
			60s	0.0	0.0	20.1						
WS01	0.0	0.0	15s	0.1	0.0	20.0	0.0	-	3.72	-	3.82	Slightly brown silt residue
			30s	0.1	0.0	19.9						
			60s	0.1	0.0	19.9						
			120s	0.1	0.0	19.9						
			180s	0.1	0.0	20.0						
			240s	0.1	0.0	19.9						
			300s	0.1	0.0	20.0						
WS02	0.0	0.0	15s	0.7	0.0	20.2	0.0	-	Dry	-	1.37	Completely dry and no silt residue
			30s	0.8	0.0	19.1						
			60s	0.9	0.0	19.0						
			120s	0.9	0.0	19.0						
			180s	0.9	0.0	19.0						
			240s	0.9	0.0	19.0						
			300s	0.9	0.0	19.0						
Calibration Check	0.0	0.0	15s	0.0	0.0	19.9	0.0	-	-	-	-	Calibration check passed
			30s	0.0	0.0	20.0						
			60s	0.0	0.0	20.1						