IB/24/LP3548

Adam Light
Sigma Homes Ltd
By Email Only

7 June 2024

Dear Adam

Our ref. ADC/24/LP3662/Addendum SI

Re: LP3662 – Addendum Site Investigation – Northern Area, Sumners Pond, Barns Green

1. Introduction

Leap Environmental, a trading name of RSK Environment Ltd (hereafter referred to as LEAP) has been appointed by Sigma homes Ltd to undertake an addendum site investigation and chemical testing of the soils encountered at their development site at Sumners Pond, Barns Green, West Sussex, RH13 0PR. The scope of the investigation encompasses the northern half of the site only which for the purposes of this report is referred to as "the site" going forward. The site location plan is presented as Drawing Ref. LP3662-LW-111_XX-D-G-11101-C01, **Appendix B**.

The works were undertaken in accordance with LEAP's proposal ADC/24/LPQ11482 dated 20/05/24 and the Service Constraints as set out in **Appendix A**.

1.1 Proposed Development

It is proposed to develop the site with 14 No. detached and semi-detached residential properties with private gardens and a single low rise apartment block along with associated infrastructure, garages and access roads. An area of public open space including a pond is proposed near the central southern boundary of the site. The proposed development layout has been provided by the client and is presented in Drawing Ref. LP3662-LW-116-XX-D-G-11601_C01 **Appendix B**.

1.2 Objective

We understand that the Environmental Protection Officer of Horsham District Council (HDC) required further site investigation to better characterise the made ground fraction encountered at the site. The made ground was considered by HDC to be the likely source of contamination in the northern part of the site.

The objectives of this report are to:

- Provide further information on the lateral and vertical extent of made ground in the northern part of the site; and to
- Assess the potential health and other environmental risks posed by the made ground to the proposed development and identified receptors.

1.3 Previous Investigations

The site has been the subject of previous investigations by LEAP and others. The reader is referred to these earlier reports which should be read in conjunction with this report:

- Phase I Desk Study, Site Reconnaissance & Phase II Site Investigation Report produced for Sigma Homes Ltd by LEAP. Ref LP3019. Issued 13 September 2022.
- Groundwater Monitoring Results Sumners Pond, Horsham produced for Sigma Homes Ltd by LEAP. Ref EL/23/LP3019/GW. Issued 8 June 2023.
- Archaeological Evaluation Report for Sumners Pond, Horsham produced for Sigma Homes by Archaeology South-East on behalf of RPS Group Report Ref. 2023127 dated June 2023.
- Phase III Investigation Report produced for Sigma Homes Ltd by LEAP Ref. LP3444 Issued 29 September 2023.
- Remediation Method Statement for Sigma Homes Ltd by LEAP Ref. LP3662/RMS Issued 7 May 2024.

1.4 Scope of Works

The scope of the investigation was agreed between LEAP and the Environmental Protection Officer at Horsham District Council via email dated the 17 of May 2024. The scope comprised:

- Excavation of 13 No. machine excavated trial pits to confirm the presence and depth of any made ground.
- Sampling of the made ground typically at 0.6m bgl and if present at depth at 1.0m and 1.5m.
- Chemical testing of the made ground and underlying natural soils for LEAP's standard suite of contaminants comprising heavy metals, speciated polycyclic aromatic hydrocarbons, TOC, pH and asbestos screening.

2 Environmental Setting

2.1 Site Description

The development site comprises an area of ~1.8Ha situated to the west of Chapel Road, Barns Green, the northern section of (the subject area of these works) covered an area of ~0.8Ha. At the time of LEAP's previous site investigations, the northern section of the site comprised a field, which was infrequently used as an overflow car park for an adjacent campsite. The western margin of the site comprised a farmers trackway comprising of compacted aggregated (crushed concrete and brick), and the southeastern corner was used for the storage of silage and farm machinery.

At the time of our current investigation the topsoil had been removed and excavation and installation of the strip foundations for the plots on the eastern most area of the site had begun. A layer of crushed concrete and brick had been placed along the eastern and northern edges of the site to provide an access route for the piling rig. The former trackway on the western site of the site had been partially removed but was still present in some areas.

A site plan showing the location of the former trackway and silage pit and access road is presented in Drawing Ref. LP3662-LW-112_XX-D-G-11201-C01.

2.2 Geology

The geology of the site has been ascertained by reference to the 1:50,000 British Geological Survey sheet 302 'Horsham', solid and drift edition, the BGS website (www.bgs.ac.uk). The site is mapped as being underlain by the Weald Clay Formation – Mudstone.

2.3 Weald Clay Formation

The Wealden Beds are Lower Cretaceous deposits. They comprise mostly shales and mudstones known as the Weald Clay with subordinate beds of siltstones, sandstones, shelly limestones and clay ironstones. When fresh, the beds are normally dark grey but weather to yellow and brown. Conspicuous bands of red clay also occur usually in close association with sandstone beds.

2.4 Hydrogeology

The site is underlain by the unproductive strata of the Weald Clay Formation. The site is not situated with a groundwater Source Protection Zone (SPZ)[1].

3 Summary of Previous Investigations

3.1 Phase I Desk Study and Phase II Investigation Report ref. LP3019 issued 13/09/22

The desk study identified a number of potential contaminant sources although these generally related to the southern area of the wider site (outside of the subject site). The potential onsite sources in the northern part of the site related to farming activities including pesticides and heavy metals from agricultural works or localised areas of petroleum hydrocarbons associated with potential agricultural vehicle fuel leaks.

The intrusive site investigation consisted of five machine excavated trial pits and a windowless sampler borehole. The investigation encountered topsoil over stiff to very stiff clays which transitioned to mudstone with depth. Made ground which was logged as reworked clay and silt with anthropogenic fragments was encountered in TP3 to 1.6m bgl. Made ground, logged as reworked silt was encountered in WS2 to a depth of 0.5m bgl. The made ground was considered to be related to construction of the road along the southern boundary of the site and the trackway present along the western boundary. No made ground was encountered within any of the other trial holes and no visual or olfactory evidence for hydrocarbon contamination was encountered.

Five soil samples were tested for LEAP's standard suite of contaminants, in addition a sample was also tested for the presence of pesticides. None of the samples tested recorded contaminant concentrations above the relevant generic assessment criteria values.

3.2 Phase III Investigation Report Ref. LP3444 Issued 29/09/23

The Phase III Investigation was undertaken for geotechnical purposes to aid foundation design. However, at the request of the client some additional soil samples were collected from a former silage stockpile area. The Investigation comprised a rotary borehole, four windowless sampler boreholes and three shallow hand

[1] DEFRA Magic Maps, Department of Environment, Food and Rural Affairs accessed 03/06/24.

dug pits. The investigation encountered ground conditions which were consistent with the previous investigation. Made ground was encountered in WS103 and WS104 to 1.0m bgl (WS104 was situated close to TP3 discussed above). The made ground was considered to be related to construction of the road along the southern site boundary.

Made ground was also encountered in the three hand pits in the former silage area with depths proven in two of the three locations to between 0.2 and 0.4m bgl. Made ground was encountered in WS102 to 0.7m bgl, however it was observed on site that the borehole was situated within one of the archaeologist trenches completed in June 2023 and as such the materials were considered to represent reworked natural soils backfilled within the trench on completion.

Chemical testing was undertaken on three samples, one each of the made ground from the three hand dug pits in the former silage area. Chemical testing indicated the presence of a fragment of chrysotile cement within the made ground in HP1 and slightly elevated PAH compounds in HP3.

3.3 Existing Conceptual Site Model

The proposed development will comprise a residential development including both private gardens and areas of public open space. As such all contaminant linkages (soil / dust ingestion, dermal contact, indoor / outdoor inhalation pathways) and ingestion of home grown produce will be active. Construction workers will also be exposed to any contaminants present within the soils albeit for short duration time periods.

The potential contaminant sources identified at this stage are as follows:

- Made ground present beneath the existing roadway / former car park area along the southern site boundary (metals, PAH compounds & Asbestos).
- Made ground beneath the trackway along the sites western margin.
- Made ground beneath the former silage storage area.

The risk of pesticides contamination highlighted within the preliminary CSM has been discounted based on the findings of the Phase II Investigation.

4 Fieldwork

LEAP attended site on the 21 of May 2024 to log and sample the trial pits excavated by the clients groundworks contractor Surrey Excavations. Prior to breaking ground each trial hole was cleared for below ground services by EMF detection Ltd and scanned using a Cable Avoidance Tool and Genny by LEAP. The position and elevation of each trial hole was recorded by GPS.

The trial pits were excavated using a 5-tonne tracked machine with a 300mm toothless bucket and excavations were continued until LEAP were satisfied that they extended to at least 500mm into natural soils.

The location of the trial pits completed as part of this investigation are presented in Drawing Ref. LP3662-LW-222_XX-D-G-22201-C01 while all investigation locations completed on site are presented in Drawing Ref. LP3662-LW-222_XX-D-G-22202-C01.

5 Ground Conditions Encountered

A total of 13 No. additional trial pits were excavated across the site. The following summary table outlines the ground conditions encountered during this addendum investigation only. For clarity the site has been divided into three broad areas based on the historical site use, and the ground conditions encountered, namely: **the main field area**; **the former access road, carpark and silage area;** and the **western trackway**. The areas are delineated in Drawing Ref. LP3662-LW-112-XX-D-G-11201-C01 **Appendix B**.

Table 1: Summary of soils encountered field area (TP302 TP303, TP304, TP312, and TP313).

Depth From (m)	Depth To (m)	Soil Type	Description
0.0	0.20 – 0.28	**TOPSOIL**	Brown silty clayey TOPSOIL with abundant rootlets (Encountered in TP302 & TP303 only).
0.0	0.35 / 0.50	**MADE GROUND**	MADE GROUND comprising of greyish brown mottled brick red sandy gravel. Gravel is brick, tile, concrete, blacktop, mortar and rare plastic and wood (Encountered in TP304, TP312 and TP313).
0.20 / 0.50	0.75* / 1.0*	**CLAY**	Stiff orangish brown mottled grey thinly laminated silty CLAY with occasional fine mudstone gravel.

*Full depth of excavation

The trial holes completed in the open field area of the site encountered either made ground or topsoil over natural Weald Clay deposits. The depth to the natural clay ranged from 0.2m to 0.5m bgl. However, the made ground was encountered only in TP304, TP312 and TP313. These areas had recently been capped with imported and compacted crushed aggregate to provide an access route / pile mat for a piling rig in the north of the site. The made ground encountered around TP312 and TP313 represents the recently placed imported materials rather than *insitu* made ground related to the site's historical use. TP304 was outside of the recently placed imported materials and represents historical made ground.

Apart from the recently placed pile mat the ground conditions are consistent with those previously encountered in this area of the site.

Table 2: Summary of soils encountered western trackway (TP301, TP309, TP310, TP311).

Depth From (m)	Depth To (m)	Soil Type	Description
0.0	0.30 / 0.45	**MADE GROUND**	MADE GROUND comprising black silty sandy gravel. Gravel is fine to coarse blacktop, fine to medium brick and concrete and occasional medium tile. (Not present in TP310).
0.30	0.70	**MADE GROUND**	MADE GROUND comprising greenish grey to grey brown silty clay with rare fine to medium brick (Encountered in TP309 only).

0.0 / 0.70	0.70* / 1.0*	**CLAY**	Stiff desiccated thinly laminated orange to orangish brown mottled grey slightly sandy silty CLAY with rare fine ironstone gravel.

*Full depth of excavation

The trial pits completed in the western trackway generally encountered a layer of mixed made ground of various brick, concrete and blacktop comprising the trackway surface over stiff desiccated natural clays. The made ground in TP309 was underlain by greenish grey to grey brown silty clay made ground with fragments of brick to 0.70 m. This was not present in any of the other trial holes completed in this area. The ground level was somewhat reduced in the area of TP310 and appeared to have been stripped as such made ground was absent in this location with natural clays exposed at surface.

Table 3: Summary of soils encountered road, carpark and silage area (TP305, TP306, TP307 and TP308).

Depth From (m)	Depth To (m)	Soil Type	Description
0.0	0.30	**HARDSTANDING**	Blacktop and Concrete hardstanding (Encountered in TP308 only).
0.0	0.65 / 0.90	**MADE GROUND**	MADE GROUND comprising orangish brown mottled grey and brick red silty clay with occasion fine to whole bricks and medium to coarse concrete and tile. Pockets of brown silty topsoil were noted in the made ground in TP307.
0.30 / 0.65	1.15 / 1.53	**MADE GROUND**	MADE GROUND comprising dark brown to greenish brown and grey gravelly silty clay. Gravel is fine to cobble sized brick and concrete with occasional metal and wood (Encountered in TP305 and TP308 only).
0.70 / 1.53	1.40* / 1.90*	**CLAY**	Stiff orangish brown mottled grey thinly laminated silty CLAY. Gravel of fine to coarse tabular siltstone and mudstone gravel was encountered in TP306 and TP308.

*Full depth of excavation

In accordance with our previous findings the ground conditions in the carpark / access road area of the site encountered deeper made ground when compared to elsewhere on site. Hardstanding comprising the former car park was present at surface in TP308 while made ground comprising orange brown and grey sandy gravelly clay was present at surface in the other three locations. This made ground was encountered in TP305, TP306 and TP307 extended to between 0.65m and 0.90m bgl and was underlain by natural soils except in TP305 where it was underlain by brown gravelly clay made ground with brick, concrete and wood fragments. Visually similar made ground was also encountered in TP308 underlying the hardstanding.

5.1 Groundwater

Two groundwater seepage were encountered during the works. These were encountered at 1.4m bgl in TP305 (at the base of reworked clay) and 1.3m bgl in TP306 (in natural soils). All other trial pits remained dry throughout excavation.

5.2 Visual or olfactory Evidence for Contamination

Discounting the presence of made ground which is discussed above limited visual or olfactory evidence for contamination was encountered during the works. Organic odours were noted in TP305 at 1.0 m bgl and TP308 at 0.6 m bgl, in both cases the soil samples recovered were screened with a Photoionization Detector (PID) with negligible VOC's detected (maximum concentration recorded 0.1ppm).

6 Revised Conceptual Site Model

Based on the ground conditions encountered during these works no significant revisions to the CSM are considered necessary at this stage other than the presence of recently placed crushed aggregate to form the piling mat along the eastern and northern areas of the site. However, we understand that the piling mat is a temporary feature, and it will be removed in its entirety following completion of the piling works.

6.1 Chemical Testing Results and Risk Assessment

The generic quantitative risk assessment (GQRA) for human health was conducted in line with the CLEA methodology by comparing the soil analytical results from the ground investigation with Generic Assessment Criteria (GAC). The GACs were selected using the rationale and assumptions provided in Appendix L. Sets of soil GACs are available for SOMs of 1%, 2.5% and 6%. Using the conversion of SOM = TOC x 1.72. The TOC concentrations within the samples ranged from 0.26% to 3.4% corresponding to a SOM range of 0.45% to 5.84%. For conservatism a SOM of 1% has been assumed.

6.1.1 Made ground

Soils samples were collected from the made ground and the underlying natural clays in each trial hole. From this phase of investigation 12 No. samples of the made ground and three samples of the natural clay were tested for LEAP's standard suite of contaminants as part of this investigation.

The results of the testing completed as part of this, and previous, investigations are included in **Appendix E** and are summarised in Table 4 and Table 5 below. None of the samples previously tested contained pesticides or PCB compounds above the laboratory limit of detection as such are not re-reported here.

Table 4: Summary of Soil Contamination Test Results Made Ground

Determinand	Number of samples	Number >LOD	Maximum Conc. (mg/kg unless otherwise stated)	Generic Assessment Criteria (mg/kg)	Number of Exceedances
METALS					
Arsenic	19	19	18.3	37	0

Determinand	Number of samples	Number >LOD	Maximum Conc. (mg/kg unless otherwise stated)	Generic Assessment Criteria (mg/kg)	Number of Exceedances
Cadmium	19	15	0.7	22	0
Chromium	19	19	46.8	910	0
Hexavalent Chromium	19	0	<1	21	0
Copper	19	19	72.7	2,400	0
Lead	19	19	334	200	1 (TP308 at 0.6m)
Mercury[1]	19	0	<0.5	40	0
Nickel	19	19	36.8	130	0
Selenium	19	0	<1.0	250	0
Zinc	19	19	321	3,700	0
ASBESTOS					
Asbestos	19	1	Chrysotile Cement Present	Presence	1 (HP1)
HYDROCARBONS					
Benzo(a)pyrene[2]	19	19	22.4	5.0	2 TP301 at 0.30m TP304 at 0.35m
Naphthalene	19	6	0.3	2.3	0
Total PAHs	19	17	279	n.v.	-

Notes to table

1. *Assessment criterion based on inorganic mercury*
2. *As a surrogate marker for genotoxic PAH*
3. *As a marker compound for threshold PAH*

n.v. – no appropriate value

In total 19 No. samples of the made ground in the northern area have been tested across the various phases of investigation. One sample taken from TP308 recorded an elevated lead concentration of 334mg/kg with respect to the assessment criteria of 200mg/kg. It is noted that this elevated lead was recorded within made ground where metal fragments were noted to be present. A made ground sample from TP308 at 1.0

m bgl reported lead at 104 mg/kg, below the assessment criteria. TP308 is located in an area of proposed public open space, lead at 334 mg/kg would not exceed the generic assessment criterion of 630 mg/kg for lead in a public open space area close to residential properties.

Two samples of the made ground from TP301 at 0.30 m and TP304 at 0.35 m encountered elevated concentrations of PAH compound benzo(a)pyrene (BaP). In both cases these elevated concentrations were recorded within made ground, which was noted to contain fragments of blacktop (asphalt) which is considered to be the likely source of the elevated PAHs encountered.

One fragment of chrysotile asbestos cement was encountered and sampled within the made ground in HP1. The exact depth of the fragment cannot be defined as it was collected from the arisings from the excavation. No ACM or free fibres were encountered within any of the soil samples tested.

None of the other made ground samples tested recorded potential contaminants of concern at concentrations above the generic assessment criteria for a residential development with home grown produce. The results are considered to be in broad accordance with LEAP 's previous findings that localised contamination is present within the made ground soils.

6.1.2 Natural Soils

A total of seven natural soil samples have been tested for Leaps standard suite of contaminants in the north of the site. They comprised four topsoil and three subsoil samples. The results are included in **Appendix E** and are summarised below.

Table 5: Summary of Soil Contamination Test Results Natural soils (Topsoil and natural Weald Clay)

Determinand	Number of samples	Number >LOD	Maximum Conc. (mg/kg unless otherwise stated)	Generic Assessment Criteria (mg/kg)	Number of Exceedances
METALS					
Arsenic	7	7	26.5	37	0
Cadmium	7	1	0.4	22	0
Chromium	7	7	43.5	910	0
Hexavalent Chromium	7	0	<0.8	21	0
Copper	7	7	39.5	2,400	0
Lead	7	7	89.9	200	0
Mercury[1]	7	0	<0.5	40	0
Nickel	7	7	22.4	130	0
Selenium	7	0	<1.0	250	0

Determinand	Number of samples	Number >LOD	Maximum Conc. (mg/kg unless otherwise stated)	Generic Assessment Criteria (mg/kg)	Number of Exceedances
Zinc	7	7	196	3,700	0
ASBESTOS					
Asbestos	7	0	NAD	Presence	0
HYDROCARBONS					
Benzo(a)pyrene[2]	7	2	0.7	5.0	0
Naphthalene	7	2	<0.1	5.6	0
Total PAHs	7	4	9.4	n.v.	-

Notes to table

1. *Assessment criterion based on inorganic mercury*
2. *As a surrogate marker for genotoxic PAH*
3. *As a marker compound for threshold PAH*

n.v. – no appropriate value

None of the natural soils samples tested recorded potential contaminants of concern at concentrations above the generic assessment criteria for a residential development with home grown produce. The results are in accordance with Leaps previous findings indicating that the natural soils on site are not impacted with contaminants considered to pose a risk to human health.

7 Conclusions

The additional site investigation broadly confirmed that made ground was present where it was anticipated i.e. in the former trackway along the western boundary; in the former access road / car park area in the southern boundary; and in the former silage area. The boundaries of proven made ground extended slightly beyond where the mapped extent of these features were anticipated.

Additional areas of made ground were located in the east of the site (TP304) and in the north of the site around TP312/TP313. In the north and east of the site it is understood that imported recycled aggregate had been placed to form a temporary track and pile mat area. We understand that the pile mat in the north of the site is a temporary feature which is to be entirely removed following completion of the piling works. TP304 was located immediately to the west of the temporary track. The source of the made ground around TP304 may have been due to vehicle movements causing anthropogenic materials to be embedded into the natural soils.

Depth of made ground in the trackway in the west of the site is between 0.36 m to 1.00 m in depth; made ground thicknesses in the former access road / car park area varied between 0.40 m to 1.15 m. The deepest made ground was encountered in the former silage area, which was proven to be between 0.20 m to 1.53

m thick. Where placed imported aggregate had been laid it was shallow and between 0.35 m to 0.40 m deep. Around TP304 made ground was reported as 0.50 m thick. The proposed land use at TP304

Localised elevated concentrations of PAH compounds and lead when compared to a residential with homegrown produce GAC were encountered within the shallow made ground and one fragment of asbestos containing cement was encountered within the made ground. It is noted that where the lead exceedance of GAC was noted the sample was taken from an area of proposed public open space and the result would not be above a GAC for POS_{resi}.

Selected samples of the topsoil and Weald Clay formation were found not to be contaminated with common contaminants of concern.

Based on the findings of this additional investigation, in combination with our previous findings, it is considered that the recommendations of the existing RMS Ref. LP3662/RMS are sufficient to mitigate the risks associated with shallow made ground with regard to future residential in the northern half of the development site i.e. where historical made ground is present it should be removed to natural soils or to at least 0.60 m below ground level in private residential areas and to 0.45 m in soft landscaped areas. We note localised deepening to 0.90 m may be required where new trees are proposed, although the made ground soils tested below 0.60 m do not indicate a significant contaminated land risk.

Please do not hesitate to contact the undersigned if you require any further information.

Yours faithfully,

Authored by:	Approved by:	QA/QC Check
		
Adam Carr BSc MSc FGS Senior Engineering Geologist	Martin Weil BSc MA CSci CWEM CEnv Principal Consultant	Gemma Laz Administrator
03/06/24	05/06/24	07/06/24

ENCLOSED

Appendix A – Limitations

Appendix B – Figures

Appendix C – Site Photos

Appendix D – Trial Pit Logs

Appendix E – Chemical Laboratory Certificates and Screen Table.

APPENDIX A – Limitations

Limitations

1. Service Constraints for all Reports

1.1. This Report (the "Report") and any study, inspection, investigation, sampling, testing and or interpretation carried out in connection with the Report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) trading as Carbon Zero Consulting, Leap Environmental or RSK Geosciences, for the Client named in the first paragraph of the Report (the "Client") in accordance with the terms of an RSK Fee Proposal including RSK Environment Standard Terms and Conditions (the "Appointment") between RSK and the Client, unless otherwise stated in the first paragraph of the Report. The Services were performed by RSK with the reasonable skill and care ordinarily exercised by a geo-environmental consultant at the time the Services were performed. Nothing in this Report shall be construed as imposing any fitness for purpose obligation. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the Client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the Client.

1.2 Other than that, expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services. RSK shall not be liable in respect of any action or proceedings arising out of or in connection with this Report whether in contract, in tort, for breach of statutory duty or otherwise after the expiry of six (6) years from either (i) the date of the Report or (ii) such earlier date as prescribed by law, unless varied in the terms of the Appointment.

1.3 Unless otherwise agreed in writing, the Services were performed by RSK exclusively for the purposes of the Client. RSK is not aware of any interest of or reliance by any party other than the Client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent, or condone any party, other than the Client relying upon the Services. Should this Report or any part of this Report, or details of the Services or any part of the Services, be made known to any such party, and such party relies thereon, that party does so wholly at its own and sole risk, and RSK disclaims any liability to such parties. Any such party would be well advised to seek independent advice from a competent geo-environmental consultant and/or lawyer.

1.4 The Client shall not, without the prior written consent of RSK, assign, transfer, charge, mortgage, subcontract, or deal in any other manner with all or any of the benefits provided in this Report. Unless specified in the Appointment, RSK shall not be obliged to assign the benefit of the Report whether by collateral warranty, third party rights pursuant to the Contracts (Rights of Third Parties) Act 1999, letter of reliance or otherwise. If RSK agrees to any assignment of the benefit of this Report, in whatever form, benefits to third parties through collateral warranties, third party rights or letters of reliance shall not be provided unless a fee for each right, warranty or letter is agreed. The form of wording used in the warranty or letter shall be provided by RSK for agreement by the Client. Any reasonable changes to the form of wording will be implemented by mutual agreement, however the terms in the warranty or letter cannot offer the third party any greater benefit than the Appointment offered to the Client.

1.5 It is the understanding of RSK that this Report is to be used for the purpose described in the introduction to the Report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the Report is used, or the proposed use of the site change, this Report

may no longer be valid and any further use of or reliance upon the Report in those circumstances by the Client without the review and advice of RSK shall be at the Client's sole and own risk. RSK shall not be liable for any use of this Report for any purpose other than that for which it was provided.

1.6 The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the Report inaccurate or unreliable. The information and conclusions contained in this Report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the Report in the future shall be at the Client's own and sole risk.

1.7 The observations and conclusions described in this Report are based solely upon the Services which were provided pursuant to the agreement between the Client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out, or required by the Appointment between the Client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this Report, RSK did not seek to evaluate the presence on or off site of asbestos, invasive plants, electromagnetic fields, lead paint, heavy metals, radon gas, fuel storage, persistent bio-accumulative or toxic chemicals (including PFAS and related compounds) or other radioactive or hazardous materials, unless specifically identified in the Services.

1.8 The Services are based upon RSK's observations of existing physical conditions at the Site gained from a visual inspection of the site together with RSK's interpretation of desk based publicly available information, including documentation, obtained from third parties and from the Client on the history and usage of the site, unless specifically identified in the Services and the limitations below:

a. The Services were based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely.

b. The Services were limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the visual inspection.

c. The Services did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the Client or third parties, including laboratories and information services, during the performance of the Services.

d. The Client has identified in writing to RSK, the information, reports, findings, surveys and preliminary works RSK may not rely upon when providing the Services.

RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK, and including the doing of any independent investigation of the information provided to RSK, save as otherwise provided in the terms of the Appointment between the Client and RSK.

1.9 Any site drawing(s) provided in this Report is (are) not meant to be an accurate base plan for scale measurement but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (intrusive and sample locations etc) annotated on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for accurate setting out and should be considered indicative only.

1.10 Should RSK be requested to review the Report after the date of issue of this Report, RSK shall be entitled to additional payment at the existing rates, or such other terms as agreed between RSK and the Client.

2. Service Constraints where the Report provides an intrusive assessment of ground conditions:

2.1 The intrusive environmental ground investigation aspects of the Services are a limited sampling of soil from the site, at pre-determined locations based on the known historic / operational configuration of the site. The conclusions given in this Report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the properties of the materials adjacent and local conditions, together with the position of any current structures and underground utilities and facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters (as stipulated in the scope agreed between the Client and RSK, based on an understanding of the available operational and historical information) and it should not be inferred that other chemical species (not tested) are not present.

2.2 The comments given in this Report and the opinions expressed are based on the ground conditions encountered during the site work and on the results of tests made in the field and in the laboratory. The extent of the exploratory holes, laboratory testing and monitoring undertaken may have been restricted due to a number of factors including accessibility, the presence of buried or overhead services, current development, site usage, timescales or the Client's specification. The exploratory holes only assess a small proportion of the site area with respect to the site as a whole, and as such may only provide an indicative assessment of ground conditions on site. There may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account. In particular, it should be noted that there may be areas of made ground not detected due to the limited nature of the investigation or the thickness and quality of made ground across the site may be variable. In addition, groundwater levels and ground gas concentrations and flows, may vary from those reported due to seasonal, or other, effects and the limitations stated in the data should be recognised. The presence of hotspots of undisclosed contamination or exceptional and unforeseen ground conditions cannot be discounted.

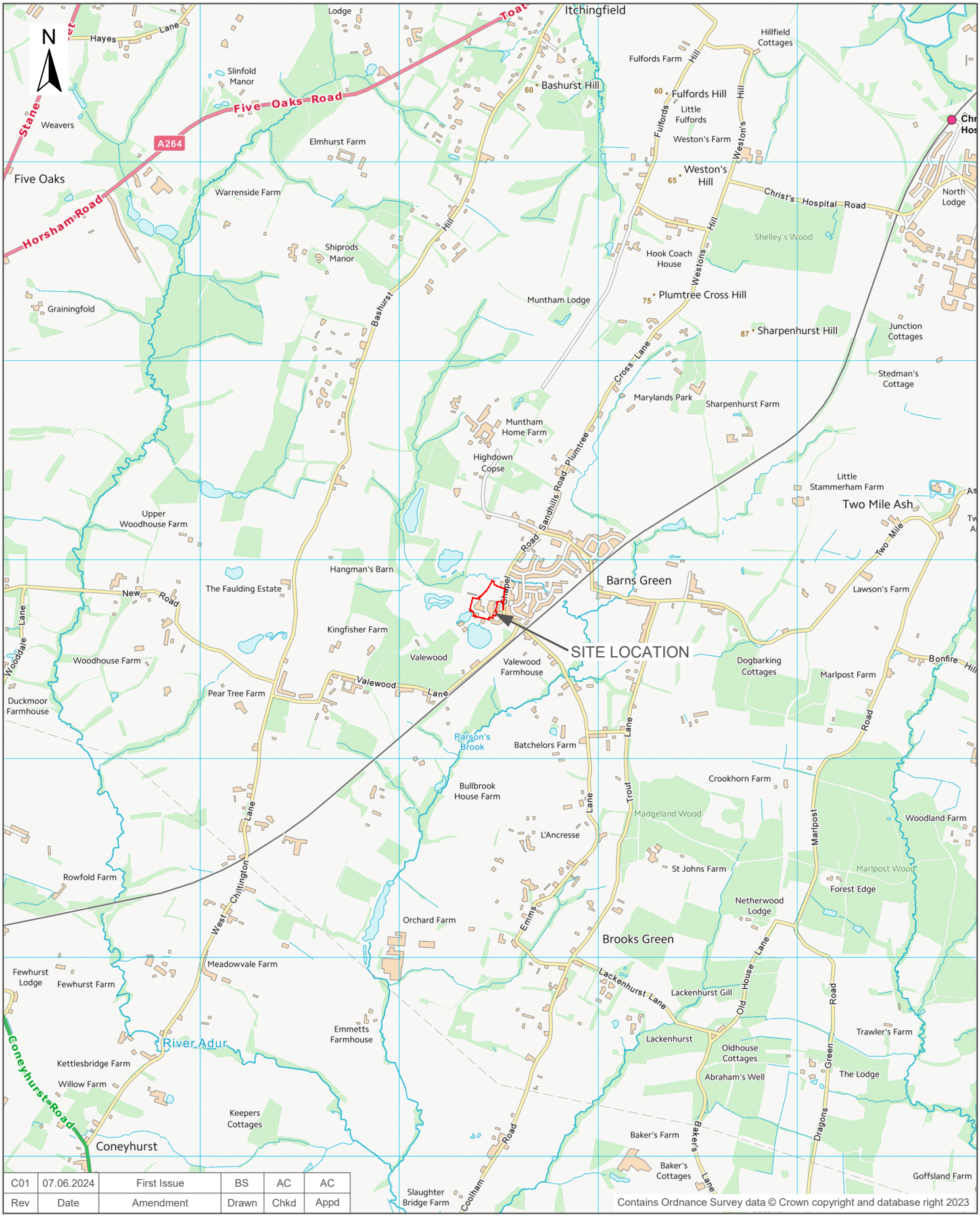
2.3 Where the Services include Investigation of an exploratory nature or relating to physical ground works, any costings and prices provided in the Report are estimated and provided for guidance purposes only. The actual cost and time quantities shall be remeasured and shall be dependent upon the ground or other conditions, constraints present, and number and depth of the investigation locations, which shall influence the number of samples and tests required, and the quantities of soil being classified.

2.4 Asbestos is often observed to be present in soils in discrete areas. Whilst asbestos-containing materials may have been locally encountered during the fieldworks or supporting laboratory analysis, the history of brownfield and demolition sites indicates that asbestos fibres may be present more widely in soils and aggregates, which could be encountered during more extensive ground works. However, this Report does not constitute an asbestos survey. On this basis, the presence of asbestos on site cannot be discounted and a full asbestos survey should be undertaken.

2.5 Unless stated otherwise, only preliminary geotechnical recommendations are presented in this Report and these should be verified in a Geotechnical Design Report, once proposed construction and structural design proposals are confirmed. Eurocode 7 gives guidance on the type of sampling, sample quality, number and spacing of intrusive investigations, and number of laboratory tests required. It is intended that the Geotechnical Information section of this Report will fulfil the general requirements of the Ground Investigation Report as set

out in section 6 of Eurocode7, although this is subject to the restrictions imposed on the investigation, as listed above. For geotechnical design, Eurocode 7 requires the Geotechnical Design Report to address both the geotechnical and structural aspects of the geotechnical design for both the limit and serviceability states. The Geotechnical Appraisal section of this Report will not meet the requirements of a Geotechnical Design Report (GDR) and should therefore be used for preliminary guidance only.

APPENDIX B – Figures and Drawings



Rev	Date	Amendment	Drawn	Chkd	Appd
C01	07.06.2024	First Issue	BS	AC	AC

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leap environmental
an RSK company
Premier House, 46 Victoria Rd,
Burgess Hill, RH15 9LR

Client: Sigma Homes Ltd

Project Name: Sumners Pond

Description: Site Location Plan

Dimension	Size	Scale	Geolocation	Project ID	Drawing no.	Rev	File name
m	A4	1:25,000	512460,126770	LP3651	11101	C01	LP3662-LW-111-XX-D-G-11101-C01

DO NOT SCALE FROM THIS DRAWING

N

Little Slaughterford

Farm Cl

Chapel Road

The Old Farm House

Sumners Cottage

Slaughterford Bungalow

Farm Pond

Recession

Central Green

Pond

Turning Area

Large Vehicle Turning Head

CONVERTED COTTAGE

New fence south of concrete bridge

Red-line taken to post and wire fence

1.1m high post & rail fence to rear garden with increased buffer tree & hedgerow planting

1.1m high post & rail fence to rear gardens to protect & position the existing hedgerow outside of private domain

Bird nesting boxes to be installed on the retained mature trees within the site

Existing hedgerow to be retained and protected

Northern boundary shown on approx. hedge root line

Existing small tree removed

Existing drainage ditch to be retained and protected

Gas Utility to be diverted

Red-line taken to approx. centre line of hedge

Existing access to caravan pitches retained

Overhead cables to be retained with minimum 5m easement

Public Right of Way to be routed along 2.2m wide footpath

Tree to be removed

Part of existing hedge to be removed to allow for the proposed site access

Proposed conversion and alterations to the existing cottage to introduce additional parking spaces & soft landscaping

3m wide pedestrian and cycle path

Existing wooden bridge

3 minimum good quality bat boxes to be secured to the retained mature trees within and adjacent to the site.

Existing access to holiday villas retained

Oak tree retained

Existing access to holiday villas retained

11 Car Parking Spaces

7 Car Parking Spaces

7 Car Parking Spaces

3 Car Parking Spaces

3 Car Parking Spaces

24 Car Parking Spaces

4 Car Parking Spaces

8 Car Parking Spaces

8 Car Parking Spaces

8 Car Parking Spaces

3 Car Parking Spaces

01 48H

02 48H

03 48H

04 48H

05 38H

06 38H

07 48H

08 48H

09 38H

10 38H

11 48H

12 48H

13 28H

14 28H

15-20

21-22 2 x 1BF

23 38H

24 38H

25 38H

26 38H

27 38H

28 38H

29 38H

30 38H

31 38H

32 48H

C1

C2

C3

C4

C5

C6

S1

S2

S3

S4

S5

S6

4100

4800

7000

8300

7500

6000

5000

7700

20000

2122

LEGEND

Site boundary

Notes:

Base plan provided by Client
Drawing Ref: ECE Architecture- 6991-001-N

Rev	Date	Amendment	Drawn	Chkd	Appd
C01	07.06.2024	First Issue	BS	AC	AC

leap environmental an RSK company

Premier House, 46 Victoria Rd,
Burgess Hill, RH15 9LR

Client
Sigma Homes Ltd

Project Name
Sumners Pond

Description
Proposed Development Plan

Project ID	Drawing no.	Revision
LP3661	11601	C01

File name
LP3662-LW-116-XX-D-G-11601-C01

Dimensions	Scale	Size
m	1:1000	A3

0 10 20 30 40 50m

DO NOT SCALE FROM THIS DRAWING

N

New fence south of concrete bridge

Red-line taken to post and wire fence

1.1m high post & rail fence to rear garden with increased buffer tree & hedgerow planting

Bird nesting boxes to be installed on the retained mature trees within the site

1.1m high post & rail fence to rear gardens to protect & postion the existing hedgerow outside of private domain

Little Slaughterford

Existing hedgerow to be retained and protected

Northern boundary shown on approx. hedge root line

Existing hedgerow to be retained and protected

Existing small tree removed

Existing drainage ditch to be retained and protected

Gas Utility to be diverted

Red-line taken to approx. centre line of hedge

Existing access to caravan pitches retained

Overhead cables to be retained with minimum 5m easement

Public Right of Way to be routed along 2.2m wide footpath

Central Green

Pond

Tree to be removed

11 Car Parking Spaces

7 Car Parking Spaces

7 Car Parking Spaces

The Old Farm House

Chapel Road

LEGEND

- Site boundary
- Pile Mat - Crushed Concrete
- Trackway
- Access Rd-Parking
- Former silage storage area

Notes:

Base plan provided by Client
Drawing Ref: ECE Architecture- 6991-001-N

Rev	Date	Amendment	Drawn	Chkd	Appd
C01	07.06.2024	First Issue	BS	AC	AC

leap environmental an RSK company
Premier House, 46 Victoria Rd,
Burgess Hill, RH15 9LR

Client
Sigma Homes Ltd

Project Name
Sumners Pond

Description
Site Zonation Plan

Project ID	Drawing no.	Revision
LP3661	11201	C01

File name
LP3662-LW-112-XX-D-G-11201-C01

Dimensions	Scale	Size
m	1:500	A3

0 5 10 15 20 25m

DO NOT SCALE FROM THIS DRAWING

N

New fence south of concrete bridge

Red-line taken to post and wire fence

1.1m high post & rail fence to rear garden with increased buffer tree & hedgerow planting

Bird nesting boxes to be installed on the retained mature trees within the site

Existing hedgerow to be retained and protected

1.1m high post & rail fence to rear gardens to protect & postion the existing hedgerow outside of private domain

Northern boundary shown on approx. hedge root line

Existing hedgerow to be retained and protected

Existing small tree removed

Existing drainage ditch to be retained and protected

Gas Utility to be diverted

Red-line taken to approx. centre line of hedge

Existing access to caravan pitches retained

Overhead cables to be retained with minimum 5m easement

Public Right of Way to be routed along 2.2m wide footpath

Tree to be removed

Central Green

Pond

Little Slaughterford

The Old Farm House

Chapel Road

TP301
TP302
TP303
TP304
TP305
TP306
TP307
TP308
TP309
TP310
TP311
TP312
TP313

10 3BH
09 4BH
08 3BH
12 4BH
13 2BH
14 2BH
07 4BH
06 3BH
05 3BH
03 4BH
01 4BH
15-20
21-22 2 x 1BF
23 3BH
24 3BH
25 3BH
26 3BH
27 3BH
28 3BH
29 3BH
30 3BH
31 3BH
32 4BH

11 Car Parking Spaces
7 Car Parking Spaces
7 Car Parking Spaces
Car Barn

21122
4100
4800
6000
7500

LEGEND

- Site boundary
- Trial pit location
- Pile Mat - Crushed Concrete
- Trackway
- Access Rd-Parking
- Former silage storage area

Notes:

Base plan provided by Client
Drawing Ref: ECE Architecture- 6991-001-N

Rev	Date	Amendment	Drawn	Chkd	Appd
C01	07.06.2024	First Issue	BS	AC	AC

leap environmental an RSK company
Premier House, 46 Victoria Rd, Burgess Hill, RH15 9LR

Client: Sigma Homes Ltd

Project Name: Sumners Pond

Description: Additional SI Locations Plan - TPs

Project ID	Drawing no.	Revision
LP3661	22201	C01

File name: LP3662-LW-222-XX-D-G-22201-C01

Dimensions	Scale	Size
m	1:500	A3

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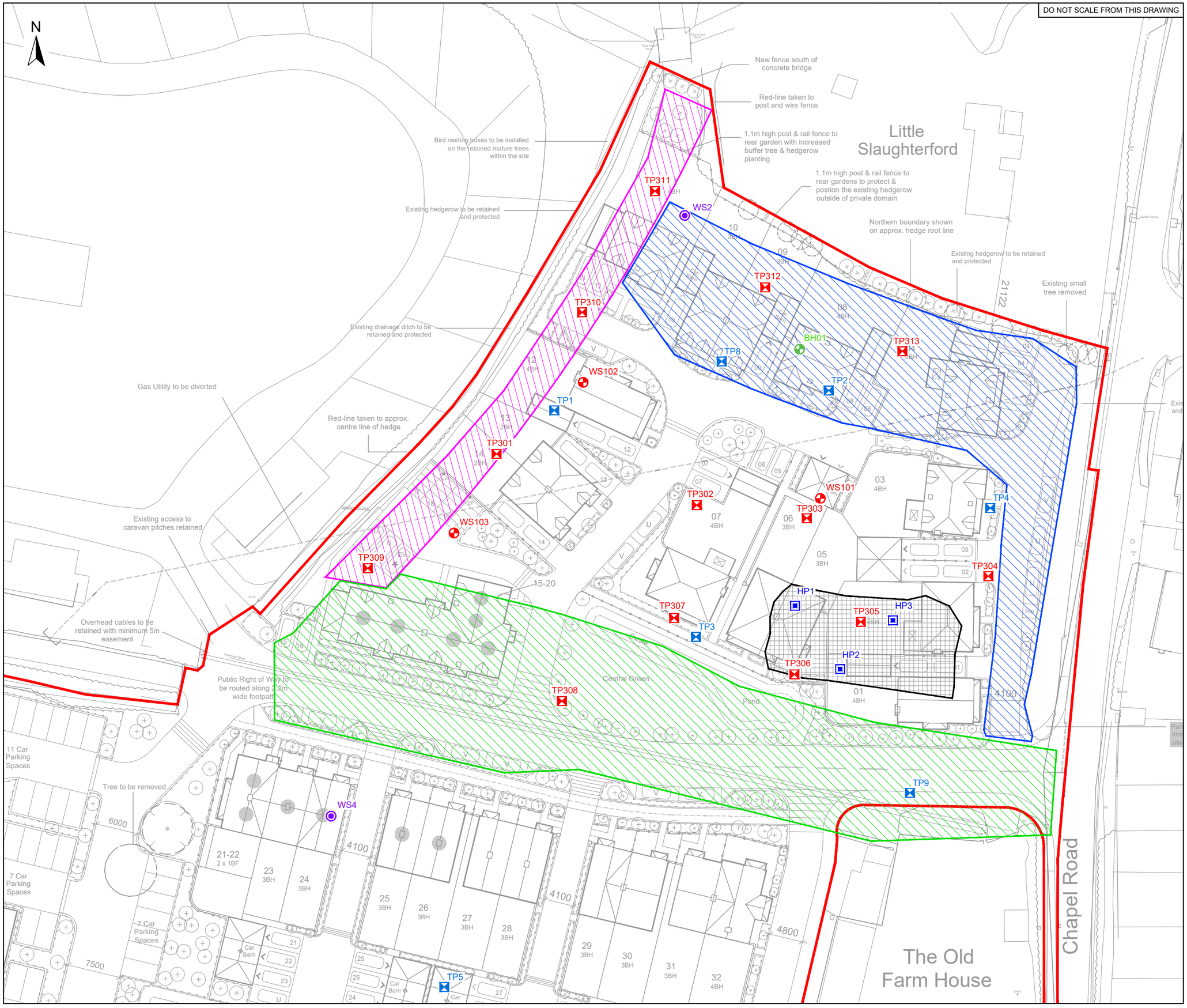

LEGEND

- Site boundary
- Trial pit location
- LP3019 Trial Pits
- LP3019 Windowless
- LP3444 Rotary Borehole
- LP3444 Windowless boreholes
- LP3444 Hand Pits
- Pile Mat - Crushed Concrete
- Trackway
- Access Rd-Parking
- Former silage storage area

Notes:

Base plan provided by Client
Drawing Ref: ECE Architecture- 6991-001-N

Rev	Date	Amendment	Drawn	Chkd	Appd
C01	07.06.2024	First Issue	BS	AC	AC

leap environmental an RSK company

Premier House, 46 Victoria Rd, Burgess Hill, RH15 9LR

Client: Sigma Homes Ltd

Project Name: Sumners Pond

Description: Additional SI Locations Plan - All

Project ID	Drawing no.	Revision
LP3661	22202	C01

File name: LP3662-LW-222-XX-D-G-22202-C01

Dimensions	Scale	Size
m	1:500	A3

0 5 10 15 20 25m

APPENDIX C – Photographic Record



Plate 1 – Trial pit 301



Plate 2 – Trial pit 302



Plate 3 – Trial pit 302



Plate 4 – Trial pit 303



Plate 5 – Trial pit 303



Plate 6 – Trial pit 304



Plate 7 – Trial pit 304



Plate 8 – Trial pit 305



Plate 9 – Trial 305



Plate 10 – Trial pit 308



Plate 11 – Trial pit 308



Plate 12 – Trial pit 309



Plate 13 – Trial pit 309



Plate 14 - Trial pit 310



Plate 15 – Trial pit 310



Plate 16 – trial pit 311



Plate 17 – Trial pit 311



Plate 18 – Trial pit 312



Plate 19 – Trial pit 312



Plate 20 – Trial pit 313



Plate 21 – Trial pit 313

APPENDIX D – Trial Pit Logs

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP301
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512440 - 126843 Level: 34.24
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 1.00	Date 21/05/2024
Client:	Sigma Homes Ltd		Scale 1:25 Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.30	ES		0.45	33.79		MADE GROUND comprising brown to black silty, sandy GRAVEL. Gravel is fine to medium brick and concrete with occasional medium tile and fine to coarse blacktop.
	0.70	ES		1.00	33.24		Stiff desiccated orange to orangish brown slightly sandy, silty CLAY, with rare fine ironstone gravel. End of pit at 1.00 m

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP302
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512468 - 126836 Level: 34.24
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 0.75	Date 21/05/2024
Client:	Sigma Homes Ltd		Scale 1:25 Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.28	33.96		Grass and bare earth over brown silty, clayey TOPSOIL with abundant rootlets.
	0.65	ES		0.75	33.49		Stiff orange mottled grey slightly silty CLAY with rare fine mudstone gravel. End of pit at 0.75 m

1
2
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4
5

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
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Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP303
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512484 - 126834 Level: 34.09
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 0.85	Date 21/05/2024
Client:	Sigma Homes Ltd		Scale 1:25 Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20	33.89		Brown silty, clayey, slightly reworked TOPSOIL with rare fine brick and crystalline rock.
	0.60	ES					Stiff orangish brown mottled grey slightly gravelly, silty CLAY. Gravel is fine to medium mudstone and ironstone.
							Becoming more gravelly below 0.70m.
				0.85	33.24		End of pit at 0.85 m

1
2
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Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP304
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512511 - 126825 Level: 34.30
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 1.00	Date 21/05/2024 Scale 1:25
Client:	Sigma Homes Ltd		Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.35	ES		0.50	33.80		MADE GROUND comprising greyish brown mottled brick red sandy GRAVEL. Gravel is brick, tile, concrete, blacktop and rare plastic.
	0.95	ES		1.00	33.30		Stiff orangish brown mottled grey thinly laminated silty CLAY. End of pit at 1.00 m

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
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Tel: 01306 646510
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Trial Pit Log

Trialpit No
TP305
Sheet 1 of 1

Project Name: Sumners Pond	Project No. LP3662	Co-ords: 512492 - 126819 Level: 34.91	Date 21/05/2024
Location: Chapel Rd, Barns Green, Horsham		Dimensions (m): Depth 1.90	Scale 1:25
Client: Sigma Homes Ltd			Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
							MADE GROUND comprising orangish brown and grey mottled brick red slightly sandy, gravelly CLAY. Gravel is medium to whole brick, medium to coarse concrete and occasional tile.
	0.60	ES		0.65	34.26		
							Dark brown MADE GROUND comprising slightly gravelly to gravelly, silty CLAY with abundant rootlets and organic odour. Gravel is fine to cobbled brick and concrete with occasional fine to medium wood.
	1.00	ES					*VOC PPM value on 1.00m sample - p=0.1, s=0.0.*
▼				1.30	33.60		Reworked brown, orangish brown, grey and dark grey gravelly CLAY. Gravel is fine ironstone and occasional fine brick.
	1.50	ES		1.53	33.38		*Groundwater seepage at 1.40m.*
							Stiff orangish brown mottled grey laminated silty CLAY.
	1.90	ES		1.90	33.01		End of pit at 1.90 m

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry during excavation, with groundwater seepage encountered at 1.40m. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP306
Sheet 1 of 1

Project Name: Sumners Pond	Project No. LP3662	Co-ords: 512483 - 126811 Level: 34.81	Date 21/05/2024
Location: Chapel Rd, Barns Green, Horsham		Dimensions (m): Depth 1.45	Scale 1:25
Client: Sigma Homes Ltd			Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.60	ES		0.70	34.11		MADE GROUND comprising orange, brown, grey and dark grey mottled brick red gravelly, CLAY. Gravel is brick, concrete and occasional tile.
▼	1.10	ES		1.43	33.38		Stiff orange, brown, grey and ironstained dark brown slightly gravelly to gravelly silty CLAY. Gravel is fine to coarse angular to tabular siltstone and mudstone. *Slight water seepage at 1.30m.* End of pit at 1.45 m

1
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4
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Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry during excavation, with slight groundwater seepage encountered at 1.30m. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP307
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512465 - 126820 Level: 35.11
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 1.40	Date 21/05/2024 Scale 1:25
Client:	Sigma Homes Ltd		Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.70	ES		0.90	34.21		MADE GROUND comprising orangish brown mottled grey silty CLAY with occasional fine to medium brick gravel, with pockets of brown silty, clayey topsoil with rootlets.
	1.20	ES		1.40	33.71		Stiff orange mottled grey ironstained dark brownish black silty CLAY with occasional fine to medium ironstone gravel. End of pit at 1.40 m

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP308
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512449 - 126808 Level: 35.32
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 1.50	Date 21/05/2024 Scale 1:25
Client:	Sigma Homes Ltd		Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.30	35.02		Hardstanding mixture of blacktop and concrete.
	0.60	ES					MADE GROUND comprising greenish brown to grey gravelly, silty CLAY. Gravel is brick, concrete, metal and wood. *Dark brownish black in places.*
	1.00	ES					
				1.15	34.17		Stiff brown to orangish brown and grey silty, becoming slightly gravelly, CLAY. Gravel is very weak fine to medium tabular mudstone.
	1.50	ES		1.50	33.82		End of pit at 1.50 m

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP309
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512422 - 126827 Level: 34.65
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 1.10	Date 21/05/2024
Client:	Sigma Homes Ltd		Scale 1:25 Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.20	ES		0.30	34.35		MADE GROUND comprising dark brown sandy GRAVEL. Gravel is blacktop, brick, mortar and concrete and breeze block.
	0.60	ES		0.70	33.95		MADE GROUND comprising greenish grey to greyish brown silty CLAY, with rare fine to medium brick.
	1.00	ES		1.10	33.55		Stiff to very stiff orangish brown and grey thinly laminated CLAY.
							End of pit at 1.10 m

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP310
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512452 - 126863 Level: 33.61
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 0.70	Date 21/05/2024 Scale 1:25
Client:	Sigma Homes Ltd		Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.60	ES		0.70	32.91		Bare earth with occasional brick tracked in over stiff to very stiff thinly laminated light orangish brown mottled grey slightly silty to silty CLAY. End of pit at 0.70 m

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP311
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: 512463 - 126881 Level: 33.45
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 0.80	Date 21/05/2024 Scale 1:25
Client:	Sigma Homes Ltd		Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.25	ES		0.36	33.09		Blacktop over MADE GROUND comprising mottled off whitish grey and brown occasionally brick red slightly sandy, silty GRAVEL. Gravel is fine to coarse chalk and occasional fine to medium blacktop and medium to cobbled fragments of concrete and paving slab.
	0.60	ES		0.70	32.75		Stiff to very stiff brown thinly laminated slightly desiccated, silty CLAY.
				0.80	32.65		Extremely to very weak orangish brown IRONSTONE recovered as clayey gravel.
							End of pit at 0.80 m

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Trial Pit Log

Trialpit No
TP312
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: - Level:	Date 21/05/2024
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 0.95		Scale 1:25
Client:	Sigma Homes Ltd			Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.40			MADE GROUND comprising brown mottled brick red sandy GRAVEL. Gravel is medium to cobbled brick, medium to coarse tile, concrete and mortar with occasional wood.
	0.70	ES		0.95			Stiff orange to dark orangish brown mottled grey silty CLAY with occasional fine mudstone gravel.
							End of pit at 0.95 m

1
2
3
4
5

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

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Trial Pit Log

Trialpit No
TP313
Sheet 1 of 1

Project Name:	Sumners Pond	Project No. LP3662	Co-ords: - Level:	Date 21/05/2024
Location:	Chapel Rd, Barns Green, Horsham	Dimensions (m): Depth 0.85		Scale 1:25
Client:	Sigma Homes Ltd			Logged ADC

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
							MADE GROUND comprising sandy Gravel. Gravel is brick, flint, concrete, mortar and occasional wood and plastic.
				0.35			Stiff orangish brown thinly laminated silty CLAY.
	0.60	ES					
				0.85			End of pit at 0.85 m

1
2
3
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5

Remarks: Location was set out and cleared by Sigma Home. LEAP engineer cleared the location prior to excavation with a CAT/genny. Trial pit remained dry and stable during excavation. Trial pit reinstated with arisings in reverse order upon completion.

Stability: Stable

AGS

APPENDIX E – Chemical Laboratory Certificates

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

cs@elab-uk.co.uk
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UKAS TESTING 2683

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Certificate of Analysis

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	24-53971
Issue:	1
Date of Issue:	31/05/2024
Contact:	Adam Carr
Customer Details:	RSK Environment Book House Glebelands Centre Dorking SurrevRH4 3HW
Quotation No:	Q24-04573
Order No:	P02149564
Customer Reference:	LP3662
Date Received:	23/05/2024
Date Approved:	31/05/2024
Details:	Sumners Pond
Approved by:	

Ben Rees, Customer Services Assistant

Sample Summary

Report No.: 24-53971, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
362157	TP301 0.30	21/05/2024	23/05/2024	Sandy loam	
362158	TP302 0.65	21/05/2024	23/05/2024	Silty clayey loam	
362159	TP304 0.35	21/05/2024	23/05/2024	Sandy loam	
362160	TP305 0.60	21/05/2024	23/05/2024	Silty clayey loam	
362161	TP305 1.00	21/05/2024	23/05/2024	Silty clayey loam	
362162	TP305 1.50	21/05/2024	23/05/2024	Silty clayey loam	
362163	TP305 1.90	21/05/2024	23/05/2024	Silty clayey loam	
362164	TP306 0.60	21/05/2024	23/05/2024	Silty clayey loam	
362165	TP307 0.70	21/05/2024	23/05/2024	Silty loam	
362166	TP308 0.60	21/05/2024	23/05/2024	Silty clayey loam	
362167	TP308 1.00	21/05/2024	23/05/2024	Silty clayey loam	
362168	TP308 1.50	21/05/2024	23/05/2024	Silty clayey loam	
362169	TP309 0.20	21/05/2024	23/05/2024	Sandy loam	
362170	TP309 0.60	21/05/2024	23/05/2024	Silty loam	
362171	TP311 0.25	21/05/2024	23/05/2024	Silty loam	

Results Summary

Report No.: 24-53971, issue number 1

			ELAB Reference	362157	362158	362159	362160	362161
			Customer Reference					
			Sample ID					
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
			Sample Location	TP301	TP302	TP304	TP305	TP305
			Sample Depth (m)	0.30	0.65	0.35	0.60	1.00
			Sampling Date	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024
Determinand	**Codes**	**Units**	**LOD**					
Soil sample preparation parameters								
Moisture Content	N	%	0.1	9.9	16.7	10.5	14.1	20.3
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1	< 0.1	15.3
Description of Inert material removed	N		0	None	None	None	None	Stones
Metals								
Arsenic	M	mg/kg	0.5	12.4	9.4	10.0	13.4	14.0
Cadmium	M	mg/kg	0.2	0.3	< 0.2	0.3	0.3	0.4
Chromium	M	mg/kg	1	25.2	21.3	26.4	26.1	28.6
Copper	M	mg/kg	4	29.5	16.1	44.4	35.8	51.6
Lead	M	mg/kg	1	55.1	15.8	47.6	58.3	69.4
Mercury	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	M	mg/kg	1	18.2	12.8	17.1	18.7	22.7
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	4.5	96.8	42.9	99.2	95.9	149
Inorganics								
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Miscellaneous								
pH	M	pH units	0.1	9.7	7.8	11.6	8.9	8.3
Total Organic Carbon	N	%	0.01	1.9	0.26	2.5	1.1	2.4
Polyaromatic hydrocarbons								
Naphthalene	SM	mg/kg	0.02	0.30	0.08	0.08	0.16	0.07
Acenaphthylene	SM	mg/kg	0.02	0.23	< 0.02	0.23	0.14	0.18
Acenaphthene	SM	mg/kg	0.02	2.65	0.04	0.24	0.39	0.18
Fluorene	S	mg/kg	0.02	1.97	0.06	0.21	0.47	0.35
Phenanthrene	SM	mg/kg	0.02	27.3	0.27	2.20	3.44	4.55
Anthracene	S	mg/kg	0.02	7.37	0.09	1.03	1.25	1.29
Fluoranthene	SM	mg/kg	0.02	51.4	0.33	10.5	7.54	8.93
Pyrene	SM	mg/kg	0.02	39.3	0.27	11.7	6.19	7.45
Benzo(a)anthracene	S	mg/kg	0.02	20.9	0.21	5.74	3.48	3.72
Chrysene	SM	mg/kg	0.02	22.2	0.18	5.82	3.38	3.49
Benzo(b)fluoranthene	SM	mg/kg	0.02	29.4	0.18	10.9	4.93	4.04
Benzo(k)fluoranthene	SM	mg/kg	0.03	11.1	0.13	3.88	1.81	1.62
Benzo(a)pyrene	S	mg/kg	0.02	22.4	0.13	9.48	4.03	3.57
Indeno(1,2,3-cd)pyrene	SM	mg/kg	0.02	20.3	0.14	8.41	4.02	2.82
Dibenzo(a,h)anthracene	SM	mg/kg	0.02	4.28	0.09	1.53	0.74	0.57
Benzo[g,h,i]perylene	SM	mg/kg	0.02	18.3	0.11	7.08	3.05	2.14
Total PAH(16)	NS	mg/kg	0.34	279	2.31	79.0	45.0	45.0

Results Summary

Report No.: 24-53971, issue number 1

			ELAB Reference	362162	362163	362164	362165	362166
			Customer Reference					
			Sample ID					
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
			Sample Location	TP305	TP305	TP306	TP307	TP308
			Sample Depth (m)	1.50	1.90	0.60	0.70	0.60
			Sampling Date	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024
Determinand	**Codes**	**Units**	**LOD**					
Soil sample preparation parameters								
Moisture Content	N	%	0.1	20.1	21.0	18.0	20.3	21.1
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None	None	None
Metals								
Arsenic	M	mg/kg	0.5	14.3	20.5	11.7	12.9	13.7
Cadmium	M	mg/kg	0.2	< 0.2	0.4	0.3	0.3	0.6
Chromium	M	mg/kg	1	33.1	43.5	37.9	25.6	34.5
Copper	M	mg/kg	4	24.3	36.1	36.4	33.1	32.6
Lead	M	mg/kg	1	23.6	16.4	32.6	38.7	334
Mercury	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	M	mg/kg	1	26.4	18.8	36.8	21.6	17.1
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	1.3
Zinc	M	mg/kg	4.5	56.9	63.5	105	101	164
Inorganics								
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Miscellaneous								
pH	M	pH units	0.1	8.0	6.5	7.6	8.1	8.1
Total Organic Carbon	N	%	0.01	0.31	0.42	0.97	1.5	2.3
Polyaromatic hydrocarbons								
Naphthalene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Acenaphthylene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Acenaphthene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	0.02	0.04
Fluorene	S	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03
Phenanthrene	SM	mg/kg	0.02	< 0.02	< 0.02	0.08	0.23	0.27
Anthracene	S	mg/kg	0.02	< 0.02	< 0.02	0.03	0.08	0.10
Fluoranthene	SM	mg/kg	0.02	0.04	< 0.02	0.26	0.59	0.79
Pyrene	SM	mg/kg	0.02	0.04	< 0.02	0.24	0.50	0.73
Benzo(a)anthracene	S	mg/kg	0.02	< 0.02	< 0.02	0.16	0.32	0.50
Chrysene	SM	mg/kg	0.02	< 0.03	< 0.03	0.14	0.29	0.48
Benzo(b)fluoranthene	SM	mg/kg	0.02	0.03	< 0.02	0.17	0.40	0.71
Benzo(k)fluoranthene	SM	mg/kg	0.03	< 0.03	< 0.03	0.07	0.16	0.28
Benzo(a)pyrene	S	mg/kg	0.02	0.03	< 0.02	0.14	0.30	0.61
Indeno(1,2,3-cd)pyrene	SM	mg/kg	0.02	0.03	< 0.02	0.12	0.27	0.55
Dibenzo(a,h)anthracene	SM	mg/kg	0.02	< 0.02	< 0.02	0.02	0.06	0.11
Benzo[g,h,i]perylene	SM	mg/kg	0.02	0.02	< 0.02	0.10	0.22	0.45
Total PAH(16)	NS	mg/kg	0.34	< 0.34	< 0.34	1.53	3.44	5.64

Results Summary

Report No.: 24-53971, issue number 1

			ELAB Reference	362167	362168	362169	362170	362171
			Customer Reference					
			Sample ID					
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
			Sample Location	TP308	TP308	TP309	TP309	TP311
			Sample Depth (m)	1.00	1.50	0.20	0.60	0.25
			Sampling Date	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024
Determinand	**Codes**	**Units**	**LOD**					
Soil sample preparation parameters								
Moisture Content	N	%	0.1	20.5	15.6	3.4	20.8	11.9
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None	None	None
Metals								
Arsenic	M	mg/kg	0.5	13.9	26.5	12.3	11.5	7.5
Cadmium	M	mg/kg	0.2	0.3	< 0.2	0.4	0.3	0.4
Chromium	M	mg/kg	1	22.1	23.2	25.8	19.1	16.9
Copper	M	mg/kg	4	23.1	30.3	28.5	24.7	20.0
Lead	M	mg/kg	1	104	37.0	79.8	36.6	51.1
Mercury	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	M	mg/kg	1	14.3	21.2	21.3	14.9	12.4
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	4.5	142	79.6	103	99.0	79.3
Inorganics								
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Miscellaneous								
pH	M	pH units	0.1	7.7	7.7	9.5	7.9	8.5
Total Organic Carbon	N	%	0.01	1.5	0.30	2.7	1.6	0.65
Polyaromatic hydrocarbons								
Naphthalene	SM	mg/kg	0.02	< 0.02	< 0.02	0.04	< 0.02	0.12
Acenaphthylene	SM	mg/kg	0.02	< 0.02	< 0.02	0.10	< 0.02	0.03
Acenaphthene	SM	mg/kg	0.02	< 0.02	< 0.02	0.05	< 0.02	0.21
Fluorene	S	mg/kg	0.02	< 0.02	< 0.02	0.04	< 0.02	0.16
Phenanthrene	SM	mg/kg	0.02	0.06	< 0.02	0.33	< 0.02	2.28
Anthracene	S	mg/kg	0.02	0.02	< 0.02	0.21	< 0.02	0.68
Fluoranthene	SM	mg/kg	0.02	0.22	< 0.02	2.28	0.04	3.86
Pyrene	SM	mg/kg	0.02	0.23	< 0.02	2.49	0.04	3.37
Benzo(a)anthracene	S	mg/kg	0.02	0.15	< 0.02	2.02	< 0.02	1.78
Chrysene	SM	mg/kg	0.02	0.11	< 0.03	2.04	< 0.03	1.68
Benzo(b)fluoranthene	SM	mg/kg	0.02	0.33	< 0.02	3.84	0.03	2.31
Benzo(k)fluoranthene	SM	mg/kg	0.03	0.12	< 0.03	1.51	< 0.03	0.90
Benzo(a)pyrene	S	mg/kg	0.02	0.23	< 0.02	3.23	0.02	2.06
Indeno(1,2,3-cd)pyrene	SM	mg/kg	0.02	0.23	< 0.02	3.42	0.03	1.80
Dibenzo(a,h)anthracene	SM	mg/kg	0.02	0.05	< 0.02	0.68	< 0.02	0.34
Benzo[g,h,i]perylene	SM	mg/kg	0.02	0.19	< 0.02	2.98	0.02	1.56
Total PAH(16)	NS	mg/kg	0.34	1.94	< 0.34	25.3	< 0.34	23.1

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Results Summary

Report No.: 24-53971, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

In accordance with procedures, a 1kg soil sample should be analysed. For amounts less than this caution should be used when analysing the data as sample size is smaller than the recommended amount, therefore samples could be deemed as not being representative of the materials present on site.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)	F/mm2 (I)
362157	0.30	TP301	Brown Sandy Soil, Stones, Concrete, Clinker	No asbestos detected	n/t	n/t	n/t	n/t	n/t
362158	0.65	TP302	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362159	0.35	TP304	Brown Sandy Soil, Stones,	No asbestos	n/t	n/t	n/t	n/t	n/t
362160	0.60	TP305	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362161	1.00	TP305	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362162	1.50	TP305	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362163	1.90	TP305	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362164	0.60	TP306	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362165	0.70	TP307	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362166	0.60	TP308	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362167	1.00	TP308	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362168	1.50	TP308	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362169	0.20	TP309	Brown Sandy Soil, Stones,	No asbestos	n/t	n/t	n/t	n/t	n/t
362170	0.60	TP309	Brown Sandy Soil, Stones	No asbestos	n/t	n/t	n/t	n/t	n/t
362171	0.25	TP311	Brown Sandy Soil, Stones, Chalk, Clinker	No asbestos detected	n/t	n/t	n/t	n/t	n/t

Method Summary

Report No.: 24-53971, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	24/05/2024	110	Colorimetry
pH	M	Air dried sample	24/05/2024	113	Electromeric
Total organic carbon/Total sulphur	N	Air dried sample	28/05/2024	210	IR
Asbestos identification	U	Air dried sample	29/05/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	24/05/2024	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 24-53971, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.
	Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report.
	The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request
	Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
All water samples will be retained for 7 days following the date of the test report
Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

End of Report

LP3019 Summers Pond
Soil Analytical Results and Human Health QRA

					Project Number:	LP3019							LP3444				LP3662															
					Sample Location:	TP1	TP2	TP3	TP4	TP8	TP9	WS2	HP1	HP2	HP3	HP1 (Pos ASB)	TP301	TP302	TP304	TP305	TP305	TP305	TP305	TP306	TP307	TP308	TP308	TP308	TP309	TP309	TP311
					Depth (m):	0.1	0.15	0.15	0.1	0.2	0.4	0.15	0.4	0.3	0.15	-	0.3	0.65	0.35	0.6	1	1.5	1.9	0.6	0.7	0.6	1	1.5	0.2	0.6	0.25
					Matrix:	TS	TS	MG	MG	TS	MG	TS	MG	MG	MG	Fragment	MG	NATURAL	MG	MG	MG	MG	NATURAL	MG	MG	MG	MG	NATURAL	MG	MG	MG
					Date Sampled:	09/08/2022	09/08/2022	09/08/2022	09/08/2022	09/08/2022	09/08/2022	08/08/2022	08/08/2023	08/08/2023	08/08/2023	08/08/2023	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024
Determinand	**Units**	**LOD**	**Assessment Criteria Value***	**Source**	**Maximum Detected**																										
Miscellaneous																															
pH	pH units	0.1	n.v.	n.a.	8.4	7.6	8.1	8	7.9	-	8.4	7.5	7.49	8.58	9.63		9.7	7.8	11.6	8.9	8.3	8	6.5	7.6	8.1	8.1	7.7	7.7	9.5	7.9	8.5
Total Organic Carbon	%	0.1	n.v.	n.a.	3.4	2.1	1.5	2.7	2	-	3.4	1.7	0.66	2.54	2.69		1.9	0.26	2.5	1.1	2.4	0.31	0.42	0.97	1.5	2.3	1.5	0.3	2.7	1.6	0.65
Soil Organic Matter (calculated)**	%	-	n.v.	n.a.	5.848	3.61	2.58	4.64	3.44	-	5.85	2.92	1.14	4.37	4.63		3.27	0.45	4.30	1.89	4.13	0.53	0.72	1.67	2.58	3.96	2.58	0.52	4.64	2.75	1.12
Metals																															
Arsenic	mg/kg	2	37	C4SL	26.5	18.9	13.3	15.0	12.8	-	18.3	18.1	14	4	5		12.4	9.4	10	13.4	14	14.3	20.5	11.7	12.9	13.7	13.9	26.5	12.3	11.5	7.5
Cadmium	mg/kg	0.2	22	C4SL	0.7	*< 0.5*	*< 0.5*	0.6	*< 0.5*	-	0.7	*< 0.5*	0.7	*<0.5*	*<0.5*		0.3	*<0.2*	0.3	0.3	0.4	*<0.2*	0.4	0.3	0.3	0.6	0.3	*<0.2*	0.4	0.3	0.4
Chromium	mg/kg	0.5	910	S4UL	46.8	31.1	28.8	46.8	24.1	-	29.1	28.3	26	19	25		25.2	21.3	26.4	26.1	28.6	33.1	43.5	37.9	25.6	34.5	22.1	23.2	25.8	19.1	16.9
Chromium VI	mg/kg	0.8	21	C4SL	*< 1*	*< 0.8*	*< 0.8*	*< 0.8*	*< 0.8*	-	*< 0.8*	*< 0.8*	*<1*	*<1*	*<1*		*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*	*<0.8*
Copper	mg/kg	2	2,400	S4UL	72.7	39.5	24.5	72.7	26.8	-	33.5	25.1	11	10	20		29.5	16.1	44.4	35.8	51.6	24.3	36.1	36.4	33.1	32.6	23.1	30.3	28.5	24.7	20
Lead	mg/kg	2	200	C4SL	334	89.9	41.3	109	41.2	-	117	35.2	19	23	39		55.1	15.8	47.6	58.3	69.4	23.6	16.4	32.6	38.7	334	104	37	79.8	36.6	51.1
Mercury	mg/kg	0.5	40	S4UL	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	-	*< 0.5*	*< 0.5*	*<0.17*	1.55	0.85		*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*
Nickel	mg/kg	5	130	S4UL	36.8	22.4	15.8	19.7	14.8	-	23	15.9	13	14	18		18.2	12.8	17.1	18.7	22.7	26.4	18.8	36.8	21.6	17.1	14.3	21.2	21.3	14.9	12.4
Selenium	mg/kg	1	250	S4UL	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	-	*< 1.0*	*< 1.0*	1	*<1*	*<1*		*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<1.0*	1.3	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<1.0*
Zinc	mg/kg	2	3,700	S4UL	321.0	196.0	71.0	189	83.1	-	321	72.8	53	32	49		96.8	42.9	99.2	95.9	149	56.9	63.5	105	101	164	142	79.6	103	99	79.3
Asbestos																															
Asbestos Identification	-	-	Presence	n.a.	Detected	*NAD*	*NAD*	*NAD*	*NAD*	-	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*Chrysotile Cement*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*	*NAD*
Polycyclic Aromatic Hydrocarbons (USEPA 16)																															
Benzo(a)pyrene	mg/kg	0.1	5.0	C4SL	22.4	0.7	*< 0.1*	1.3	0.3	-	2.8	*< 0.1*	0.09	0.85	4.87	-	22.4	0.13	9.48	4.03	3.57	0.03	*<0.02*	0.14	0.3	0.61	0.23	*<0.02*	3.23	0.02	2.06
Naphthalene	mg/kg	0.1	2.3	S4UL	0.3	*< 0.1*	*< 0.1*	*< 0.1*	*< 0.1*	-	*< 0.1*	*< 0.1*	*<0.03*	*<0.03*	*<0.03*	-	0.3	0.08	0.08	0.16	0.07	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	0.04	*<0.02*	0.12
Acenaphthylene	mg/kg	0.1	n.v.	n.a.	0.23	*< 0.1*	*< 0.1*	*< 0.1*	*< 0.1*	-	0.2	*< 0.1*	*<0.01*	0.02	0.12	-	0.23	*<0.02*	0.23	0.14	0.18	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	0.1	*<0.02*	0.03
Acenaphthene	mg/kg	0.1	n.v.	n.a.	2.65	*< 0.1*	*< 0.1*	*< 0.1*	*< 0.1*	-	*< 0.1*	*< 0.1*	*<0.01*	0.07	0.24	-	2.65	0.04	0.24	0.39	0.18	*<0.02*	*<0.02*	*<0.02*	0.02	0.04	*<0.02*	*<0.02*	0.05	*<0.02*	0.21
Fluorene	mg/kg	0.1	n.v.	n.a.	1.97	*< 0.1*	*< 0.1*	*< 0.1*	*< 0.1*	-	*< 0.1*	*< 0.1*	0.01	0.02	0.13	-	1.97	0.06	0.21	0.47	0.35	*<0.02*	*<0.02*	*<0.02*	*<0.02*	0.03	*<0.02*	*<0.02*	0.04	*<0.02*	0.16
Phenanthrene	mg/kg	0.1	n.v.	n.a.	27.3	1.3	*< 0.1*	0.5	*< 0.1*	-	1.1	*< 0.1*	0.16	0.24	1.48	-	27.3	0.27	2.2	3.44	4.55	*<0.02*	*<0.02*	0.08	0.23	0.27	0.06	*<0.02*	0.33	*<0.02*	2.28
Anthracene	mg/kg	0.1	n.v.	n.a.	7.37	*< 0.1*	*< 0.1*	*< 0.1*	*< 0.1*	-	0.2	*< 0.1*	0.03	0.16	0.65	-	7.37	0.09	1.03	1.25	1.29	*<0.02*	*<0.02*	0.03	0.08	0.1	0.02	*<0.02*	0.21	*<0.02*	0.68
Fluoranthene	mg/kg	0.1	n.v.	n.a.	51.4	2	0.3	2.2	0.5	-	3.7	0.2	0.26	1.09	5.53	-	51.4	0.33	10.5	7.54	8.93	0.04	*<0.02*	0.26	0.59	0.79	0.22	*<0.02*	2.28	0.04	3.86
Pyrene	mg/kg	0.1	n.v.	n.a.	39.3	1.6	0.2	1.9	0.4	-	3.4	0.1	0.22	1.04	4.75	-	39.3	0.27	11.7	6.19	7.45	0.04	*<0.02*	0.24	0.5	0.73	0.23	*<0.02*	2.49	0.04	3.37
Benzo(a)anthracene	mg/kg	0.1	n.v.	n.a.	20.9	0.5	*< 0.1*	1	0.2	-	1.5	*< 0.1*	0.11	0.65	3.84	-	20.9	0.21	5.74	3.48	3.72	*<0.02*	*<0.02*	0.16	0.32	0.5	0.15	*<0.02*	2.02	*<0.02*	1.78
Chrysene	mg/kg	0.1	n.v.	n.a.	22.2	0.6	*< 0.1*	0.9	0.2	-	1.7	*< 0.1*	0.14	0.76	3.74	-	22.2	0.18	5.82	3.38	3.49	*<0.03*	*<0.03*	0.14	0.29	0.48	0.11	*<0.03*	2.04	*<0.03*	1.68
Benzo(b)fluoranthene	mg/kg	0.1	n.v.	n.a.	29.4	0.7	*< 0.1*	1.3	0.2	-	2.6	*< 0.1*	0.1	0.87	5.63	-	29.4	0.18	10.9	4.93	4.04	0.03	*<0.02*	0.17	0.4	0.71	0.33	*<0.02*	3.84	0.03	2.31
Benzo(k)fluoranthene	mg/kg	0.1	n.v.	n.a.	11.1	0.7	*< 0.1*	1.7	0.2	-	2.9	*< 0.1*	*<0.07*	0.34	1.89	-	11.1	0.13	3.88	1.81	1.62	*<0.03*	*<0.03*	0.07	0.16	0.28	0.12	*<0.03*	1.51	*<0.03*	0.9
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	n.v.	n.a.	20.3	0.4	*< 0.1*	0.9	0.1	-	2.2	*< 0.1*	0.06	0.63	4.23	-	20.3	0.14	8.41	4.02	2.82	0.03	*<0.02*	0.12	0.27	0.55	0.23	*<0.02*	3.42	0.03	1.8
Dibenzo(ah)anthracene	mg/kg	0.1	n.v.	n.a.	4.28	*< 0.1*	*< 0.1*	0.1	*< 0.1*	-	0.6	*< 0.1*	*<0.04*	0.09	0.57	-	4.28	0.09	1.53	0.74	0.57	*<0.02*	*<0.02*	0.02	0.06	0.11	0.05	*<0.02*	0.68	*<0.02*	0.34
Benzo(ghi)perylene	mg/kg	0.1	n.v.	n.a.	18.3	0.4	*< 0.1*	0.9	0.2	-	2.8	*< 0.1*	*<0.05*	0.56	4	-	18.3	0.11	7.08	3.05	2.14	0.02	*<0.02*	0.1	0.22	0.45	0.19	*<0.02*	2.98	0.02	1.56
Total PAH (16)	mg/kg	0.1	n.v.	n.a.	279	9.4	0.6	13.2	2.5	-	25.8	0.4	1.18	7.39	41.7	-	279	2.31	79	45	45	*<0.34*	*<0.34*	1.53	3.44	5.64	1.94	*<0.34*	25.3	*<0.34*	23.1
PCB																															
PCB 28	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB 52	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB 101	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB 118	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB 153	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB 138	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB 180	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs (7 congeners)	mg/kg	0.03	n.v.	n.a.	*< 0.03*	-	-	-	*< 0.03*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Organochlorine Pesticides																															
alpha-HCH	ug/kg	10	230	S4UL	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
beta_HCH	ug/kg	10	85	S4UL	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gamma-HCH	ug/kg	10	60	S4UL	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
delta-HCH	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aldrin	ug/kg	10	5700	S4UL	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor expoxide	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-Chlordane	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
alpha cis-Chlordane	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p,p-DDE	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin	ug/kg	10	97,000	S4UL	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p,p-DDD	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan II	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin aldehyde	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p,p-DDT	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulphan sulphate	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin ketone	ug/kg	10	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Organophosphorous Pesticides																															
Acephate	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azinphos-methyl	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorpyrifos	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Demeton-s-methyl	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorvos	ug/kg	100	32,000	S4UL	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethoate	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethion	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malathion	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methidathion	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methamidophos	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Omethoate	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pirimifos-methyl	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profenofos	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrazophos	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tokuthion	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tolclofos-methyl	ug/kg	100	n.v.	n.a.	*< 0.1*	-	-	-	-	*< 0.1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Triazines																															
Ametryn	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Atraton	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prometon	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prometryn	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propazine	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Secbumeton	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Simazine	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Simetryn	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Terbuthylazine	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Terbutryn	mg/kg	0.01	n.v.	n.a.	*< 0.01*	-	-	-	-	*< 0.01*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Assuming 1% SOM for organic compounds
** - Soil Organic Matter = Total Organic Carbon x 1.72

- Exceedances of residential with homegrown produce GAC

NAD = No asbestos detected
TS = Topsoil
MG = Made ground
- = not tested
n.a = not applicable
n.v = no published value available
NIV = Netherlands Intervention Value