Geo-Environmental

VERIFICATION REPORT

for the site at

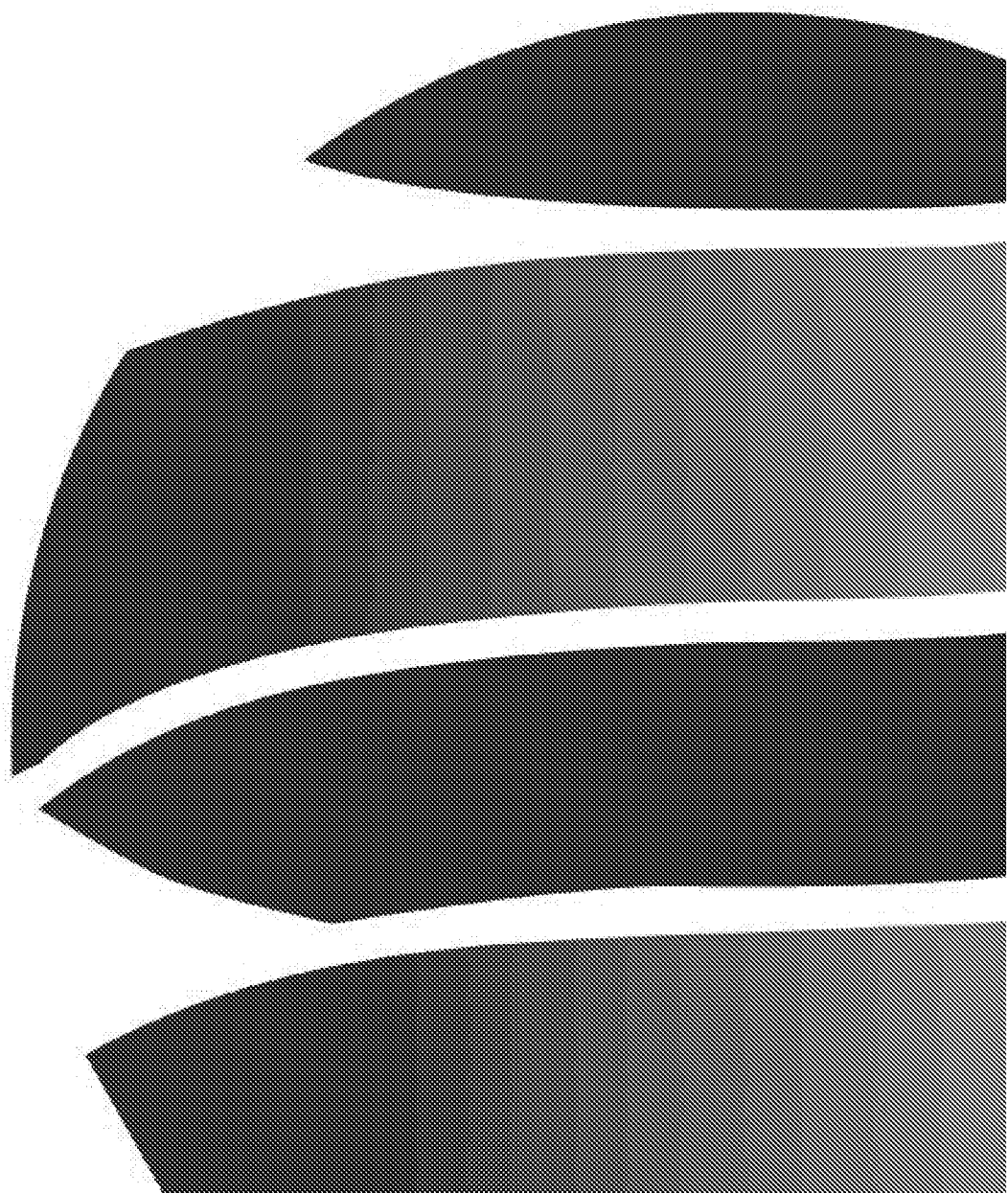
PLOTS 1-15, CORNFIELD CLOSE,

LITTLEHAMPTON,

WEST SUSSEX, BN17 6LD

on behalf of

THAKEHAM CLIENT LTD



ARUN DISTRICT COUNCIL LU/191/21/DOC

Report:	**VERIFICATION REPORT**
Site:	**PLOTS 1-15, CORNFIELD CLOSE, LITTLEHAM, WEST SUSSEX, BN17 6LG**
Client:	**THAKEHAM CLIENT LTD**
Date:	**26/01/2021**
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Environmental Consultants | Geotechnical Engineers | Site Investigations

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AMENDMENT RECORD

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1.0 INTRODUCTION

1.1 General

Following several phases of investigation and assessment for the site, as reported in the Phase I desk study (ref. GE16903-DSR-DEC17) baseline ground investigation (ref. GE16903-BGIR-JAN18) and further Phase II intrusive investigation (ref. GE17106- GAR/AP01/231018) undertaken and reported by Geo-Environmental Services Limited, together with subsequent development of a Remediation Strategy and Verification Plan (RSVP), referenced GE17106-RSVPv1.2-GE-NOV19 and Water Quarterly Monitoring Plan (WQMP), referenced GE18103/WQMP/NOV19 Geo-Environmental was instructed by Thakeham Client Ltd to prepare a Verification Report to compile the relevant information in relation to the residential development for Plots 1-15, Cornfield Close, Littlehampton, West Sussex, BN17 6LG, herein referred to as 'the site' (see Figure 1).

This report sets out the works undertaken to date to provide independent verification of the risk mitigation measures incorporated into the development to protect the development and end users thereof. This report provides final validation for works undertaken and independent inspection in relation to Plots 1-15 only with respect to ground gases and land contamination and for the whole site in relation to groundwater analysis and controlled water. At the time of reporting other plots within the development were not ready for final validation inspections therefore remedial works related to these remaining plots will be validated within a separate verification (or updated) report in due course.

1.2 Objectives

A desk study and ground investigation undertaken by Geo-Environmental identified the presence of potential hazards and through a risk assessment process a series of pollutant linkages were identified which require action to mitigate or otherwise reduce the risk. The Remediation Strategy and Verification Plan (RSVP) sets out the proposed remedial works to be undertaken on the subject site to support its development for a proposed residential end use. The Water Quality Monitoring Plan presents the monitoring works that would be undertaken prior to, during and following the intrusive element of development works (cut and fill and piling works).

This Verification Report (VR) presents the details and findings of inspection visits undertaken throughout the construction period by Geo-Environmental and/or to compile data provided by the Client with respect for Plots 1-15 in order to demonstrate that the risk mitigation measures were implemented, within these Plots only. The verification report also presents the details of the groundwater monitoring and analysis completed under the Water Quality Management Plan for the wider site following completion of the intrusive element of works on the site.

1.3 Planning Permission

It is understood that a planning application has been approved for the site by Arun District Council under Planning Reference LU/330/18/PL. The following pre-occupation planning conditions have been attached to the application which relate to the validation of land contamination in relation the development. Where conditions required the submission and agreement of works pre-commencement it is understood that those elements of the conditions have been completed and agreed.

Condition 9:

Within 3 months of the start of the development, the Developer shall agree a timetable for submission of periodic verification reports to demonstrate the completion of works set out in the approved remediation strategy and the effectiveness of the remediation. The reports shall include a maintenance plan in respect of contamination, including a timetable of monitoring and shall be submitted to, and approved in writing, by the local planning

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authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. The development shall proceed in accordance with approved details.
Reason: To ensure that the site does not pose any further risk to human health or the water environment by demonstrating that the requirements of the approved verification plan have been met and that remediation of the site is complete in accordance with Arun Local Plan policies QE SP1 and QE DM4

Condition 10:

If during development, contamination not previously identified, is found to be present at the site then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be implemented as approved.

Reason: To ensure that the development complies with approved details in the interests of protection of the environment and prevention of harm to human health in accordance with Arun Local Plan policies QE SP1 and QE DM4.

Condition 11:

Piling & investigation boreholes using penetrative methods shall not be carried out other than with the written consent of the Local Planning Authority. The development shall be carried out and completed in accordance with details so approved.

Reason: To prevent pollution of groundwater in accordance with Arun Local Plan policy W DM1.

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2.0 BACKGROUND

This Validation Report has been produced in order to demonstrate that the works required and presented within the Remediation Strategy and Verification Plan (RSVP) and Water Quality Management Plan (WQMP) have been carried out. The RSVP and WQMP for the site were developed following several phases of investigation works for the site, including a Phase I desk study (ref. 16903-DSR-DEC17) baseline ground investigation (ref. 16903-BGIR-JAN18) and further Phase II intrusive investigation (ref. GE17106- GAR/AP01/231018) undertaken and reported by Geo-Environmental Services Limited. Whilst a summary of these reports is presented below, reference should be made to the full reports for further details.

2.1 Proposed Site Use

The proposed development comprised the construction of 77No. residential units with private gardens, soft landscaping, amenity space, parking, roadways and associated infrastructure.

2.2 Investigation and Assessment

A summary of the findings of previous investigations and reports is presented below:

- The site was most recently utilised as a caravan park comprising caravan plots and hardstanding from a former wash block. The northern most portion of the site comprised accommodation with the southern portion of the site recreational space;
- The ground conditions beneath the site generally comprised a thickness of Made Ground (depths up to 2.90m bgl) overlying the River Terrace Deposits over the Lewes Nodular Chalk Formation at depth;
- The encountered Made Ground materials were found to generally comprise landfill type material of mixed composition comprising sandy clay and silty sand with brick, glass, plastics, metal, china, ash, coal, concrete, black organic matter, shoes, fabric, timber and flint gravel;
- River Terraced Deposits were found to underlie the Made Ground and was generally found to comprise medium dense orange-brown sandy clay becoming orange brown sand with flint gravel with slight traces of chalk at depth.
- Groundwater was encountered within boreholes between depths of 7.50m and 9.00m bgl during the intrusive investigation works. Return monitoring between 28th August 2018 and 19th October 2018 encountered groundwater between depths of 6.00m and 7.10m bgl.
- Thirty-four soil samples were submitted for analysis of a comprehensive suite of commonly occurring contaminants augmented with speciated hydrocarbon analysis and asbestos screening. Nine of these samples were used for leachate testing. Ten additional samples were analysed for VOCs, SVOCs, PCBs and ammoniacal nitrogen. A further ten samples were analysed for Waste Acceptance Criteria tests.
- The testing showed that near surface soils were impacted by Arsenic, Lead, PCBs, VOCs, SVOCs and Asbestos.
- Remediation, or risk mitigation measures were recommended to be required to protect end users from the contaminants identified in the Made Ground within private gardens and areas of soft landscaping.
- Groundwater samples were analysed during the monitoring visits and were tested for a comprehensive suite of commonly occurring contaminants, VOCs, SVOCs, BOD, COD, electrical conductivity, suspended solids and PCBs.
- Groundwater testing showed isolated elevated concentrations of Selenium, PAHs and Boron within the groundwater.
- Based on the testing results and the development proposals to include the introduction of 50% hardcover (houses/roads etc.), together with the excavation of significant volumes of the Made Ground material to accommodate the development, it was considered that the proposed development would improve the site status in respect of the leaching of contaminants from the Made Ground/Landfill materials, and the development would provide a betterment in terms of groundwater contamination.

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- It was considered that no specific measures with respect to protection of groundwater are required on the site. A Qualitative Piling Risk Assessment (QPRA), reference GE18103/QPRA/JUL19, dated 10th July 2019 and Water Quality Management Plan (WQMP), reference GE18103/WQMP/NOV19, dated 15th November 2019 were also undertaken for the site in relation to the proposed foundation solution to be utilised on the site.
- Ten cable percussive boreholes were installed with two monitoring standpipes within each location (BH101-BH110) during the intrusive investigation works. Spot monitoring was undertaken on a single occasion within each location. Continuous gas monitoring was undertaken within ten gas monitoring standpipes (BH101-BH110) for a period of 3 weeks. The monitoring locations were sited within the former landfill area.
- Spot monitoring detected methane at concentrations in the range 0-8.5%, carbon dioxide in the range 0-19.4% and oxygen in the range 0-19.4%. VOCs were detected up to 3.2ppm. Borehole flow rates were only detected within two monitoring standpipes, BH101d and BH102s, and ranged from 0.9l/hr to 3.0l/hr.
- The continuous gas monitoring identified methane in the range 0-6.53%, carbon dioxide in the range 0.52-25.2% and oxygen in the range 0.06-18.53%. Carbon monoxide was detected in the range 0-19.43ppm, hydrogen sulphide in the range 0-3.89ppm and VOCs in the range 0-1.7ppm.
- The gas assessment based on the monitoring data indicated that the sites gassing regime was representative of Characteristic Situation 2/ Amber 2, for which remediation measures were considered necessary.
- A discovery strategy was also developed for the site. Where unexpected conditions or contamination are encountered as part of the works these were be addressed under the discovery strategy in place for the site.

2.3 Conceptual Site Model

The conceptual site model (CSM) developed as part of the risk assessment identified particular hazards, or potential hazards which were considered to require intervention (remediation) to mitigate the risk of harm.

2.4 Approach for Remediation, Monitoring and Validation

Remediation works were proposed to break the pathways of identified sources of contamination to receptors. The aim of the remediation was not necessarily to remove all contamination from the site but to provide betterment and to reduce the identified risk to an acceptable level with respect to relevant receptors, e.g. human health, the built environment and controlled waters.

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3.0 GROUND GAS

3.1 Ground Gas Assessment

A ground gas assessment was undertaken as part of the further Phase II intrusive investigation undertaken by Geo-Environmental. The monitoring undertaken as part of the 2018 investigation comprised one 'spot' monitoring visit alongside continuous monitoring undertaken over a 3 week period from 26th September 2018 to 17th October 2018. Spot monitoring detected methane at concentrations in the range 0-8.5%, carbon dioxide in the range 0-19.4% and oxygen in the range 0-19.4%. VOCs were detected up to 3.2ppm. Borehole flow rates were only detected within two monitoring standpipes, BH101d and BH102s, and ranged from 0.9l/hr to 3.0l/hr.

The continuous gas monitoring identified methane in the range 0-6.53%, carbon dioxide in the range 0.52-25.2% and oxygen in the range 0.06-18.53%. Carbon monoxide was detected in the range 0-19.43ppm, hydrogen sulphide in the range 0-3.89ppm and VOCs in the range 0-1.7ppm. Positive gas flow rates and marginally negative gas flow rates were identified within all monitoring locations during the continuous monitoring. A maximum flow rate of 1.24l/hr was detected within BH108.

On the basis of both the spot and continuous monitoring undertaken, the site's gassing regime, based on both hazardous gas flow and limiting concentrations, was assessed to be Characteristic Situation 2 (CIRIA and BS) and Amber 2 (NHBC).

3.2 Gas Protection Design Measures

The following gas protection measures were considered to be required to protect the development and end users thereof:

- Reinforced concrete cast in situ floor slab (suspended, non-suspended or raft) with sufficient reinforcement to mitigate/control cracking;
- Minimum penetration of the slab by services and sealing of all penetrations and joints using 'top hats' or bespoke/site formed top hat seals;
- Installation of a vapour and gas resistant membrane laid across the floor with all joints and service penetrations sealed to form a single integral membrane with welded joints. All joints should comprise a minimum 150mm overlap. The membrane installation is to be undertaken by a suitability competent (e.g. NVQ qualified) installer;
- Use of an appropriate gas resistant DPC across the cavity with lap on the inner skin wall to facilitate joining to the floor membrane;
- Inspection and verification of installed measures.

Gas protection measures on site have been installed by Keytec Membrane Limited. Independent verification of gas protection measures at various stages of development with respect to Plots 1-15 were undertaken by Geo-Environmental on behalf of Thakeham Client Ltd, and included several inspection visits undertaken between August 2019 and January 2020, details of which are presented below:

- 11th June 2020 (Plots 1-2 perimeter);
- 2nd July 2020 (Plots 2-15 perimeter);
- 29th July 2020 (Plot 1-3 whole floor area);
- 10th August 2020 (Plots 4-5 whole floor area);
- 13th August 2020 (Plots 6-7 whole floor area);
- 25th August 2020 (Plots 8-10 whole floor area – Plot 11 in progress);
- 10th September 2020 (Plots 12-13 whole floor area – Plots 14-15 in progress);

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Plots 1-15

Plots 1-15 comprised semi-detached and terraced houses. Floor construction within all the plots comprised a piled foundation with 225mm reinforced concrete slab above. A gas resistant membrane was installed directly on top of the reinforced concrete slab. The membrane was installed around the perimeter of the plots so as to go directly over external walls to ensure the cavity was sealed. Where plots were semi-detached or terrace the membrane was taken across adjoining wall cavities to ensure a continuous seal. Celotex Rigid insulation (or similar) was to be installed directly on top of the gas resistant membrane with floor screed above.

The houses are of timber frame construction, with the frames secured to the foundation blockwork/external wall and floor slabs. Hammer screw type fixings were used to secure the frames, self-sealing tape was laid beneath the soleplate fixing points so that where hammer screws breached the membrane to secure the timber frame the breach was sealed with the tape product, thereby creating a continuous seal of the installed membrane.

The gas membranes installed on these plots were installed by specialist membrane installers from Keytec Geomembranes Limited. The membranes utilised were self-branded Keytec 400 HP membranes. All joints were heat welded with at least a 150mm overlap. Corner details and threshold details were sealed using heat welded joins. Site-formed service seals were used to seal services, and were formed of foil band tape that was heat sealed. Where necessary any damage or defects were sealed using foil band tape product patch repairs.

The gas resistant products installed within the development of Plots 1-15 comprised:

- Keytec 400 HP – self branded purchased from Juta;
- 301483 Foil Band 150mm width/ 1.5 thickness/ 10m length – Aluminium heat weld membrane tape.

The gas membrane installation for Plots 1-15, was inspected by Geo-Environmental on several occasions to observe and record that the measures installed complied with the requirements as set out within RSVP. The proposed floor construction detail drawing including the gas membrane detail for the houses are presented in Appendix A. Visual inspection record sheets in line with the verification pro forma as set out in CIRIA C735 'Good practice on the testing and verification of protection systems for buildings against hazardous ground gases', of the gas protection measures installed are enclosed in Appendix B. The completed membrane installation was not fully completed within Plots 11 and 14-15 during the visits undertaken by Geo-Environmental. As such, the final completed membrane installation within these plots was photographed by the site manager for Thakeham (the Client), with these photos then issued to Geo-Environmental. These photographs are presented within Appendix C.

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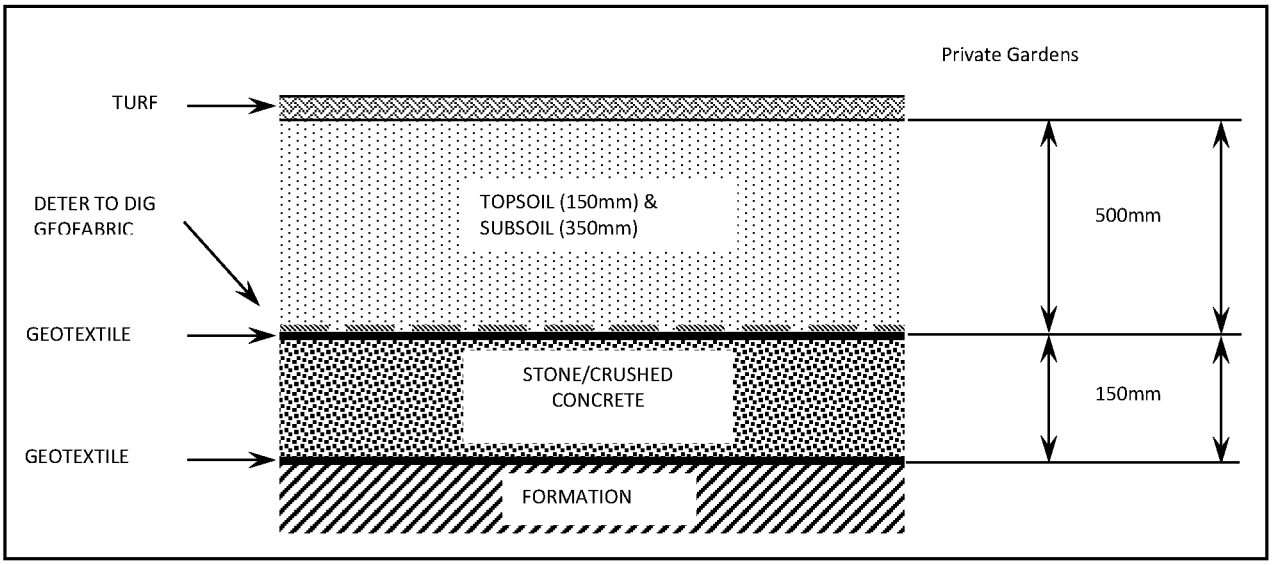
4.0 SOILS

4.1 End Users (Shallow Soils)

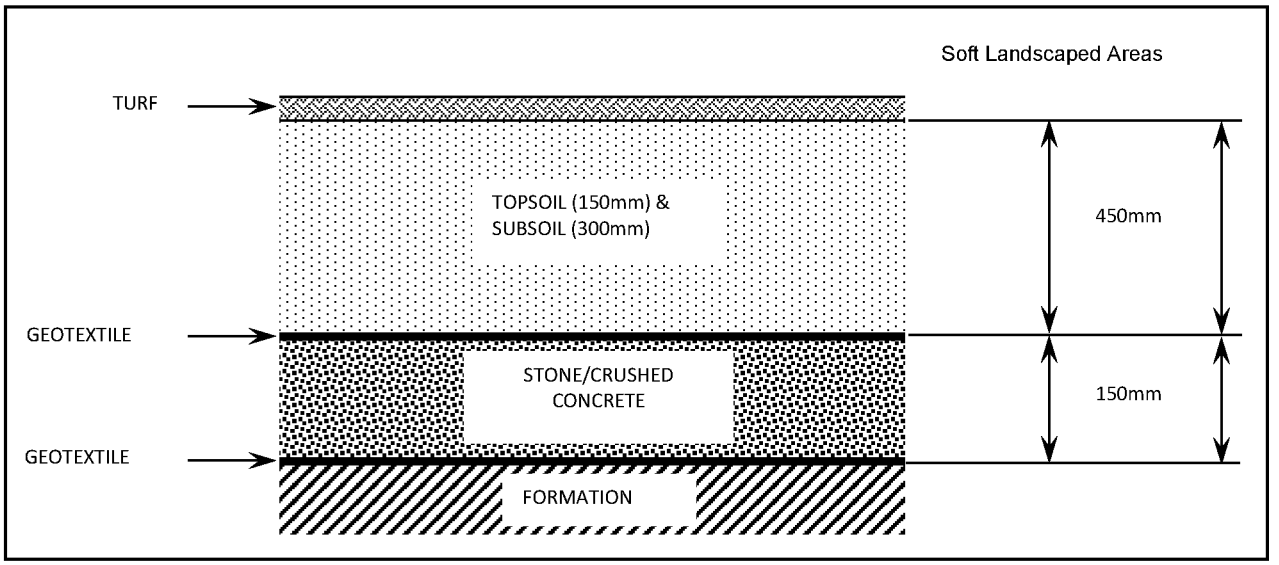
With reference to report Ground Appraisal Report for the site GE17106 - GAR/AP01/231018, through a process of statistical analyses on the results of chemical analyses on both deeper and near surface soil samples, it was considered that the near surface soils have been impacted by Lead, Arsenic, PCBs, SVOCs, VOCs and ACMs and remedial measures were deemed necessary to protect end users of the proposed properties from soil contamination within private garden and soft landscaped areas. Furthermore, the physical quality of all near surface soils was deemed unsuitable for inclusion in private gardens due to the presence of concrete, brick, and tarmacadam. In addition, ACMs and asbestos fibres have been identified both visually and within chemical analysis to be present within the Made Ground.

In areas remote from those designated for tree root protection it was recommended that the Made Ground beneath be removed or the site raised to a depth of 650mm and be replaced with chemically and geotechnically suitable material with a high visibility marker geotextile layer such as Terram High-Vis placed at the base between the imported soils and a capillary break layer comprising crushed stone or hardcore of 150m and underlain by a further layer of Terram.

An example of the cover system for use in private gardens is provided below:



An example of the cover system for use in areas of soft landscaping is provided below:



5.0 IMPORTATION OF MATERIALS

5.1 Topsoil (Plots 1-15)

The chain of custody (COC) delivery certificates for Topsoil materials imported into site for use within Plots 1-15 were provided by to Geo-Environmental by Thakeham (the Client), copies of which are presented within Appendix D. Geochemical analysis was provided for the source site for the Topsoil materials prior to importation to site. A copy of this analysis is also presented in Appendix D.

Further independent sampling and analysis of this materials was undertaken by Geo-Environmental following the placement of this material with the private gardens of Plots 1-15. The results of this independent validation analysis testing are presented in Appendix F and detailed and discussed within Section 6 of this report.

5.2 Subsoil (Plots 1-15)

Thakeham have confirmed that the subsoil utilised within Plots 1-15 on site was clean material excavated from on site as part of the installation of a soakaway chamber. One composite sample of this material was analysed and tested for a suite of commonly occurring contaminants by Bells (The Groundworkers) prior to the use of this material within private garden areas, these results are presented within Appendix D.

Further independent sampling and analysis of this material was undertaken by Geo-Environmental following the placement of this material with the private gardens. The results of this testing are testing are presented in Appendix F and detailed and discussed within Section 6 of this report.

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6.0 INSPECTION/ VALIDATION (SOILS)

6.1 Validation inspection of Topsoil and Subsoil and sampling of Topsoil (cover system) placement associated with private gardens (Plots 1-7) – 18th and 26th November 2020

The inspection/ validation works of the cover systems installed within the private gardens and areas of soft landscaping were undertaken by a Geo-Environmental Engineer on the 18th and 26th November 2020. The inspection on the 18th November included a meeting with the groundworkers (Bells) with respect to the proposed works and an inspection of the installation of the crushed concrete break layer installed as part of the cover system, with the deter-to-dig Geo-textile type membrane and placement of subsoil and topsoil inspected on the 26th November 2020. The visual inspection records including site photographs and hand pit logs are presented in Appendix E.

Inspection comprised three independent shallow hand pits (HP101-HP103) which were excavated by the ground workers under the supervision of an engineer from Geo-Environmental within the private front garden of Plot 3, and the private rear gardens of Plot 1 and Plot 6, to confirm the presence of a geo-textile type membrane and the thickness of the soil cover system. The location of these hand pits is presented on Figure 3, photographs and site inspection records taken during this inspection visit are presented in Appendix E, which confirm the depth of the installed subsoil and Topsoil with the cover system installed, along with soil logs of the material encountered. It should be noted that at the point of inspection the Turf and the final 100mm of the soil likely associated with the turf placement had not been laid within any areas of soft landscaping at the time of the inspection.

The inspection confirmed that in all inspected areas (hand pits HP101-HP103) a deter-to-dig Geo-textile type membrane was present beneath the subsoil and the installed subsoil and Topsoil was found to be between 350mm and 400mm in thickness within all hand pits with a minimum 200mm thickness of Topsoil.

The three soil samples, referenced HP101, HP102 and HP103 were submitted to a UKAS accredited laboratory for testing for a suite of commonly occurring brownfield contaminants including asbestos screening. The laboratory test results are presented within Appendix F.

The results of the analyses were compared to the Suitable for Use (S4UL) Levels for 'private gardens with home-grown produce' (representative of the proposed development end use), which are summarised in Table 6.1 below:

Determinand	Soil Screening Value (mg/kg)	Sample Max. Conc. (mg/kg)	Below Screening Value?
Arsenic	37	14.0	Yes
Benzo(a)pyrene	2.7	2.2	Yes
Beryllium	1.7	<1.0	Yes
Boron (Water Soluble)	290	1.0	Yes
Cadmium	11	<0.5	Yes
Chromium (Total)	130	38.7	Yes
Copper	2400	35.1	Yes
Hexavalent Chromium	6	<0.8	Yes
Lead	200	121	Yes
Mercury (inorganic)	40	<0.5	Yes
Nickel	180	16.1	Yes
Phenols	110	<0.6	Yes
Selenium	250	<1.0	Yes
Total Petroleum Hydrocarbons	110	41.0	Yes

Vanadium	410	35.1	Yes
Zinc	3700	136	Yes

Table 6.1 Summary of chemical analyses (Plots 1-7 Inspection Visit 26/11/2020)

The results indicated that all of the determinands tested, were below the limiting concentrations set within the Remediation Strategy and Verification Plan (RSVP).

All samples were submitted for asbestos screening and returned with no asbestos fibres identified.

In addition, the results of the speciated hydrocarbon analyses were all returned as either below the laboratory detection limits or below their respective human health screening values for the proposed end use.

All three of the validation samples from Plots 1-7 were also submitted for a nutrient testing suite. The results of the soils tested were compared to the Table 1 from BS3882:2015 entitled 'Specification for topsoil'.

The results are summarised in Table 6.2 below:

Parameters	Limits for Multipurpose Topsoil	Sample Range	Within acceptable Limits?
Maximum Coarse Fragment Content (%)			Yes
Stones >2mm	30	16-20	
Stones > 20mm	10	<1	
Stones >50mm	0	<1	
Mass loss on ignition %			Yes
Clay 5% to 20%	3 to 20	4.73-4.99	
Soil pH	5.5 to 8.5	8.1-8.7	Yes
Plant nutrient content			Yes
Total nitrogen %	>0.15	0.15-0.17	
Extractable phosphate mg/l	16 to 140	66-75	
Extractable potassium mg/l	121 to 1500	225-250	
Extractable magnesium mg/l	51 to 600	92-99	
Carbon:nitrogen ratio	<20:1	17.2-18.7	Yes
Electrical conductivity µS·cm	<3300	2460-2550	Yes
Potentially Phytotoxic Elements			Yes
Zn mg/kg	<200	118-136	
Cu mg/kg	<135	29.9-35.1	
Ni mg/kg	<75	14.3-16.1	
Visible contaminants			Yes
% m/m	<0.5	<0.01	
…of which plastics	<0.25	<0.01	

Table 6.2 Summary of BS8332 Topsoil Analysis (Plots 1-7, Inspection Visit 26/11/2020)

The results demonstrate that the Topsoil soils analysed are in accordance with BS3882:2015 Multipurpose Topsoil.

6.2 Validation inspection and sampling of Topsoil and Subsoil (cover system) placement associated with private gardens (Plots 8-15) – 7th January 2021

The inspection/ validation works were undertaken by a Geo-Environmental Engineer on 7th January 2021. The visual inspection records including site photographs and hand pit logs are presented in Appendix E.

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Inspection comprised six independent shallow hand pits (HP1-HP6) which were excavated by the ground workers under the supervision of an engineer from Geo-Environmental within the private rear gardens of Plots 8, 9, 10/11, 12, 13 and 14/15, to confirm the presence of a geo-textile type membrane and the thickness of the soil cover system. The location of these hand pits is presented in Figure 3, photographs taken during this inspection visit are presented in Appendix E confirming the depth of the installed subsoil and Topsoil, along with soil logs of the material encountered. It should be noted that at the point of inspection the Turf and the final 100mm of the soil likely associated with the turf placement had not been laid within any areas of soft landscaping at the time of the inspection.

The inspection confirmed that in all inspected areas (Hand pits HP1-HP6) a deter-to-dig Geo-textile type membrane was present beneath the subsoil and the installed subsoil and Topsoil was found to be between 400mm and 550mm in thickness within all hand pits with a minimum 150mm thickness of Topsoil.

Six soil samples, referenced HP1 (subsoil), HP2-HP5 (Topsoil), and HP6 (subsoil), were submitted to a UKAS accredited laboratory for testing for a suite of commonly occurring brownfield contaminants including asbestos screening. The laboratory test results are presented within Appendix F.

The results of the analyses were compared to the Suitable for Use (S4UL) Levels for 'private gardens with home-grown produce' (representative of the proposed development end use), which are summarised in Table 6.3 below:

Determinand	Soil Screening Value (mg/kg)	Sample Max. Conc. (mg/kg)	Below Screening Value?
Arsenic	37	14.5	Yes
Benzo(a)pyrene	2.2	0.4	Yes
Beryllium	1.7	<1.0	Yes
Boron (Water Soluble)	290	1.5	Yes
Cadmium	11	0.5	Yes
Chromium (Total)	130	27.7	Yes
Copper	2400	42.6	Yes
Hexavalent Chromium	6	<0.8	Yes
Lead	200	167	Yes
Mercury (inorganic)	40	<0.5	Yes
Nickel	180	27.3	Yes
Phenols	110	<6.0	Yes
Selenium	250	<1.0	Yes
Total Petroleum Hydrocarbons	110	6.1	Yes
Vanadium	410	42.1	Yes
Zinc	3700	154	Yes

Table 6.3 Summary of chemical analyses (Plots 8-15, Inspection Visit 07/01/2021)

The results indicated that all of the determinands tested, were below the limiting concentrations set within the Remediation Strategy and Verification Plan (RSVP).

All samples were submitted for asbestos screening and returned with no asbestos fibres identified.

In addition, the results of the speciated hydrocarbon analyses were all returned as either below the laboratory detection limits or below their respective human health screening values for the proposed end use.

Four of the validation samples (2No.Topsoil and 2 No. Subsoil) samples from Plots 8-15 were also submitted for a

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nutrient testing suite. The results of the Topsoil tested were compared to the Table 1 of BS3882:2015 entitled 'Specification for topsoil'. The results of the subsoil tested were compared to Table 1 of BS8601:2013 entitled 'Specification for subsoil and requirements for use'.

The results are summarised in Table 6.4 below:

Parameters	Limits for Multipurpose Topsoil	Sample Range	Within acceptable Limits?
Maximum Coarse Fragment Content (%) Stones >2mm Stones > 20mm Stones >50mm	 30 10 0		To Follow
Mass loss on ignition % Clay 5% to 20%	 3 - 20	 3.94-4.23	Yes
Soil pH	5.5 - 8.5	8.2-8.3	Yes
Plant nutrient content Total nitrogen % Extractable phosphate mg/l Extractable potassium mg/l Extractable magnesium mg/l	 >0.15 16 to 140 121 to 1500 51 to 600	 0.12-0.15 51-67 206-250 88-89	Some results are <0.15% for total nitrogen
Carbon:nitrogen ratio	<20:1	16.7-19.2	Yes
Electrical conductivity µS·cm	<3300	2300-2430	Yes
Potentially Phytotoxic Elements Zn mg/kg Cu mg/kg Ni mg/kg	 <200 <135 <75	 125-154 28.4-42.6 17.2-19.7	Yes
Visible contaminants % m/m …of which plastics	 <0.5 <0.25	 <0.01 <0.01	Yes

Table 6.4 Summary of BS8332 Topsoil Analysis (Plots 8-15, Inspection Visit 07/01/2021)

The results available to date demonstrate that the soils tested are in accordance with BS3882:2015 Multipurpose Topsoil with the exception of a slight short fall (minimum values) of total nitrogen. However, this is within limits based on the mean percentages.

Parameters	Limits for Multipurpose Topsoil	Sample Range	Within acceptable Limits?
Maximum Coarse Fragment Content (%) Stones >2mm Stones > 20mm Stones >50mm	 40 20 0		To Follow
Mass loss on ignition %	maximum 2%	1.74-5.04	The highest recorded value is slightly above limiting value, but is within the limit for Topsoil
Soil pH	5.5 - 8.5	7.5-8.3	Yes
Electrical conductivity µS·cm	<3300	2260-2340	Yes
Potentially Phytotoxic Elements Zn mg/kg Cu mg/kg Ni mg/kg	 <200 <135 <75	 92.3-103 23.8-31.2 24.4-27.3	Yes
Other contaminants % m/m …of which plastics	 <0.5 <0.25	 <0.01 <0.01	Yes

Table 6.5 Summary of BS8332 Subsoil Analysis (Plots 8-15, Inspection Visit 07/01/2021)

The results available to date demonstrate that the soils tested are in accordance with BS8601:2013 entitled Multipurpose subsoil with the exception of a slight exceedance (on maximum values) on mass loss on ignition which is however noted to be within the range for Topsoil.

7.0 CONTROLLED WATERS

7.1 Groundwater Monitoring

A monitoring plan strategy was developed within the Water Quality Management Plan for the site (GE18103-WQMP-NOV19), which detailed that monitoring that was to be undertaken prior to, during and following the intrusive groundworks on the site (deep foundation and piling works). Where groundworks were to be phased, monitoring was to be undertaken until all such works are completed in line with those phases.

Five monitoring wells were installed and selected to enable monitoring during the construction period (BH110, BH103, BHA, BHB & BHC), whilst the remaining wells have been decommissioned prior to the March 2020 monitoring. Table 7.1 below lists the testing frequency and suite of analysis that was agreed to be undertaken during the development works:

Locations	Frequency	Suite of Analysis	Phase
BH103, BH110 & BHA-BHC*	1No. visit to determine baseline conditions if commencement date on site >6 months past WQMP issue date	General brownfield suite, speciated PAH, TPH, MNA parameters, water quality parameters and ground water level.	Pre commencement
BH103, BH110 & BHA-BHC	Bi-monthly		Initial 6 months
BH103, BH110 & BHA-BHC	Quarterly		6-24 months
BH103, BH110 & BHA-BHC	Six-monthly		>24 months (to be reviewed and agreed with LA/EA subject to results during initial 24 months)
BH103, BH110 & BHA-BHC	1No. visit post intrusive development to confirm GW conditions following works on site.		Post Development on intrusive groundworks element

*Updated baseline from wells to be utilised for ongoing monitoring programme undertaken on 5th November 2019

Table 7.1 Groundwater Monitoring Schedule

The pre commencement monitoring visit was undertaken on 5th November 2019 to record the baseline conditions.

Table 7.2 details the response zones within the groundwater monitoring wells selected for monitoring in line with the WQMP during the development period.

Location	Standpipe diameter (mm)	Depth of Standpipe Response Zone (m bgl)	Level of Monitoring Well (m AOD)
BH103	50	7 – 10	7.92
BH110	50	10 - 15	7.83
BHA	50	7 – 10	7.75
BHB	50	7 – 10	7.75
BHC	50	7 - 10	8.10

Table 7.2 Summary of Monitoring Well Response Zones

Groundwater Monitoring and sampling visits were undertaken on the following dates:

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- 10th March 2020
- 12th May 2020
- 11th June 2020
- 3rd September 2020

The monitoring works in March and May 2020 were undertaken during the intrusive works being undertaken in Phases 1-4 of the site. The monitoring in June 2020 was undertaken following the completion of intrusive foundation and piling works in Phases 1-4. The monitoring undertaken in September 2020 was undertaken following completion of the intrusive foundation and piling works associated with Phase 5.

Following the completion of works in Phases 1-4 monitoring wells BH110 and BHA-C were subsequently decommissioned on 2nd July 2020 to ensure no ongoing pathways remained and to allow development works in these phases to continue. Following the completion of works in Phase 5 monitoring well BH102 was subsequently decommissioned on 19th November 2020.

Where monitoring wells have been decommissioned this has been undertaken in line with Environment Agency guidance and best practice. The groundwater analysis undertaken during the monitoring period are presented in Appendix G (Quarterly Groundwater Quality Assessment Letter Report (GE18103/AP01/200402) dated 2nd April 2020, presenting baseline 2019 and March 2020 Results and Appendix H presenting May, June and September 2020 monitoring results.

Groundwater was recorded at the following levels during the pre-commencement and subsequent monitoring visits undertaken on the site.

Position	Groundwater Level (m bgl)	Groundwater level (m AOD)	Dates
BH103	5.63	2.29	05/11/2019
	4.30	3.62	10/03/2020
	6.00	1.92	12/05/2020
	6.40	1.52	11/06/2020
	6.60	1.32	03/09/2020
BH110	5.67	2.16	05/11/2019
	4.18	3.65	10/03/2020
	5.92	1.91	12/05/2020
	6.30	1.53	11/06/2020
BHA	5.53	2.22	05/11/2019
	4.20	3.55	10/03/2020
	5.90	1.85	12/05/2020
	6.27	1.48	11/06/2020
BHB	5.92	1.83	05/11/2019
	4.57	3.18	10/03/2020
	6.21	1.54	12/05/2020
	6.64	1.11	11/06/2020
BHC	6.10	2.00	05/11/2019
	4.58	3.52	10/03/2020
	6.32	1.78	12/05/2020
	6.74	1.36	11/06/2020

Table 7.3 Summary of Groundwater Conditions (within Monitoring Standpipes)

7.2 Groundwater vs Human Health & Controlled Waters

A Tier 1 risk assessment for groundwater was undertaken as part of the Water Quality Management Plan for the site (GE18103/WQMP/NOV19). An updated Tier 1 assessment was subsequently undertaken and presented following receipt of the results of the groundwater analyses from the pre-commencement visit and first monitoring visit (10th March 2020), which was presented in the Quarterly Groundwater Quality Assessment Letter Report (GE18103/AP01/200402) dated the 2nd April 2020, a copy of which is presented in Appendix G. Groundwater analysis was compared against the Environmental Quality Standards for freshwater (EQS) and the Water Supply (Water Quality) Regulations 2000 and Water Framework Directive (WFD). A summary of contaminant concentrations encountered above the respective EQS, WFD and DWS guideline values (where available) over the monitoring period is presented within Table 7.4 below.

Location	Determinand	Concentration	Appropriate Standard	Dated Sampled
Barium	BH103 BHB	157ug/l 181ug/l	100ug/l (DWS)	05/11/2019
	BH103 BHB	118ug/l 221ug/l		10/03/2020
	BHB	213ug/l		12/05/2020
Boron	BHA BHC	1180ug/l 1080ug/l	1000ug/l (WHO)	11/06/2020
Nickel	BH103 BHB	44ug/l 41ug/l	8-40ug/l (EQS) 20ug/l (DWS)	12/05/2020
	BH103 BHB	49ug/l 49ug/l		11/06/2020
	BH103	59ug/l		03/09/2020
Iron	BH103 BHB	224ug/l 4880ug/l	1000ug/l (EQS) 200ug/l (DWS)	12/05/2020
	BHA	984ug/l		11/06/200
Sulphate	BHA	466mg/l	250 mg/l (DWS) 400mg/l (EQS)	12/05/2020
	BHA	599mg/l		11/06/2020
TPH	BH103	C21-35 Aro – 11.1ug/l TPH – 25ug/l	10ug/l (DWS) 5.47ug/l (WSV)	05/11/2019
	BH110	TPH – 23.2ug/l C12-C16 Ali 28.2ug/l		
	BHA	TPH – 36.6ug/l C21-C35 Aro – 22.7ug/l		
	BHB	TPH – 239ug/l C10-C12 Ali – 11.5ug/l C12-C16 Ali – 28.2ug/l C16-C21 Ali – 28.4ug/l C21-C35 Ali – 54.4ug/l C10-C12 Aro – 23.5ug/l C12-C16 Aro – 29.4ug/l C16-C21 Aro – 16.5ug/l C21-C35 Aro – 34.7ug/l		
	BH103	C21-35 Ali– 9.6ug/l C21-35 Aro– 7.3ug/l TPH – 169ug/l		12/05/2020
	BHA	C8-C10 Ali – 19.1ug/l C10-C12 Ali – 9.1ug/l		

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		C12-C16 Ali – 18.6ug/l C16-C21 Ali – 19.6ug/l C21-C35 Ali – 54.7ug/l C12-C16 Aro – 9.1ug/l C16-C21 Aro – 13.2ug/l C21-C35 Aro – 36.1ug/l TPH – 180 ug/l		
	BHB	C8-C10 Ali – 24ug/l C10-C12 Ali – 48.1ug/l C12-C16 Ali – 172ug/l C16-C21 Ali – 305ug/l C21-C35 Ali – 599ug/l C35-C40 Ali – 20.8ug/l C8-C10 Aro – 10.4ug/l C10-C12 Aro – 39ug/l C12-C16 Aro –163ug/l C16-C21 Aro – 297ug/l C21-C35 Aro – 505ug/l C35-C40 -Aro – 189.2ug/l TPH – 2200ug/l		
	BHC	C16-C21 Ali – 8.8ug/l C21-C35 Ali – 16.5ug/ C16-C21 Aro – 5.9ug/l C21-C35 Aro – 10ug/l TPH – 41.3ug/l		12/05/2020
	BH103 BHC	TPH – 11.3ug/l TPH – 19.2ug/l		11/06/2020
	BH103	C10-C12 Ali – 12.9ug/l C12-C16 Ali – 38.8ug/l C16-C21 Ali – 60.2ug/l C21-C35 Ali – 208ug/l C35-C40 Ali – 26.7ug/l C10-C12 Aro – 15.2ug/l C12-C16 Aro – 38.8ug/l C16-C21 Aro – 46.8ug/l C21-C35 Aro – 144ug/l C35-C40 Aro – 41.2ug/l TPH – 650ug/l		03/09/20
Anthracene	BH103 BHB	0.06ug/l 0.02ug/l	0.02ug/l (EQS)	10/03/2020
	BH110 BHB BHC	0.03ug/l 0.70ug/l 0.03ug/l		12/05/2020
Fluoranthene	BHA BHB BHC	0.03ug/l 0.04ug/l 0.06ug/l	0.02ug/l (EQS)	05/11/2019
	BH103 BHB	0.38ug/l 0.05ug/l		10/03/2020
	BH103 BH110 BHA	0.20ug/l 0.21ug/l 0.07ug/l		12/05/2020

	BHB BHC	5.31ug/l 0.33ug/l		
	BHB	0.03ug/l		11/06/2020
	BH103	0.04ug/l		03/09/2020
Benzo(a)pyrene	BHB BHC	0.01ug/l 0.03ug/l	0.01ug/l (WHO) 0.03ug/l (EQS)	05/11/2019
	BH103 BHB	0.13ug/l 0.01ug/l		10/03/2020
	BH103 BH110 BHA BHB BHC	0.12ug/l 0.12ug/l 0.04ug/l 6.20ug/l 0.30ug/l		12/05/2020
PAH Sum of four *	BH103	0.02ug/l	0.10ug/l (DWS)	3/9/2020
	BHC	0.11ug/l		05/11/2019
	BH103	0.52ug/l		10/03/2020
	BH103 BH110 BHA BHB BHC	0.36ug/l 0.33ug/l 0.13ug/l 19.57ug/l 0.87ug/l		12/05/2020

*benzo(b)fluoranthene, benzo(ghi)perylene, benzo (k) fluoranthene & indeno (1,2,3-c,d) pyrene.

- DWS - Water Supply (Water Quality) Regulations 1989.
- EQS - Environmental Quality Standards (freshwater)
- WSV – Atkins ATRISK values for groundwater

Table 7.4 Contaminant exceedances within Groundwater (ug/l) (November 2019 to September 2020)

Additional analysis was undertaken for biochemical oxygen demand, chemical oxygen demand, electrical conductivity, dissolved organic carbon and suspended solids was also undertaken during both visits. The results are presented in Table 7.5.

Location	Biochemical Oxygen Demand (mg/l)	Chemical Oxygen Demand (mg/l)	Electrical Conductivity (uS/cm)	Dissolved Organic Carbon (mg/l)	pH (pH units)	Suspended Solids (mg/l)	Date
BH103	6	23	1530	13	6.8	7700	05/11/2019
	6	10	1530	6.2	6.7	56	10/03/2020
	2	15	1480	5.9	6.7	52000	12/05/2020
	38	17	1610	7.9	6.7	4700	11/06/2020
	7	30	1570	6.7	6.7	17000	03/09/2020
BH110	<2	<2	1100	14	7.0	42	05/11/2019
	8	12	1400	6.3	6.7	8	10/03/2020
	<2	20	1530	7.0	6.7	870	12/05/2020
	4	15	1370	6.8	6.7	56	11/06/2020
BHA	<2	<2	1180	10	7.0	1200	05/11/2019
	3	7	1900	7.1	6.6	410	10/03/2020
	<2	8	1940	7.0	6.6	25000	12/05/2020
	2	17	2050	3.1	6.7	250	11/06/2020

BHB	12	31	2460	18	6.9	2200	05/11/2019
	9	33	1710	14	6.7	120	10/03/2020
	2	34	1660	13	6.7	20000	12/05/2020
	<2	30	1620	12	6.8	170	11/06/2020
BHC	<2	<2	1560	9.6	6.9	1200	05/11/2019
	5	5	2340	5.8	6.7	14	10/03/2020
	<2	11	2310	5.1	6.8	8300	12/05/2020
	<2	11	2200	5.4	6.8	28	11/06/2020

Table 7.5 Water Quality Results (November 2019 to September 2020)

In line with the RSVP and WQMP the aim of the development was to provide a long term betterment of the site's groundwater quality. As such based following a review of the baseline and the development proposals it is considered that no specific remediation is required in this respect of groundwater, however it was agreed that a period of groundwater monitoring would be undertaken during the intrusive element of the development works (piling and foundations) in order to demonstrate that the proposed development had not resulted in a detrimental impact to the site.

Based on the chemical laboratory results, elevated concentrations have either remained at similar levels and order of magnitude to those previously recorded as part of the baseline assessment for the site or, where slight exceedances have been identified, further monitoring has shown that these concentrations have subsequently decreased following the intrusive works. A slight increase in suspended solids was noted following the piling works in Phase 1-4 and to lesser degree in Phase 5, however monitoring has shown that this generally reduced back down in line with background levels within 1 month of these elements of works ceasing. These elements could also have been affected by variations in groundwater levels recorded over the monitoring period. The water results have generally improved between monitoring visits, with increases in biological and chemical oxygen demand and decreases with dissolved organic carbon.

The groundwater analysis monitoring results have also been tabulated per borehole and presented in Appendix H to show the variation in concentration between locations over the monitoring period and in line with the baseline monitoring undertaken for the site.

Whilst some slight variation in concentrations recorded has been recorded over the intrusive development works (foundations and piling) it is considered that the works have not resulted in an increased or determinantal impact to controlled waters. The proposed development is reducing the infiltration through the site compared with the previous land use and will continue to offer a longer term betterment and improvement of groundwater quality beneath the site.

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8.0 DISCOVERY STRATEGY

A discovery strategy remains in place throughout the development works on this site. Geo-Environmental have not been made aware of any discoveries having been made to date and thus the strategy, as set out in the RSVP did not require enacting. However, the strategy remains in place for the remainder of the development works.

9.0 VERIFICATION

In accordance with the Client's instruction, Geo-Environmental undertook routine and independent inspection during key stages of the construction process. The risk mitigation measures in relation to remedial measures for Plots 1-15, have been inspected and were considered to comply with the requirements of the design and Remediation Strategy and Verification Plan at the point of inspection, or defects otherwise noted and subsequently rectified and plots re-inspected. Further plots and validation works for the site will be reported via an updated report or under separate cover in due course.

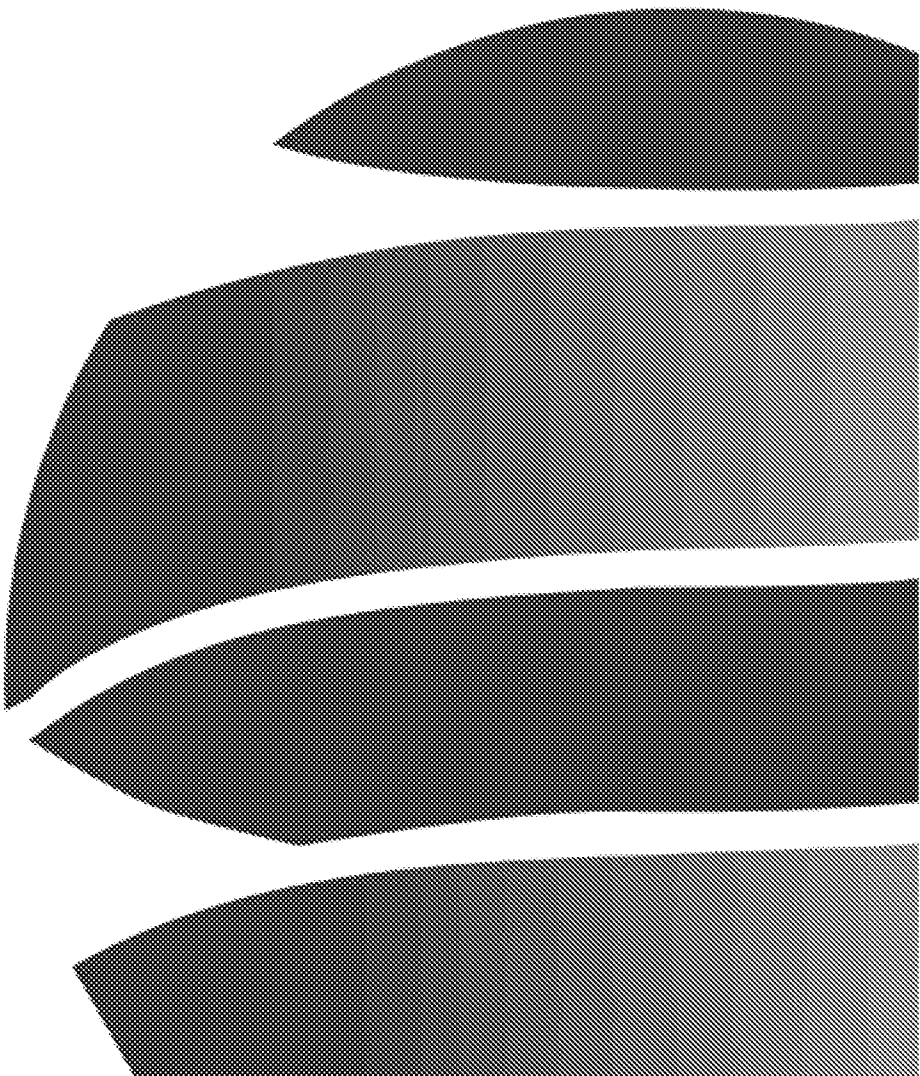
Please be aware that the independent inspection and validation of the gas protection measures installed presented within this report relates to the works undertaken up to the point of inspection. Geo-Environmental accept no responsibility or liability for any works following the inspection that may have resulted in subsequent damage to the gas protection measures and membranes installed due to any failure to protect the membrane prior to or after screeding works on site. In addition, the inspection of the installed soil cover system was undertaken by Geo-Environmental via the excavation of a selected number of hand pits. There was no visual evidence on the site to indicate that the areas remote from the pits undertaken were likely to differ significantly from the areas where the pits had been undertaken for inspection. As such, the confirmation of the presence of a geo-textile membrane, the confirmation of depth and composition of subsoil and Topsoil has only been independently verified by Geo-Environmental within these hand pit locations. It has been assumed that these hand pits are representative of the imported soils within the garden areas of Plots 1-15.

Geo-Environmental can only verify the installation of a cover system at the locations inspected at the time of inspections. Geo-Environmental accepts no liability for areas that have not been directly inspected or works that have subsequently been undertaken on the site following our inspection visit(s) that may in any way alter or affect the validation works inspected and reported herein.

The report relates solely to the validation of the remedial measures installed within Plots 1-15. Validation with respect the remaining Plots will be presented under separate cover in due course.

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FIGURES





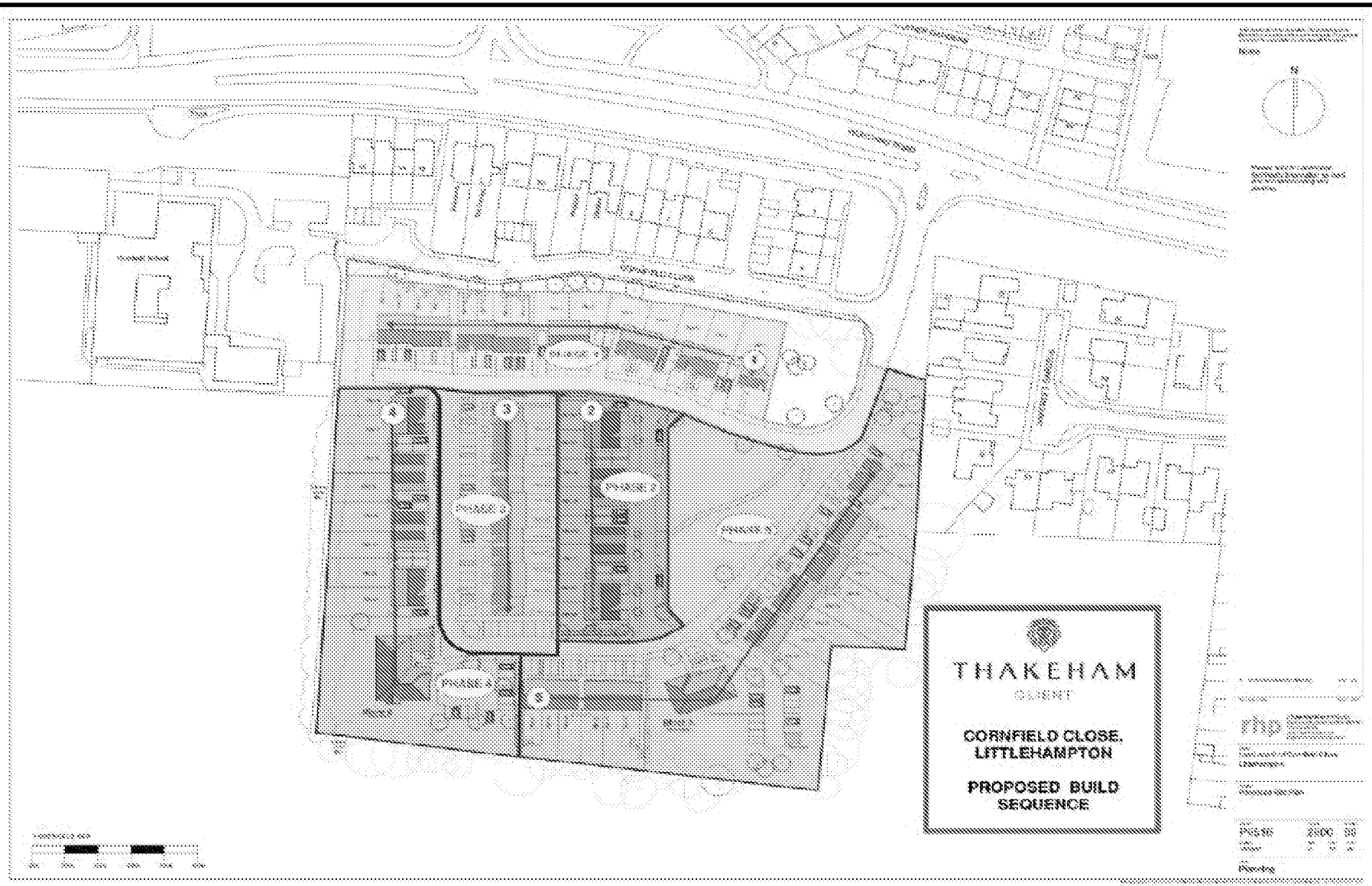
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Client:	Thakeham Homes			**Geo-Environmental Services Ltd**	
Ref No:	GE18103	**Revision:**	0	**Unit 7 Danworth Farm, Cuckfield Road**	
Drawn:	LL	**Date:**	01/10/2019	**Hurstpierpoint, West Sussex BN6 9GL**	
Figure:	1	**Scale:**	Not To Scale	**+44(0)1273 832972 www.gesl.net**	Geo-Environmental

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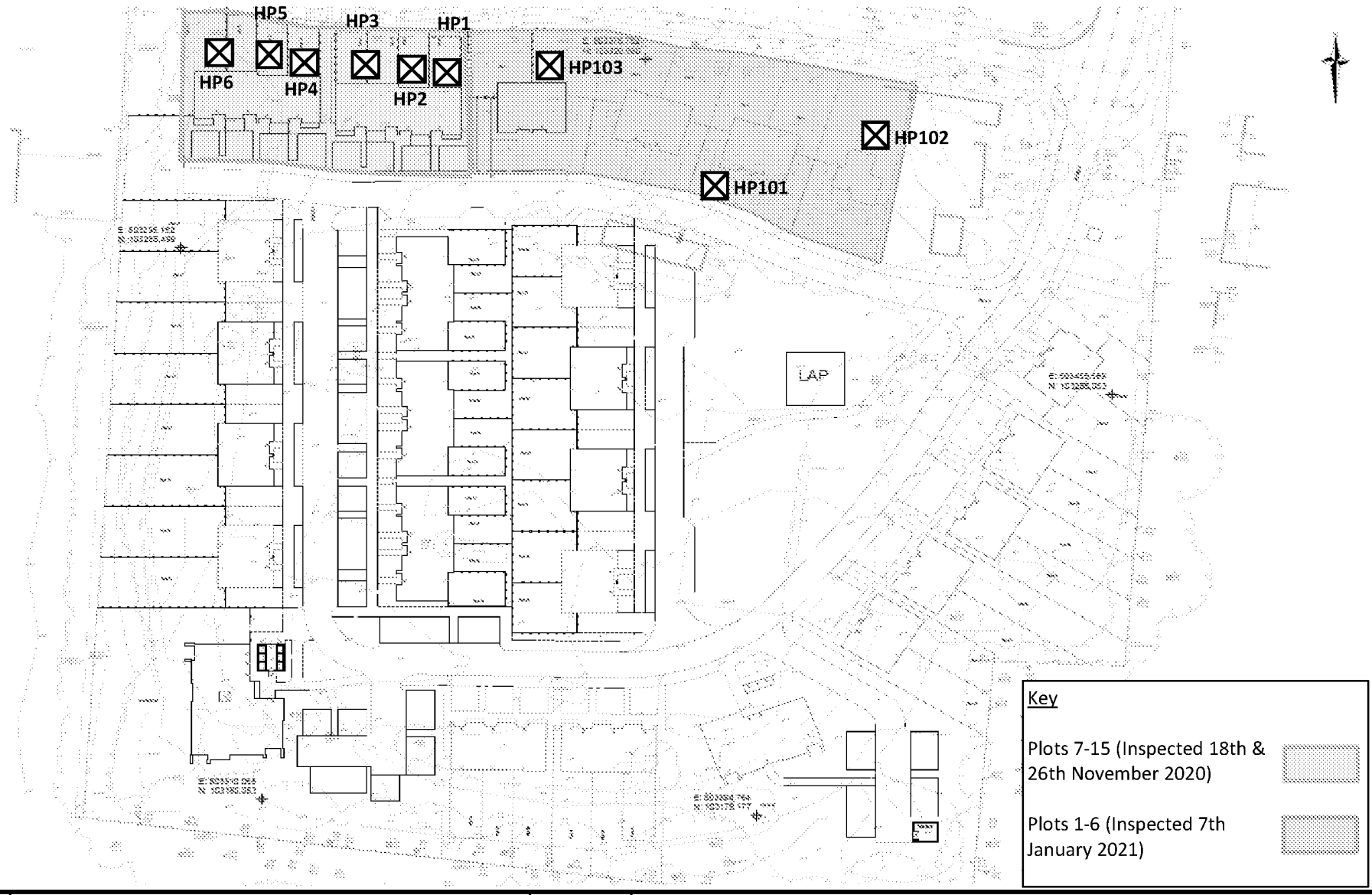
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Client:	Thakeham Homes			**Geo-Environmental Services Ltd** **Unit 7 Danworth Farm, Cuckfield Road** **Hurstpierpoint, West Sussex BN6 9GL** **+44(0)1273 832972 www.gesl.net**	Geo-Environmental
Ref No:	GE18103	**Revision:**	0		
Drawn:	LL	**Date:**	01/10/2019		
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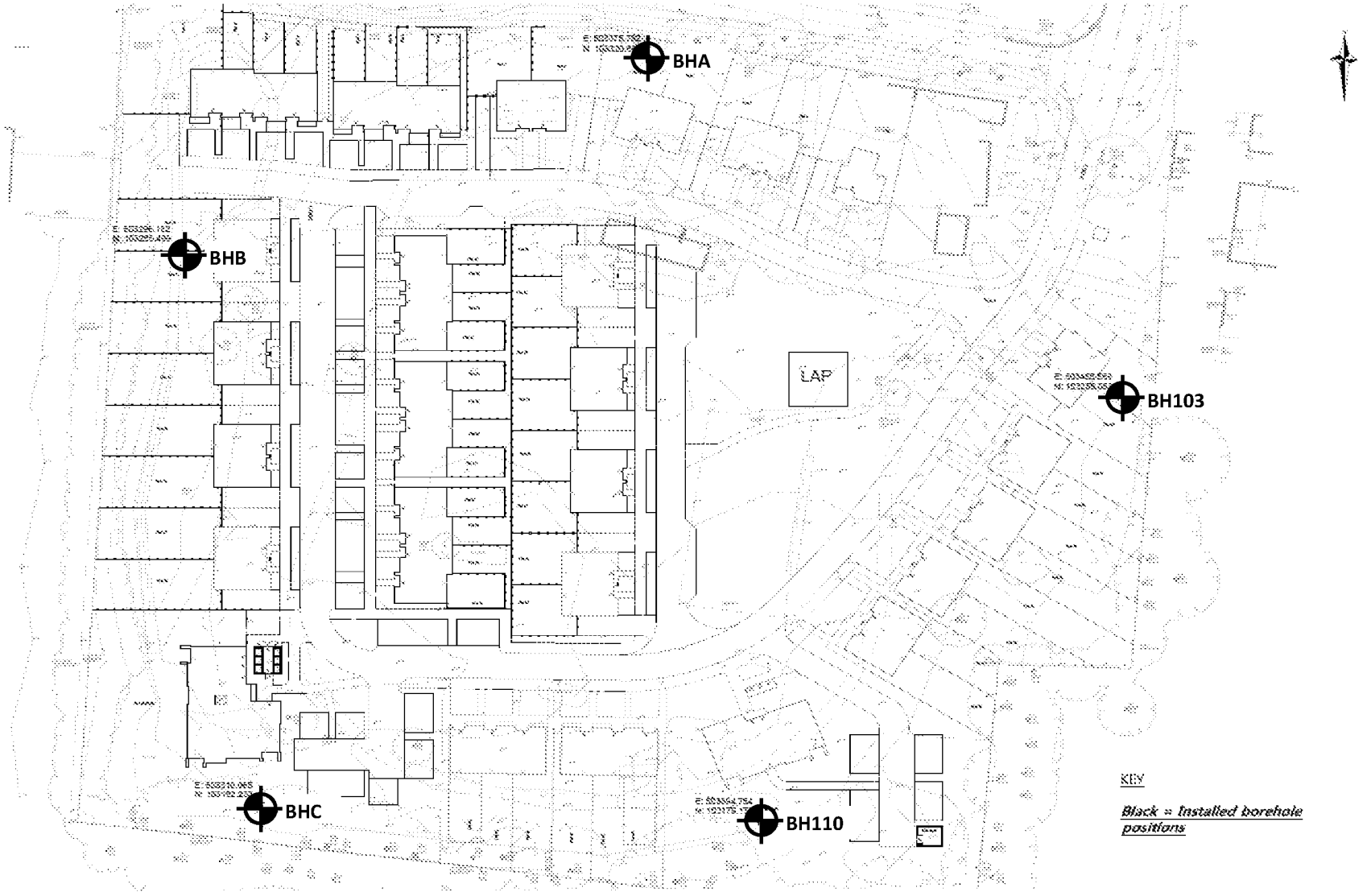
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Client:	Thakeham Homes			**Geo-Environmental Services Ltd**	
Ref No:	GE18103	**Revision:**	0	**Unit 7 Danworth Farm, Cuckfield Road**	
Drawn:	LL	**Date:**	01/10/2019	**Hurstpierpoint, West Sussex BN6 9GL**	
Figure:	3	**Scale:**	Not To Scale	**+44(0)1273 832972 www.gesl.net**	Geo-Environmental

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Project:	Cornfield Close, Littlehampton, West Sussex			**Title**	Validation Sample Location Plan (Plots 1-5)
Client:	Thakeham Homes			**Geo-Environmental Services Ltd**	
Ref No:	GE18103	**Revision:**	0	**Unit 7 Danworth Farm, Cuckfield Road**	
Drawn:	FG	**Date:**	12/01/2021	**Hurstpierpoint, West Sussex BN6 9GL**	
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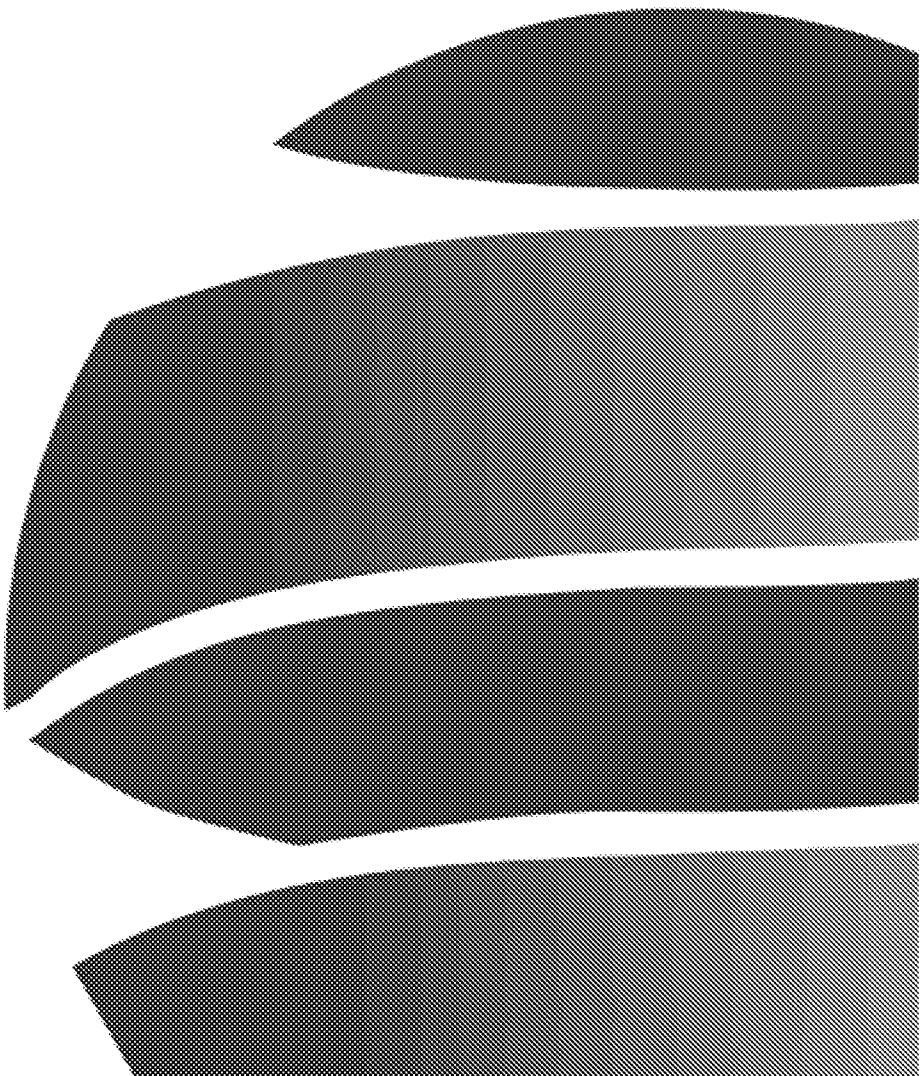
Project:	Cornfield Close, Littlehampton, West Sussex			**Title**	Groundwater Monitoring Well Borehole Locations (BH103, BH110, BHA, BHB and BHC)
Client:	Thakeham Homes			**Geo-Environmental Services Ltd** **Unit 7 Danworth Farm, Cuckfield Road** **Hurstpierpoint, West Sussex BN6 9GL** **+44(0)1273 832972 www.gesl.net**	Geo-Environmental
Ref No:	GE18103	**Revision:**	0		
Drawn:	LL	**Date:**	01/10/2019		
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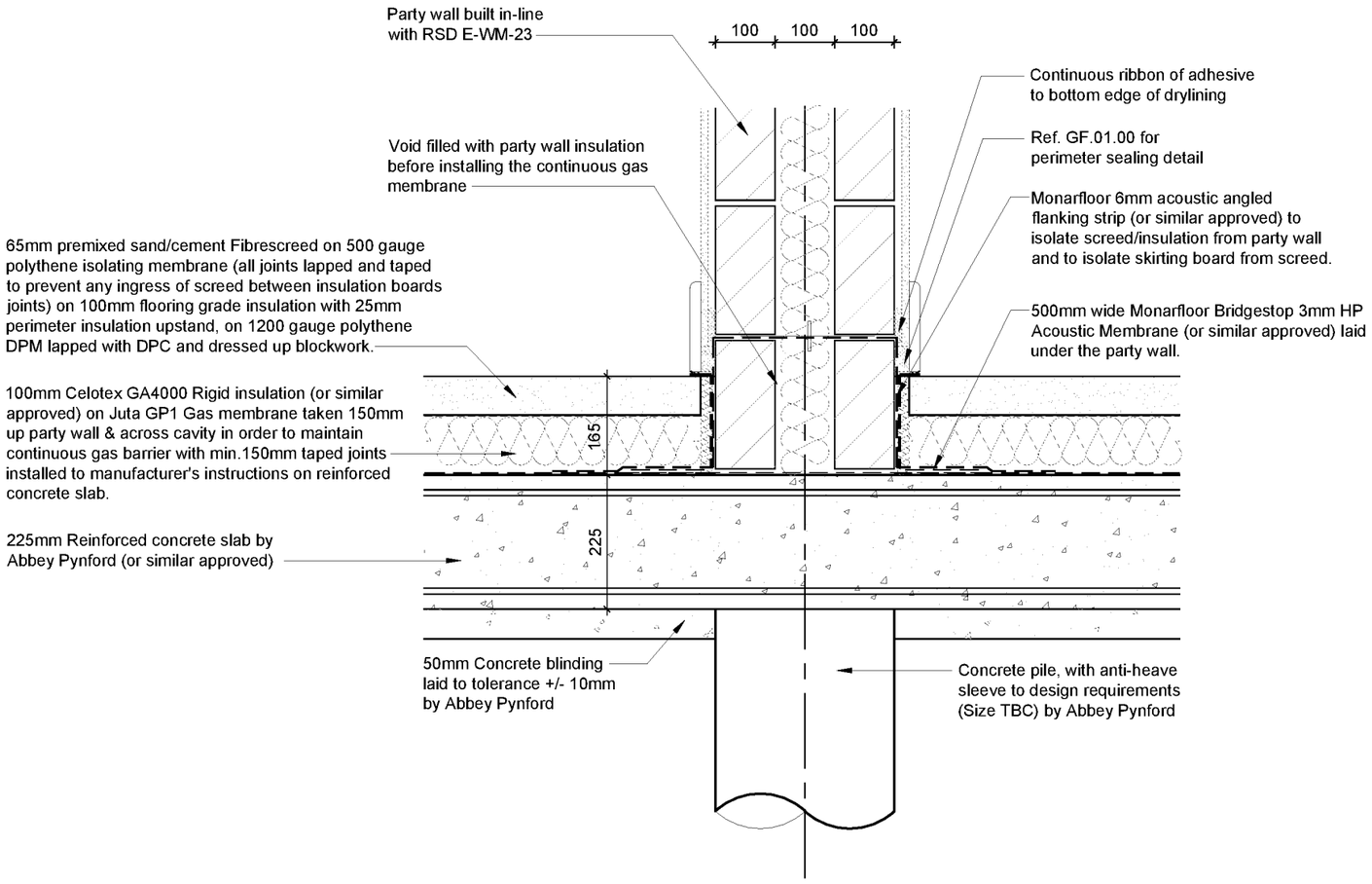
Geo-Environmental

APPENDIX A

Proposed Floor Construction Detail Plans (Flats and Houses)



Drawing to be read in conjunction with Construction Specification & Standard Details



PARTY WALL/G.F. SLAB SUBSTRUCTURE DETAIL - MASONRY APARTMENTS

(GROUND WORKS TO BE IN STRICT ACCORDANCE WITH ENGINEERS DETAILS & INFORMATION)

CONSTRUCTION

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Do not scale from this drawing, other than for Local Authority Planning purposes.

This drawing is to be read in conjunction with all relevant consultants, specialist manufacturers drawings and specifications.

Any discrepancies in dimensions or details on or between these drawings should be drawn to our attention.

All dimensions are in millimetres unless noted otherwise.

Any surveyed information incorporated within this drawing cannot be guaranteed as accurate unless confirmed by fixed dimension.

Party Wall/G.F. Slab Substructure Detail
Littlehampton - (Masonry Apartments)

REV	DATE	DESCRIPTION	INITIAL	CHECKED
C03	19.12.19	DETAIL UPDATED TO SUIT GAS MEMBRANE COMMENTS.	AJH	CD
C02	09.10.19	SUB FLOOR VOID & VENTS OMITTED & DPC'S UPDATED.	AJH	CD
C01	12.06.19	ISSUED FOR CONSTRUCTION	AJH	CD
P02	07.03.19	225mm AIR VOID AND TELESCOPIC VENTS INTRODUCED.	AJH	CD
P01	07.12.18	FIRST ISSUE	AJH	CD

enquiries@architecture.co.uk
01344 752 271

CLIENT: THAKEHAM CLIENT

PROJECT: CORNFIELD CLOSE, LITTLEHAMPTON

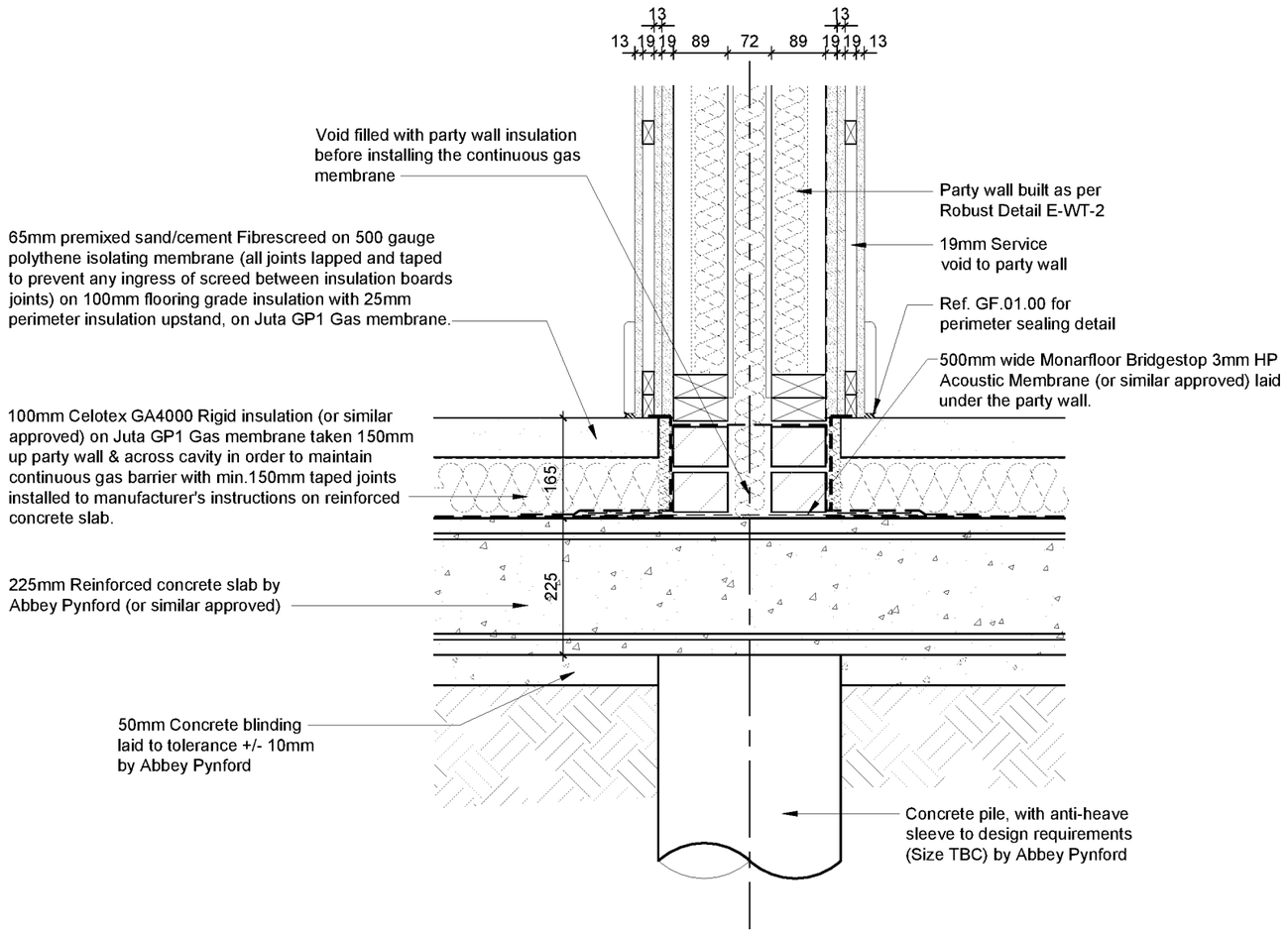
TITLE: PARTY WALL/G.F. SLAB SUBSTRUCTURE MASONRY APARTMENTS

SCALE	DATE	PROJECT NO
1:10 @ A3	07/12/18	18.335

DRAWN	CHECKED	
AJH	CD	M637_60.50.03 C03

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Drawing to be read in conjunction with Construction Specification & Standard Details



PARTY WALL/G.F. SLAB SUBSTRUCTURE DETAIL - TIMBER FRAME HOUSES

(GROUND WORKS TO BE IN STRICT ACCORDANCE WITH ENGINEERS DETAILS & INFORMATION)

CONSTRUCTION

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Do not scale from this drawing, other than for Local Authority Planning purposes.

This drawing is to be read in conjunction with all relevant consultants, specialist manufacturers drawings and specifications.

Any discrepancies in dimensions or details on or between these drawings should be drawn to our attention.

All dimensions are in millimetres unless noted otherwise.

Any surveyed information incorporated within this drawing cannot be guaranteed as accurate unless confirmed by fixed dimension.

Party Wall/G.F. Slab Substructure Detail
Littlehampton - (Timber Frame Houses)

REV	DATE	DESCRIPTION	INITIAL	CHECKED
C03	19.12.19	DETAIL UPDATED TO SUIT GAS MEMBRANE COMMENTS.	AJH	CD
C02	09.10.19	SUB FLOOR VOID & VENTS OMITTED, PARTY WALL DETAIL AMENDED.	AJH	CD
C01	12.06.19	ISSUED FOR CONSTRUCTION	AJH	CD
P02	07.03.19	225mm AIR VOID AND TELESCOPIC VENTS INTRODUCED.	AJH	CD
P01	07.12.18	FIRST ISSUE	AJH	CD

enquiries@architecture.co.uk
01344 752 271

CLIENT: THAKEHAM CLIENT

PROJECT: CORNFIELD CLOSE, LITTLEHAMPTON

TITLE: PARTY WALL/G.F. SLAB SUBSTRUCTURE TIMBER FRAME HOUSES

SCALE: 1:10 @ A3 | DATE: 07/12/18 | PROJECT NO.: 18.335

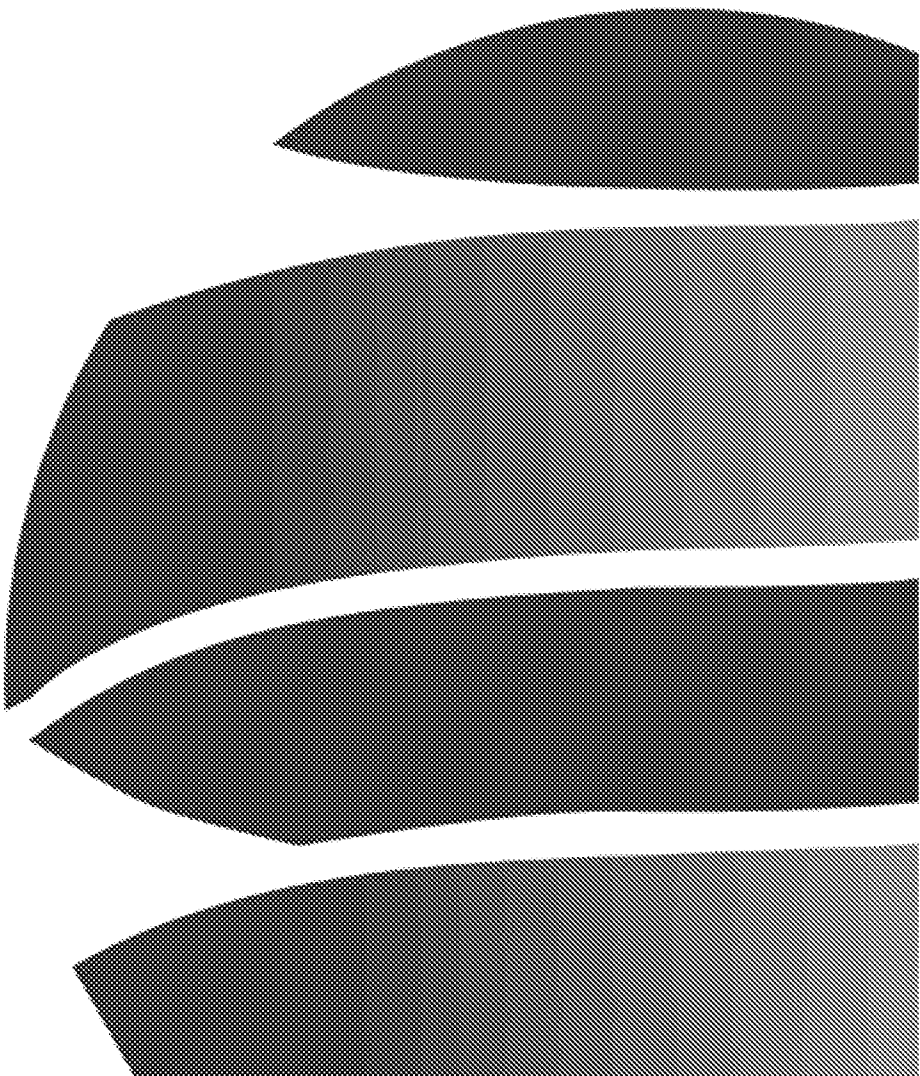
DRAWN: AJH | CHECKED: CD

M637_60.50.04 C03

Geo-Environmental

APPENDIX B

Visual Inspection Records of Gas Membrane Installations



Geo-Environmental

Project Name	Cornfield Close, Littlehampton
Project No.	GE18103
Client	Thakeham
Geo-Environmental Project Manager's Email	[redacted]
Date	11/06/2020, 13:20
Site Engineer	
Toby Smith	[redacted]
Weather at time of inspection	Overcast, light wind.
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential
Plot No.	Plot 2 - unfinished - cavity walls only half conpleted
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

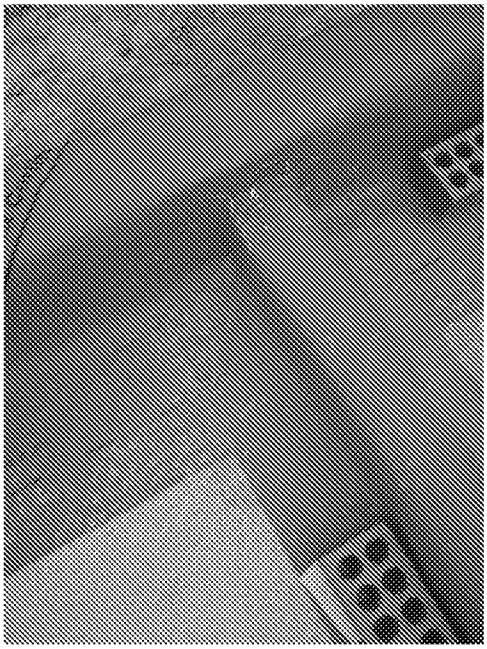
1.1 Condition of sub-grade and underside of membrane	Clean, recently swept flat concrete.
1.2 Gas membrane type	Keytec 400 HP - Self branded bought from Juta.
1.3 Gas membrane condition	Very good. No sign of previous repair or weakness.
Jointing tape product	Membrane cutouts used as principal joint tape. 301483 Foil Band 150mm width/ 1.5mm thickness/10m length - Aluminum heat weld membrane tape - used around service ducts.
1.5 Lapping design	Lapped >=50mm in all areas where achievable
1.6 Laps, welds and joints seals	Heat welded membrane used to seal joints.
1.7 Service seals	Seal with foil band weld membrane joining tape.

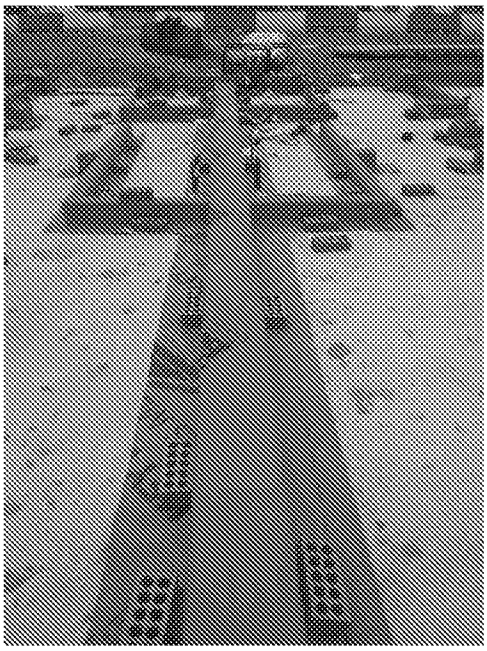
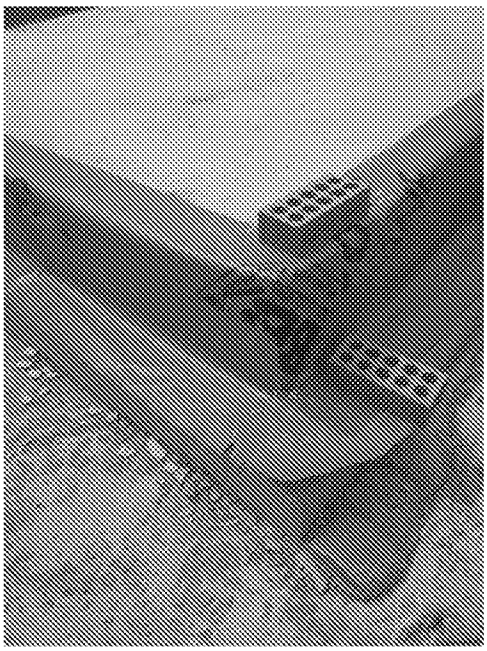
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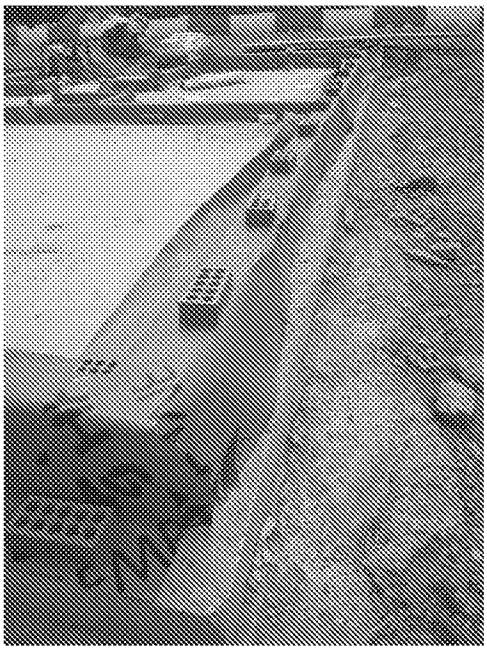
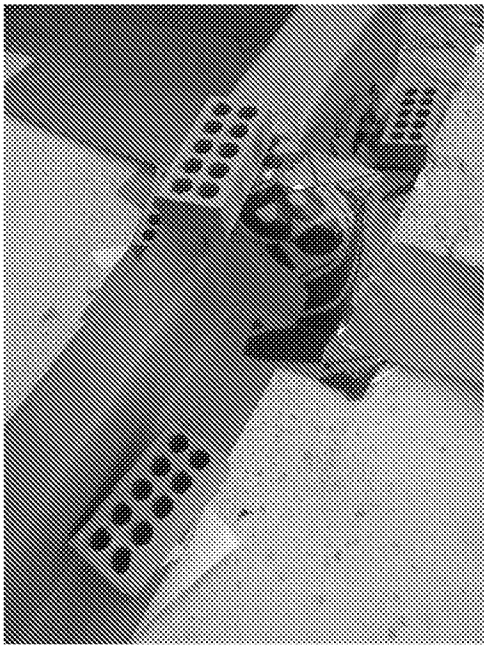
Photographs

(7 records)

Photograph	*Photograph Title*

	Area - incomplete
	Inner wall
	Service

	Inner walls - centre
	Outer wall corner north east

	Outer North West - still unfinished
	Inner walls south (front of property)

5. PASS/FAIL

The gas protection measures inspected:	Are acceptable & comply with the specification
Details of issues	
Approved by	
Fiona Goode	[redacted]
Date	11/06/2020

Geo-Environmental

Project Name	Cornfield Close, Littlehampton
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	11/06/2020, 12:22
Site Engineer	
Toby Smith	[redacted]
Weather at time of inspection	Overcast, light wind but dry.
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential housing
Plot No.	Plot 1 - wall cavity only - unfinished.
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

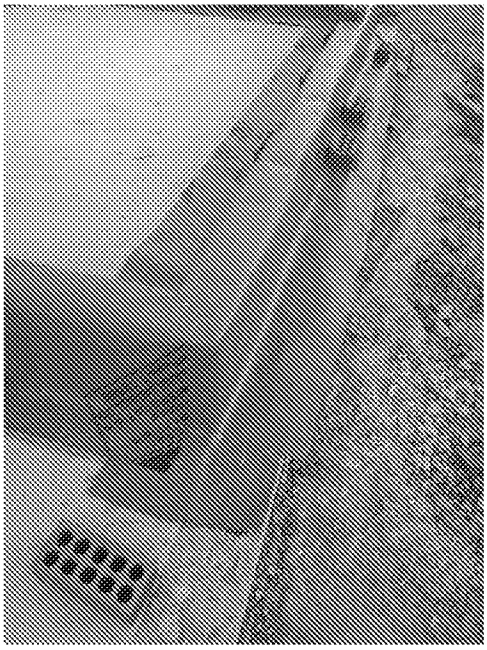
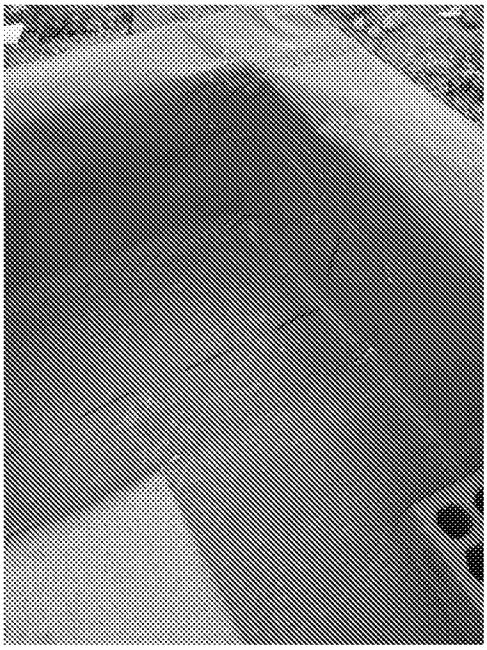
1.1 Condition of sub-grade and underside of membrane	Very clean, recently swept.
1.2 Gas membrane type	Keytec 400 HP - bought from Juta branded by Keytec. Red. Stored in van.
1.3 Gas membrane condition	No punctures, evidence of footprints, repairs or weakness. Joining tape will be used to protect membrane against wooden beam installation at later date
Jointing tape product	Membrane used as principal joint tape as opposed to membrane tape due to longer life span (25 years). Joining tape used on service ducts only. Brand:301483 Foil Band 150mm width/ 1.5mm thickness/10m length - Aluminum heat membrane tape - used around service ducts
1.5 Lapping design	Joints lapped and welded. Overlap >=50mm across all welds.
1.6 Laps, welds and joints seals	Welds very securely sealed. Membrane used to seal at joints as opposed to joining tape.
1.7 Service seals	Services sealed with heat sealed tape

4. PHOTOGRAPHS

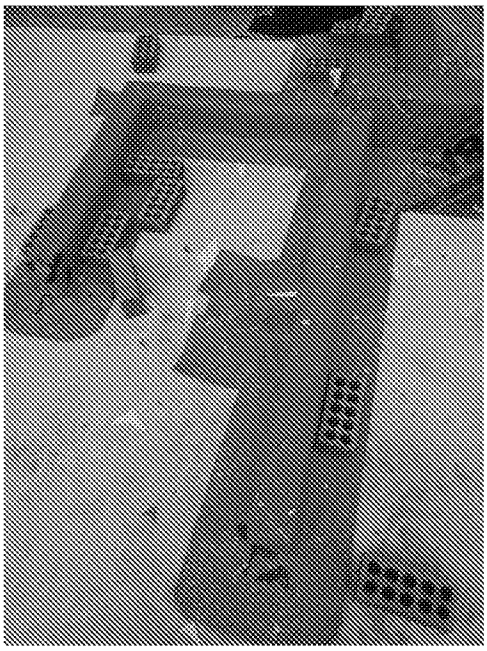
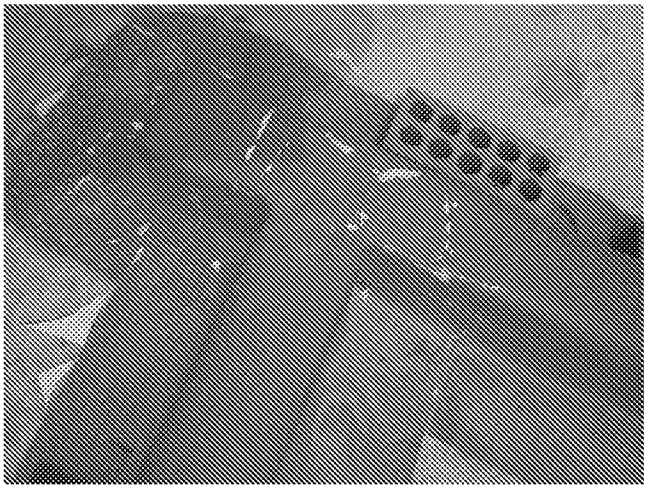
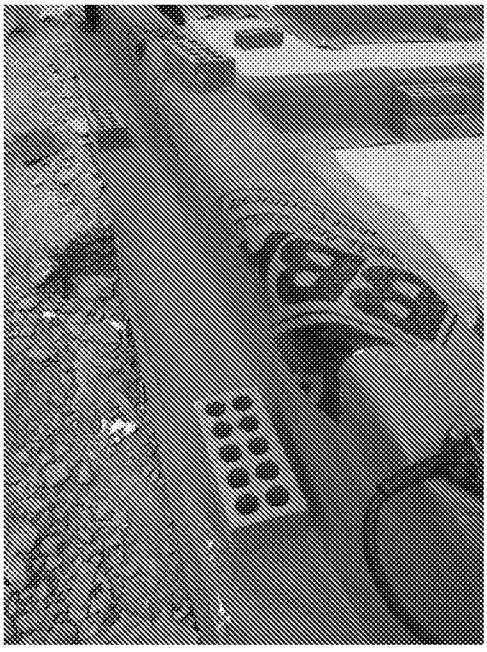
Photographs

(8 records)

Photograph	*Photograph Title*

	Outer corner
	Area
	Overlap on inside corner.

	Alum tape around service duct
	Foil tape around service duct

	Sufficient length for overlap
	Joint sealed with no gaps or voids
	Outer layer seal

5. PASS/FAIL

The gas protection measures inspected:	Are acceptable & comply with the specification
Details of issues	
Approved by	
Fiona Goode	[redacted]
Date	11/06/2020

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham
Geo-Environmental Project Manager's Email	[redacted]
Date	02/07/2020, 12:59
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Windy, overcast, warm
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Semi detached and terraced houses
Plot No.	Plots 2-4 timber frame and Plots 5-15 perimeter
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

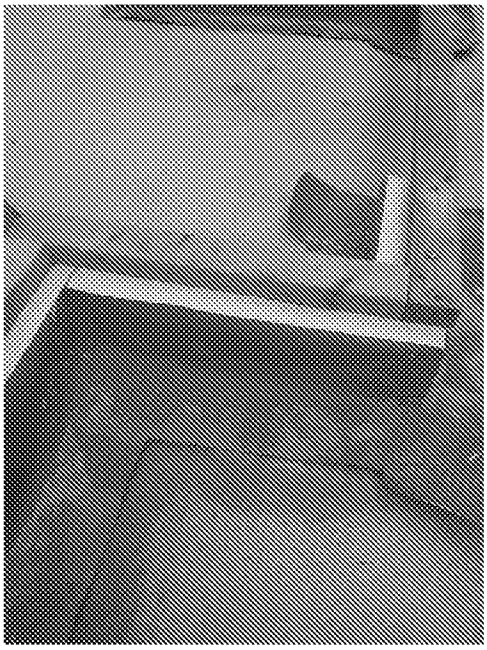
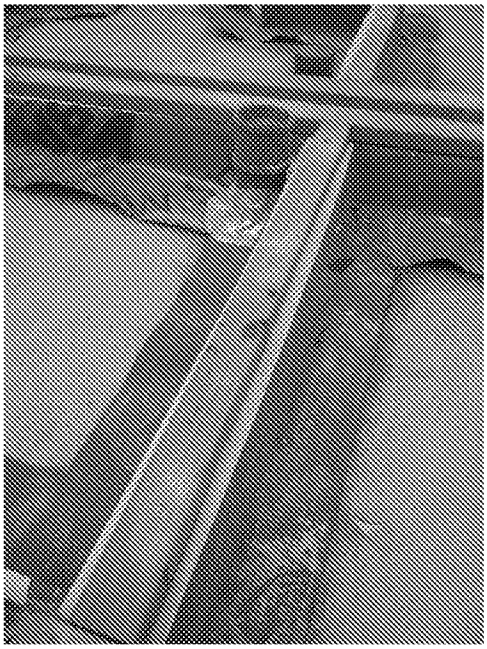
1.1 Condition of sub-grade and underside of membrane	Good condition, clean with no visible damage
1.2 Gas membrane type	Keytec gas resistant 400 membrane and on a few plots black juta unbranded gas resistant membrane
1.3 Gas membrane condition	Membrane in good condition some dust but well protected
Jointing tape product	Heat sealed, no tape
1.5 Lapping design	At least 100mm lap on all joins
1.6 Laps, welds and joints seals	All heat sealed and well sealed
1.7 Service seals	Site made seals around all services that fall within perimeter. Services outside perimeter yet to be sealed

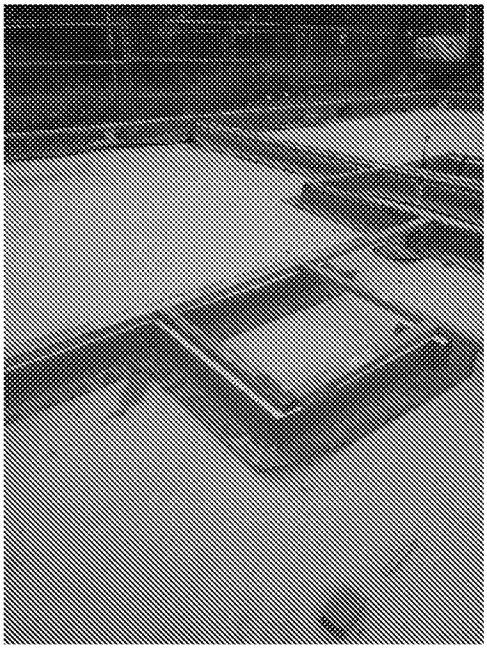
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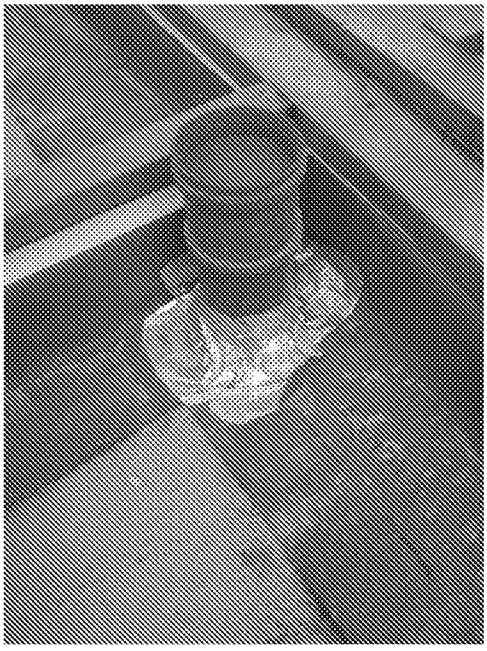
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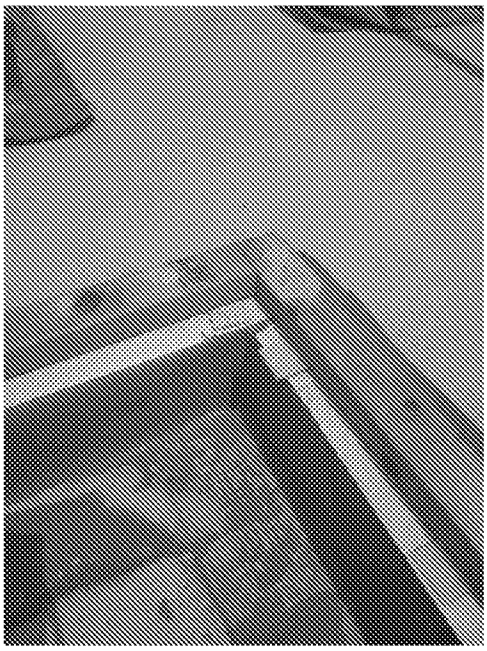
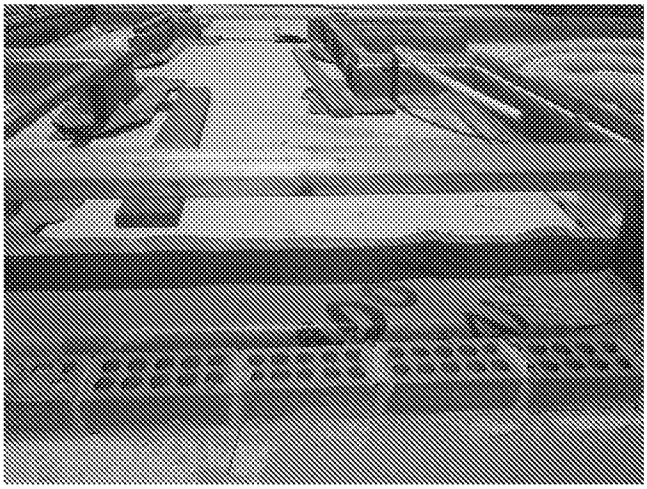
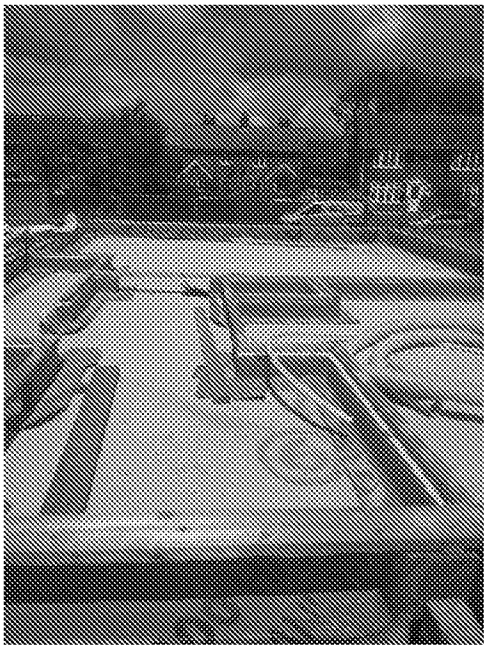
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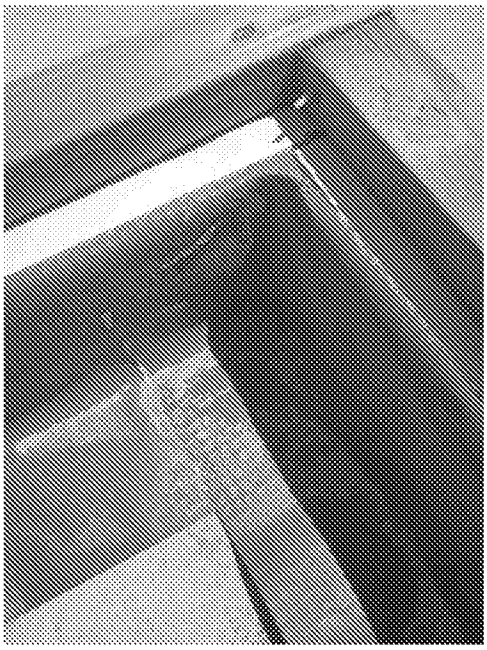
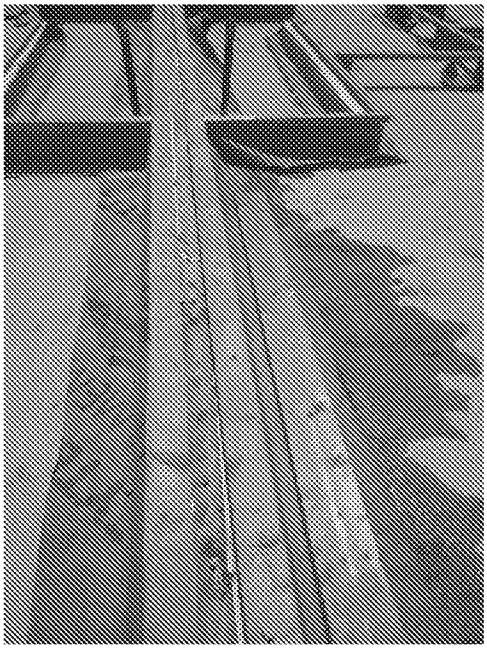
Photograph	*Photograph Title*

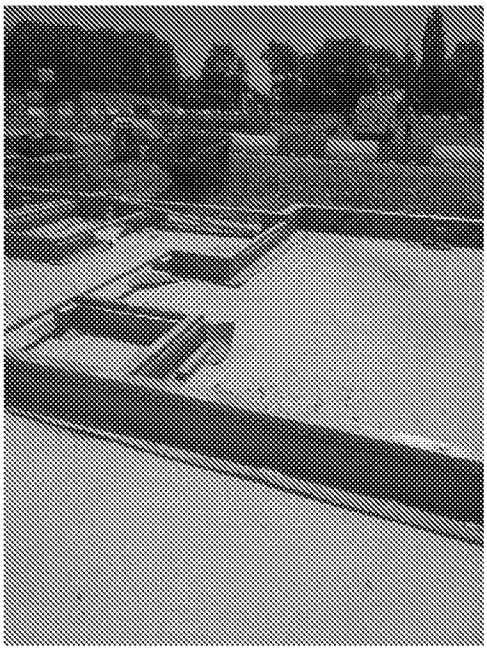
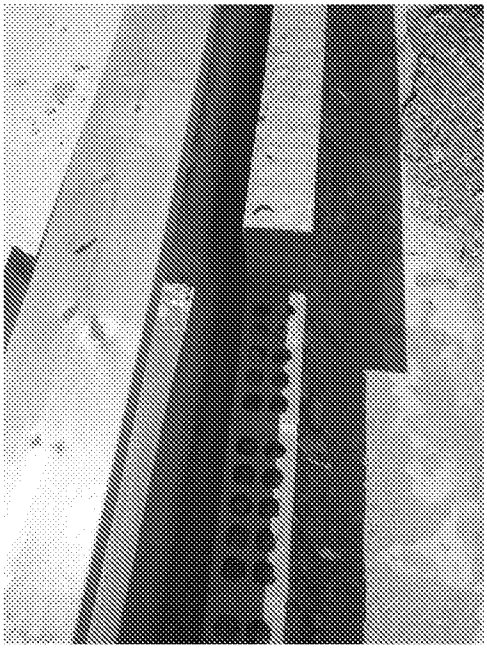
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	Plot 2 timber

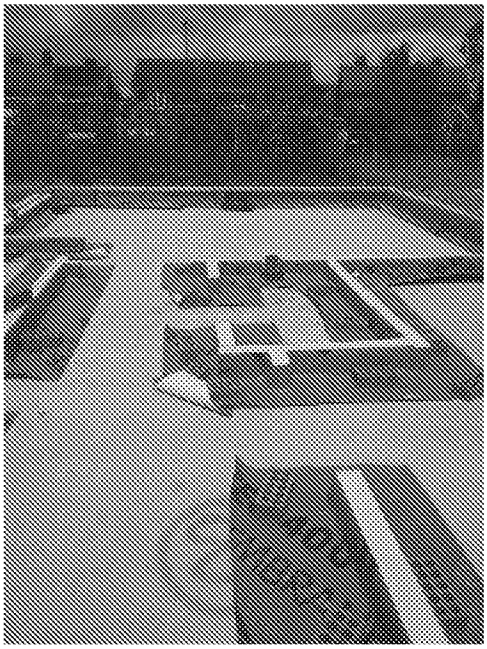
	Plot 5 underside
	Plot 5 overview

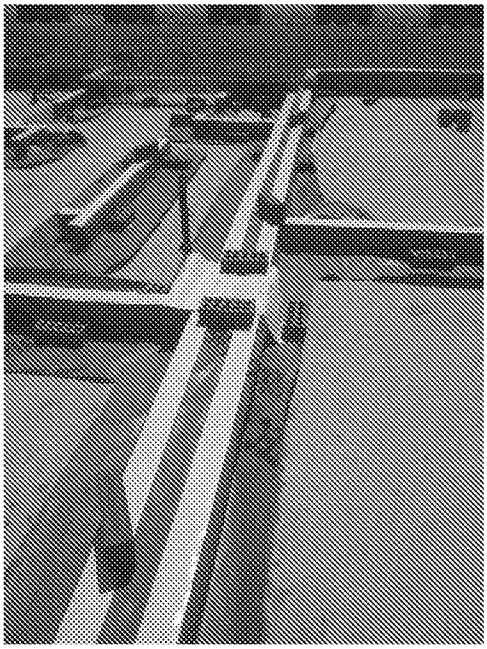
	Plot 5 corner
	Plot 5 services

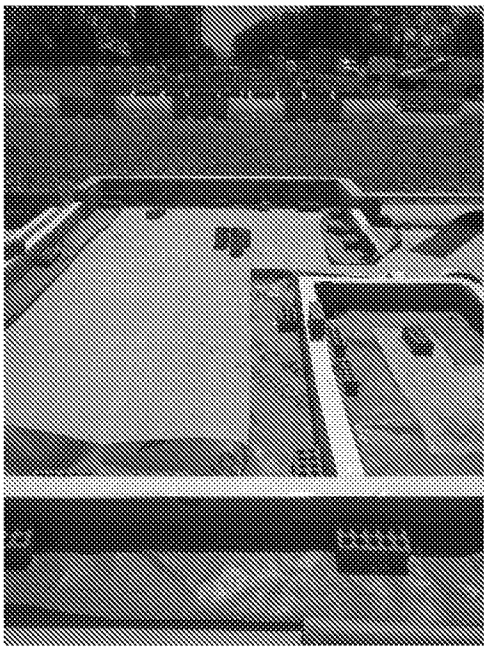
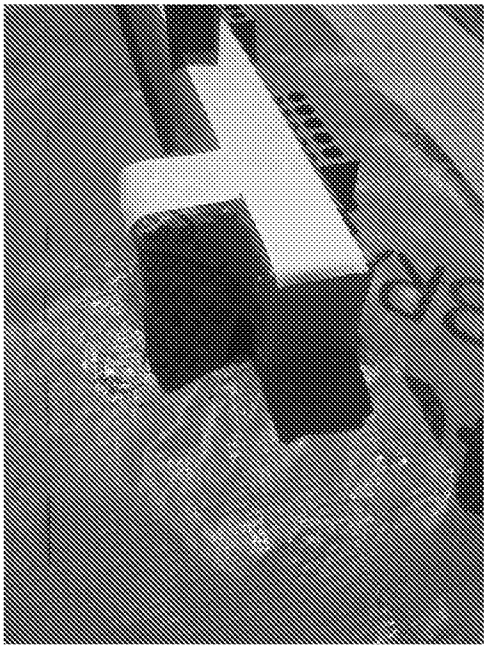
	Plot 4 timber
	Plot 6 doorway
	Plot 6 overview

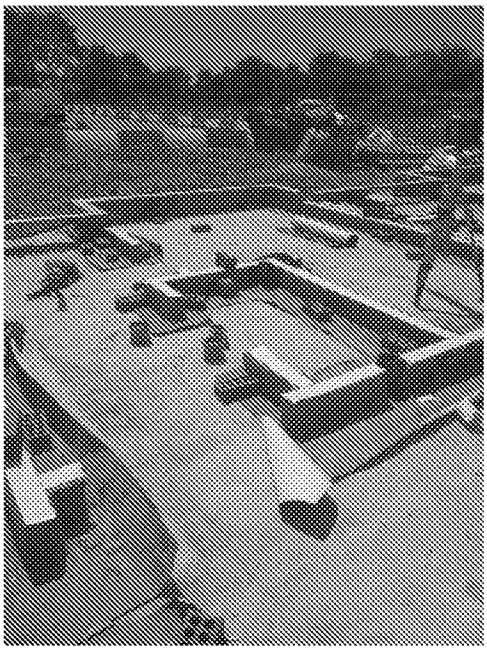
	Plot 6 corner
	Plots 6 and 7

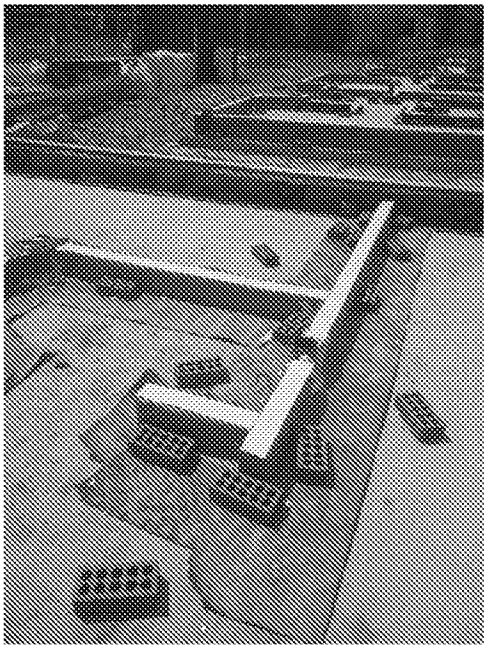
	Plot 7 overview
	Plot 7 cavity

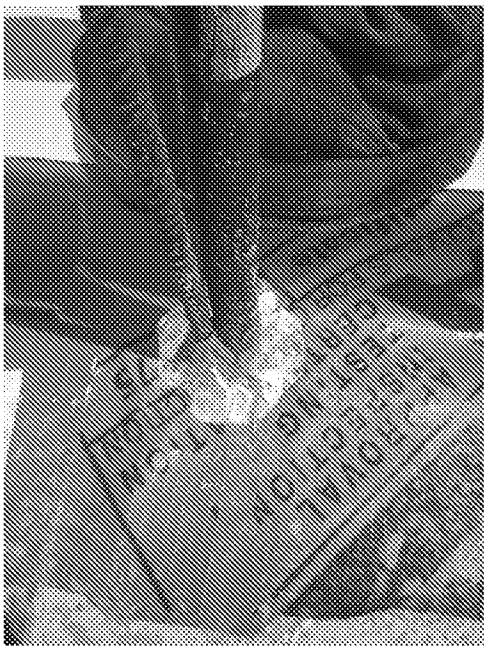
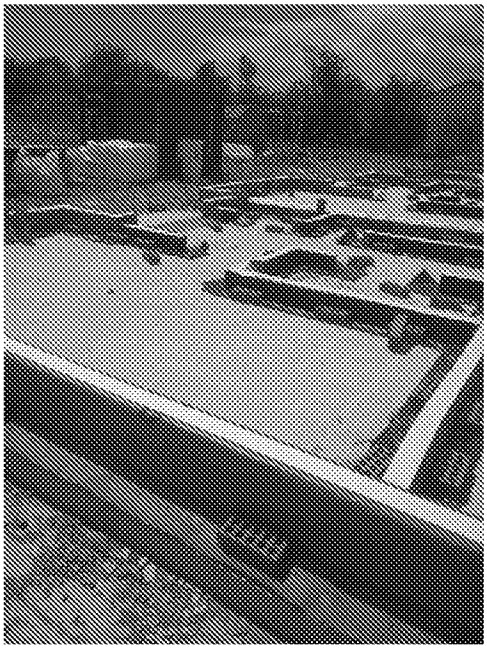
	Plot 7 services
	Plot 8 overview

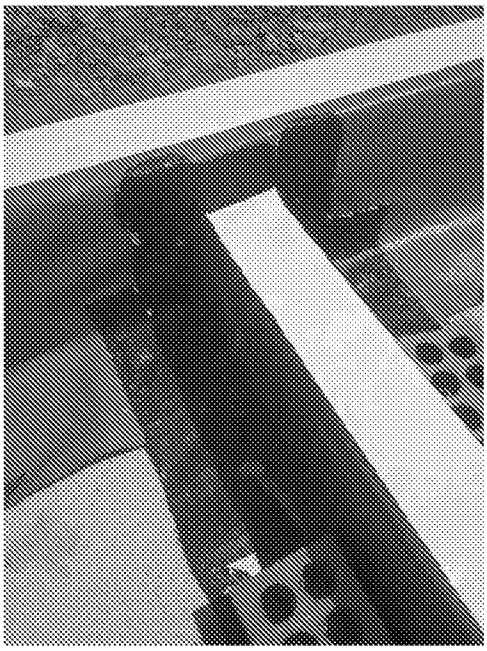
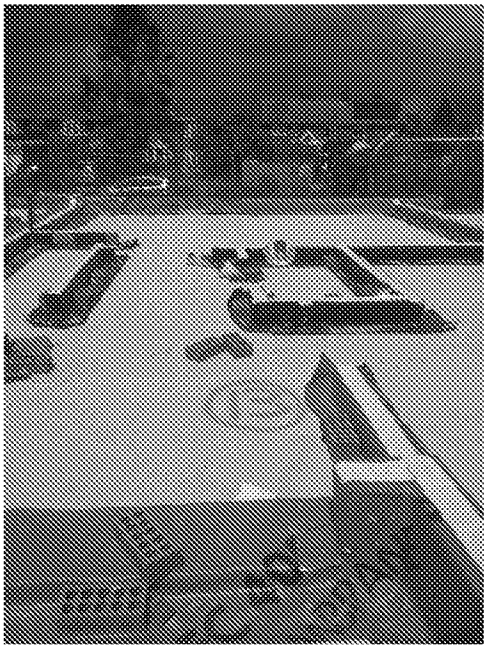
	Plot 8 services
	Plot 8 and 9

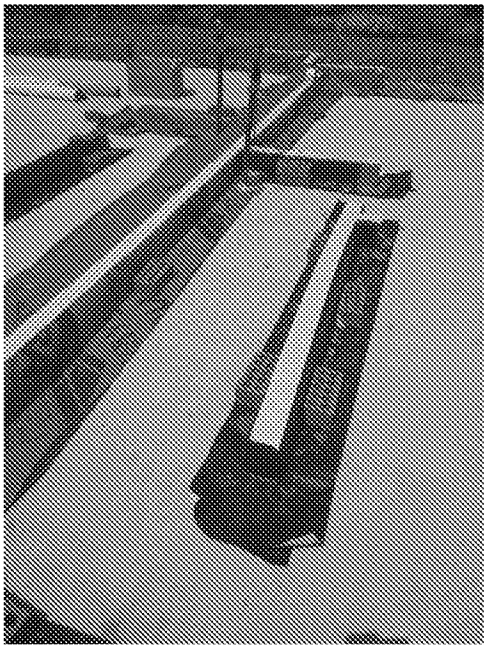
	Plot 9 overview
	Plot 9 corner

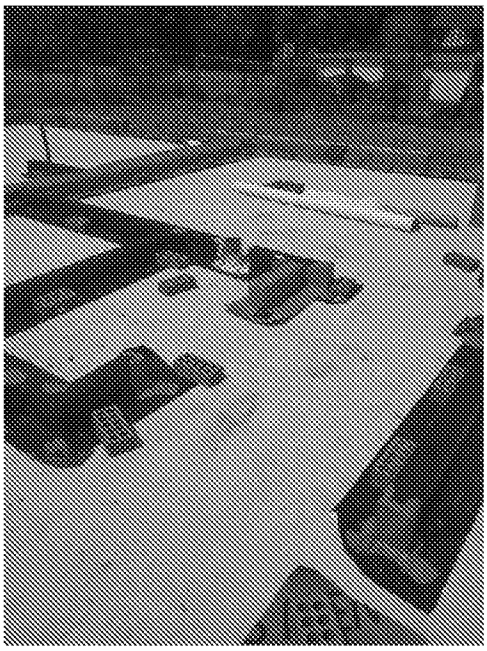
	Plot 10 overview
	Plot 10 wall

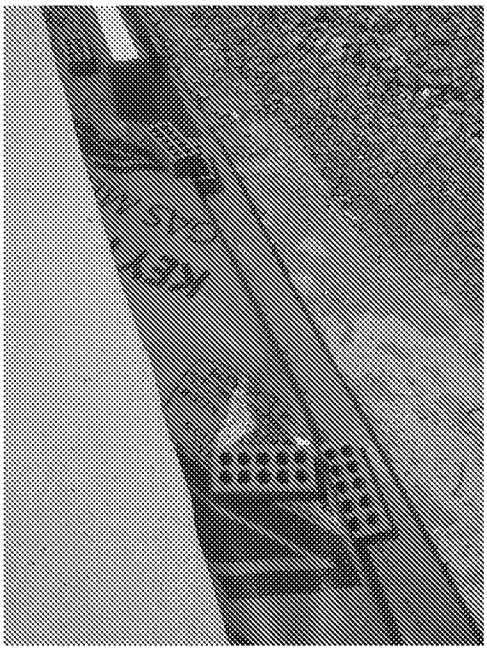
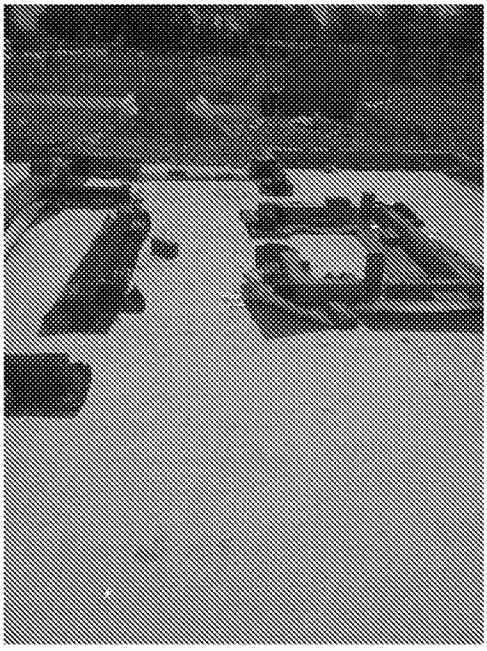
	Plot 10 services
	Plot 11 overview

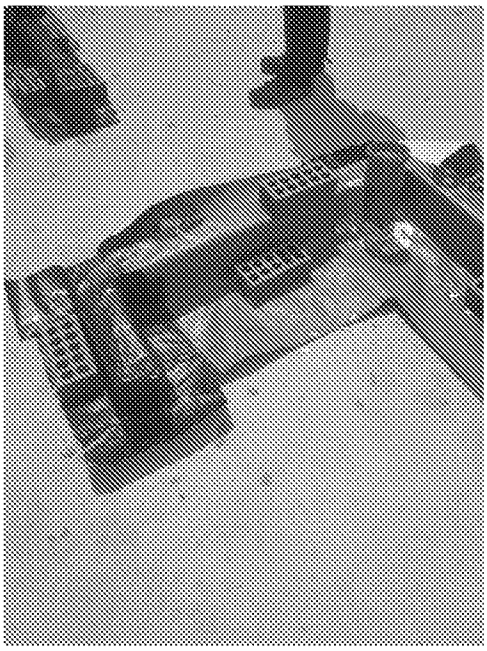
	Plot 11 services
	Plot 12 overview

	Plot 12 seal
	Plot 13 overview

	Plot 13 corner
	Plot 13 detail

	Plot 14 overview
	Plot 14 services

	Plot 14 doorway
	Plot 15 overview

	Plot 15 corner

5. PASS/FAIL

The gas protection measures inspected:	Are acceptable & comply with the specification
Details of issues	
Approved by	
Fiona Goode	[redacted]
Date	02/07/2020

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	29/07/2020, 14:37
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Sunny, breezy, warm
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Houses plot 1 detached and Plots 2-3 semi detached Flats Block A plots 60-65 Block B plots 66-77 lift pit skin only
Plot No.	Plots 1-3 (whole floor) and Block A (60-65) perimeter and Block B lift pit
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

1.1 Condition of sub-grade and underside of membrane	Very clean
1.2 Gas membrane type	Keytec 400hp gas resistant membrane
1.3 Gas membrane condition	Good condition, some dust but generally clean
Jointing tape product	Heat sealed joins with double sided tape to seal services. Tape along brick and timber frame walls so no brick or other materials puncture membrane and where nails are driven through membrane tape forms a seal
1.5 Lapping design	150mm joins
1.6 Laps, welds and joints seals	All heat sealed joins some double sided tape on services and corners. Patch repairs heat sealed
1.7 Service seals	All well sealed with site formed taped seals

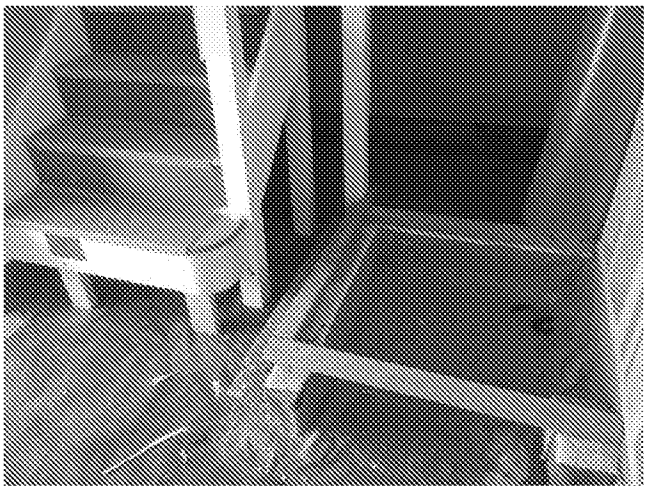
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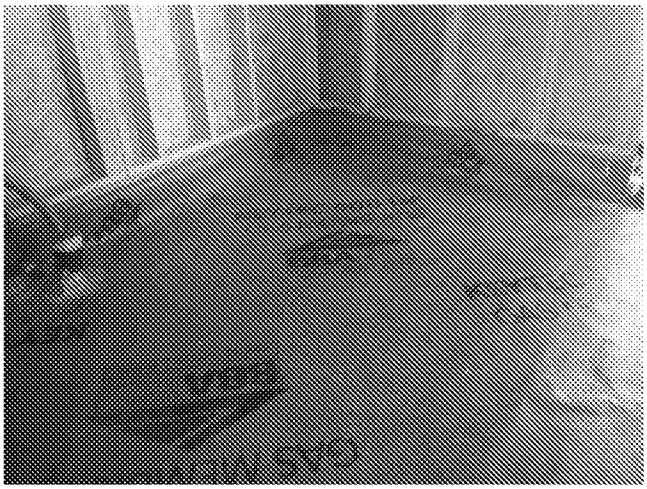
Photographs

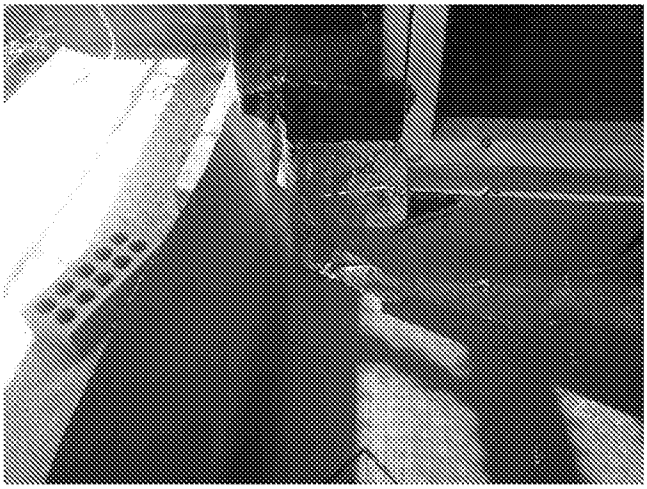
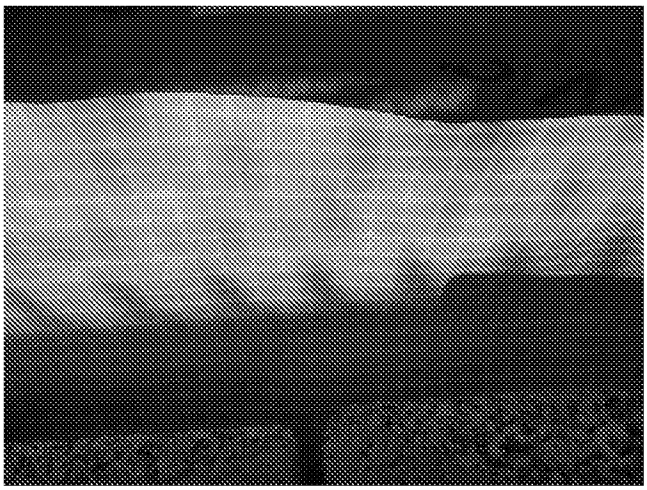
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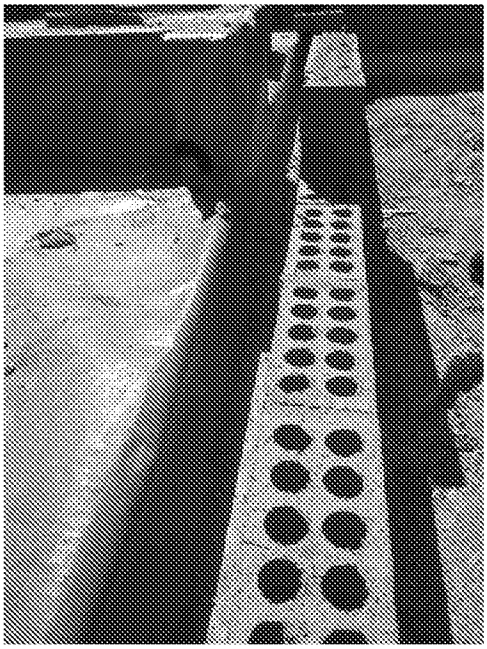
Photograph	*Photograph Title*

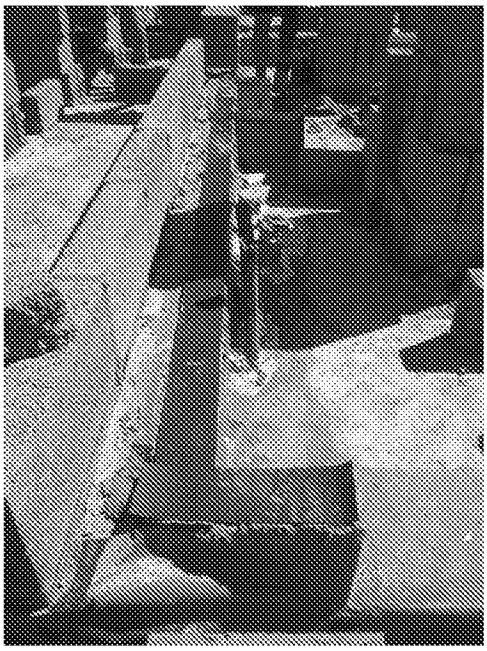
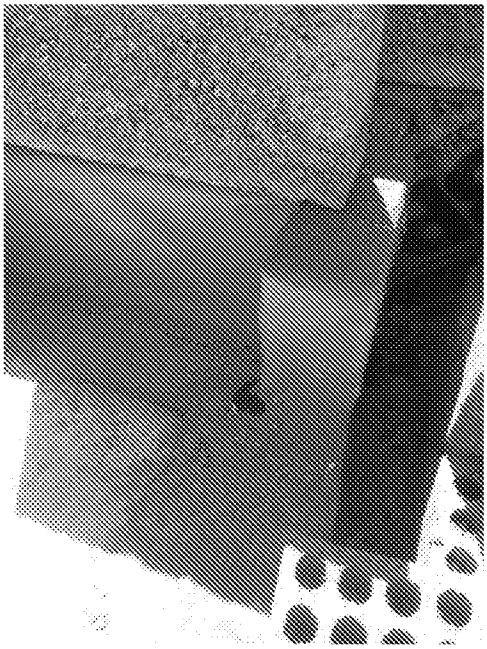
	Plot 1 services
	Plot 1steel

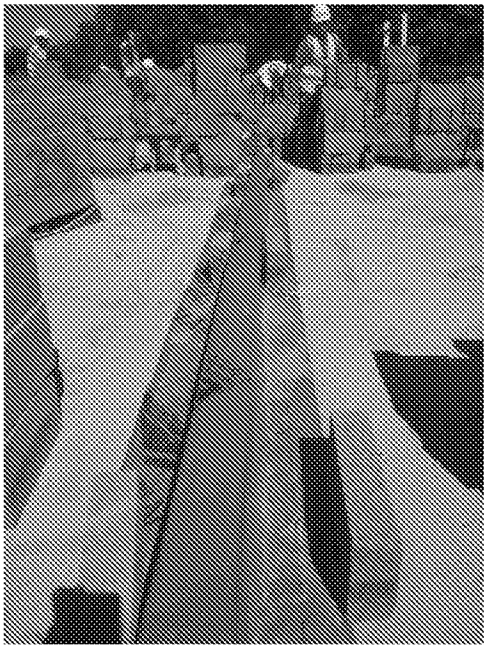
	Plot 1 seals
	Plot door threshold
	Plot 1 stairwell

	Plot 1 overview
	Plot 2 overview
	Plot 2 under stairs

	Plot 2 services
	Plot 2 details
	Plot 2 underside

	Block A services
	Block A cavity

	Block A tape under blockwork
	Block A corner

	Block A water
	Block A overview

	Block B pit
	Block B damage

	Block B overview
	Plot 3 overview

	Plot 3 services
	Plot 3 under stairs



Plot 3 overview

5. PASS/FAIL

The gas protection measures inspected:	Are acceptable & comply with the specification
Details of issues	
Approved by	
Fiona Goode	[redacted]
Date	29/07/2020

Geo-Environmental

Project Name	Cornfield Close Validation
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	10/08/2020, 12:04
Site Engineer	
Katie O'Dea	[redacted]
Weather at time of inspection	Hot, sunny, humid
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential
Plot No.	Plots 4-5 whole floor, Block B Plots 66-77 perimeter only
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

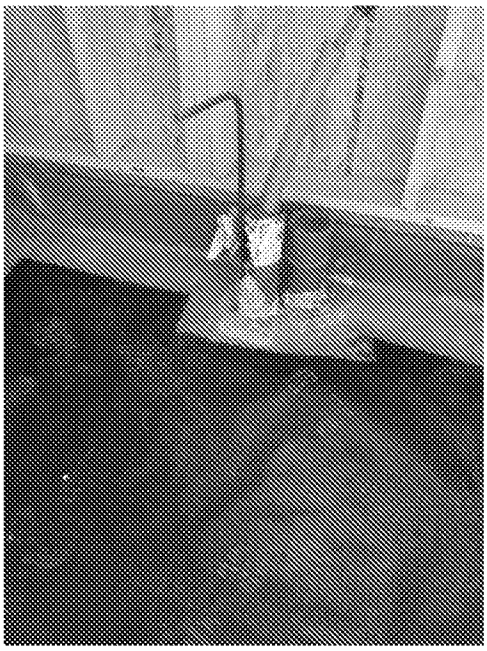
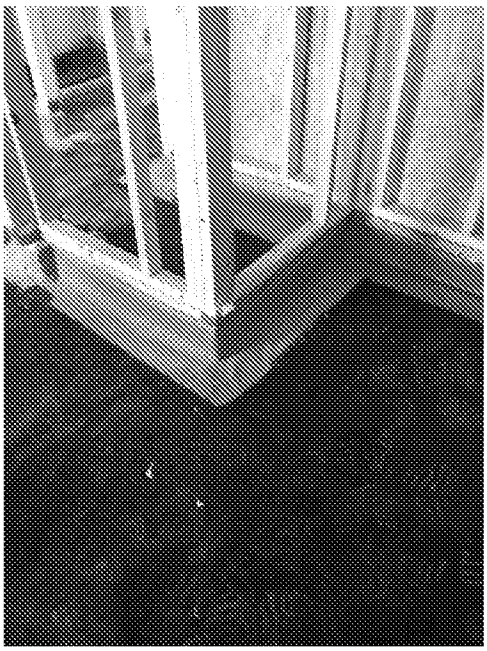
1.1 Condition of sub-grade and underside of membrane	Sub grade and underside of membrane in good condition.
1.2 Gas membrane type	Keytec 400 gas membrane and black unbranded gas membrane.
1.3 Gas membrane condition	Membrane in good condition.
Jointing tape product	Heat welded joints. Tape used for service seals. Black putty tape between membrane and timber frame to seal screw holes
1.5 Lapping design	Welded lapping. Min 150mm.
1.6 Laps, welds and joints seals	Heat sealed welds in good condition.
1.7 Service seals	Services sealed with double sided tape and membrane. All in good condition.

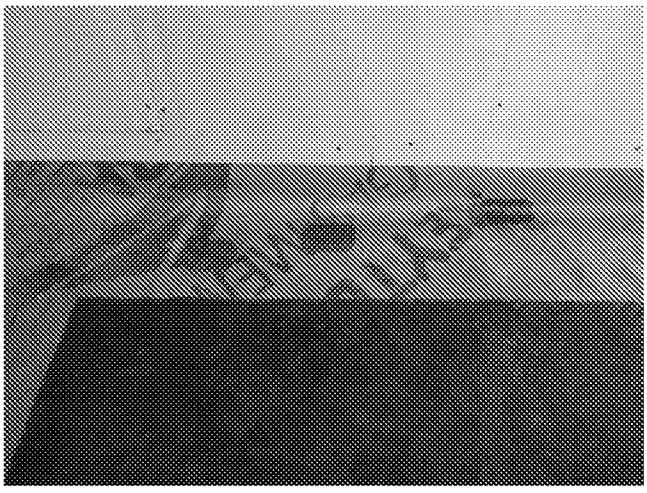
4. PHOTOGRAPHS

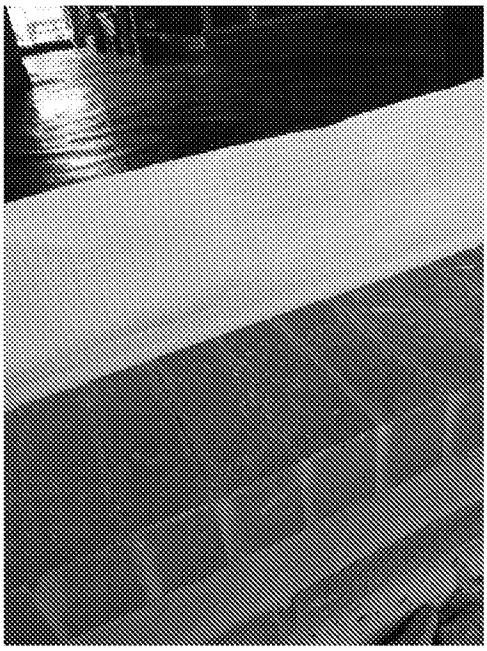
Photographs

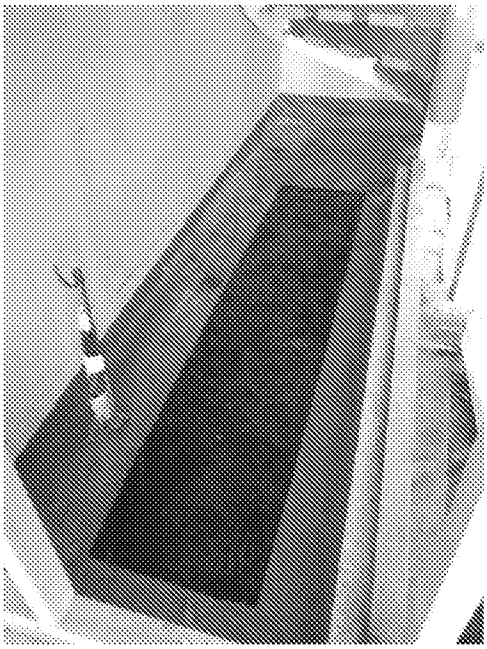
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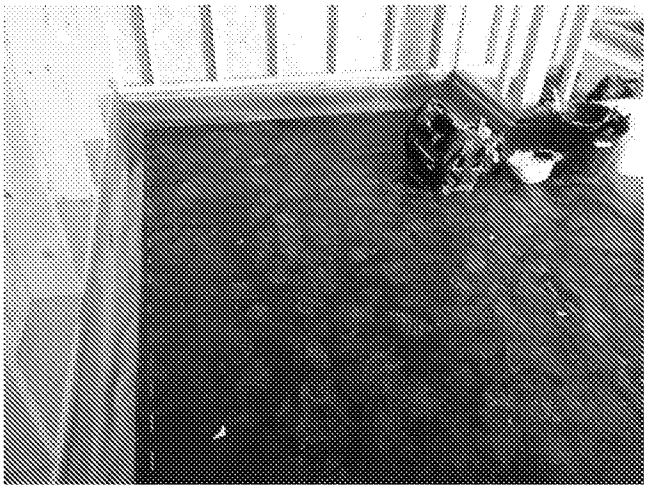
Photograph	*Photograph Title*

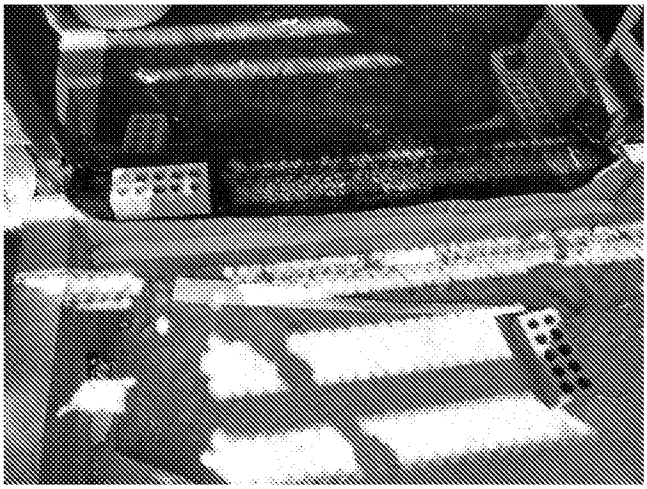
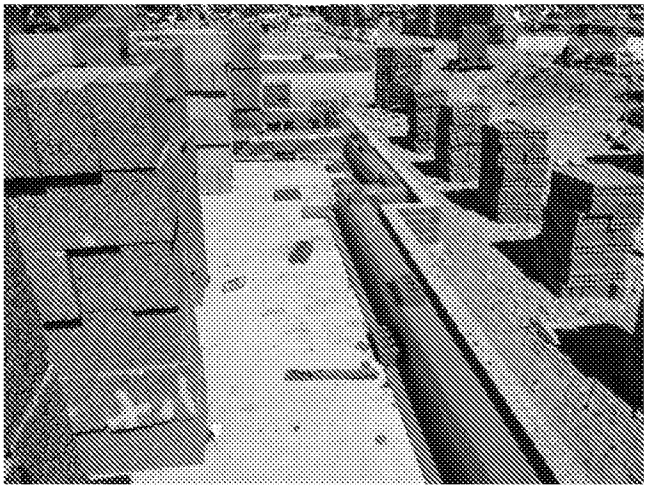
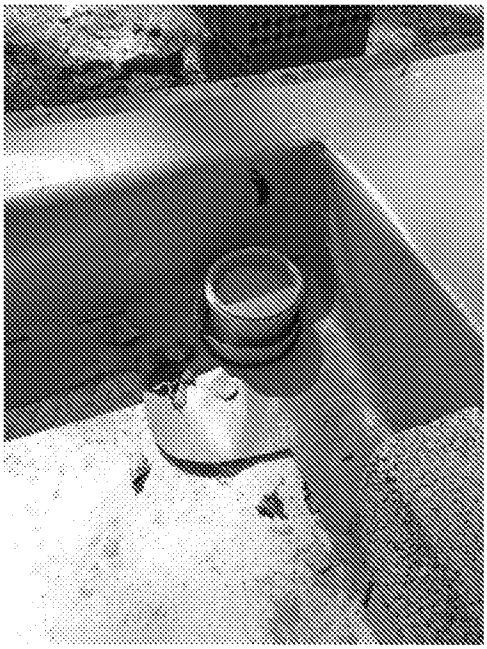
	Plot 4 - service seal
	Plot 4 - join between wall and floor

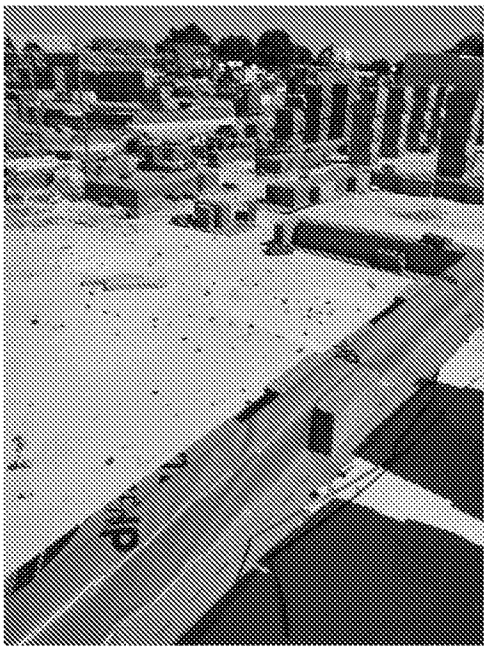
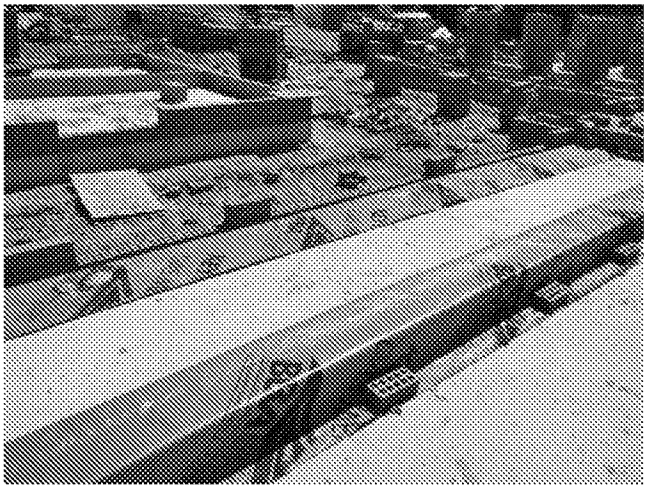
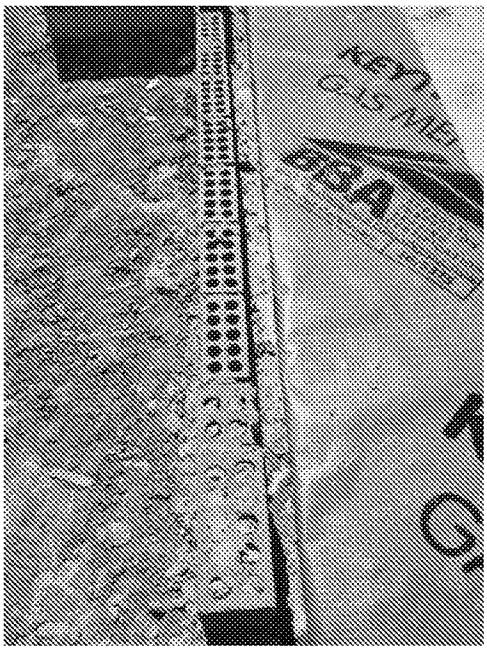
	Plot 4 - Threshold
	Plot 4 - Black putty tape sealant under frame
	Plot 4 - Patching of any holes has already been completed

	Plot 4 - underside of membrane in good condition
	Plot 5 -Threshold corner detail
	Plot 5 - Patching of holes already complete

	Plot 5 - Threshold
	Plot 5 - under stairs and service seal.
	Plot 5 - service seal

	Plot 5 - floor
	Plot 5 - Corner detail
	Plot 5 - floor

	Plot 5 - threshod
	Block B - perimeter
	Block B - services not yet sealed

	Block B - membrane
	Block B - Threshold
	Block B - Threshold

5. PASS/FAIL

The gas protection measures inspected:	Are acceptable & comply with the specification
Details of issues	
Approved by	
Fiona Goode	[redacted]
Date	10/08/2020

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	13/08/2020, 13:20
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Overcast, warm, humid, slight breeze
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Semis detached house
Plot No.	Plot 6 and 7 (floor area)
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

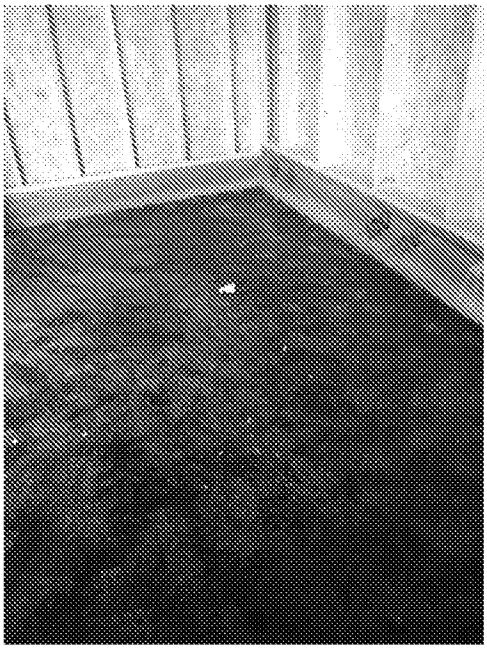
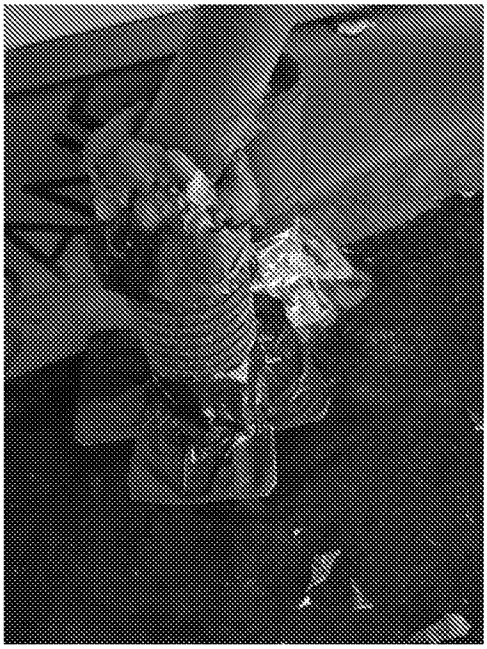
1.1 Condition of sub-grade and underside of membrane	Membrane sealed unable to insect
1.2 Gas membrane type	Juta gas resistant membrane- black
1.3 Gas membrane condition	Membrane is in good condition with some dust and evidence of footfall
Jointing tape product	Double sided tape on service seals all other joins heat sealed
1.5 Lapping design	150mm lap
1.6 Laps, welds and joints seals	Heat sealed and well sealed
1.7 Service seals	Site made taped seals on all services

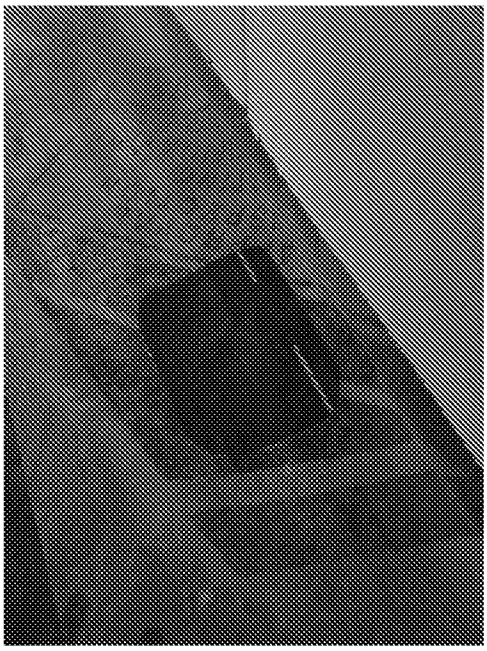
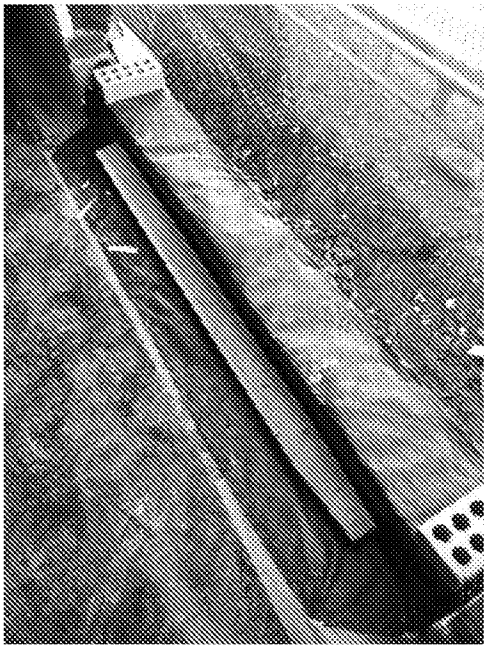
4. PHOTOGRAPHS

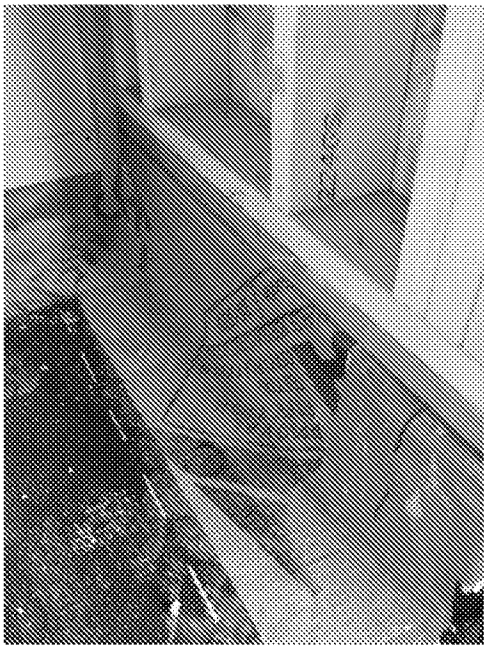
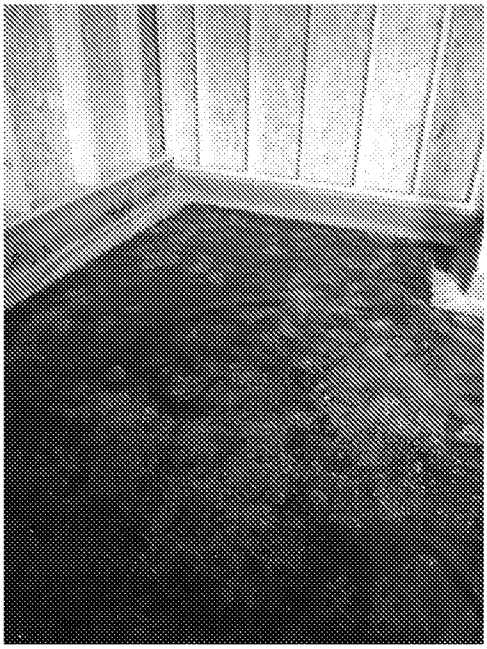
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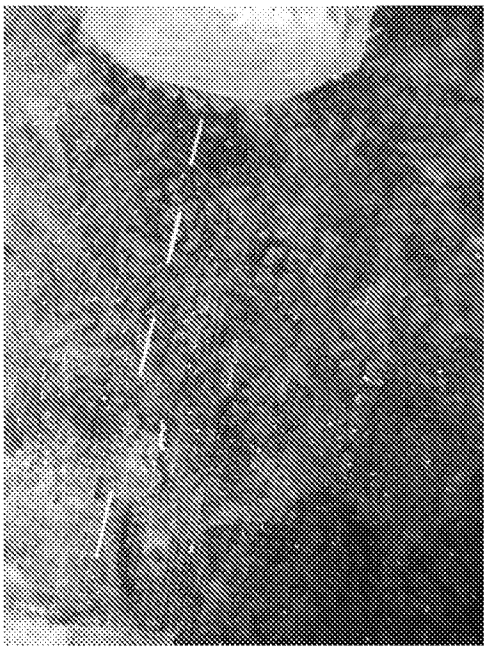
(9 records)

Photograph	*Photograph Title*

	Plot 6
	Plot 6 services

	Plot 6 repair
	Plot 6 threshold

	Plot 6 timber frame
	Plot 7

	Plot 7 joins
	Plot 7 timber frame



Plot 7 threshold

5. PASS/FAIL

The gas protection measures inspected:	Are acceptable & comply with the specification
Details of issues	
Approved by	
Fiona Goode	[redacted]
Date	13/08/2020

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	25/08/2020, 14:09
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Windy, warm, overcast
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Terraced house
Plot No.	perimeter
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

1.1 Condition of sub-grade and underside of membrane	Unable to inspect in plots 8-11 as sealed
1.2 Gas membrane type	Juta GP1 gas resistant membrane (black)
1.3 Gas membrane condition	Generally good condition, some signs of foot traffic
Jointing tape product	Heat sealed joins, double sided tape used on service seals and patch repairs
1.5 Lapping design	At least 150mm
1.6 Laps, welds and joints seals	All well sealed
1.7 Service seals	Site made seals, all services well sealed

4. PHOTOGRAPHS

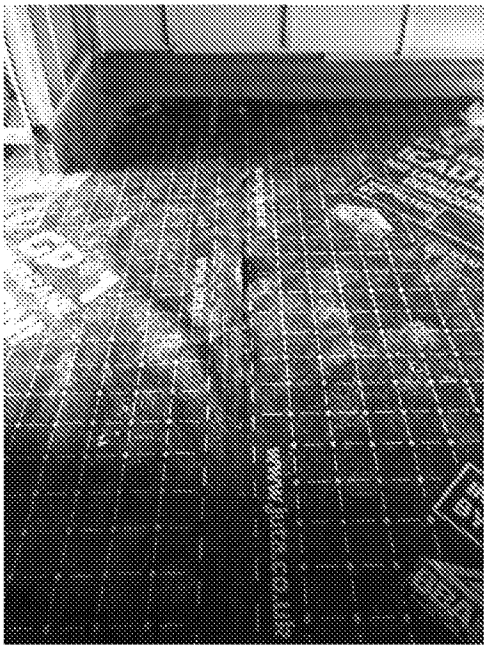
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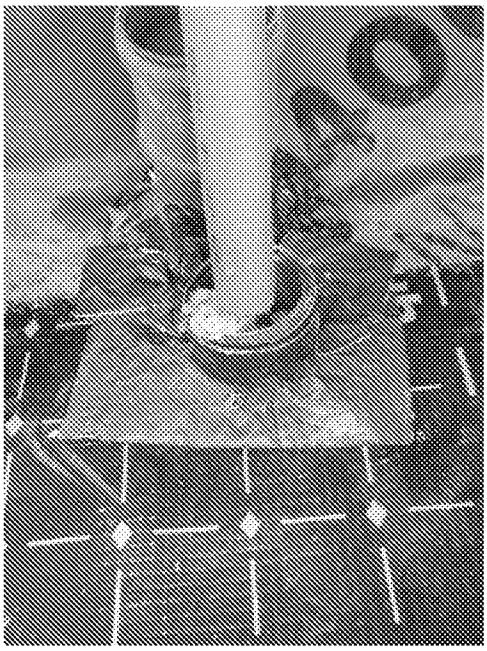
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Photograph	*Photograph Title*

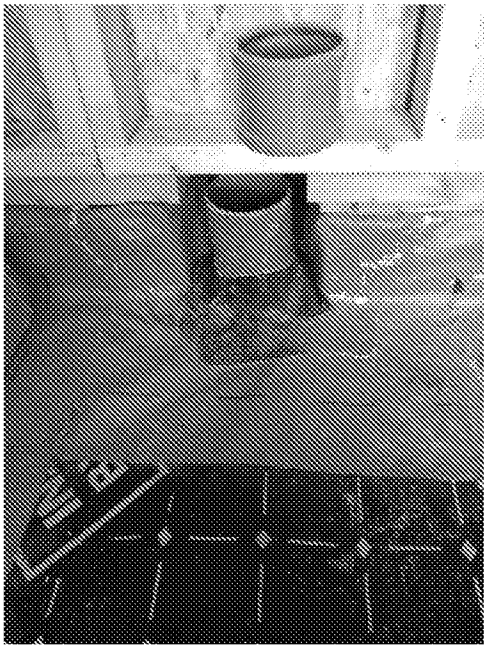
	Plot 8 overview
	Plot 8 under stairs

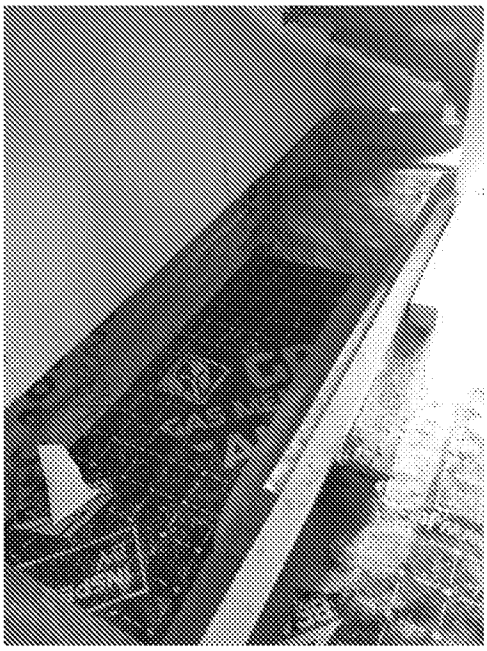
	Plot 8 patch repair
	Membrane type

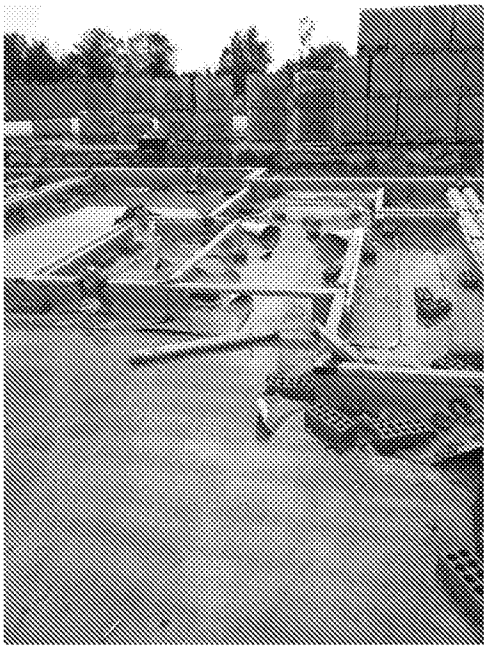
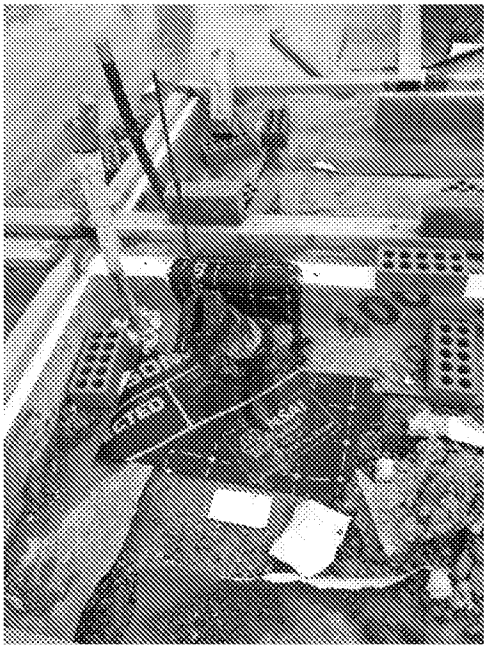
	Plot 8 join
	Plot 9 overview

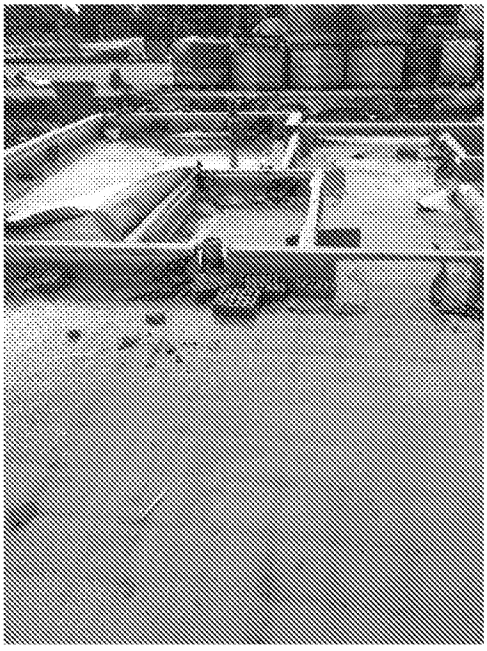
	Plot 9 service seal
	Plot 9 patch repair

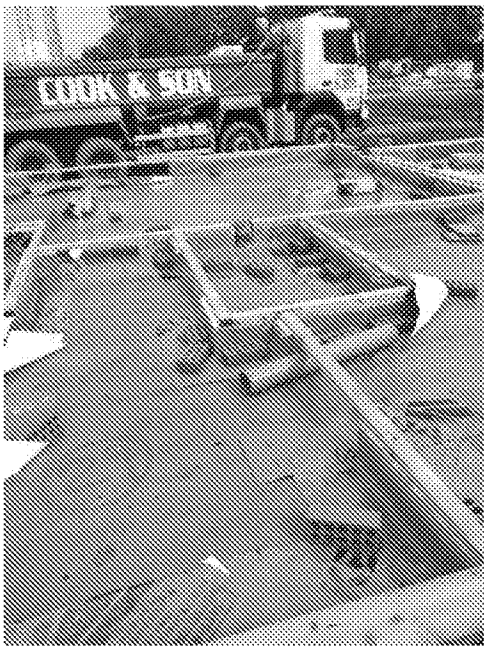
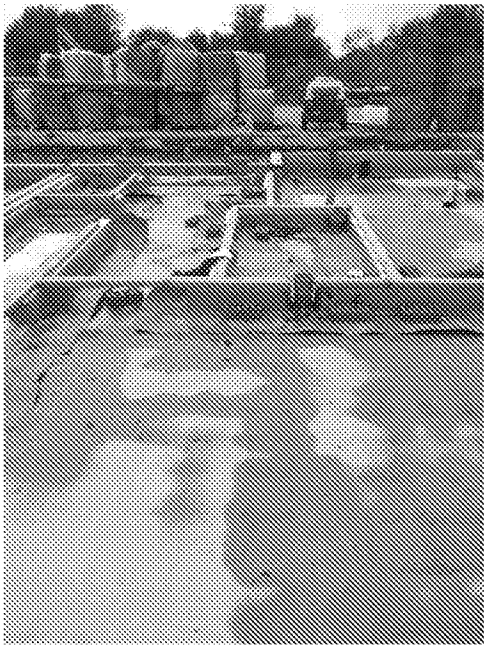
	Plot 9 floor
	Plot 10 overview

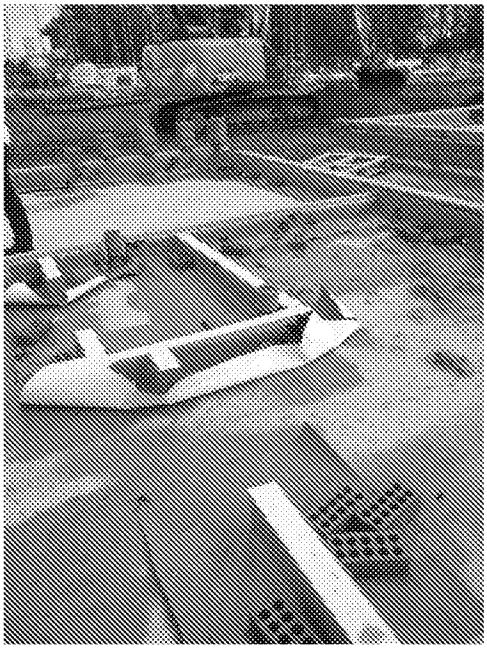
	Pot 10 membrane joins
	Plot 10 services

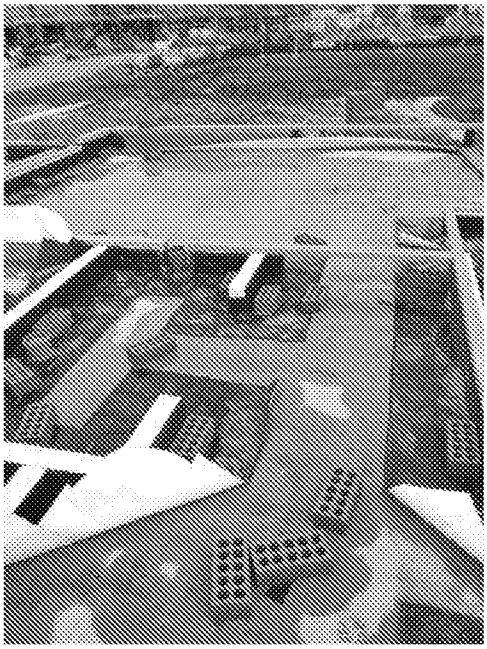
	Plot 10 under stairs
	Plot 24 reinspection

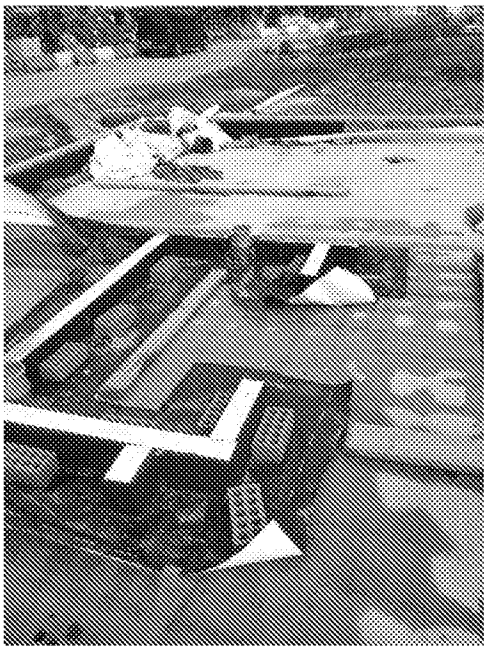
	Plot 25 reinspection
	Plot 26 service

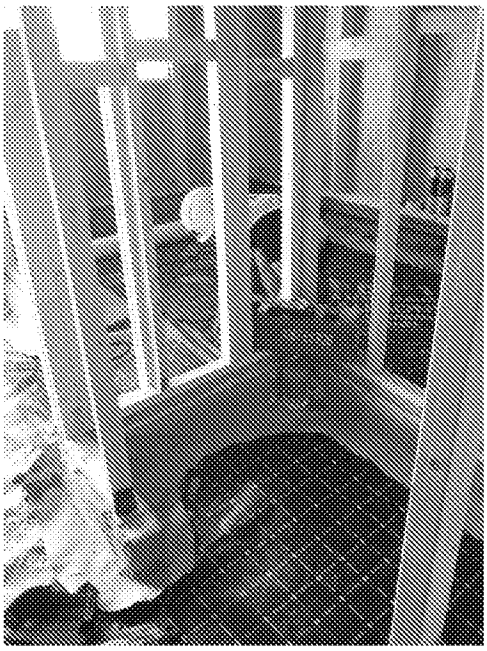
	Plot 27
	Plot 28

	Plot 29
	Plot 30

	Plot 31
	Plot 32

	Plot 33
	Plot 34

	Plot 35
	Plot 11 in progress

	Plot 11 in progress

5. PASS/FAIL

The gas protection measures inspected:	Are acceptable & comply with the specification
Details of issues	
Approved by	
Fiona Goode	[redacted]
Date	25/08/2020

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	10/09/2020, 12:23
Site Engineer	Katie O'Dea [redacted]
Weather at time of inspection	Warm, sunny, dry
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential - terraced houses
Plot No.	Plots 12-13 complete, Plots 14-15 in progress, Plots 20-21 (Phase 4) perimeter
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

1.1 Condition of sub-grade and underside of membrane	Good condition where visible. Membrane sealed in Plots12-13.
1.2 Gas membrane type	Red Keytec gas membrane and black gas membrane.
1.3 Gas membrane condition	Good condition. Any holes or tears had been patched.
Jointing tape product	Heat welded joints.
1.5 Lapping design	Min 150mm overlap
1.6 Laps, welds and joints seals	Welded joints in good condition and well sealed.
1.7 Service seals	Service seals using membrane and tape. All well sealed and in good condition.

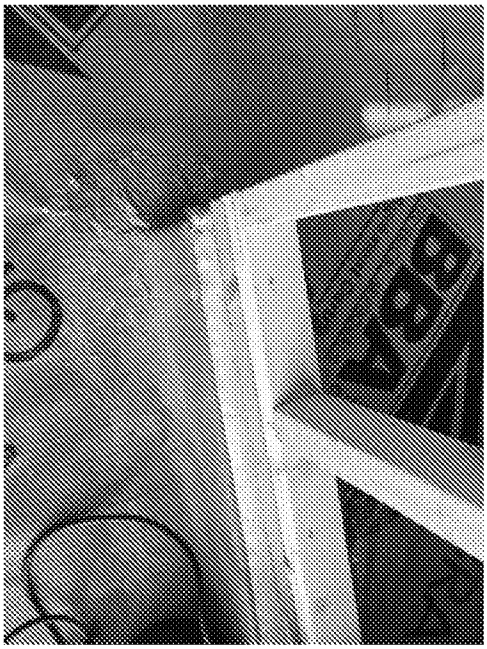
4. PHOTOGRAPHS

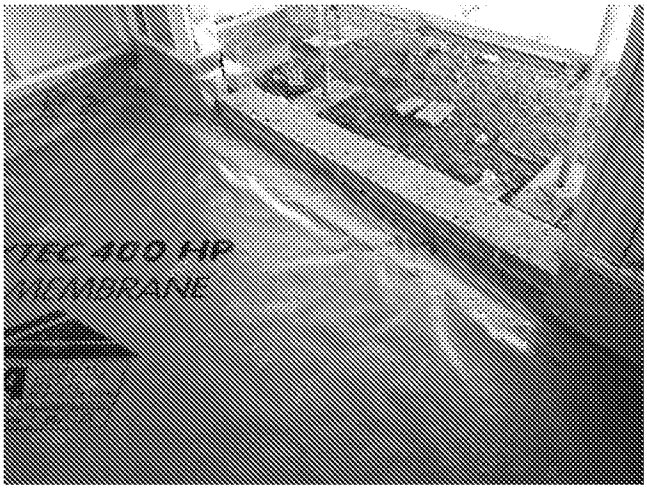
Photographs

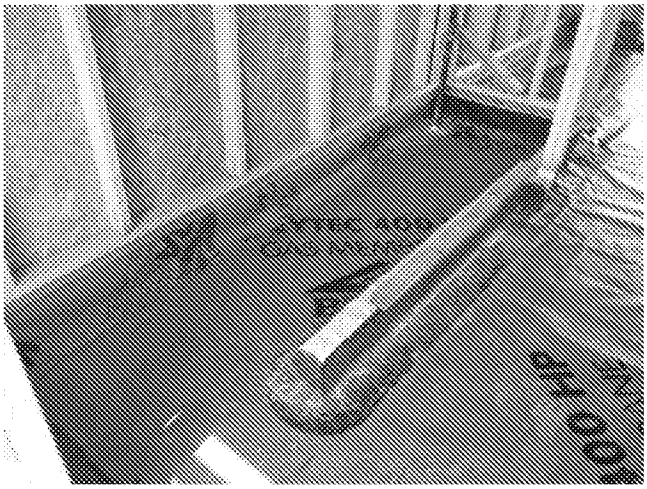
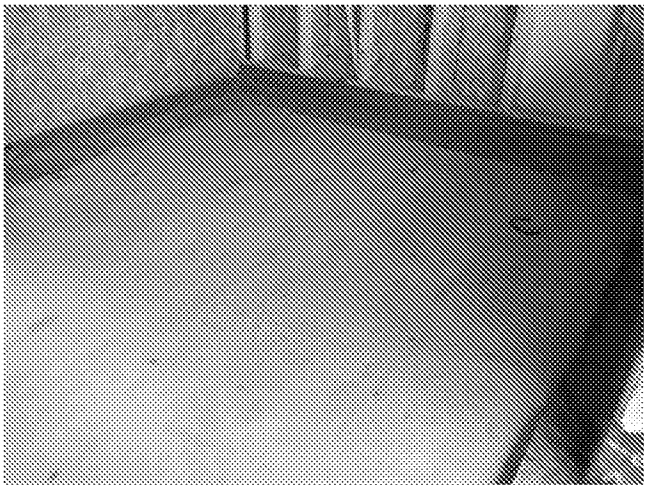
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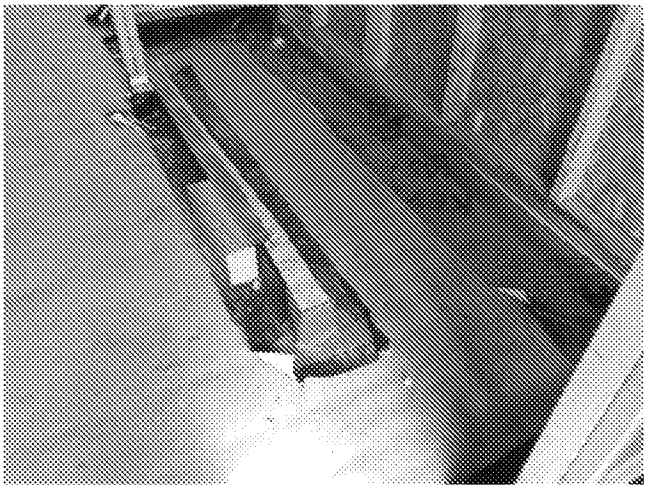
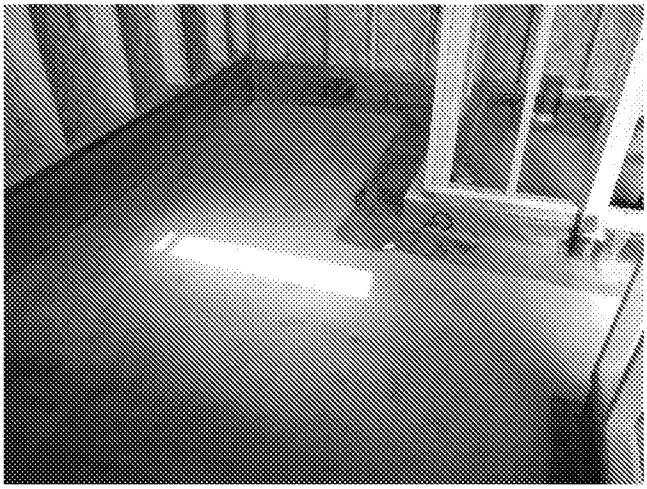
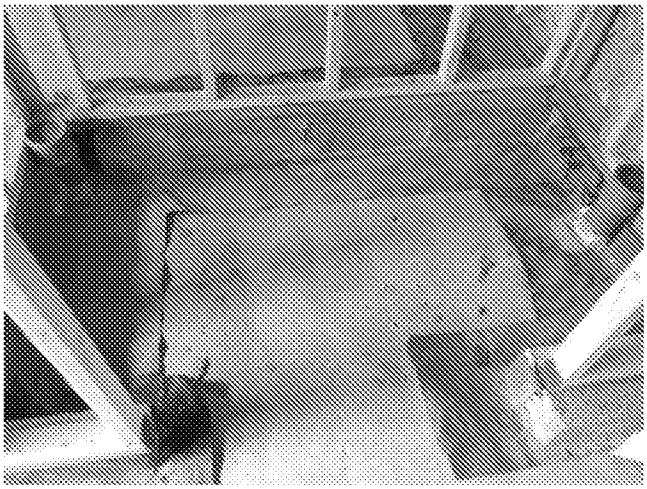
Photograph	*Photograph Title*

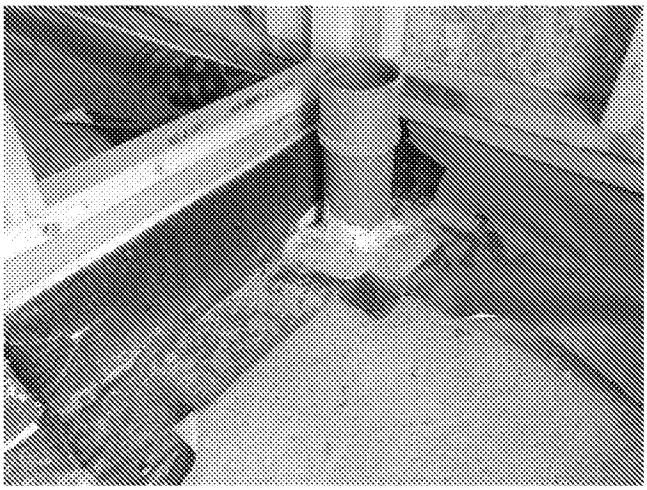
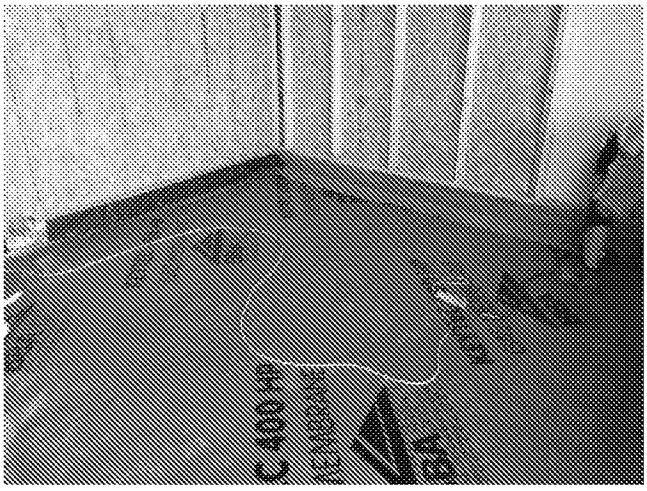
	Plot 12 - View across floor
	Plot 12 - service seal
	Plot 12 - Holes have been patched

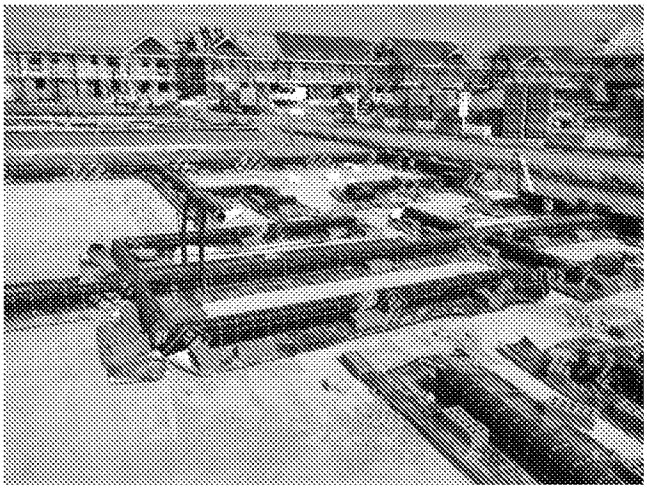
	Plot 12 - Threshold
	Plot 13 - Threshold
	Plot 13 - Corner detail

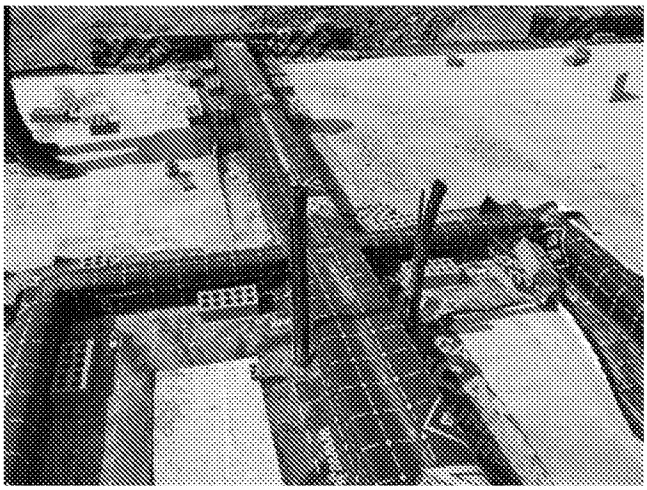
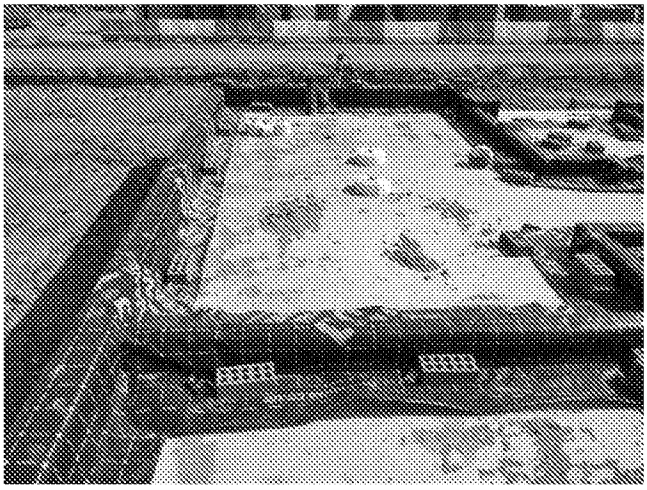
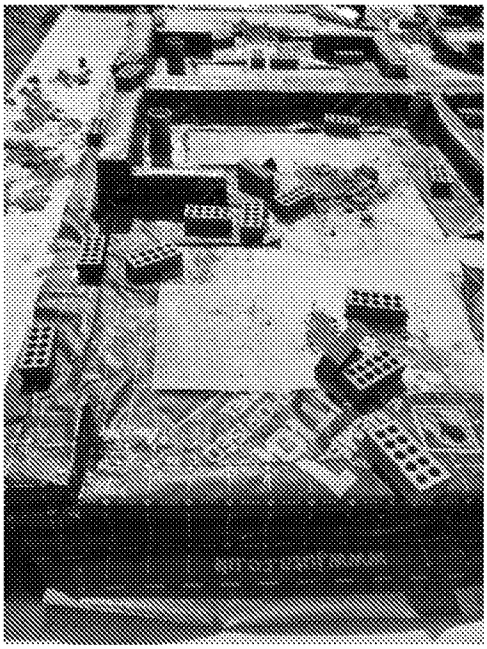
	Plot 13 - Floor
	Plot 13 - Floor and service seal
	Plot 13 - Threshold

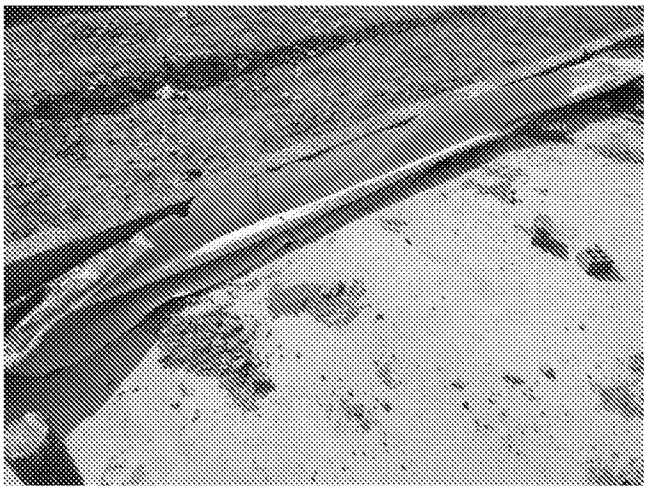
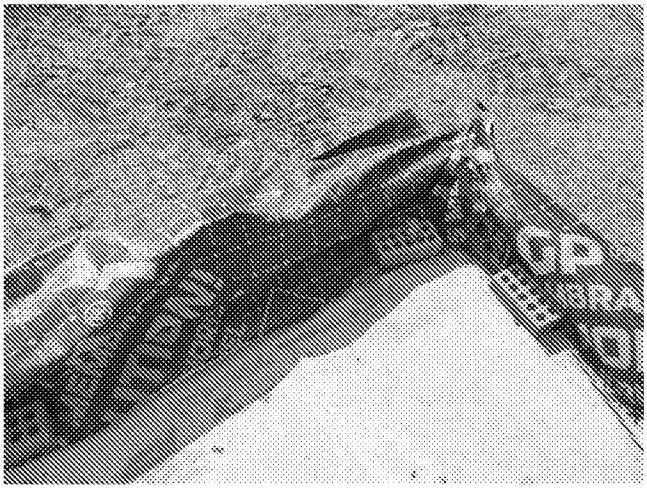
	Plot 13 - Patching
	Plot 13 - Under stairs
	Plot 15 - In progress

	Plot 15 - Under stairs
	Plot 15 - Floor swept and l good condition
	Plot 15 - Services sealed

	Plot 15 - Services sealed
	Plot 14 in progress
	Plot 14 in progress

	Plot 14 in progress
	Plot 14 in progress
	Plot 20-21(Phase 4) - View across plots

	Plot 20-21(Phase 4)
	Plot 20-21(Phase 4)
	Plot 20-21(Phase 4) - walls and doorway

	Plot 20-21(Phase 4) - Wind damage
	Plot 20-21(Phase 4) - Damaged membrane will be replaced before bitumen tape placement

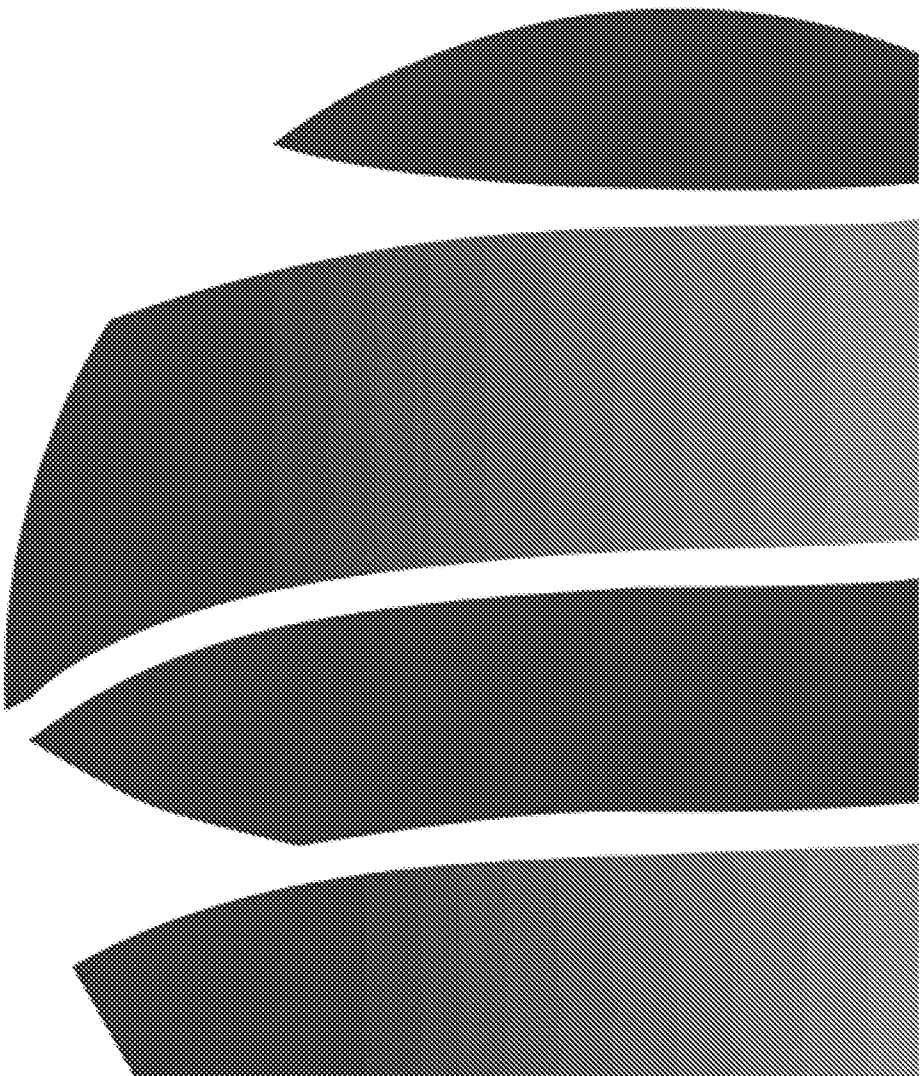
5. PASS/FAIL

The gas protection measures inspected:	Are acceptable & comply with the specification
Details of issues	
Approved by	
Fiona Goode	[redacted]
Date	10/09/2020

Geo-Environmental

APPENDIX C

Photographs of Gas Membrane Installation works (Provided by Client)



Gas Protection Measures – Photographs provided by the Client.

Plot 11



Plate 1 - Infills Plot 11



Plate 2 – Infills Plot 11

ARUN DISTRICT COUNCIL LU/191/21/DOC

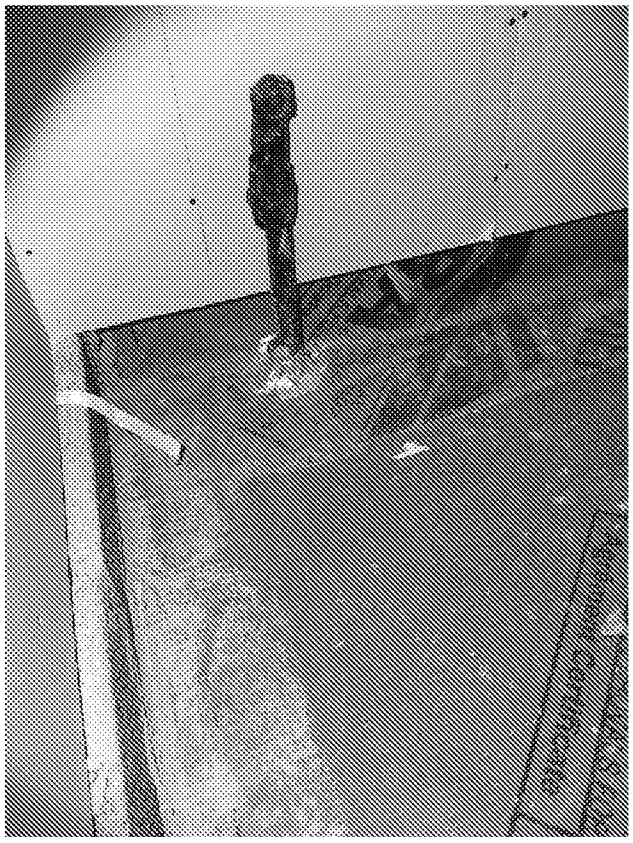


Plate 3 – Infills Plot 11

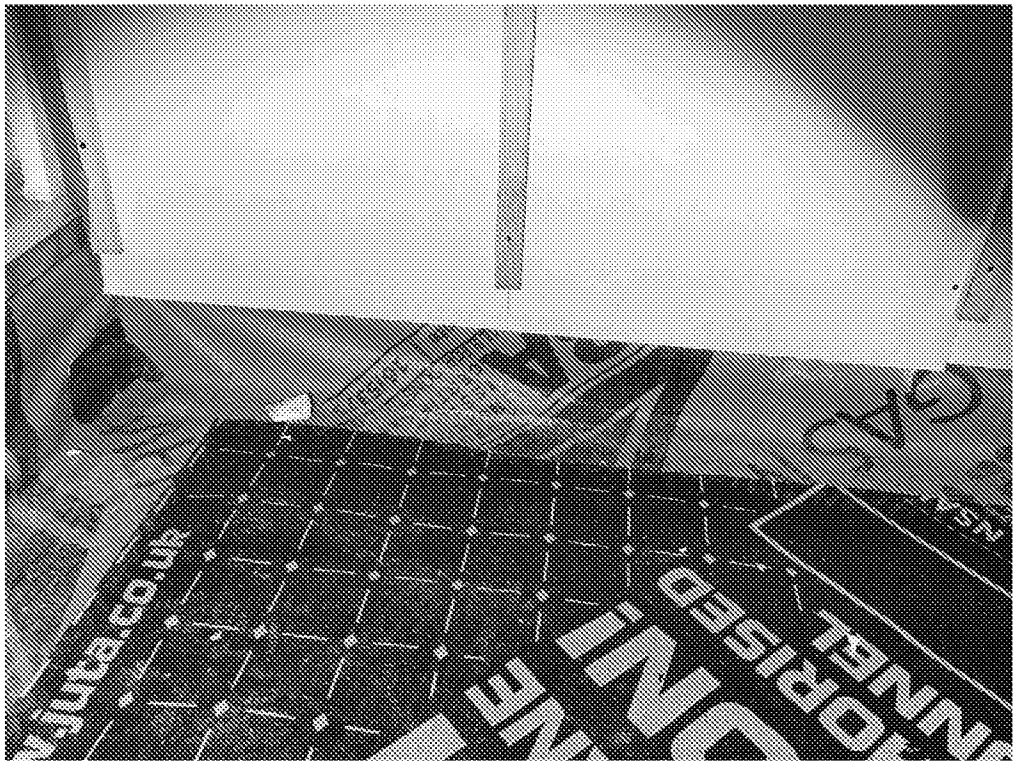


Plate 4 – Infills Plot 11

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 5 – Infills Plot 11

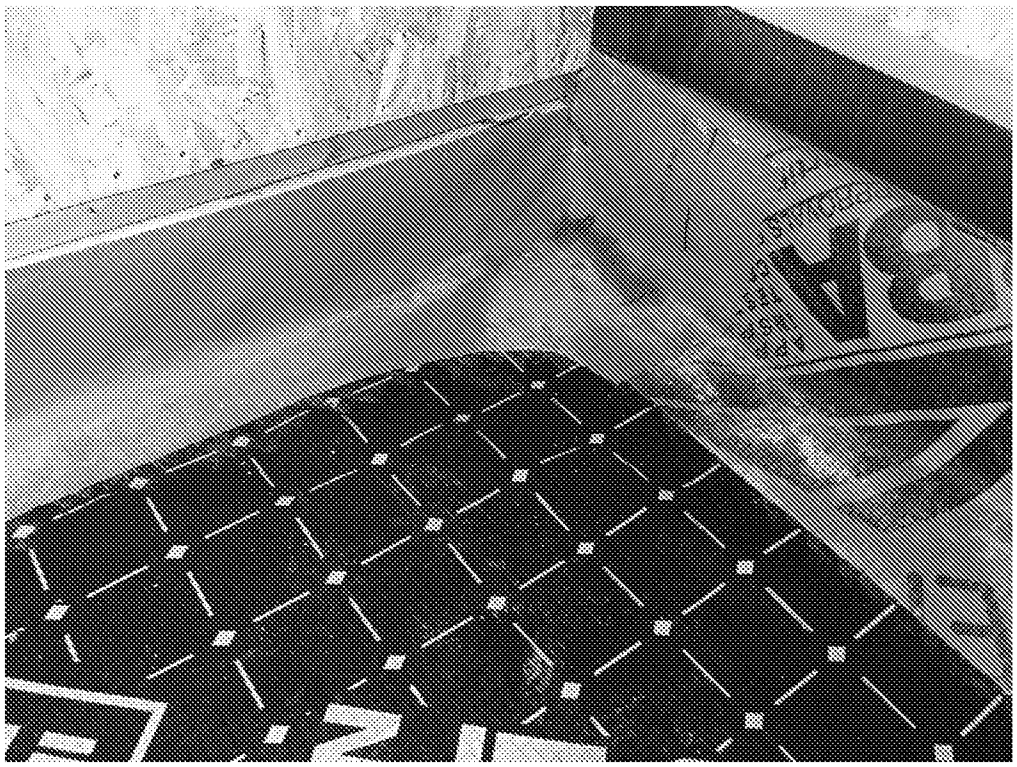


Plate 6 – Infills Plot 11

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 7 – Infills Plot 11

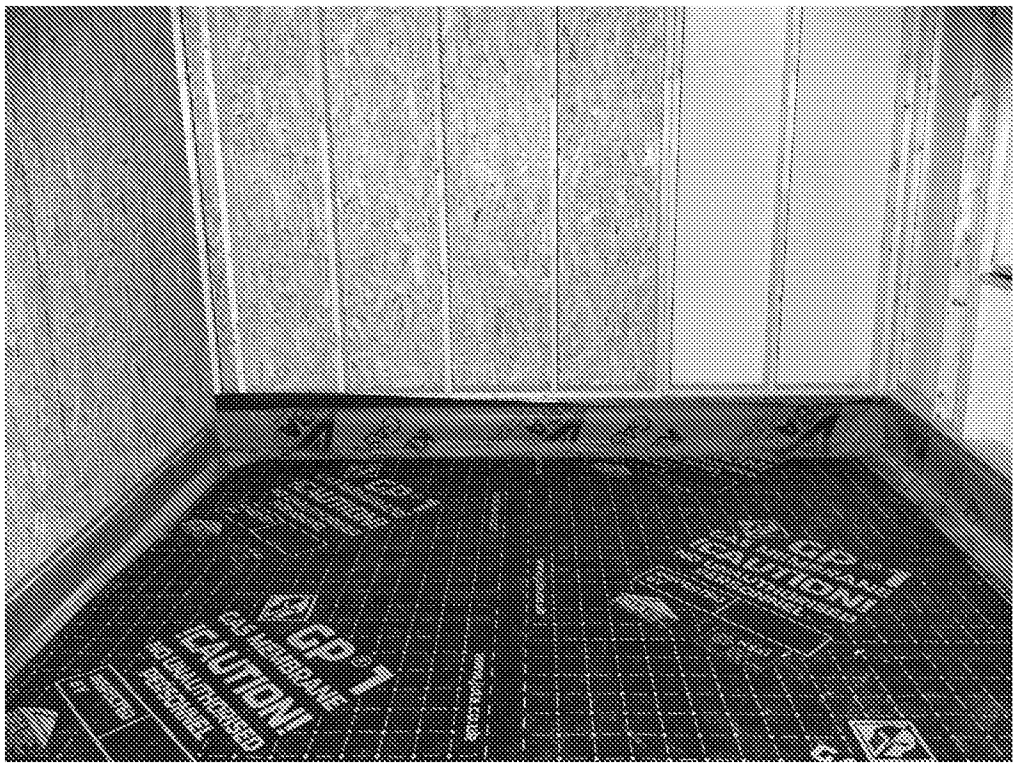


Plate 8 – Infills Plot 11

ARUN DISTRICT COUNCIL LU/191/21/DOC

Plot 14



Plate 9 – Infills Plot 14



Plate 10 – Infills Plot 14

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 11 – Infills Plot 14



Plate 12 – Infills Plot 14

ARUN DISTRICT COUNCIL LU/191/21/DOC

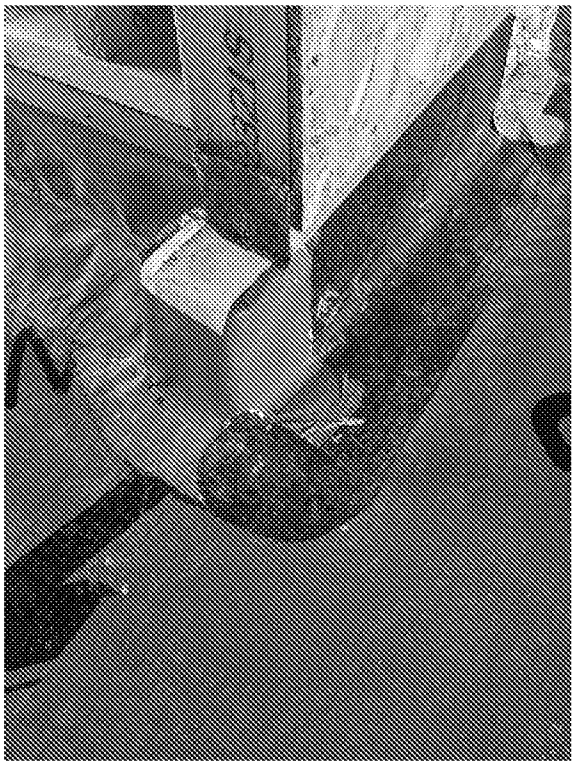


Plate 13 – Infills Plot 14



Plate 14 – Infills Plot 14

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 15 – Infills Plot 14

Plot 15



Plate 16 – Infills Plot 15

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 17 – Infills Plot 15



Plate 18 – Infills Plot 15

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 19 – Infills Plot 15



Plate 20 – Infills Plot 15

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 21 – Infills Plot 15



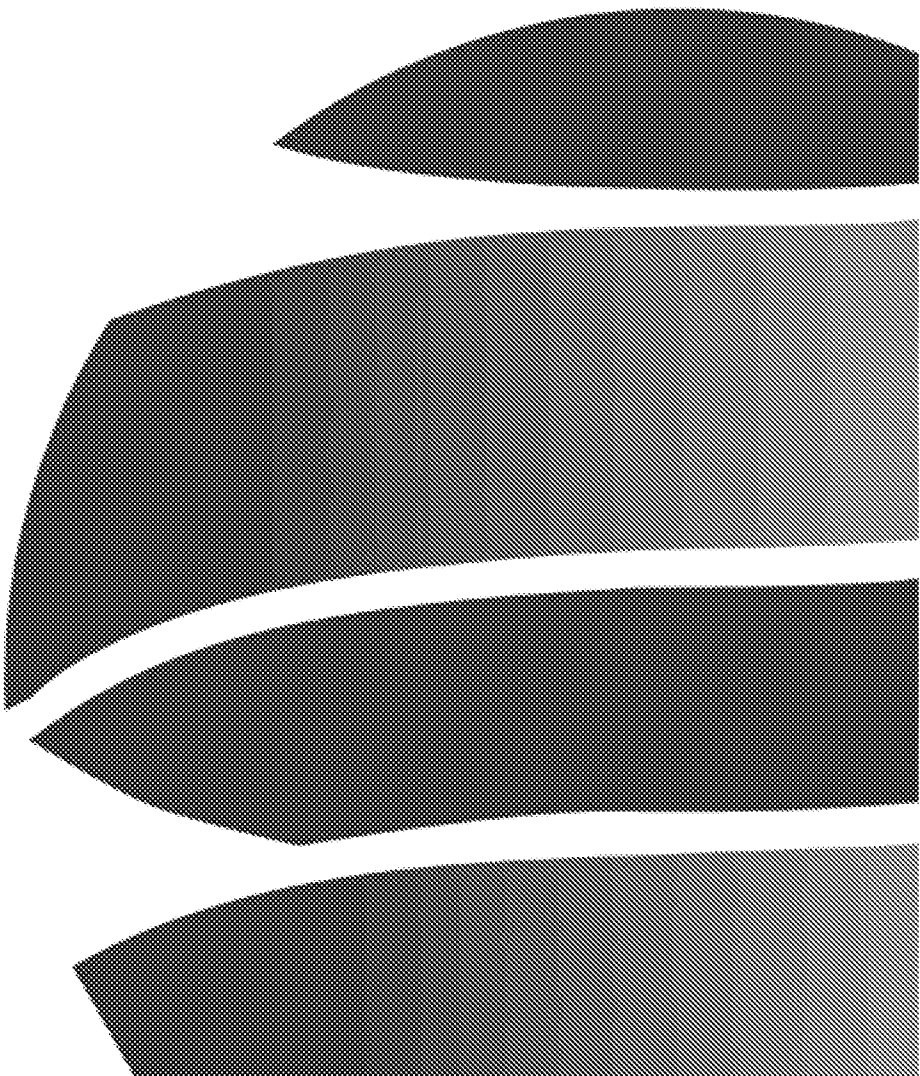
Plate 22 – Infills Plot 15

ARUN DISTRICT COUNCIL LU/191/21/DOC

Geo-Environmental

APPENDIX D

Topsoil Delivery Tickets and Topsoil/Subsoil Analysis (Provided by Client)



BELL & SONS
CONSTRUCTION LIMITED

WTN 08112

DATE 23/11/22

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wimlands Lane, Paygate,
Nr Horsham, West Sussex RH12 4SP
[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☑ Other Topsoil EWC
- ☐ Description of waste
- ☐ CLAIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☑ LOOSE 15 m³
- ☐ GRAB LOOSE ____ m³
- ☐ SKIP ____ YDS
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE ____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME Private Paygate Stables

SITE ADDRESS Paygate Farm Cottage, Paygate Lane, Pulborough, RH20 2QS

BY SIGNING SECTION B I CAN CONFIRM THAT I HAVE FULFILLED MY DUTY TO APPLY THE WASTE HIERARCHY

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08001

DATE [redacted]
TIME ON SITE [redacted]
TIME OFF SITE [redacted]

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☐ Other EWC
- ☐ Description of waste
- ☐ CL'AIRE

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☐ LOOSE [redacted] m³
- ☐ SKIP _____ YDS
- ☐ GRAB LOOSE _____ m³
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME _____

SITE ADDRESS _____

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 07649

DATE
TIME ON SITE
TIME OFF SITE

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☐ Other — EWC
- ☐ Description of waste
- ☐ CL:AIRE

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☐ LOOSE ____ m³
- ☐ SKIP ____ YDS
- ☐ GRAB LOOSE ____ m³
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE ____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME ____

SITE ADDRESS ____

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08103

DATE 07/12/23

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wardlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP
[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☑ Other Topsoil EWC
- ☐ Description of waste:
- ☐ CLAIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☑ LOOSE 15 m³
- ☐ SKIP _____ YDS
- ☐ GRAB LOOSE _____ m³
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME [redacted]

SITE ADDRESS [redacted]

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08102

DATE

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☒ Other EWC
- ☐ Description of waste:
- ☐ CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☒ LOOSE m³
- ☐ SKIP YDS
- ☐ GRAB LOOSE m³
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE
- ☐ COLLECT ☐ WAIT & LOAD
- ☐ DELIVER ☐ EXCHANGE

OTHER WORK
- ☐ DAY WORK
- ☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME

SITE ADDRESS

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP
[redacted]

WTN 06242
DATE 17/7/20
TIME ON SITE
TIME OFF SITE

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☐ Other EWC
- ☐ Description of waste: Topsoil
- ☐ CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☐ LOOSE 1,250 m³
- ☐ GRAB LOOSE _____ m³
- ☐ SKIP _____ YDS
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME Thorncroft Farms
SITE ADDRESS Little Dunton Rd

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 07639

DATE [redacted]

TIME ON SITE [redacted]

TIME OFF SITE [redacted]

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☐ Other EWC
- ☐ Description of waste:
- ☐ CL:AIRE

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☐ LOOSE _____ m³
- ☐ SKIP _____ YDS
- ☐ GRAB LOOSE _____ m³
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME _____

SITE ADDRESS _____

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 07640

DATE [redacted]

TIME ON SITE [redacted]

TIME OFF SITE [redacted]

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☒ Other EWC
- ☐ Description of waste:
- ☐ CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☐ LOOSE _____ m³
- ☐ SKIP _____ YDS
- SKIP SIZE _____
  - ☐ COLLECT ☐ WAIT & LOAD
  - ☐ DELIVER ☐ EXCHANGE
- ☐ GRAB LOOSE _____ m³
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

OTHER WORK
- ☐ DAY WORK
- ☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME _____

SITE ADDRESS _____

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 07633

DATE [ ][ ] [ ][ ]

TIME ON SITE [ ][ ]

TIME OFF SITE [ ][ ]

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP
[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- [ ] Soil & Stones 170504
- [ ] Concrete 170101
- [ ] Hardcore 170107
- [ ] Bituminous mixture (Tarmac) 170302
- [ ] Mixed Construction & Demo Waste 170904
- [ ] Other EWC
- [ ] Description of waste
- [ ] CL_AIRE

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- [ ] LOOSE _____ m³
- [ ] GRAB LOOSE _____ m³
- [ ] SKIP _____ YDS
- [ ] OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____
- [ ] COLLECT [ ] WAIT & LOAD
- [ ] DELIVER [ ] EXCHANGE

OTHER WORK
- [ ] DAY WORK
- [ ] HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME _____

SITE ADDRESS _____

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

WTN 08314

DATE 27/11/20

TIME ON SITE 12:30

TIME OFF SITE

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- [ ] Soil & Stones 170504
- [ ] Concrete 170101
- [ ] Hardcore 170107
- [ ] Bituminous mixture (tarmac) 170302
- [ ] Mixed Construction & Demo Waste 170904
- [x] Other Inert EWC 170504
- [ ] Description of waste:
- [ ] CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- [x] LOOSE 12 m³
- [ ] GRAB LOOSE _____ m³
- [ ] SKIP _____ YDS
- [ ] OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____
[ ] COLLECT [ ] WAIT & LOAD
[ ] DELIVER [ ] EXCHANGE

OTHER WORK
[ ] DAY WORK
[ ] HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME: [illegible]

SITE ADDRESS: [illegible]

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08189

DATE [redacted]
TIME ON SITE [redacted]
TIME OFF SITE [redacted]

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☒ Other [redacted] EWC
- ☐ Description of waste:
- ☐ CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

☐ LOOSE _____ m³ ☐ GRAB LOOSE [redacted] m³

☐ SKIP _____ YDS ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME _____

SITE ADDRESS _____

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

WTN 08191

DATE

TIME ON SITE

TIME OFF SITE

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☒ Other EWC
- ☐ Description of waste:
- ☐ CL:AIRE

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY):

☐ LOOSE ____ m³ ☐ GRAB LOOSE ____ m³

☐ SKIP ____ YDS ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE ____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME

SITE ADDRESS

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08307
DATE 6/11/24
TIME ON SITE 7:10
TIME OFF SITE 7:30

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP
[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☑ Other Topsoil EWC
- ☐ Description of waste:
- ☐ CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☑ LOOSE 15. m³
- ☐ GRAB LOOSE _____ m³
- ☐ SKIP _____ YDS
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUAUTITY)

SKIP SIZE _____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME T HALLAM HOMES
SITE ADDRESS COMFIELD CLOSE. HTHallam Ltd

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 04917

DATE 16/12/20

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☒ Other EWC
- ☐ Description of waste: 170504 / 170101
- ☐ CLAIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

☒ LOOSE 12 m³

☐ GRAB LOOSE m³

☐ SKIP YDS

☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE

☐ COLLECT ☐ WAIT & LOAD

☐ DELIVER ☐ EXCHANGE

OTHER WORK

☐ DAY WORK

☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME [redacted]

SITE ADDRESS [redacted]

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 07626

DATE 27/7/20

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP
[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☒ Other EWC
- ☐ Description of waste:
- ☐ CL:AIRE

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

☐ LOOSE ____ m³ ☐ GRAB LOOSE ____ m³

☐ SKIP ____ YDS ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE ____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME ____

SITE ADDRESS ____

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 07974

DATE 27/10/20

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☐ Other EWC
- ☐ Description of waste
- ☐ CL:AIRE

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☐ LOOSE m³
- ☐ SKIP YDS
- ☐ GRAB LOOSE m³
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME

SITE ADDRESS

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08305

DATE 17/7/24

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☒ Other Inert Waste EWC
- ☐ Description of waste:
- ☐ CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

☐ LOOSE 1 m³ ☐ GRAB LOOSE m³

☐ SKIP YDS ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME [redacted]

SITE ADDRESS [redacted]

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08303

DATE [illegible]

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wineands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL SIC CODE 41201 | 41202

1 DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☑ Other [illegible] EWC
- ☐ Description of waste
- ☐ CL:AIRE

2 HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

- ☑ LOOSE [illegible] m³
- ☐ GRAB LOOSE _____ m³
- ☐ SKIP _____ YDS
- ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME [illegible]

SITE ADDRESS [illegible]

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08306

DATE [redacted]

TIME ON SITE [redacted]

TIME OFF SITE [redacted]

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP

[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL **SIC CODE 41201 | 41202**

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (Tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☒ Other [illegible] EWC
- ☐ Description of waste: [illegible]
- ☐ CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

☒ LOOSE [illegible] m³

☐ GRAB LOOSE _____ m³

☐ SKIP _____ YDS

☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE _____

☐ COLLECT ☐ WAIT & LOAD

☐ DELIVER ☐ EXCHANGE

OTHER WORK

☐ DAY WORK

☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME [illegible]

SITE ADDRESS [illegible]

[redacted]

BY SIGNING SECTION B, CAN CONFIRM THAT I HAVE FULFILLED MY DUTY TO APPLY THE WASTE HIERARCHY

BELL & SONS
CONSTRUCTION LIMITED

WTN 04915
DATE 10/7/21
TIME ON SITE
TIME OFF SITE

North Grange Farm House, Wimlands Lane, Faygate,
Nr Horsham, West Sussex RH12 4SP
[redacted]

DUTY OF CARE CONTROLLED WASTE/MATERIAL TRANSFER NOTE

SECTION A: DESCRIPTION OF WASTE/MATERIAL **SIC CODE 41201 | 41202**

1. DESCRIBE WASTE OR MATERIAL BEING TRANSFERRED (TICK OR STATE OTHER AND ENTER 6 DIGIT EWC)

- ☐ Soil & Stones 170504
- ☐ Concrete 170101
- ☐ Hardcore 170107
- ☐ Bituminous mixture (tarmac) 170302
- ☐ Mixed Construction & Demo Waste 170904
- ☐ Other EWC
- ☐ Description of waste: Topsoil
- ☐ CL:AIRE:

2. HOW IS THE WASTE/MATERIAL CONTAINED (TICK) AND QUANTITY (WRITE IN QUANTITY)

☐ LOOSE 1,000 m³ ☐ GRAB LOOSE ____ m³

☐ SKIP ____ YDS ☐ OTHER (PLEASE DESCRIBE AND GIVE QUANTITY)

SKIP SIZE ____
☐ COLLECT ☐ WAIT & LOAD
☐ DELIVER ☐ EXCHANGE

OTHER WORK
☐ DAY WORK
☐ HAULAGE TO

SECTION B: CURRENT HOLDER OF WASTE/MATERIAL (SITE/CUSTOMER/PRODUCER)

COMPANY NAME: Peterborough Homes

SITE ADDRESS: Oxney Road, Peterborough

BY SIGNING SECTION B, CAN CONFIRM THAT I HAVE FULFILLED MY DUTY TO APPLY THE WASTE HIERARCHY

[redacted]

Neil Burrows
Southern Testing Laboratories Ltd
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

Analytical Report Number : 20-93440

Project / Site name:	Cornfield Close, Littlehampton	Samples received on:	19/02/2020
Your job number:	SS1597	Samples instructed on:	19/03/2020
Your order number:	SS1597-1	Analysis completed by:	27/03/2020
Report Issue Number:	1	Report issued on:	27/03/2020
Samples Analysed:	1 soil sample		

Agnieszka Czerwińska

Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

ARUN DISTRICT COUNCIL LU/191/21/DOC
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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 20-93440

Project / Site name: Cornfield Close, Littlehampton
Your Order No: SS1597-1

Lab Sample Number				1476700				
Sample Reference				SP1				
Sample Number				None Supplied				
Depth (m)				0.00				
Date Sampled				14/02/2020				
Time Taken				1200				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	14				
Total mass of sample received	kg	0.001	NONE	2.0				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.9				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.075				
Sulphide	mg/kg	1	MCERTS	< 1.0				
Organic Matter	%	0.1	MCERTS	0.3				
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05				
Fluorene	mg/kg	0.05	MCERTS	< 0.05				
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05				
Anthracene	mg/kg	0.05	MCERTS	< 0.05				
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05				
Pyrene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05				
Chrysene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05				
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05				
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80				
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	19				
Boron (water soluble)	mg/kg	0.2	MCERTS	1.7				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	28				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	16				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	29				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	57				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	52				
Petroleum Hydrocarbons								
TPH C10 - C40	mg/kg	10	MCERTS	< 10				
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1				
TPH C6 - C40	mg/kg	10	NONE	< 10				

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number : 20-93440

Project / Site name: Cornfield Close, Littlehampton

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1476700	SP1	None Supplied	0.00	Brown clay and loam with gravel.

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Analytical Report Number : 20-93440

Project / Site name: Cornfield Close, Littlehampton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	W	MCERTS
TPH C6 - C40 (soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method.	L076-PL	W	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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The results included within the report are representative of the samples submitted for analysis.

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP1		S	20-93440	1476700	c	Hexavalent chromium in soil	L080-PL	c
SP1		S	20-93440	1476700	c	Monohydric phenols in soil	L080-PL	c
SP1		S	20-93440	1476700	c	Organic matter (Automated) in soil	L009-PL	c
SP1		S	20-93440	1476700	c	Speciated EPA-16 PAHs in soil	L064-PL	c
SP1		S	20-93440	1476700	c	Sulphide in soil	L010-PL	c
SP1		S	20-93440	1476700	c	TPH Banding in Soil by FID	L076-PL	c
SP1		S	20-93440	1476700	c	TPH C6 - C40 (soil)	L076-PL	c
SP1		S	20-93440	1476700	c	TPH2 (Soil)	L088-PL	c
SP1		S	20-93440	1476700	c	Total cyanide in soil	L080-PL	c
SP1		S	20-93440	1476700	c	pH in soil (automated)	L099-PL	c

Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature

Neil Burrows
Southern Testing Laboratories Ltd
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

[redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

[redacted]

Analytical Report Number : 20-87885

Project / Site name:	Cornfield Close, Littlehampton	**Samples received on:**	19/02/2020
Your job number:	SS1597	**Samples instructed on:**	19/02/2020
Your order number:	SS1597-1	**Analysis completed by:**	02/03/2020
Report Issue Number:	1	**Report issued on:**	02/03/2020
Samples Analysed:	1 wac multi sample		

[redacted]

Zina Abdul Razzak
Senior Quality Specialist

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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The results included within the report are representative of the samples submitted for analysis.

i2 Analytical
7 Woodshots Meadow
Croxley Green Business Park
Watford, WD18 8YS

[redacted]

Waste Acceptance Criteria Analytical Results

Report No:	20-87885						
					Client: SOUTHERNT		
Location	Cornfield Close, Littlehampton						
Lab Reference (Sample Number)	1447481				Landfill Waste Acceptance Criteria Limits		
Sampling Date	14/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	SP1						
Depth (m)	0.00						
Solid Waste Analysis							
TOC (%)**	0.2				3%	5%	6%
Loss on Ignition (%) **	1.4				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.30				1	--	--
Mineral Oil (mg/kg) #	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	1.1				100	--	--
pH (units)**	7.9				--	>6	--
Acid Neutralisation Capacity (mol / kg)	6.6				--	To be evaluated	To be evaluated
Eluate Analysis	2:1	8:1		Cumulative 10:1	Limit values for compliance leaching test		
(BS EN 12457 - 3 preparation utilising end over end leaching procedure)	mg/l	mg/l		mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.010	< 0.010		< 0.050	0.5	2	25
Barium *	0.042	0.020		0.24	20	100	300
Cadmium *	< 0.0005	< 0.0005		0.0027	0.04	1	5
Chromium *	< 0.0010	< 0.0010		0.0062	0.5	10	70
Copper *	0.0011	< 0.0030		< 0.020	2	50	100
Mercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
Molybdenum *	< 0.0030	< 0.0030		< 0.020	0.5	10	30
Nickel *	0.0024	0.0028		0.027	0.4	10	40
Lead *	< 0.0050	< 0.0050		< 0.020	0.5	10	50
Antimony *	< 0.0050	< 0.0050		0.023	0.06	0.7	5
Selenium *	< 0.010	< 0.010		< 0.040	0.1	0.5	7
Zinc *	< 0.0010	0.0047		0.040	4	50	200
Chloride *	4.7	< 4.0		18	800	15000	25000
Fluoride	1.0	0.86		8.8	10	150	500
Sulphate *	250	28		670	1000	20000	50000
TDS*	360	94		1400	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
DOC	4.0	3.6		37	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	86						
Moisture (%)	14						
Stage 1							
Volume Eluate L2 (litres)	0.32						
Filtered Eluate VE1 (litres)	0.30						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.

*= UKAS accredited (liquid eluate analysis only)

Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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The results included within the report are representative of the samples submitted for analysis.

ARUN DISTRICT COUNCIL LU/191/21/POC

Analytical Report Number : 20-87885

Project / Site name: Cornfield Close, Littlehampton

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1447481	SP1	None Supplied	0.00	Brown clay and loam with gravel.

ARUN DISTRICT COUNCIL LU/191/21/DOC
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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number : 20-87885

Project / Site name: Cornfield Close, Littlehampton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	W	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457-3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil C10 - C40	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L031-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L023-PL	D	MCERTS

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Analytical Report Number : 20-87885

Project / Site name: Cornfield Close, Littlehampton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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The results included within the report are representative of the samples submitted for analysis.

Timon Greenwood
Southern Testing Laboratories Ltd
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

[redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

[redacted]

Analytical Report Number : 20-97528

Project / Site name:	Wimlands Lane, Faygate RH12 4SP	**Samples received on:**	24/04/2020
Your job number:	GL6399 1	**Samples instructed on:**	24/04/2020
Your order number:	GL6399	**Analysis completed by:**	Not complete
Report Issue Number:	1	**Report issued on:**	05/05/2020
Samples Analysed:	1 soil sample		

[redacted]

Dr Claire Stone
Quality Manager

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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i2 Analytical
7 Woodshots Meadow
Croxley Green Business Park
Watford, WD18 8YS

[redacted]

Certificate of Analysis

BS 3882:2015 Specification For Topsoil

	Pass BS 3882 for Multipurpose Topsoil; Calcareous;		client	
Report No:	**20-97528**		**Southern Testing Laboratories Ltd**	
Location	Wimlands Lane, Faygate RH12 4SP		[redacted]	
Lab Reference (Sample Number)	1499368			
Sampling Date	23/04/2020			
Sample ID	Topsoil			
Depth (m)	**0.00**			

		unit	Result	Compliant with range (Y/N)					
				Multi-P	Acid	Calc	Low-F	Low-F(a)	Low-F(c)
Soil texture	<2mm fraction	%m/m	SANDY LOAM	Y	Y	Y	Y	Y	Y
Maximum coarse fragment content:	>2mm	%m/m	1.40	Y	Y	Y	Y	Y	Y
	>20mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
	>50mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
Mass loss on ignition		%	6.10						
	Clay 5-20%		Y	Y	Y	Y	Y	Y	Y
	Clay 20-35%		-	-	-	-	-	-	-
Soil pH:		pH	7.60	Y	N	Y	Y	N	Y
Carbonate:		%m/m	1.50	-	-	Y	-	-	Y
Available plant nutrients	Nitrogen	%m/m	0.41	Y	Y	Y	-	-	-
	Extractable Phosphate (as P)	mg/l	82.00	Y	Y	Y	N	N	N
	Extractable Potassium	mg/l	859.00	Y	Y	Y	-	-	-
	Extractable Magnesium	mg/l	150.00	Y	Y	Y	-	-	-
Carbon: Nitrogen Ratio:		:1	8.80	Y	Y	Y	Y	Y	Y
Conductivity		us/cm	1900.00	Y	-	-	-	-	-
Phytotoxic contaminants:	** Total Zinc	mg/kg	110.00	Y	Y	Y	Y	Y	Y
	** Total Copper	mg/kg	26.00	Y	Y	Y	Y	Y	Y
	** Total Nickel	mg/kg	16.00	Y	Y	Y	Y	Y	Y
Visible contaminants:	>2mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
	Plastics	%m/m	0.00	Y	Y	Y	Y	Y	Y
	Sharps	no. in 1 kg	0.00	Y	Y	Y	Y	Y	Y
Compliancy:				Pass	Fail	Pass	Fail	Fail	Fail

Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and I2 cannot be held responsible for any discrepencies with current legislation

** = MCERTS accrediited

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ARUN DISTRICT COUNCIL LU/191/21/DOC

Analytical Report Number : 20-97528

Project / Site name: Wimlands Lane, Faygate RH12 4SP

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1499368	Topsoil	ES	None Supplied	Grey loam and clay with gravel and rubble.

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Analytical Report Number : 20-97528

Project / Site name: Wimlands Lane, Faygate RH12 4SP

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Carbon to Nitrogen Ratio (Topsoil - BS3882:2015)	Carbon to Nitrogen ratio (:1) calculated using Loss on Ignition.	BS3882:2015	L01TS2015	W	NONE
Carbonate (Topsoil - BS3882)	Determination of Carbonate as per BS 3882:2015.	BS3882:2015	L034-PL	D	NONE
Coarse Fragment and Contaminant Analysis	Determination of >2mm contaminants	BS3882:2007 & BS8601:2013 & PAS 100:2005	L01TS	D	NONE
Conductivity (BS3882/BS8601)	Determination of the conductivity of soil in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L099-PL	D	NONE
Extractable/Available Metals (BS3882/BS8601)	Determiation of the extractable metals in soil, in accordance with BS3882:2007 methodology.	BS3882:2007 & BS8601:2013	L038-PL	D	NONE
Geotechnical Testing in Soil	See attached geotechnical report	See attached geotechnical report		W	NONE
Kjeldahl nitrogen in soil	Determination of total nitrogen using the Kjeldahl-digestion method and colorimetric determination.	In house method based on BS 7755-3.7:1995 &	L087-PL	D	NONE
Mass loss on ignition (Topsoil - BS3882)	Determination of Loss on Ignition as per BS 3882:2015.	BS3882:2015	L047-PL	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Nitrogen (TKN)	Determination of total nitrogen by Kjeldahl method.	BS3882:2007	L087-PL	D	NONE
pH (BS3882/BS8601)	Determination of the pH of soil in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L099-PL	D	NONE
Phosphorus as PO4 (BS3882/BS8601)	Determiation of the extractable phosphorus in soil, in accordance with BS3882:2007 methodology.	BS3882:2015 & BS8601:2013	L082-PL	D	NONE
Sodium (exchangeable %)	Determination of exchangeable sodium (%) by calculation, in accordance with BS3882:2007 methodology.	BS3882:2007	L028-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Textural Classification (BS3882/BS8601)	Determination of the textural classifcation of soil following BS3882:2007 methodology.	BS3882:2007 & BS8601:2013	L01TS	D	NONE
Textural Classification Diagram	Textural classification Diagram	BS3882:2015		D	NONE

ARUN DISTRICT COUNCIL LU/191/21/DOC
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Analytical Report Number : 20-97528

Project / Site name: Wimlands Lane, Faygate RH12 4SP

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Topsoil	See attached report.	BS 3882: 2015	PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

ARUN DISTRICT COUNCIL LU/191/21/DOC
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TEST CERTIFICATE

Specification for Topsoil

i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Watford Herts WD18 8YS

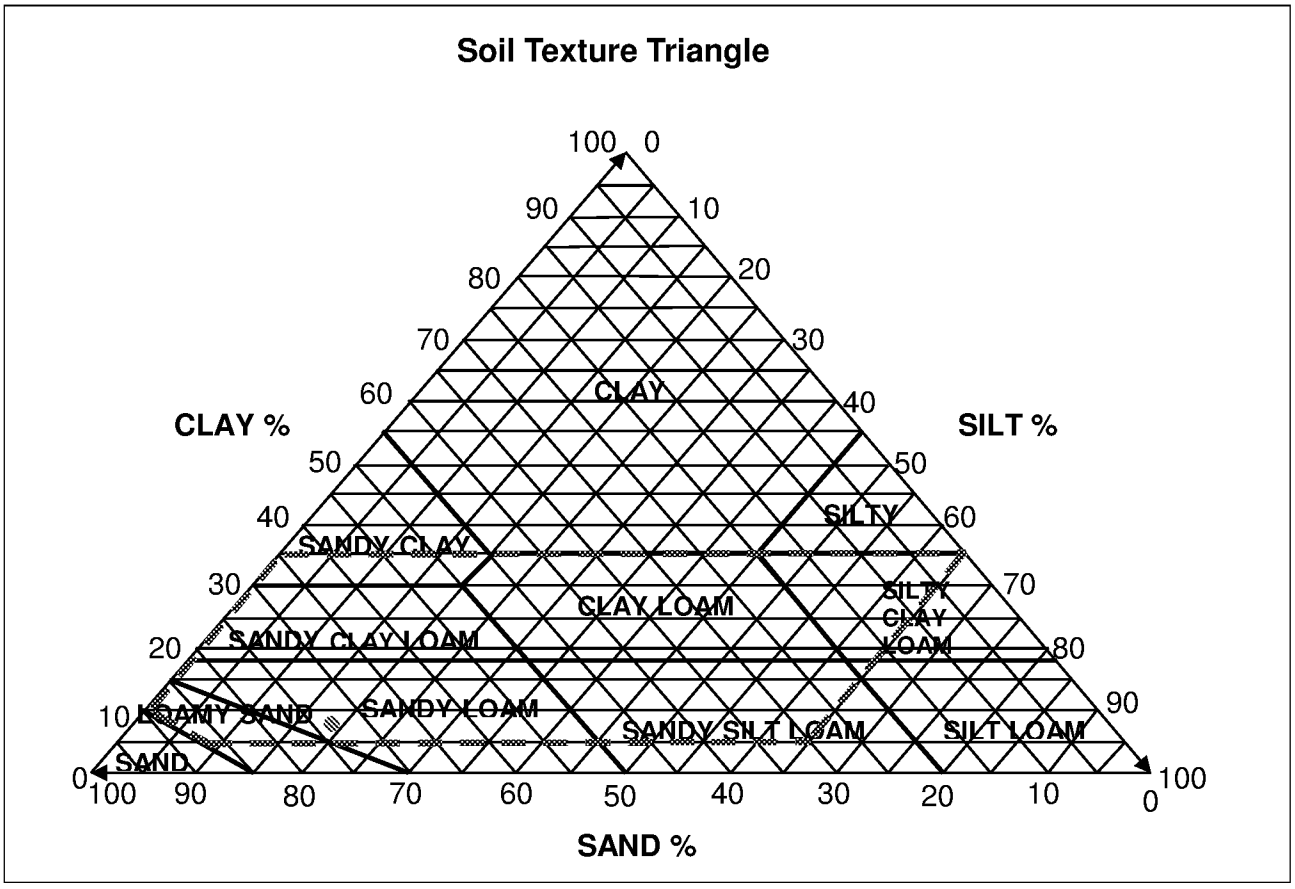
Tested in Accordance with: BS 3882: 2015

Client:	Southern Testing Laboratories Ltd	Client Reference:	GL6399 1
Client Address:	Keeble House, Stuart Way, East Grinstead, West Sussex, RH19 4QA	Job Number:	20-97528
		Date Sampled:	23/04/2020
		Date Received:	24/04/2020
Contact:	Timon Greenwood	Date Tested:	29/04/2020
Site Address:	Wimlands Lane, Faygate RH12 4SP	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1499368	Depth Top [m]:	0.00
Hole No.:	Topsoil	Depth Base [m]:	Not Given
Sample Reference:	ES	Sample Type:	D
Sample Description:	SANDY LOAM		



Sample Proportion	% dry mass
Sand	73.9
Silt	17.2
Clay	8.9

Remarks:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report are representative of the samples submitted for analysis.

Signed: [redacted]

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

Date Reported: 05/05/2020

GF 286.6

Timon Greenwood
Southern Testing Laboratories Ltd
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

[redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

[redacted]

Analytical Report Number : 20-97532

Project / Site name:	Wimlands Lane, Faygate RH12 4SP	**Samples received on:**	24/04/2020
Your job number:	GL6399 1	**Samples instructed on:**	24/04/2020
Your order number:	GL6399	**Analysis completed by:**	05/05/2020
Report Issue Number:	1	**Report issued on:**	05/05/2020
Samples Analysed:	1 soil sample		

[redacted]

Agnieszka Czerwińska

Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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Analytical Report Number: 20-97532

Project / Site name: Wimlands Lane, Faygate RH12 4SP
Your Order No: GL6399

Lab Sample Number				1499387				
Sample Reference				Topsoil				
Sample Number				ES				
Depth (m)				None Supplied				
Date Sampled				23/04/2020				
Time Taken				1200				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	15				
Total mass of sample received	kg	0.001	NONE	2.0				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.1				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.33				
Sulphide	mg/kg	1	MCERTS	28				
Organic Matter	%	0.1	MCERTS	5.3				
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05				
Fluorene	mg/kg	0.05	MCERTS	< 0.05				
Phenanthrene	mg/kg	0.05	MCERTS	1.8				
Anthracene	mg/kg	0.05	MCERTS	0.30				
Fluoranthene	mg/kg	0.05	MCERTS	3.6				
Pyrene	mg/kg	0.05	MCERTS	3.3				
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.6				
Chrysene	mg/kg	0.05	MCERTS	1.4				
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.8				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.81				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.5				
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.74				
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.23				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.99				
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	18.0				
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	18				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	25				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	92				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.5				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	14				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110				

ARUN DISTRICT COUNCIL LU/191/21/DOC
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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number : 20-97532

Project / Site name: Wimlands Lane, Faygate RH12 4SP

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1499387	Topsoil	ES	None Supplied	Grey loam and clay with gravel and rubble.

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number : 20-97532

Project / Site name: Wimlands Lane, Faygate RH12 4SP

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS

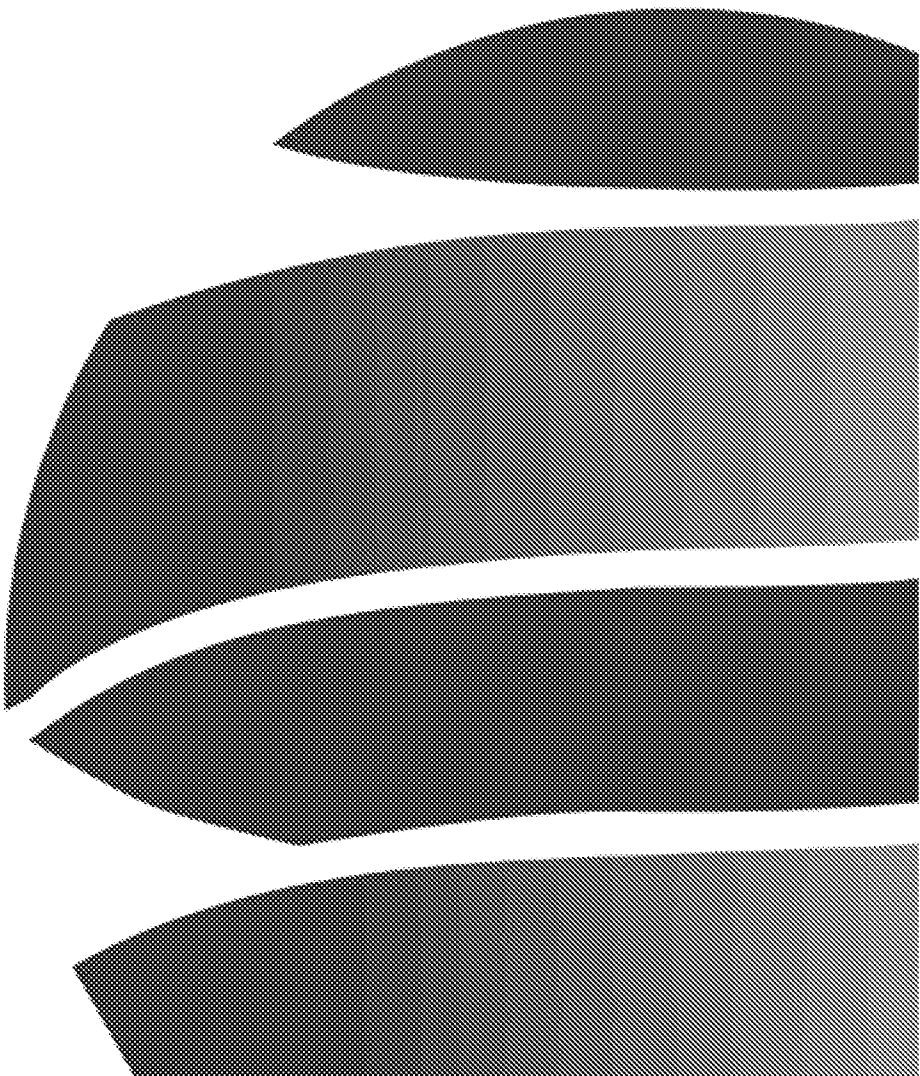
For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

ARUN DISTRICT COUNCIL LU/191/21/DOC
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The results included within the report are representative of the samples submitted for analysis.

Geo-Environmental

APPENDIX E

Visual Inspection Records of Soil Cover System Installation



Geo-Environmental

ID	GE18103
Project Name	Cornfield Close Littlehampton Plots 1-7
Client	Thakeham Client Limited
Engineers	
Katie O'Dea	[redacted]
Project Manager	
Laura Legate	[redacted]
Location	Littlehampton
Date	26/11/2020

Details of Hole

(3 records)

Hole ID	HP101
Plot No./Position	Plot 3
Date of Hole	26/11/2020, 14:04
Hole Type	HP
Final Depth	0.65

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.25	Dark brown slightly gravelly sandy SILT with frequent rootlets. Gravel is fine to medium sub angular flint.
0.25	0.65	Orangish brown sandy gravelly CLAY with black flecking. Gravel is fine to coarse sub angular flint.

Samples

(1 record)

Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.2	525	ES	1

Pass/Fail

(X) Pass
( ) Fail

Photo of Spoil



Photo of hole with tape in place



Photographs

(2 records)

Photograph



Description	Front gardens 3-7
Photograph	



Description	Front gardens1-3

Hole ID	HP102
Plot No./Position	Plot 1
Date of Hole	26/11/2020, 14:15
Hole Type	HP
Final Depth	0.65

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.25	Dark brown slightly clayey gravelly fine SAND with some rootlets and rare brick fragments. Gravel is fine to medium sub angular flint.

0.25	0.65	Orangish brown slightly gravelly very sandy CLAY. Sand is fine. Gravel is fine to coarse sub angular flint.

Samples

(1 record)

Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.1		ES	1

Pass/Fail

(X) Pass
( ) Fail

Photo of Spoil



Photo of hole with tape in place



Photographs

(2 records)

Photograph



Description	Terram
Photograph	



Description	View W across plots from Plot 1

Hole ID	HP103
Plot No./Position	Plot 6
Date of Hole	26/11/2020, 14:41
Hole Type	HP
Final Depth	0.5

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.2	Dark brown slightly clayey gravelly SAND with some rootlets and rare brick fragments.
0.2	0.55	Orangish brown slightly gravelly very sandy CLAY. Sand is fine. Gravel is fine to coarse sub angular chalk and flint.

Samples

(1 record)

Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.1		ES	1

(X) Pass

Pass/Fail	( ) Fail

Photo of Spoil



Photo of hole with tape in place



Photographs

(1 record)

Photograph



Description	Looking from Plot 6

Approved By

Katie O'Dea [redacted]

Geo-Environmental

ID	GE18103
Project Name	Cornfield Close - Plots 8-15
Client	Thakeham Client Limited
Engineers	
Fiona Goode	[redacted]
Project Manager	
Laura Legate	[redacted]
Location	Littlehampton
Date	07/01/2021

Details of Hole

(6 records)

Hole ID	HP1
Plot No./Position	Plot 8
Date of Hole	07/01/2021, 14:18
Hole Type	HP
Final Depth	0.6

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.2	Dark brown sandy CLAY with frequent roots and rootlets and occasional flint gravel.
0.2	0.6	Orange brown slightly gravel sandy CLAY. Gravel is fine to medium sub angular to sub rounded of flint and sand is fine

Samples

(2 records)

Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.1	0.1	ES	1
0.45	0.45	ES	2

Pass/Fail	(X) Pass ( ) Fail
Remarks	Taram encountered at 0.6m bgl
Photo of Spoil	



Photo of hole with tape in place



Photographs

(1 record)

Photograph



Description	HP1 with Taram in base

Hole ID	HP2
Plot No./Position	Plot 9
Date of Hole	07/01/2021, 14:18
Hole Type	HP
Final Depth	0.55

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.15	Dark brown slightly sandy CLAY with frequent roots and rootlets and occasional flint gravel

0.15	0.55	Orange brown slightly gravelly slightly sandy CLAY. Gravel is fine to medium sub angular to sub rounded of flint and sand is fine

Samples

(2 records)

Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.15	0.15	ES	1
0.50	0.50	ES	2

Pass/Fail

(X) Pass
( ) Fail

Remarks

Taram encountered beneath sub soil at 0.55m bgl

Photo of Spoil



Photo of hole with tape in place



Photographs

(1 record)

Photograph



Description	HP2 location

Hole ID	HP3
Plot No./Position	Plot 10-11
Date of Hole	07/01/2021, 14:19
Hole Type	HP
Final Depth	0.55

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.15	Dark brown slightly sandy CLAY with frequent roots and rootlets and occasional flint gravel

0.15	0.55	Orange brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium sub angular to sub rounded of flint and sand is fine

Samples

(2 records)

Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.1	0.1	ES	1
0.3	0.3	ES	2

Pass/Fail

(X) Pass
( ) Fail

Remarks

Taram encountered beneath subsoil at 0.55m bgl

Photo of Spoil



Photo of hole with tape in place



Hole ID	HP4
Plot No./Position	Plot 12
Date of Hole	07/01/2021, 14:19
Hole Type	HP
Final Depth	0.75

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.25	Dark brown slightly sandy CLAY with frequent roots and rootlets and occasional flint gravel
0.25	0.75	Orange brown slightly sandy slightly gravelly CLAY. Sand is fine and gravel is fine to medium sub angular to sub rounded of flint

Samples

(2 records)

Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.15	0.15	ES	1
0.4	0.4	ES	2

Pass/Fail

(X) Pass
( ) Fail

Remarks

Taram encountered beneath sub soil at 0.75m bgl

Photo of Spoil

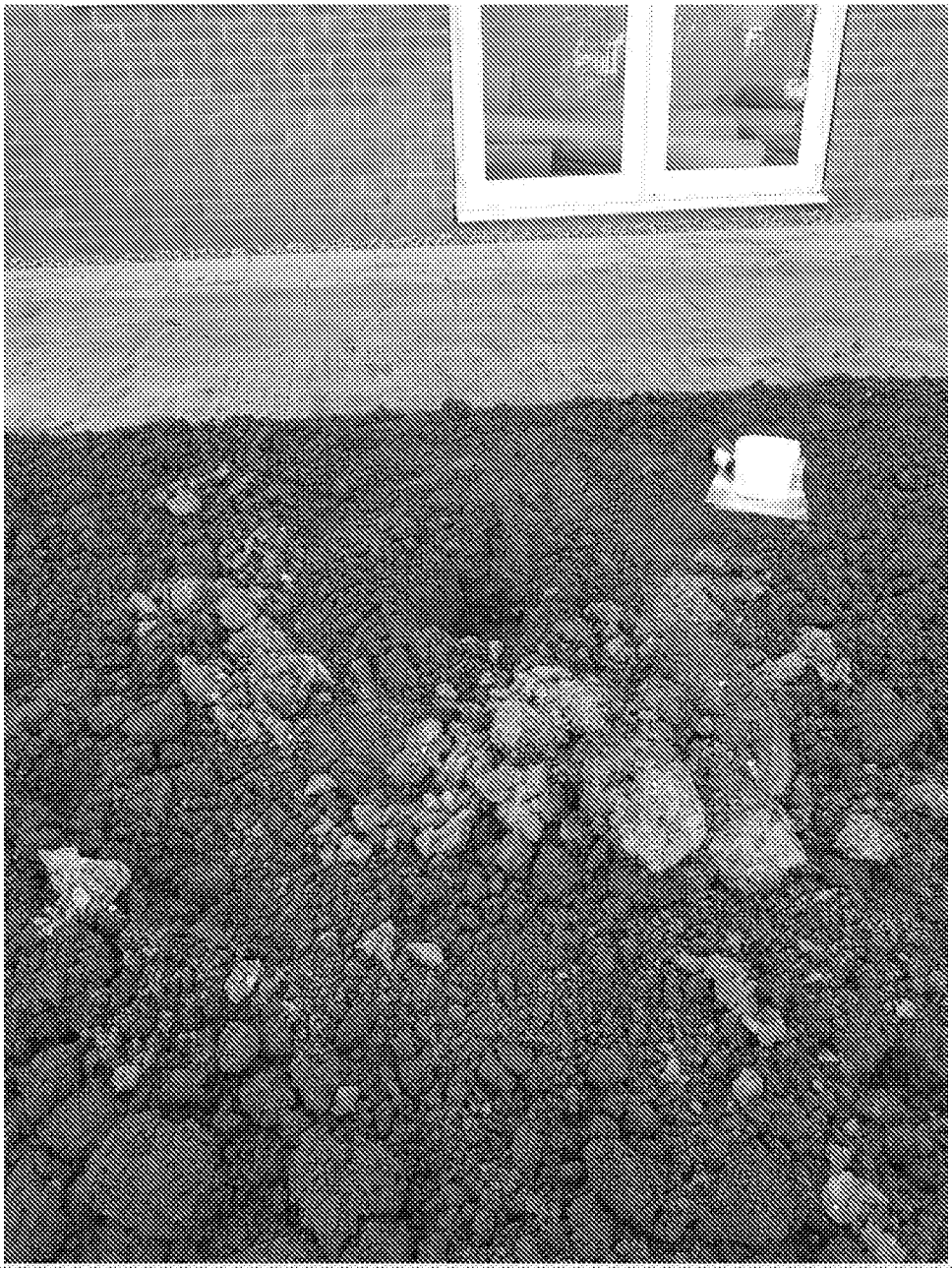


Photo of hole with tape in place



Hole ID	HP5
Plot No./Position	Plot 13
Date of Hole	07/01/2021, 14:20
Hole Type	HP
Final Depth	0.75

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.25	Dark brown slightly sandy CLAY with frequent roots and rootlets and occasional flint gravel
0.25	0.75	Orange brown slightly sandy slightly gravelly CLAY. Sand is fine and gravel is fine to medium sub angular to sub rounded of flint

Samples

(2 records)

Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.2	0.2	ES	1
0.6	0.6	ES	2

Pass/Fail

(X) Pass
( ) Fail

Remarks

Taram present beneath sub soil at 0.75m bgl

Photo of Spoil

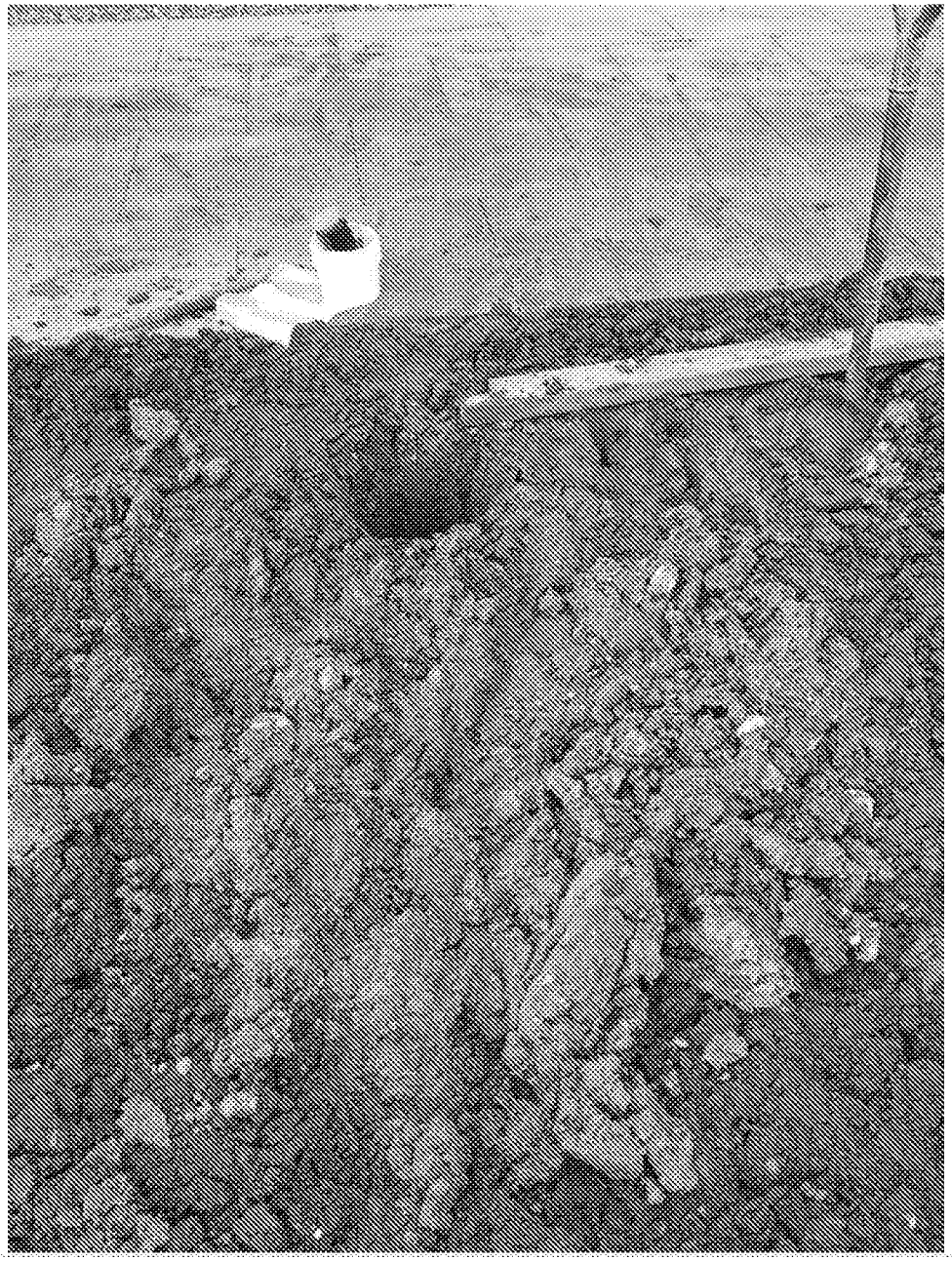


Photo of hole with tape in place



Photographs

(1 record)

Photograph



Description	Rear gardens (plots 8-15)

Hole ID	HP6
Plot No./Position	Plots 14-15
Date of Hole	07/01/2021, 14:20
Hole Type	HP
Final Depth	0.8

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.25	Dark brown slightly sandy CLAY with frequent roots and rootlets and occasional flint gravel
0.25	0.8	Orange brown slightly gravelly slightly sandy CLAY. Sand is fine and gravel is fine to medium sub angular to sub rounded of flint

Samples

(2 records)

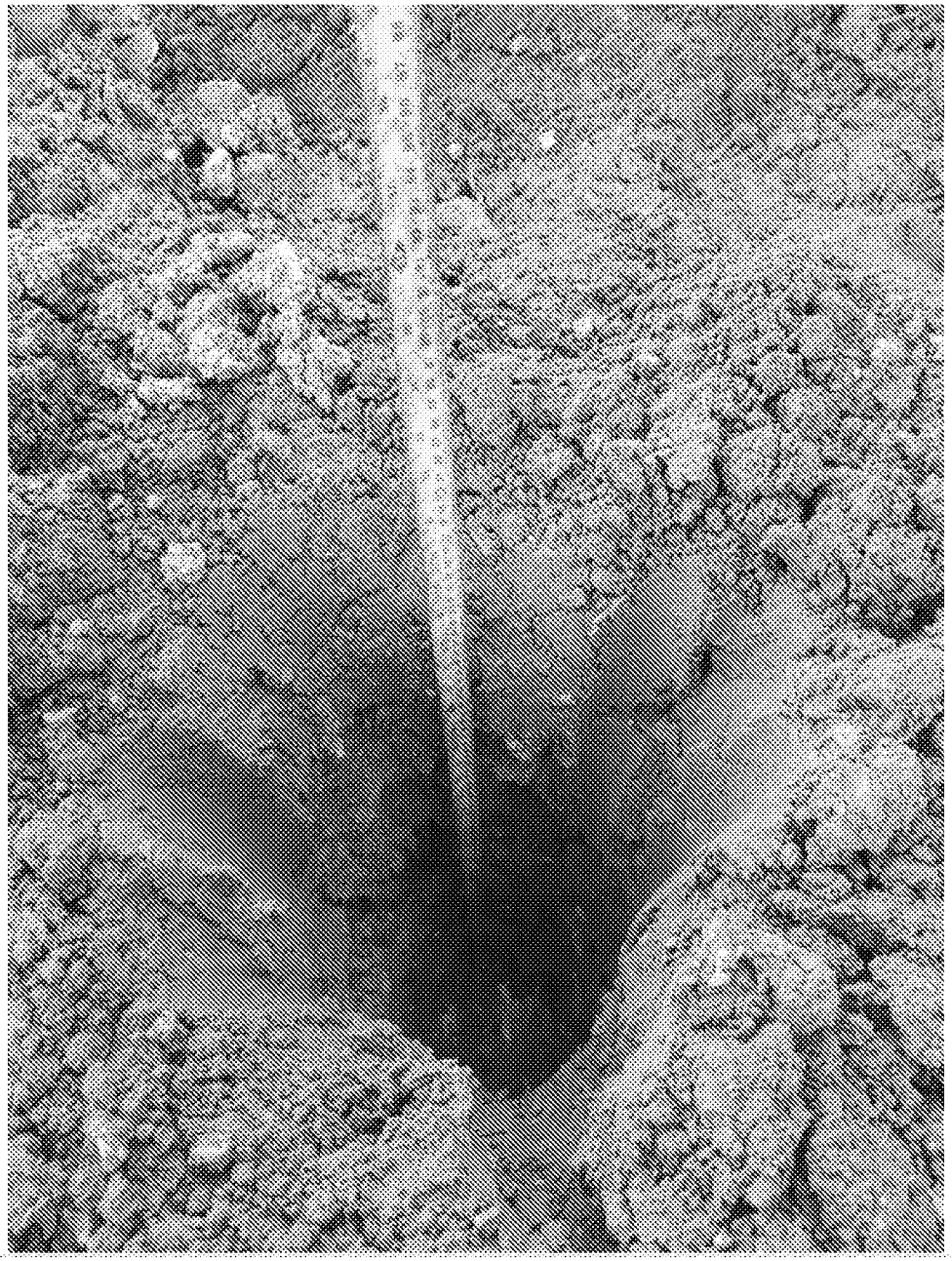
Top Depth	*Base Depth*	*Sample type*	*Sample reference*
0.2	0.2	ES	1
0.65	0.65	ES	2

Pass/Fail	(X) Pass ( ) Fail
Remarks	Taram present beneath sub soil at 0.8m bgl

Photo of Spoil



Photo of hole with tape in place



Photographs

(1 record)

Photograph



Description	Plots 14-15

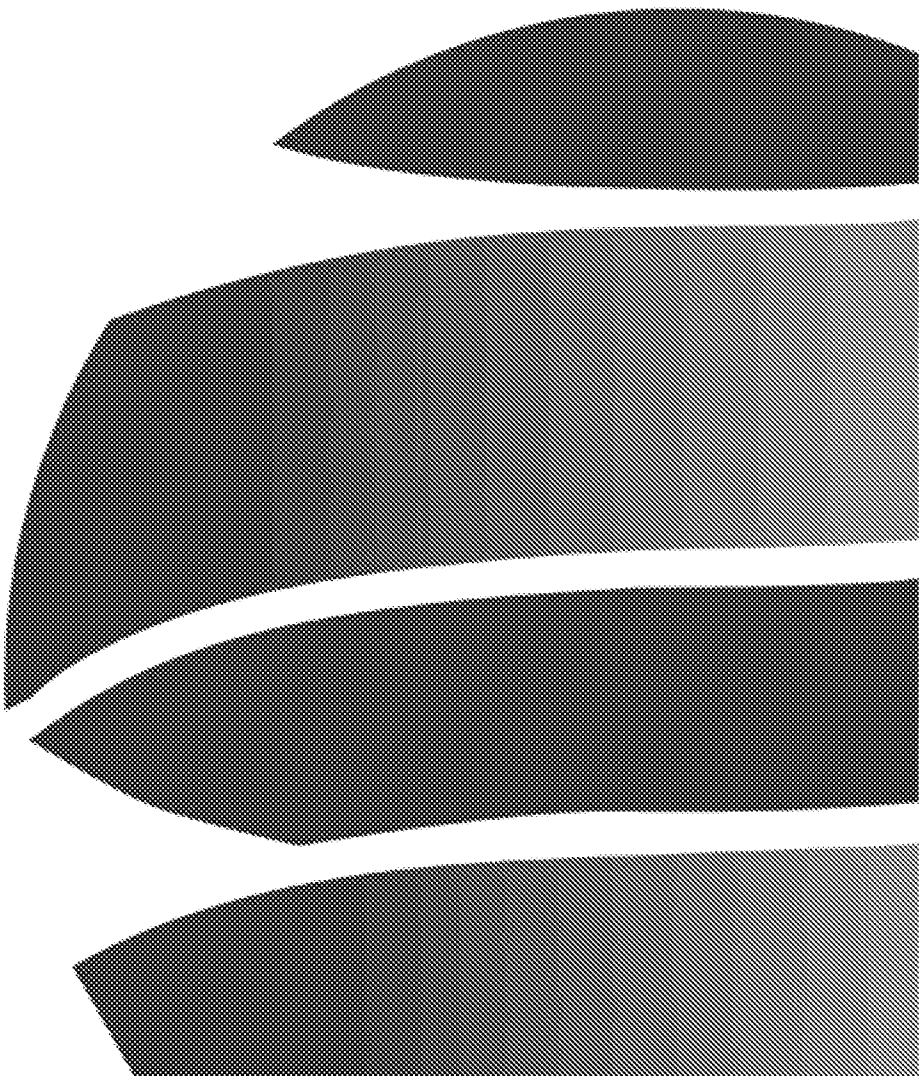
Approved By

Fiona Goode [redacted]

Geo-Environmental

APPENDIX F

Independent Geochemical Laboratory Test Results for Topsoil and Subsoil (14/12/2020 and 18/01/2021)



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
[redacted]

2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 20-31128

Issue: 1

Date of Issue: 14/12/2020

Contact: Laura Legate

Customer Details: GESL
Unit 7
Danworth Farm
Hurstpierpoint
West SussexBN6 9GL

Quotation No: Q19-01488

Order No: PO

Customer Reference: GE18103

Date Received: 27/11/2020

Date Approved: 14/12/2020

Details: Cornfield Close, Littlehampton

Approved by: [redacted]

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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ELAB

Sample Summary

Report No.: 20-31128, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
221713	Plot 3 HP101 0.00 - 0.25	26/11/2020	02/12/2020	Silty loam	
221714	Plot 1 HP102 0.10	26/11/2020	02/12/2020	Silty loam	
221715	Plot 6 HP103 0.10	26/11/2020	02/12/2020	Silty loam	

ELAB

UKAS TESTING 2683

MCERTS

Results Summary

Report No.: 20-31128, issue number 1

			ELAB Reference	221713	221714	221715
			Customer Reference			
			Sample ID			
			Sample Type	SOIL	SOIL	SOIL
			Sample Location	Plot 3 HP101	Plot 1 HP102	Plot 6 HP103
			Sample Depth (m)	0.00 - 0.25	0.10	0.10
			Sampling Date	26/11/2020	26/11/2020	26/11/2020
Determinand	**Codes**	**Units**	**LOD**			
Soil sample preparation parameters						
Material removed	N	%	0.1	18.5	21.1	25.4
Description of Inert material removed	N		0	Stones	Stones	Stones
Metals						
Arsenic	M	mg/kg	1	12.4	14.0	14.0
Beryllium	U	mg/kg	1	< 1.0	< 1.0	< 1.0
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	21.1	22.7	38.7
Copper	M	mg/kg	5	31.8	35.1	29.9
Lead	M	mg/kg	5	112	121	109
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	14.3	16.1	15.0
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Vanadium	M	mg/kg	5	31.5	35.1	34.0
Zinc	M	mg/kg	5	127	136	118
Anions						
Water Soluble Chloride	M	mg/kg	40	75	67	57
Water Soluble Sulphate	M	g/l	0.02	0.16	0.21	0.12
Inorganics						
Carbonate	N	%	0.1	1.1	1.3	2.7
Elemental Sulphur	M	mg/kg	20	< 20	< 20	< 20
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8
Total Sulphide	N	mg/kg	2	< 2	< 2	< 2
Total Cyanide	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Acid Soluble Sulphate (SO4)	U	%	0.02	0.05	0.06	0.04
Water Soluble Boron	N	mg/kg	0.5	1.0	1.0	0.8
Miscellaneous						
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	2520	2550	2460
Carbon Nitrogen Ratio	N	ratio	0.1	17.5	17.2	18.7
Loss On Ignition (450°C)	M	%	0.01	4.99	4.90	4.73
pH	M	pH units	0.1	8.1	8.2	8.7
Density	N	g/ml	0	1.10	1.12	1.15
Total Carbon	N	%	0.01	2.9	2.8	2.7
Total Organic Carbon	N	%	0.01	2.0	1.6	1.8
Total Nitrogen	N	%	0.01	0.17	0.17	0.15
Extractable Potassium	N	mg/l	20	225	250	236
Extractable Magnesium	N	mg/l	20	92	99	93
Extractable Phosphate	N	mg/l	1	66	70	75
Sand content	NS	%	1	84	82	71
Silt content	NS	%	1	13	14	21
Clay content	NS	%	1	3	4	8
Stones > 2mm	NS	%	1	16	20	18
Stones > 20mm	NS	%	1	< 1	< 1	< 1
Stones > 50mm	NS	%	1	< 1	< 1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01	< 0.01	< 0.01
Plastics	N	%	0.01	< 0.01	< 0.01	< 0.01
Sharps	N	n/kg	0	0	0	0
Phenols						
Total Phenols	N	mg/kg	6	< 6	< 6	< 6

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The Environmental Laboratory Ltd. Reg. No. 3882193

Results Summary

Report No.: 20-31128, issue number 1

				ELAB Reference	221713	221714	221715
				Customer Reference			
				Sample ID			
				Sample Type	SOIL	SOIL	SOIL
				Sample Location	Plot 3 HP101	Plot 1 HP102	Plot 6 HP103
				Sample Depth (m)	0.00 - 0.25	0.10	0.10
				Sampling Date	26/11/2020	26/11/2020	26/11/2020
Determinand	**Codes**	**Units**	**LOD**			
Polyaromatic hydrocarbons						
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	0.4	< 0.1	0.3
Anthracene	M	mg/kg	0.1	0.1	< 0.1	0.1
Fluoranthene	M	mg/kg	0.1	1.2	0.4	2.7
Pyrene	M	mg/kg	0.1	1.0	0.3	3.2
Benzo(a)anthracene	M	mg/kg	0.1	0.6	0.2	2.0
Chrysene	M	mg/kg	0.1	0.7	0.2	1.9
Benzo(b)fluoranthene	M	mg/kg	0.1	0.7	0.2	1.9
Benzo(k)fluoranthene	M	mg/kg	0.1	0.9	0.2	2.6
Benzo(a)pyrene	M	mg/kg	0.1	0.7	0.2	2.2
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	0.6	0.2	1.8
Dibenzo(a,h)anthracene	M	mg/kg	0.1	0.2	< 0.1	0.4
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.6	0.2	1.6
Total PAH(16)	M	mg/kg	0.4	7.9	2.3	21.1
BTEX						
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0
MTBE	N	ug/kg	10	< 10.0	< 10.0	< 10.0
TPH CWG						
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic	M	mg/kg	1	5.1	< 1.0	< 1.0
>C35-C40 Aliphatic	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Total aliphatic hydrocarbons (>C5 - C40)	N	mg/kg	1	6.8	< 1.0	1.3
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic	M	mg/kg	1	1.3	< 1.0	< 1.0
>C12-C16 Aromatic	M	mg/kg	1	5.2	1.1	1.5
>C16-C21 Aromatic	M	mg/kg	1	2.0	< 1.0	< 1.0
>C21-C35 Aromatic	M	mg/kg	1	22.8	2.3	3.1
>C35-C40 Aromatic	M	mg/kg	1	2.5	< 1.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40)	N	mg/kg	1	34.2	4.3	6.0
Total petroleum hydrocarbons (>C5 - C40)	N	mg/kg	1	41.0	5.1	7.3

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Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY

Results Summary

Report No.: 20-31128, 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.

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 (%)
221713	0.00 - 0.25	Plot 3 HP101	Brown Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
221714	0.10	Plot 1 HP102	Brown Soil,Stones,Brick,Twigs,Concrete	No asbestos detected	n/t	n/t	n/t	n/t
221715	0.10	Plot 6 HP103	Brown sandy Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 20-31128, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	03/12/2020		
Extractable cations - BS3882	N	Air dried sample	03/12/2020		ICPMS
Visible Contaminants	N		03/12/2020		
Sulphide	N	As submitted sample	03/12/2020	109	Colorimetry
Hexavalent chromium	N	As submitted sample	03/12/2020	110	Colorimetry
pH	M	Air dried sample	03/12/2020	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	04/12/2020	114	Electromeric
Acid Soluble Sulphate	U	Air dried sample	04/12/2020	115	Ion Chromatography
Phenols in solids	N	As submitted sample	03/12/2020	121	HPLC
Elemental Sulphur	M	Air dried sample	03/12/2020	122	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	04/12/2020	129	Gravimetry
PAH (GC-FID)	M	As submitted sample	03/12/2020	133	GC-FID
Extr. Phos	N	Air dried sample	03/12/2020	140	ICPMS
Water soluble anions	M	Air dried sample	03/12/2020	172	Ion Chromatography
Low range Aliphatic hydrocarbons soil	N	As submitted sample	03/12/2020	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	03/12/2020	181	GC-MS
BTEX in solids	M	As submitted sample	03/12/2020	181A	GC-MS
Water soluble boron	N	Air dried sample	03/12/2020	202	Colorimetry
Total cyanide	M	As submitted sample	09/12/2020	204	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	04/12/2020	210	IR
TPH CWG soil by gc-gc	M	As submitted sample	02/12/2020	271	
Asbestos identification	U	Air dried sample	04/12/2020	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	03/12/2020	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 20-31128, 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

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
[redacted]

UKAS TESTING
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 21-31599

Issue: Preliminary Report

Date of Issue: 18/01/2021

Contact: Fiona Goode

Customer Details: GESL
Unit 7
Danworth Farm
Hurstpierpoint
West SussexBN6 9GL

Quotation No: Q19-01488

Order No: PO-3398

Customer Reference: GE18103

Date Received: 11/01/2021

Date Approved: 18/01/2021

Details: Cornfield Close

Approved by: [redacted]

Mike Varley, Technical Manager

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ELAB

Sample Summary

Report No.: 21-31599, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
224329	HP1 0.10	07/01/2021	11/01/2021		
224330	HP1 0.45	07/01/2021	11/01/2021	Silty loam	
224331	HP2 0.15	07/01/2021	11/01/2021	Sandy silty loam	
224332	HP2 0.50	07/01/2021	11/01/2021		
224333	HP3 0.10	07/01/2021	11/01/2021	Sandy silty loam	
224334	HP3 0.30	07/01/2021	11/01/2021		
224335	HP4 0.15	07/01/2021	11/01/2021	Sandy silty loam	
224336	HP4 0.40	07/01/2021	11/01/2021		
224337	HP5 0.20	07/01/2021	11/01/2021	Sandy silty loam	
224338	HP5 0.60	07/01/2021	11/01/2021		
224339	HP6 0.20	07/01/2021	11/01/2021		
224340	HP6 0.65	07/01/2021	11/01/2021	Sandy silty loam	

Results Summary

Report No.: 21-31599, issue number 1

ELAB Reference				224330	224331	224333	224335	224337
Customer Reference								
Sample ID								
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				HP1	HP2	HP3	HP4	HP5
Sample Depth (m)				0.45	0.15	0.10	0.15	0.20
Sampling Date				07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021
Determinand	**Codes**	**Units**	**LOD**					
Soil sample preparation parameters								
Material removed	N	%	0.1	1.4	14.8	13.3	4.3	4.0
Description of Inert material removed	N		0	Stones	Stones	Stones	Stones	Stones
Metals								
Arsenic	M	mg/kg	1	n/t	14.4	n/t	14.5	n/t
Beryllium	U	mg/kg	1	n/t	< 1.0	n/t	< 1.0	n/t
Cadmium	M	mg/kg	0.5	n/t	0.5	n/t	< 0.5	n/t
Chromium	M	mg/kg	5	n/t	25.0	n/t	27.7	n/t
Copper	M	mg/kg	5	31.2	36.6	28.4	42.6	31.6
Lead	M	mg/kg	5	n/t	133	n/t	167	n/t
Mercury	M	mg/kg	0.5	n/t	< 0.5	n/t	< 0.5	n/t
Nickel	M	mg/kg	5	24.4	17.8	19.7	17.6	17.2
Selenium	M	mg/kg	1	n/t	< 1.0	n/t	< 1.0	n/t
Vanadium	M	mg/kg	5	n/t	37.4	n/t	42.1	n/t
Zinc	M	mg/kg	5	103	147	125	154	138
Anions								
Water Soluble Chloride	M	mg/kg	40	n/t	< 40	n/t	53	n/t
Water Soluble Sulphate	M	g/l	0.02	n/t	0.04	n/t	0.15	n/t
Inorganics								
Carbonate	N	%	0.1	4.5	n/t	4.8	n/t	4.0
Elemental Sulphur	M	mg/kg	20	n/t	< 20	n/t	< 20	n/t
Hexavalent Chromium	N	mg/kg	0.8	n/t	< 0.8	n/t	< 0.8	n/t
Total Sulphide	N	mg/kg	2	n/t	< 2	n/t	< 2	n/t
Total Cyanide	M	mg/kg	1	n/t	< 1.0	n/t	< 1.0	n/t
Acid Soluble Sulphate (SO4)	U	%	0.02	n/t	0.06	n/t	0.07	n/t
Water Soluble Boron	N	mg/kg	0.5	n/t	1.5	n/t	1.1	n/t
Miscellaneous								
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	2340	n/t	2300	n/t	2430
Carbon Nitrogen Ratio	N	ratio	0.1	n/t	n/t	19.2	n/t	16.7
Loss On Ignition (450°C)	M	%	0.01	5.04	n/t	3.94	n/t	4.23
pH	M	pH units	0.1	7.5	8.2	8.3	8.0	8.3
Density	N	g/ml	0	1.15	n/t	1.15	n/t	1.13
Soil Organic Matter	U	%	0.1	2.8	n/t	n/t	n/t	n/t
Total Carbon	N	%	0.01	n/t	n/t	2.3	n/t	2.5
Total Organic Carbon	N	%	0.01	n/t	1.8	n/t	2.1	n/t
Total Nitrogen	N	%	0.01	n/t	n/t	0.12	n/t	0.15
Extractable Potassium	N	mg/l	20	125	n/t	206	n/t	250
Extractable Magnesium	N	mg/l	20	109	n/t	88	n/t	89
Extractable Phosphate	N	mg/l	1	n/t	n/t	51	n/t	67
Extractable Calcium	N	mg/l	20	4380	n/t	n/t	n/t	n/t
Extractable Sodium	N	mg/l	20	28	n/t	n/t	n/t	n/t
Sand content	NS	%	1	to follow	n/t	to follow	n/t	to follow
Silt content	NS	%	1	to follow	n/t	to follow	n/t	to follow
Clay content	NS	%	1	to follow	n/t	to follow	n/t	to follow
Stones > 2mm	NS	%	1	to follow	n/t	to follow	n/t	to follow
Stones > 20mm	NS	%	1	to follow	n/t	to follow	n/t	to follow
Stones > 50mm	NS	%	1	n/t	n/t	to follow	n/t	to follow
Stones > 75mm	NS	%	1	to follow	n/t	n/t	n/t	n/t
Total Visible Contaminants	N	%	0.01	< 0.01	n/t	< 0.01	n/t	< 0.01
Plastics	N	%	0.01	< 0.01	n/t	< 0.01	n/t	< 0.01
Sharps	N	n/kg	0	0	n/t	0	n/t	0

Tests marked N are not UKAS accredited.

The Environmental Laboratory Ltd. Reg. No. 3882193

ELAB

UKAS TESTING 2683

MCERTS

Results Summary

Report No.: 21-31599, issue number 1

				ELAB Reference	224330	224331	224333	224335	224337
				Customer Reference					
				Sample ID					
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Location	HP1	HP2	HP3	HP4	HP5
				Sample Depth (m)	0.45	0.15	0.10	0.15	0.20
				Sampling Date	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021
Determinand	**Codes**	**Units**	**LOD**						
Phenols									
Total Phenols	N	mg/kg	6		n/t	< 6	n/t	< 6	n/t
Polyaromatic hydrocarbons									
Naphthalene	M	mg/kg	0.1		n/t	< 0.1	n/t	< 0.1	n/t
Acenaphthylene	M	mg/kg	0.1		n/t	< 0.1	n/t	< 0.1	n/t
Acenaphthene	M	mg/kg	0.1		n/t	< 0.1	n/t	< 0.1	n/t
Fluorene	M	mg/kg	0.1		n/t	< 0.1	n/t	< 0.1	n/t
Phenanthrene	M	mg/kg	0.1		n/t	0.4	n/t	0.2	n/t
Anthracene	M	mg/kg	0.1		n/t	0.2	n/t	< 0.1	n/t
Fluoranthene	M	mg/kg	0.1		n/t	0.7	n/t	0.7	n/t
Pyrene	M	mg/kg	0.1		n/t	0.5	n/t	0.6	n/t
Benzo(a)anthracene	M	mg/kg	0.1		n/t	0.3	n/t	0.3	n/t
Chrysene	M	mg/kg	0.1		n/t	0.4	n/t	0.4	n/t
Benzo(b)fluoranthene	M	mg/kg	0.1		n/t	0.4	n/t	0.5	n/t
Benzo(k)fluoranthene	M	mg/kg	0.1		n/t	0.7	n/t	0.7	n/t
Benzo(a)pyrene	M	mg/kg	0.1		n/t	0.3	n/t	0.4	n/t
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1		n/t	0.2	n/t	0.3	n/t
Dibenzo(a,h)anthracene	M	mg/kg	0.1		n/t	0.2	n/t	0.1	n/t
Benzo[g,h,i]perylene	M	mg/kg	0.1		n/t	0.2	n/t	0.3	n/t
Total PAH(16)	M	mg/kg	0.4		n/t	4.8	n/t	4.5	n/t
BTEX									
Benzene	M	ug/kg	10		n/t	< 10.0	n/t	< 10.0	n/t
Toluene	M	ug/kg	10		n/t	< 10.0	n/t	< 10.0	n/t
Ethylbenzene	M	ug/kg	10		n/t	< 10.0	n/t	< 10.0	n/t
Xylenes	M	ug/kg	10		n/t	< 10.0	n/t	< 10.0	n/t
MTBE	N	ug/kg	10		n/t	< 10.0	n/t	< 10.0	n/t
TPH CWG									
>C5-C6 Aliphatic	N	mg/kg	0.01		n/t	< 0.01	n/t	< 0.01	n/t
>C6-C8 Aliphatic	N	mg/kg	0.01		n/t	< 0.01	n/t	< 0.01	n/t
>C8-C10 Aliphatic	N	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C10-C12 Aliphatic	M	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C12-C16 Aliphatic	M	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C16-C21 Aliphatic	M	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C21-C35 Aliphatic	M	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C35-C40 Aliphatic	M	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
Total aliphatic hydrocarbons (>C5 - C40)	N	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C5-C7 Aromatic	N	mg/kg	0.01		n/t	< 0.01	n/t	< 0.01	n/t
>C7-C8 Aromatic	N	mg/kg	0.01		n/t	< 0.01	n/t	< 0.01	n/t
>C8-C10 Aromatic	N	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C10-C12 Aromatic	M	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C12-C16 Aromatic	M	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C16-C21 Aromatic	M	mg/kg	1		n/t	< 1.0	n/t	< 1.0	n/t
>C21-C35 Aromatic	M	mg/kg	1		n/t	1.8	n/t	2.4	n/t
>C35-C40 Aromatic	M	mg/kg	1		n/t	1.7	n/t	2.3	n/t
Total aromatic hydrocarbons (>C5 - C40)	N	mg/kg	1		n/t	3.5	n/t	5.2	n/t
Total petroleum hydrocarbons (>C5 - C40)	N	mg/kg	1		n/t	3.7	n/t	6.1	n/t

Tests marked N are not UKAS accredited.

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UKAS TESTING 2683

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Results Summary

Report No.: 21-31599, issue number 1

ELAB Reference	224340
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	HP6
Sample Depth (m)	0.65
Sampling Date	07/01/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	23.7
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	1	n/t
Beryllium	U	mg/kg	1	n/t
Cadmium	M	mg/kg	0.5	n/t
Chromium	M	mg/kg	5	n/t
Copper	M	mg/kg	5	23.8
Lead	M	mg/kg	5	n/t
Mercury	M	mg/kg	0.5	n/t
Nickel	M	mg/kg	5	27.3
Selenium	M	mg/kg	1	n/t
Vanadium	M	mg/kg	5	n/t
Zinc	M	mg/kg	5	92.3
Anions				
Water Soluble Chloride	M	mg/kg	40	n/t
Water Soluble Sulphate	M	g/l	0.02	n/t
Inorganics				
Carbonate	N	%	0.1	3.5
Elemental Sulphur	M	mg/kg	20	n/t
Hexavalent Chromium	N	mg/kg	0.8	n/t
Total Sulphide	N	mg/kg	2	n/t
Total Cyanide	M	mg/kg	1	n/t
Acid Soluble Sulphate (SO4)	U	%	0.02	n/t
Water Soluble Boron	N	mg/kg	0.5	n/t
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	2260
Carbon Nitrogen Ratio	N	ratio	0.1	n/t
Loss On Ignition (450°C)	M	%	0.01	1.74
pH	M	pH units	0.1	8.2
Density	N	g/ml	0	1.16
Soil Organic Matter	U	%	0.1	0.7
Total Carbon	N	%	0.01	n/t
Total Organic Carbon	N	%	0.01	n/t
Total Nitrogen	N	%	0.01	n/t
Extractable Potassium	N	mg/l	20	112
Extractable Magnesium	N	mg/l	20	105
Extractable Phosphate	N	mg/l	1	n/t
Extractable Calcium	N	mg/l	20	3800
Extractable Sodium	N	mg/l	20	32
Sand content	NS	%	1	to follow
Silt content	NS	%	1	to follow
Clay content	NS	%	1	to follow
Stones > 2mm	NS	%	1	to follow
Stones > 20mm	NS	%	1	to follow
Stones > 50mm	NS	%	1	n/t
Stones > 75mm	NS	%	1	to follow
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 21-31599, issue number 1

ELAB Reference	224340
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	HP6
Sample Depth (m)	0.65
Sampling Date	07/01/2021

Determinand	Codes	Units	LOD	
Phenols				
Total Phenols	N	mg/kg	6	n/t
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	n/t
Acenaphthylene	M	mg/kg	0.1	n/t
Acenaphthene	M	mg/kg	0.1	n/t
Fluorene	M	mg/kg	0.1	n/t
Phenanthrene	M	mg/kg	0.1	n/t
Anthracene	M	mg/kg	0.1	n/t
Fluoranthene	M	mg/kg	0.1	n/t
Pyrene	M	mg/kg	0.1	n/t
Benzo(a)anthracene	M	mg/kg	0.1	n/t
Chrysene	M	mg/kg	0.1	n/t
Benzo(b)fluoranthene	M	mg/kg	0.1	n/t
Benzo(k)fluoranthene	M	mg/kg	0.1	n/t
Benzo(a)pyrene	M	mg/kg	0.1	n/t
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	n/t
Dibenzo(a,h)anthracene	M	mg/kg	0.1	n/t
Benzo[g,h,i]perylene	M	mg/kg	0.1	n/t
Total PAH(16)	M	mg/kg	0.4	n/t
BTEX				
Benzene	M	ug/kg	10	n/t
Toluene	M	ug/kg	10	n/t
Ethylbenzene	M	ug/kg	10	n/t
Xylenes	M	ug/kg	10	n/t
MTBE	N	ug/kg	10	n/t
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	n/t
>C6-C8 Aliphatic	N	mg/kg	0.01	n/t
>C8-C10 Aliphatic	N	mg/kg	1	n/t
>C10-C12 Aliphatic	M	mg/kg	1	n/t
>C12-C16 Aliphatic	M	mg/kg	1	n/t
>C16-C21 Aliphatic	M	mg/kg	1	n/t
>C21-C35 Aliphatic	M	mg/kg	1	n/t
>C35-C40 Aliphatic	M	mg/kg	1	n/t
Total aliphatic hydrocarbons (>C5 - C40)	N	mg/kg	1	n/t
>C5-C7 Aromatic	N	mg/kg	0.01	n/t
>C7-C8 Aromatic	N	mg/kg	0.01	n/t
>C8-C10 Aromatic	N	mg/kg	1	n/t
>C10-C12 Aromatic	M	mg/kg	1	n/t
>C12-C16 Aromatic	M	mg/kg	1	n/t
>C16-C21 Aromatic	M	mg/kg	1	n/t
>C21-C35 Aromatic	M	mg/kg	1	n/t
>C35-C40 Aromatic	M	mg/kg	1	n/t
Total aromatic hydrocarbons (>C5 - C40)	N	mg/kg	1	n/t
Total petroleum hydrocarbons (>C5 - C40)	N	mg/kg	1	n/t

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY

[redacted]

Results Summary

Report No.: 21-31599, 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.

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 (%)
224331	0.15	HP2	Brown soil, stones, clinker	No asbestos detected	n/t	n/t	n/t	n/t
224335	0.15	HP4	Brown soil, stones, plant-material	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-31599, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	13/01/2021		
Extractable cations - BS3882	N	Air dried sample	13/01/2021		ICPMS
Visible Contaminants	N		13/01/2021		
Sulphide	N	As submitted sample	13/01/2021	109	Colorimetry
Hexavalent chromium	N	As submitted sample	13/01/2021	110	Colorimetry
pH	M	Air dried sample	13/01/2021	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	13/01/2021	114	Electromeric
Acid Soluble Sulphate	U	Air dried sample	14/01/2021	115	Ion Chromatography
Phenols in solids	N	As submitted sample	13/01/2021	121	HPLC
Elemental Sulphur	M	Air dried sample	13/01/2021	122	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	14/01/2021	129	Gravimetry
PAH (GC-FID)	M	As submitted sample	13/01/2021	133	GC-FID
Extr. Phos	N	Air dried sample	13/01/2021	140	ICPMS
Water soluble anions	M	Air dried sample	13/01/2021	172	Ion Chromatography
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/01/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/01/2021	181	GC-MS
BTEX in solids	M	As submitted sample	14/01/2021	181A	GC-MS
Water soluble boron	N	Air dried sample	13/01/2021	202	Colorimetry
Total cyanide	M	As submitted sample	13/01/2021	204	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	14/01/2021	210	IR
TPH CWG soil by gc-gc	M	As submitted sample	13/01/2021	271	
Asbestos identification	U	Air dried sample	13/01/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	13/01/2021	300	ICPMS
Soil organic matter	U	Air dried sample	13/01/2021	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-31599, 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

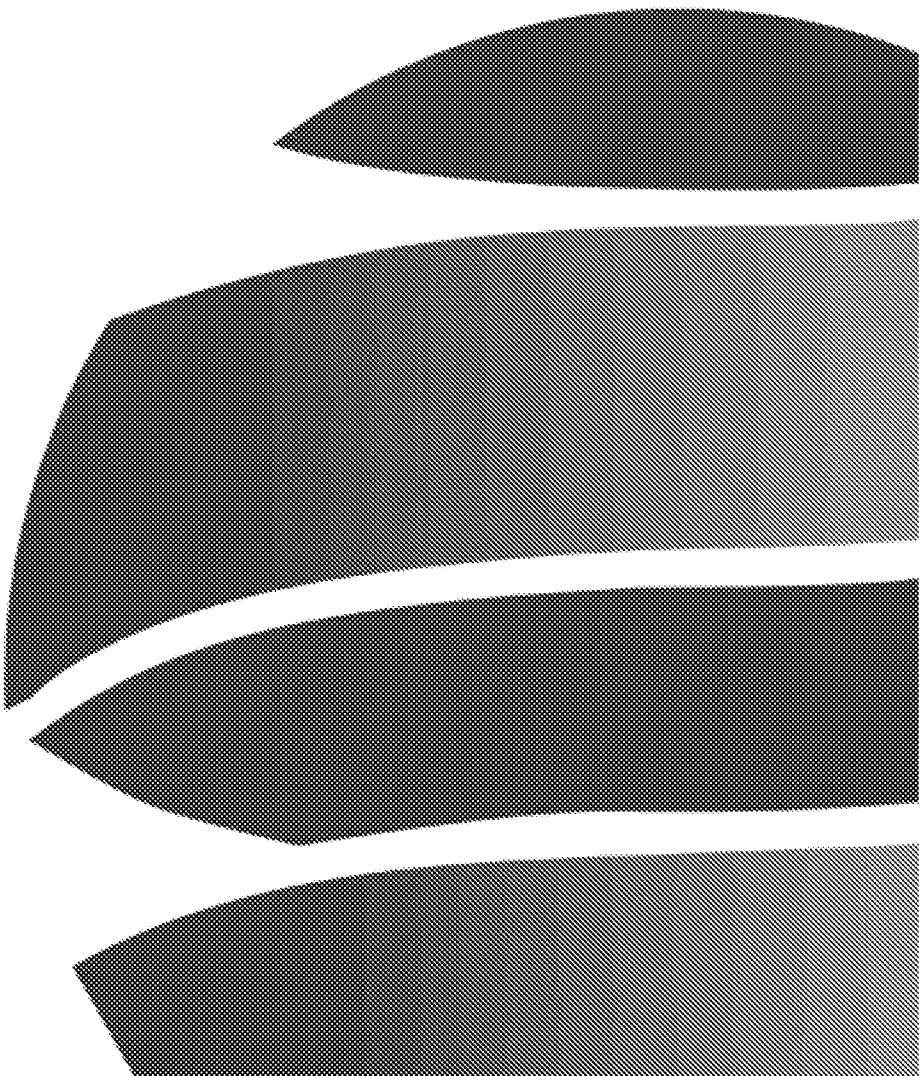
All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Geo-Environmental

APPENDIX G

Water Quality Monitoring Report, GE18103/AP01/200402, April 2020



2nd April 2020

Our ref: GE18103/AP01/200402

Geo-Environmental

Thomas Richards
Thakeham Homes Limited
Thakeham House
Summers Place
Stane Street
Billingshurst
West Sussex
RH14 9GN

By Email Only

Dear Tom,

RE: DAISYFIELDS, CORNFIELD CLOSE, LITTLEHAMPTON, POSTCODE HERE– QUARTERLY GROUNDWATER QUALITY ASSESSMENT

Background

Geo-Environmental was instructed by Thakeham Homes to produce a Water Quality Management Plan in November 2019 (ref: GE18103-WQMP-NOV19) for the re-development of the site at Daisyfields, Cornfield Close, Littlehampton.

The water quality management plan outlined the monitoring strategy which required bi-monthly monitoring visits over the period when groundworks (foundations and piling) are being undertaken for the first six months and then quarterly monitoring thereafter. Where groundworks are to be phased, monitoring should be undertaken until all such works are completed.

This letter outlines the results of the first water quality monitoring visit which was undertaken on the 10th March 2020, from which the groundwater laboratory analysis has now been completed.

Water Quality Monitoring Strategy

Five monitoring wells have been selected to enable monitoring during the construction period (BH110, BH103, BHA, BHB & BHC), whilst the remaining wells have been decommissioned prior to the March 2020 monitoring. Table 1, overleaf lists the testing frequency and suite of analysis required for the monitoring period.

ARUN DISTRICT COUNCIL LU/191/21/DOC

Locations	Frequency	Suite of Analysis	Phase
BH103, BH110 & BHA-BHC*	1No. visit to determine baseline conditions if commencement date on site >6 months past WQMP issue date	General brownfield suite, speciated PAH, TPH, MNA parameters, water quality parameters and ground water level.	Pre commencement
BH103, BH110 & BHA-BHC	Bi-monthly		Initial 6 months
BH103, BH110 & BHA-BHC	Quarterly		6-24 months
BH103, BH110 & BHA-BHC	Six-monthly		>24 months (to be reviewed and agreed with LA/EA subject to results during initial 24 months)
BH103, BH110 & BHA-BHC	1No. visit post intrusive development to confirm GW conditions following works on site.		Post Development on intrusive groundworks element

*Updated baseline from wells to be utilised for ongoing monitoring programme undertaken on the 5th November 2019

Table 1 Groundwater Monitoring Schedule

The pre commencement monitoring visit was undertaken on 5th November 2019 to record the baseline conditions and the first groundwater monitoring visit was undertaken on 10th March 2020.

Groundwater Levels

Table 2 details the response zones within the groundwater monitoring wells selected for monitoring in line with the WQMP during the development period:

Location	Standpipe diameter (mm)	Depth of Standpipe Response Zone (m bgl)	Level of Monitoring Well (m AOD)
BH103	50	7 – 10	7.92
BH110	50	10 - 15	7.83
BHA	50	7 – 10	7.75
BHB	50	7 – 10	7.75
BHC	50	7 - 10	8.10

Table 2 Summary of Monitoring Well Response Zones

Groundwater was recorded at the following levels during the pre-commencement and first monitoring visit, the results are presented in table 3.

Position	Groundwater Depth (m bgl) & (mAOD)			
	05/11/2019		10/03/2020	
BH103	5.63	2.29	4.30	3.62
BH110	5.67	2.16	4.18	3.65
BHA	5.53	2.22	4.20	3.55
BHB	5.92	1.83	4.57	3.18
BHC	6.10	2.00	4.58	3.52

Table 3 Summary of Groundwater Depth (within Standpipes)

Groundwater Monitoring Results

A Tier 1 risk assessment was undertaken and the results of the groundwater analyses from the pre-commencement visit and first monitoring visit were compared against the Environmental Quality Standards for freshwater (EQS) and the Water Supply (Water Quality) Regulations 2000 and Water Framework Directive (WFD). A summary of contaminant concentrations encountered above the respective EQS, WFD and DWS guideline values (where available) is presented within Table 4 below.

Location	Determinand	Concentration	Appropriate Standard	Dated Sampled
Barium	BH103 BHB	157ug/l 181ug/l	100ug/l (DWS)	05/11/2019
	BH103 BHB	118ug/l 221ug/l		10/03/2020
Boron			1000ug/l (WHO)	
Selenium			10ug/l (DWS)	
TPH	BH103	C21-35 Aro – 11.1ug/l TPH – 25ug/l	10ug/l (DWS)	05/11/2019
	BH110	TPH – 23.2ug/l C12-C16 Ali 28.2ug/l	10ug/l (DWS) 5.47ug/l (WSV)	05/11/2019
	BHA	TPH – 36.6ug/l C21-C35 Aro – 22.7ug/l	10ug/l (DWS)	05/11/2019
	BHB	TPH – 239ug/l C10-C12 Ali – 11.5ug/l C16-C21 Ali – 28.4ug/l C21-C35 Ali – 54.4ug/l C10-C12 Aro – 23.5ug/l C12-C16 Aro – 29.4ug/l C16-C21 Aro – 16.5ug/l C21-C35 Aro – 34.7ug/l C12-C16 Ali – 28.2ug/l	10ug/l (DWS) 5.47ug/l (WSV)	05/11/2019
Anthracene	BH103	0.06ug/l	0.02ug/l (EQS)	10/03/2020
	BHB	0.02ug/l		10/03/2020
Fluoranthene	BHA	0.03ug/l	0.02ug/l (EQS)	05/11/2019
	BHB	0.04ug/l		05/11/2019
	BHC	0.06ug/l		05/11/2019
	BH103	0.38ug/l		10/03/2020

	BHB	0.05ug/l		10/03/2020
Benzo(a)pyrene	BHB	0.01ug/l	0.01ug/l (WHO) 0.03ug/l (EQS)	05/11/2019
	BHC	0.03ug/l		05/11/2019
	BH103	0.13ug/l		10/03/2020
	BHB	0.01ug/l		10/03/2020
PAH Sum of four *	BHC	0.11ug/l	0.10ug/l (DWS)	05/11/2019
	BH103	0.52ug/l		10/03/2020

*benzo(b)fluoranthene, benzo(ghi)perylene, benzo (k) fluoranthene & indeno (1,2,3-c,d) pyrene.

- DWS - Water Supply (Water Quality) Regulations 1989.
- EQS - Environmental Quality Standards (freshwater)
- WSV – Atkins ATRISK values for groundwater

Table 4 Contaminant exceedances within Groundwater (ug/l)

Additional analysis was undertaken for biochemical oxygen demand, chemical oxygen demand, electrical conductivity, dissolved organic carbon and suspended solids during both visits. The results are presented in Table 5:

Location	Biochemical Oxygen Demand (mg/l)	Chemical Oxygen Demand (mg/l)	Electrical Conductivity (uS/cm)	Dissolved Organic Carbon (mg/l)	pH (pH units)	Suspended Solids (mg/l)	Date
BH103	6	23	1530	13	6.8	7700	05/11/2019
	6	10	1530	6.2	6.7	56	10/03/2020
BH110	<2	<2	1100	14	7.0	42	05/11/2019
	8	12	1400	6.3	6.7	8	10/03/2020
BHA	<2	<2	1180	10	7.0	1200	05/11/2019
	3	7	1900	7.1	6.6	410	10/03/2020
BHB	12	31	2460	18	6.9	2200	05/11/2019
	9	33	1710	14	6.7	120	10/03/2020
BHC	<2	<2	1560	9.6	6.9	1200	05/11/2019
	5	5	2340	5.8	6.7	14	10/03/2020

Table 5 Water Quality Results

Conclusions

Based on the chemical laboratory results, elevated concentrations have either remained at similar levels to previously recorded with a decrease in hydrocarbons and a slight increase for Barium. It is concluded that any increases have not been significant. The water results have generally improved between monitoring visits, with increases in biological and chemical oxygen demand and decreases with dissolved organic carbon.

We trust we have interpreted your instructions correctly. Should you have any queries please do not hesitate to contact us.

Yours sincerely
For and on Behalf of Geo-Environmental Services Ltd

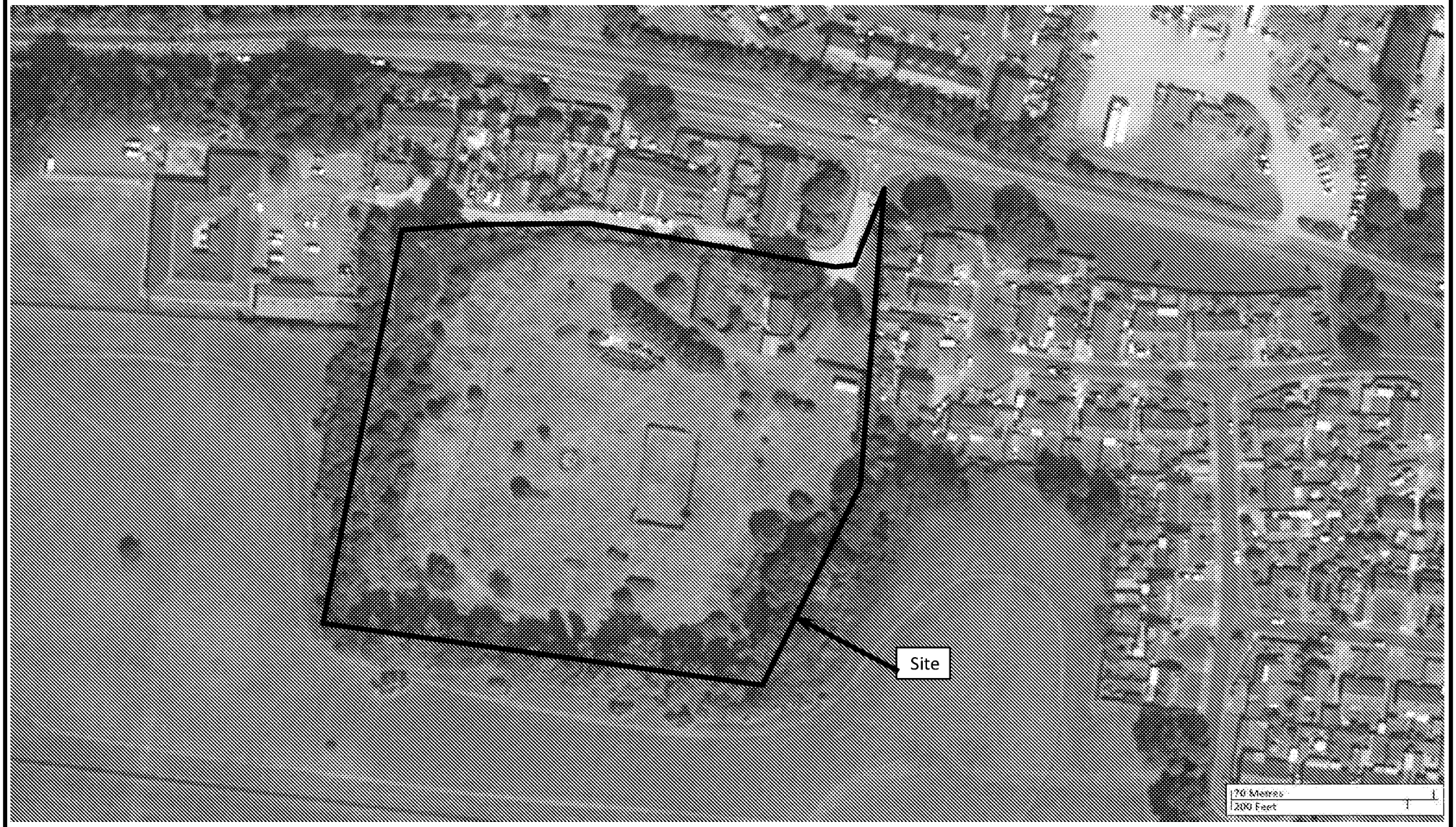
[redacted]

ANTHONY POTTER BSc (Hons) MSc FGS
Senior Consulting Engineer

[redacted]

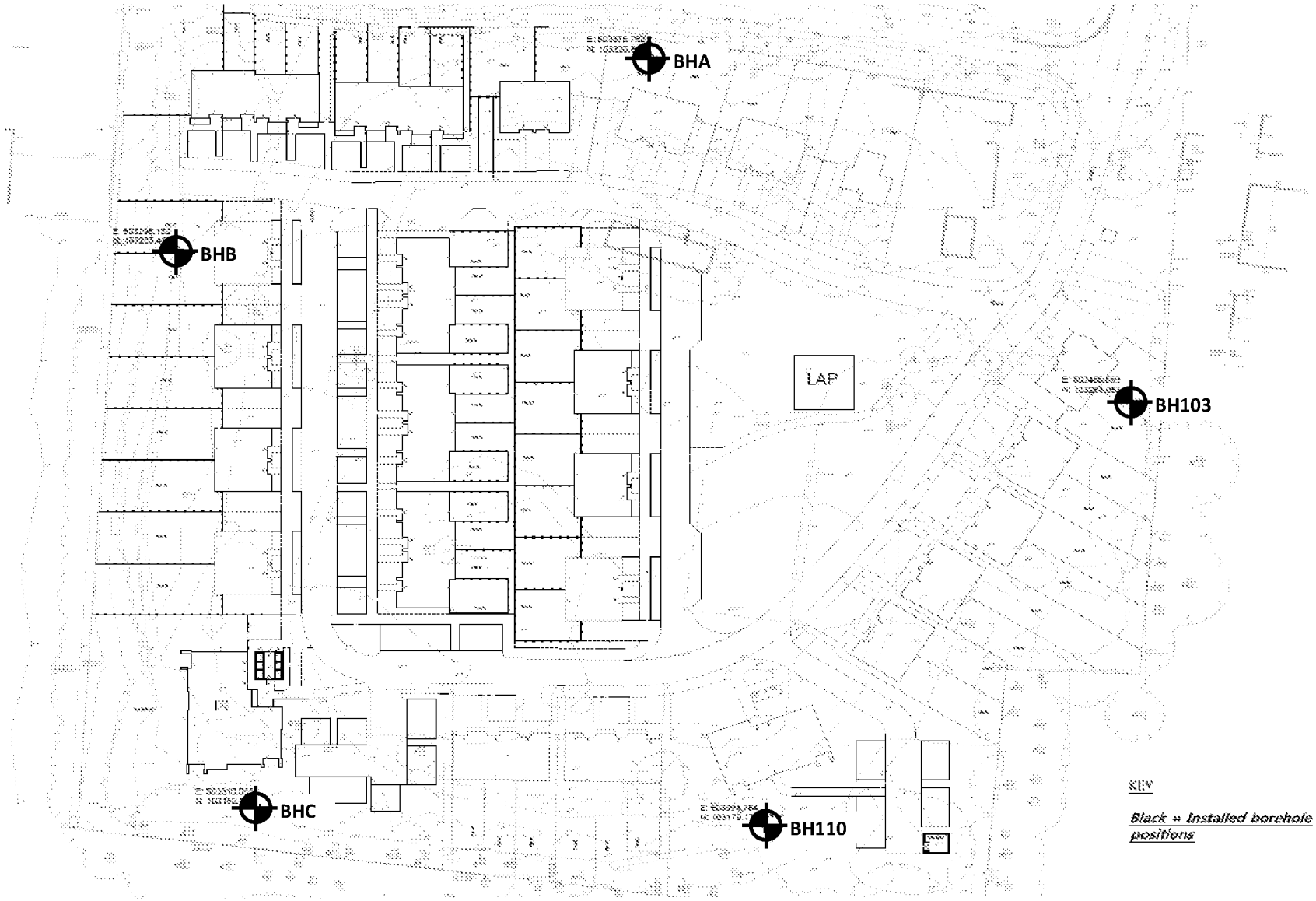
Encs - Figure 1 – Site Location Plan
Figure 2 – Monitoring Well Standpipe Location Plan
Appendix A – Groundwater Laboratory Testing Results (November 2019 and March 2020)
-

ARUN DISTRICT COUNCIL LU/191/21/DOC



Project:	Cornfield Close, Littlehampton, West Sussex			**Title**	Site Location Plan
Client:	Thakeham Homes			**Geo-Environmental Services Ltd**	
Ref No:	GE18103	**Revision:**	0	**Unit 7 Danworth Farm, Cuckfield Road**	
Drawn:	LL	**Date:**	01/10/2019	**Hurstpierpoint, West Sussex BN6 9GL**	
Figure:	1	**Scale:**	Not To Scale	**+44(0)1273 832972 www.gesl.net**	Geo-Environmental

ARUN DISTRICT COUNCIL LU/191/21/DOC



Project:	Cornfield Close, Littlehampton, West Sussex			**Title**	Monitoring Well Locations (to remain during development)
Client:	Thakeham Homes			**Geo-Environmental Services Ltd**	
Ref No:	GE18103	**Revision:**	0	**Unit 7 Danworth Farm, Cuckfield Road**	
Drawn:	LL	**Date:**	01/10/2019	**Hurstpierpoint, West Sussex BN6 9GL**	
Figure:	3	**Scale:**	Not To Scale	**+44(0)1273 832972 www.gesl.net**	Geo-Environmental

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY

UKAS TESTING
2683

[redacted]

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	19-25655
Issue:	1
Date of Issue:	18/11/2019
Contact:	Glyn Evans
Customer Details:	GESL Unit 7 Danworth Farm Hurstpierpoint West SussexBN6 9GL
Quotation No:	Q19-01488
Order No:	PO2211
Customer Reference:	GE18103
Date Received:	06/11/2019
Date Approved:	18/11/2019
Details:	Cornfield Close, Littlehampton
Approved by:	[redacted]

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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ELAB

Sample Summary

Report No.: 19-25655, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
188993	BH103d 5.67	05/11/2019	07/11/2019		
188994	BH110 5.63	05/11/2019	07/11/2019		
188995	BHA 5.53	05/11/2019	07/11/2019		
188996	BHB 5.92	05/11/2019	07/11/2019		
188997	BHC 6.10	05/11/2019	07/11/2019		

Results Summary

Report No.: 19-25655, issue number 1

			ELAB Reference	188993	188994	188995	188996	188997
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH103d	BH110	BHA	BHB	BHC
			Sample Depth (m)	5.67	5.63	5.53	5.92	6.10
			Sampling Date	05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
Determinand	**Codes**	**Units**	**LOD**					
Dissolved Metals								
Arsenic	U	ug/l	5	< 5	< 5	< 5	11	< 5
Boron	N	ug/l	5	618	263	525	858	610
Barium	U	ug/l	5	157	51	41	181	48
Beryllium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Cadmium	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chromium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Copper	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Iron	U	ug/l	140	3620	< 140	< 140	2260	< 140
Mercury	U	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	U	ug/l	5	38	< 5	6	24	< 5
Lead	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Selenium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Vanadium	N	ug/l	5	< 5	< 5	< 5	< 5	< 5
Zinc	U	ug/l	5	16	< 5	6	< 5	< 5
Anions								
Chloride	U	mg/l	0.5	30.4	63.7	35.3	192	105
Nitrate	U	mg/l	0.5	< 0.5	22.0	7.1	< 0.5	103
Sulphate	U	mg/l	0.5	218	128	177	133	199
Inorganics								
Elemental Sulphur	N	mg/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ammoniacal Nitrogen as N	N	mg/l	0.1	29	1.6	8.2	41	0.2
Free ammonia (NH3)	N	mg/l	0.1	43	2.4	12	61	0.2
Hexavalent Chromium	U	ug/l	100	< 100	< 100	< 100	< 100	< 100
Sulphide	N	mg/l	0.1	0.7	< 0.1	0.2	0.2	< 0.1
Miscellaneous								
Total Alkalinity (CaCO3)	N	mg/l	5	570	310	360	840	450
Biochemical Oxygen Demand (5 day)	N	mg/l	2	6	< 2	< 2	12	< 2
Chemical Oxygen Demand	N	mg/l	2	23	< 2	< 2	31	< 2
Electrical Conductivity	U	uS/cm	1	1530	1100	1180	2460	1560
Dissolved organic carbon	U	mg/l	1.5	13	14	10	18	9.6
pH	U	pH units	0.1	6.8	7.0	7.0	6.9	6.9
Suspended Solids	N	mg/l	0.1	7700	42	1200	2200	1200
Phenols								
Phenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
M,P-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
O-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
3,4-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,3-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,3,5-trimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Total Monohydric Phenols	N	ug/l	1	< 1	< 1	< 1	< 1	< 1

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 19-25655, issue number 1

ELAB Reference				188993	188994	188995	188996	188997
Customer Reference								
Sample ID								
Sample Type				WATER	WATER	WATER	WATER	WATER
Sample Location				BH103d	BH110	BHA	BHB	BHC
Sample Depth (m)				5.67	5.63	5.53	5.92	6.10
Sampling Date				05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
Determinand	**Codes**	**Units**	**LOD**					
Polyaromatic hydrocarbons								
Naphthalene GCMS	N	ug/l	0.01	0.01	< 0.01	< 0.01	0.09	< 0.01
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.06	< 0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.06	< 0.01
Phenanthrene GCMS	N	ug/l	0.01	0.02	< 0.01	0.05	0.04	0.03
Anthracene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Fluoranthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.03	0.04	0.06
Pyrene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.02	0.03	0.05
Benzo (a) anthracene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.01	0.03
Chrysene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.01	0.01	0.04
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.01	0.03
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.03
Benzo (a) pyrene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.01	0.03
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.01	0.02
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.01	0.01	0.03
Total PAH(16) GCMS	N	ug/l	0.01	0.10	0.05	0.19	0.42	0.39
TPH CWG								
>C5-C6 Aliphatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C6-C8 Aliphatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	5.5	< 5.0
>C10-C12 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	11.5	< 5.0
>C12-C16 Aliphatic	N	ug/l	5	5.1	8.3	< 5.0	28.2	< 5.0
>C16-C21 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	28.4	< 5.0
>C21-C35 Aliphatic	N	ug/l	5	< 5.0	< 5.0	5.6	54.4	< 5.0
>C35-C40 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aliphatic	N	ug/l	5	5.1	8.3	5.6	128	< 5.0
>C5-C7 Aromatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C7-C8 Aromatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	6.6	< 5.0
>C10-C12 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	23.5	< 5.0
>C12-C16 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	29.4	< 5.0
>C16-C21 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	16.5	< 5.0
>C21-C35 Aromatic	N	ug/l	5	11.1	9.5	22.7	34.7	8.3
>C35-C40 Aromatic	N	ug/l	5	8.8	5.4	8.3	< 5.0	< 5.0
Total (>C5-C40) Aromatic	N	ug/l	5	19.9	15.0	31.0	111	8.3
Total (>C5-C40) Ali/Aro	N	ug/l	5	25.0	23.2	36.6	239	8.3
PCB (ICES 7 congeners)								
PCB 28	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 52	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 101	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB118	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 153	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 138	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 180	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB (7 Congeners)	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Results Summary

Report No.: 19-25655, issue number 1

			ELAB Reference	188993	188994	188995	188996	188997
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH103d	BH110	BHA	BHB	BHC
			Sample Depth (m)	5.67	5.63	5.53	5.92	6.10
			Sampling Date	05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
Determinand	**Codes**	**Units**	**LOD**					
VOC								
MTBE	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Heptane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Octane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Nonane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Benzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Toluene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
m+p-xylene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
o-xylene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chloroform	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Tetrachloromethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroetha	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Methylethylbenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloro-1-propene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Trans - 1-2 -dichloroethylene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromoethane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Styrene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Propylbenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
t-butylbenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-methylpropylbenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
p-cymene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Butylbenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Naphthalene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromoform	U	ug/l	1	< 1	< 1	< 1	< 1	< 1

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Results Summary

Report No.: 19-25655, issue number 1

			ELAB Reference	188993	188994	188995	188996	188997
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH103d	BH110	BHA	BHB	BHC
			Sample Depth (m)	5.67	5.63	5.53	5.92	6.10
			Sampling Date	05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
Determinand	**Codes**	**Units**	**LOD**					
SVOC								
Phenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Aniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Chlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzyl Alcohol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroisopropyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3 and 4-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
N-Nitrosodi-n-propylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloroethane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Nitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Isophorone	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dimethylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethoxy)methane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3,5-Trichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Naphthalene	N	ug/l	0.01	0.02	0.02	0.02	0.05	0.01
3-Chloroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloro-1,3-butadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
4-Chloro-3-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methynaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Methylnaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorocyclopentadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,6-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,5-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Chloronaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dimethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-3-dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-6-dinitrotoluene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthylene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
1,2-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthene	N	ug/l	0.01	< 0.01	< 0.01	0.02	0.05	< 0.01
4-nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibenzofuran	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,5,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,4,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-chloro-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluorene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.05	< 0.01
4-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dinitro-o-cresol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diphenylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Azobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-bromo-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Pentachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 19-25655, issue number 1

ELAB Reference				188993	188994	188995	188996	188997
Customer Reference								
Sample ID								
Sample Type				WATER	WATER	WATER	WATER	WATER
Sample Location				BH103d	BH110	BHA	BHB	BHC
Sample Depth (m)				5.67	5.63	5.53	5.92	6.10
Sampling Date				05/11/2019	05/11/2019	05/11/2019	05/11/2019	05/11/2019
Determinand	**Codes**	**Units**	**LOD**					
SVOC								
Phenanthrene	N	ug/l	0.01	0.02	0.01	0.04	0.04	0.03
Anthracene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
Carbazole	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibutyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluoranthene	N	ug/l	0.01	0.01	< 0.01	0.03	0.03	0.05
Pyrene	N	ug/l	0.01	0.01	< 0.01	0.02	0.03	0.05
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis-2-ethylhexyladipate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(a)anthracene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.03
Chrysene	N	ug/l	0.01	< 0.01	< 0.01	0.01	< 0.01	0.03
Bis(2-ethylhexyl)phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(b)fluoranthene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Benzo(k)fluoranthene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Benzo(a)pyrene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(ah)anthracene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.01	0.01

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Method Summary

Report No.: 19-25655, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		15/11/2019		GC-FID
Aromatic hydrocarbons in water	N		15/11/2019		GC-FID
Phenols in waters	N		08/11/2019		HPLC
Alkalinity in waters	N		08/11/2019	100	Titrimetry
Dissolved metals by ICP in waters	U		08/11/2019	101	ICPMS
Dissolved organic carbon	U		12/11/2019	102	IR
pH of waters	U		08/11/2019	113	Electromeric
Chromium Hexavalent in waters	U		18/11/2019	123	Colorimetry
Sulphide in water	N		08/11/2019	134	Colorimetry
PAHs and/or PCBs in waters	N		14/11/2019	135	GC-MS
Electrical conductivity of water	U		08/11/2019	136	Electromeric
BOD	N		12/11/2019	142	5 Day
COD (Chemical Oxygen Demand in waters)	N		08/11/2019	143	Colorimetry
Ammonia in waters	N		11/11/2019	151	Colorimetry
Suspended Solids in waters	N		13/11/2019	155	Gravimetry
SVOC in waters	N		14/11/2019	167	GC-MS
PAHs and/or PCBs in waters	N		14/11/2019	170	GC-MS
Low range Aliphatic hydrocarbons water	N		08/11/2019	200	GC-MS
Low range Aromatic hydrocarbons water	N		08/11/2019	200	GC-MS
VOC in waters	U		07/11/2019	200	GC-MS
Elemental Sulphur by HPLC in waters	N		15/11/2019	206	HPLC
Aliphatic hydrocarbons in water	N		14/11/2019	215	GC-FID
Aromatic hydrocarbons in water	N		14/11/2019	215	GC-FID
Anions	U		08/11/2019	270	Ion Chromatography

Tests marked N are not UKAS accredited

Report Information

Report No.: 19-25655, 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"

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

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY

UKAS TESTING
2683

[redacted]

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	20-27456
Issue:	3. Replaces Analytical Report number 20-27456; issue no.2
Date of Issue:	01/04/2020
Contact:	Glyn Evans
Customer Details:	GESL Unit 7 Danworth Farm Hurstpierpoint West SussexBN6 9GL
Quotation No:	Q19-01488
Order No:	PO2576
Customer Reference:	GE18103
Date Received:	12/03/2020
Date Approved:	01/04/2020
Details:	Cornfield Close, Littlehampton
Approved by:	[redacted]

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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Sample Summary

Report No.: 20-27456, issue number 3

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
199614	BH110 4.30	10/03/2020	12/03/2020		
199615	BH103 4.18	10/03/2020	12/03/2020		
199616	BHA 4.20	10/03/2020	12/03/2020		
199617	BHB 4.57	10/03/2020	12/03/2020		
199618	BHC 4.58	10/03/2020	12/03/2020		

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-27456, issue number 3

				ELAB Reference	199614	199615	199616	199617	199618
				Customer Reference					
				Sample ID					
				Sample Type	WATER	WATER	WATER	WATER	WATER
				Sample Location	BH110	BH103	BHA	BHB	BHC
				Sample Depth (m)	4.30	4.18	4.20	4.57	4.58
				Sampling Date	10/03/2020	10/03/2020	10/03/2020	10/03/2020	10/03/2020
Determinand	**Codes**	**Units**	**LOD**						
Dissolved Metals									
Arsenic	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Boron	N	ug/l	5	491	601	902	711	798
Barium	U	ug/l	5	70	118	58	221	67
Beryllium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Cadmium	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chromium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Copper	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Iron	U	ug/l	140	< 140	< 140	< 140	< 140	< 140
Mercury	U	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	U	ug/l	5	8	33	16	43	< 5
Lead	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Selenium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Vanadium	N	ug/l	5	< 5	< 5	< 5	< 5	< 5
Zinc	U	ug/l	5	< 5	13	9	< 5	< 5
Anions									
Chloride	U	mg/l	0.5	50.0	23.5	36.9	34.5	179
Nitrate	U	mg/l	0.5	9.1	5.3	49.5	< 0.5	314
Sulphate	U	mg/l	0.5	166	180	384	46.5	345
Inorganics									
Elemental Sulphur	N	mg/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ammoniacal Nitrogen as N	N	mg/l	0.1	12	29	8.2	82	< 0.1
Free ammonia (NH3)	N	mg/l	0.1	18	43	12	120	< 0.1
Hexavalent Chromium	U	ug/l	100	< 100	< 100	< 100	< 100	< 100
Sulphide	N	mg/l	0.1	0.1	0.1	0.2	< 0.1	< 0.1
Miscellaneous									
Total Alkalinity (CaCO3)	N	mg/l	5	510	510	490	760	380
Biochemical Oxygen Demand (5 day)	N	mg/l	2	8	6	3	9	5
Chemical Oxygen Demand	N	mg/l	2	12	10	7	33	5
Electrical Conductivity	U	uS/cm	50	1400	1530	1900	1710	2340
Dissolved organic carbon	N	mg/l	1.5	6.3	6.2	7.1	14	5.8
Dissolved Oxygen	N	mg/l	0.1	8.3	7.6	7.7	6.7	7.4
pH	U	pH units	0.1	6.7	6.7	6.6	6.7	6.7
Suspended Solids	N	mg/l	0.1	8.0	56	410	120	14
Phenols									
Phenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
M,P-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
O-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
3,4-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,3-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,3,5-trimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Total Monohydric Phenols	N	ug/l	1	< 1	< 1	< 1	< 1	< 1

Results Summary

Report No.: 20-27456, issue number 3

			ELAB Reference	199614	199615	199616	199617	199618
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH110	BH103	BHA	BHB	BHC
			Sample Depth (m)	4.30	4.18	4.20	4.57	4.58
			Sampling Date	10/03/2020	10/03/2020	10/03/2020	10/03/2020	10/03/2020
Determinand	**Codes**	**Units**	**LOD**					
Polyaromatic hydrocarbons								
Naphthalene GCMS	N	ug/l	0.01	0.02	0.01	0.01	0.02	0.01
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene GCMS	N	ug/l	0.01	< 0.01	0.14	0.01	0.03	< 0.01
Anthracene GCMS	N	ug/l	0.01	< 0.01	0.06	< 0.01	0.02	< 0.01
Fluoranthene GCMS	N	ug/l	0.01	< 0.01	0.38	0.01	0.05	< 0.01
Pyrene GCMS	N	ug/l	0.01	< 0.01	0.35	0.01	0.04	< 0.01
Benzo (a) anthracene GCMS	N	ug/l	0.01	< 0.01	0.30	< 0.01	0.03	< 0.01
Chrysene GCMS	N	ug/l	0.01	< 0.01	0.17	< 0.01	0.02	< 0.01
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	< 0.01	0.15	< 0.01	0.01	< 0.01
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	< 0.01	0.12	< 0.01	0.02	< 0.01
Benzo (a) pyrene GCMS	N	ug/l	0.01	< 0.01	0.13	< 0.01	0.01	< 0.01
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	< 0.01	0.17	< 0.01	0.01	< 0.01
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	< 0.01	0.25	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene GCMS	N	ug/l	0.01	< 0.01	0.08	< 0.01	< 0.01	< 0.01
Total PAH(16) GCMS	N	ug/l	0.01	0.05	2.34	0.07	0.28	0.04
TPH CWG								
>C5-C6 Aliphatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C6-C8 Aliphatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C16-C21 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C35-C40 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C5-C7 Aromatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C7-C8 Aromatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	6.8	< 5.0
>C16-C21 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C35-C40 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	6.8	< 5.0
Total (>C5-C40) Ali/Aro	N	ug/l	5	< 5.0	< 5.0	< 5.0	6.8	< 5.0
PCB (ICES 7 congeners)								
PCB 28	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 52	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 101	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB118	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 153	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 138	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 180	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB (7 Congeners)	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-27456, issue number 3

			ELAB Reference	199614	199615	199616	199617	199618
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH110	BH103	BHA	BHB	BHC
			Sample Depth (m)	4.30	4.18	4.20	4.57	4.58
			Sampling Date	10/03/2020	10/03/2020	10/03/2020	10/03/2020	10/03/2020
Determinand	**Codes**	**Units**	**LOD**					
VOC								
MTBE	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Heptane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Octane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Nonane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Benzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Toluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
m+p-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
o-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chloroform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Tetrachloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroetha	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Methylethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Trans - 1-2 -dichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromoethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Styrene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Propylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
t-butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
p-cymene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromoform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-27456, issue number 3

			ELAB Reference	199614	199615	199616	199617	199618
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH110	BH103	BHA	BHB	BHC
			Sample Depth (m)	4.30	4.18	4.20	4.57	4.58
			Sampling Date	10/03/2020	10/03/2020	10/03/2020	10/03/2020	10/03/2020
Determinand	**Codes**	**Units**	**LOD**					
SVOC								
Phenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Aniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Chlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzyl Alcohol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroisopropyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3 and 4-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
N-Nitrosodi-n-propylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloroethane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Nitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Isophorone	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dimethylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethoxy)methane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3,5-Trichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Naphthalene	N	ug/l	0.01	0.02	0.02	0.01	0.02	0.01
3-Chloroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloro-1,3-butadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
4-Chloro-3-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methynaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Methylnaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorocyclopentadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,6-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,5-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Chloronaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dimethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-3-dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-6-dinitrotoluene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthylene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibenzofuran	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,5,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,4,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-chloro-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluorene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dinitro-o-cresol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diphenylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Azobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-bromo-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Pentachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 20-27456, issue number 3

				ELAB Reference	199614	199615	199616	199617	199618
				Customer Reference					
				Sample ID					
				Sample Type	WATER	WATER	WATER	WATER	WATER
				Sample Location	BH110	BH103	BHA	BHB	BHC
				Sample Depth (m)	4.30	4.18	4.20	4.57	4.58
				Sampling Date	10/03/2020	10/03/2020	10/03/2020	10/03/2020	10/03/2020
Determinand	**Codes**	**Units**	**LOD**						
SVOC									
Phenanthrene	N	ug/l	0.01	< 0.01	0.05	< 0.01	0.01	< 0.01
Anthracene	N	ug/l	0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01
Carbazole	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibutyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluoranthene	N	ug/l	0.01	< 0.01	0.33	0.01	0.05	< 0.01
Pyrene	N	ug/l	0.01	< 0.01	0.32	< 0.01	0.04	< 0.01
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis-2-ethylhexyladipate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(a)anthracene	N	ug/l	0.01	< 0.01	0.13	< 0.01	0.01	< 0.01
Chrysene	N	ug/l	0.01	< 0.01	0.16	< 0.01	0.01	< 0.01
Bis(2-ethylhexyl)phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(b)fluoranthene	N	ug/l	0.01	< 0.01	0.09	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	N	ug/l	0.01	< 0.01	0.11	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	N	ug/l	0.01	< 0.01	0.09	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01	< 0.01	0.04	< 0.01	< 0.01	< 0.01
Dibenz(ah)anthracene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	N	ug/l	0.01	< 0.01	0.07	< 0.01	< 0.01	< 0.01

Tests marked N are not UKAS accredited.

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2683

Method Summary

Report No.: 20-27456, issue number 3

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		18/03/2020		GC-FID
Aromatic hydrocarbons in water	N		18/03/2020		GC-FID
Phenols in waters	N		13/03/2020		HPLC
Alkalinity in waters	N		16/03/2020	100	Titrimetry
Dissolved metals by ICP in waters	U		13/03/2020	101	ICPMS
Dissolved organic carbon	N		16/03/2020	102	IR
pH of waters	U		16/03/2020	113	Electromeric
Chromium Hexavalent in waters	U		16/03/2020	123	Colorimetry
Sulphide in water	N		13/03/2020	134	Colorimetry
PAHs and/or PCBs in waters	N		17/03/2020	135	GC-MS
Electrical conductivity of water	U		16/03/2020	136	Electromeric
BOD	N		18/03/2020	142	5 Day
COD (Chemical Oxygen Demand in waters)	N		16/03/2020	143	Colorimetry
Ammonia in waters	N		16/03/2020	151	Colorimetry
Suspended Solids in waters	N		01/04/2020	155	Gravimetry
SVOC in waters	N		17/03/2020	167	GC-MS
PAHs and/or PCBs in waters	N		17/03/2020	170	GC-MS
Low range Aliphatic hydrocarbons water	N		17/03/2020	200	GC-MS
Low range Aromatic hydrocarbons water	N		17/03/2020	200	GC-MS
VOC in waters	N		12/03/2020	200	GC-MS
Elemental Sulphur by HPLC in waters	N		16/03/2020	206	HPLC
DO (Dissolved Oxygen) in waters	N		16/03/2020	211	Electromeric
Aliphatic hydrocarbons in water	N		17/03/2020	215	GC-FID
Aromatic hydrocarbons in water	N		17/03/2020	215	GC-FID
Anions	U		13/03/2020	270	Ion Chromatography

Tests marked N are not UKAS accredited

Report Information

Report No.: 20-27456, issue number 3

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"

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.

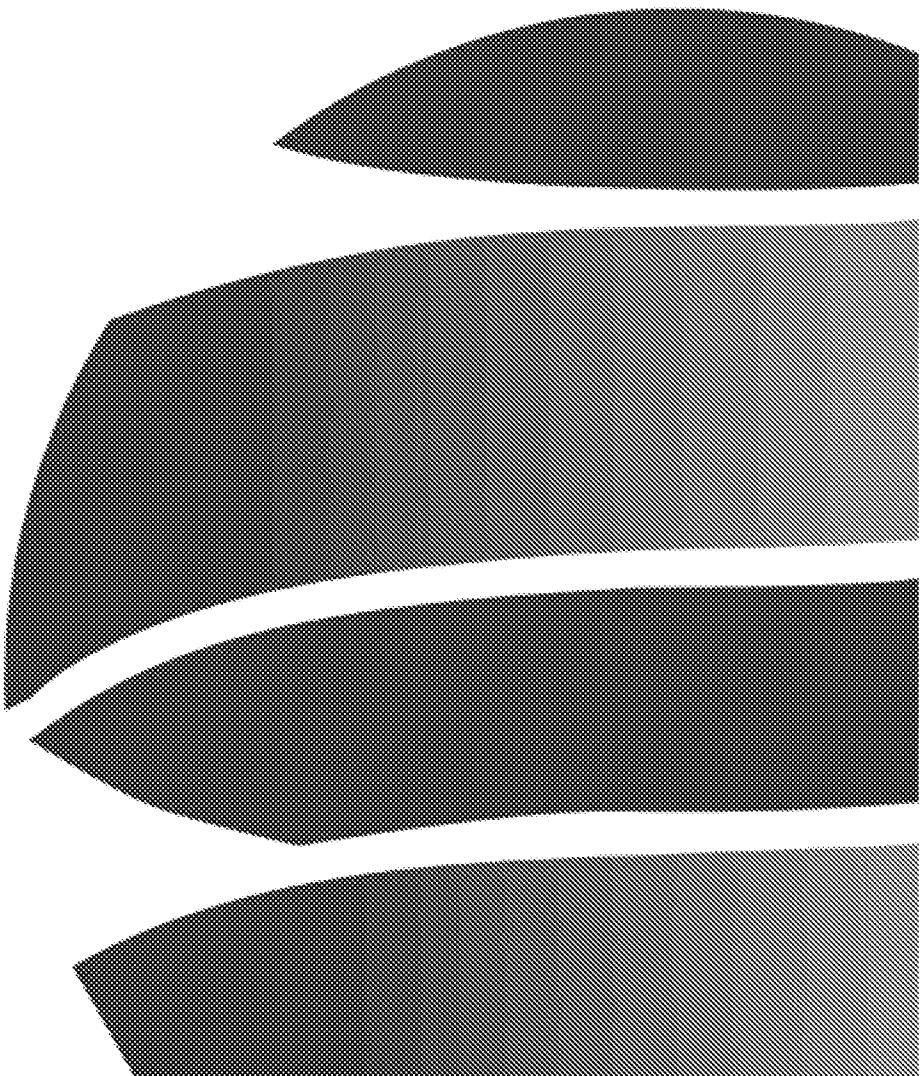
Sample Retention and Disposal

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

Geo-Environmental

APPENDIX H

Groundwater Analysis (May, June and September 2020) & tabulated summary November 2019 to September 2020



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY

UKAS TESTING
2683

[redacted]

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 20-28132

Issue: 1

Date of Issue: 20/05/2020

Contact: Glyn Evans

Customer Details: GESL
Unit 7
Danworth Farm
Hurstpierpoint
West SussexBN6 9GL

Quotation No: Q19-01488

Order No: 2674

Customer Reference: GE18103

Date Received: 14/05/2020

Date Approved: 20/05/2020

Details: Cornfield Close - Littlehampton

Approved by: [redacted]

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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Sample Summary

Report No.: 20-28132, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
204067	BH110 5.92	12/05/2020	14/05/2020		
204068	BH103 6.00	12/05/2020	14/05/2020		
204069	BHA 5.90	12/05/2020	14/05/2020		
204070	BHB 6.21	12/05/2020	14/05/2020		
204071	BHC 6.32	12/05/2020	14/05/2020		

Results Summary

Report No.: 20-28132, issue number 1

ELAB Reference			204067	204068	204069	204070	204071
Customer Reference							
Sample ID							
Sample Type			WATER	WATER	WATER	WATER	WATER
Sample Location			BH110	BH103	BHA	BHB	BHC
Sample Depth (m)			5.92	6.00	5.90	6.21	6.32
Sampling Date			12/05/2020	12/05/2020	12/05/2020	12/05/2020	12/05/2020
Determinand	**Codes**	**Units**	**LOD**				
Dissolved Metals							
Arsenic	U	ug/l	5	< 5	< 5	< 5	8	< 5
Boron	N	ug/l	5	557	566	950	677	903
Barium	U	ug/l	5	88	131	63	213	60
Beryllium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Cadmium	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chromium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Copper	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Iron	U	ug/l	140	224	< 140	< 140	4880	< 140
Mercury	U	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	U	ug/l	5	13	44	18	41	< 5
Lead	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Selenium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Vanadium	N	ug/l	5	< 5	< 5	< 5	< 5	< 5
Zinc	U	ug/l	5	8	15	17	< 5	5
Anions							
Chloride	U	mg/l	0.5	53.8	25.5	37.5	46.7	206
Nitrate	U	mg/l	0.5	6.2	3.3	36.4	< 0.5	255
Sulphate	U	mg/l	0.5	229	194	466	48.0	333
Inorganics							
Elemental Sulphur	N	mg/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ammoniacal Nitrogen as N	N	mg/l	0.1	17	33	8.2	33	< 0.1
Free ammonia (NH3)	N	mg/l	0.1	24	49	12	49	< 0.1
Hexavalent Chromium	U	ug/l	100	< 100	< 100	< 100	< 100	< 100
Sulphide	N	mg/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Miscellaneous							
Total Alkalinity (CaCO3)	N	mg/l	5	872	930	1150	2230	1370
Biochemical Oxygen Demand (5 day)	N	mg/l	2	< 2	2	< 2	2	< 2
Chemical Oxygen Demand	N	mg/l	2	20	15	8	34	11
Electrical Conductivity	U	uS/cm	50	1530	1480	1940	1660	2310
Dissolved organic carbon	N	mg/l	1.5	7.0	5.9	7.0	13	5.1
Dissolved Oxygen	N	mg/l	0.1	3.2	2.3	3.5	1.3	5.6
pH	U	pH units	0.1	6.7	6.7	6.6	6.7	6.8
Suspended Solids	N	mg/l	0.1	870	52000	25000	20000	8300
Phenols							
Phenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
M,P-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
O-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
3,4-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,3-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,3,5-trimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Total Monohydric Phenols	N	ug/l	1	< 1	< 1	< 1	< 1	< 1

Tests marked N are not UKAS accredited.

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-28132, issue number 1

ELAB Reference			204067	204068	204069	204070	204071
Customer Reference							
Sample ID							
Sample Type			WATER	WATER	WATER	WATER	WATER
Sample Location			BH110	BH103	BHA	BHB	BHC
Sample Depth (m)			5.92	6.00	5.90	6.21	6.32
Sampling Date			12/05/2020	12/05/2020	12/05/2020	12/05/2020	12/05/2020
Determinand	**Codes**	**Units**	**LOD**				
Polyaromatic hydrocarbons							
Naphthalene GCMS	N	ug/l	0.01	0.01	0.01	0.01	0.82	0.04
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.23	0.03
Acenaphthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.25	0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.68	0.03
Phenanthrene GCMS	N	ug/l	0.01	0.09	0.06	0.03	2.77	0.11
Anthracene GCMS	N	ug/l	0.01	0.03	0.02	< 0.01	0.70	0.03
Fluoranthene GCMS	N	ug/l	0.01	0.21	0.20	0.07	5.31	0.33
Pyrene GCMS	N	ug/l	0.01	0.22	0.17	0.07	4.83	0.33
Benzo (a) anthracene GCMS	N	ug/l	0.01	0.14	0.12	0.03	4.37	0.24
Chrysene GCMS	N	ug/l	0.01	0.13	0.11	0.04	3.74	0.20
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	0.11	0.12	0.04	6.00	0.27
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	0.10	0.10	0.04	4.22	0.20
Benzo (a) pyrene GCMS	N	ug/l	0.01	0.12	0.12	0.04	6.20	0.30
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	0.05	0.07	0.02	4.57	0.20
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	0.02	0.02	< 0.01	2.28	0.05
Benzo(ghi)perylene GCMS	N	ug/l	0.01	0.07	0.07	0.03	4.78	0.20
Total PAH(16) GCMS	N	ug/l	0.01	1.30	1.21	0.46	51.8	2.56
TPH CWG							
>C5-C6 Aliphatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C6-C8 Aliphatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic	N	ug/l	5	< 5.0	< 5.0	19.1	24.0	< 5.0
>C10-C12 Aliphatic	N	ug/l	5	< 5.0	< 5.0	9.1	48.1	< 5.0
>C12-C16 Aliphatic	N	ug/l	5	< 5.0	< 5.0	18.6	172	< 5.0
>C16-C21 Aliphatic	N	ug/l	5	< 5.0	< 5.0	19.6	305	8.8
>C21-C35 Aliphatic	N	ug/l	5	< 5.0	9.6	54.7	599	16.5
>C35-C40 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	20.8	< 5.0
Total (>C5-C40) Aliphatic	N	ug/l	5	< 5.0	9.6	121	1170	25.3
>C5-C7 Aromatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C7-C8 Aromatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	10.4	< 5.0
>C10-C12 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	39.0	< 5.0
>C12-C16 Aromatic	N	ug/l	5	< 5.0	< 5.0	9.1	163	< 5.0
>C16-C21 Aromatic	N	ug/l	5	< 5.0	< 5.0	13.2	297	5.9
>C21-C35 Aromatic	N	ug/l	5	< 5.0	7.3	36.1	505	10.0
>C35-C40 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	19.2	< 5.0
Total (>C5-C40) Aromatic	N	ug/l	5	< 5.0	7.3	58.4	1030	15.9
Total (>C5-C40) Ali/Aro	N	ug/l	5	< 5.0	16.9	180	2200	41.3
PCB (ICES 7 congeners)							
PCB 28	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 52	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 101	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB118	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 153	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 138	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 180	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB (7 Congeners)	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-28132, issue number 1

ELAB Reference				204067	204068	204069	204070	204071
Customer Reference								
Sample ID								
Sample Type				WATER	WATER	WATER	WATER	WATER
Sample Location				BH110	BH103	BHA	BHB	BHC
Sample Depth (m)				5.92	6.00	5.90	6.21	6.32
Sampling Date				12/05/2020	12/05/2020	12/05/2020	12/05/2020	12/05/2020
Determinand	**Codes**	**Units**	**LOD**					
VOC								
MTBE	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Heptane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Octane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Nonane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Benzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Toluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
m+p-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
o-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chloroform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Tetrachloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroetha	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Methylethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Trans - 1-2 -dichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromoethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Styrene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Propylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
t-butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
p-cymene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromoform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1

Results Summary

Report No.: 20-28132, issue number 1

			ELAB Reference	204067	204068	204069	204070	204071
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH110	BH103	BHA	BHB	BHC
			Sample Depth (m)	5.92	6.00	5.90	6.21	6.32
			Sampling Date	12/05/2020	12/05/2020	12/05/2020	12/05/2020	12/05/2020
Determinand	**Codes**	**Units**	**LOD**					
SVOC								
Phenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Aniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Chlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzyl Alcohol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroisopropyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3 and 4-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
N-Nitrosodi-n-propylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloroethane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Nitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Isophorone	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dimethylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethoxy)methane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3,5-Trichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Naphthalene	N	ug/l	0.01	0.01	< 0.01	0.01	0.77	0.04
3-Chloroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloro-1,3-butadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
4-Chloro-3-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methynaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Methylnaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorocyclopentadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,6-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,5-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Chloronaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dimethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-3-dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-6-dinitrotoluene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthylene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.23	0.02
1,2-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.35	< 0.01
4-nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibenzofuran	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-28132, issue number 1

			ELAB Reference	204067	204068	204069	204070	204071
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH110	BH103	BHA	BHB	BHC
			Sample Depth (m)	5.92	6.00	5.90	6.21	6.32
			Sampling Date	12/05/2020	12/05/2020	12/05/2020	12/05/2020	12/05/2020
Determinand	**Codes**	**Units**	**LOD**					
SVOC								
2,3,5,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,4,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-chloro-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluorene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.59	0.02
4-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dinitro-o-cresol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diphenylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Azobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-bromo-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Pentachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	1.12	< 1.00
Phenanthrene	N	ug/l	0.01	0.07	0.05	0.02	2.29	0.08
Anthracene	N	ug/l	0.01	0.02	0.01	< 0.01	0.51	0.02
Carbazole	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibutyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluoranthene	N	ug/l	0.01	0.17	0.16	0.05	4.64	0.27
Pyrene	N	ug/l	0.01	0.18	0.15	0.06	4.49	0.28
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis-2-ethylhexyladipate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(a)anthracene	N	ug/l	0.01	0.07	0.06	0.02	2.89	0.14
Chrysene	N	ug/l	0.01	0.10	0.08	0.03	3.32	0.16
Bis(2-ethylhexyl)phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(b)fluoranthene	N	ug/l	0.01	0.05	0.04	0.02	3.71	0.15
Benzo(k)fluoranthene	N	ug/l	0.01	0.06	0.05	0.02	3.67	0.18
Benzo(a)pyrene	N	ug/l	0.01	0.05	0.06	0.01	4.34	0.18
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01	0.02	0.03	0.01	2.85	0.11
Dibenz(ah)anthracene	N	ug/l	0.01	< 0.01	0.01	< 0.01	1.22	0.05
Benzo(ghi)perylene	N	ug/l	0.01	0.03	0.04	0.02	3.60	0.14

Tests marked N are not UKAS accredited.
The Environmental Laboratory Ltd. Reg. No. 3882193

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UKAS TESTING
2683

Method Summary

Report No.: 20-28132, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		19/05/2020		GC-FID
Aromatic hydrocarbons in water	N		19/05/2020		GC-FID
Phenols in waters	N		15/05/2020		HPLC
Alkalinity in waters	N		15/05/2020	100	Titrimetry
Dissolved metals by ICP in waters	U		15/05/2020	101	ICPMS
Dissolved organic carbon	N		18/05/2020	102	IR
pH of waters	U		15/05/2020	113	Electromeric
Chromium Hexavalent in waters	U		15/05/2020	123	Colorimetry
Sulphide in water	N		19/05/2020	134	Colorimetry
PAHs and/or PCBs in waters	N		18/05/2020	135	GC-MS
Electrical conductivity of water	U		15/05/2020	136	Electromeric
BOD	N		20/05/2020	142	5 Day
COD (Chemical Oxygen Demand in waters)	N		18/05/2020	143	Colorimetry
Ammonia in waters	N		15/05/2020	151	Colorimetry
Suspended Solids in waters	N		19/05/2020	155	Gravimetry
SVOC in waters	N		18/05/2020	167	GC-MS
PAHs and/or PCBs in waters	N		18/05/2020	170	GC-MS
Low range Aliphatic hydrocarbons water	N		18/05/2020	200	GC-MS
Low range Aromatic hydrocarbons water	N		18/05/2020	200	GC-MS
VOC in waters	N		14/05/2020	200	GC-MS
Elemental Sulphur by HPLC in waters	N		18/05/2020	206	HPLC
DO (Dissolved Oxygen) in waters	N		15/05/2020	211	Electromeric
Aliphatic hydrocarbons in water	N		18/05/2020	215	GC-FID
Aromatic hydrocarbons in water	N		18/05/2020	215	GC-FID
Anions	U		15/05/2020	270	Ion Chromatography

Tests marked N are not UKAS accredited

Report Information

Report No.: 20-28132, 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"

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

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY

UKAS TESTING
2683

[redacted]

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	20-28455
Issue:	1
Date of Issue:	22/06/2020
Contact:	Glyn Evans
Customer Details:	GESL Unit 7 Danworth Farm Hurstpierpoint West SussexBN6 9GL
Quotation No:	Q19-01488
Order No:	PO2756
Customer Reference:	GE18103
Date Received:	15/06/2020
Date Approved:	22/06/2020
Details:	Cornfield Close, Littlehampton
Approved by:	[redacted]

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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Sample Summary

Report No.: 20-28455, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
206008	BH110 6.30	11/06/2020	15/06/2020		
206009	BH103 6.40	11/06/2020	15/06/2020		
206010	BHA 6.27	11/06/2020	15/06/2020		
206011	BHB 6.64	11/06/2020	15/06/2020		
206012	BHC 6.74	11/06/2020	15/06/2020		

Results Summary

Report No.: 20-28455, issue number 1

			ELAB Reference	206008	206009	206010	206011	206012
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH110	BH103	BHA	BHB	BHC
			Sample Depth (m)	6.30	6.40	6.27	6.64	6.74
			Sampling Date	11/06/2020	11/06/2020	11/06/2020	11/06/2020	11/06/2020
Determinand	**Codes**	**Units**	**LOD**					
Dissolved Metals								
Arsenic	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Boron	N	ug/l	5	472	682	1180	736	1080
Barium	U	ug/l	5	68	134	61	229	55
Beryllium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Cadmium	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chromium	U	ug/l	5	5	< 5	< 5	< 5	< 5
Copper	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Iron	U	ug/l	140	< 140	< 140	984	< 140	< 140
Mercury	U	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	U	ug/l	5	10	49	20	49	< 5
Lead	U	ug/l	1	< 1	< 1	< 1	< 1	< 1
Selenium	U	ug/l	5	< 5	< 5	< 5	< 5	< 5
Vanadium	N	ug/l	5	< 5	< 5	< 5	< 5	< 5
Zinc	U	ug/l	5	< 5	14	15	< 5	< 5
Anions								
Chloride	U	mg/l	0.5	57.5	22.2	33.0	39.8	164
Nitrate	U	mg/l	0.5	10.0	42.1	16.5	0.5	230
Sulphate	U	mg/l	0.5	180	206	599	51.7	335
Inorganics								
Elemental Sulphur	N	mg/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ammoniacal Nitrogen as N	N	mg/l	0.1	17	33	17	82	0.2
Free ammonia (NH3)	N	mg/l	0.1	24	49	24	120	0.2
Hexavalent Chromium	U	ug/l	100	< 100	< 100	< 100	< 100	< 100
Sulphide	N	mg/l	0.1	0.5	0.1	0.1	0.2	0.3
Miscellaneous								
Total Alkalinity (CaCO3)	N	mg/l	5	510	755	660	750	460
Biochemical Oxygen Demand (5 day)	N	mg/l	2	4	38	2	< 2	< 2
Chemical Oxygen Demand	N	mg/l	2	15	17	17	30	11
Electrical Conductivity	U	uS/cm	50	1370	1610	2050	1620	2200
Dissolved organic carbon	N	mg/l	1.5	6.8	7.9	8.4	12	5.4
Dissolved Oxygen	N	mg/l	0.1	3.6	2.1	3.1	1.6	5.1
pH	U	pH units	0.1	6.7	6.7	6.7	6.8	6.8
Suspended Solids	N	mg/l	0.1	56	4700	250	170	28
Phenols								
Phenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
M,P-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
O-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
3,4-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,3-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,3,5-trimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Total Monohydric Phenols	N	ug/l	1	< 1	< 1	< 1	< 1	< 1

Tests marked N are not UKAS accredited.

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-28455, issue number 1

ELAB Reference				206008	206009	206010	206011	206012
Customer Reference								
Sample ID								
Sample Type				WATER	WATER	WATER	WATER	WATER
Sample Location				BH110	BH103	BHA	BHB	BHC
Sample Depth (m)				6.30	6.40	6.27	6.64	6.74
Sampling Date				11/06/2020	11/06/2020	11/06/2020	11/06/2020	11/06/2020
Determinand	**Codes**	**Units**	**LOD**					
Polyaromatic hydrocarbons								
Naphthalene GCMS	N	ug/l	0.01	0.02	0.01	0.02	< 0.01	0.02
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
Phenanthrene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.02	0.04	< 0.01
Anthracene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.01	0.03	0.01
Pyrene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.01	0.03	0.01
Benzo (a) anthracene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
Chrysene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Benzo (a) pyrene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.04	< 0.01	< 0.01
Benzo(ghi)perylene GCMS	N	ug/l	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Total PAH(16) GCMS	N	ug/l	0.01	0.06	0.07	0.23	0.17	0.09
TPH CWG								
>C5-C6 Aliphatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C6-C8 Aliphatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic	N	ug/l	5	< 5.0	6.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aliphatic	N	ug/l	5	< 5.0	5.3	< 5.0	< 5.0	6.0
>C16-C21 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	5.9
>C21-C35 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	7.3
>C35-C40 Aliphatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aliphatic	N	ug/l	5	< 5.0	11.3	< 5.0	< 5.0	19.2
>C5-C7 Aromatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C7-C8 Aromatic	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C16-C21 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C35-C40 Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aromatic	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Ali/Aro	N	ug/l	5	< 5.0	11.3	< 5.0	< 5.0	19.2
PCB (ICES 7 congeners)								
PCB 28	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 52	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 101	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB118	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 153	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 138	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB 180	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB (7 Congeners)	N	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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UKAS TESTING 2683

Results Summary

Report No.: 20-28455, issue number 1

			ELAB Reference	206008	206009	206010	206011	206012
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH110	BH103	BHA	BHB	BHC
			Sample Depth (m)	6.30	6.40	6.27	6.64	6.74
			Sampling Date	11/06/2020	11/06/2020	11/06/2020	11/06/2020	11/06/2020
Determinand	**Codes**	**Units**	**LOD**					
VOC								
MTBE	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Heptane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Octane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Nonane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Benzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Toluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
m+p-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
o-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chloroform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Tetrachloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroetha	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Methylethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Trans - 1-2 -dichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Dibromoethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Styrene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Propylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
t-butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
p-cymene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1
Bromoform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-28455, issue number 1

			ELAB Reference	206008	206009	206010	206011	206012
			Customer Reference					
			Sample ID					
			Sample Type	WATER	WATER	WATER	WATER	WATER
			Sample Location	BH110	BH103	BHA	BHB	BHC
			Sample Depth (m)	6.30	6.40	6.27	6.64	6.74
			Sampling Date	11/06/2020	11/06/2020	11/06/2020	11/06/2020	11/06/2020
Determinand	**Codes**	**Units**	**LOD**					
SVOC								
Phenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Aniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Chlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzyl Alcohol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroisopropyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3 and 4-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
N-Nitrosodi-n-propylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloroethane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Nitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Isophorone	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dimethylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethoxy)methane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3,5-Trichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Naphthalene	N	ug/l	0.01	0.02	0.01	0.02	0.01	0.02
3-Chloroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloro-1,3-butadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
4-Chloro-3-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methynaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Methylnaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorocyclopentadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,6-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,5-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Chloronaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dimethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-3-dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-6-dinitrotoluene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthylene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibenzofuran	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,5,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,4,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-chloro-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluorene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
4-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dinitro-o-cresol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diphenylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Azobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-bromo-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Pentachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 20-28455, issue number 1

ELAB Reference				206008	206009	206010	206011	206012
Customer Reference								
Sample ID								
Sample Type				WATER	WATER	WATER	WATER	WATER
Sample Location				BH110	BH103	BHA	BHB	BHC
Sample Depth (m)				6.30	6.40	6.27	6.64	6.74
Sampling Date				11/06/2020	11/06/2020	11/06/2020	11/06/2020	11/06/2020
Determinand	**Codes**	**Units**	**LOD**					
SVOC								
Phenanthrene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.04	< 0.01
Anthracene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibutyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluoranthene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.03	0.01
Pyrene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.03	0.01
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis-2-ethylhexyladipate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(a)anthracene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bis(2-ethylhexyl)phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(b)fluoranthene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(ah)anthracene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Method Summary

Report No.: 20-28455, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		17/06/2020		GC-FID
Aromatic hydrocarbons in water	N		17/06/2020		GC-FID
Phenols in waters	N		16/06/2020		HPLC
Alkalinity in waters	N		16/06/2020	100	Titrimetry
Dissolved metals by ICP in waters	U		16/06/2020	101	ICPMS
Dissolved organic carbon	N		17/06/2020	102	IR
pH of waters	U		16/06/2020	113	Electromeric
Chromium Hexavalent in waters	U		16/06/2020	123	Colorimetry
Sulphide in water	N		17/06/2020	134	Colorimetry
PAHs and/or PCBs in waters	N		16/06/2020	135	GC-MS
Electrical conductivity of water	U		16/06/2020	136	Electromeric
BOD	N		22/06/2020	142	5 Day
COD (Chemical Oxygen Demand in waters)	N		17/06/2020	143	Colorimetry
Ammonia in waters	N		16/06/2020	151	Colorimetry
Suspended Solids in waters	N		17/06/2020	155	Gravimetry
SVOC in waters	N		16/06/2020	167	GC-MS
PAHs and/or PCBs in waters	N		16/06/2020	170	GC-MS
Low range Aliphatic hydrocarbons water	N		17/06/2020	200	GC-MS
Low range Aromatic hydrocarbons water	N		17/06/2020	200	GC-MS
VOC in waters	N		15/06/2020	200	GC-MS
Elemental Sulphur by HPLC in waters	N		17/06/2020	206	HPLC
DO (Dissolved Oxygen) in waters	N		16/06/2020	211	Electromeric
Aliphatic hydrocarbons in water	N		16/06/2020	215	GC-FID
Aromatic hydrocarbons in water	N		16/06/2020	215	GC-FID
Anions	U		16/06/2020	270	Ion Chromatography

Tests marked N are not UKAS accredited

Report Information

Report No.: 20-28455, 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"

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

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
[redacted]

UKAS TESTING
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	20-29705
Issue:	1
Date of Issue:	11/09/2020
Contact:	Glyn Evans
Customer Details:	GESL Unit 7 Danworth Farm Hurstpierpoint West SussexBN6 9GL
Quotation No:	Q19-01488
Order No:	PO2973
Customer Reference:	GE18103
Date Received:	04/09/2020
Date Approved:	11/09/2020
Details:	Cornfield Close, Littlehampton
Approved by:	[redacted]

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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Sample Summary

Report No.: 20-29705, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
213209	BH103 6.60	03/09/2020	04/09/2020		

ELAB

UKAS TESTING 2683

Results Summary

Report No.: 20-29705, issue number 1

ELAB Reference	213209
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH103
Sample Depth (m)	6.60
Sampling Date	03/09/2020

Determinand	Codes	Units	LOD	
Dissolved Metals				
Arsenic	U	ug/l	5	< 5
Boron	N	ug/l	5	568
Barium	U	ug/l	5	127
Beryllium	U	ug/l	5	< 5
Cadmium	U	ug/l	1	< 1
Chromium	U	ug/l	5	< 5
Copper	U	ug/l	5	< 5
Iron	U	ug/l	140	< 140
Mercury	U	ug/l	0.1	< 0.1
Nickel	U	ug/l	5	59
Lead	U	ug/l	1	< 1
Selenium	U	ug/l	5	< 5
Vanadium	N	ug/l	5	< 5
Zinc	U	ug/l	5	11
Anions				
Chloride	U	mg/l	0.5	24.4
Nitrate	U	mg/l	0.5	9.9
Sulphate	U	mg/l	0.5	202
Inorganics				
Elemental Sulphur	N	mg/l	0.1	< 0.1
Ammoniacal Nitrogen as N	N	mg/l	0.1	4.1
Free ammonia (NH3)	N	mg/l	0.1	6.1
Hexavalent Chromium	U	ug/l	100	< 100
Sulphide	N	mg/l	0.1	< 0.1
Miscellaneous				
Total Alkalinity (CaCO3)	N	mg/l	5	690
Biochemical Oxygen Demand (5 day)	N	mg/l	2	7
Chemical Oxygen Demand	N	mg/l	2	30
Electrical Conductivity	U	uS/cm	50	1570
Dissolved organic carbon	N	mg/l	1.5	6.7
Dissolved Oxygen	N	mg/l	0.1	5.2
pH	U	pH units	0.1	6.7
Suspended Solids	N	mg/l	0.1	17000
Phenols				
Phenol	N	ug/l	1	< 1
M,P-Cresol	N	ug/l	1	< 1
O-Cresol	N	ug/l	1	< 1
3,4-Dimethylphenol	N	ug/l	1	< 1
2,3-Dimethylphenol	N	ug/l	1	< 1
2,3,5-trimethylphenol	N	ug/l	1	< 1
Total Monohydric Phenols	N	ug/l	1	< 1

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UKAS TESTING 2683

Results Summary

Report No.: 20-29705, issue number 1

ELAB Reference	213209
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH103
Sample Depth (m)	6.60
Sampling Date	03/09/2020

Determinand	Codes	Units	LOD	
Polyaromatic hydrocarbons				
Naphthalene GCMS	N	ug/l	0.01	< 0.01
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01
Acenaphthene GCMS	N	ug/l	0.01	< 0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01
Phenanthrene GCMS	N	ug/l	0.01	0.01
Anthracene GCMS	N	ug/l	0.01	< 0.01
Fluoranthene GCMS	N	ug/l	0.01	0.04
Pyrene GCMS	N	ug/l	0.01	0.03
Benzo (a) anthracene GCMS	N	ug/l	0.01	0.02
Chrysene GCMS	N	ug/l	0.01	0.02
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	0.02
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	0.02
Benzo (a) pyrene GCMS	N	ug/l	0.01	0.02
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	0.02
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	< 0.01
Benzo(ghi)perylene GCMS	N	ug/l	0.01	0.02
Total PAH(16) GCMS	N	ug/l	0.01	0.24
TPH CWG				
>C5-C6 Aliphatic	N	ug/l	1	< 1.0
>C6-C8 Aliphatic	N	ug/l	1	< 1.0
>C8-C10 Aliphatic	N	ug/l	5	7.7
>C10-C12 Aliphatic	N	ug/l	5	12.9
>C12-C16 Aliphatic	N	ug/l	5	38.8
>C16-C21 Aliphatic	N	ug/l	5	60.2
>C21-C35 Aliphatic	N	ug/l	5	208
>C35-C40 Aliphatic	N	ug/l	5	26.7
Total (>C5-C40) Aliphatic	N	ug/l	5	355
>C5-C7 Aromatic	N	ug/l	1	< 1.0
>C7-C8 Aromatic	N	ug/l	1	< 1.0
>C8-C10 Aromatic	N	ug/l	5	9.4
>C10-C12 Aromatic	N	ug/l	5	15.2
>C12-C16 Aromatic	N	ug/l	5	38.8
>C16-C21 Aromatic	N	ug/l	5	46.8
>C21-C35 Aromatic	N	ug/l	5	144
>C35-C40 Aromatic	N	ug/l	5	41.2
Total (>C5-C40) Aromatic	N	ug/l	5	296
Total (>C5-C40) Ali/Aro	N	ug/l	5	650
PCB (ICES 7 congeners)				
PCB 28	N	ug/l	0.1	< 0.1
PCB 52	N	ug/l	0.1	< 0.1
PCB 101	N	ug/l	0.1	< 0.1
PCB118	N	ug/l	0.1	< 0.1
PCB 153	N	ug/l	0.1	< 0.1
PCB 138	N	ug/l	0.1	< 0.1
PCB 180	N	ug/l	0.1	< 0.1
PCB (7 Congeners)	N	ug/l	0.1	< 0.1

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UKAS TESTING 2683

Results Summary

Report No.: 20-29705, issue number 1

ELAB Reference	213209
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH103
Sample Depth (m)	6.60
Sampling Date	03/09/2020

Determinand	Codes	Units	LOD	
VOC				
MTBE	N	ug/l	1	< 1
Heptane	N	ug/l	1	< 1
Octane	N	ug/l	1	< 1
Nonane	N	ug/l	1	< 1
Benzene	N	ug/l	1	< 1
Toluene	N	ug/l	1	< 1
Ethylbenzene	N	ug/l	1	< 1
m+p-xylene	N	ug/l	1	< 1
o-xylene	N	ug/l	1	< 1
cis-1,2-dichloroethene	N	ug/l	1	< 1
1,1-Dichloroethane	N	ug/l	1	< 1
Chloroform	N	ug/l	1	< 1
Tetrachloromethane	N	ug/l	1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1
Trichloroethylene	N	ug/l	1	< 1
Tetrachloroethylene	N	ug/l	1	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1
1,1,2,2-Tetrachloroetha	N	ug/l	1	< 1
Chlorobenzene	N	ug/l	1	< 1
Bromobenzene	N	ug/l	1	< 1
Bromodichloromethane	N	ug/l	1	< 1
Methylethylbenzene	N	ug/l	1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1
Trans - 1-2 -dichloroethylene	N	ug/l	1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1
Bromochloromethane	N	ug/l	1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1
Dibromomethane	N	ug/l	1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1
Dibromochloromethane	N	ug/l	1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1
Dibromoethane	N	ug/l	1	< 1
Styrene	N	ug/l	1	< 1
Propylbenzene	N	ug/l	1	< 1
2-Chlorotoluene	N	ug/l	1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1
4-Chlorotoluene	N	ug/l	1	< 1
t-butylbenzene	N	ug/l	1	< 1
1,3,5-Trimethylbenzene	N	ug/l	1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1
p-cymene	N	ug/l	1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1
Butylbenzene	N	ug/l	1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1
Naphthalene	N	ug/l	1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1
Bromoform	N	ug/l	1	< 1

Results Summary

Report No.: 20-29705, issue number 1

ELAB Reference	213209
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH103
Sample Depth (m)	6.60
Sampling Date	03/09/2020

Determinand	Codes	Units	LOD	
SVOC				
Phenol	N	ug/l	1	< 1.00
Aniline	N	ug/l	1	< 1.00
Bis(2-chloroethyl)ether	N	ug/l	1	< 1.00
2-Chlorophenol	N	ug/l	1	< 1.00
1,3-Dichlorobenzene	N	ug/l	1	< 1.00
1,4-Dichlorobenzene	N	ug/l	1	< 1.00
Benzyl Alcohol	N	ug/l	1	< 1.00
1,2-Dichlorobenzene	N	ug/l	1	< 1.00
2-Methylphenol	N	ug/l	1	< 1.00
Bis(2-chloroisopropyl)ether	N	ug/l	1	< 1.00
3 and 4-methylphenol	N	ug/l	1	< 1.00
N-Nitrosodi-n-propylamine	N	ug/l	1	< 1.00
Hexachloroethane	N	ug/l	1	< 1.00
Nitrobenzene	N	ug/l	1	< 1.00
Isophorone	N	ug/l	1	< 1.00
2-Nitrophenol	N	ug/l	1	< 1.00
2,4-Dimethylphenol	N	ug/l	1	< 1.00
Bis(2-chloroethoxy)methane	N	ug/l	1	< 1.00
2,4-Dichlorophenol	N	ug/l	1	< 1.00
1,3,5-Trichlorobenzene	N	ug/l	1	< 1.00
Naphthalene	N	ug/l	0.01	< 0.01
3-Chloroaniline	N	ug/l	1	< 1.00
Hexachloro-1,3-butadiene	N	ug/l	1	< 1.00
4-Chloro-3-methylphenol	N	ug/l	1	< 1.00
2-Methynaphthalene	N	ug/l	1	< 1.00
1-Methylnaphthalene	N	ug/l	1	< 1.00
Hexachlorocyclopentadiene	N	ug/l	1	< 1.00
2,4,6-Trichlorophenol	N	ug/l	1	< 1.00
2,4,5-Trichlorophenol	N	ug/l	1	< 1.00
1-Chloronaphthalene	N	ug/l	1	< 1.00
2-Nitroaniline	N	ug/l	1	< 1.00
1,4-Dinitrobenzene	N	ug/l	1	< 1.00
Dimethyl phthalate	N	ug/l	1	< 1.00
1-3-dinitrobenzene	N	ug/l	1	< 1.00
2-6-dinitrotoluene	N	ug/l	1	< 1.00
Acenaphthylene	N	ug/l	0.01	< 0.01
1,2-Dinitrobenzene	N	ug/l	1	< 1.00
3-Nitroaniline	N	ug/l	1	< 1.00
Acenaphthene	N	ug/l	0.01	< 0.01
4-nitrophenol	N	ug/l	1	< 1.00
Dibenzofuran	N	ug/l	1	< 1.00
2,3,5,6-Tetrachlorophenol	N	ug/l	1	< 1.00
2,3,4,6-Tetrachlorophenol	N	ug/l	1	< 1.00
Diethyl phthalate	N	ug/l	1	< 1.00
1-chloro-4-phenoxybenzene	N	ug/l	1	< 1.00
Fluorene	N	ug/l	0.01	< 0.01
4-Nitroaniline	N	ug/l	1	< 1.00
Dinitro-o-cresol	N	ug/l	1	< 1.00
Diphenylamine	N	ug/l	1	< 1.00
Azobenzene	N	ug/l	1	< 1.00
1-bromo-4-phenoxybenzene	N	ug/l	1	< 1.00
Hexachlorobenzene	N	ug/l	1	< 1.00
Pentachlorophenol	N	ug/l	1	< 1.00

Tests marked N are not UKAS accredited.

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UKAS TESTING 2683

Results Summary

Report No.: 20-29705, issue number 1

ELAB Reference	213209
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH103
Sample Depth (m)	6.60
Sampling Date	03/09/2020

Determinand	Codes	Units	LOD	
SVOC				
Phenanthrene	N	ug/l	0.01	< 0.01
Anthracene	N	ug/l	0.01	< 0.01
Carbazole	N	ug/l	1	< 1.00
Dibutyl phthalate	N	ug/l	1	< 1.00
Fluoranthene	N	ug/l	0.01	0.03
Pyrene	N	ug/l	0.01	0.03
Butyl benzyl phthalate	N	ug/l	1	< 1.00
Bis-2-ethylhexyladipate	N	ug/l	1	< 1.00
Butyl benzyl phthalate	N	ug/l	1	< 1.00
Benzo(a)anthracene	N	ug/l	0.01	0.01
Chrysene	N	ug/l	0.01	0.02
Bis(2-ethylhexyl)phthalate	N	ug/l	1	< 1.00
Benzo(b)fluoranthene	N	ug/l	0.01	0.01
Benzo(k)fluoranthene	N	ug/l	0.01	0.01
Benzo(a)pyrene	N	ug/l	0.01	0.01
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01	0.02
Dibenz(ah)anthracene	N	ug/l	0.01	< 0.01
Benzo(ghi)perylene	N	ug/l	0.01	0.03

ELAB

UKAS TESTING
2683

Method Summary

Report No.: 20-29705, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		11/09/2020		GC-FID
Aromatic hydrocarbons in water	N		11/09/2020		GC-FID
Phenols in waters	N		08/09/2020		HPLC
Alkalinity in waters	N		09/09/2020	100	Titrimetry
Dissolved organic carbon	N		09/09/2020	102	IR
pH of waters	U		09/09/2020	113	Electromeric
Chromium Hexavalent in waters	U		10/09/2020	123	Colorimetry
Sulphide in water	N		11/09/2020	134	Colorimetry
PAHs and/or PCBs in waters	N		11/09/2020	135	GC-MS
Electrical conductivity of water	U		09/09/2020	136	Electromeric
BOD	N		11/09/2020	142	5 Day
COD (Chemical Oxygen Demand in waters)	N		11/09/2020	143	Colorimetry
Ammonia in waters	N		09/09/2020	151	Colorimetry
Suspended Solids in waters	N		10/09/2020	155	Gravimetry
SVOC in waters	N		11/09/2020	167	GC-MS
PAHs and/or PCBs in waters	N		11/09/2020	170	GC-MS
Low range Aliphatic hydrocarbons water	N		08/09/2020	200	GC-MS
Low range Aromatic hydrocarbons water	N		08/09/2020	200	GC-MS
VOC in waters	N		07/09/2020	200	GC-MS
Elemental Sulphur by HPLC in waters	N		09/09/2020	206	HPLC
DO (Dissolved Oxygen) in waters	N		09/09/2020	211	Electromeric
Aliphatic hydrocarbons in water	N		11/09/2020	215	GC-FID
Aromatic hydrocarbons in water	N		11/09/2020	215	GC-FID
Anions	U		08/09/2020	270	Ion Chromatography
Dissolved metals by ICP in waters	U		08/09/2020	301	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 20-29705, 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"

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

Groundwater Analysis - Tabulated Summary (Baseline 2019 and Monitoring March, May, June and September 2020)

Site: Cornfield Close, Lewes
Client: Thakeham Client Limited
Job Number: GE18103
Tabulated results to show a direct comparisom of monitoring data against baseline monitoring. (Green=below baseline, Amber = above baseline)

Geo-Environmental

			Baseline					Baseline					Baseline				
		ELAB/12 Reference	188994	199615	204068	206009	213209	188993	199614	204067	206008		188995	199616	204069	206010	
		Customer Reference	35mm	35mm	35mm	35mm	35mm	35mm	35mm	35mm	35mm		35mm	35mm	35mm	35mm	
		Sample ID	BH103	BH103	BH103	BH103	BH103	BH110	BH110	BH110	BH110		BHA	BHA	BHA	BHA	
		Sample Type	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER		WATER	WATER	WATER	WATER	
		Sample Location															
		Sample Depth (m)	5.63	4.18	6.00	6.40	6.60	5.67	4.30	5.92	6.30		5.53	4.20	5.90	6.27	
		Sampling Date	05/11/2019	10/03/2020	12/05/2020	11/06/2020	11/06/2020	05/11/2019	10/03/2020	12/05/2020	11/06/2020		05/11/2019	10/03/2020	12/05/2020	11/06/2020	
Determinand	Units	LOD															
Arsenic	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5	
Boron	ug/l	5	263	601	566	682	568	618	491	587	472		525	902	950	1180	
Barium	ug/l	5	51	118	131	134	127	157	70	88	68		41	58	63	61	
Beryllium	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5	
Cadmium	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
Chromium	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5	
Copper	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5	
Iron	ug/l	140	< 140	< 140	< 140	< 140	< 140	3620	< 140	224	< 140		< 140	< 140	< 140	984	
Mercury	ug/l	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	ug/l	5	< 5	33	44	49	59	38	8	13	10		6	16	18	20	
Lead	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
Selenium	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5	
Vanadium	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5	
Zinc	ug/l	5	< 5	13	15	14	11	16	< 5	8	< 5		6	9	17	15	
Chloride	mg/l	0.5	63.7	23.5	25.5	22.2	34.4	30.4	50.0	53.8	57.5		39.3	36.9	37.5	33.0	
Nitrate	mg/l	0.5	22.0	5.2	3.9	42.1	8.9	< 0.5	9.1	6.2	10.0		7.1	49.5	36.4	16.5	
Sulphate	mg/l	0.5	126	180	194	206	202	218	166	229	182		177	384	466	599	
Elemental Sulphur	mg/l	100	< 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	
Ammoniacal Nitrogen as N	mg/l	0.1	1.6	29	33	33	41	29	12	17	17		8.2	8.2	6.2	17	
Free ammonia (NH3)	mg/l	1.5	2.4	43	49	49	61	43	18	24	24		12	12	18	24	
Hexavalent Chromium	ug/l	0.1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100		< 100	< 100	< 100	< 100	
Sulphide	mg/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.7	< 0.1	< 0.1	0.5		0.2	0.2	< 0.1	0.1	
Phenol	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
M,P-Cresol	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
O-Cresol	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
3,4-Dimethylphenol	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
2,3-Dimethylphenol	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
2,3,5-trimethylphenol	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
Total Monohydric Phenols	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	
Naphthalene GCMS	ug/l	0.01	< 0.01	0.01	0.01	0.01	< 0.01	< 0.01	0.02	0.01	0.02		< 0.01	0.01	0.01	0.02	
Acenaphthylene GCMS	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene GCMS	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		< 0.01	< 0.01	< 0.01	< 0.01	
Fluorene GCMS	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		< 0.01	< 0.01	< 0.01	< 0.01	
Phenanthrene GCMS	ug/l	0.01	< 0.01	0.14	0.06	< 0.01	0.01	0.02	< 0.01	0.09	< 0.01		0.05	0.01	0.03	0.02	
Anthracene GCMS	ug/l	0.01	< 0.01	0.06	0.02	< 0.01	< 0.01	< 0.01	< 0.01	0.03	< 0.01		< 0.01	< 0.01	< 0.01	< 0.01	
Fluoranthene GCMS	ug/l	0.01	< 0.01	0.38	0.20	< 0.01	0.04	< 0.01	< 0.01	0.21	< 0.01		0.03	0.01	0.07	0.01	
Pyrene GCMS	ug/l	0.01	< 0.01	0.35	0.17	< 0.01	0.03	< 0.01	< 0.01	0.22	< 0.01		0.02	0.01	0.07	0.01	
Benzo (a) anthracene GCMS	ug/l	0.01	< 0.01	0.30	0.12	< 0.01	0.02	< 0.01	< 0.01	0.14	< 0.01		< 0.01	< 0.01	0.03	0.01	
Chrysene GCMS	ug/l	0.01	< 0.01	0.17	0.11	< 0.01	0.02	< 0.01	< 0.01	0.13	< 0.01		0.01	< 0.01	0.04	0.01	
Benzo (b) fluoranthene GCMS	ug/l	0.01	< 0.01	0.15	0.12	< 0.01	0.02	< 0.01	< 0.01	0.11	< 0.01		< 0.01	< 0.01	0.04	0.02	
Benzo (k) fluoranthene GCMS	ug/l	0.01	< 0.01	0.12	0.10	< 0.01	0.02	< 0.01	< 0.01	0.10	< 0.01		< 0.01	< 0.01	0.04	0.02	
Benzo (a) pyrene GCMS	ug/l	0.01	< 0.01	0.13	0.12	< 0.01	0.02	< 0.01	< 0.01	0.12	< 0.01		< 0.01	< 0.01	0.04	< 0.01	
Indeno (1,2,3-cd) pyrene GCMS	ug/l	0.01	< 0.01	0.17	0.07	< 0.01	0.02	< 0.01	< 0.01	0.05	< 0.01		< 0.01	< 0.01	0.02	0.02	
Dibenzo(a,h)anthracene GCMS	ug/l	0.01	< 0.01	0.25	0.02	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01		< 0.01	< 0.01	< 0.01	0.04	
Benzo(ghi)perylene GCMS	ug/l	0.01	< 0.01	0.08	0.07	< 0.01	0.02	< 0.01	< 0.01	0.07	< 0.01		0.01	< 0.01	0.03	0.02	
Total PAH(16) GCMS	ug/l	0.01	0.05	2.34	1.21	0.07	0.24	0.10	0.05	1.30	0.06		0.19	0.07	0.46	0.23	
>C5-C6 Aliphatic	ug/l	1	< 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	
>C6-C8 Aliphatic	ug/l	1	< 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	
>C8-C10 Aliphatic	ug/l	5-10	< 5.0	< 5.0	< 5.0	6.0	7.7	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	19.1	< 5.0	
>C10-C12 Aliphatic	ug/l	5-10	< 5.0	< 5.0	< 5.0	< 5.0	12.9	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	9.1	< 5.0	
>C12-C16 Aliphatic	ug/l	5-10	8.3	< 5.0	< 5.0	5.3	38.8	5.1	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	18.6	< 5.0	
>C16-C21 Aliphatic	ug/l	5-10	< 5.0	< 5.0	< 5.0	< 5.0	60.2	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	19.6	< 5.0	
>C21-C35 Aliphatic	ug/l	5-10	< 5.0	< 5.0	9.6	< 5.0	208	< 5.0	< 5.0	< 5.0	< 5.0		5.6	< 5.0	54.7	< 5.0	
>C35-C40 Aliphatic	ug/l	5-10	< 5.0	< 5.0	< 5.0	< 5.0	26.7	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	
Total (>C5-C40) Aliphatic	ug/l	5-10	8.3	< 5.0	9.6	11.3	355	5.1	< 5.0	< 5.0	< 5.0		5.6	< 5.0	121	< 5.0	
>C5-C7 Aromatic	ug/l	1	< 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	
>C7-C8 Aromatic	ug/l	1	< 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	
>C8-C10 Aromatic	ug/l	1-5	< 5.0	< 5.0	< 5.0	< 5.0	9.4	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	
>C10-C12 Aromatic	ug/l	5-10	< 5.0	< 5.0	< 5.0	< 5.0	15.2	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	
>C12-C16 Aromatic	ug/l	5-10	< 5.0	< 5.0	< 5.0	< 5.0	38.8	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	9.1	< 5.0	
>C16-C21 Aromatic	ug/l	5-10	< 5.0	< 5.0	< 5.0	< 5.0	46.8	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	13.2	< 5.0	
>C21-C35 Aromatic	ug/l	5-10	9.5	< 5.0	7.3	< 5.0	144	11.1	< 5.0	< 5.0	< 5.0		22.7	< 5.0	36.1	< 5.0	
>C35-C40 Aromatic	ug/l	5-10	5.4	< 5.0	< 5.0	< 5.0	41.2	8.8	< 5.0	< 5.0	< 5.0		8.3	< 5.0	< 5.0	< 5.0	
Total (>C5-C40) Aromatic	ug/l	5-10	15.0	< 5.0	7.3	< 5.0	296	19.9	< 5.0	< 5.0	< 5.0		31.0	< 5.0	58.4	< 5.0	
Total (>C5-C40) Ali/Aro	ug/l	5-10	23.2	< 5.0	16.9	11.3	650	25.0	< 5.0	< 5.0	< 5.0		36.6	< 5.0	180	< 5.0	
PCB 28	ug/l	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	
PCB 52	ug/l	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	
PCB 101	ug/l	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	
PCB118	ug/l	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	
PCB 153	ug/l	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	
PCB 138	ug/l	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	
PCB 180	ug/l	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	
PCB (7 Congeners)	ug/l	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	

Groundwater Analysis - Tabulated Summary (Baseline 2019 and Monitoring March, May, June and September 2020)

Site: Cornfield Close, Lewes
Client: Thakeham Client Limited
Job Number: GE18103
Tabulated results to show a direct comparisom of monitoring data against baseline monitoring. (Green=below baseline, Amber = above baseline)

Geo-Environmental

			Baseline					Baseline					Baseline				
		ELAB/12 Reference	188996	199617	204070	206011		188997	199618	204071	206012						
		Customer Reference	35mm	35mm	35mm	35mm		35mm	35mm	35mm	35mm						
		Sample ID	BHB	BHB	BHB	BHB		BHC	BHC	BHC	BHC						
		Sample Type	WATER	WATER	WATER	WATER		WATER	WATER	WATER	WATER						
		Sample Location															
		Sample Depth (m)	5.32	4.57	6.21	6.64		6.10	4.58	6.32	6.74						
		Sampling Date	05/11/2019	10/03/2020	12/05/2020	11/06/2020		05/11/2019	10/03/2020	12/05/2020	11/06/2020						
Determinand	Units	LOD															
Arsenic	ug/l	5	11	< 5	8	< 5		< 5	< 5	< 5	< 5						
Boron	ug/l	5	858	711	877	736		810	798	903	1080						
Barium	ug/l	5	181	221	213	229		48	67	60	55						
Beryllium	ug/l	5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5						
Cadmium	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
Chromium	ug/l	5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5						
Copper	ug/l	5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5						
Iron	ug/l	140	2260	< 140	4880	< 140		< 140	< 140	< 140	< 140						
Mercury	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
Nickel	ug/l	5	24	43	41	49		< 5	< 5	< 5	< 5						
Lead	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
Selenium	ug/l	5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5						
Vanadium	ug/l	5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5						
Zinc	ug/l	5	< 5	< 5	< 5	< 5		< 5	< 5	< 5	< 5						
Chloride	mg/l	0.5	192	34.5	46.7	39.8		105	179	206	164						
Nitrate	mg/l	0.5	< 0.5	< 0.5	< 0.5	0.5		193	314	255	230						
Sulphate	mg/l	0.5	133	46.5	48.0	51.7		186	345	333	335						
Elemental Sulphur	mg/l	100	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
Ammoniacal Nitrogen as N	mg/l	0.1	41	82	33	82		0.2	< 0.1	< 0.1	0.2						
Free ammonia (NH3)	mg/l	1.5	61	120	49	120		0.2	< 0.1	< 0.1	0.2						
Hexavalent Chromium	ug/l	0.1	< 100	< 100	< 100	< 100		< 100	< 100	< 100	< 100						
Sulphide	mg/l	0.1	0.2	< 0.1	< 0.1	0.2		< 0.1	< 0.1	< 0.1	0.3						
Phenol	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
M,P-Cresol	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
O-Cresol	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
3,4-Dimethylphenol	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
2,3-Dimethylphenol	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
2,3,5-trimethylphenol	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
Total Monohydric Phenols	ug/l	1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1						
Naphthalene GCMS	ug/l	0.01	0.09	0.02	0.82	< 0.01		< 0.01	0.01	0.04	0.02						
Acenaphthylene GCMS	ug/l	0.01	< 0.01	< 0.01	0.23	< 0.01		< 0.01	< 0.01	0.03	< 0.01						
Acenaphthene GCMS	ug/l	0.01	0.06	< 0.01	0.25	< 0.01		< 0.01	< 0.01	0.01	< 0.01						
Fluorene GCMS	ug/l	0.01	0.06	< 0.01	0.68	0.02		< 0.01	< 0.01	0.03	< 0.01						
Phenanthrene GCMS	ug/l	0.01	0.04	0.03	2.77	0.04		0.03	< 0.01	0.11	< 0.01						
Anthracene GCMS	ug/l	0.01	0.01	0.02	0.70	< 0.01		< 0.01	< 0.01	0.03	< 0.01						
Fluoranthene GCMS	ug/l	0.01	0.04	0.05	5.31	0.03		0.06	< 0.01	0.33	0.01						
Pyrene GCMS	ug/l	0.01	0.03	0.04	4.83	0.03		0.05	< 0.01	0.33	0.01						
Benzo (a) anthracene GCMS	ug/l	0.01	0.01	0.03	4.37	< 0.01		0.03	< 0.01	0.24	< 0.01						
Chrysene GCMS	ug/l	0.01	0.01	0.02	3.74	< 0.01		0.04	< 0.01	0.20	< 0.01						
Benzo (b) fluoranthene GCMS	ug/l	0.01	0.01	0.01	6.00	< 0.01		0.03	< 0.01	0.27	< 0.01						
Benzo (k) fluoranthene GCMS	ug/l	0.01	< 0.01	0.02	4.22	< 0.01		0.03	< 0.01	0.20	< 0.01						
Benzo (a) pyrene GCMS	ug/l	0.01	0.01	0.01	6.20	< 0.01		0.03	< 0.01	0.30	< 0.01						
Indeno (1,2,3-cd) pyrene GCMS	ug/l	0.01	0.01	0.01	4.57	< 0.01		0.02	< 0.01	0.20	< 0.01						
Dibenzo(a,h)anthracene GCMS	ug/l	0.01	< 0.01	< 0.01	2.28	< 0.01		< 0.01	< 0.01	0.09	< 0.01						
Benzo(ghi)perylene GCMS	ug/l	0.01	0.01	< 0.01	4.78	< 0.01		0.03	< 0.01	0.20	< 0.01						
Total PAH(16) GCMS	ug/l	0.01	0.42	0.28	51.8	0.17		0.39	0.04	2.56	0.09						
>C5-C6 Aliphatic	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0						
>C6-C8 Aliphatic	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0						
>C8-C10 Aliphatic	ug/l	5-10	5.5	< 5.0	24.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0						
>C10-C12 Aliphatic	ug/l	5-10	11.5	< 5.0	48.1	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0						
>C12-C16 Aliphatic	ug/l	5-10	28.2	< 5.0	172	< 5.0		< 5.0	< 5.0	< 5.0	6.0						
>C16-C21 Aliphatic	ug/l	5-10	28.4	< 5.0	305	< 5.0		< 5.0	< 5.0	8.8	5.9						
>C21-C35 Aliphatic	ug/l	5-10	54.4	< 5.0	599	< 5.0		< 5.0	< 5.0	16.5	7.3						
>C35-C40 Aliphatic	ug/l	5-10	< 5.0	< 5.0	201.8	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0						
Total (>C5-C40) Aliphatic	ug/l	5-10	128	< 5.0	1170	< 5.0		< 5.0	< 5.0	25.3	19.2						
>C5-C7 Aromatic	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0						
>C7-C8 Aromatic	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0						
>C8-C10 Aromatic	ug/l	1-5	6.6	< 5.0	10.4	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0						
>C10-C12 Aromatic	ug/l	5-10	23.5	< 5.0	39.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0						
>C12-C16 Aromatic	ug/l	5-10	29.4	8.8	183	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0						
>C16-C21 Aromatic	ug/l	5-10	16.5	< 5.0	297	< 5.0		< 5.0	< 5.0	5.9	< 5.0						
>C21-C35 Aromatic	ug/l	5-10	34.7	< 5.0	505	< 5.0		8.3	< 5.0	10.0	< 5.0						
>C35-C40 Aromatic	ug/l	5-10	< 5.0	< 5.0	19.2	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0						
Total (>C5-C40) Aromatic	ug/l	5-10	111	8.8	1030	< 5.0		8.3	< 5.0	15.9	< 5.0						
Total (>C5-C40) Ali/Aro	ug/l	5-10	239	8.8	2200	< 5.0		8.3	< 5.0	41.3	19.2						
PCB 28	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
PCB 52	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
PCB 101	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
PCB118	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
PCB 153	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
PCB 138	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
PCB 180	ug/l	0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						
PCB (7 Congeners)	ug/l	0.1	< 0.1	< 0.1	0.2	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1						