APPENDIX A: Conditions and Limitations

2 The Long Barn, Norton Farm, Selborne Road, Alton, Hampshire GU34 3NB
[redacted] groundandwater.co.uk

Registered Office: Kineton House, 31 Horse Fair, Banbury, Oxfordshire OX16 0AE Registered in England No. 07032001

The ground is a product of continuing natural and artificial processes. As a result, the ground will exhibit a variety of characteristics that vary from place to place across a site, and also with time. Whilst a ground investigation will mitigate to a greater or lesser degree against the resulting risk from variation, the risks cannot be eliminated.

The report has been prepared on the basis of information, data and materials which were available at the time of writing. Accordingly, any conclusions, opinions or judgements made in the report should not be regarded as definitive or relied upon to the exclusion of other information, opinions and judgements.

The investigation, interpretations, and recommendations given in this report were prepared for the sole benefit of the client in accordance with their brief; as such these do not necessarily address all aspects of ground behaviour at the site. No liability is accepted for any reliance placed on it by others unless specifically agreed in writing.

Any decisions made by you, or by any organisation, agency or person who has read, received or been provided with information contained in the report ("you" or "the Recipient") are decisions of the Recipient and we will not make, or be deemed to make, any decisions on behalf of any Recipient. We will not be liable for the consequences of any such decisions.

Current regulations and good practice were used in the preparation of this report. An appropriately qualified person must review the recommendations given in this report at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

Any Recipient must take into account any other factors apart from the Report of which they and their experts and advisers are or should be aware. The information, data, conclusions, opinions and judgements set out in the report may relate to certain contexts and may not be suitable in other contexts. It is your responsibility to ensure that you do not use the information we provide in the wrong context.

This report is based on readily available geological records, the recorded physical investigation, the strata observed in the works, together with the results of completed site and laboratory tests. Whilst skill and care has been taken to interpret these conditions likely between or below investigation points, the possibility of other characteristics not revealed cannot be discounted, for which no liability can be accepted. The impact of our assessment on other aspects of the development required evaluation by other involved parties.

The opinions expressed cannot be absolute due to the limitations of time and resources within the context of the agreed brief and the possibility of unrecorded previous in ground activities. The ground conditions have been sampled or monitored in recorded locations and tests for some of the more common chemicals generally expected. Other concentrations of types of chemicals may exist.

The conclusions and recommendations relate to land South of Wandleys Lane, Fontwell, Eastergate, West Sussex PO20 3SE.

Trial hole is a generic term used to describe a method of direct investigation. The term trial pit, borehole or window sampler borehole implies the specific technique used to produce a trial hole.

The depth to roots and/or of desiccation may vary from that found during the investigation. The client is responsible for establishing the depth to roots and/or of desiccation on a plot-by-plot basis prior to the construction of foundations. Where trees are mentioned in the text this means existing trees, recently removed trees (approximately 15 years to full recovery on cohesive soils) and those planned as part of the site landscaping.

Ownership of copyright of all printed material including reports, laboratory test results, trial pit and borehole log sheets, including drillers log sheets, remain with Ground and Water Limited. Licence is for the sole use of the client and may not be assigned, transferred or given to a third party.

Only our client may rely on this report and should this report or any information contained in it be provided to any third party we accept no responsibility to the third party for the contents of this report save to the extent expressly outlined by us in writing in a reliance letter addressed from us to the third party.

Recipients are not permitted to publish this report outside of their organisation without our express written consent.

APPENDIX B: Technical Glossary

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TECHNICAL GLOSSARY

The list of possible definitions within the report may be seen below. Please note that some definitions may not be relevant to this report.

HYDROGEOLOGY:

A **Principal Aquifer** is a layer of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.

Secondary aquifers include a wide range of drift deposits with an equally wide range of water permeability and storage capacities.

Secondary (A) Aquifers consist of deposits with permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as Minor Aquifers.

Secondary (B) Aquifers consist of deposits with predominantly lower permeability layers with may stoke and yield limited amounts of groundwater due to localised features such as fissures, think permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

Secondary Aquifers (Undifferentiated) are assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both a minor aquifer and non-aquifer in different locations due to the variable characteristics of the rock type.

Unproductive Strata are rock layers with low permeability that have negligible significance for water supply or river base flow. These were formerly classified as non-aquifers.

FLOOD ZONES:

Environment Agency Flood Zone 2, defined as; land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.

Environment Agency Flood Zone 3 shows the extent of a river flood with a 1 in 100 (1%0 or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year.

Environment Agency Flood Zone 3 area that benefits from flood defences, defined as; land and property in this flood zone would have a high probability of flooding without the local flood defences. These protect the area against a river flood with a 1% chance of happening each year, or a flood from the sea with a 0.5% chance of happening each year.

GROUNDWATER SOURCE PROTECTION ZONES (SPZS):

Inner zone (SPZ1): This zone is 50 day travel time of pollutant to source with a 50 metres default minimum radius.

Outer zone (SPZ2): This zone is 400 day travel time of pollutant to source. This has a 250 or 500 metres minimum radius around the source depending on the amount of water taken.

Total catchment (SPZ3): This is the area around a supply source within which all the groundwater ends up at the abstraction point. This is the point from where the water is taken. This could extend some distance from the source point.

Zone of special interest (SPZ4): This zone is where local conditions require additional protection.

IN-SITU STRENGTH GEOTECHNICAL TESTING:

Windowless Sample and/or Cable Percussion and/or Rotary Boreholes provide samples of the ground for assessment but they do not give any engineering data. The standard penetration test (SPT) is an in-situ dynamic penetration test designed to provide information on the geotechnical engineering properties of soil. The test uses a thick-walled sample tube, with an outside diameter of 50mm and an inside diameter of 35mm, and a length of around 650mm. This is driven into the ground at the bottom of a borehole by blows from a slide hammer with a weight of 63.5kg falling through a distance of 760mm. The sample tube is driven 150mm into the ground and then the number of blows needed for the tube to penetrate each 75mm up to a depth of 450mm is recorded. The sum of the number of blows is termed the "standard penetration resistance" or the "N-value".

Dynamic Probing involves the driving of a metal cone into the ground via a series of steel rods. These rods are driven from the surface by a hammer system that lifts and drops a 63.5kg (SHDP) hammer onto the top of the rods through a set height, thus ensuring a consistent energy input. The number of hammer blows that are required to drive the cone down by each 100mm increment are recorded. These blow counts then provide a comparative assessment from which correlations have been published, based on dynamic energy, which permits engineering parameters to be generated. (The Dynamic Probe 'Super Heavy' (SHDP) Tests were conducted in accordance with BS 1377; 1990; Part 9, Clause 3.2).

APPENDIX C: BGS Radon Report

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Registered Office: Kineton House, 31 Horse Fair, Banbury, Oxfordshire OX16 0AE Registered in England No. 07032001

GeoReports

British Geological Survey

DIPALEE JUKES
GROUND AND WATER LIMITED
234 IVYDALE ROAD
LONDON
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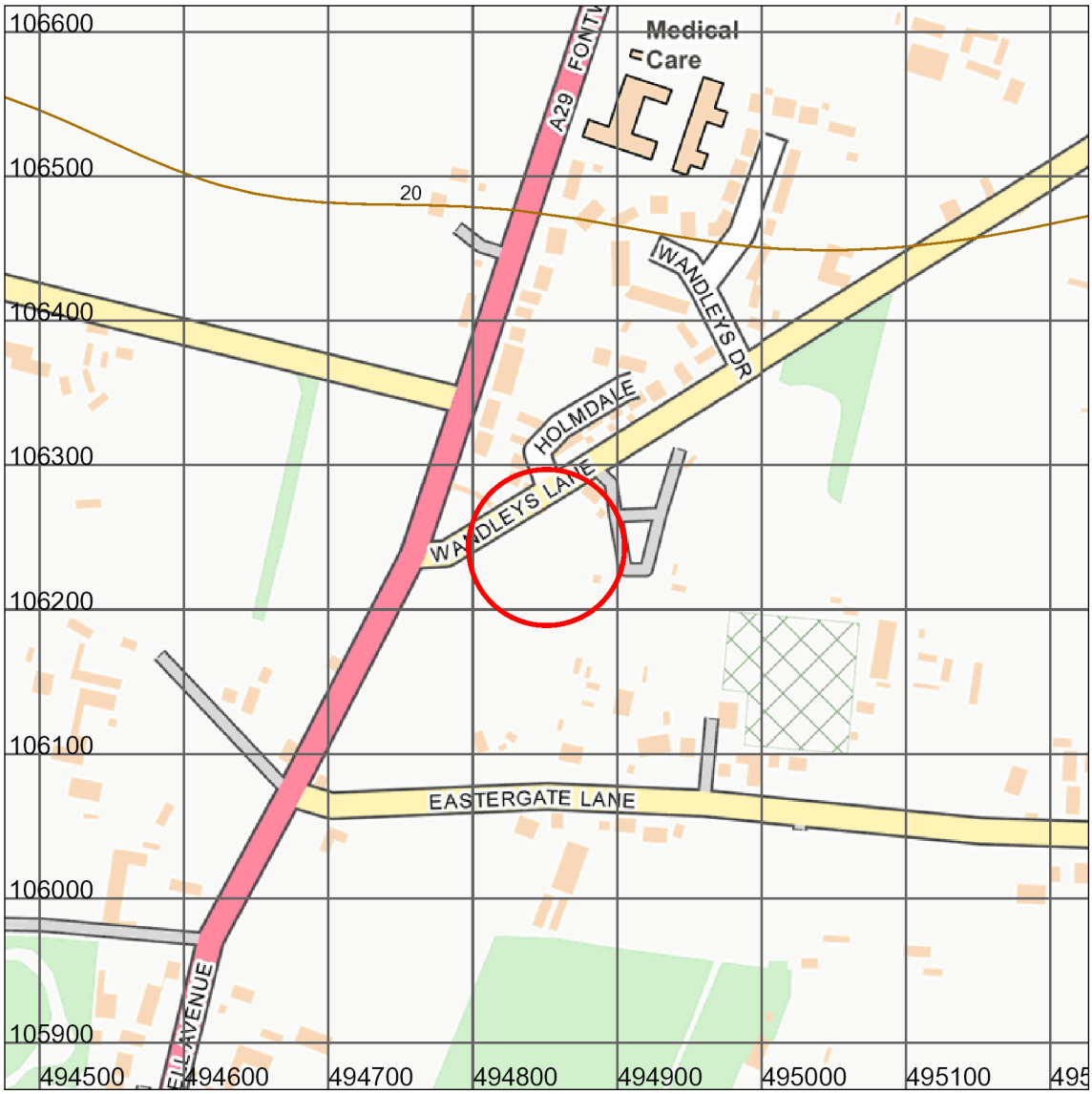
Radon Report

Advisory report on the requirement for radon protective measures in new buildings, conversions and extensions to existing buildings. The report also indicates whether a site is located within a radon Affected Area

Report Id: ***BGS_334964/48686***

Client reference:

Search location



Contains OS data © Crown Copyright and database right 2023. OS OpenMap Local: Scale: 1:5 000 (1cm = 50 m)
Search location indicated in red

Area centred at: 494851,106243
Radius of site area: 54 metres

Radon Report: UK

When extensions are made to existing buildings in high radon areas, or new buildings are constructed in these areas, the Building Regulations for England, Wales, Scotland and Northern Ireland require that protective measures are taken against radon entering the building.

This report provides information on whether radon protective measures are required. Depending on the probability of buildings having high radon levels, the Regulations may require either:

1. No protective measures
2. Basic protective measures
3. Full protective measures

This is an advisory report on the requirement for radon protective measures in new buildings, conversions and extensions. The report also indicates whether a site is located within a radon Affected Area

Requirement for radon protective measures

The determination below follows advice in *BR211 Radon: Guidance on protective measures for new buildings (2023 edition), which also provides guidance on what to do if the* result *indicates that protective measures are required.*

Is the property in an area where radon protective measures are required for new buildings or extensions to existing ones as described in publication BR211 (2023 edition) Radon: Guidance on protective measures for new buildings?

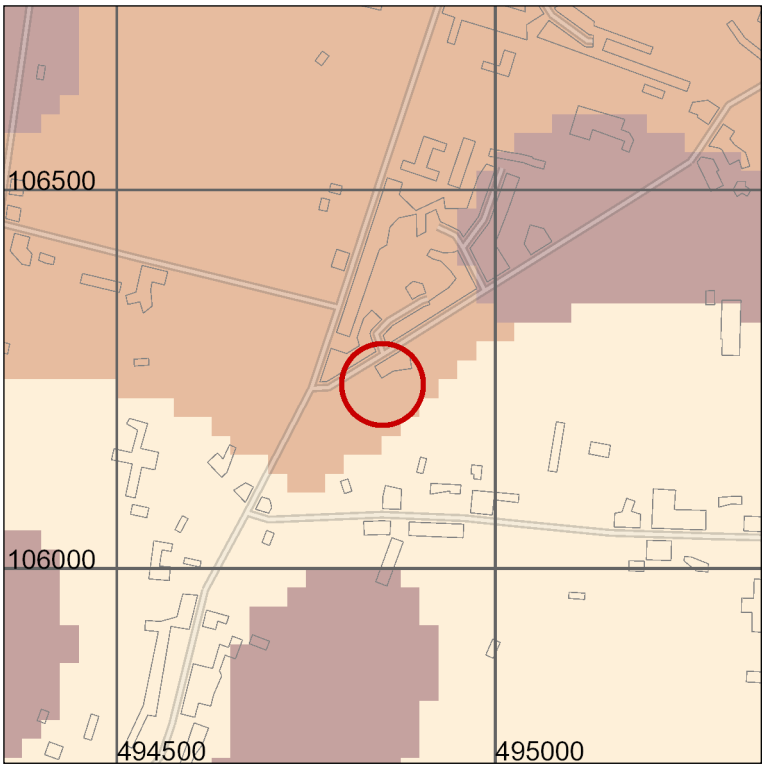
NO RADON PROTECTIVE MEASURES ARE REQUIRED FOR THE REPORT AREA.

More details of the protective measures required are available in *BR211 Radon: Guidance on protective measures for new buildings (2023 Edition)*. Additional information and guidance is available from the Building Research Establishment website (http://www.bre.co.uk/radon/).

Whether or not the radon level in a building is above or below the radon Action Level can only be established by having the building tested. The UKHSA provides a radon testing service which can be accessed at www.ukradon.org or by telephone (01235 822622).

If you require further information or guidance, you should contact your local authority building control officer or approved inspector.

Radon Affected Area



	% Homes estimated to be at or above the action level
	0-1%
	1-3%
	3-5%
	5-10%
	10-30%
	30-100%

Scale: 1:10 000 (1cm = 100 m)
Search area indicated in red

Is the property in a radon Affected Area as defined by the UK Health Security Agency (UKHSA) and if so what percentage of homes are estimated to be at or above the Action Level? **YES**

Additional Information

THE PROPERTY IS IN A RADON AFFECTED AREAS WHERE 1 TO 3% OF HOMES ARE ESTIMATED TO BE AT OR ABOVE THE ACTION LEVEL.

The UKHSA recommends a radon 'Action Level' of 200 Becquerels per cubic metre of air (Bq m^{-3}) for the annual average of the radon gas concentration in a home. Where 1% or more of homes are estimated to be at or above the Action Level the area should be regarded as a radon Affected Area.

This report informs you whether the property is in a radon Affected Area and the percentage of homes that are estimated to be at or above the radon Action Level at this location. Being in an Affected Area does not necessarily mean there is a high radon level within the property; the only way to determine the radon level is to carry out a radon measurement.

The UKHSA advises that radon gas should be measured in all properties within radon Affected Areas and that homes with radon levels at or above the Action Level (200 Bq m^{-3}) should be remediated. Householders with levels between the Target Level (100 Bq m^{-3}) and Action Level should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers. Whether or not a home is in fact above or below the Action Level or Target Level can only be established by having the building tested. The UKHSA provides a validated radon testing service which can be accessed at www.ukradon.org.

The information in this report provides an answer to one of the standard legal enquiries on house purchase in England and Wales, known as Law Society CON29 Enquiries of the Local Authority (2016); 3.14 Radon Gas: Do records indicate that the property is in a “Radon Affected Area” as identified by the UKHSA. The data can also be used to advise house buyers and sellers in Scotland and Northern Ireland.

If you are buying a new build property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

If you are buying a currently occupied property in a radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were at or above the radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and if the results of re-testing confirmed the effectiveness of the measures.

Further information on radon is available from the UKHSA at www.ukradon.org.

What is radon?

Radon is a naturally occurring radioactive gas, which is produced by the radioactive decay of radium which, in turn, is derived from the radioactive decay of uranium. Uranium is found in small quantities in all soils and rocks, although the amount varies from place to place. Radon released from rocks and soils is quickly diluted in the atmosphere. Concentrations in the open air are normally very low and do not present a hazard. Radon that enters enclosed spaces such as some buildings (particularly basements), caves, mines, and tunnels may reach high concentrations in some circumstances. The construction method and degree of ventilation will influence radon levels in individual buildings. A person's exposure to radon will also vary according to how particular buildings and spaces are used.
Inhalation of the radioactive decay products of radon gas increases the chance of developing lung cancer. If individuals are exposed to high concentrations for significant periods of time, there may be cause for concern. In order to limit the risk to individuals, the Government has adopted an Action Level for radon in homes of 200 becquerels per cubic metre (Bq m^{-3}). The Government advises householders that, where the radon level is at or above the Action Level, measures should be taken to reduce the concentration.

Radon in workplaces

The Ionising Radiation Regulations 2017 require employers to take action when radon is present above a defined level in the workplace. Advice may be obtained from your local Health and Safety Executive Area Office or the Environmental Health Department of your local authority. The BRE publishes a guide (BR293)**: Radon in the workplace.** BRE publications may be obtained from the BRE Bookshop, Tel: 01923 664262, email: bookshop@bre.co.ukwebsite: www.brebookshop.com

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General Terms & Conditions

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Important notes about this Report

- The data, information and related records supplied in this Report by BGS can only be indicative and should not be taken as a substitute for specialist interpretations, professional advice and/or detailed site investigations. You must seek professional advice before making technical interpretations on the basis of the materials provided.
- Geological observations and interpretations are made according to the prevailing understanding of the subject at the time. The quality of such observations and interpretations may be affected by the availability of new data, by subsequent advances in knowledge, improved methods of interpretation, and better access to sampling locations.
- Raw data may have been transcribed from analogue to digital format, or may have been acquired by means of automated measuring techniques. Although such processes are subjected to quality control to ensure reliability where possible, some raw data may have been processed without human intervention and may in consequence contain undetected errors.
- Detail, which is clearly defined and accurately depicted on large-scale maps, may be lost when small-scale maps are derived from them.
- Although samples and records are maintained with all reasonable care, there may be some deterioration in the long term.
- The most appropriate techniques for copying original records are used, but there may be some loss of detail and dimensional distortion when such records are copied.
- Data may be compiled from the disparate sources of information at BGS's disposal, including material donated to BGS by third parties, and may not originally have been subject to any verification or other quality control process.
- Data, information and related records, which have been donated to BGS, have been produced for a specific purpose, and that may affect the type and completeness of the data recorded and any interpretation. The nature and purpose of data collection, and the age of the resultant material may render it unsuitable for certain applications/uses. You must verify the suitability of the material for your intended usage.
- If a report or other output is produced for you on the basis of data you have provided to BGS, or your own data input into a BGS system, please do not rely on it as a source of information about other areas or geological features, as the report may omit important details.
- The topography shown on any map extracts is based on the latest OS mapping and is not necessarily the same as that used in the original compilation of the BGS geological map, and to which the geological linework available at that time was fitted.
- Note that for some sites, the latest available records may be historical in nature, and while every effort is made to place the analysis in a modern geological context, it is possible in some cases that the detailed geology at a site may differ from that described.

Report issued by
BGS Enquiry Service

APPENDIX D:
Trial Hole Logs

2 The Long Barn, Norton Farm, Selborne Road, Alton, Hampshire GU34 3NB
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Registered Office: Kineton House, 31 Horse Fair, Banbury, Oxfordshire OX16 0AE Registered in England No. 07032001

Percussion Drilling Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 26/09/2023
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS1	WLS		RF	1:50	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D		0.60			Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
		0.50	D					
		0.80	D					
		1.00	D					
		1.00	SPT	N=16 (2,4/3,4,4,5)	1.20			Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.50	D					
		2.00	D					Pale brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		2.00	SPT	N=33 (7,10/7,8,8,10)				
		2.50	D					
		3.00	D		3.00			End of Borehole at 3.000m
		3.00	SPT	106 (12,15/106 for 165mm)				

1 2 3 4 5 6 7 8 9 10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Roots were noted to 0.50m bgl. Groundwater not encountered. Borehole refused at 3.00m bgl due to the density of the soils.

Percussion Drilling Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 26/09/2023
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS2	WLS			1:50	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D		0.25			Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
		0.50	D					Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		0.80	D					
		1.00	D					
		1.00	SPT	N=12 (3,2/2,3,3,4)				
		1.50	D		1.35			Pale brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		2.00	D		2.00			End of Borehole at 2.000m
		2.00	SPT	65 (10,16/65 for 225mm)				

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Roots were noted to 030m bgl. Groundwater not encountered. Borehole refused at 2.00m bgl due to the density of the soils.

Percussion Drilling Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 26/09/2023
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS3	WLS		RF	1:50	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D		0.30			Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
		0.50	D					
		0.80	D					Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.00	D					
		1.00	SPT	N=8 (1,0/1,4,2,1)				
		1.50	D		1.60			
		2.00	D					Pale brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		2.00	SPT	N=33 (7,11/10,8,8,7)				
		2.50	D		2.50			End of Borehole at 2.500m
		2.50	SPT	56 (12,15/56 for 150mm)				

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Roots were noted to 0.25m bgl. Groundwater not encountered. Borehole refused at 2.50m bgl due to the density of the soils.

Percussion Drilling Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 26/09/2023
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS4	WLS		RF	1:50	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D		0.25			Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
		0.50	D					Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		0.80	D		0.75			Pale brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.00	D		1.00			End of Borehole at 1.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Roots were noted to 0.20m bgl. Groundwater not encountered. Borehole refused at 1.00m bgl due to the density of the soils.

Percussion Drilling Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 26/09/2023
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS5	WLS		RF	1:50	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D					Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
		0.50	D		0.55			
		0.80	D					Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.00	D					
		1.00	SPT	N=13 (3,3/2,2,4,5)	1.20			Pale brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.50	D					
		2.00	D		2.00			End of Borehole at 2.000m
		2.00	SPT	N=56 (12,15/12,12,15,17)				

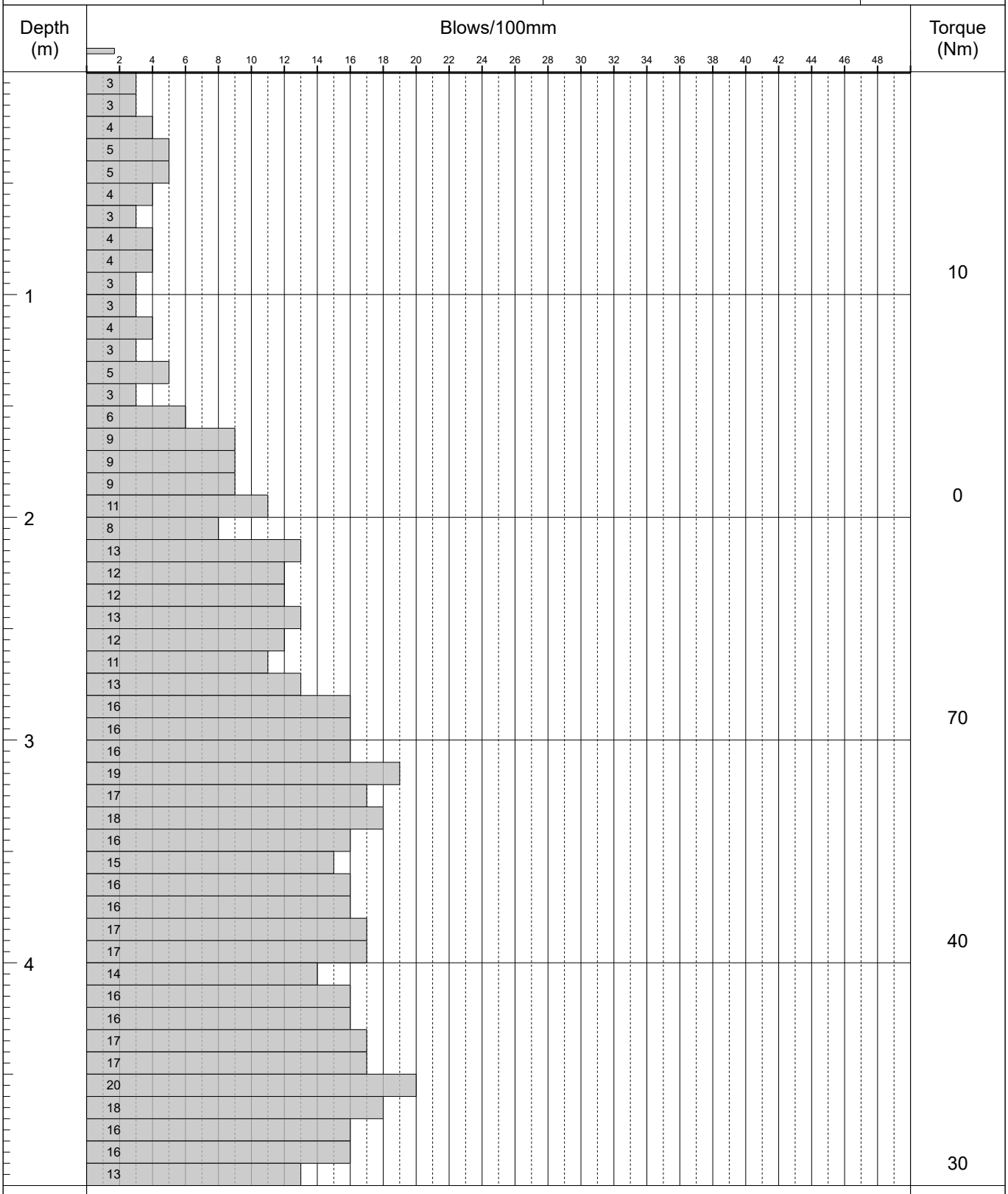
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Roots were noted to 0.50m bgl. Groundwater not encountered. Borehole refused at 2.00m bgl due to the density of the soils.

Probe Log

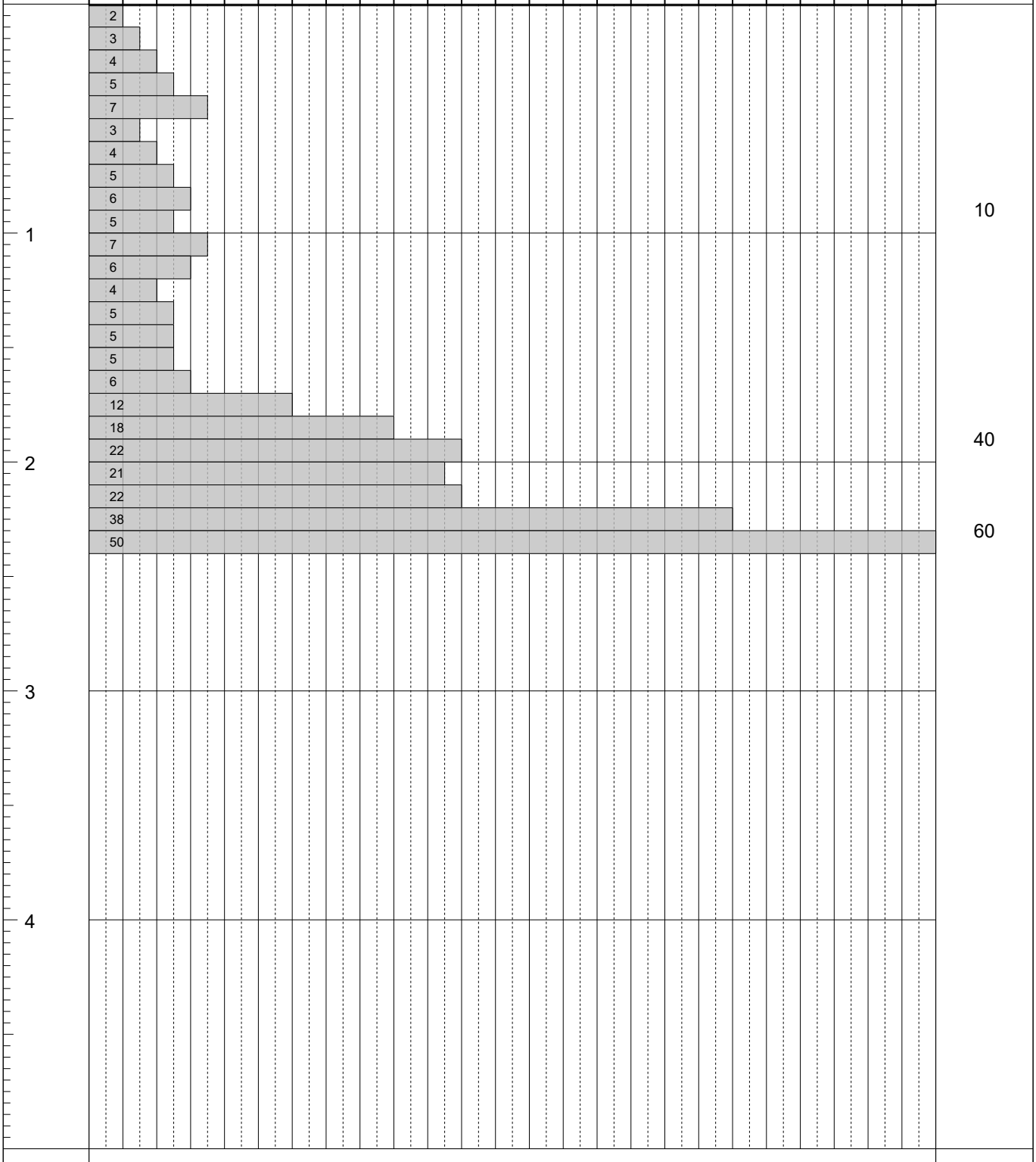
ground&water			Probe No DP1 Sheet 1 of 1
Project Name: Land South of Wandleys Lane,	Project No. GWPR5571	Co-ords:	Hole Type DP
Location: Eastergate, West Sussex		Level:	Scale 1:25
Client: LandQuest UK (Southern) Limited		Dates: 26/09/2023	Logged By



Remarks:	Fall Height	750	Cone Base Diameter		AGS
	Hammer Wt	64	Final Depth	5.00	
	Probe Type	DPSH-B			

Probe Log

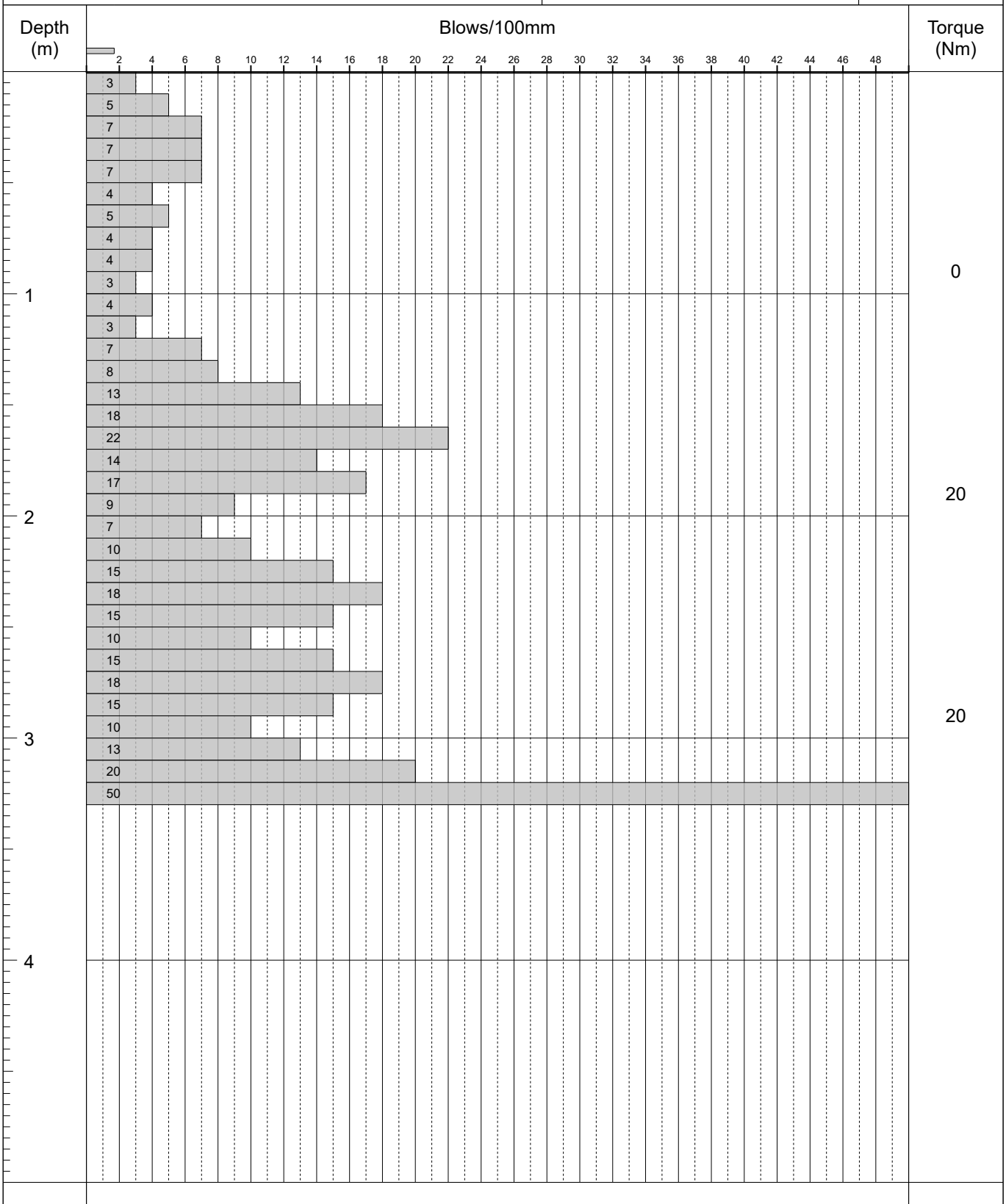
ground&water		Probe No DP2 Sheet 1 of 1
Project Name: Land South of Wandleys Lane,	Project No. GWPR5571	Co-ords: / Hole Type DP
Location: Eastergate, West Sussex		Level: / Scale 1:25
Client: LandQuest UK (Southern) Limited		Dates: 26/09/2023 / Logged By



Remarks:	Fall Height	750	Cone Base Diameter		AGS
	Hammer Wt	64	Final Depth	2.40	
	Probe Type	DPSH-B			

Probe Log

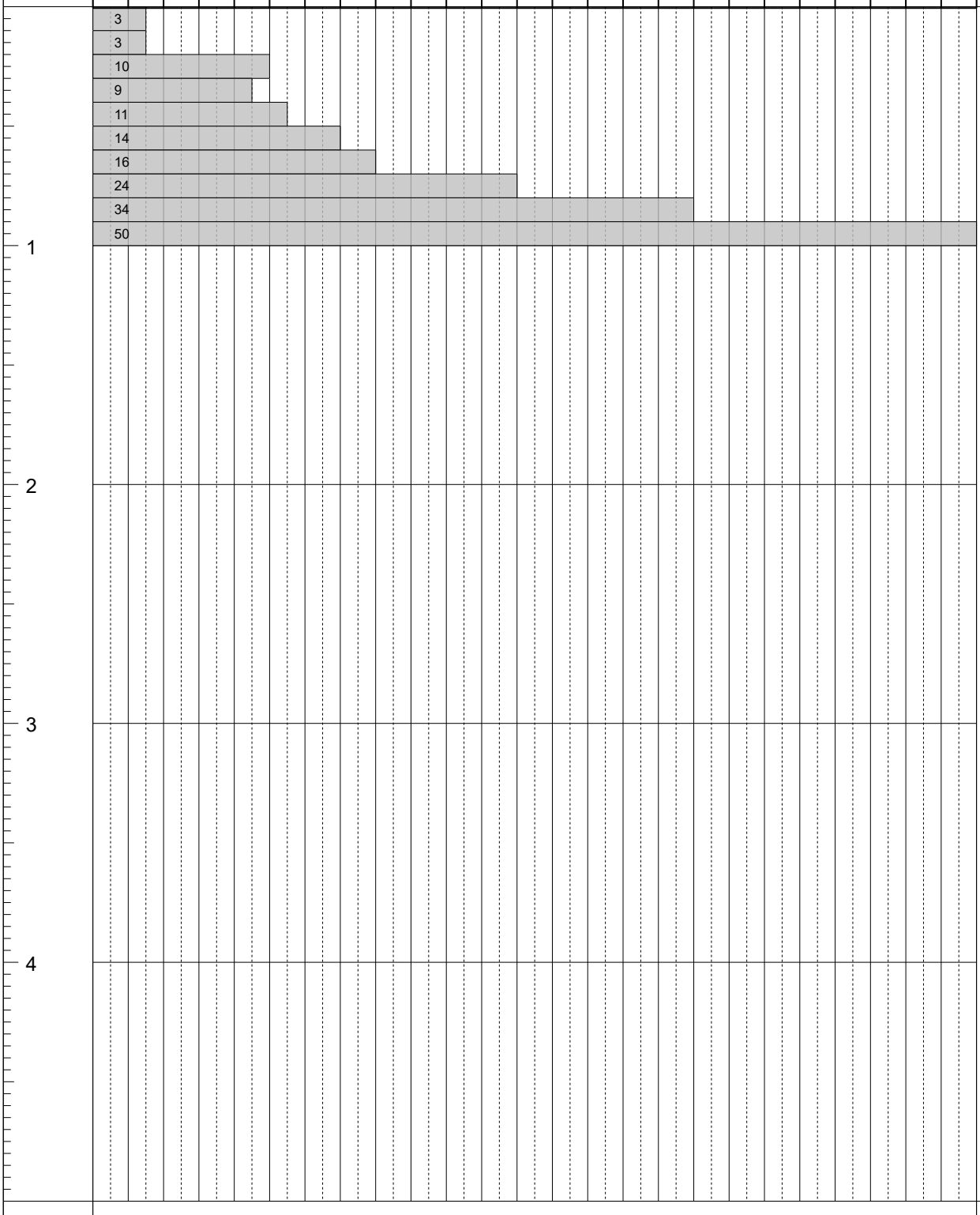
ground&water			Probe No DP3 Sheet 1 of 1
Project Name: Land South of Wandleys Lane,	Project No. GWPR5571	Co-ords:	Hole Type DP
Location: Eastergate, West Sussex		Level:	Scale 1:25
Client: LandQuest UK (Southern) Limited		Dates: 26/09/2023	Logged By



Remarks:	Fall Height	750	Cone Base Diameter		AGS
	Hammer Wt	64	Final Depth	3.30	
	Probe Type	DPSH-B			

Probe Log

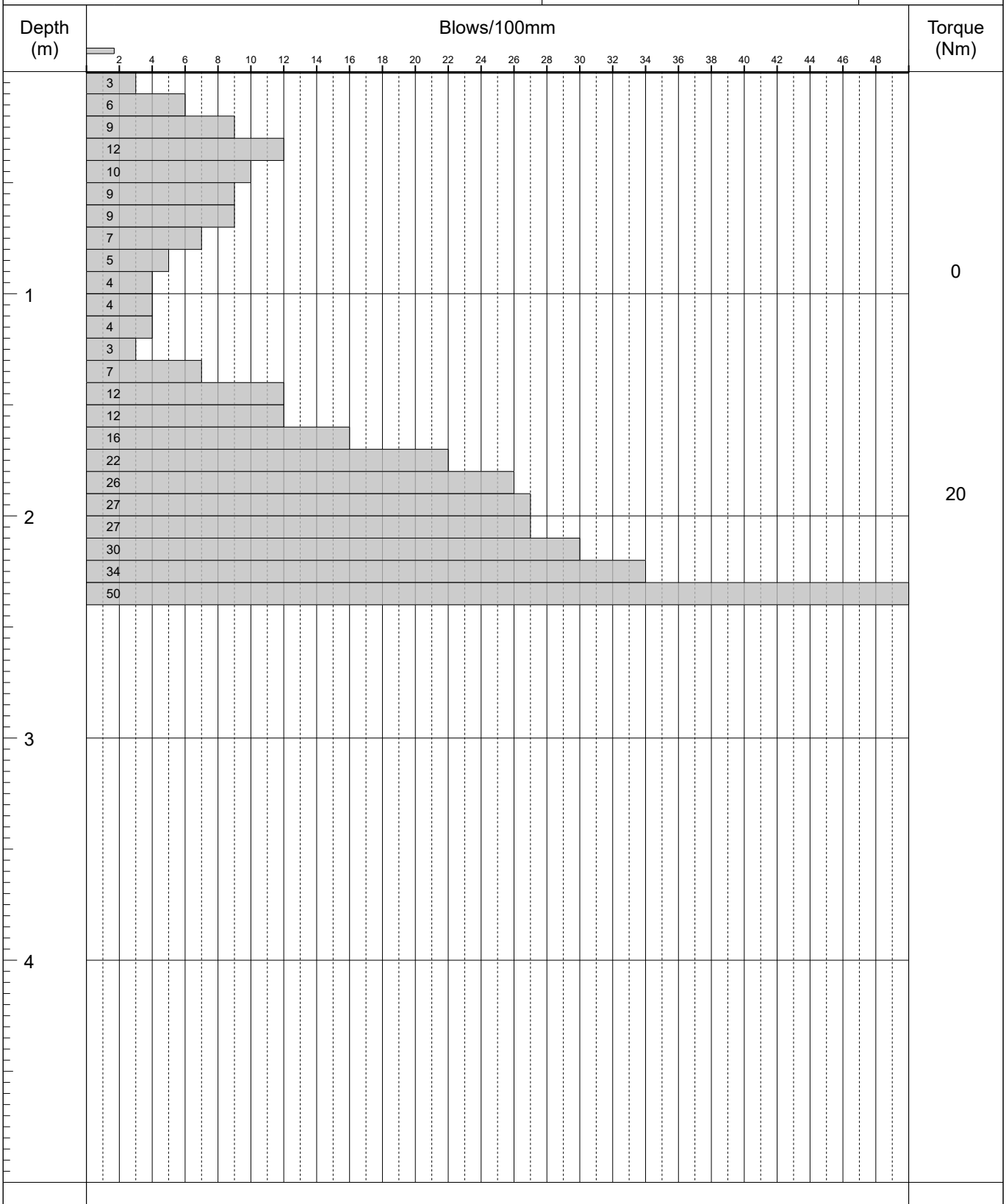
			Probe No DP4 Sheet 1 of 1
Project Name: Land South of Wandleys Lane,	Project No. GWPR5571	Co-ords:	Hole Type DP
Location: Eastergate, West Sussex		Level:	Scale 1:25
Client: LandQuest UK (Southern) Limited		Dates: 26/09/2023	Logged By



Remarks:	Fall Height	750	Cone Base Diameter	
	Hammer Wt	64	Final Depth	1.00
	Probe Type	DPSH-B		

Probe Log

ground&water			Probe No DP5 Sheet 1 of 1
Project Name: Land South of Wandleys Lane,	Project No. GWPR5571	Co-ords:	Hole Type DP
Location: Eastergate, West Sussex		Level:	Scale 1:25
Client: LandQuest UK (Southern) Limited		Dates: 26/09/2023	Logged By



Remarks:	Fall Height	750	Cone Base Diameter		AGS
	Hammer Wt	64	Final Depth	2.40	
	Probe Type	DPSH-B			

Trial Pit Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 22/01/2025
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Equipment:

Location Number	Location Type	Level	Logged By	Scale	Page Number
TPA	TP			1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D					Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
					0.35			
		0.50	D					Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.00	D					
					1.20			Pale brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.50	D		1.50			End of Borehole at 1.500m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks

Roots were noted to 0.40m bgl. Groundwater not encountered.

Trial Pit Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 22/01/2025
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Equipment:

Location Number	Location Type	Level	Logged By	Scale	Page Number
TPB	TP			1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D					Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
		0.50	D		0.50			Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.00	D					
					1.25			Pale brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.50	D		1.50			End of Borehole at 1.500m

1 2 3 4 5

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks

Roots were noted to 0.40m bgl. Groundwater not encountered.

Trial Pit Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 22/01/2025
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Equipment:

Location Number	Location Type	Level	Logged By	Scale	Page Number
TPC	TP			1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D					Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
		0.50	D		0.40			Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
					0.80			End of Borehole at 0.800m

1
2
3
4
5

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks

Roots were noted to 0.40m bgl. Groundwater not encountered.

Trial Pit Log

Project Name: Land South of Wandleys Lane,	Client: LandQuest UK (Southern) Limited	Date: 22/01/2025
Location: Eastergate, West Sussex	Contractor: ABSI	
Project No. : GWPR5571	Crew Name:	Equipment:

Location Number	Location Type	Level	Logged By	Scale	Page Number
TPD	TP			1:25	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D					Dark brown slightly gravelly SAND. The sand was fine and the gravel was fine, sub-angular flint (TOPSOIL).
					0.40			
		0.50	D					Dark brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.00	D					
					1.10			Pale brown slightly clayey sandy GRAVEL. The sand was fine to medium and the gravel was fine to medium sub-angular to sub-rounded flint. (HEAD DEPOSITS).
		1.50	D		1.50			End of Borehole at 1.500m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks

Roots were noted to 0.40m bgl. Groundwater not encountered.

APPENDIX E: Geotechnical Laboratory Testing

2 The Long Barn, Norton Farm, Selborne Road, Alton, Hampshire GU34 3NB
[redacted] groundandwater.co.uk

Registered Office: Kineton House, 31 Horse Fair, Banbury, Oxfordshire OX16 0AE Registered in England No. 07032001

Laboratory Report

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES A PHENNA GROUP COMPANY

Contract Number: 68983

Client Ref: **GWPR5571**
Client PO: **GWPR5571**

Date Received: **06-10-2023**
Date Completed: **11-10-2023**
Report Date: **11-10-2023**

Client: **Ground and Water Limited**
Unit 2, The Long Barn,
Norton Farm,
Selbourne Road,
Alton,
Hampshire
GU34 3NB

This report has been checked and approved by:

[redacted]

Brendan Evans
Office Administrator

Contract Title: **Land South of Wandleys Lane, Eastergate, West Sussex**
For the attention of: **Roger Foord**

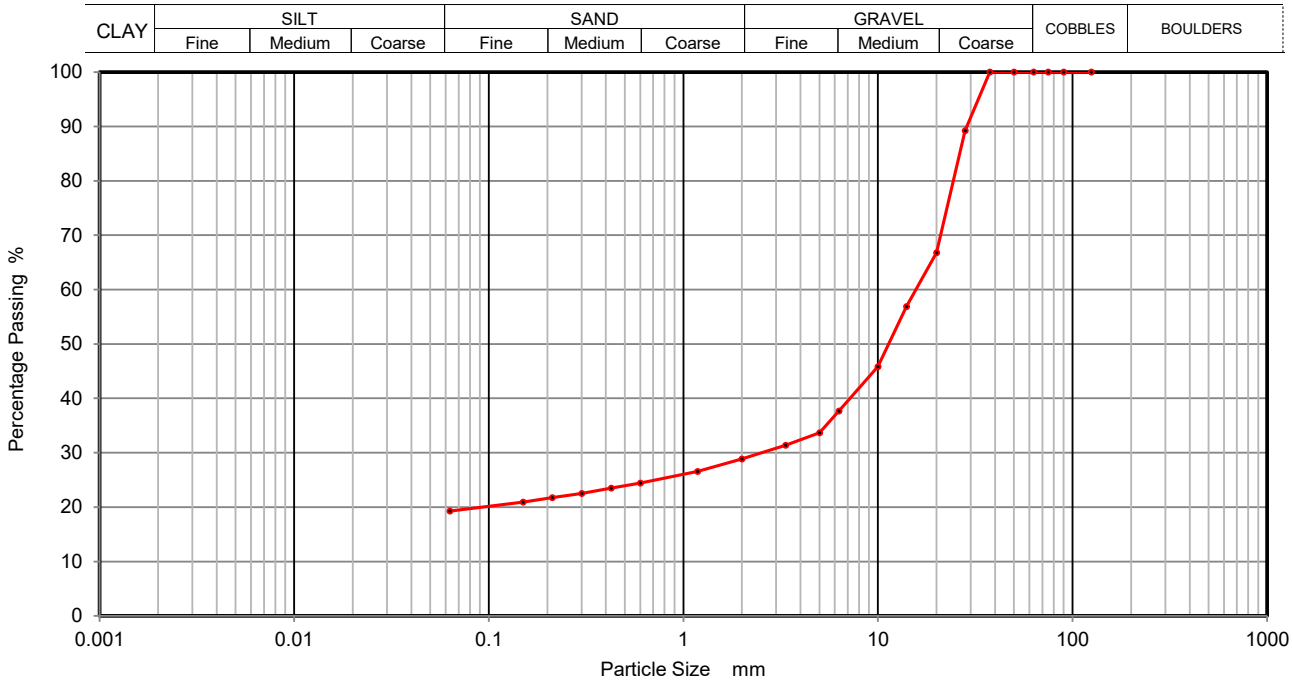
Test Description	Qty
PSD Wet Sieve method BS 1377:1990 - Part 2 : 9.2 - * UKAS	5
Disposal of samples for job	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
 # - denotes test carried out by approved contractor
@ - denotes non accredited tests

Approved Signatories:
Brendan Evans (Office Administrator) - Darren Bourne (Quality Senior Technician) - Paul Evans (Director)
Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager)
Wayne Honey (Human Resources/ Health and Safety Manager)

GEO Site & Testing Services Ltd
Units 3-4, Heol Aur, Dafen, Llanelli, Carmarthenshire, Wales SA14 8QN
[redacted] stl.co.uk

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68983
		Borehole/Pit No.	WS1
Project Name	Land South of Wandleys Lane, Eastergate, West Sussex	Sample No.	
Soil Description	Brown fine to coarse sandy silty/ claye fine to coarse GRAVEL	Depth Top	1.00
		Depth Base	
Date Tested	09/10/2023	Sample Type	D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	89		
20	67		
14	57		
10	46		
6.3	38		
5	34		
3.35	31		
2	29		
1.18	27		
0.6	24		
0.425	23		
0.3	23		
0.212	22		
0.15	21		
0.063	19		

Sample Proportions	% dry mass
Cobbles	0
Gravel	71
Sand	10
Silt and Clay	19

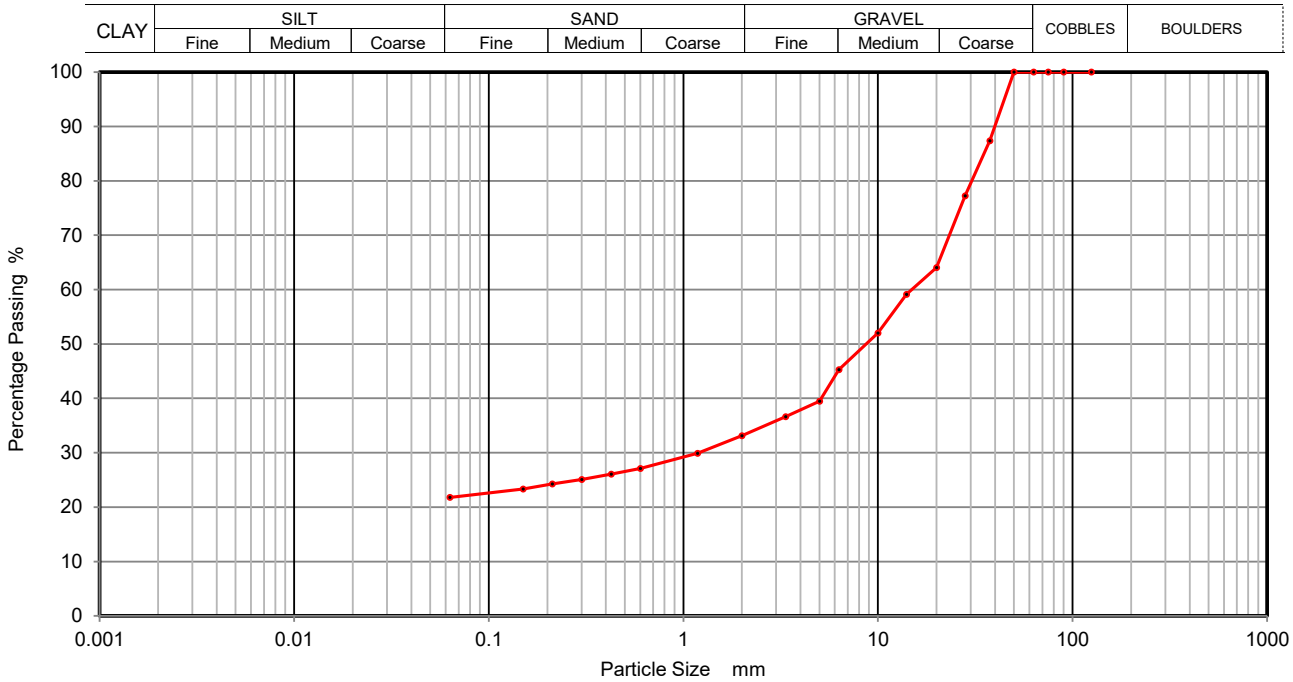
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68983
		Borehole/Pit No.	WS2
Project Name	Land South of Wandleys Lane, Eastergate, West Sussex	Sample No.	
Soil Description	Brown/ off white fine to coarse sandy silty/ claye fine to coarse GRAVEL	Depth Top	1.50
		Depth Base	
Date Tested	09/10/2023	Sample Type	U



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	87		
28	77		
20	64		
14	59		
10	52		
6.3	45		
5	39		
3.35	37		
2	33		
1.18	30		
0.6	27		
0.425	26		
0.3	25		
0.212	24		
0.15	23		
0.063	22		

Sample Proportions	% dry mass
Cobbles	0
Gravel	67
Sand	11
Silt and Clay	22

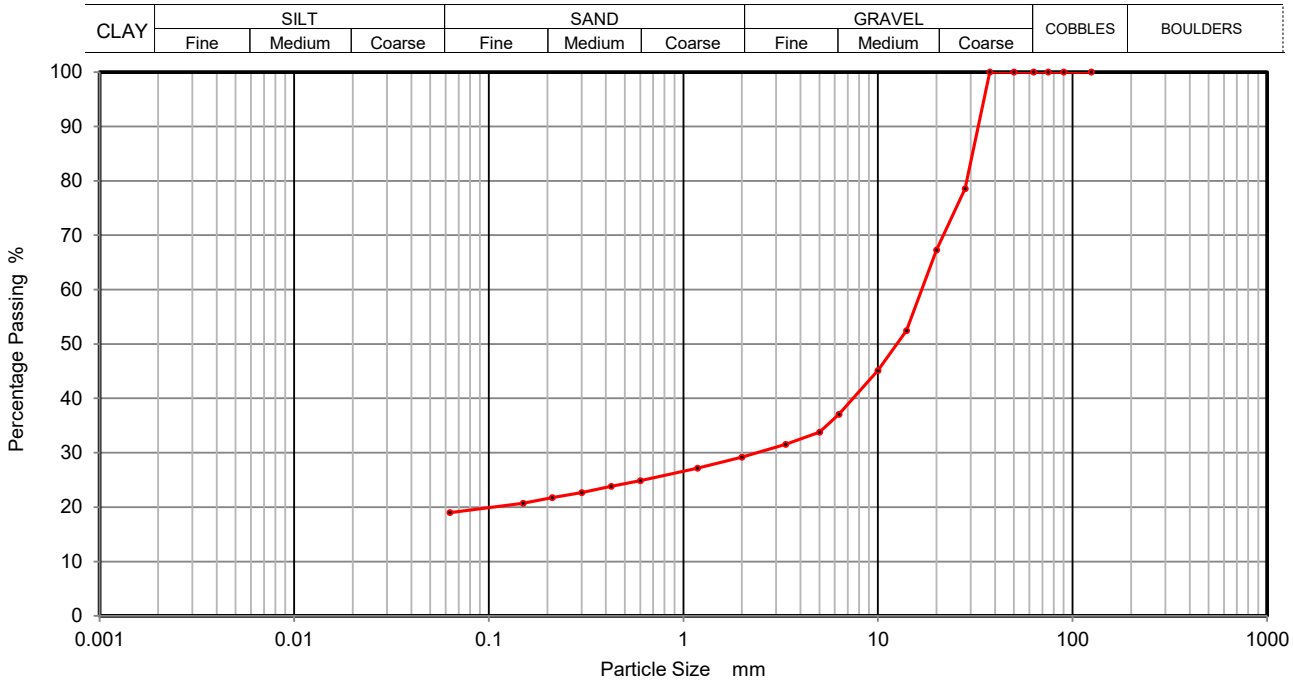
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68983
		Borehole/Pit No.	WS3
Project Name	Land South of Wandleys Lane, Eastergate, West Sussex	Sample No.	
Soil Description	Brown/ off white fine to coarse sandy silty/ claye fine to coarse GRAVEL	Depth Top	2.00
		Depth Base	
Date Tested	09/10/2023	Sample Type	D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	79		
20	67		
14	52		
10	45		
6.3	37		
5	34		
3.35	32		
2	29		
1.18	27		
0.6	25		
0.425	24		
0.3	23		
0.212	22		
0.15	21		
0.063	19		

Sample Proportions	% dry mass
Cobbles	0
Gravel	71
Sand	10
Silt and Clay	19

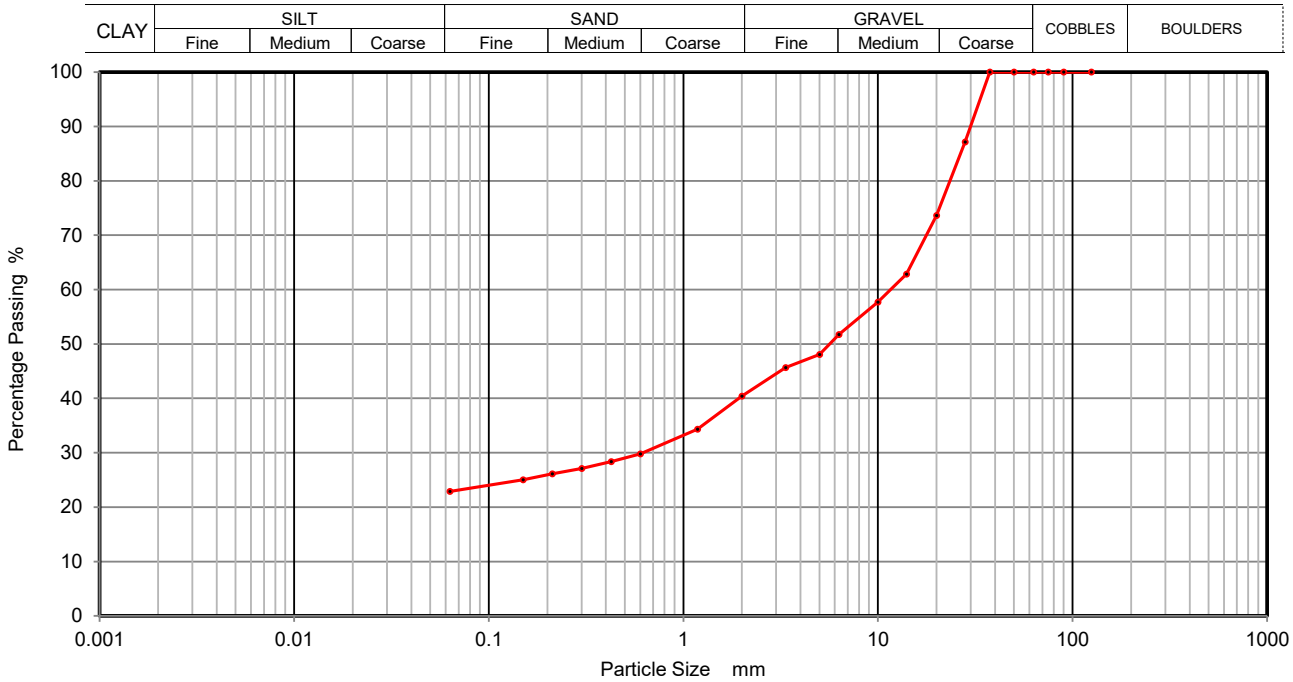
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68983
		Borehole/Pit No.	WS4
Project Name	Land South of Wandleys Lane, Eastergate, West Sussex	Sample No.	
Soil Description	Brown/ off white fine to coarse sandy silty/ claye fine to coarse GRAVEL	Depth Top	1.00
		Depth Base	
Date Tested	09/10/2023	Sample Type	D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	87		
20	74		
14	63		
10	58		
6.3	52		
5	48		
3.35	46		
2	40		
1.18	34		
0.6	30		
0.425	28		
0.3	27		
0.212	26		
0.15	25		
0.063	23		

Sample Proportions	% dry mass
Cobbles	0
Gravel	60
Sand	17
Silt and Clay	23

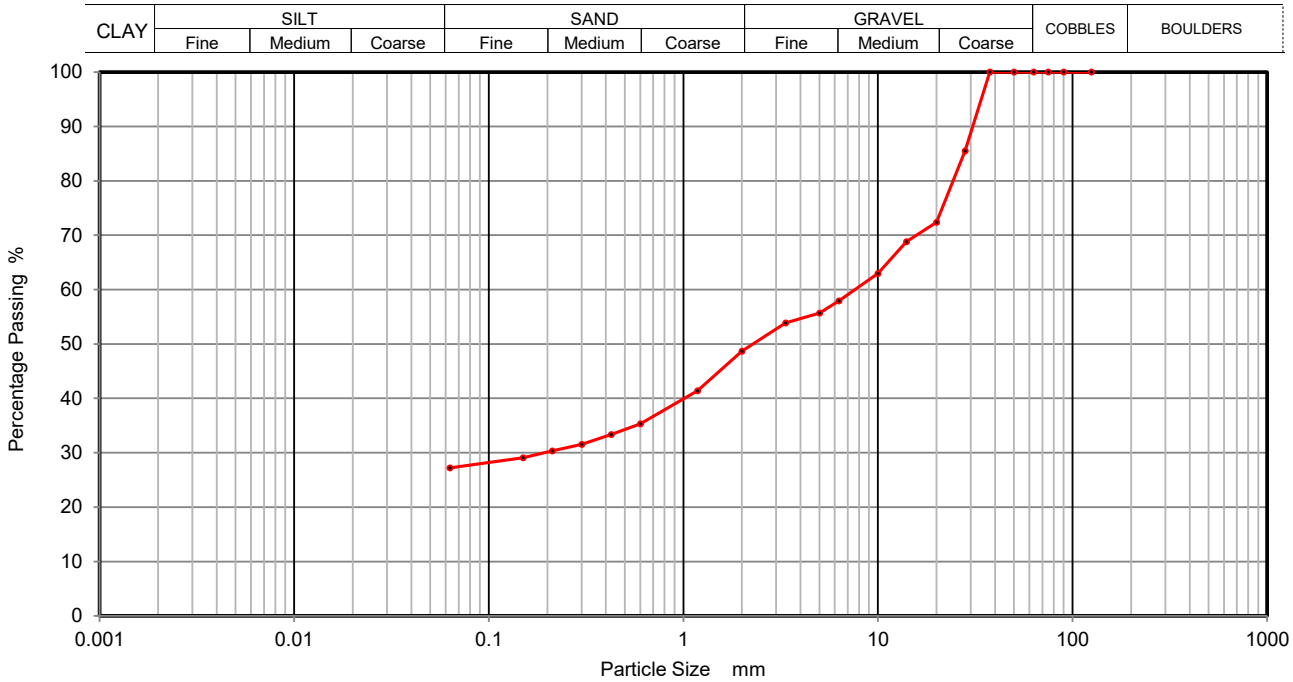
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68983
		Borehole/Pit No.	WS5
Project Name	Land South of Wandleys Lane, Eastergate, West Sussex	Sample No.	
Soil Description	Brown/ off white fine to coarse sandy silty/ claye fine to coarse GRAVEL	Depth Top	1.50
		Depth Base	
Date Tested	09/10/2023	Sample Type	D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	86		
20	72		
14	69		
10	63		
6.3	58		
5	56		
3.35	54		
2	49		
1.18	41		
0.6	35		
0.425	33		
0.3	32		
0.212	30		
0.15	29		
0.063	27		

Sample Proportions	% dry mass
Cobbles	0
Gravel	51
Sand	22
Silt and Clay	27

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

APPENDIX F: Chemical Laboratory Testing

2 The Long Barn, Norton Farm, Selborne Road, Alton, Hampshire GU34 3NB
[redacted]groundandwater.co.uk

Registered Office: Kineton House, 31 Horse Fair, Banbury, Oxfordshire OX16 0AE Registered in England No. 07032001

Units 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
[redacted]
Website: www.alsenvironmental.co.uk

Ground and Water Ltd
Head Office
2 The Long Barn
Norton Farm, Selborne Road
Alton
Hampshire
GU34 3NB

Attention: Roger Foord

CERTIFICATE OF ANALYSIS

Date of report Generation:	15 October 2023
Customer:	Ground and Water Ltd
Sample Delivery Group (SDG):	231006-62
Your Reference:	GWPR5571
Location:	Land South of Wandleys Lane, Eastergate, We
Report No:	707404
Order Number:	GWPR5571

We received 7 samples on Friday October 06, 2023 and 7 of these samples were scheduled for analysis which was completed on Sunday October 15, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

[redacted]

Sonia McWhan
Operations Manager

1291

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28738930	WS1		0.20	26/09/2023
28738955	WS2		1.00	26/09/2023
28738935	WS3		0.20	26/09/2023
28738959	WS3		1.50	26/09/2023
28738950	W4S		0.20	26/09/2023
28738942	WS4		0.20	26/09/2023
28738964	WS5		2.00	26/09/2023

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	28738930	28738955	28738935	28738959	28738950	28738942	28738964
			Customer Sample Reference	WS1	WS2	WS3	WS3	W4S	WS4	WS5
			AGS Reference							
			Depth (m)	0.20	1.00	0.20	1.50	0.20	0.20	2.00
			Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)
			Sample Type	S	S	S	S	S	S	S	S	S	S
Ammoniacal N as NH4 in 2:1 extract	All	NDPs: 0 Tests: 2			X							X
Anions by Kone (soil)	All	NDPs: 0 Tests: 6			X	X		X	X		X	X
Anions by Kone (w)	All	NDPs: 0 Tests: 1	X									
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 3				X			X		X	
Boron Water Soluble	All	NDPs: 0 Tests: 3				X			X		X	
CEN Readings	All	NDPs: 0 Tests: 1	X									
Coronene	All	NDPs: 0 Tests: 1	X									
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3				X			X		X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 1	X									
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 1	X									
EPH by GCxGC-FID	All	NDPs: 0 Tests: 1	X									
EPH CWG GC (S)	All	NDPs: 0 Tests: 2				X			X			
Fluoride	All	NDPs: 0 Tests: 1	X									
GRO by GC-FID (S)	All	NDPs: 0 Tests: 2					X			X		
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 3				X			X		X	

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	28738930		28738955	28738935		28738959	28738950		28738942	28738964
			Customer Sample Reference	WS1		WS2	WS3		WS3	W4S		WS4	WS5
			AGS Reference										
			Depth (m)	0.20		1.00	0.20		1.50	0.20		0.20	2.00
			Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)
			Sample Type	S	S	S	S	S	S	S	S	S	S
Magnesium (BRE)	All	NDPs: 0 Tests: 2				X							X
Mercury Dissolved	All	NDPs: 0 Tests: 1		X									
Metals in solid samples by OES	All	NDPs: 0 Tests: 3					X			X		X	
NO3, NO2 and TON by KONE (s)	All	NDPs: 0 Tests: 2				X							X
PAH 16 & 17 Calc	All	NDPs: 0 Tests: 1		X									
PAH by GCMS	All	NDPs: 0 Tests: 4		X			X			X		X	
PCBs by GCMS	All	NDPs: 0 Tests: 1		X									
pH	All	NDPs: 0 Tests: 5				X	X			X		X	X
pH Value of Filtered Water	All	NDPs: 0 Tests: 1		X									
Phenols by HPLC (S)	All	NDPs: 0 Tests: 3					X			X		X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 1		X									
Sample description	All	NDPs: 0 Tests: 6		X		X			X	X		X	X
Total Organic Carbon	All	NDPs: 0 Tests: 4		X			X			X		X	
Total Sulphate	All	NDPs: 0 Tests: 2				X							X
Total Sulphur	All	NDPs: 0 Tests: 2				X							X

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	28738930	28738955	28738935	28738959	28738950	28738942	28738964
			Customer Sample Reference	WS1	WS2	WS3	WS3	W4S	WS4	WS5
			AGS Reference							
			Depth (m)	0.20	1.00	0.20	1.50	0.20	0.20	2.00
			Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	250g Amber Jar (ALE210)
			Sample Type	S	S	S	S	S	S	S	S	S
TPH CWG GC (S)	All	NDPs: 0 Tests: 2					X		X			
VOC MS (S)	All	NDPs: 0 Tests: 3		X				X		X		

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
28738930	WS1	0.20	Dark Brown	Sandy Silt Loam	Stones	Vegetation
28738955	WS2	1.00	Dark Brown	Loamy Sand	Stones	N/A
28738935	WS3	0.20	Dark Brown	Silt Loam	Stones	Tile/Insulation Board
28738959	WS3	1.50	Dark Brown	Sandy Clay	Stones	None
28738942	WS4	0.20	Dark Brown	Loamy Sand	Stones	Tile/Insulation Board
28738950	W4S	0.20	Dark Brown	Sandy Silt Loam	Stones	Vegetation
28738964	WS5	2.00	Light Brown	Loamy Sand	Stones	Tile/Insulation Board

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS1	WS2	WS3	WS3	W4S	WS4
			Depth (m)	0.20	1.00	0.20	1.50	0.20	0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/09/2023	26/09/2023	26/09/2023	26/09/2023	26/09/2023	26/09/2023
			Sampled Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	06/10/2023	06/10/2023	06/10/2023	06/10/2023	06/10/2023	06/10/2023
			SDG Ref	231006-62	231006-62	231006-62	231006-62	231006-62	231006-62
			Lab Sample No.(s)	28738930	28738955	28738935	28738959	28738950	28738942
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.4	7.2	12	8.7	8.1	9.1
Phenol	mg/kg	TM062 (S)				<0.01 @ M		<0.01 @ M	<0.01 @ M
Cresols	mg/kg	TM062 (S)				<0.01 @ M		<0.01 @ M	0.011 @ M
Xylenols	mg/kg	TM062 (S)				<0.015 @ M		<0.015 @ M	<0.015 @ M
Phenols, Total Detected monohydric	mg/kg	TM062 (S)				<0.035 @ M		<0.035 @ M	<0.035 @ M
Organic Carbon, Total	%	TM132		1.26 M		1.55 M		1.96 M	1.88 M
Sulphur, Total	%	TM132			<0.02 #				
Soil Organic Matter (SOM)	%	TM132				2.67 #		3.38 #	3.24 #
pH	pH Units	TM133			8.25 M	5.65 M		6.13 M	6.41 M
Chromium, Hexavalent	mg/kg	TM151				<0.6 M		<0.6 M	<0.6 M
Cyanide, Total	mg/kg	TM153				<1 @ M		<1 @ M	<1 @ M
PCB congener 28	mg/kg	TM168		<0.003 M					
PCB congener 52	mg/kg	TM168		<0.003 M					
PCB congener 101	mg/kg	TM168		<0.003 M					
PCB congener 118	mg/kg	TM168		<0.003 M					
PCB congener 138	mg/kg	TM168		<0.003 M					
PCB congener 153	mg/kg	TM168		<0.003 M					
PCB congener 180	mg/kg	TM168		<0.003 M					
Sum of detected PCB 7 Congeners	mg/kg	TM168		<0.021					
Arsenic	mg/kg	TM181				6.76 M		7.35 M	9.78 M
Cadmium	mg/kg	TM181				0.167 M		<0.02 M	0.287 M
Chromium	mg/kg	TM181				17.1 M		13.3 M	12.2 M
Copper	mg/kg	TM181				14 M		27.4 M	10.6 M
Lead	mg/kg	TM181				36.2 M		28.6 M	36.2 M
Mercury	mg/kg	TM181				<0.1 M		<0.1 M	<0.1 M
Nickel	mg/kg	TM181				10.5 M		10.4 M	16.6 M
Selenium	mg/kg	TM181				<1 #		<1 #	1.54 #
Vanadium	mg/kg	TM181				26.8 #		26.8 #	24.7 #
Zinc	mg/kg	TM181				65.3 M		47.5 M	66.1 M
Sulphate, acid soluble (total)	%	TM221			0.0129 M				
Boron, water soluble	mg/kg	TM222				<1 M		<1 M	<1 M
Water Soluble Sulphate as SO4 2:1 Extract	g/l	TM243				0.007 M	<0.004 M	0.0109 M	<0.004 M

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS1	WS2	WS3	WS3	W4S	WS4
			Depth (m)	0.20	1.00	0.20	1.50	0.20	0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/09/2023	26/09/2023	26/09/2023	26/09/2023	26/09/2023	26/09/2023
			Sampled Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	06/10/2023	06/10/2023	06/10/2023	06/10/2023	06/10/2023	06/10/2023
			SDG Ref	231006-62	231006-62	231006-62	231006-62	231006-62	231006-62
			Lab Sample No.(s)	28738930	28738955	28738935	28738959	28738950	28738942
			AGS Reference						
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243			<0.004 M				
Chloride 2:1 water/soil extract BRE	<0.0025 g/l	TM243			<0.0025 M				
Nitrate as NO3, 2:1 water soluble (BRE)	<0.0003 g/l	TM243			0.00671				
Ammoniacal N as NH4 in 2:1 extract BRE	<0.0003 g/l	TM248			0.00248				
Magnesium (BRE)	<0.008 g/l	TM282			<0.008				
PAH Total 17 (inc Coronene) Moisture Corrected	<10 mg/kg	TM410		<10					
Coronene	<0.2 mg/kg	TM410		<0.2					
EPH Surrogate % recovery**	%	TM415		96.9					
Mineral Oil >C10-C40 (EH_2D_AL)	<5 mg/kg	TM415		<5					

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Results Legend		Customer Sample Ref.	WS5
#	ISO17025 accredited.		
M	mCERTS accredited.		
aq	Aqueous / settled sample.	Depth (m)	2.00
diss.filt	Dissolved / filtered sample.	Sample Type	Soil/Solid (S)
tot.unfilt	Total / unfiltered sample.	Date Sampled	26/09/2023
*	Subcontracted - refer to subcontractor report for accreditation status.	Sampled Time	00:00
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Date Received	06/10/2023
		SDG Ref	231006-62
(F)	Trigger breach confirmed	Lab Sample No.(s)	28738964
1-4+§@	Sample deviation (see appendix)	AGS Reference	

Component	LOD/Units	Method	
Moisture Content Ratio (% of as received sample)	%	PM024	9.9
Sulphur, Total	<0.02 %	TM132	<0.02 #
pH	1 pH Units	TM133	9.06 M
Sulphate, acid soluble (total)	<0.0048 %	TM221	0.0294 M
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243	<0.004 M
Chloride 2:1 water/soil extract BRE	<0.0025 g/l	TM243	<0.0025 M
Nitrate as NO3, 2:1 water soluble (BRE)	<0.0003 g/l	TM243	0.00186
Ammoniacal N as NH4 in 2:1 extract BRE	<0.0003 g/l	TM248	0.00305
Magnesium (BRE)	<0.008 g/l	TM282	<0.008

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS3	W4S	WS4			
			Depth (m)	0.20	0.20	0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	26/09/2023	26/09/2023	26/09/2023			
			Sampled Time	00:00	00:00	00:00			
			Date Received	06/10/2023	06/10/2023	06/10/2023			
			SDG Ref	231006-62	231006-62	231006-62			
			Lab Sample No.(s)	28738935	28738950	28738942			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90.9	92.8	90.6			
Acenaphthene-d10 % recovery**	%	TM218		93.9	93.8	94.1			
Phenanthrene-d10 % recovery**	%	TM218		102	101	102			
Chrysene-d12 % recovery**	%	TM218		99.6	97.4	96.4			
Perylene-d12 % recovery**	%	TM218		101	97.6	95.9			
Naphthalene	<0.009 mg/kg	TM218		<0.009 @ M	<0.009 @ M	<0.009 @ M			
Acenaphthylene	<0.012 mg/kg	TM218		<0.012 @ M	<0.012 @ M	<0.012 @ M			
Acenaphthene	<0.008 mg/kg	TM218		<0.008 @ M	<0.008 @ M	<0.008 @ M			
Fluorene	<0.01 mg/kg	TM218		<0.01 @ M	<0.01 @ M	<0.01 @ M			
Phenanthrene	<0.015 mg/kg	TM218		0.0246 @ M	0.0313 @ M	0.0507 @ M			
Anthracene	<0.016 mg/kg	TM218		<0.016 @ M	<0.016 @ M	<0.016 @ M			
Fluoranthene	<0.017 mg/kg	TM218		0.0814 @ M	0.12 @ M	0.192 @ M			
Pyrene	<0.015 mg/kg	TM218		0.072 @ M	0.11 @ M	0.173 @ M			
Benz(a)anthracene	<0.014 mg/kg	TM218		0.0364 @ M	0.0555 @ M	0.095 @ M			
Chrysene	<0.01 mg/kg	TM218		0.0417 @ M	0.0634 @ M	0.103 @ M			
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.0598 @ M	0.0926 @ M	0.145 @ M			
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		0.0196 @ M	0.0347 @ M	0.053 @ M			
Benzo(a)pyrene	<0.015 mg/kg	TM218		0.0404 @ M	0.071 @ M	0.119 @ M			
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		0.0307 @ M	0.0499 @ M	0.085 @ M			
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		<0.023 @ M	<0.023 @ M	<0.023 @ M			
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		0.0293 @ M	0.0498 @ M	0.0789 @ M			
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		0.436	0.678	1.1			

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.							
			WS3	W4S						
			Depth (m)	0.20	0.20					
			Sample Type	Soil/Solid (S)	Soil/Solid (S)					
			Date Sampled	26/09/2023	26/09/2023					
			Sampled Time	00:00	00:00					
			Date Received	06/10/2023	06/10/2023					
			SDG Ref	231006-62	231006-62					
			Lab Sample No.(s)	28738935	28738950					
			AGS Reference							
GRO Surrogate % recovery**	%	TM089	93.8 @	93.6 @						
Aliphatics >C5-C6 (HS_1D_AL)	<0.01 mg/kg	TM089	<0.01 @	<0.01 @						
Aliphatics >C6-C8 (HS_1D_AL)	<0.01 mg/kg	TM089	<0.01 @	<0.01 @						
Aliphatics >C8-C10 (HS_1D_AL)	<0.01 mg/kg	TM089	<0.01 @	<0.01 @						
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1 mg/kg	TM414	<1 #	<1 #						
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1 mg/kg	TM414	<1 #	<1 #						
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1 mg/kg	TM414	<1 #	<1 #						
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1 mg/kg	TM414	3.02 #	6.91 #						
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1 mg/kg	TM414	<1	<1						
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5 mg/kg	TM414	<5	7.53						
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10 mg/kg	TM414	16.6	17.6						
Aromatics >EC5-EC7 (HS_1D_AR)	<0.01 mg/kg	TM089	<0.01 @	<0.01 @						
Aromatics >EC7-EC8 (HS_1D_AR)	<0.01 mg/kg	TM089	<0.01 @	<0.01 @						
Aromatics >EC8-EC10 (HS_1D_AR)	<0.01 mg/kg	TM089	<0.01 @	<0.01 @						
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1 mg/kg	TM414	<1 #	<1 #						
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1 mg/kg	TM414	<1 #	<1 #						
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1 mg/kg	TM414	<1 #	<1 #						
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1 mg/kg	TM414	10.5 #	6.62 #						
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1 mg/kg	TM414	1.46	2.83						
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1 mg/kg	TM414	<1	<1						
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5 mg/kg	TM414	12.6	10.1						
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10 mg/kg	TM414	12.6	17.6						
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<0.05 mg/kg	TM089	<0.05 @	<0.05 @						
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<0.05 mg/kg	TM089	<0.05 @	<0.05 @						
GRO >C5-C10 (HS_1D_TOTAL)	<0.02 mg/kg	TM089	<0.02 @	<0.02 @						

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	WS1	WS3	W4S			
			Depth (m)	0.20	0.20	0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	26/09/2023	26/09/2023	26/09/2023			
			Sampled Time	00:00	00:00	00:00			
			Date Received	06/10/2023	06/10/2023	06/10/2023			
			SDG Ref	231006-62	231006-62	231006-62			
			Lab Sample No.(s)	28738930	28738935	28738950			
			AGS Reference						
Dibromofluoromethane**	%	TM116		108 @	101 @	108 @			
Toluene-d8**	%	TM116		92.4 @	94.7 @	99.6 @			
4-Bromofluorobenzene**	%	TM116		70.6 @	74.9 @	95.5 @			
Methyl Tertiary Butyl Ether	mg/kg	TM116		<0.0005 @ M	<0.0005 @ M	<0.005 @ M			
Benzene	mg/kg	TM116		<0.001 @ M	<0.001 @ M	<0.01 3 @ M			
Toluene	mg/kg	TM116		<0.001 @ M	<0.001 @ M	<0.01 @ M			
Ethylbenzene	mg/kg	TM116		<0.001 @ M	<0.001 @ M	<0.01 @ M			
p/m-Xylene	mg/kg	TM116		<0.002 @ #	<0.002 @ #	<0.02 @ #			
o-Xylene	mg/kg	TM116		<0.002 @ M	<0.002 @ M	<0.02 @ M			
Sum of Detected Xylenes	mg/kg	TM116			<0.02 @	<0.2 @			
Sum of BTEX	mg/kg	TM116			<0.007 @	<0.07 3 @			

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS3 0.20 SOLID 26/09/2023 00:00:00 06/10/2023 05:00:00 231006-62 28738935 TM048	12/10/2023	Alex Horner	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W4S 0.20 SOLID 26/09/2023 00:00:00 06/10/2023 05:00:00 231006-62 28738950 TM048	11/10/2023	Alex Horner	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS4 0.20 SOLID 26/09/2023 00:00:00 06/10/2023 05:00:00 231006-62 28738942 TM048	12/10/2023	Renata Bozhkov	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected

CERTIFICATE OF ANALYSIS

SDG: 231006-62 | Report Number: 707404 | Superseded Report:
Client Ref.: GWPR5571 | Location: Land South of Wandleys Lane, Eastergate, West Suss

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Land South of Wandleys Lane, I
Mass Sample taken (kg)	0.097	**Natural Moisture Content (%)**	8.08
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	92.5
Particle Size <4mm	>95%		

Case	
SDG	231006-62
Lab Sample Number(s)	28738930
Sampled Date	26-Sep-2023
Customer Sample Ref.	WS1
Depth (m)	0.20

Solid Waste Analysis	**Result**	**Landfill Waste Acceptance Criteria Limits**		
		Inert Waste Landfill	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon (%)	1.26	3	5	6
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	<0.021	1	-	-
Mineral Oil (mg/kg) (EH_2D_AL)	<5	500	-	-
PAH Sum of 17 (mg/kg)	<10	100	-	-
pH (pH Units)	-	-	-	-
ANC to pH 6 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**C_2 Conc^n in 10:1 eluate (mg/l)**		**A_2 10:1 conc^n leached (mg/kg)**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Arsenic	0.000813	<0.0005	0.00813	<0.005	0.5	2	25
Barium	0.00192	<0.0002	0.0192	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.00103	<0.001	0.0103	<0.01	0.5	10	70
Copper	0.00628	<0.0003	0.0628	<0.003	2	50	100
Mercury Dissolved (CVAF)	0.0000174	<0.00001	0.000174	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.00153	<0.0004	0.0153	<0.004	0.4	10	40
Lead	0.000666	<0.0002	0.00666	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00427	<0.001	0.0427	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	19.4	<10	194	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	7.96	<3	79.6	<30	500	800	1000

Leach Test Information

Date Prepared	07-Oct-2023
pH (pH Units)	6.86
Conductivity (µS/cm)	25
Volume Leachant (Litres)	0.893

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable
Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)
Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

15/10/2023 07:42:22

Table of Results - Appendix

Method No	Description
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM151	Determination of Hexavalent Chromium using Kone analyser
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM104	Determination of Fluoride using the Kone Analyser
TM183	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
PM115	Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM090	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM221	Determination of Acid Extractable Sulphate in Soils by ICP OES
TM243	Mixed Anions In Soils By Kone
TM259	Determination of Phenols in Waters and Leachates by HPLC
TM410	Determination of Coronene in soils by GCMS
TM048	Identification of Asbestos in Bulk Material
TM062 (S)	Determination of Phenols in Soils by HPLC
TM152	Analysis of Aqueous Samples by ICP-MS
TM153	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM168	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM218	The determination of PAH in soil samples by GC-MS
TM222	Determination of Hot Water Soluble Boron in Soils (10:1 Water:Soil) by ICP OES.
TM248	Determination of Ammonium BRE (2:1 Extract) on solids
TM256	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM282	Extraction of Magnesium by BRE Method
TM415	Determination of Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Test Completion Dates

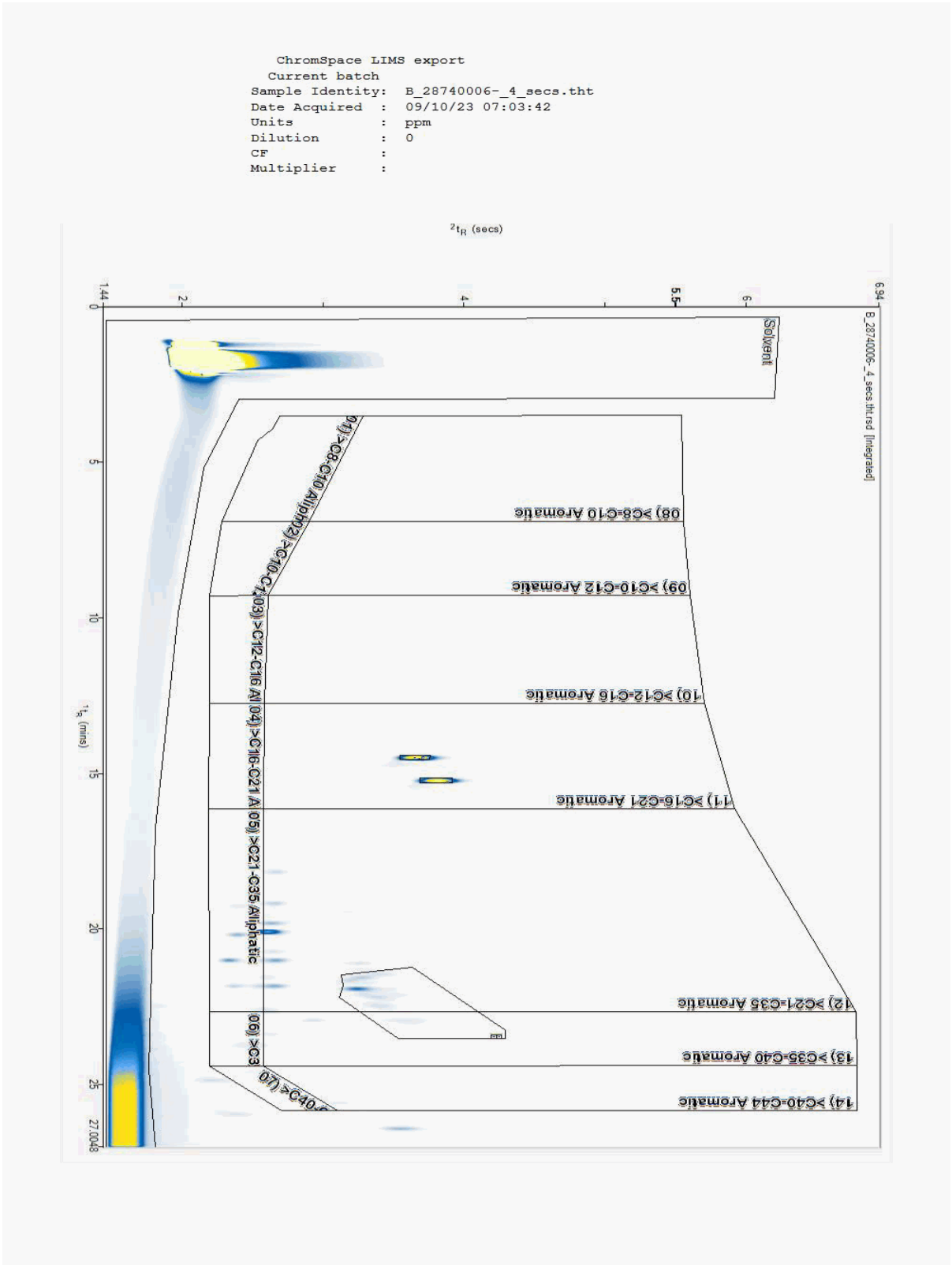
Lab Sample No(s)	28738930	28738955	28738935	28738959	28738942	28738950	28738964
Customer Sample Ref.	WS1	WS2	WS3	WS3	WS4	W4S	WS5
AGS Ref.							
Depth	0.20	1.00	0.20	1.50	0.20	0.20	2.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammoniacal N as NH4 in 2:1 extract		10-Oct-2023					10-Oct-2023
Anions by Kone (soil)		12-Oct-2023	12-Oct-2023	12-Oct-2023	12-Oct-2023	13-Oct-2023	11-Oct-2023
Anions by Kone (w)	11-Oct-2023						
Asbestos ID in Solid Samples			13-Oct-2023		12-Oct-2023	12-Oct-2023	
Boron Water Soluble			10-Oct-2023		10-Oct-2023	13-Oct-2023	
CEN 10:1 Leachate (1 Stage)	07-Oct-2023						
CEN Readings	11-Oct-2023						
Coronene	11-Oct-2023						
Cyanide Comp/Free/Total/Thiocyanate			13-Oct-2023		13-Oct-2023	13-Oct-2023	
Dissolved Metals by ICP-MS	12-Oct-2023						
Dissolved Organic/Inorganic Carbon	15-Oct-2023						
EPH by GCxGC-FID	12-Oct-2023						
EPH CWG GC (S)			10-Oct-2023			12-Oct-2023	
Fluoride	11-Oct-2023						
GRO by GC-FID (S)			11-Oct-2023			11-Oct-2023	
Hexavalent Chromium (s)			11-Oct-2023		11-Oct-2023	13-Oct-2023	
Magnesium (BRE)		12-Oct-2023					11-Oct-2023
Mercury Dissolved	13-Oct-2023						
Metals in solid samples by OES			10-Oct-2023		12-Oct-2023	12-Oct-2023	
Moisture at 105C	07-Oct-2023						
NO3, NO2 and TON by KONE (s)		12-Oct-2023					10-Oct-2023
PAH 16 & 17 Calc	11-Oct-2023						
PAH by GCMS	12-Oct-2023		11-Oct-2023		11-Oct-2023	11-Oct-2023	
PCBs by GCMS	11-Oct-2023						
pH		11-Oct-2023	12-Oct-2023		12-Oct-2023	11-Oct-2023	12-Oct-2023
pH Value of Filtered Water	11-Oct-2023						
Phenols by HPLC (S)			11-Oct-2023		11-Oct-2023	13-Oct-2023	
Phenols by HPLC (W)	12-Oct-2023						
Sample description	07-Oct-2023	07-Oct-2023	06-Oct-2023	07-Oct-2023	06-Oct-2023	07-Oct-2023	06-Oct-2023
Total Organic Carbon	13-Oct-2023		12-Oct-2023		12-Oct-2023	13-Oct-2023	
Total Sulphate		12-Oct-2023					10-Oct-2023
Total Sulphur		12-Oct-2023					11-Oct-2023
TPH CWG GC (S)			11-Oct-2023			12-Oct-2023	
VOC MS (S)	11-Oct-2023		11-Oct-2023			11-Oct-2023	

CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Chromatogram

Analysis: EPH CWG GC (S) **Sample No :** 28740006 **Depth :** 0.20
Sample ID : WS3

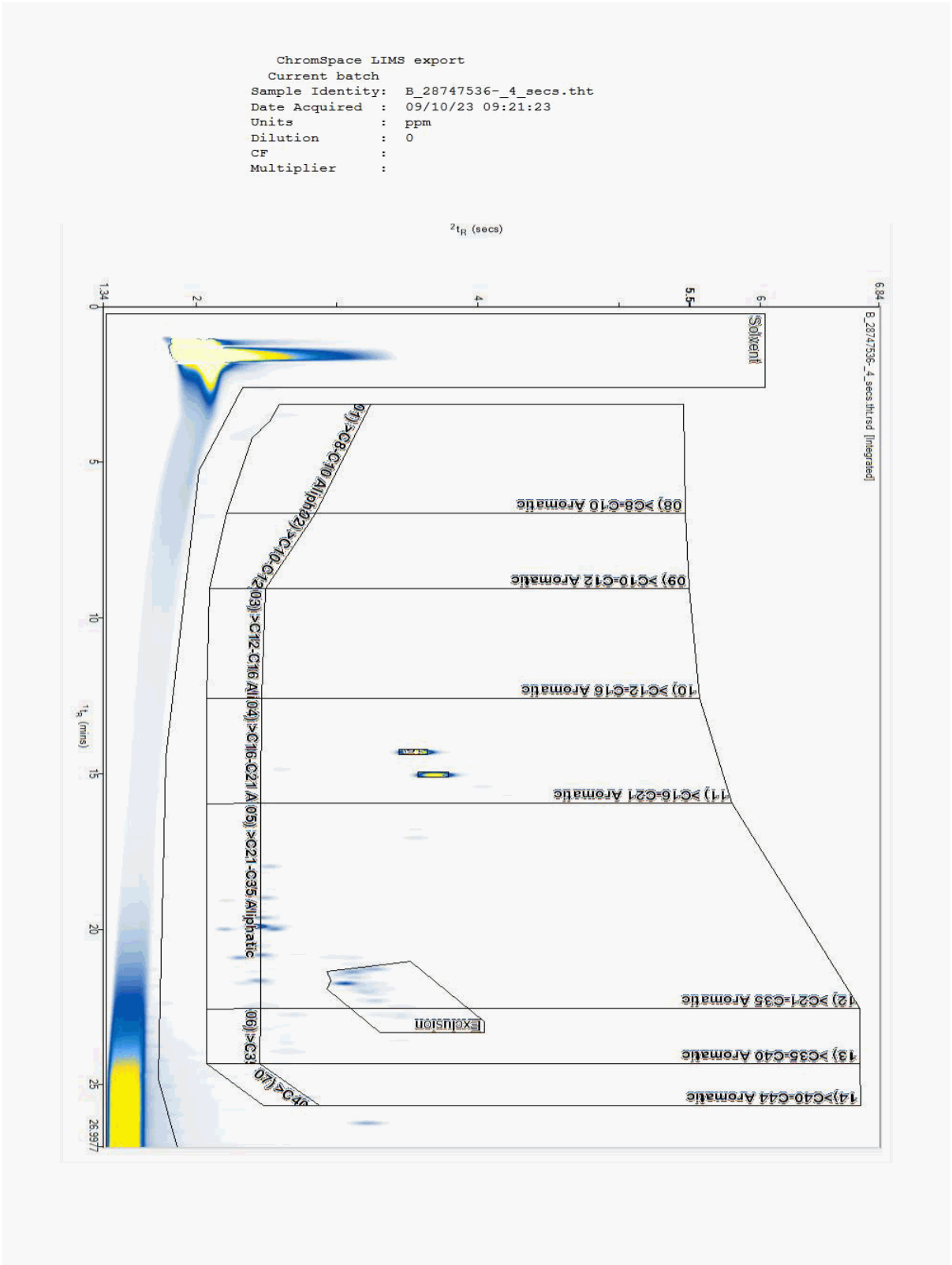


CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

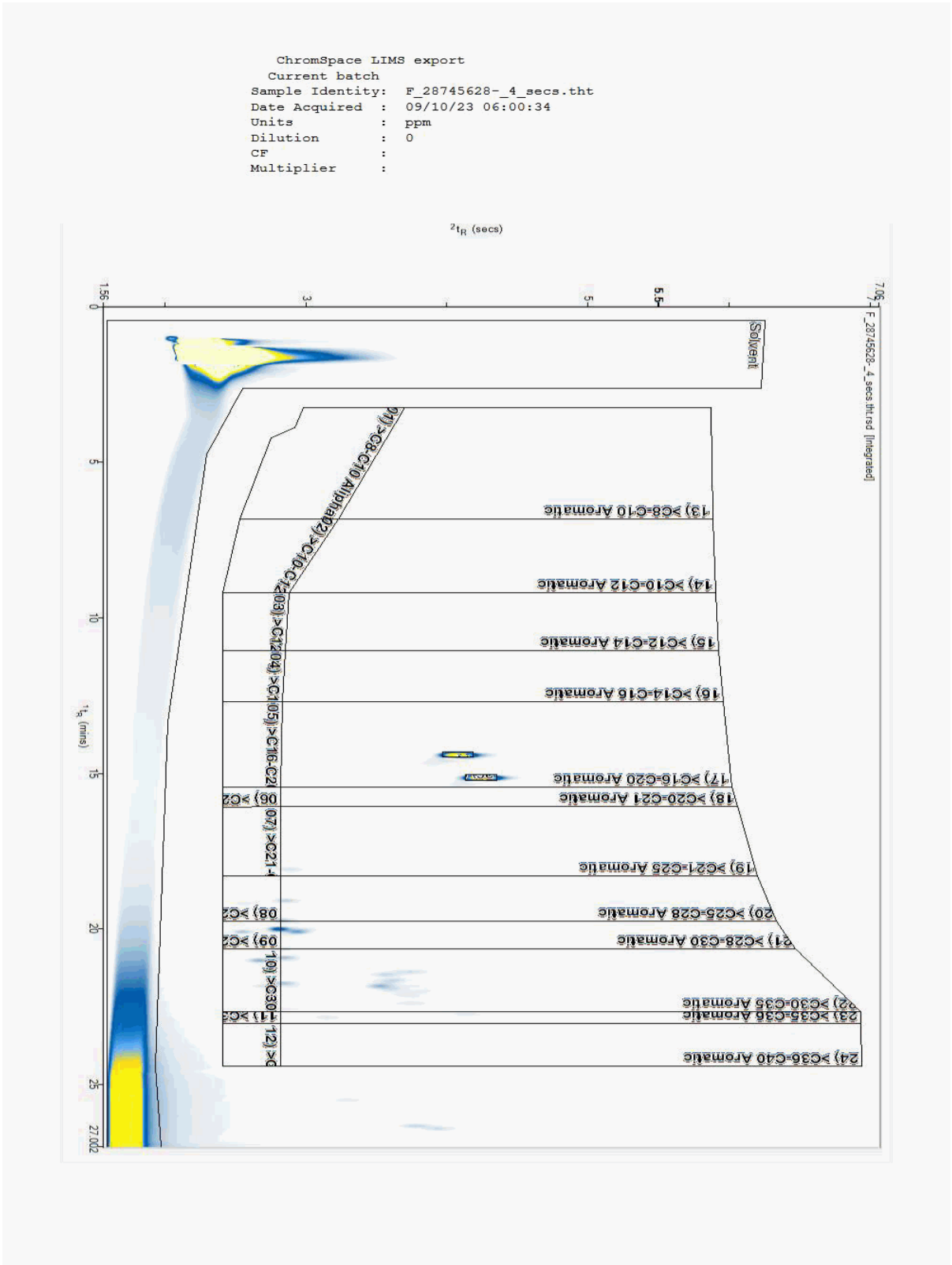
Chromatogram

Analysis: EPH CWG GC (S) **Sample No :** 28747536 **Depth :** 0.20
Sample ID : W4S



Chromatogram

Analysis: EPH by GCxGC-FID **Sample No :** 28745628 **Depth :** 0.20
Sample ID : WS1

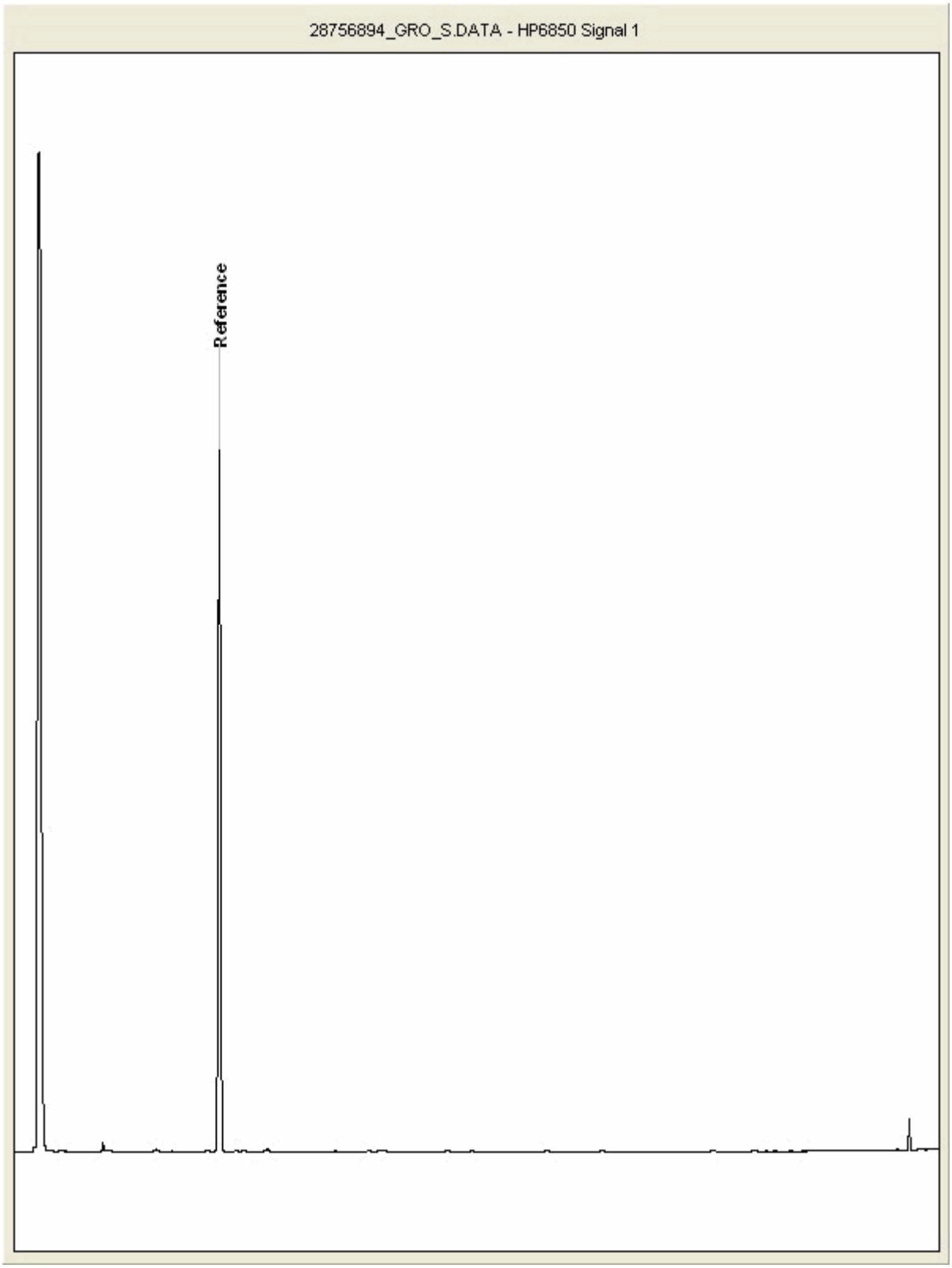


CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Chromatogram

Analysis: GRO by GC-FID (S) **Sample No :** 28756894 **Depth :** 0.20
Sample ID : WS3

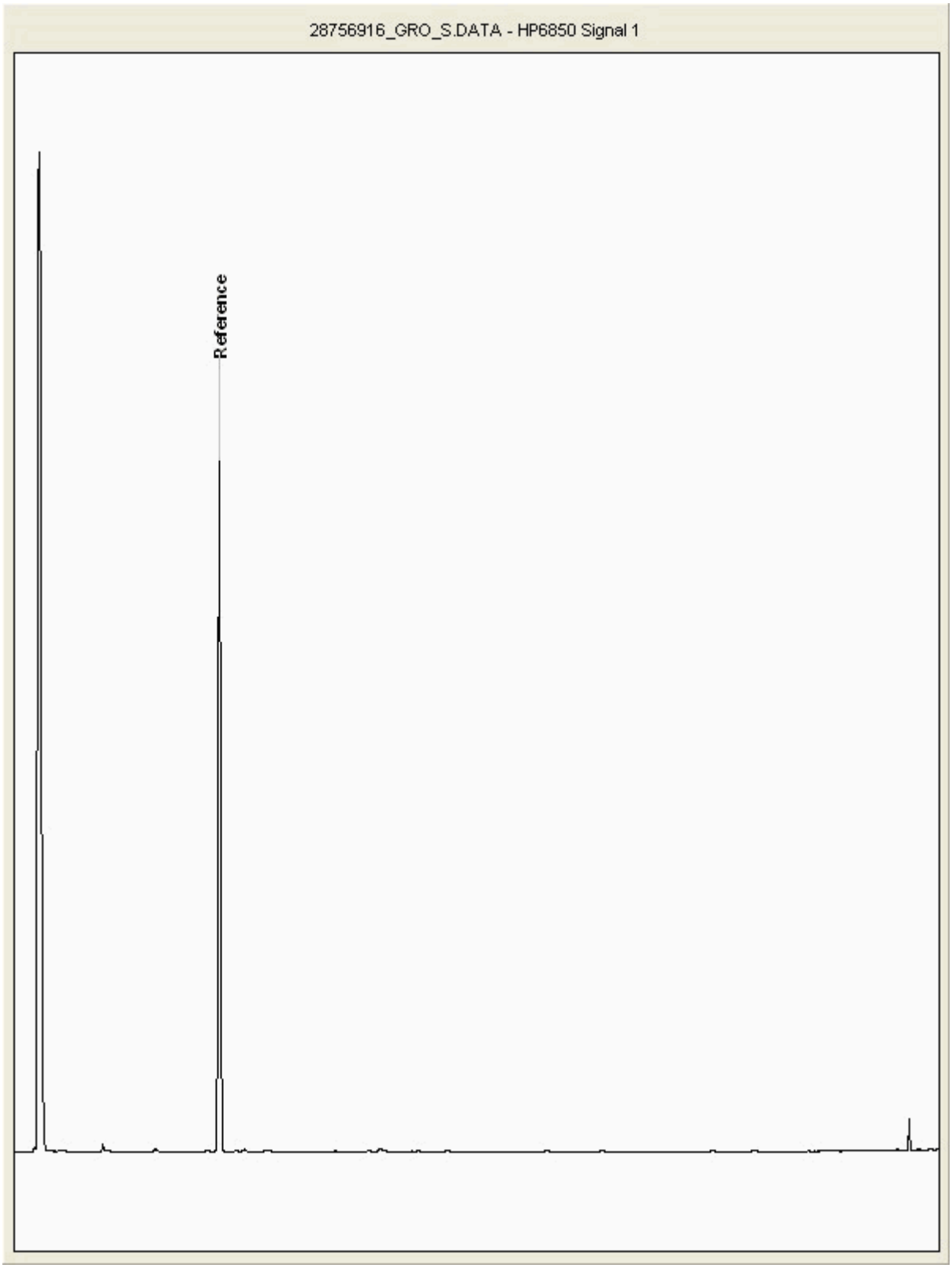


CERTIFICATE OF ANALYSIS

SDG: 231006-62 **Report Number:** 707404 **Superseded Report:**
Client Ref.: GWPR5571 **Location:** Land South of Wandleys Lane, Eastergate, West Suss

Chromatogram

Analysis: GRO by GC-FID (S) **Sample No :** 28756916 **Depth :** 0.20
Sample ID : W4S



Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials andd soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

APPENDIX G:
Soil Assessment Criteria

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[redacted] groundandwater.co.uk

Registered Office: Kineton House, 31 Horse Fair, Banbury, Oxfordshire OX16 0AE Registered in England No. 07032001

Ground and Water Limited

Soil Guideline Values and Generic Assessment Criteria

The Contaminated Land Regime reflects the UK Government's stated objectives of achieving sustainable development through the 'suitable for use approach'. At preliminary risk assessment stage, risks are evaluated qualitatively. As the site investigation progresses to a generic or detailed quantitative risk assessment, data is collected and assessment criteria are utilised to evaluate whether the contaminants represent an unacceptable risk to the identified receptors.

1. Contaminated Land Exposure Assessment Model (CLEA)

Current United Kingdom risk assessment practice is based on the Contaminated Land Exposure Assessment Model (CLEA).

The CLEA Guidance comprises the following documents:

1) EA Science Report SC050021/SR2: Human health toxicological assessment of contaminants in soil.
2) EA Science Report SC050021/SR3: Updated technical background to the CLEA model.
3) EA CLEA Bulletin (2009).
4) CLEA software version 1.07 (2015)
5) Toxicological reports and SGV technical notes.

The CLEA guidance and tools:

- Do not cover other types of risk to humans, such as fire, suffocation or explosion, or short-term and acute exposures;
- Do not cover risks to the environment, such as groundwater, ecosystems or buildings;
- Do not provide a definitive test for telling when human health risks are significant; and
- Are not a legal requirement in assessing land contamination risks. They are not part of the legal regime for Part 2A of the Environmental Protection Act 1990.

The CLEA guidance derives soil concentrations of contaminants above which (in the opinion of the EA) there may be a concern that warrants further investigation. It does not provide a definitive test for establishing that the risk is significant.

1.1. Land-use Scenarios

The CLEA model uses a range of standard land-use scenarios to develop conceptual exposure models outlined in the following sections.

1.1.1. Residential (with home grown produce) (RwHP)

Generic scenario assumes a typical two-storey house built on a ground bearing slab with a private garden having a lawn, flowerbeds and a small fruit and vegetable patch.

- Critical receptor is a young female child (zero to six years old)
- Exposure duration is six years.
- Exposure pathways include direct soil and indoor dust ingestion, consumption of homegrown produce and any adhering soil, skin contact with soils and indoor dust and inhalation of indoor and outdoor dust and vapours.
- Building type is a two-storey small-terraced house.

A sub-set of this land-use is residential apartments with communal landscaped gardens where the consumption of home grown vegetables will not occur. (Residential without homegrown produce (RwoHP)).

1.1.2. Allotments

Provision of open space (about 250sq.m) commonly made available to tenants by the local authority to grow fruit and vegetable for their own consumption. Typically, there are a number of plots to a site which may have a total area of up to 1 hectare. The tenants are assumed to be adults and that young children make occasional accompanied visits.

Although some allotment holders may choose to keep animals including rabbits, hens, and ducks, potential exposure to contaminated meat and eggs is not considered.

- Critical receptor is a young female child (zero to six years old)
- Exposure duration is six years.
- Exposure pathways include direct soil ingestion, consumption of homegrown produce and any adhering soil, skin contact with soils and inhalation of outdoor dust and vapours.
- There is no building.

1.1.3. Commercial/Industrial

The generic scenario assumes a typical commercial or light industrial property comprising a three-storey building at which employees spend most time indoors and are involved in office-based or relatively light physical work.

- Critical receptor is a working female adult (aged 16 to 65 years old).
- Exposure duration is a working lifetime of 49 years.
- Exposure pathways include direct soil and indoor dust ingestion, skin contact with soils and dusts and inhalation of dust and vapours.
- Building type is a three-storey office (pre 1970).

2. LQM/CIEH Suitable 4 Use Levels (S4UL)

For derivation of these S4UL reference must be made to:

Nathanial, P., McCaffrey, C., Gillet, A., Ogden, R., Nathanial, J., *The LQM/CIEH S4UL's for Human Health Risk Assessment*. **Land Quality Press**. 2015

2.1. S4UL Background

The Land Quality Management/Chartered Institute of Environmental Health (LQM/CIEH) S4UL for a given land use is the concentration of the contaminant in soil at which the predicted daily exposure,

as calculated by the CLEA software, equals the Health Criteria Value. The S4ULs have been derived for substances based on various generic land use and soil organic matter contents.

The final output for each contaminant represents a synthesis of new toxicological (and fate and transport) reviews published since the preparation of the 2nd edition LQM/CIEH GAC's (Nathanial et al., 2009).

In the derivation of LQM/CIEH S4UL's the principles of 'minimal' or 'tolerable' risk enshrined in SR2, which has not been withdrawn, has been maintained.

2.2. S4UL Land-use

S4UL's have been derived for the basic CLEA land-uses, as described in section 1.2, and for two new land uses:

- Public Open Spaces near Residential Housing (POSresi).
- Public Park (POSpark).

2.2.1. Public Open Spaces near Residential Housing (POSresi)

Includes the predominantly grassed areas adjacent to high density housing, the central green area on many 1930's – 1970's housing estates, and smaller areas commonly incorporated in newer developments as informal grassed areas or more formal landscaped areas with a mixture of open space and covered soils with planting. It is assumed that the close proximity to the place of residence will allow tracking back of soil to occur.

2.2.2. Public Park (POSpark)

An area of open space, usually owned and maintained by the local authority, provided for recreational uses including family visists and picnics, children's play area, informal sporting activities (not a dedicated sports pitch), and dog walking. It is assumed that tracking back of soils into places of residence will be negligible.

The following LQM/CIEH S4Uls (Copyright Land Quality Management Limited) have been reproduced with permission, to the publication number S4UL3072.

3. Category 4 Screening Levels (C4SLs)

In the case of Lead, no SGV or GAC has been published to date. This is likely to be due to the toxicity review that is currently being undertaken by the Environment Agency. In the absence of updated toxicity information the SGV derived using CLEA 1.07 methodology and related toxicity will be used.

The overall objective of the C4SLs research project was to assist the provision of technical guidance in support of Defra's revised Statutory Guidance (SG) for Part 2A of the Environmental Protection Act 1990 (Part 2A) (Defra, 2012a). Specifically, the project aimed to deliver:

- A methodology for deriving C4SLs for four generic land-uses comprising residential, commercial, allotments and public open space; and
- A demonstration of the methodology, via the derivation of C4SLs for six substances – arsenic, benzene, benzo(a)pyrene, cadmium, chromium (VI) and lead.

To help achieve a more targeted approach to identifying and managing contaminated land in relation to the risk (or possibility) of harm to human health, the revised SG presented a new four category

system for considering land under Part 2A, ranging from Category 4, where there is no risk that land poses a significant possibility of significant harm (SPOSH), or the level of risk is low, to Category 1, where the risk that land poses a significant possibility of significant harm (SPOSH) is unacceptably high. More specific guidance on what type of land should be considered as Category 4 (Human Health) is provided in Paragraphs 4.21 and 4.22 of the revised SG, as follows:

> *"4.21 The local authority should consider that the following types of land should be placed into Category 4: Human Health:*
> *(a) Land where no relevant contaminant linkage has been established.*
> *(b) Land where there are only normal levels of contaminants in soil, as explained in Section 3 of this Guidance.*
> *(c) Land that has been excluded from the need for further inspection and assessment because contaminant levels do not exceed relevant generic assessment criteria in accordance with Section 3 of this Guidance, or relevant technical tools or advice that may be developed in accordance with paragraph 3.30 of this Guidance.*
> *(d) Land where estimated levels of exposure to contaminants in soil are likely to form only a small proportion of what a receptor might be exposed to anyway through other sources of environmental exposure (e.g. in relation to average estimated national levels of exposure to substances commonly found in the environment, to which receptors are likely to be exposed in the normal course of their lives).*
>
> *4.22 The local authority may consider that land other than the types described in paragraph 4.21 should be placed into Category 4: Human Health if following a detailed quantitative risk assessment it is satisfied that the level of risk posed is sufficiently low."*

The C4SLs are intended as "relevant technical tools" (in relation to Paragraph 4.21(c)) to help local authorities and others when deciding to stop further assessment of a site, on the grounds that it falls within Category 4 (Human Health).

The Impact Assessment (IA), which accompanied the revised SG (Defra, 2012b) provides further information on the nature and potential role of the C4SLs. Paragraph 47(h) of the IA states that:

> *"The new statutory guidance will bring about a situation where the current SGVs/GACs are replaced with more pragmatic (but still strongly precautionary) Category 4 screening levels (C4SLs) which will provide a higher simple test for deciding that land is suitable for use and definitely not contaminated land."*

A key distinction between the Soil Guideline Values (SGVs) and the C4SLs is the level of risk that they describe. As described by the Environment Agency (2009a):

> *"SGVs are guidelines on the level of long-term human exposure to individual chemicals in soil that, unless stated otherwise, are tolerable or pose a minimal risk to human health."*

The implication of Paragraph 47(h) of the IA is that minimal risk is well within Category 4 and that the C4SLs should describe a higher level of risk which, whilst not minimal, can still be considered low enough to allow a judgement to be made that land containing substances at, or below, the C4SLs would typically fall within Category 4. This reflects Paragraph 4.20 of the revised SG, which states:

> *"4.20 The local authority should not assume that land poses a significant possibility of significant harm if it considers that there is no risk or that the level of risk posed is low. For the purposes of this Guidance, such land is referred to as a "Category 4: Human Health" case. The authority may decide that the land is a Category 4: Human Health case as soon as it considers it has evidence to this effect, and this may happen at any stage during risk assessment including the early stages."*

C4SLs, therefore, should not be viewed as "SPOSH levels" and they should not be used as a legal trigger for the determination of land under Part 2A.

The generic screening values referred to before usually take the form of risk-based Soil Guideline Values (SGVs) or other Generic Assessment Criteria (GACs) that are most typically derived using the Environment Agency's Contaminated Land Exposure Assessment (CLEA) model, as described in the Environment Agency's SR2, SR3 and SR7 reports (EA, 2009b & c; EA, 2008). It is anticipated that C4SLs will be used in a similar manner; as generic screening criteria that can be used within a GQRA, albeit describing a higher level of risk than the SGVs.

The suggested approach to the development of C4SLs consists of the retention and use of the CLEA framework, modified according to considerations of the underlying science within the context of Defra's policy objectives relating to the revised SG. Within this context, it is suggested that the development of C4SLs may be achieved in one of three ways, namely:

- By modifying the toxicological parameters used within CLEA (while maintaining current exposure parameters);
- By modifying the exposure parameters embedded within CLEA (while maintaining current toxicological "minimal risk" interpretations); and
- By modifying both toxicological and exposure parameters.

There is also a suggested check on "other considerations" (e.g., background levels, epidemiological data, sources of uncertainty) within the approach, applicable to all three options.

It is suggested that a new term is defined for the toxicological guidance values associated with the derivation of C4SLs – a Low Level of Toxicological Concern (LLTC). A LLTC should represent an intake of low concern that remains suitably protective of health, and definitely does not approach an intake level that could be defined as SPOSH.

4. CL:AIRE Generic Assessment Criteria (GAC)

For derivation of the CL:AIRE Generic Assessment Criteria (GAC) reference should be made to the following report:

> CL:AIRE, *The Soil Generic Assessment Criteria for Human Health Risk Assessment.* **Contaminated Land: Applications in the Real Environment**. 2009.

Within this report, Contaminated Land: Applications in Real Environments (CL:AIRE) provided Generic Assessment Criteria (GAC) in accordance with the CLEA software and the principles outlined previously for a further 35 contaminants sometimes encountered on land affected by contamination.

5. SoBRA Acute GAC

The Society of Brownfield Risk Assessment (SoBRA) identified that most human health risk assessments focus on the chronic risks arising from long-term exposure to specific substances. As chronic risks often occur at lower doses than acute risks, they are often the key drivers, however, in some instances the acute dose may also be an important consideration within risk assessments.

The methodology for deriving the acute GAC were related to two distinct receptor groups:

- Members of the public, where the 'critical' receptor for this group will typically be a female child, which is consistent with CLEA residential and Public Open Space/allotments land-uses;
- Workers involved with excavations. The critical receptor for this group is assumed to be a female working adult, without the use of PPE.

The acute GACs relate to short term exposure of high concentrations of a substance that lead to acute effects. They are not considered to be average exposures across a specific / defined area. As a result, the GACs should be normally be compared with the maximum likely concentration that the individual may be exposed to, and not the average concentration within a specific area.

The SoBRA acute GAC will primarily be used for contaminants that do not currently have any GAC, most notably Cyanide.

6. Detailed Quantitative Risk Assessments (DQRA)

Where the adoption of a GAC is not appropriate, for instance when the intended land-use is at variance the CLEA standard land-uses, then a DQRA may be undertaken to develop site specific values for relevant soil contaminants.

- Establishing the plausibility that generic exposure pathways exist in practice by measurement and observation.
- Developing more accurate parameters using site data.

7. Phytotoxicity

CLEA guidance only addresses human health toxicity; assessment of plant toxicity (phytotoxicity) is based on threshold trigger values obtained from the following source:

- BS3882:2015 – *Specification for Topsoil*

The trigger values are relevant only to those contaminants, where present in excess, have the potential to inhibit plant growth, or kill plants (Cu, Ni and Zn). The criteria have been based on a wide range of planting that are common within a multi-purpose topsoil.

8. Statistical Tests

DEFRA R&D Publication CLR 7 (DOE 1994) addressed the statistical treatment of test results and their comparison to Soil Guideline Values.

Consideration must be given to the appropriate area of land to be considered termed the critical averaging area.

For a communal open space or commercial land-use, the critical averaging area will depend on the proposed layout. For a residential use with private gardens the averaging area is the individual plot.

It may be appropriate to compare the upper 95th percentile concentration with the Soil Guideline Value, subject to applying a statistical test to establish that the range of concentrations are reasonably consistent and belonging to the same underlying distribution of data.

CL:AIRE published guidance in 2020, *Guidance in comparing soil contamination data with a critical concentration,* superseding the CL:AIRE/CIEH 2008 report of the same name. The guidance provides ways to assist land contamination stakeholders to apply statistical methods to their data to enable decisions under the legislative framework; either planning system or Part 2A of the Environmental Protection Act 1990.

The use of the statistical tests should only be applied if the following statements are valid for the datasets:

- Averaging areas, as well as the smallest area of concern have been identified on the basis of the CSM, including the desk study and/or the site walkover;
- The sample locations were chosen using a simple random, stratified random or stratified systematic (square, herringbone or triangular grid) sampling pattern, rather than being targeted to locations suspected of being contaminated;
- The sample locations are relatively evenly spread across the area and are not clustered, to avoid giving undue weight to some parts of the site over others in the calculated statistics;
- The analyses do not suggest a hotspot or outlier of contamination that should be treated as a separate zone. This has been established by a histogram and/or a names statistical test;
- The sample locations are all taken from one population (i.e. the same material);
- Where an averaging zone encompasses several averaging areas, analyses do not show a spatial trend or other spatial pattern across that zone; and
- The number of samples has been shown to be sufficient for a statistical analysis.

Any included statistical spreadsheet is based on an in-house method of statistical analysis, in line with those outlined within the CL:AIRE guidance (2020).

Treatment of Hot-Spots

- A statistical test is applied to establish whether the data is a part of a single set, or whether data outliers are present.
- Provided that the data is based on random sampling and no distinct contamination source was present at the sampling location, the hot-spot(s) may be excluded and the mean of the remaining data assessed.

9. Ground and Water Limited Soil Assessment Criteria

The Soil Assessment Criteria used in the preparation of the Generic Quantitative Risk Assessment are tabulated in the following pages, where the source of each has been outlined in the previous sections.

9.1. Inorganics

SoBRA – Acute Generic Assessment Criteria						
Determinand	**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
Cyanide	24	24	24	1400	24	24

9.2. Metals

C4SL Low Level of Toxicological Concern						
Determinand	**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
Lead	< 200	< 310	< 80	< 2300	< 630	< 1300

LQM/CIEH Suitable 4 Use Levels – Metals and Semi-metals						
Determinand	**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
Arsenic	37	40	43	640	79	170
Beryllium	1.7	1.7	35	12	2.2	63
Boron	290	11000	45	240000	21000	46000
Cadmium	11	85	1.9	190	120	532
Chromium (III)	910	910	18000	8600	1500	33000
Chromium (VI)	6	6	1.8	33	7.7	220
Copper	2400	7100	520	68000	12000	44000
Elemental Mercury	1.2	1.2	21	58	16	30
Inorganic Mercury	40	56	19	1100	120	240
Methylmercury	11	15	6	320	40	68
Nickel	130	180	53	980	230	800
Selenium	250	430	88	12000	1100	1800
Vanadium	410	1200	91	9000	2000	5000
Zinc	3700	40000	620	730000	81000	170000

Phytotoxicity (Harmful to Plants) Threshold Trigger Values			
Determinand	**Soil pH < 6.0 (mg/kg)**	**Soil pH 6.0 – 7.0 (mg/kg)**	**Soil pH > 7.0 (mg/kg)**
Copper	100	135	200
Nickel	60	75	110
Zinc	200	200	300
Notes: BS3882:2015 – *Specification for Topsoil*. Based on a wide range of common plants that will be exposed to multi-purpose topsoil. Toxicity of contaminant may also be impacted by pH of soils. Site observation of plant vitality may give additional guidance.			

CL:AIRE Soil Generic Assessment Criteria				
Determinand	**Residential (mg/kg)**	**Residential without plant uptake (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**
Antimony	ND	550	ND	7500
Barium	ND	1300	ND	22000
Molybdenum	ND	670	ND	17000
ND – Not derived				

9.3. Total Petroleum Hydrocarbons (TPHs)

9.3.1. BTEX Compounds

LQM/CIEH Suitable 4 Use Levels – BTEX Compounds							
Determinand	**Soil Organic Matter**	**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
Benzene	1.0% SOM	0.087	0.38	0.017	27	72	90
	2.5% SOM	0.170	0.70	0.034	47	72	100
	6.0% SOM	0.370	1.40	0.075	90	73	110
Toluene	1.0% SOM	130	880	22	56000	56000	87000
	2.5% SOM	290	1900	51	110000	56000	95000
	6.0% SOM	660	3900	120	180000	56000	100000
Ethylbenzene	1.0% SOM	47	83	16	5700	24000	17000
	2.5% SOM	110	190	39	13000	24000	22000
	6.0% SOM	260	440	91	27000	25000	27000
o-Xylene	1.0% SOM	60	88	28	6600	41000	17000
	2.5% SOM	140	210	67	15000	42000	24000
	6.0% SOM	330	480	160	33000	43000	33000
m-Xylene	1.0% SOM	59	82	31	6200	41000	17000
	2.5% SOM	140	190	74	14000	42000	24000
	6.0% SOM	320	450	170	31000	43000	33000
p-Xylene	1.0% SOM	56	79	29	5900	41000	17000
	2.5% SOM	130	180	69	14000	42000	23000
	6.0% SOM	310	430	160	30000	43000	31000
SOM = Soil Organic Matter Content (%)							

9.3.2. Total Petroleum Hydrocarbons – Aliphatic

LQM/CIEH Suitable 4 Use Levels For TPH							
Aliphatic		**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
EC 5-6	1.0% SOM	42	42	730	3,200 (304) [sol]	570,000 (304) [sol]	95,000 (304) [sol]
	2.5% SOM	78	78	1,700	5,900 (558) [sol]	590,000	130,000 (558) [sol]
	6.0% SOM	160	160	3,900	12,000 (1150) [sol]	600,000 (1150)[sol]	180,000 (1150) [sol]
EC >6-8	1.0% SOM	100	100	2,300	7,800 (144) [sol]	600,000	150,000 (144) [sol]
	2.5% SOM	230	230	5,600	17,000 (322) [sol]	610,000	220,000 (322) [sol]
	6.0% SOM	530	530	13,000	40,000 (736) [sol]	620,000	320,000 (736) [sol]
EC >8-10	1.0% SOM	27	27	320	2,000 (78) [sol]	13,000	14,000 (78) [sol]
	2.5% SOM	65	65	770	4,800 (118) [vap]	13,000	18,000 (118) [vap]
	6.0% SOM	150	150	1,700	11,000 (451) [vap]	13,000	21,000 (451) [vap]
EC >10-12	1.0% SOM	130 (48) [vap]	130 (48) [vap]	2,200	9,700 (48) [sol]	13,000	21,000 (48) [sol]
	2.5% SOM	330 (118) [vap]	330 (118) [vap]	4,400	23,000 (118) [vap]	13,000	23,000 (118) [vap]
	6.0% SOM	760 (283) [vap]	760 (283) [vap]	7,300	47,000 (283) [vap]	13,000	24,000 (283) [vap]
EC >12-16	1.0% SOM	1,100 (24) [sol]	1,100 (24) [sol]	11,000	59,000 (24) [sol]	13,000	25,000 (24) [sol]
	2.5% SOM	2,400 (59) [sol]	2,400 (59) [sol]	13,000	82,000 (59) [sol]	13,000	25,000 (59) [sol]
	6.0% SOM	4,300 (142) [sol]	4,400 (142) [sol]	13,000	90,000 (142) [sol]	13,000	26,000 (142) [sol]
EC >16-35	1.0% SOM	65,000 (8.48) [sol]	65,000 (8.48) [sol]	260,000	1,600,000	250,000	450,000
	2.5% SOM	92,000 (21) [sol]	92,000 (21) [sol]	270,000	1,700,000	250,000	480,000
	6.0% SOM	110,000	110,000	270,000	1,800,000	250,000	490,000
EC >35-44	1.0% SOM	65,000 (8.48) [sol]	65,000 (8.48) [sol]	260,000	1,600,000	250,000	450,000
	2.5% SOM	92,000 (21) [sol]	92,000 (21) [sol]	270,000	1,700,000	250,000	480,000
	6.0% SOM	110,000	110,000	270,000	1,800,000	250,000	490,000

SOM = Soil Organic Matter Content (%)

[vap] – GAC presented exceeds the vapour saturation limit, which is presented in brackets.

[sol] – GAC presented exceeds the soil saturation limit, which is presented in brackets.

9.3.3. Total Petroleum Hydrocarbons – Aromatic

LQM/CIEH Suitable 4 Use Levels For TPH							
Aromatic		**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
EC 5-7 (Benzene)	1.0% SOM	70	370	13	26,000 (1220) [sol]	56,000	76,000 (1220 [sol]
	2.5% SOM	140	690	27	46,000 (2260) [sol]	56,000	84,000 (2260) [sol]
	6.0% SOM	300	1,400	57	86,000 (4710) [sol]	56,000	92,000 (4710) [sol]
EC >7-8 (Toluene)	1.0% SOM	130	860	22	56,000 (869) [vap]	56,000	87,000 (869) [sol]
	2.5% SOM	290	1,800	51	110,000 (1920) [sol]	56,000	95,000 (1920) [sol]
	6.0% SOM	660	3,900	120	180,000 (4360) [vap]	56,000	100,000 (4360) [vap]
EC >8-10	1.0% SOM	34	47	8.6	3,500 (613) [vap]	5,000	7,200 (613) [vap]
	2.5% SOM	83	110	21	8,100 (1500) [vap]	5,000	8,500 (1500) [vap]
	6.0% SOM	190	270	51	17,000 (3850) [vap]	5,000	9,300 (3580) [vap]
EC >10-12	1.0% SOM	74	250	13	16,000 (364) [sol]	5,000	9,200 (364) [sol]
	2.5% SOM	180	590	31	28,000 (899) [sol]	5,000	9,700 (889) [sol]
	6.0% SOM	380	1,200	74	34,000 (2150) [sol]	5,000	10,000
EC >12-16	1.0% SOM	140	1,800	23	36,000 (169) [sol]	5,100	10,000
	2.5% SOM	330	2,300 (419) [sol]	57	37,000	5,100	10,000
	6.0% SOM	660	2,500	130	38,000	5,000	10,000
EC >16-21	1.0% SOM	260	1,900	46	28,000	3,800	7,600
	2.5% SOM	540	1,900	110	28,000	3,800	7,700
	6.0% SOM	930	1,900	260	28,000	3,800	7,800
EC >21-35	1.0% SOM	1,100	1,900	370	28,000	3,800	7,800
	2.5% SOM	1,500	1,900	820	28,000	3,800	7,800
	6.0% SOM	1,700	1,900	1,600	28,000	3,800	7,900
EC >35-44	1.0% SOM	1,100	1,900	370	28,000	3,800	7,800
	2.5% SOM	1,500	1,900	820	28,000	3,800	7,800
	6.0% SOM	1,700	1,900	1,600	28,000	3,800	7,900
EC >44-70	1.0% SOM	1,600	1,900	1,200	28,000	3,800	7,800
	2.5% SOM	1,800	1,900	2,100	28,000	3,800	7,800
	6.0% SOM	1,900	1,900	3,000	28,000	3,800	7,900

SOM = Soil Organic Matter Content (%)

[vap] – GAC presented exceeds the vapour saturation limit, which is presented in brackets.

[sol] – GAC presented exceeds the soil saturation limit, which is presented in brackets.

9.4. Polycyclic Aromatic Hydrocarbons (PAHs)

LQM/CIEH Suitable 4 Use Levels For Polycyclic Aromatic Hydrocarbons (PAHs)							
Determinands		**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
Acenapthene	1.0% SOM	210	3,000 (57.0) [sol]	34	84,000(57.0) [sol]	15,000	29,000
	2.5% SOM	510	4,700(141) [sol]	85	97,000(141) [sol]	15,000	30,000
	6.0% SOM	1100	6,000(336) [sol]	200	100,000	15,000	30,000
Acenapthylene	1.0% SOM	170	2,900(86.1) [sol]	28	83,000(86.1) [sol]	15,000	29,000
	2.5% SOM	420	4,600(212) [sol]	69	97,000(212) [sol]	15,000	30,000
	6.0% SOM	920	6,000(506) [sol]	160	100,000	15,000	30,000
Anthracene	1.0% SOM	2,400	31,000(1.17) [vap]	380	520,000	74,000	150,000
	2.5% SOM	5,400	35,000	950	540,000	74,000	150,000
	6.0% SOM	11,000	37,000	2,200	540,000	74,000	150,000
Benzo(a)anthracene	1.0% SOM	7.20	11	2.90	170	29	49
	2.5% SOM	11	14	6.50	170	29	56
	6.0% SOM	13	15	13	180	29	62
Benzo(a)pyrene	1.0% SOM	2.20	3.20	0.97	35	5.70	11
	2.5% SOM	2.70	3.20	2.00	35	5.70	12
	6.0% SOM	3.00	3.20	3.50	36	5.70	13
Benzo(b)flouranthene	1.0% SOM	2.60	3.90	0.99	44	7.10	13
	2.5% SOM	3.30	4.00	2.10	44	7.20	15
	6.0% SOM	3.70	4.00	3.90	45	7.20	16
Benzo(ghi)perylene	1.0% SOM	320	360	290	3,900	640	1,400
	2.5% SOM	340	360	470	4,000	640	1,500
	6.0% SOM	350	360	640	4,000	640	1,600
Benzo(k)flouranthene	1.0% SOM	77	110	37	1,200	190	370
	2.5% SOM	93	110	75	1,200	190	410
	6.0% SOM	100	110	130	1,200	190	440
Chrysene	1.0% SOM	15	30	4.10	350	57	93
	2.5% SOM	22	31	9.40	350	57	110
	6.0% SOM	27	32	19	350	57	120
Dibenzo(ah)anthracene	1.0% SOM	0.24	0.31	0.14	3.50	0.57	1.10
	2.5% SOM	0.28	0.32	0.27	3.50	0.57	1.30
	6.0% SOM	0.30	0.32	0.43	3.60	0.58	1.40
Flouranthene	1.0% SOM	280	1,500	52	23,000	3,100	6,300
	2.5% SOM	560	1,600	130	23,000	3,100	6,300
	6.0% SOM	890	1,600	290	23,000	3,100	6,300
Flourene	1.0% SOM	170	2,800 (30.9) [sol]	27	63,000(30.9) [sol]	9,900	20,000
	2.5% SOM	400	3,800(76.5) [sol]	67	68,000	9,900	20,000
	6.0% SOM	860	4,500(183) [sol]	160	71,000	9,900	20,000
Indeno(123-cd)pyrene	1.0% SOM	27	45	9.50	500	82	150
	2.5% SOM	36	46	21	510	82	170
	6.0% SOM	41	46	39	510	82	180
Napthalene	1.0% SOM	15	36	65	1,600	11,000	800
	2.5% SOM	36	36	130	3,700	15,000	1,200
	6.0% SOM	85	85	200	8,400	17,000	1,900
Phenanthrene	1.0% SOM	95	1,300(183) [sol]	15	22,000	3,100	6,200
	2.5% SOM	220	1,500	38	22,000	3,100	6,200
	6.0% SOM	440	1,500	90	23,000	3,100	6,300
Pyrene	1.0% SOM	620	3,700	110	54,000	7,400	15,000
	2.5% SOM	1200	3,800	270	54,000	7,400	15,000
	6.0% SOM	2000	3,800	620	54,000	7,400	15,000
Coal Tar (Benzo(a)pyrene used as marker compound)	1.0% SOM	0.79	1.2	0.32	15	2.20	4.40
	2.5% SOM	0.98	1.2	0.67	15	2.20	4.70
	6.0% SOM	1.10	1.2	1.20	15	2.20	4.80

SOM = Soil Organic Matter Content (%)

[vap] – GAC presented exceeds the vapour saturation limit, which is presented in brackets.

[sol] – GAC presented exceeds the soil saturation limit, which is presented in brackets.

9.5. Volatile and Semi-volatile Organic Compounds

LQM CIEH General Assessment Criteria: Volatile and Semi-Volatile Organic Compounds							
Determinands		**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
Chloroalkanes & alkenes							
1,2 Dichloroethane	1.0% SOM	0.0071	0.0092	0.0046	0.67	29	21
	2.5% SOM	0.011	0.013	0.0083	0.97	29	24
	6.0% SOM	0.019	0.023	0.016	1.70	29	28
1,1,2,2 Tetrachloroethane	1.0% SOM	1.60	3.90	0.41	270	1,400	1,800
	2.5% SOM	3.40	8.00	0.89	550	1,400	2,100
	6.0% SOM	7.50	17	2.00	1,100	1,400	2,300
1,1,1,2 Tetrachloroethane	1.0% SOM	1.20	1.50	0.79	110	1,400	1,500
	2.5% SOM	2.80	3.50	1.90	250	1,400	1,800
	6.0% SOM	6.40	8.20	4.40	560	1,400	2,100
Tetrachloroethene	1.0% SOM	0.18	0.18	0.65	19	1,400	810 [sol](424)
	2.5% SOM	0.39	0.40	1.50	42	1,400	1,100 [sol](951)
	6.0% SOM	0.90	0.92	3.60	95	1,400	1,500
1,1,1 Trichloroethane	1.0% SOM	8.80	9.00	48	660	140,000	57,000 [vap](1425)
	2.5% SOM	18	18	110	1,300	140,000	76,000 [vap](2915)
	6.0% SOM	39	40	240	3,000	140,000	100,000 [vap] (6392)
Tetrachloromethene	1.0% SOM	0.026	0.026	0.45	2.90	890	190
	2.5% SOM	0.056	0.056	1.00	6.30	920	270
	6.0% SOM	0.130	0.130	2.40	14	950	400
Trichloroethene	1.0% SOM	0.016	0.017	0.041	1.20	120	70
	2.5% SOM	0.034	0.036	0.091	2.60	120	91
	6.0% SOM	0.075	0.080	0.210	5.70	120	120
Trichloromethane	1.0% SOM	0.91	1.20	0.42	99	2,500	2,600
	2.5% SOM	1.70	2.10	0.83	170	2,500	2,800
	6.0% SOM	3.40	4.20	1.70	350	2,500	3,100
Vinyl Chloride	1.0% SOM	0.00064	0.00077	0.00055	0.059	3.50	4.80
	2.5% SOM	0.00087	0.00100	0.00100	0.077	3.50	5.00
	6.0% SOM	0.00014	0.00150	0.00180	0.120	3.50	5.40
Explosives							
2,4,6 Trinitrotoluene	1.0% SOM	1.60	65	0.24	1,000	130	260
	2.5% SOM	3.70	66	0.58	1,000	130	270
	6.0% SOM	8.10	66	1.40	1,000	130	270
RDX (Hexogen/Cyclonite/1,3,5-trinitro-1,3,5-triazacyclohexane)	1.0% SOM	120	13,000	17	210,000	26,000	49,000(18.7)[sol]
	2.5% SOM	250	13,000	38	210,000	26,000	51,000
	6.0% SOM	540	13,000	85	210,000	27,000	53,000
HMX (Octogen/1,3,5,7-tetrenitro-1,3,5,7-tetrazacyclo-octane)	1.0% SOM	5.70	67,00	0.86	110,000	13,000	23,000(0.35)[vap]
	2.5% SOM	13	67,00	1.90	110,000	13,000	23,000(0.39)[vap]
	6.0% SOM	26	67,00	3.90	110,000	13,000	24,000(0.48)[vap]
Atrazine	1.0% SOM	3.30	610	0.50	9,300	1,200	2,300
	2.5% SOM	7.60	620	1.20	9,400	1,200	2,400
	6.0% SOM	17.40	620	2.70	9,400	1,200	2,400

[vap] – GAC presented exceeds the vapour saturation limit, which is presented in brackets.
[sol] – GAC presented exceeds the soil saturation limit, which is presented in brackets.

VOC and SVOC table continued overleaf

VOC and SVOC table continued from previous page

LQM CIEH General Assessment Criteria: Volatile and Semi-Volatile Organic Compounds							
Determinands		**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
Pesticides							
Aldrin	1.0% SOM	5.70	7.30	3.20	170	18	30
	2.5% SOM	6.60	7.40	6.10	170	18	31
	6.0% SOM	7.10	7.50	9.60	170	18	31
Dieldrin	1.0% SOM	0.97	7.00	0.17	170	18	30
	2.5% SOM	2.00	7.30	0.41	170	18	30
	6.0% SOM	3.50	7.40	0.96	170	18	31
Dichlorvos	1.0% SOM	0.032	6.40	0.0049	140	16	26
	2.5% SOM	0.066	6.50	0.0100	140	16	26
	6.0% SOM	0.140	6.60	0.0220	140	16	27
Alpha - Endosulfan	1.0% SOM	7.40	160(0.003)[vap]	1.20	5,600(0.003)[vap]	1,200	2,400
	2.5% SOM	18	280(0.007)[vap]	2.90	7,400(0.007)[vap]	1,200	2,400
	6.0% SOM	41	410(0.016)[vap]	6.80	8,400(0.016)[vap]	1,200	2,400
Beta - Endosulfan	1.0% SOM	7.00	190(0.00007)[vap]	1.10	6,300(0.00007)[vap]	1,200	2,400
	2.5% SOM	17	320(0.0002)[vap]	2.70	7,800(0.0002)[vap]	1,200	2,400
	6.0% SOM	39	440(0.0004)[vap]	6.40	8700	1,200	2,500
Alpha - Hexachlorocyclohexanes	1.0% SOM	0.23	6.90	0.035	170	24	47
	2.5% SOM	0.55	9.20	0.087	180	24	48
	6.0% SOM	1.20	11	0.210	180	24	48
Beta - Hexachlorocyclohexanes	1.0% SOM	0.085	3.70	0.013	65	8.10	15
	2.5% SOM	0.200	3.80	0.032	65	8.10	15
	6.0% SOM	0.460	3.80	0.077	65	8.10	16
Gamma - Hexachlorocyclohexanes	1.0% SOM	0.06	2.90	0.0092	67	8.2	14
	2.5% SOM	0.14	3.30	0.0230	69	8.2	15
	6.0% SOM	0.33	3.50	0.0540	70	8.2	15
Chlorobenzenes							
Chlorobenzene	1.0% SOM	0.46	0.46	5.90	56	11,000	1,300(675)[sol]
	2.5% SOM	1.00	1.00	14	130	13,000	2,000(1520)[sol]
	6.0% SOM	2.40	2.40	32	290	14,000	2,900
1,2-Dichlorobenzene	1.0% SOM	23	24	94	2,000 (571) [sol]	90,000	24,000(571)[sol]
	2.5% SOM	55	57	230	4,800 (1370) [sol]	95,000	36,000(1370)[sol]
	6.0% SOM	130	130	540	11,000 (3240) [sol]	98,000	51,000(3240)[sol]
1,3-Dichlorobenzene	1.0% SOM	0.40	0.44	0.25	30	300	390
	2.5% SOM	1.00	1.10	0.60	73	300	440
	6.0% SOM	2.30	2.50	1.50	170	300	470
1,4-Dichlorobenzene	1.0% SOM	61	61	15	4,400 (224)[vap]	17,000[g]	36,000 (224)[vap]
	2.5% SOM	150	150	37	10,000 (540)[vap]	17,000[g]	36,000 (540)[vap]
	6.0% SOM	350	350	88[g]	25,000 (1280)[vap]	17,000[g]	36,000 (1280)[vap]
1,2,3,-Trichlorobenzene	1.0% SOM	1.50	1.50	4.70	102	1,800	770(134)[vap]
	2.5% SOM	3.60	3.70	12	250	1,800	1,100(330)[vap]
	6.0% SOM	8.60	8.80	28	590	1,800	1,600(789)[vap]
1,2,4,-Trichlorobenzene	1.0% SOM	2.60	2.60	55	220	15,000	1,700(318)[vap]
	2.5% SOM	6.40	6.40	140	530	17,000	2,600(786)[vap]
	6.0% SOM	15	15	320	1,300	19,000	4,000(1880)[vap]
1,3,5,-Trichlorobenzene	1.0% SOM	0.33	0.33	4.70	23	1,700	380(36.7)[vap]
	2.5% SOM	0.81	0.81	12	55	1,700	590(90.8)[vap]
	6.0% SOM	1.90	1.90	140	130	1,800	860(217)[vap]

[vap] – GAC presented exceeds the vapour saturation limit, which is presented in brackets.
[sol] – GAC presented exceeds the soil saturation limit, which is presented in brackets.

VOC and SVOC table continued overleaf

VOC and SVOC table continued from previous page

LQM CIEH General Assessment Criteria: Volatile and Semi-Volatile Organic Compounds							
Determinands		**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**	**POSresi (mg/kg)**	**POSpark (mg/kg)**
Chlorobenzenes (cont.)							
1,2,3,4,- Tetrachlorobenzene	1.0% SOM	15	24	4.40	1,700(122)^{vap}	830	1,500(122)^{vap}
	2.5% SOM	36	56	11	3,080(304)^{vap}	830	1,600
	6.0% SOM	78	120	26	4,400(728)^{vap}	830	1,600
1,2,3,5,- Tetrachlobenzene	1.0% SOM	0.66	0.75	0.38	49(39.4)^{vap}	78	110(39)^{vap}
	2.5% SOM	1.60	1.90	0.90	120(98.1)^{vap}	79	120
	6.0% SOM	3.70	4.30	2.20	240(235)^{vap}	79	130
1,2,4, 5,- Tetrachlobenzene	1.0% SOM	0.33	0.73	0.06	42(19.7)^{sol}	13	25
	2.5% SOM	0.77	1.70	0.16	72(49.1)^{sol}	13	26
	6.0% SOM	1.60	3.50	0.37	96	13	26
Pentachlrobenzene	1.0% SOM	5.80	19	1.20	640(43.0)^{sol}	100	190
	2.5% SOM	12	30	3.10	770(107)^{sol}	100	190
	6.0% SOM	22	38	7.00	830	100	190
Hexachlorobenzene	1.0% SOM	1.80(0.20)^{vap}	4.10 (0.20)^{vap}	0.47	110(0.20)^{vap}	16	30
	2.5% SOM	3.30(0.50)^{vap}	5.70 (0.50)^{vap}	1.10	120	16	30
	6.0% SOM	4.90	6.70 (1.2)^{vap}	2.50	120	16	30
Phenols & Chlorophenols							
BTEX	1.0% SOM	280	750	66	760^{dir}(31,000)	760^{dir}(11,000)	760^{dir}(8,600)
	2.5% SOM	550	1,300	140	1,500^{dir}(35,000)	1,500^{dir}(11,000)	1,500^{dir}(9,700)
	6.0% SOM	1100	2,300	280	3,200^{dir}(37,000)	3,200^{dir}(11,000)	3,200^{dir}(11,000)
Chlorophenols (4 Congeners)	1.0% SOM	0.87	94	0.13	3,500	620	1,100
	2.5% SOM	2.00	150	0.30	4,000	620	1,100
	6.0% SOM	4.50	210	0.70	4,300	620	1,100
Pentachlorophenols	1.0% SOM	0.22	27(16.4)^{vap}	0.03	400	60	110
	2.5% SOM	0.52	29	0.08	400	60	120
	6.0% SOM	1.20	31	0.19	400	60	120
Others							
Carbon Disulphide	1.0% SOM	0.14	0.14	4.80	11	11,000	1,300
	2.5% SOM	0.29	0.29	10	22	11,000	1,900
	6.0% SOM	0.62	0.62	23	47	12,000	2,700
Hexachloro-1,3-Butadiene	1.0% SOM	0.29	0.32	0.25	31	25	48
	2.5% SOM	0.70	0.78	0.61	68	25	50
	6.0% SOM	1.60	1.80	1.40	120	25	51

^{vap} – GAC presented exceeds the vapour saturation limit, which is presented in brackets.
^{sol} – GAC presented exceeds the soil saturation limit, which is presented in brackets.

VOC and SVOC table continued overleaf

VOC and SVOC table continued from previous page

CL:AIRE General Assessment Criteria: Volatile and Semi-Volatile Organic Compounds					
Determinands		**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**
1,1,2 Trichloroethane	1.0% SOM	0.60	0.88	0.28	94
	2.5% SOM	1.20	1.8	0.61	190
	6.0% SOM	2.70	3.9	1.40	400
1,1-Dichloroethane	1.0% SOM	2.40	2.50	9.20	280
	2.5% SOM	3.90	4.10	17	450
	6.0% SOM	7.40	7.70	35	850
1,1-Dichloroethene	1.0% SOM	0.23	0.23	2.80	26
	2.5% SOM	0.40	0.41	5.60	46
	6.0% SOM	0.82	0.82	12	92
1,2,4-Trimethylbenzene	1.0% SOM	0.35	0.41	0.38	42
	2.5% SOM	0.85	0.99	0.93	99
	6.0% SOM	2.00	2.30	2.20	220
1,2-Dichloropropane	1.0% SOM	0.024	0.024	0.62	3.3
	2.5% SOM	0.042	0.042	1.20	5.9
	6.0% SOM	0.084	0.085	2.60	12
2,4-Dimethylphenol	1.0% SOM	19	210	3.10	16000*
	2.5% SOM	43	410	7.20	24000*
	6.0% SOM	97	730	17	30000*
2,4-Dinitrotoluene	1.0% SOM	1.50	170*	0.22	3700*
	2.5% SOM	3.20	170	0.49	3700*
	6.0% SOM	7.20	170	1.10	3800*
2,6-Dinitrotoluene	1.0% SOM	0.78	78	0.12	1900*
	2.5% SOM	1.70	84	0.27	1900*
	6.0% SOM	3.90	87	0.61	1900*
2-Chloronapthalene	1.0% SOM	3.70	3.80	40	390*
	2.5% SOM	9.20	9.30	98	960*
	6.0% SOM	22	22	230	2200*
Biphenyl	1.0% SOM	66*	220*	14	18000*
	2.5% SOM	160	500*	35	33000*
	6.0% SOM	360	980*	83	48000*
Bis (2-ethylhexyl) phthalate	1.0% SOM	280*	2700*	47*	85000*
	2.5% SOM	610*	2800*	120*	86000*
	6.0% SOM	1100*	2800*	280*	86000*
Bromobenzene	1.0% SOM	0.87	0.91	3.2	97
	2.5% SOM	2.0	2.1	7.6	220
	6.0% SOM	4.7	4.9	18	520
Bromodichloromethane	1.0% SOM	0.016	0.019	0.016	2.1
	2.5% SOM	0.030	0.034	0.032	3.7
	6.0% SOM	0.061	0.070	0.068	7.6
Bromoform	1.0% SOM	2.8	5.2	0.95	760
	2.5% SOM	5.9	11	2.1	1500
	6.0% SOM	13	23	4.6	3100
Butyl benzyl phthalate	1.0% SOM	1400*	42000*	220*	940000*
	2.5% SOM	3300*	44000*	550*	940000*
	6.0% SOM	7200*	44000*	1300*	950000*

*soil concentration above saturation limit

VOC and SVOC table continued overleaf

VOC and SVOC table continued from previous page

CL:AIRE General Assessment Criteria: Volatile and Semi-Volatile Organic Compounds					
Determinands		**RwHP (mg/kg)**	**RwoHP (mg/kg)**	**Allotment (mg/kg)**	**Commercial (mg/kg)**
Chloroethane	1.0% SOM	8.3	8.4	110	960
	2.5% SOM	11	11	200	1300
	6.0% SOM	18	18	380	2100
Chloromethane	1.0% SOM	0.0083	0.0085	0.066	1.0
	2.5% SOM	0.0098	0.0099	0.13	1.2
	6.0% SOM	0.013	0.013	0.23	1.6
***Cis* 1,2 Dichloroethene**	1.0% SOM	0.11	0.12	0.26	14
	2.5% SOM	0.19	0.20	0.50	24
	6.0% SOM	0.37	0.39	1.0	47
Dichloromethane	1.0% SOM	0.58	2.10	0.10	270
	2.5% SOM	0.98	2.80	0.19	360
	6.0% SOM	1.70	4.50	0.34	560
Diethyl Phthalate	1.0% SOM	120*	1800*	19*	150000*
	2.5% SOM	260*	3500*	41*	220000*
	6.0% SOM	570*	6300*	94*	290000*
Di-*n*-butyl phthalate	1.0% SOM	13*	450*	2.00	15000*
	2.5% SOM	31*	450*	5.00	15000*
	6.0% SOM	67*	450*	12	15000*
Di-*n*-octyl phthalate	1.0% SOM	2300*	3400*	940*	89000*
	2.5% SOM	2800*	3400*	2100*	89000*
	6.0% SOM	3100*	3400*	3900*	89000*
Hexachloroethane	1.0% SOM	0.20	0.22	0.27	22*
	2.5% SOM	0.48	0.54	0.67	53*
	6.0% SOM	1.10	1.30	1.60	120*
Isopropylbenzene	1.0% SOM	11	12	32	1400*
	2.5% SOM	27	28	79	3300*
	6.0% SOM	64	67	190	7700*
Methyl *tert*-butyl ether (MTBE)	1.0% SOM	49	73	23	7900
	2.5% SOM	84	120	44	13000
	6.0% SOM	160	220	90	24000
Propylbenzene	1.0% SOM	34	40	34	4100*
	2.5% SOM	82	97	83	9700*
	6.0% SOM	190	230	200	21000*
Styrene	1.0% SOM	8.10	35	1.60	3300*
	2.5% SOM	19	78	3.70	6500*
	6.0% SOM	43	170	8.70	11000*
Total Cresols (2-, 3-, and 4-methylphenol)	1.0% SOM	80	3700	12	160000
	2.5% SOM	180	5400	27	180000*
	6.0% SOM	400	6900	63	180000*
***Trans* 1,2 Dichloroethene**	1.0% SOM	0.19	0.19	0.93	22
	2.5% SOM	0.34	0.35	1.90	40
	6.0% SOM	0.70	0.71	0.24	81
Tributyl tin oxide	1.0% SOM	0.25	1.40	0.042	130*
	2.5% SOM	0.59	3.10	0.100	180*
	6.0% SOM	1.30	5.70	0.240	200*

*soil concentration above saturation limit

C4SL Low Level of Toxicological Concern							
Determinands		RwHP (mg/kg)	RwoHP (mg/kg)	Allotment (mg/kg)	Commercial (mg/kg)	POSresi (mg/kg)	POSpark (mg/kg)
1,2-Dichloroethane (Ethylene Dichloride)	1.0% SOM	0.11	0.16	0.054	12	300	300
	2.5% SOM	0.18	0.24	0.10	17	310	330
	6.0% SOM	0.31	0.41	0.19	29	310	380
Cis-1,2-Dichloroethene	1.0% SOM	0.46	0.50	0.89	38	3,800	2,000
	2.5% SOM	0.78	0.84	1.7	64	3,800	2,400
	6.0% SOM	1.5	1.6	3.6	120	3,900	3,100
Tetrachloroethene (PCE)	1.0% SOM	0.31	0.32	2	24	3,200	1,400
	2.5% SOM	0.70	0.71	4.8	55	3,300	1,900
	6.0% SOM	1.60	1.60	11	130	3,400	2,500
Trans-1,2-Dichloroethene	1.0% SOM	0.90	0.93	3.70	69	13,000	5,600
	2.5% SOM	1.60	1.70	7.50	120	13,000	7,000
	6.0% SOM	3.30	3.40	16	260	13,000	9,100
Trichloroethene (TCE)	1.0% SOM	0.0093	0.0097	0.032	0.73	76	41
	2.5% SOM	0.020	0.020	0.072	1.5	78	54
	6.0% SOM	0.043	0.045	0.16	3.4	79	69
Vinyl Chloride (Chloroethene)	1.0% SOM	0.0064	0.015	0.0017	1.1	7.8	18
	2.5% SOM	0.010	0.019	0.0031	1.4	7.8	19
	6.0% SOM	0.017	0.029	0.0058	2.2	7.8	19

9.6. Per- and Polyfluoroalkyl Substances (PFAS)

Interim C4SLs for PFOA, PFNA, PFHxS and PFOS						
Determinand	RwHP (mg/kg)	RwoHP (mg/kg)	Allotment (mg/kg)	Commercial (mg/kg)	POSresi (mg/kg)	POSpark (mg/kg)
PFOA	0.076	0.041	0.0014	0.60	0.079	0.17
PFOS	0.013	0.041	0.0027	0.60	0.079	0.17
PFHxS	0.0081	0.041	0.0015	0.60	0.079	0.17
PFNA	0.0073	0.041	0.0013	0.60	0.079	0.17

9.7. Asbestos

No asbestos or asbestos containing materials (ACM's) are considered acceptable on-site from a human health perspective. Therefore the GAC for asbestos & ACM's within any imported material should be none detected (ND).

APPENDIX H: Waste Hazard Assessment

2 The Long Barn, Norton Farm, Selborne Road, Alton, Hampshire GU34 3NB
[redacted] groundandwater.co.uk

Registered Office: Kineton House, 31 Horse Fair, Banbury, Oxfordshire OX16 0AE Registered in England No. 07032001

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

V0Q44-ANAA4-EZYKD

Job name

Land South of Wandleys Lane, Fontwell, Eastergate, West Sussex PO20 3SE

Description/Comments

Project

GWPR5571

Site

Land South of Wandleys Lane, Fontwell, Eastergate, West Sussex PO20 3SE

Classified by

Name:
Roger Foord
Date:
19 Oct 2023 16:07 GMT
Telephone:
0333 600 1221

Company:
Ground and Water
Brighton

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: -

Course	Date
Hazardous Waste Classification	-

Purpose of classification

2 - Material Characterisation

Address of the waste

Land South of Wandleys Lane, Fontwell, Eastergate, West Sussex **Post Code** PO20 3SE

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Development of undeveloped field

Description of the specific process, sub-process and/or activity that created the waste

Waste created during foundation excavations

Description of the waste

Brown slightly clayey sandy gravel.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	GWPR5571 WS1@0.20		Non Hazardous		3
2	GWPR5571 Ws3@0.20m		Non Hazardous		6
3	GWPR5571 W4s@0.20m		Non Hazardous		7
4	GWPR5571 WS4@0.20m		Non Hazardous		10

Related documents

#	Name	Description
1	231006-62.hwol	ALS Hawarden .hwol file used to populate the Job

Report

Created by: Roger Foord

Created date: 19 Oct 2023 16:07 GMT

Classification of sample: GWPR5571 WS1@0.20

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
GWPR5571 WS1@0.20

Moisture content:
8.1%
(wet weight correction)

LoW Code:

Chapter:
17: Construction and Demolition Wastes (including excavated soil from contaminated sites)

Entry:
17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.35 mg/kg	1.32	8.918 mg/kg	0.000892 %	✓	
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.0555 mg/kg		0.051 mg/kg	0.0000051 %	✓	
6	benzene	601-020-00-8	200-753-7	71-43-2		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
7	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.071 mg/kg		0.0652 mg/kg	0.00000652 %	✓	
8	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.0926 mg/kg		0.0851 mg/kg	0.00000851 %	✓	
9	benzo[ghi]perylene		205-883-8	191-24-2		0.0498 mg/kg		0.0458 mg/kg	0.00000458 %	✓	
10	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.0347 mg/kg		0.0319 mg/kg	0.00000319 %	✓	
11	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<1 mg/kg	23.173	<23.173 mg/kg	<0.00232 %		<LOD
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.02 mg/kg	1.285	<0.0257 mg/kg	<0.000002 %		<LOD
13	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
14	chrysene	601-048-00-0	205-923-4	218-01-9		0.0634 mg/kg		0.0583 mg/kg	0.00000583 %	✓	
15	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		27.4 mg/kg	1.126	28.351 mg/kg	0.00284 %	✓	
16	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD