Geo-Environmental

VERIFICATION REPORT

for PLOTS 30-35 AND 42-43 (SOIL COVER SYSTEMS) &

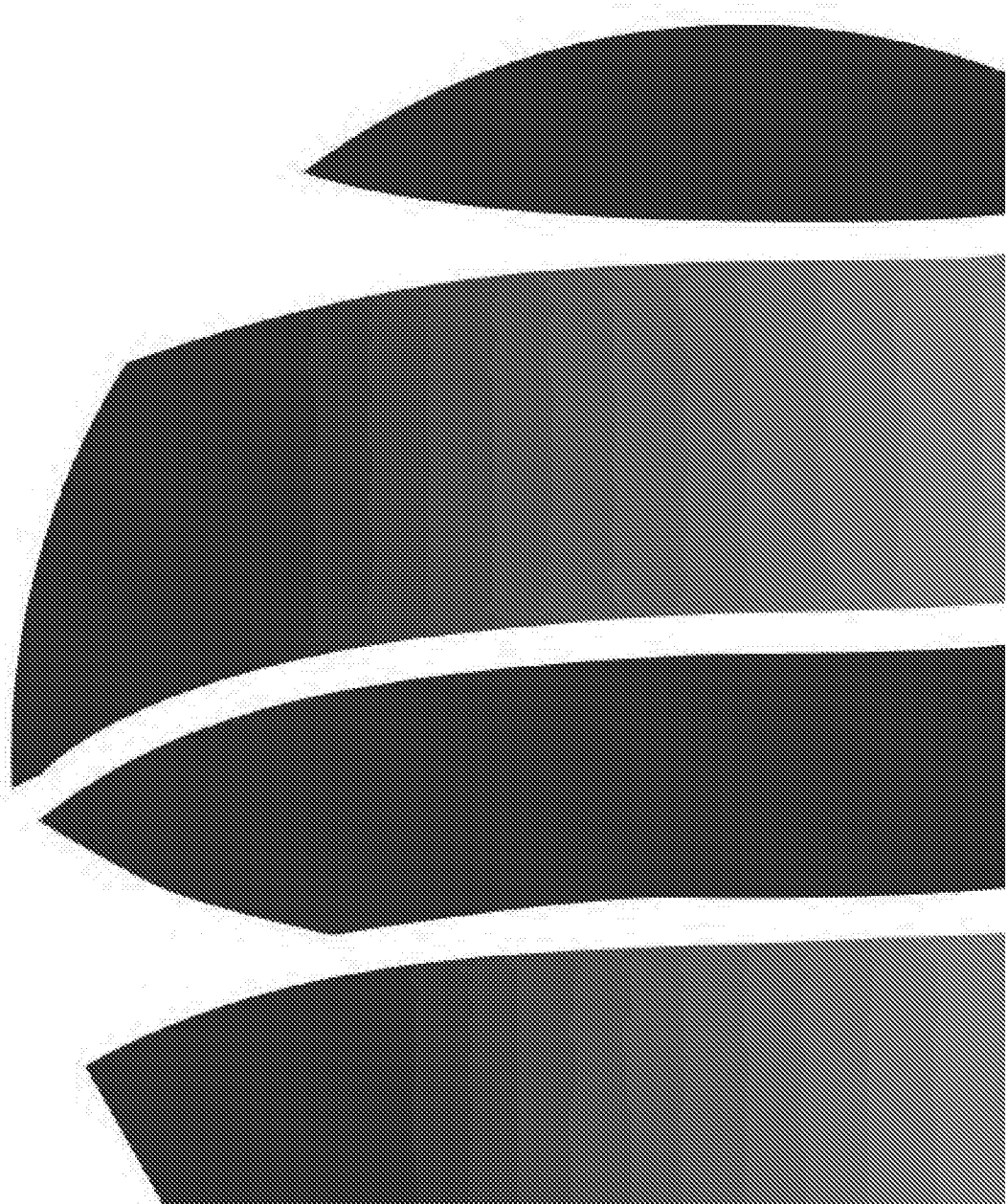
ALL PLOTS (GROUND GAS) AT

CORNFIELD CLOSE, LITTLEHAMPTON,

WEST SUSSEX, BN17 6LD

on behalf of

THAKEHAM CLIENT LTD



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Report:	**VERIFICATION REPORT**
Site:	**PLOTS 30-35 AND 42-43 (SOIL COVER SYSTEM) & ALL PLOTS (GROUND GAS) AT CORNFIELD CLOSE, LITTLEHAMPTON, WEST SUSSEX, BN17 6LG**
Client:	**THAKEHAM CLIENT LTD**
Date:	**20/04/2021**
Reference:	**GE18103/VR/PLOTS 30-35 & 42-43 (Soil) & All Plots (Gas)/APR21**
Version:	**1.0**
Prepared by:	[redacted] **FIONA GOODE BSc (Hons), MSc, FGS, MIEnvSc, RSoBRA** **Senior Consultant Engineer**
Reviewed by:	[redacted] **LAURA LEGATE CGeol, CSci, BSc (Hons), MSc, FGS** **Environmental Director**
Authorised by:	[redacted] **SHAUN ARMITAGE BSc (Hons), FGS** **Senior Consulting Engineer**

Geo-Environmental Services Ltd
Unit 7, Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex, BN6 9GL
[redacted]

Environmental Consultants | Geotechnical Engineers | Site Investigations

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AMENDMENT RECORD

Revision ref.	Date	Reasons for amendment	Author's initials	Reviewed by	Authorised by
1.0	20/04/2021	First issue for compiled report for Plots 30-35 and 42-43 (Validation for Plots 1-15 (gas protection measures, soil cover system and groundwater), have previously been issued under separate cover, report ref: GE18103/VR/JAN21, Validation for Plots 16-59, Blocks A and B (gas protection measures) issued under report ref: GE18103/VR-GAS/APR21, Validation for Plots 36-39 (soil cover system) issued under report ref: GE18103/INTVR/MAR21, and Validation for Plots 40-41 (soil cover system) issued under report ref: GE18103/INTVR/PLOTS40-41/MAR21)	FG	LL	SA

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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 Quality Monitoring Plan (WQMP), referenced GE18103/WQMP/NOV19, Geo-Environmental Services Limited ('Geo-Environmental') was instructed by 'the client' Thakeham Client Ltd to prepare a Verification Report to compile the relevant information in relation to the residential development for Plots 30-35 and 42-43, Cornfield Close, Littlehampton, West Sussex, BN17 6LG, herein referred to as 'the site' (see Figure 1).

This report relates specifically to the installation and validation of remedial measures within Plots 30-35 and 42-43 in relation to soft landscaping validation and generally to all Plots across the site in relation to gas protection validation inspections. At the time of reporting, private gardens and areas of soft landscaping on further Plots on site have either been reported under separate cover or were not ready for final validation inspections and will be validated within a separate verification (or an updated) report in due course.

Previous phases of validation works onsite have already been undertaken and reported for the site under GE18103/VR/JAN21, which presented the validation of ground gas protection measures and soil cover systems associated with Plots 1-15 and groundwater analysis and controlled water requirements for the whole site, GE18103/VR-GAS/APR21, which presented the validation of ground gas protection measures for Plots 16-59 and Block A and B, GE18103/INTVR/MAR21, which presented the validation of the soil cover system installed within Plots 36-39 only and GE18103/VR-PLOTS40-41/MAR21, which presents the validation of the soil cover system installed within Plots 40-41 only. This report details and compiles all the works undertaken in relation to the installation of a soil cover system in Plots 30-35 and 42-43 completed in March 2021, and all works in relation to gas validation inspections for all Plots across the site.

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 30-35 and 42-43 only.

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 to Plots 30-35 and 42-43 in relation to soils and for all Plots across the site in relation to gas risk in order to demonstrate that the gas risk and soil risk mitigation measures were implemented within these specific Plots.

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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 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 Geoembranes Limited. Independent verification of gas protection measures at various stages of development with respect to all Plots across the site were undertaken by Geo-Environmental on behalf of Thakeham Client Ltd, and included several inspection visits undertaken between June 2020 and March 2021, details of which are presented below:

- 11th June 2020 (Plots 1-2 perimeter);
- 2nd July 2020 (Plots 2-15 perimeter);
- 13th July 2020 (Plots 22-27 and 36-43 perimeter);
- 29th July 2020 (Plot 1-3 whole floor area, and Block A perimeter);
- 5th August 2020 (Plots 22-28 perimeter);
- 10th August 2020 (Plots 4-5 whole floor area);
- 13th August 2020 (Plots 6-7 whole floor area, and Plots 24-33 perimeter);

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- 25th August 2020 (Plots 8-10 whole floor area – Plot 11 in progress, and Plots 24-35 perimeter (reinspection));
- 10th September 2020 (Plots 12-13 whole floor area – Plots 14-15 in progress, and Plots 20-21 perimeter);
- 2nd October 2020 (Plots 36-37 whole floor area, Plots 38-39 in progress);
- 15th October 2020 (Plots 40-42 whole floor area, Plot 43 in progress);
- 29th October 2020 (Plots 32-34 whole floor area, Plot 35 in progress);
- 12th November 2020 (Plots 28-31 whole floor area);
- 19th November 2020 (Plots 24-27 whole floor area);
- 26th November 2020 (Plots 16-17 whole floor area);
- 3rd December 2020 (Plots 18-19 whole floor area);
- 10th December 2020 (Plots 20-21 whole floor area);
- 17th December 2020 (Plots 22-23 whole floor area);
- 21st January 2021 (Plots 47-49 whole floor area);
- 26th January 2021 (Plots 44-45 and Block A whole floor area (flats), Plot 46 in progress);
- 11th February 2021 (Plots 50-53 whole floor area);
- 25th February 2021 (Plots 54-57 whole floor area);
- 11th March 2021 (Plots 58-59 whole floor area);
- 17th March 2021 (Block A (corridor and stairwell and Block B);
- 26th March 2021 (Block A (corridor and stairwell and Block B - reinspection)

Plots 1-59

Plots 1-59 comprised detached, 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 terraced, 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 and unbranded black Juta GP1 gas resistant 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 1-59 comprised:

- Keytec 400 HP – self branded purchased from Juta;
- Unbranded black Juta GP1 gas resistant membrane;
- 301483 Foil Band 150mm width/ 1.5mm thickness/ 10m length – Aluminium heat weld membrane tape.

Block A and Block B

Block A and Block B comprised a series of apartment flats. Floor construction throughout this block comprised a piled foundation with 225mm reinforced concrete slab above. A gas resistant membrane was installed directly on

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top of the reinforced concrete slab. The membrane was installed around the perimeter of the block so as to go directly over external walls to ensure the cavity was sealed. Where party walls were located between masonry apartments 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 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 and unbranded black Juta GP1 gas resistant 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 Block A and Block B comprised:

- Keytec 400 HP – self branded purchased from Juta;
- Unbranded black Juta GP1 gas resistant membrane;
- 301483 Foil Band 150mm width/ 1.5mm thickness/ 10m length – Aluminium heat weld membrane tape.

Advice was given to the site manager/s on a number of visits (13/08/19, 26/01/21, and 17/03/21) in relation to ensuring that the floor surfaces were swept and cleared of any debris and materials prior to membrane installation, that any holes or damage was repaired either using tape or with a patch repair, and following the installation of the membrane no materials or equipment should be placed directly on top of the membrane and it should be swept clean and then covered prior to the floor screed installation to prevent any damage to the membrane. Thakeham (the Client) confirmed that action to rectify any damage and to fully seal the membrane, where areas requiring further work were identified, had been completed, and this was confirmed by either client photographs (Plot 46) or by an engineer from Geo-Environmental with subsequent follow up inspection visits (25/08/20 and 26/03/21).

The gas membrane installation for Plots 1-59, Block A and Block B, were inspected by Geo-Environmental on several occasions to observe and record that the measures installed complied with the requirements as set out within the RSVP. The proposed floor construction detail drawing including the gas membrane detail for the houses and the flats 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 entire membrane installation was not fully completed within Plots 11, 14-15, 35, 38-39, 43 and 46 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. Geo-Environmental has viewed these photos and the membrane installation appears to be in-line with the installation undertaken with the completed Plots independently inspected by Geo-Environmental. As such, Geo-Environmental are satisfied that the membrane installation at the point of inspection was suitable and that the client provided photographs are satisfactory. These photographs are presented within Appendix C.

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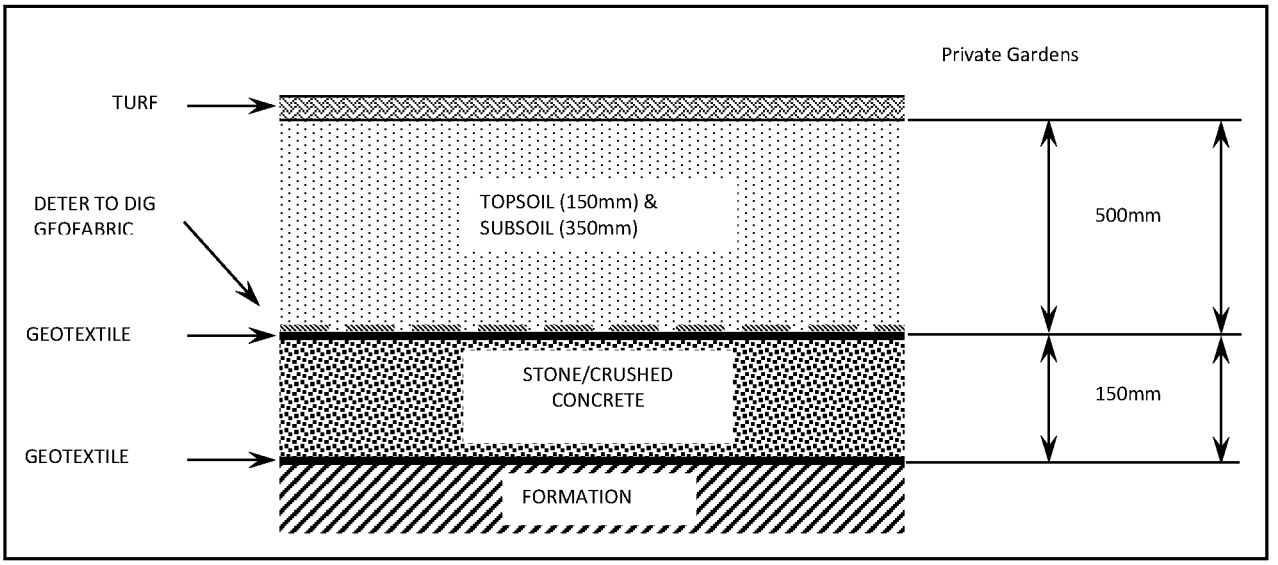
4.0 SOILS

4.1 End Users (Shallow Soils)

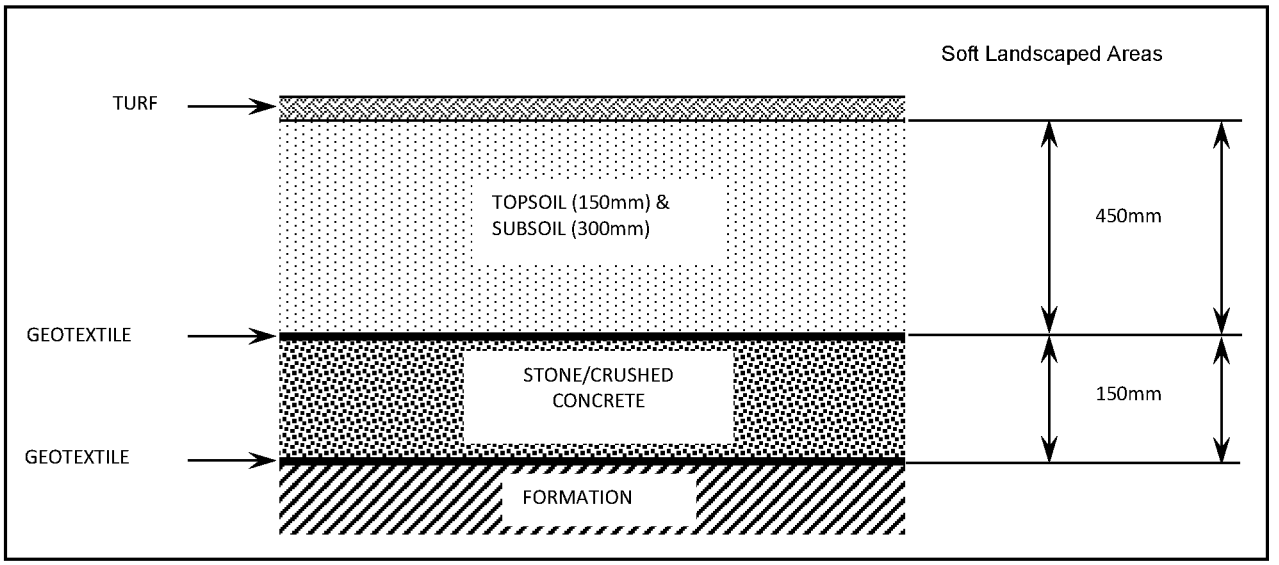
With reference to report Ground Appraisal Report for the site GE17106 - GAR/AP01/231018, through a process of statistical analyses on the results of chemical analyses on both deeper and near surface soil samples, it was considered that the near surface soils were impacted by Lead, Arsenic, PCBs, SVOCs, 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 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:



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5.0 IMPORTATION OF MATERIALS

5.1 Topsoil (Plots 30-35 and 42-43)

The chain of custody (COC) delivery certificates for Topsoil materials imported into site for use within Plots 30-35 and 42-43 were provided by to Geo-Environmental by Thakeham (the Client) and/or Bell (the Groundworks Contractor), 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. It should be noted that the entirety of the soil cover system within Plots 30-35 and 42-43 was formed of Topsoil.

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 30-35 and 42-43. The results of this independent validation analysis testing are presented in Appendix F detailed 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 sampling of Topsoil (cover system) placement associated within private gardens (Plots 30-35 and 42-43)

The inspection/validation works of the cover systems installed within the private gardens were undertaken by a Geo-Environmental Engineer on 11th March 2021. The visual inspection records including site photographs and hand pit logs are presented in Appendix E.

Inspection comprised seven independent shallow hand pits (Plot 30, Plot 32, Plot 33, Plot 34, Plot 35, Plot 42 and Plot 43) which were excavated by the ground workers under the supervision of an engineer from Geo-Environmental within the rear garden areas of Plots 30-35 and 42-43, 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 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 of the rear garden areas at the time of the inspection.

The inspection confirmed that in hand pits Plot 33, Plot 34, Plot 35, Plot 42 and Plot 43 a deter-to-dig Geo-textile type membrane was present beneath the Topsoil. It was not possible to see the deter-to-dig membrane within the hand pits excavated within Plots 30 and 32 due to the presence of water within the base of the pits. However, the Thakeham site manager(s) stated that a membrane had been installed. Topsoil was found to be between 600mm and 750mm in thickness within all hand pits. Geo-Environmental were informed by the groundworkers and the Thakeham site manager(s) that a capillary break layer was installed beneath the deter-to-dig membrane, however independent validation of this element was not undertaken by Geo-Environmental. It is understood that Thakeham have photographs of the placement of the capillary break layer but they have not be provided to Geo-Environmental for inclusion to date.

Four soil samples, referenced Plot 30 at 0.1m bgl, Plot 32 at 0.4m bgl, Plot 35 at 0.2m bgl, and Plot 42 at 0.1m bgl, 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 C.

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 5.1 below:

Determinand	Soil Screening Value (mg/kg)	Sample Max. Conc. (mg/kg)	Below Screening Value?
Arsenic	37	15.3	Yes
Benzo(a)pyrene	2.7	0.3	Yes
Beryllium	1.7	<1.0	Yes
Boron (Water Soluble)	290	0.9	Yes
Cadmium	11	<0.5	Yes
Chromium (Total)	130	25.7	Yes
Copper	2400	32.6	Yes
Hexavalent Chromium	6	<0.8	Yes
Lead	200	163	Yes
Mercury (inorganic)	40	<0.5	Yes
Nickel	180	18.5	Yes
Phenols	110	<6.0	Yes

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Determinand	Soil Screening Value (mg/kg)	Sample Max. Conc. (mg/kg)	Below Screening Value?
Selenium	250	1.9	Yes
Total Petroleum Hydrocarbons	110	1.9	Yes
Vanadium	410	37.9	Yes
Zinc	3700	150	Yes

Table 5.1 Summary of chemical analyses (Plots 30-35 and 42-43 Inspection Visit 11/03/2021)

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.

A further two validation samples from Plots 30-35 and 42-43, Plot 34 at 0.1m bgl and Plot 43 at 0.4m bgl, were 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 5.2 below:

Parameters	Limits for Multipurpose Topsoil	Sample Range	Within acceptable Limits?
Maximum Coarse Fragment Content (%)			
Stones >2mm	30	To Follow	
Stones > 20mm	10		
Stones >50mm	0		
Mass loss on ignition %			Yes
Clay 5% to 20%	3 to 20	3.28-4.14	
Soil pH	5.5 to 8.5	7.3-8.2	Yes
Plant nutrient content			
Total nitrogen %	>0.15	0.12-0.14	Results are <0.15% total for Nitrogen
Extractable phosphate mg/l	16 to 140	72-88	
Extractable potassium mg/l	121 to 1500	152-225	
Extractable magnesium mg/l	51 to 600	58-96	
Carbon:nitrogen ratio	<20:1	16:4-17:1	Yes
Electrical conductivity µS·cm	<3300	2560-2600	Yes
Potentially Phytotoxic Elements			
Zn mg/kg	<200	60.3-150	Yes
Cu mg/kg	<135	12.8-32.6	
Ni mg/kg	<75	11.8-18.5	
Visible contaminants			
% m/m	<0.5	<0.01	Yes
…of which plastics	<0.25	<0.01	

Table 5.2 Summary of BS8332 Topsoil Analysis (Plots 30-35 and 42-43, Inspection Visit 11/03/2021)

The results demonstrate that the Topsoil soils analysed are in accordance with BS3882:2015 Multipurpose Topsoil, with the exception of a slight shortfall in total Nitrogen. It may therefore be necessary to add a nitrogen based fertiliser to the Topsoil within Plots 40-41 prior to the laying of turf to increase the nitrogen levels to provide a suitable growing medium. However, these soils would still be considered to be suitable as a low fertility topsoil.

ARUN DISTRICT COUNCIL LU/191/21/DOC

7.0 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 (to the best of our knowledge). However, the strategy remains in place for the remainder of the development works.

ARUN DISTRICT COUNCIL LU/191/21/DOC

8.0 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 30-35 and 42-43, 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 have been or will be reported via an updated report or under separate cover in due course.

Please be aware that the independent inspection and validation of gas protection measures installed, presented within this report relates to the works undertaken up to the point of inspection. Geo-Environmental accepts 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.

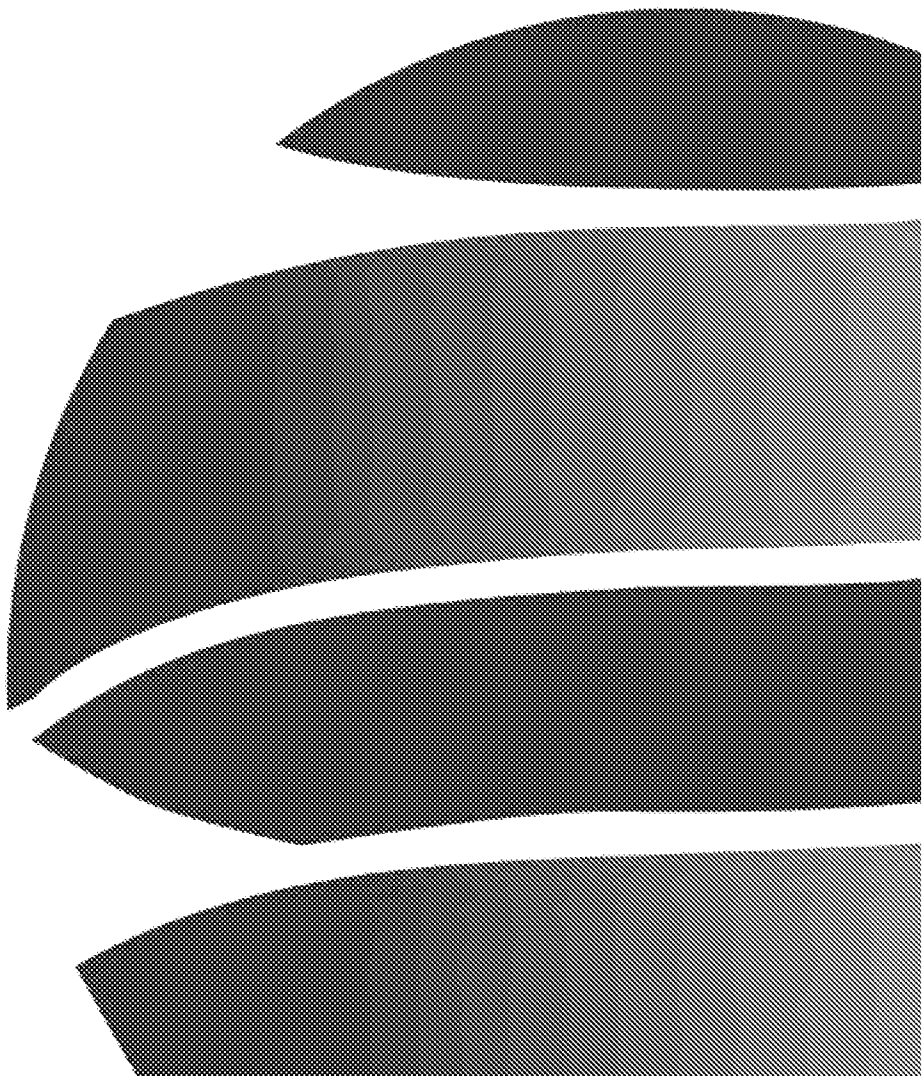
The inspection of the installed soil cover system was undertaken by Geo-Environmental via the excavation of a selected number of hand pits. There was no visual evidence on the site to indicate that the areas remote from the pits undertaken were likely to differ significantly from the areas where the pits had been undertaken for inspection. However, 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 30-35 and 42-43.

Geo-Environmental can only verify the installation of a cover system at the locations and depths 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 soil cover system remedial measures installed within Plots 30-35 and 42-43, and also generally to the ground gas remedial measures installed within all Plots across the site. Validation with respect to the soil cover systems to be installed within remaining Plots will be presented under separate cover in due course.

ARUN DISTRICT COUNCIL LU/191/21/DOC

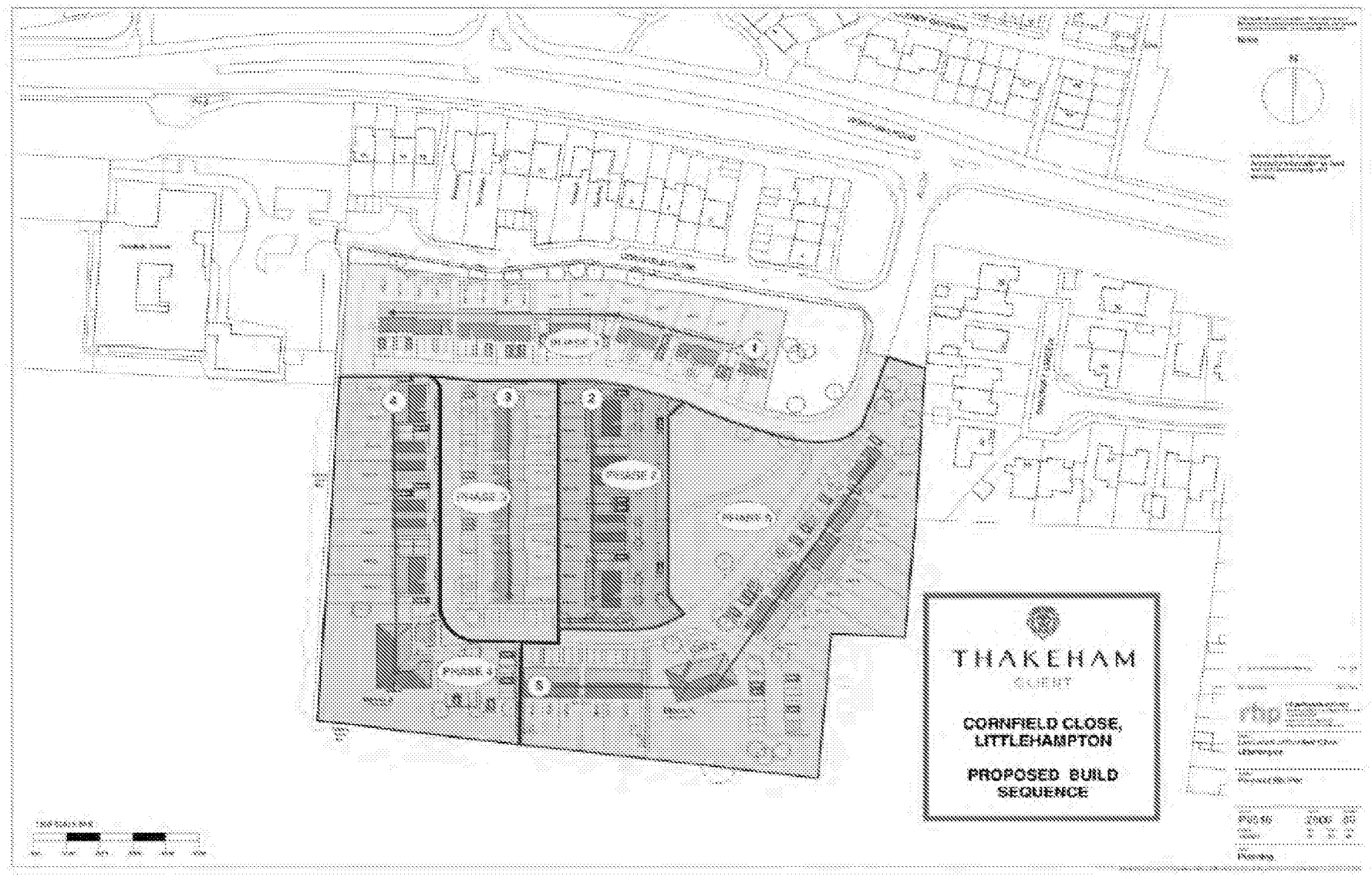
FIGURES





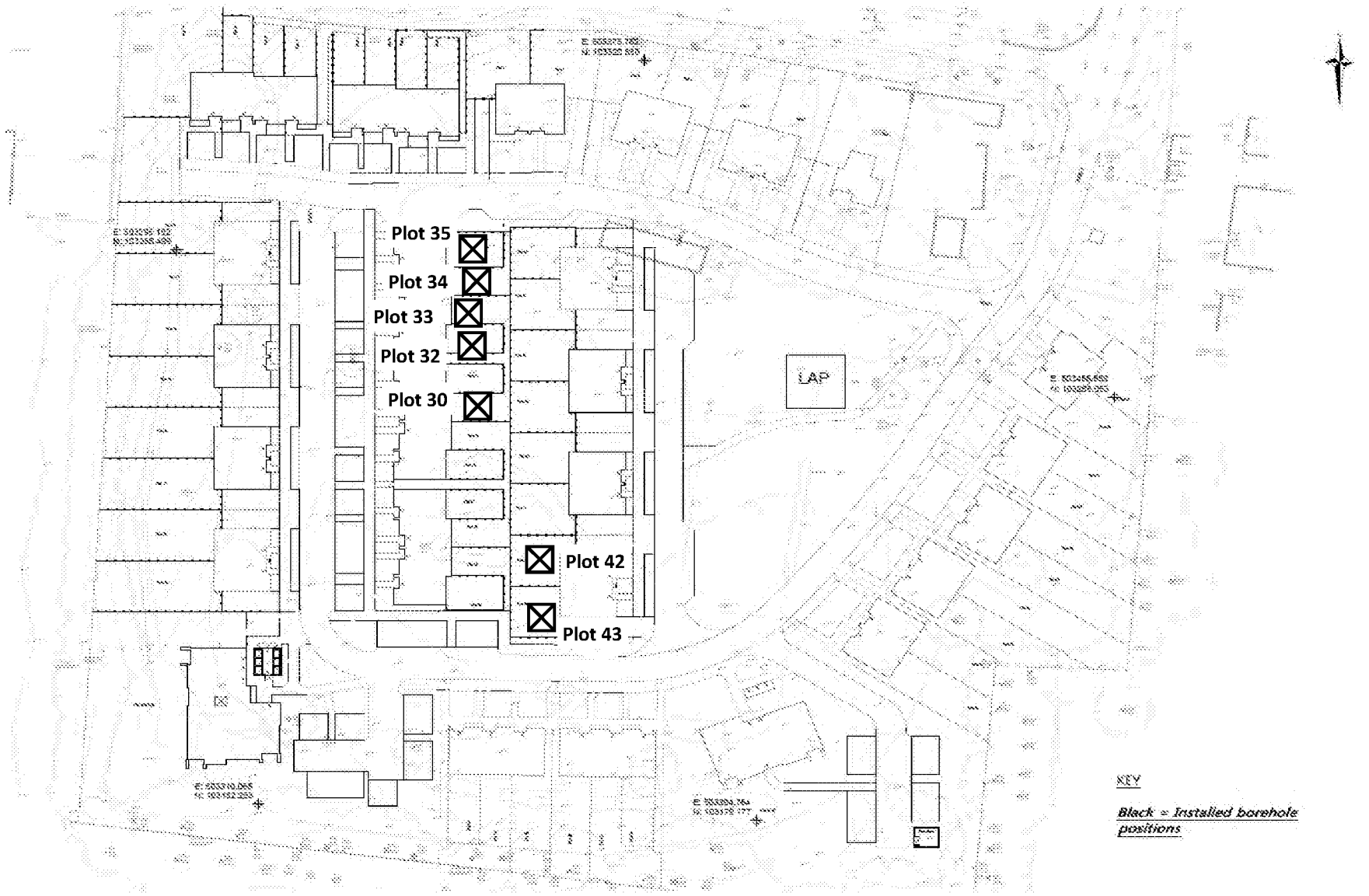
Project:	Cornfield Close, Littlehampton, West Sussex			**Title**	Site Location Plan
Client:	Thakeham Homes			**Geo-Environmental Services Ltd** **Unit 7 Danworth Farm, Cuckfield Road** **Hurstpierpoint, West Sussex BN6 9GL** **+44(0)1273 832972 www.gesl.net**	Geo-Environmental
Ref No:	GE18103	**Revision:**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

ARUN DISTRICT COUNCIL LU/191/21/DOC



Project:	Cornfield Close, Littlehampton, West Sussex			**Title**	Site Development Phasing Plan (Phase 1-5)
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**	Geo-Environmental
Figure:	2	**Scale:**	Not To Scale	**+44(0)1273 832972 www.gesl.net**	

ARUN DISTRICT COUNCIL LU/191/21/DOC



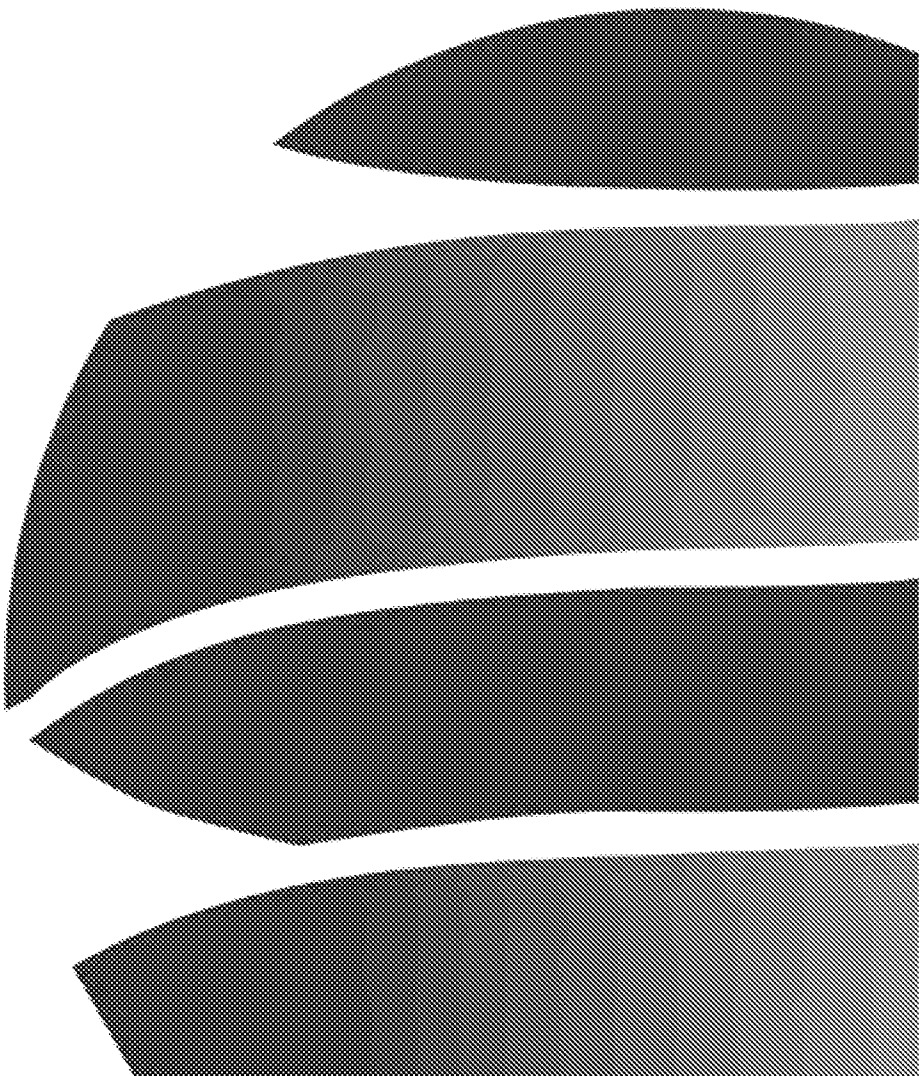
Project:	Cornfield Close, Littlehampton, West Sussex			**Title**	Validation Sample Location Plan (Plots 30-35 and 42-43)
Client:	Thakeham Homes			**Geo-Environmental Services Ltd** **Unit 7 Danworth Farm, Cuckfield Road** **Hurstpierpoint, West Sussex BN6 9GL** **+44(0)1273 832972 www.gesl.net**	Geo-Environmental
Ref No:	GE18103	**Revision:**	0		
Drawn:	FG	**Date:**	20/04/2021		
Figure:	3	**Scale:**	Not To Scale		

ARUN DISTRICT COUNCIL LU/191/21/DOC

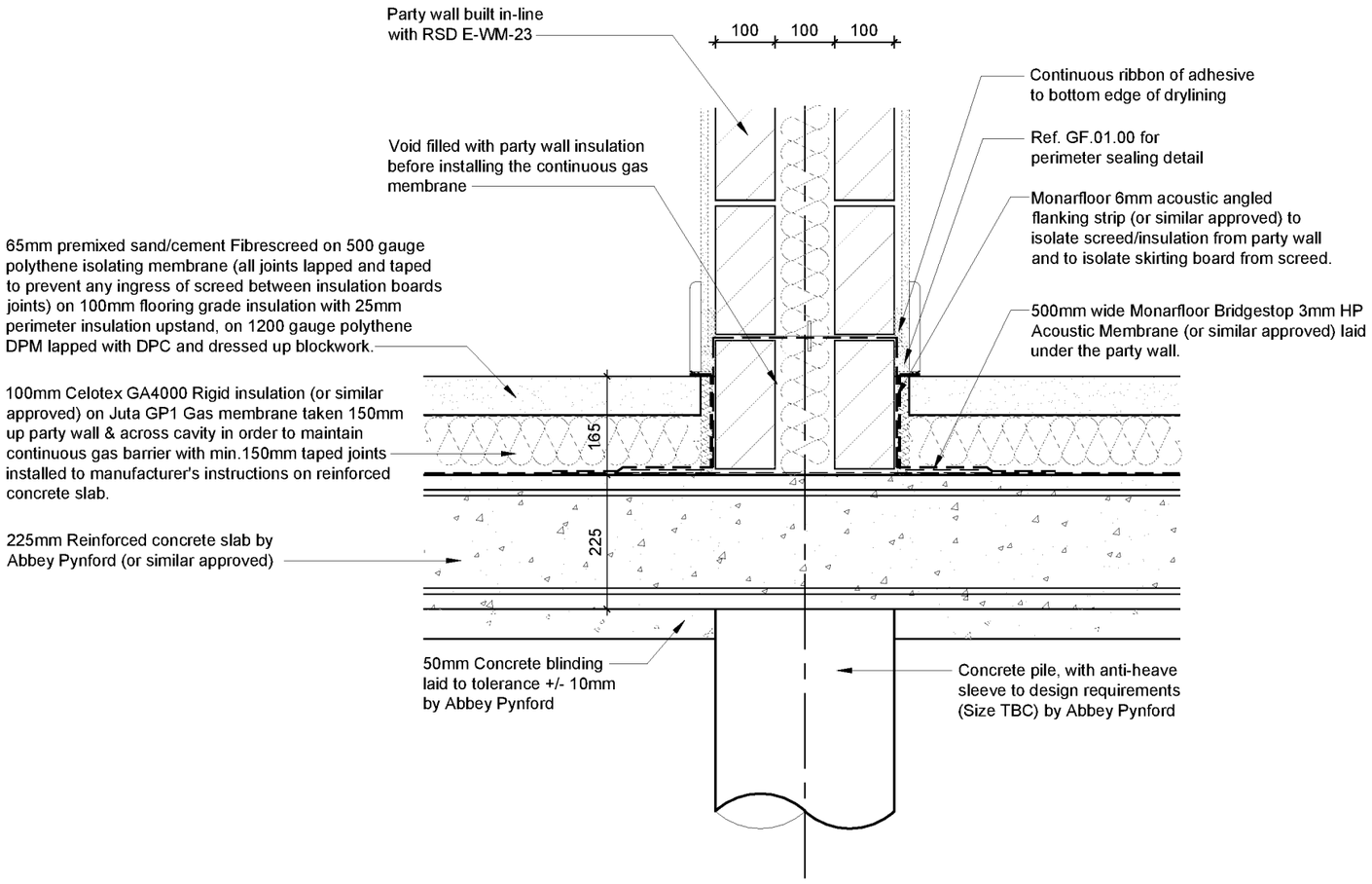
Geo-Environmental

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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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

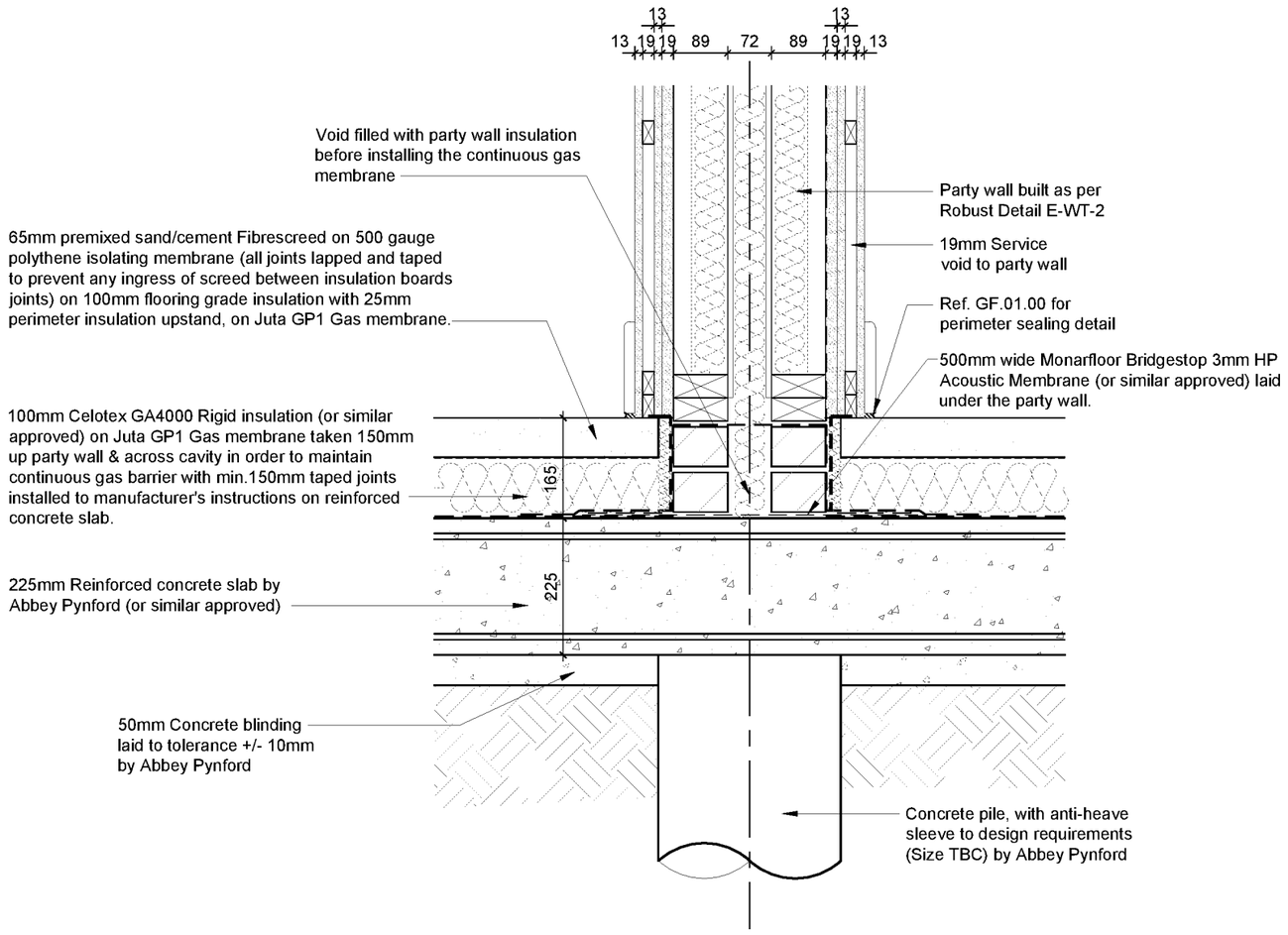
PROJECT: CORNFIELD CLOSE, LITTLEHAMPTON

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

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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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

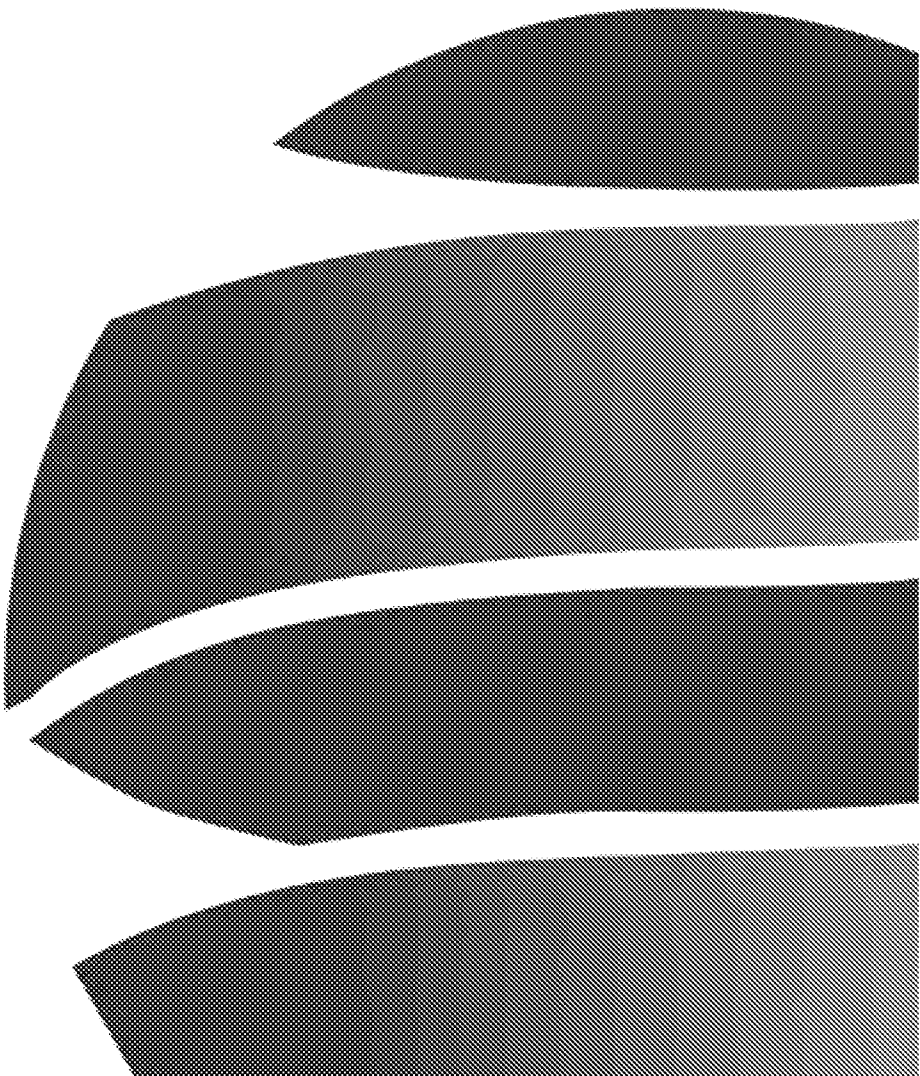
DRAWN: AJH | CHECKED: CD

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

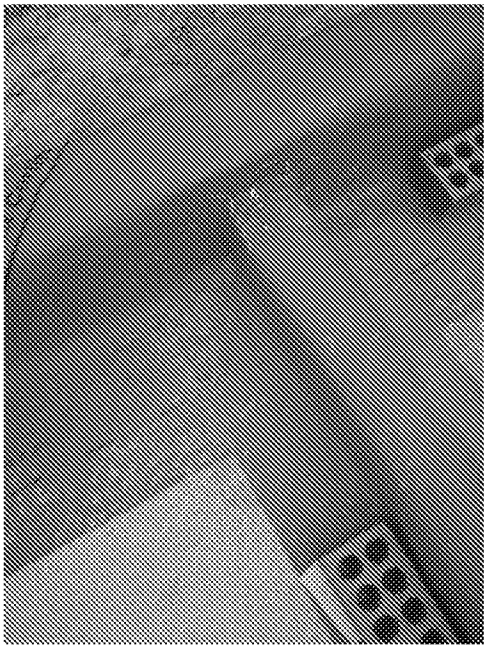
1.1 Condition of sub-grade and underside of membrane	Clean, recently swept flat concrete.
1.2 Gas membrane type	Keytec 400 HP - Self branded bought from Juta.
1.3 Gas membrane condition	Very good. No sign of previous repair or weakness.
Jointing tape product	Membrane cutouts used as principal joint tape. 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.

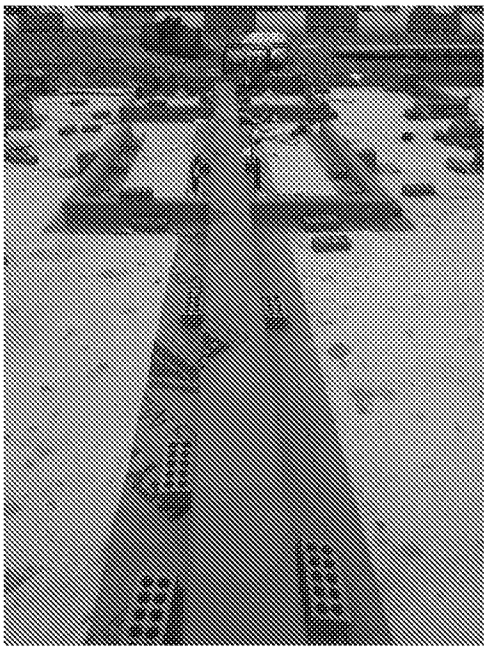
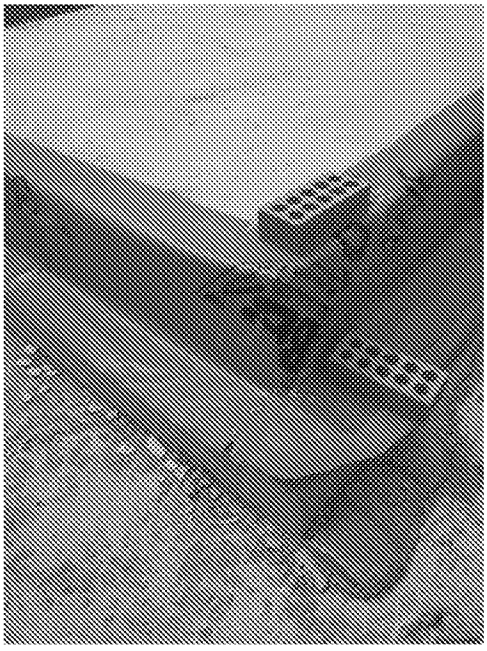
4. PHOTOGRAPHS

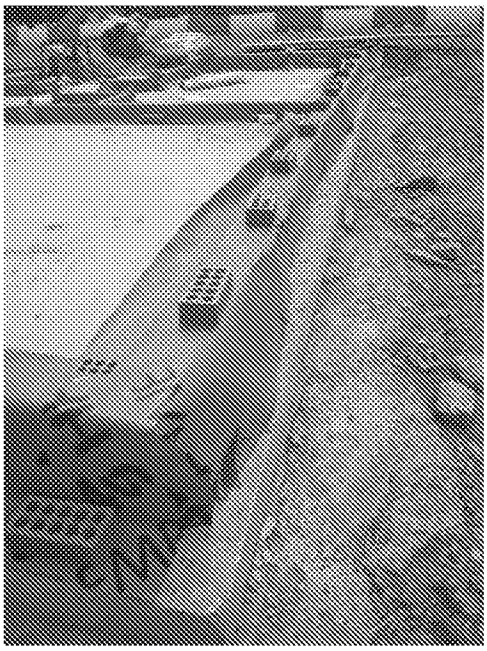
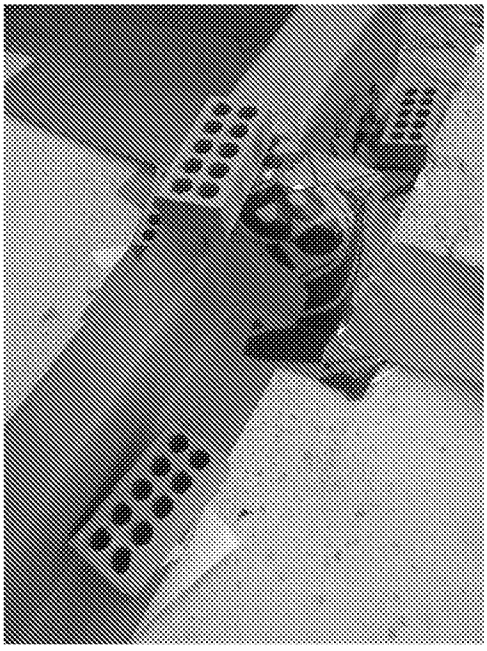
Photographs

(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

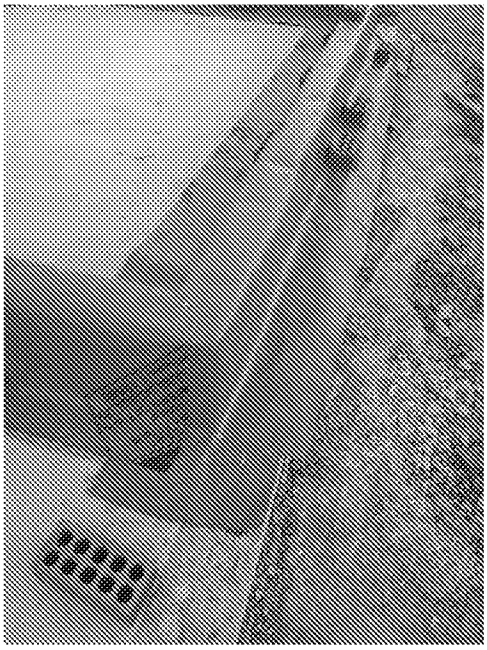
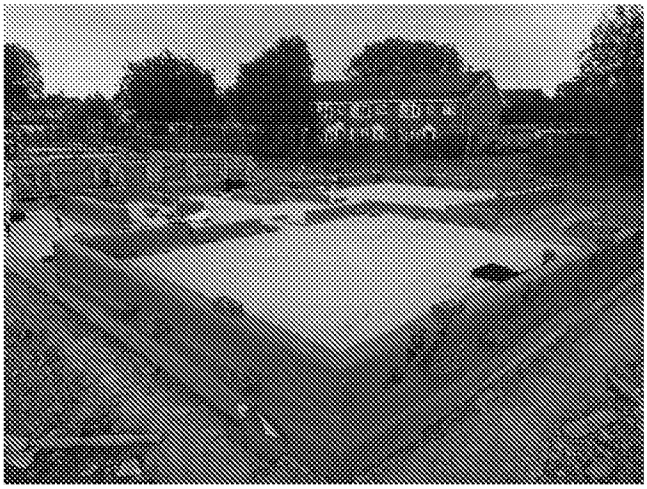
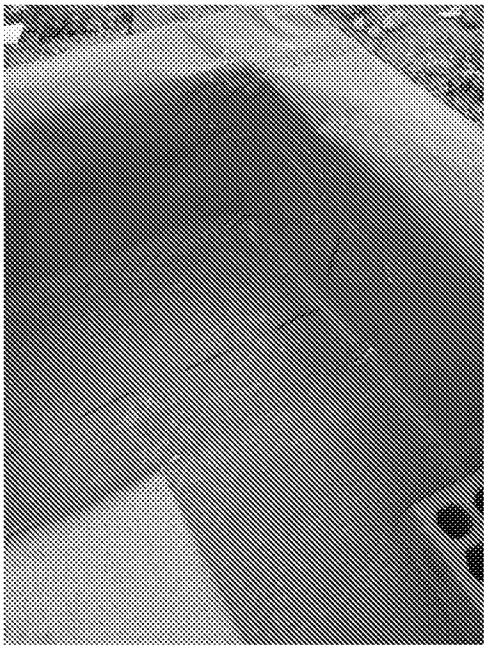
1.1 Condition of sub-grade and underside of membrane	Very clean, recently swept.
1.2 Gas membrane type	Keytec 400 HP - bought from Juta branded by Keytec. Red. Stored in van.
1.3 Gas membrane condition	No punctures, evidence of footprints, repairs or weakness. Joining tape will be used to protect membrane 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

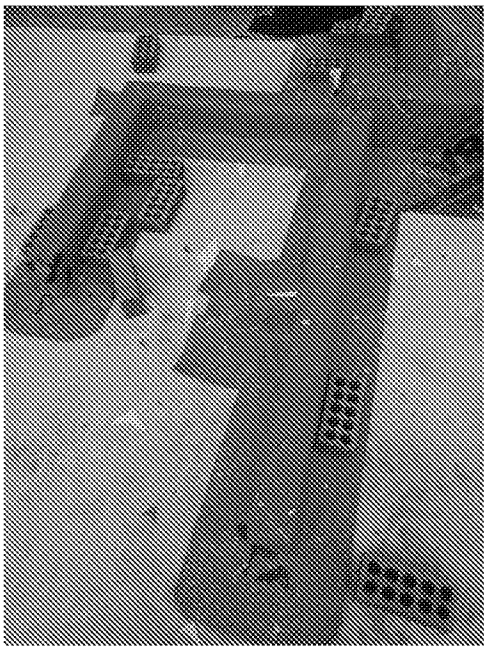
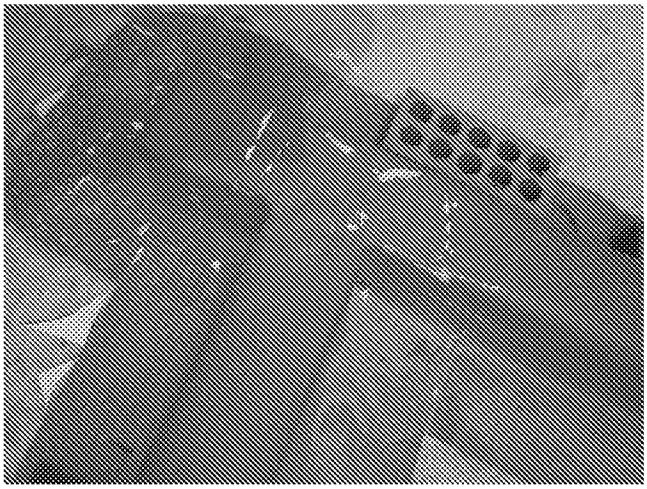
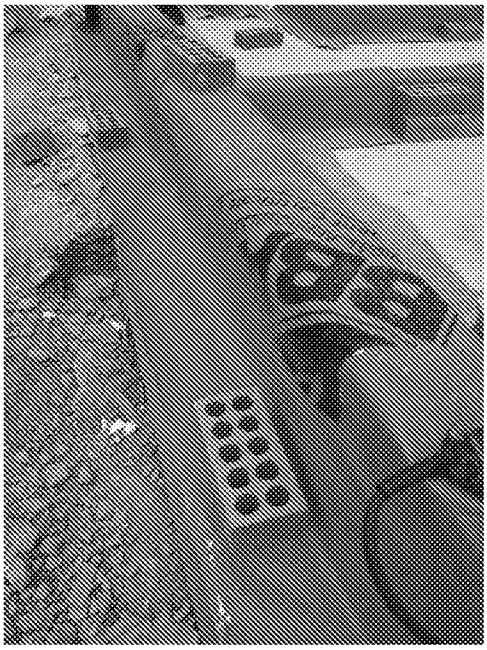
Photographs

(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

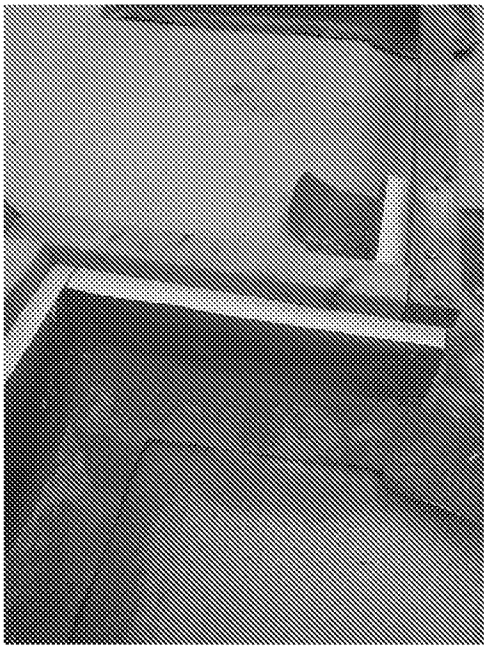
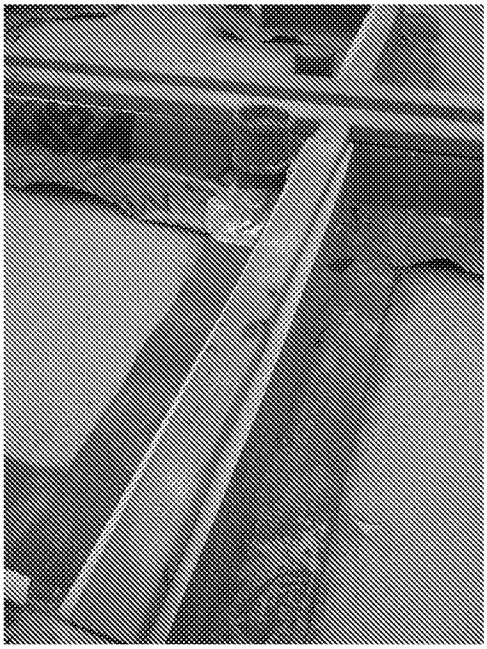
1.1 Condition of sub-grade and underside of membrane	Good condition, clean with no visible damage
1.2 Gas membrane type	Keytec gas resistant 400 membrane and on a few plots black juta unbranded gas resistant membrane
1.3 Gas membrane condition	Membrane in good condition some dust but well protected
Jointing 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

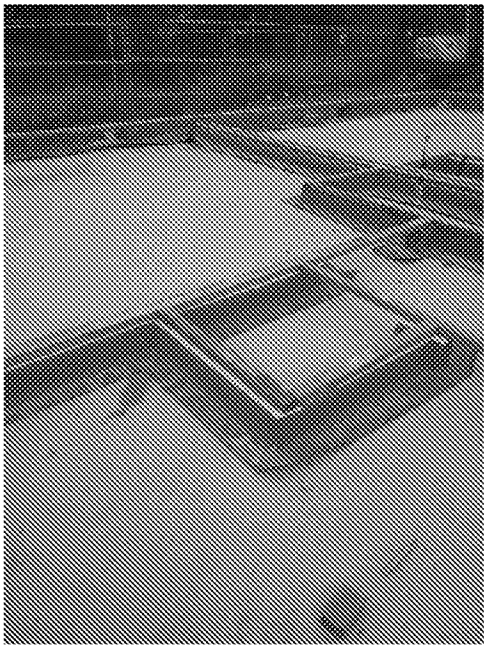
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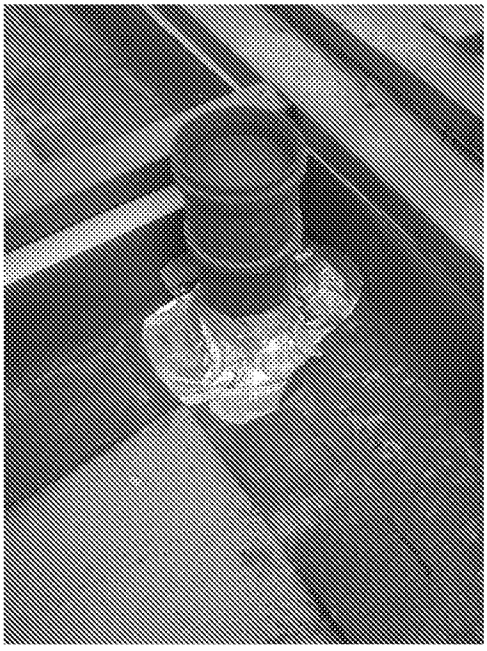
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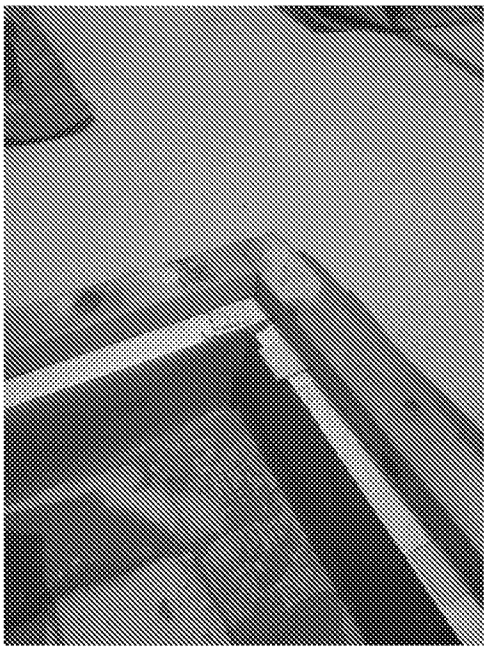
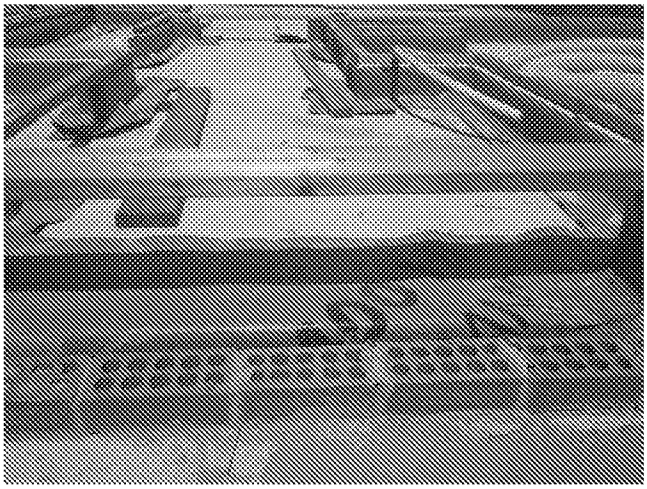
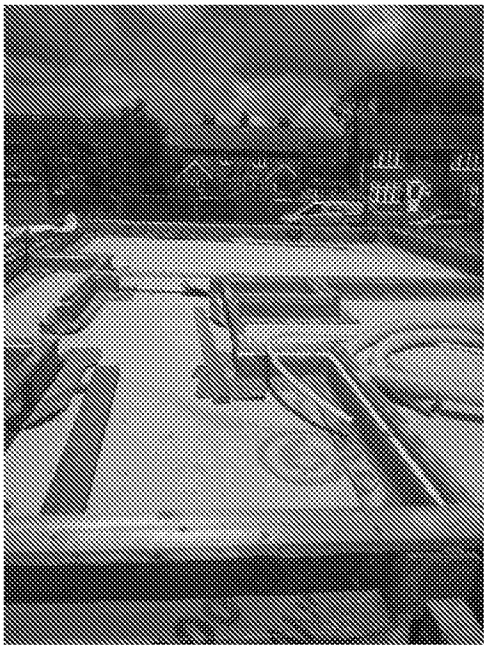
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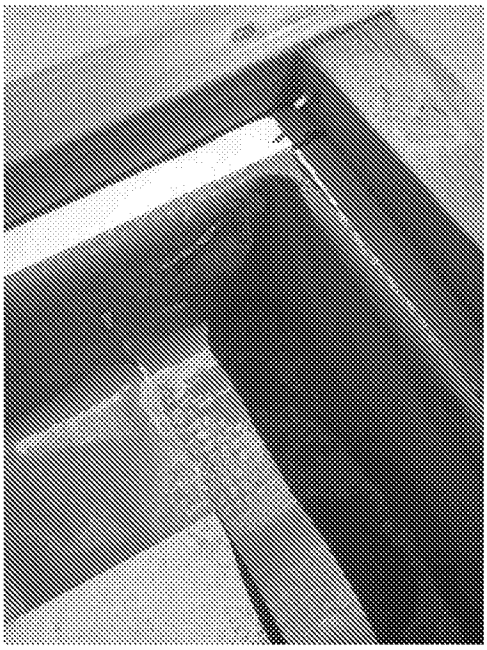
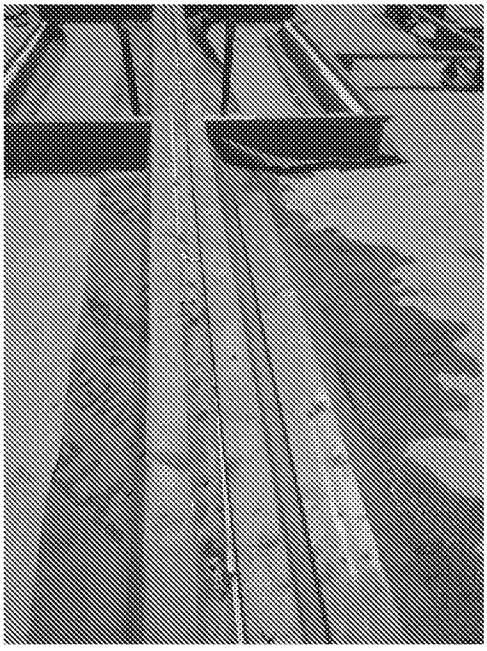
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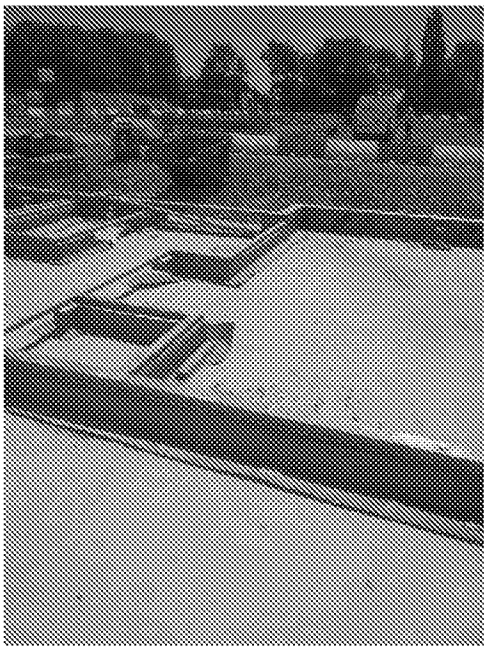
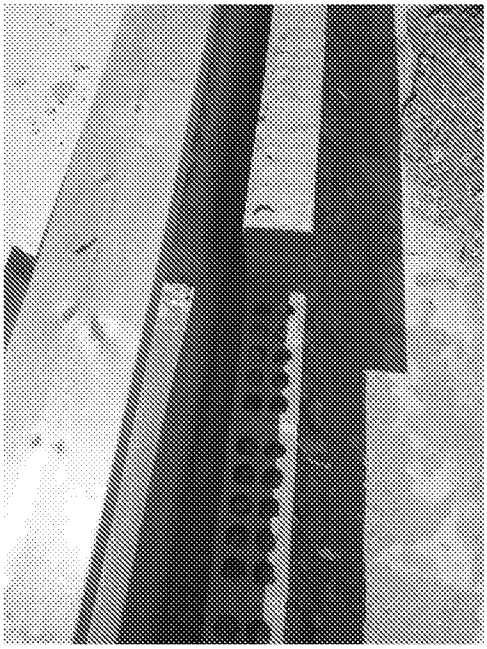
	Plot 3 timber
	Plot 2 timber

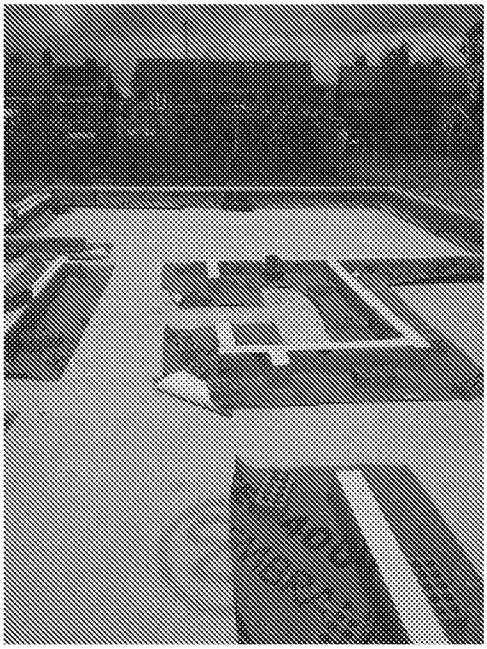
	Plot 5 underside
	Plot 5 overview

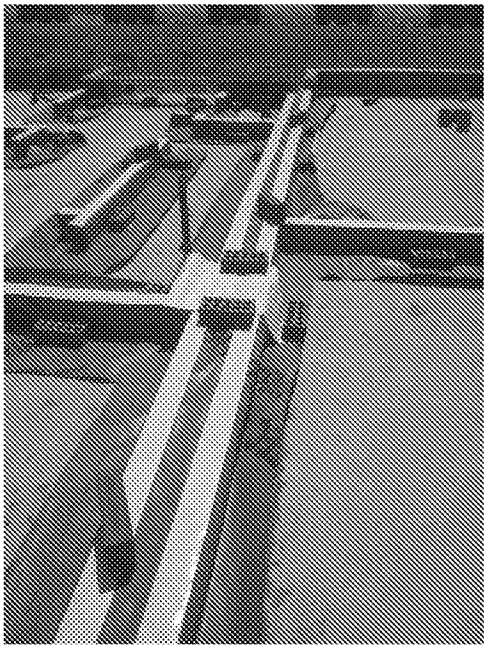
	Plot 5 corner
	Plot 5 services

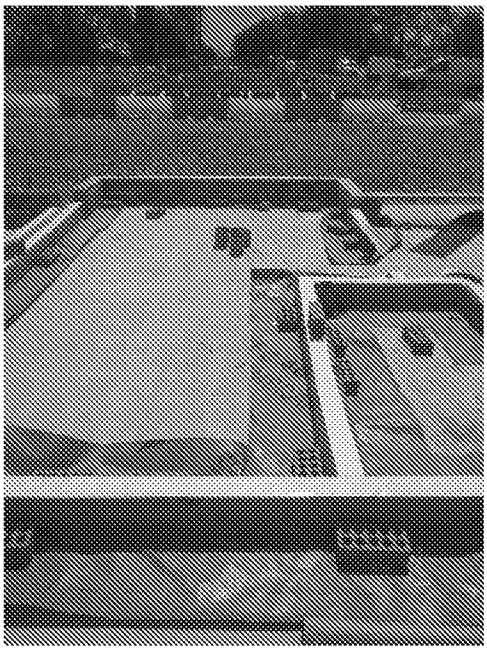
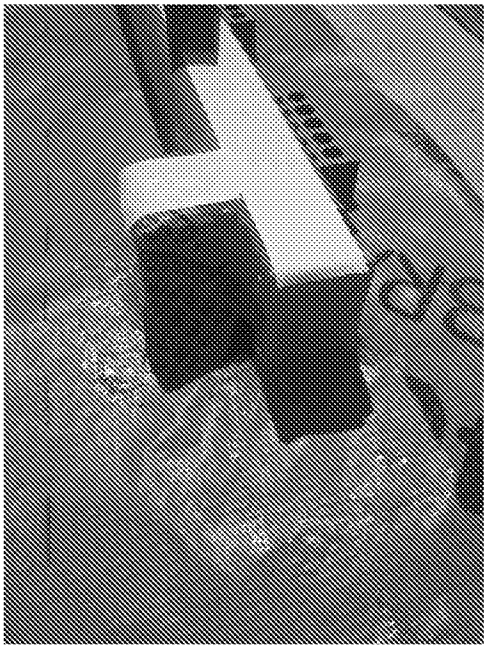
	Plot 4 timber
	Plot 6 doorway
	Plot 6 overview

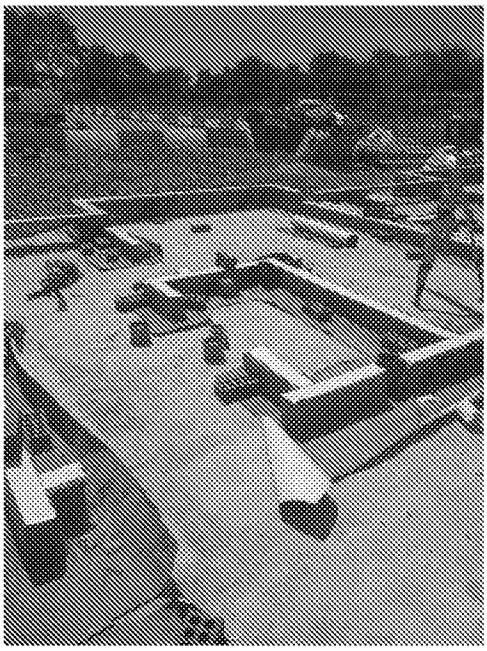
	Plot 6 corner
	Plots 6 and 7

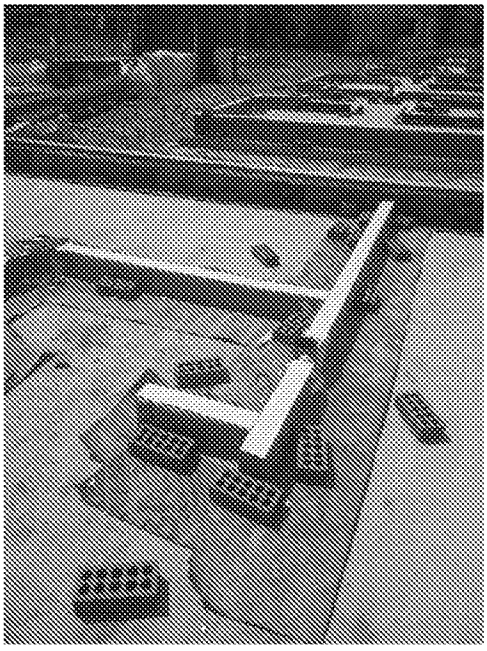
	Plot 7 overview
	Plot 7 cavity

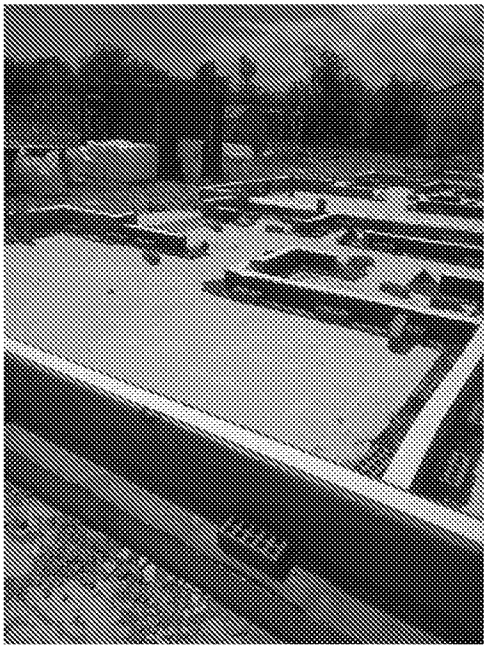
	Plot 7 services
	Plot 8 overview

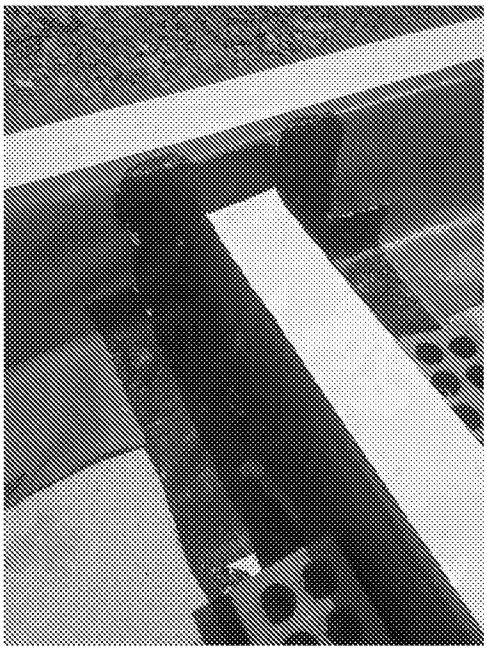
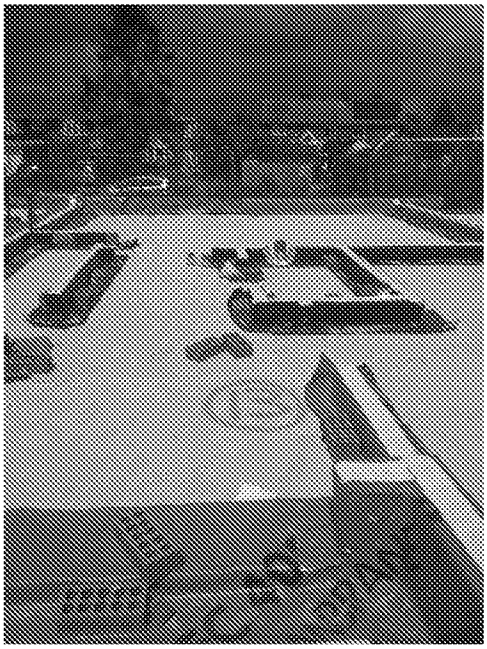
	Plot 8 services
	Plot 8 and 9

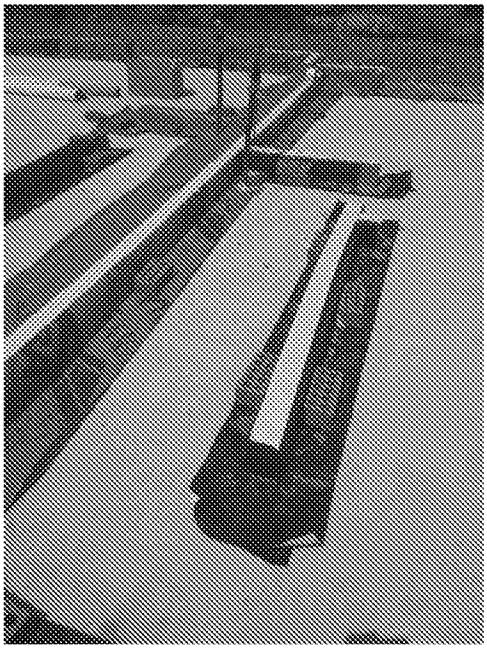
	Plot 9 overview
	Plot 9 corner

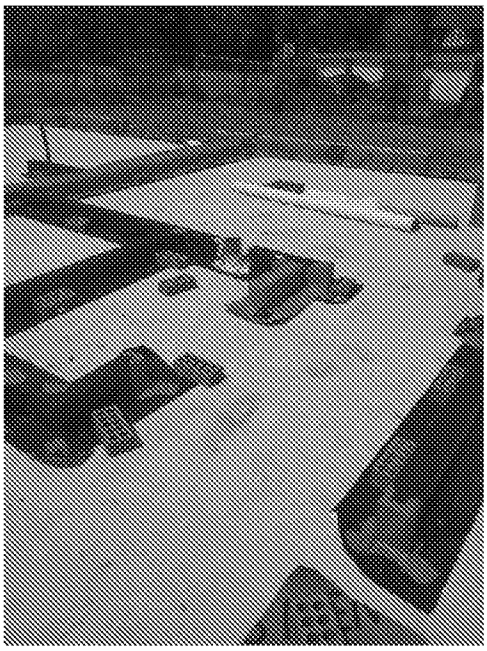
	Plot 10 overview
	Plot 10 wall

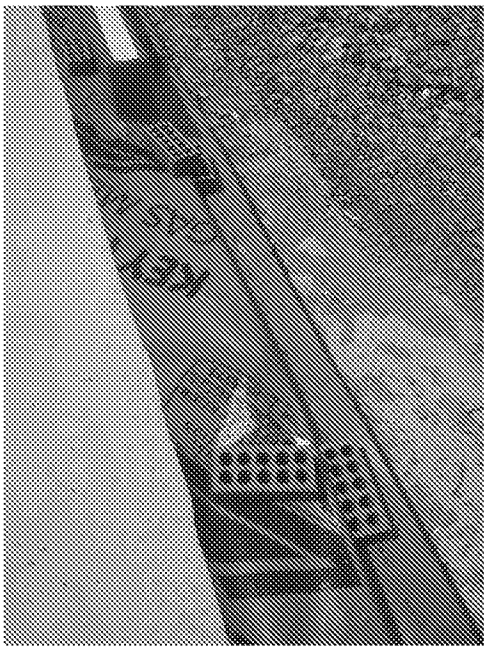
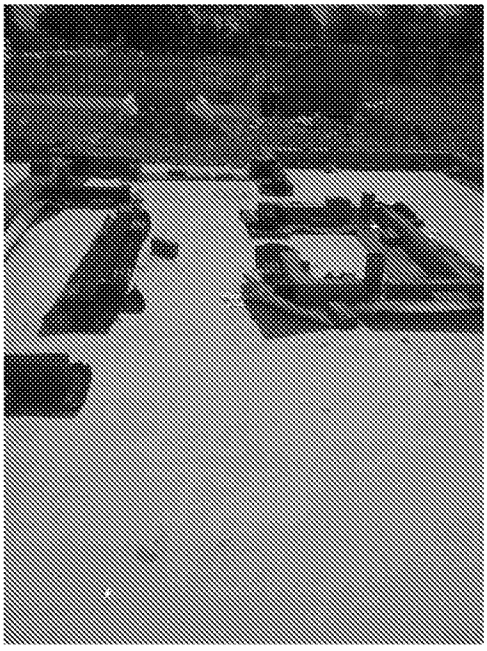
	Plot 10 services
	Plot 11 overview

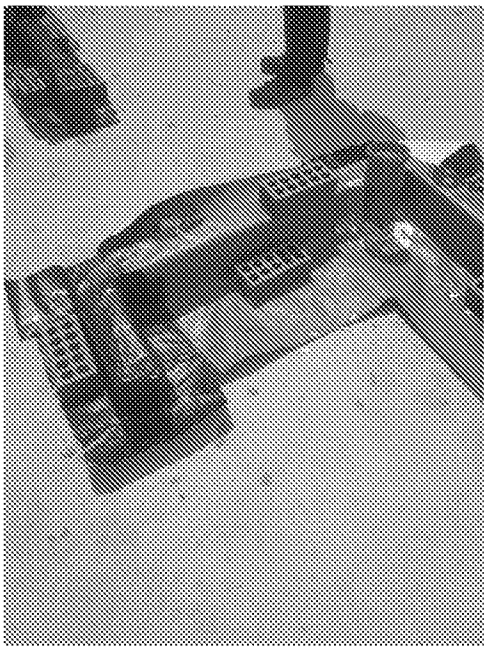
	Plot 11 services
	Plot 12 overview

	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

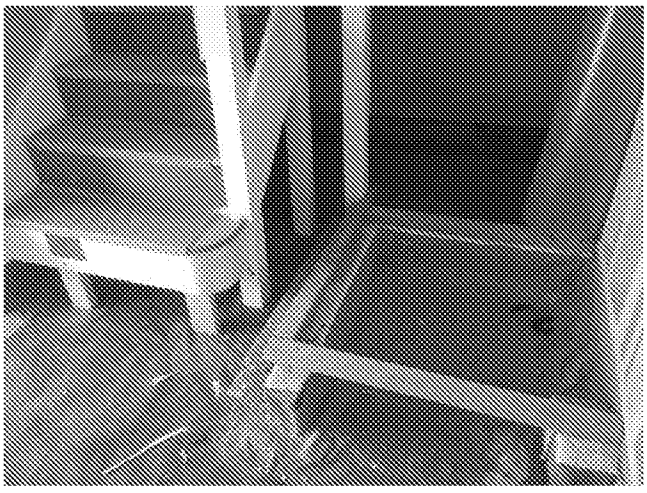
4. PHOTOGRAPHS

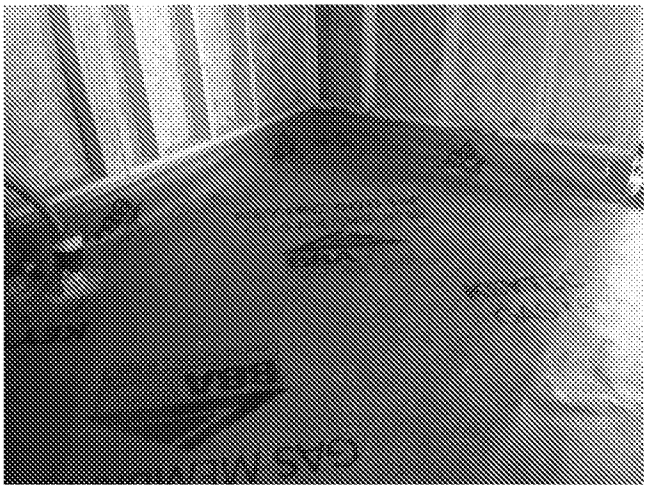
Photographs

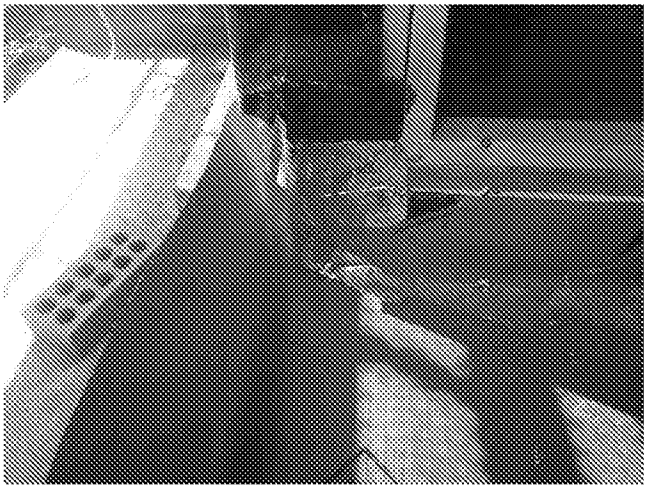
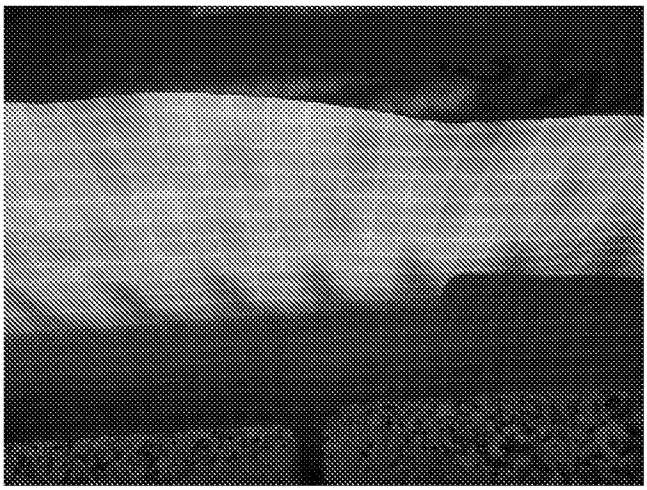
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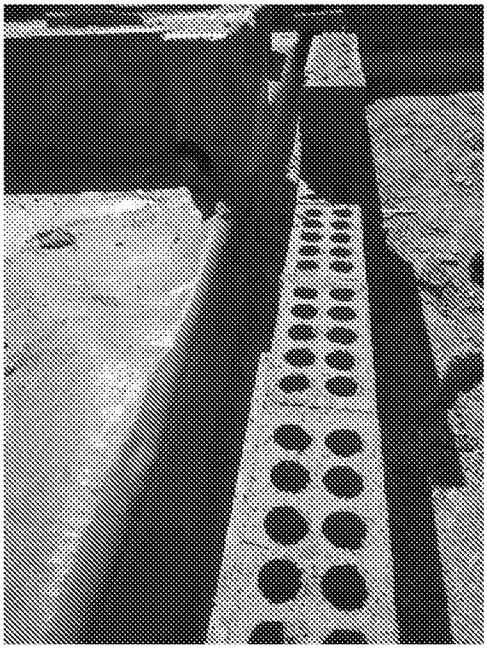
Photograph	*Photograph Title*

	Plot 1 services
	Plot 1steel

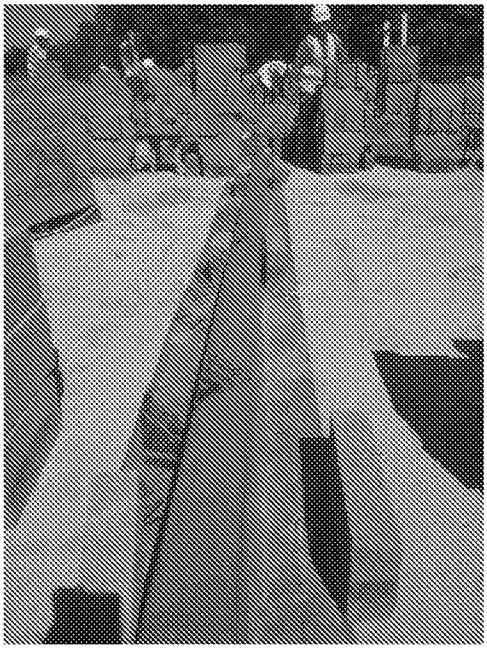
	Plot 1 seals
	Plot door threshold
	Plot 1 stairwell

	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

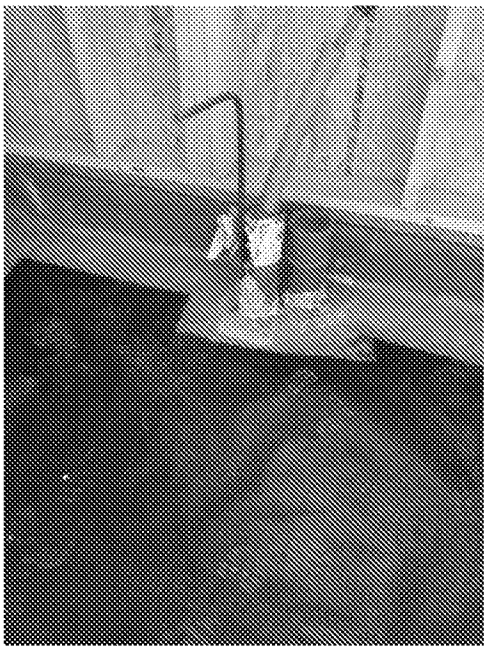
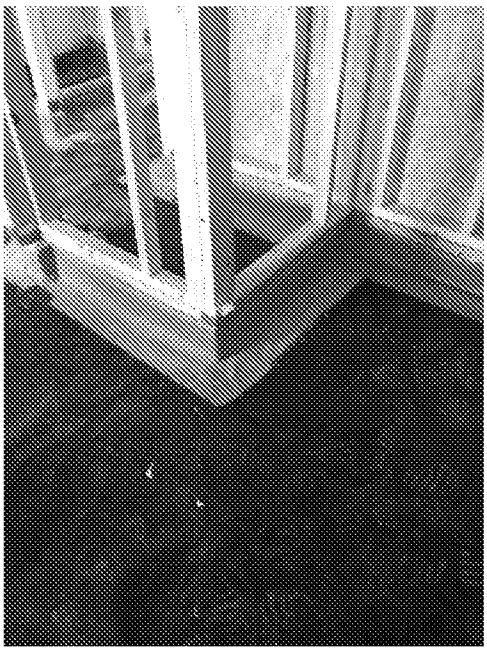
1.1 Condition of sub-grade and underside of membrane	Sub grade and underside of membrane in good condition.
1.2 Gas membrane type	Keytec 400 gas membrane and black unbranded gas membrane.
1.3 Gas membrane condition	Membrane in good condition.
Jointing tape product	Heat welded joints. Tape used for service 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.

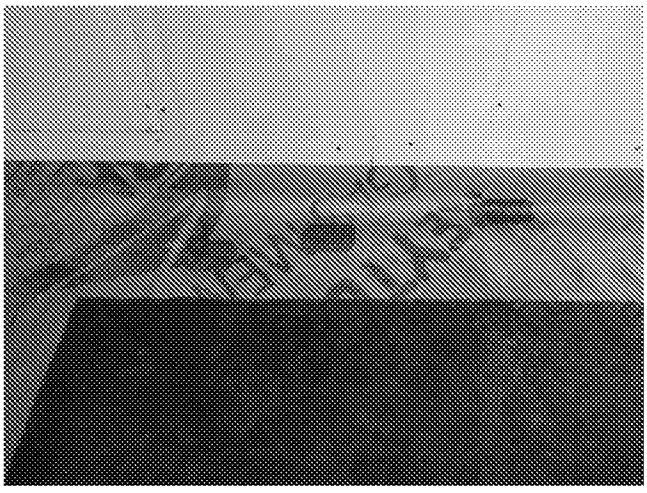
4. PHOTOGRAPHS

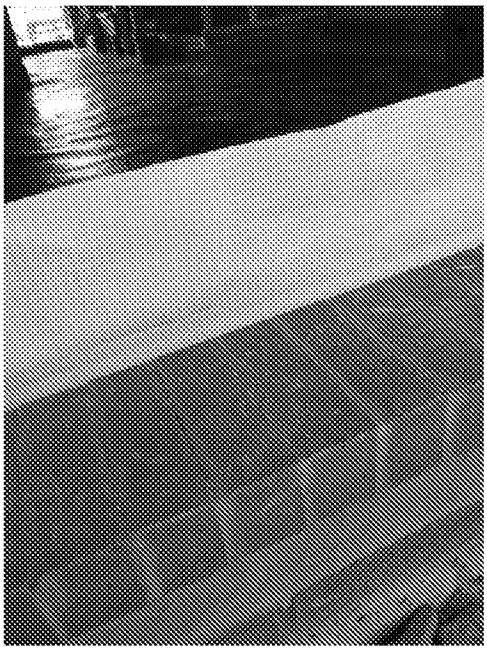
Photographs

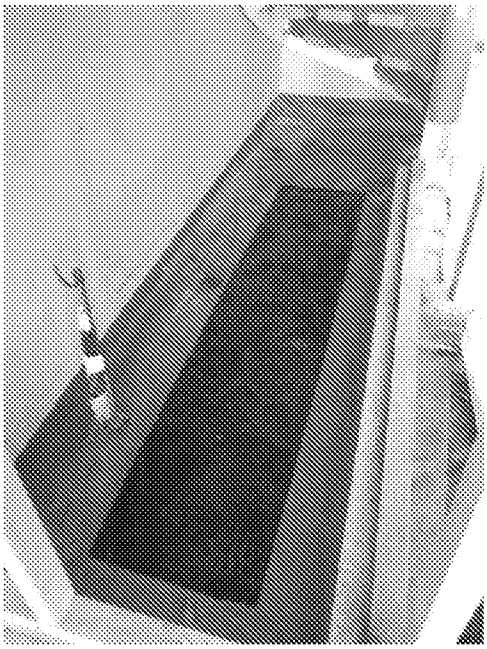
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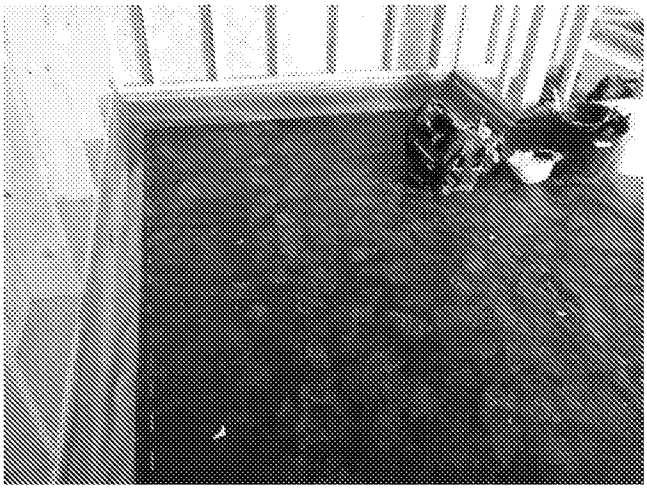
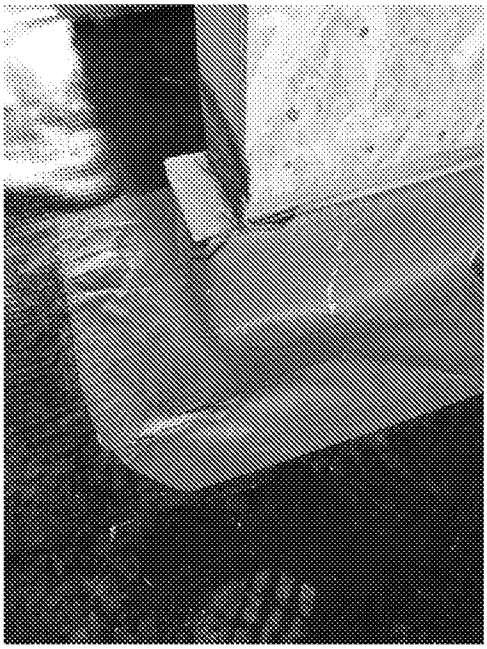
Photograph	*Photograph Title*

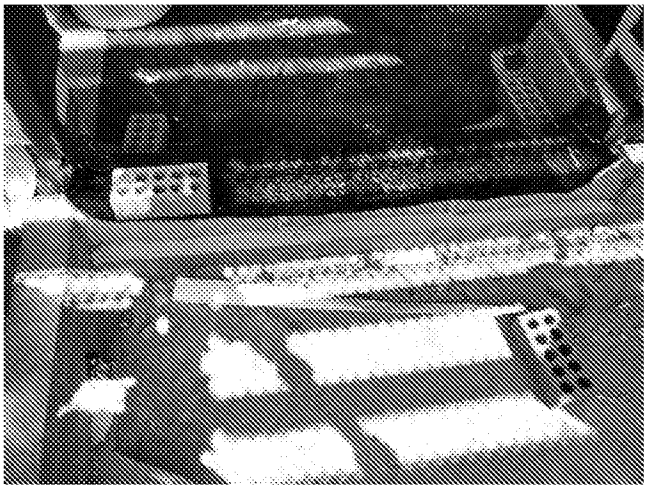
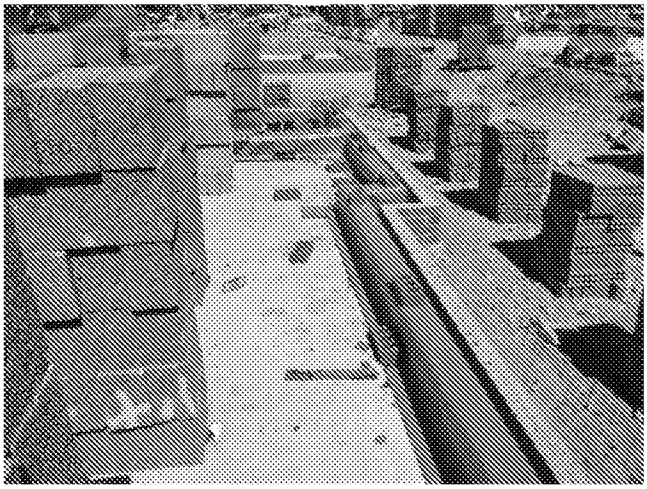
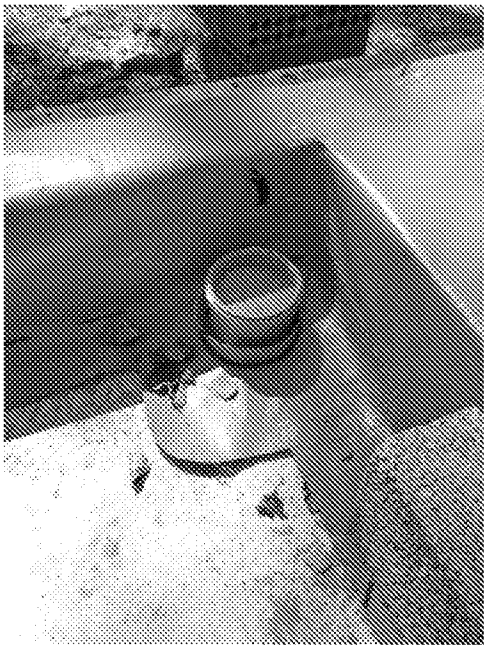
	Plot 4 - service seal
	Plot 4 - join between wall and floor

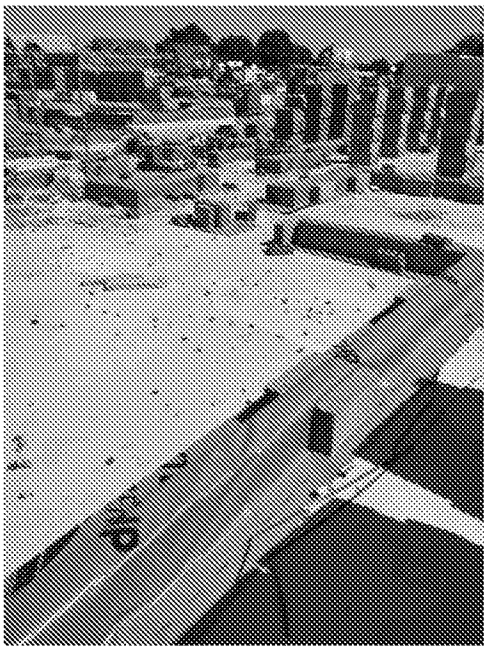
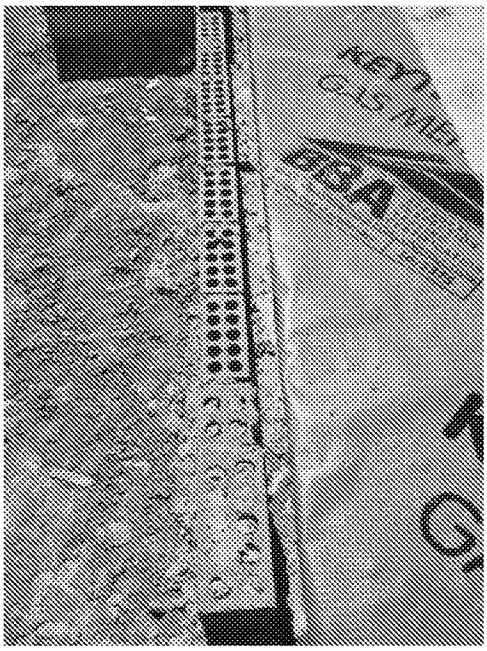
	Plot 4 - Threshold
	Plot 4 - Black putty tape sealant under frame
	Plot 4 - Patching of any holes has already been completed

	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	[redacted]
Fiona Goode	
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

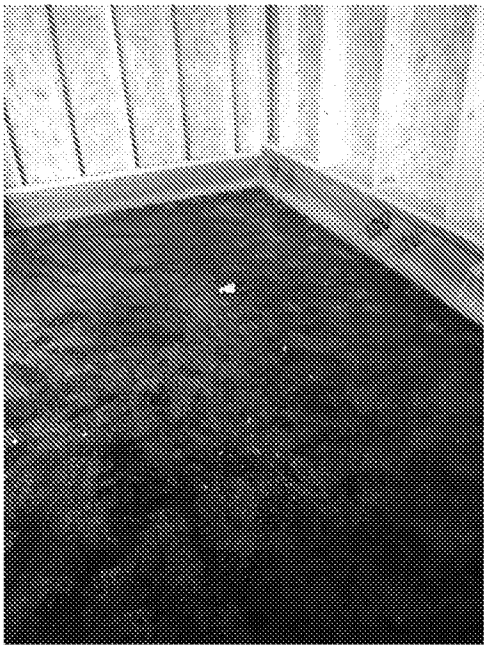
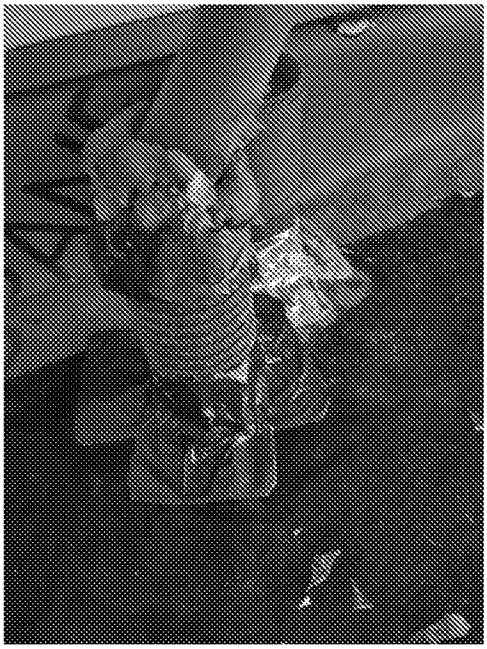
1.1 Condition of sub-grade and underside of membrane	Membrane sealed unable to insect
1.2 Gas membrane type	Juta gas resistant membrane- black
1.3 Gas membrane condition	Membrane is in good condition with some dust and evidence of footfall
Jointing tape product	Double sided tape on service seals all 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

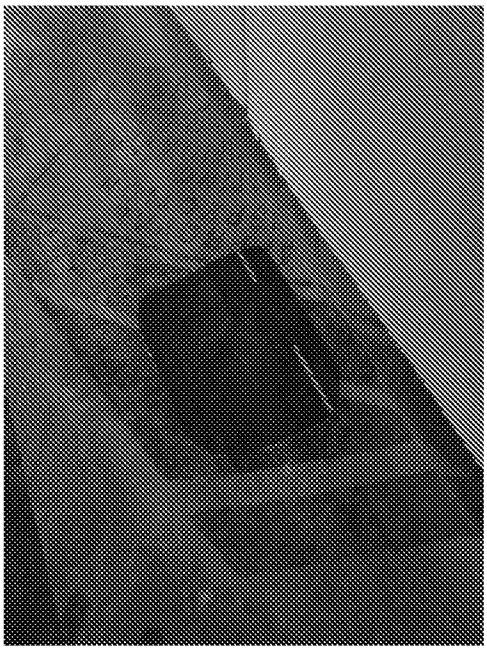
4. PHOTOGRAPHS

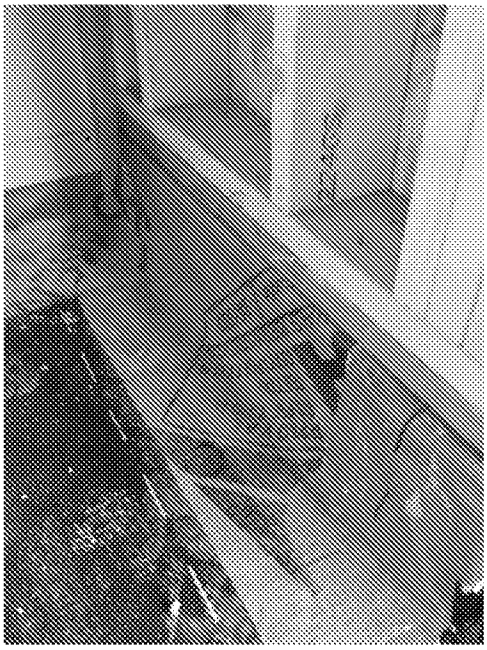
Photographs

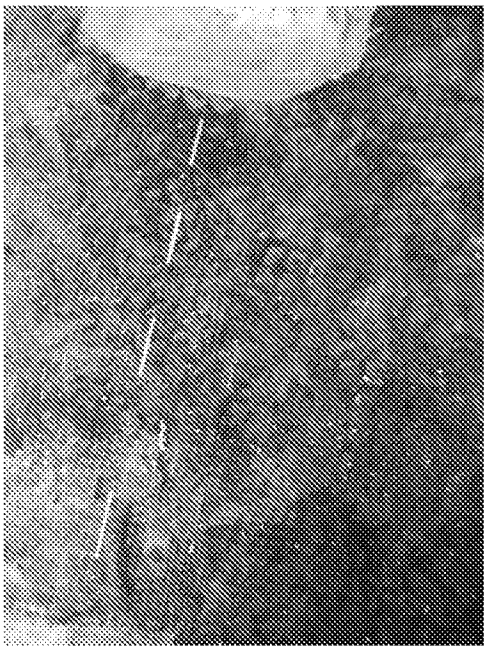
(9 records)

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

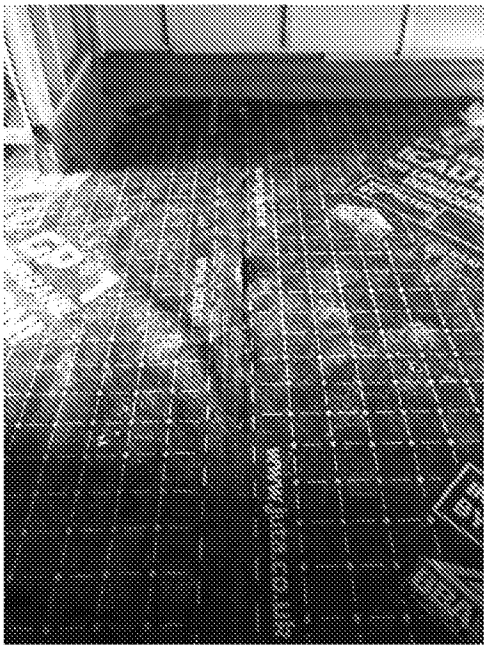
Photographs

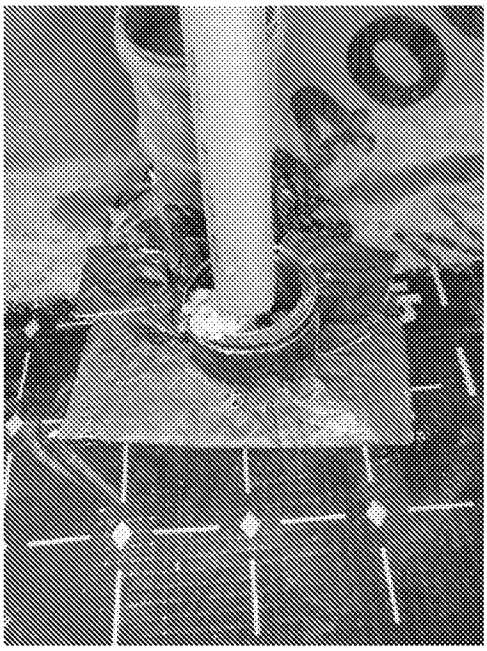
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Photograph	*Photograph Title*

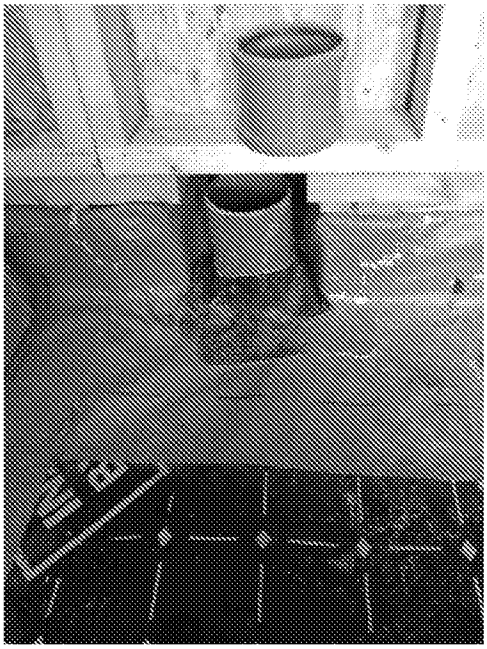
	Plot 8 overview
	Plot 8 under stairs

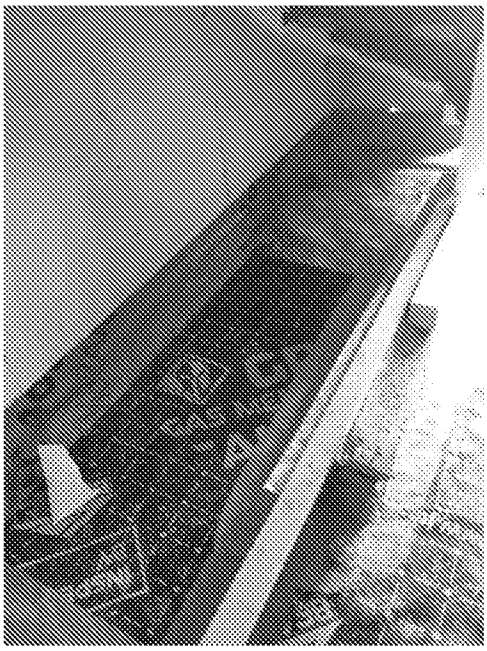
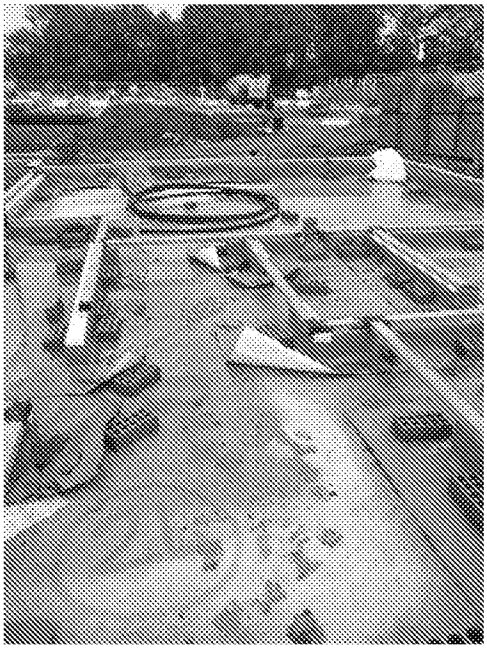
	Plot 8 patch repair
	Membrane type

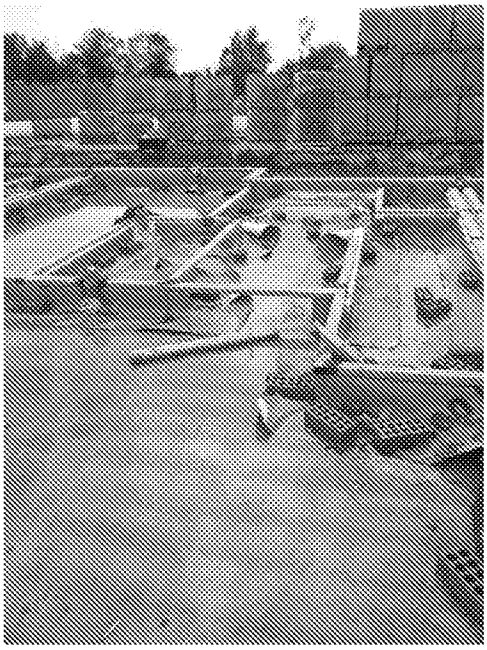
	Plot 8 join
	Plot 9 overview

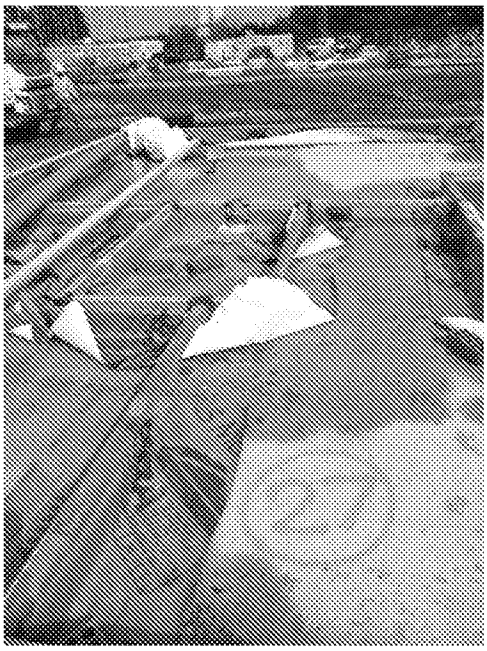
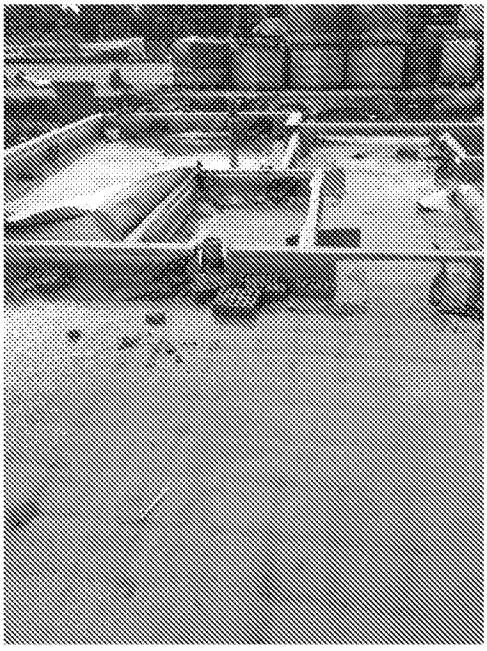
	Plot 9 service seal
	Plot 9 patch repair

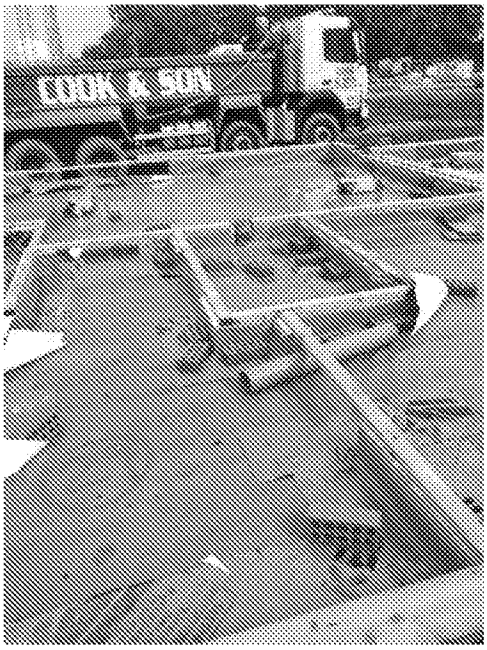
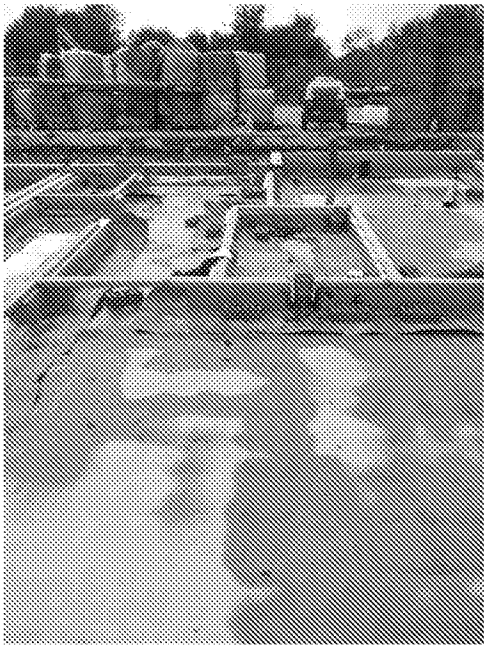
	Plot 9 floor
	Plot 10 overview

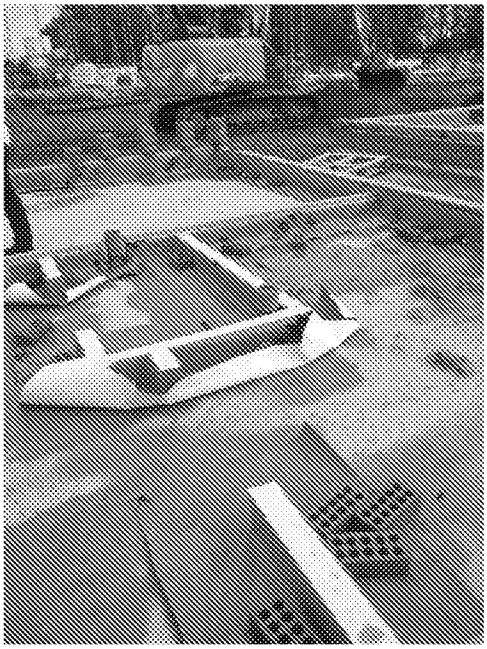
	Pot 10 membrane joins
	Plot 10 services

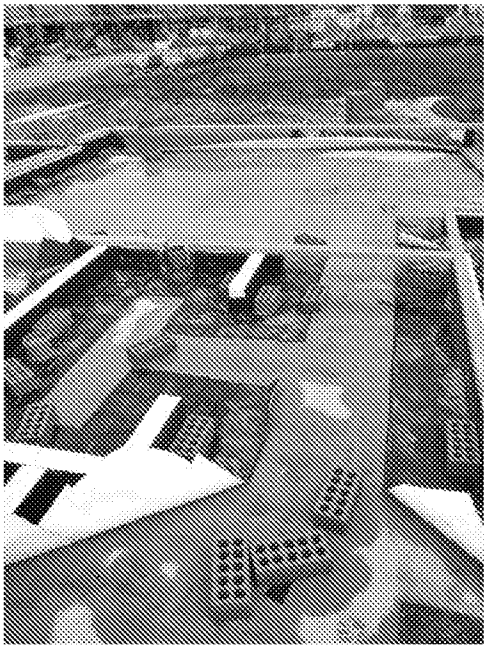
	Plot 10 under stairs
	Plot 24 reinspection

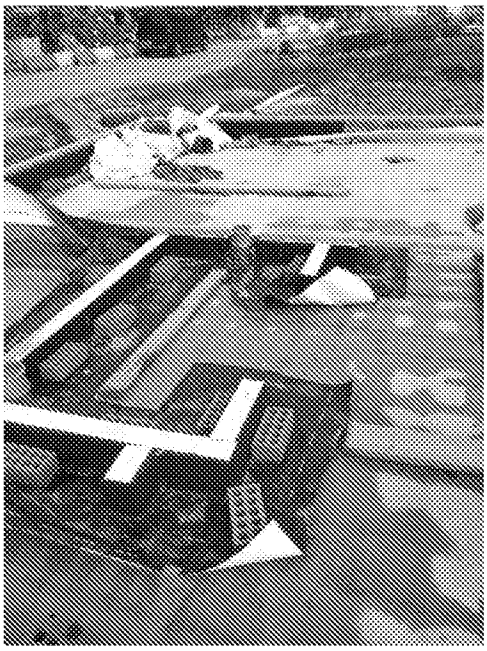
	Plot 25 reinspection
	Plot 26 service

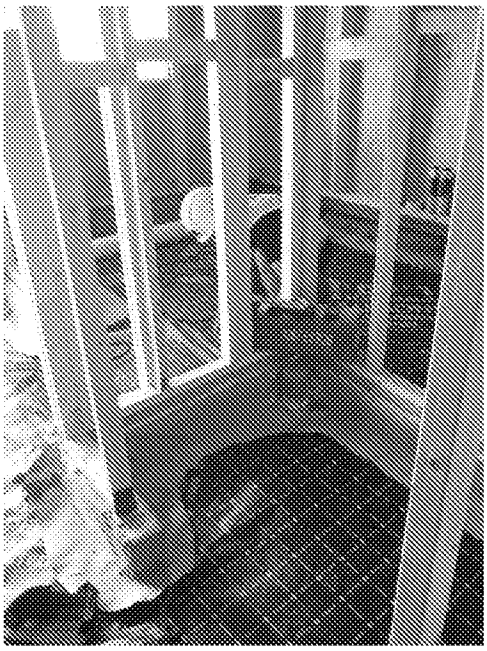
	Plot 27
	Plot 28

	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.

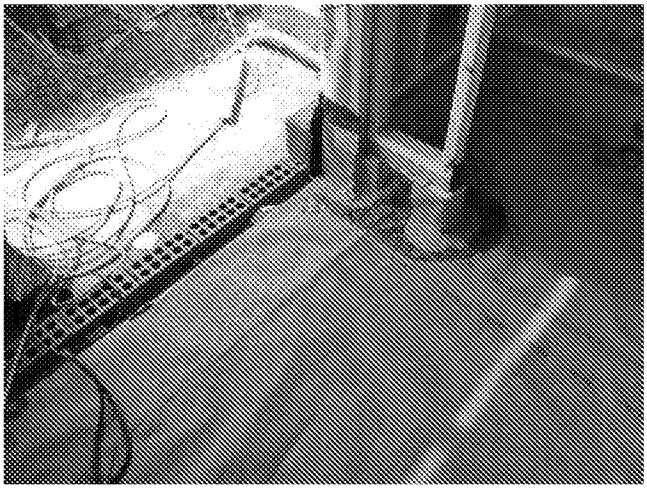
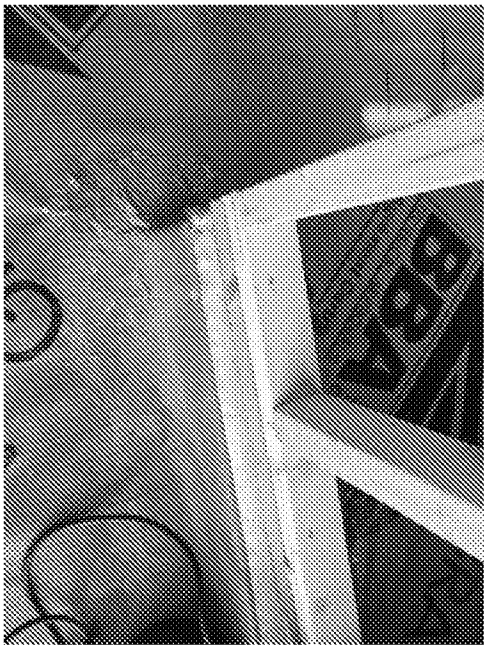
4. PHOTOGRAPHS

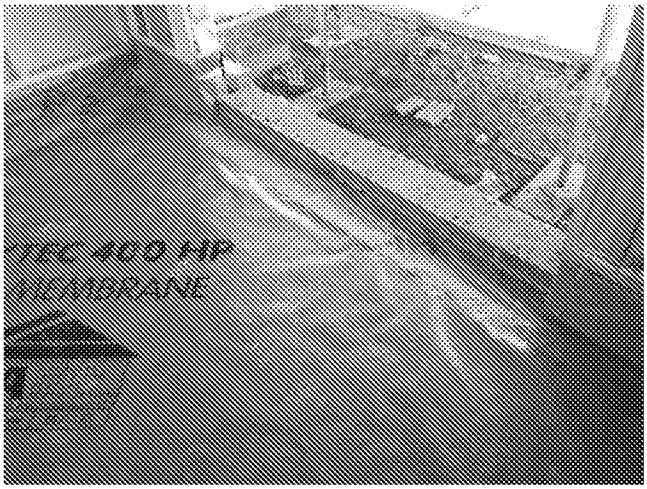
Photographs

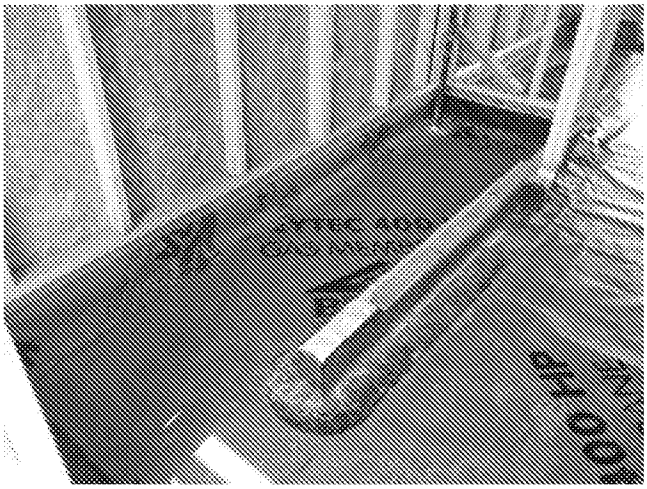
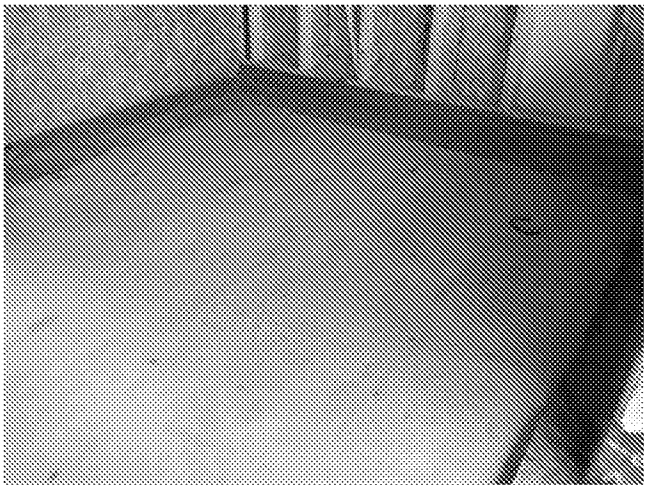
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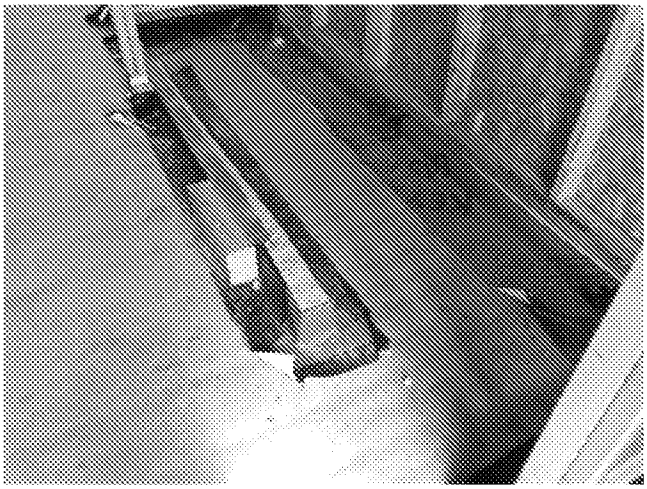
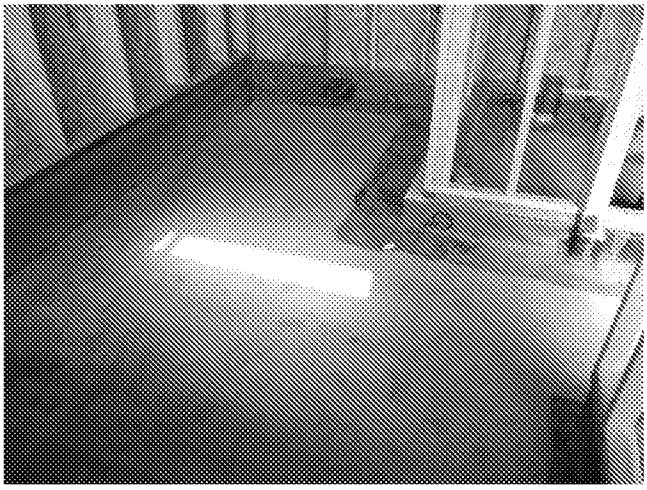
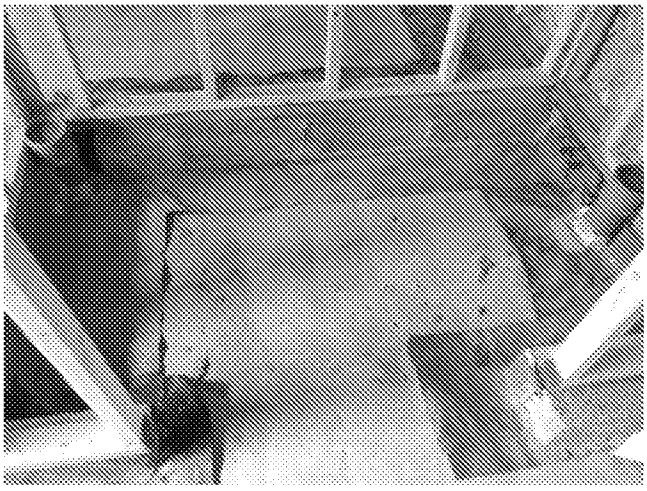
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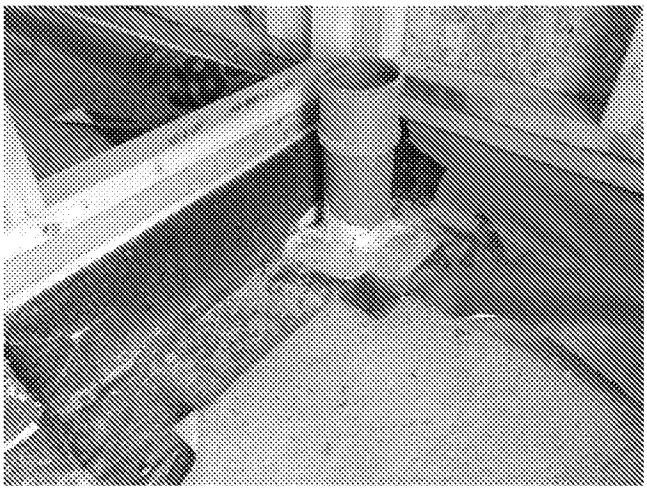
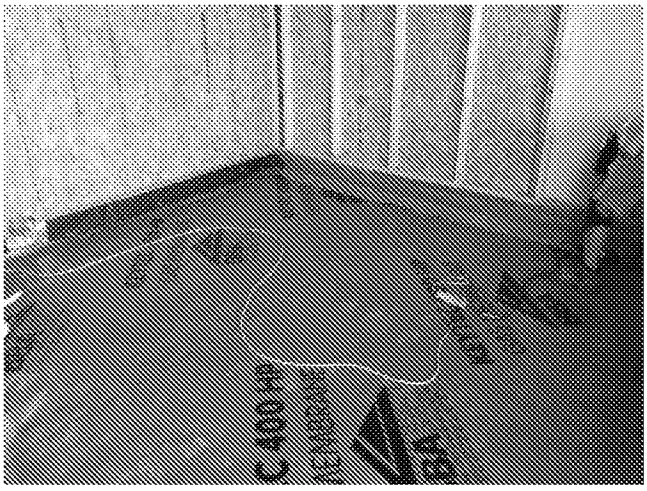
	Plot 12 - View across floor
	Plot 12 - service seal
	Plot 12 - Holes have been patched

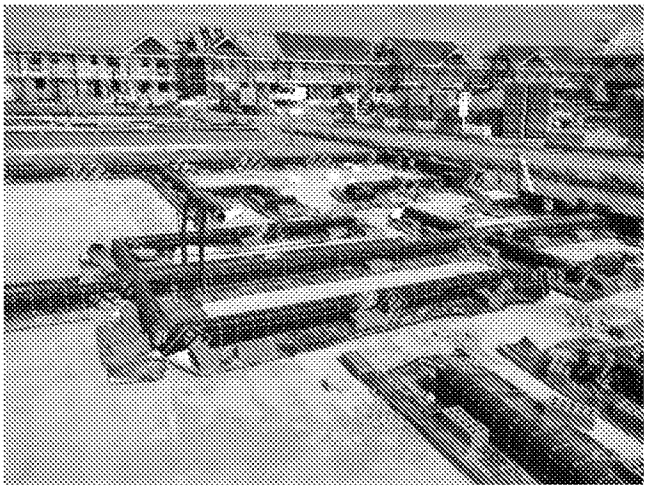
	Plot 12 - Threshold
	Plot 13 - Threshold
	Plot 13 - Corner detail

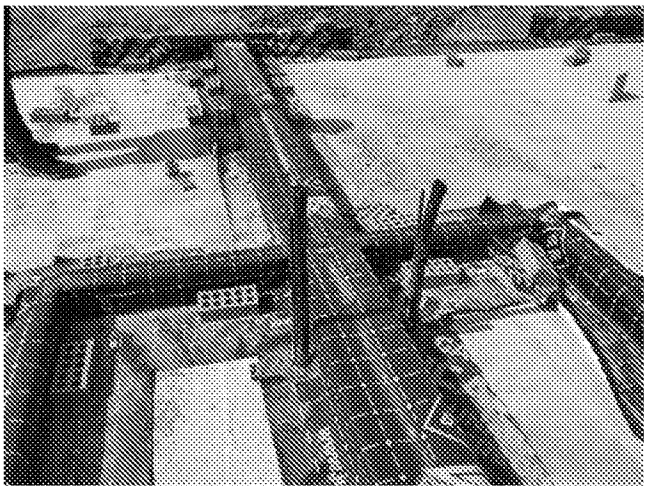
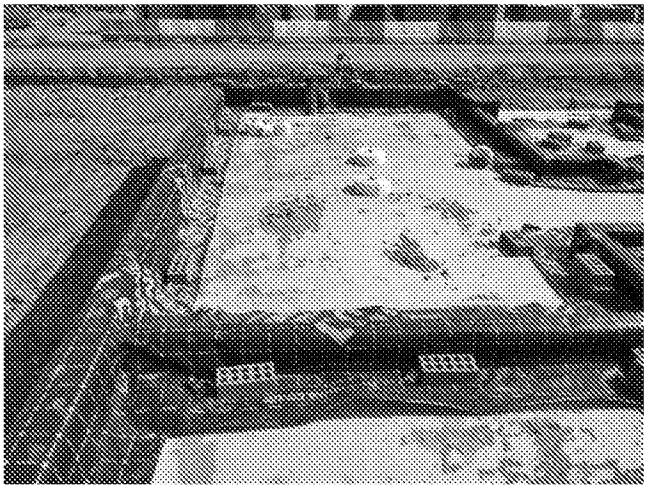
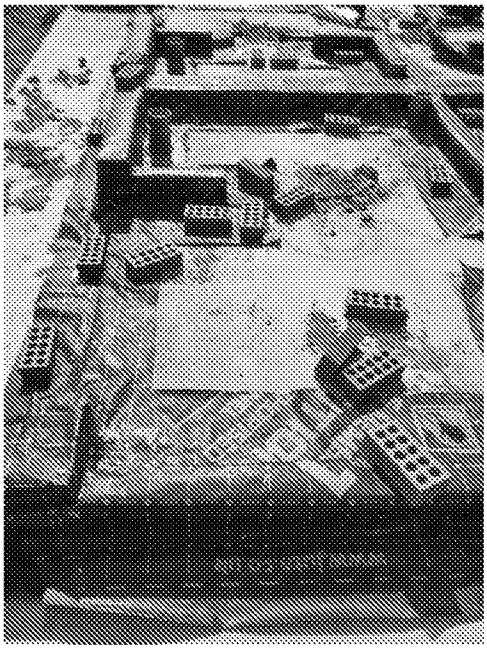
	Plot 13 - Floor
	Plot 13 - Floor and service seal
	Plot 13 - Threshold

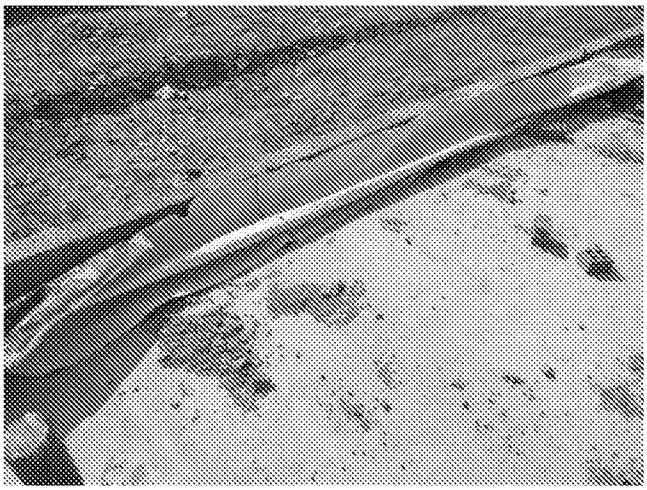
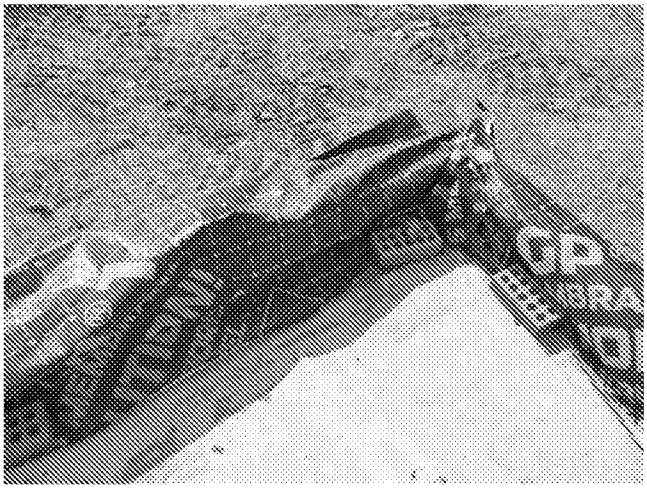
	Plot 13 - Patching
	Plot 13 - Under stairs
	Plot 15 - In progress

	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

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	13/07/2020, 13:37
Site Engineer	
Katie O'Dea	[redacted]
Weather at time of inspection	Warm, sunny, light breeze
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential houses.
Plot No.	22-27, 36-43
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 membrane slightly dusty but in good condition.
1.2 Gas membrane type	Keytec 400 Gas Membrane
1.3 Gas membrane condition	Gas membrane in good condition with no visible damage.
Jointing tape product	Butyl tape to seal screw holes.
1.5 Lapping design	Min 150mm overlap.
1.6 Laps, welds and joints seals	All heated welds in good condition with no gaps.
1.7 Service seals	Bespoke seals using butyl tape. Some services had been marked with a road pin which needs to be cut out and sealed.

Engineer's Prelim Assessment (Mem)

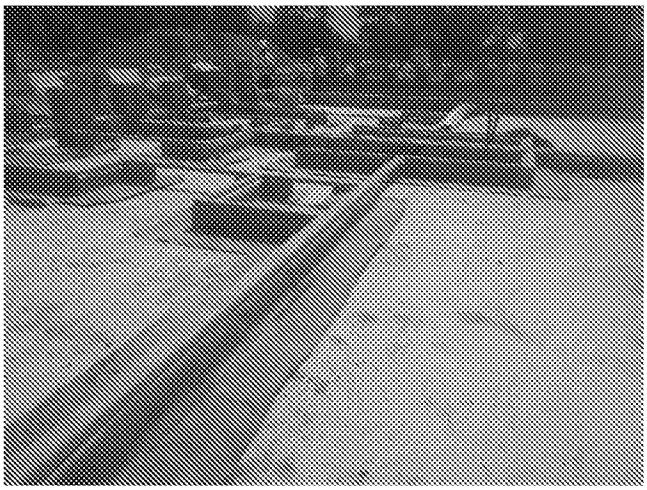
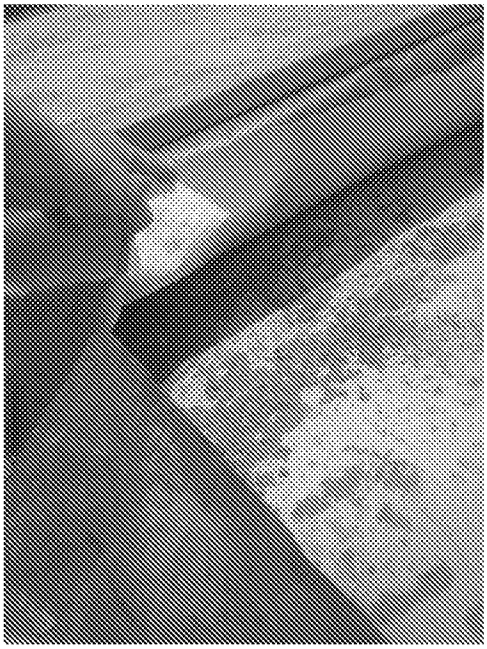
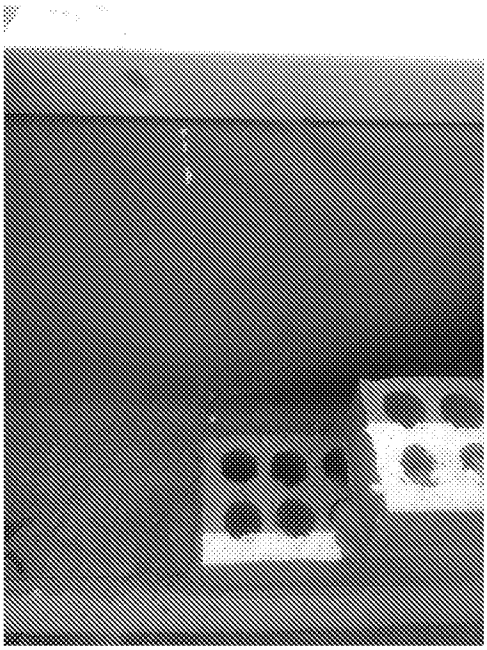
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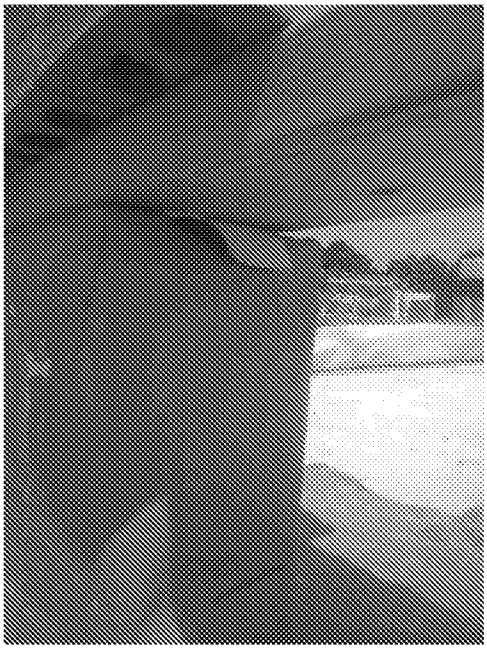
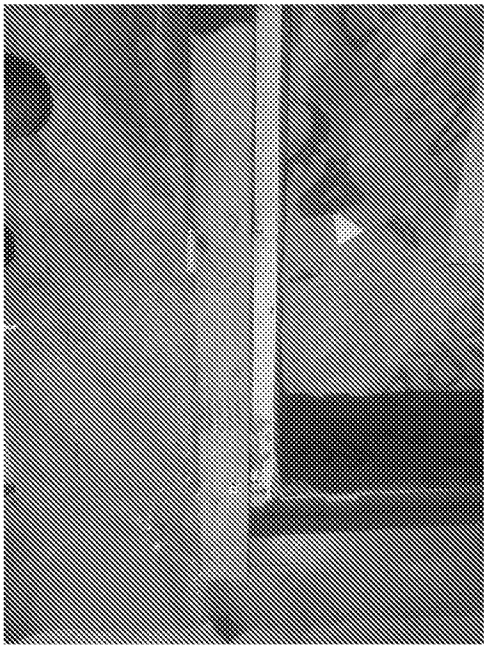
4. PHOTOGRAPHS

Photographs

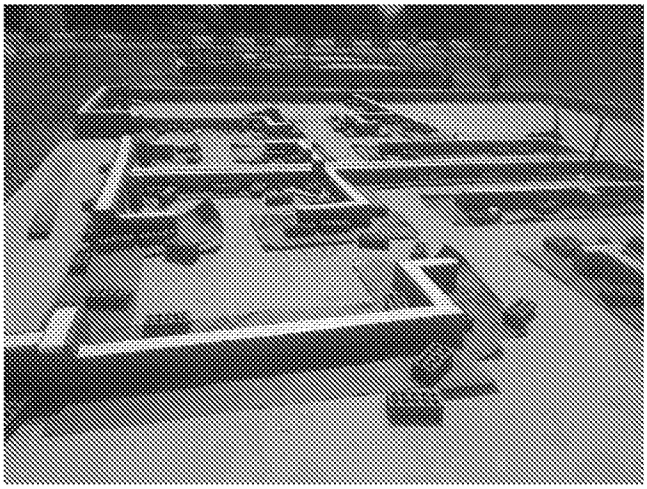
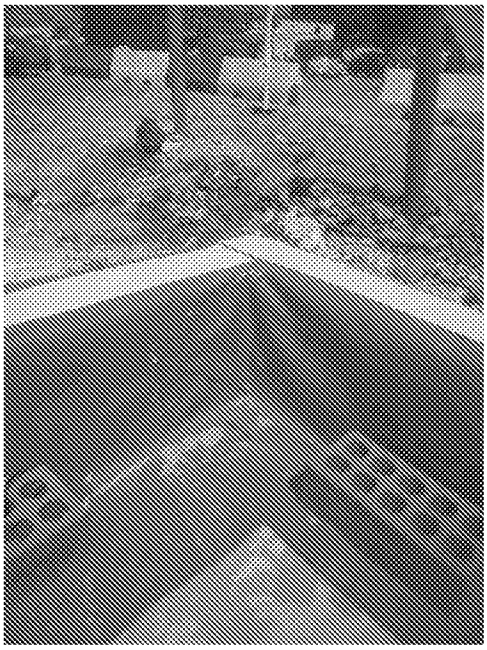
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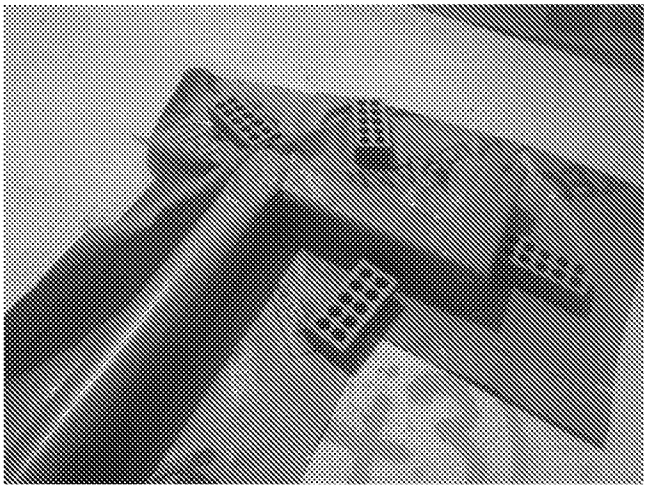
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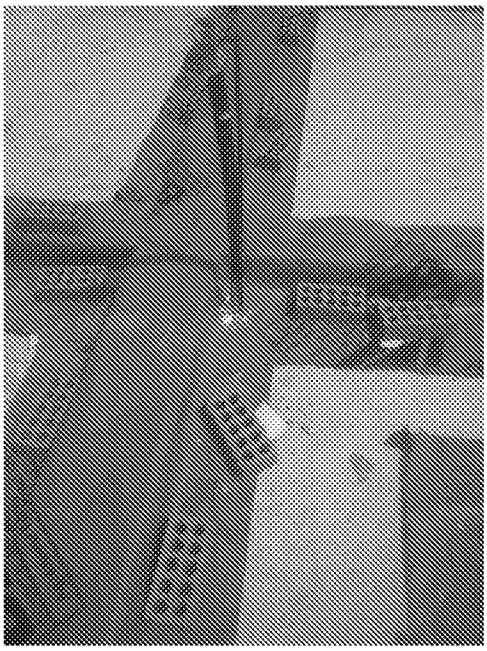
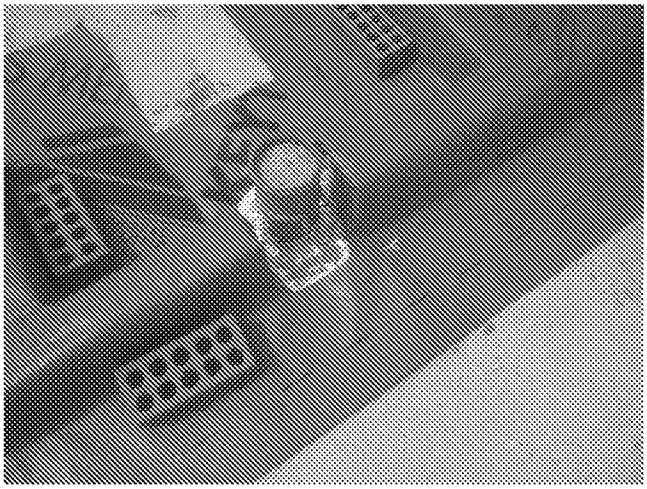
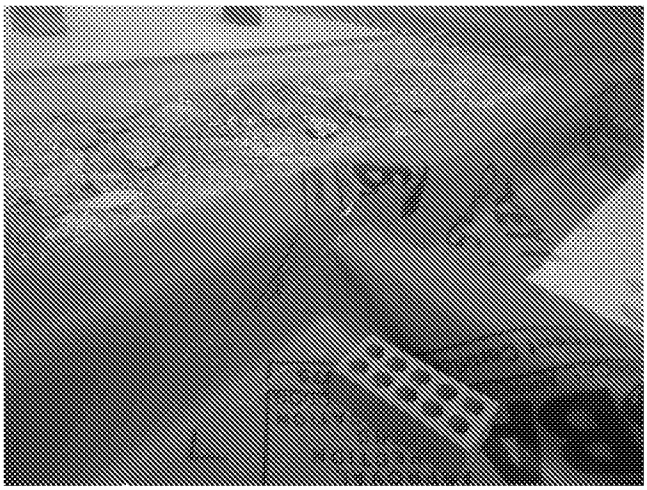
	Plots 36-37. View across plots.
	Plots 36-37. Example of underside of membrane.
	Plots 38-39. Example of weld.

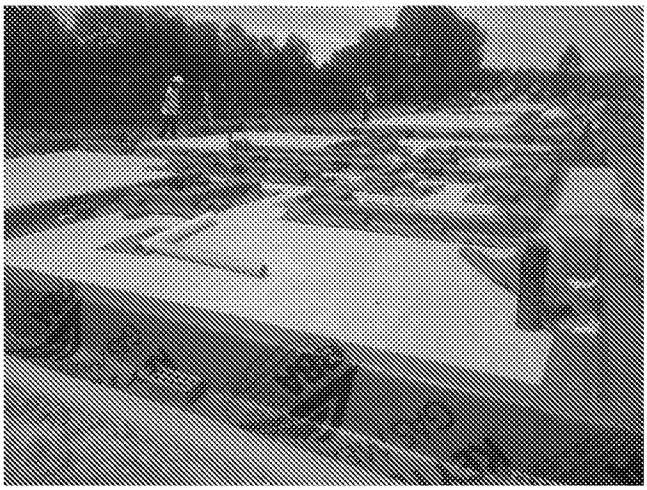
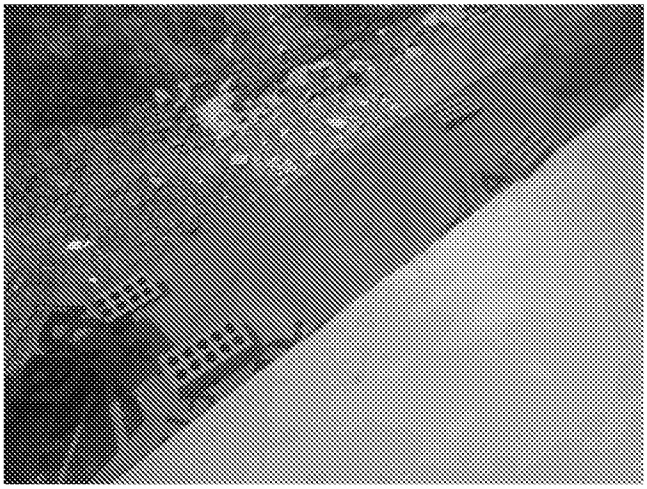
	Plots 38-39. Underside of wooden frame with butyl tape for sealing screws.
	Plots 38-39. Example of butyl tape under wooden frame.

	Plots 38-39. Service seal using foil backed butyl tape.
	Plots 38-39. Service seal using butyl tape.

	Plot 40-41. Servicing seal.
	Plots 40-41. View across Plots showing butyl tape laid out for fixture of wooden frame.
	Plots 40-41. Corner detail.

	Plots 42-43. View across plots.
	Plots 42-43. Corner detail.
	Plots 24-27. View across plots.

	Plots 24-27. Service seal. Road pin will be cut out.
	Plots 24-27. Service seal.
	Plots 24-27. Corner detail.

	Plots 22-23. View across plots.
	Plots 22-23. Threshold detail.
	Plots 22-23. Lapping over external wall.

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	05/08/2020, 15:35
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Sunny, hot, breezy little cloud
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Flats and semi detached houses
Plot No.	Block B plots 66-77 (lift pit) and Plots 22 and 23
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 see under side as sealed on lift pit. Underside of membrane on perimeter of Plots 22 and 23 in good condition
1.2 Gas membrane type	Keytec 400 gas resistant membrane
1.3 Gas membrane condition	Membrane in good condition
Jointing tape product	Heat sealed joins
1.5 Lapping design	150mm lap
1.6 Laps, welds and joints seals	All joins are heat sealed and well sealed around block work
1.7 Service seals	No services in lift pit. Services in plots 22 and 23 sealed with site formed taped seals. All well sealed

Engineer's Prelim Assessment (Mem)

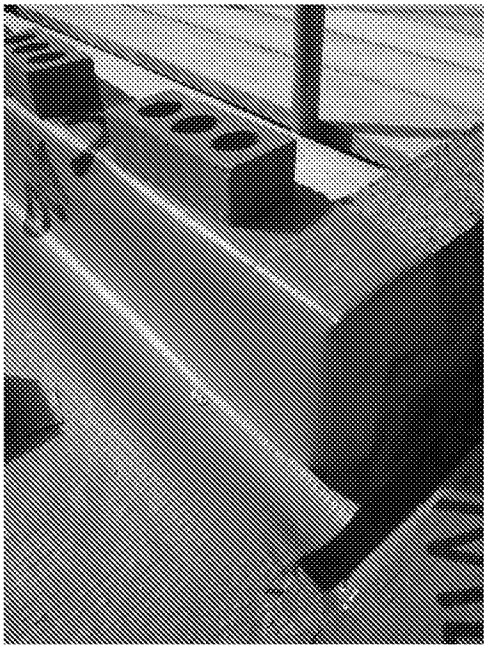
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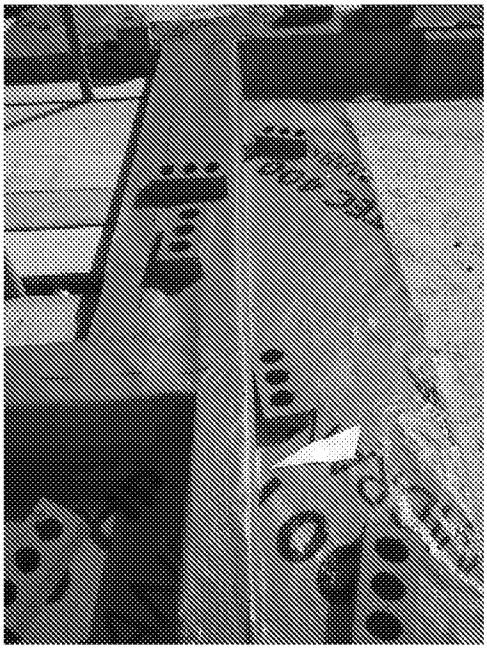
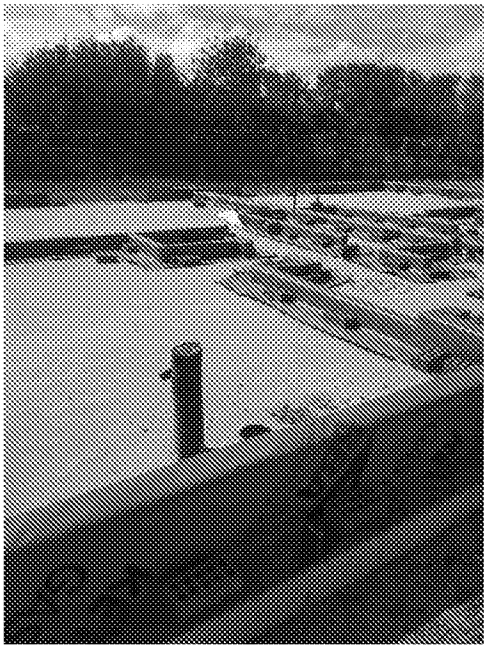
4. PHOTOGRAPHS

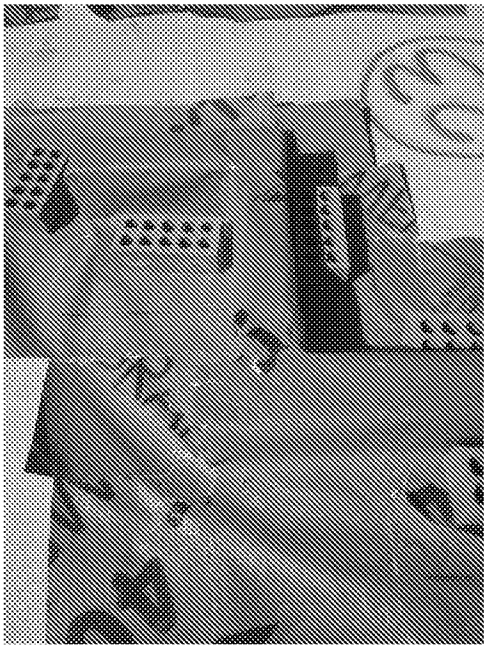
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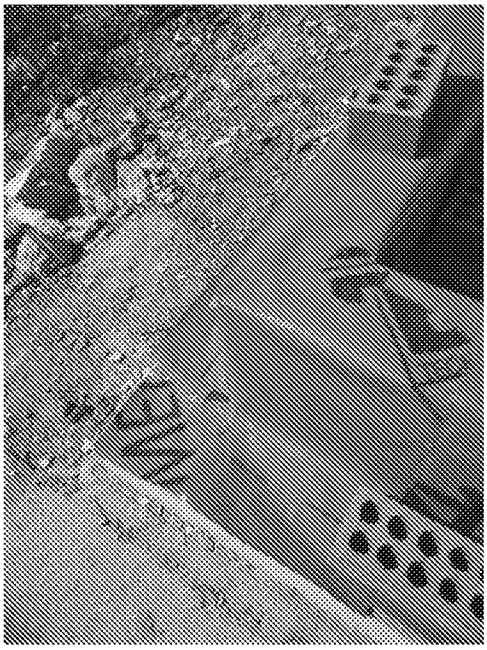
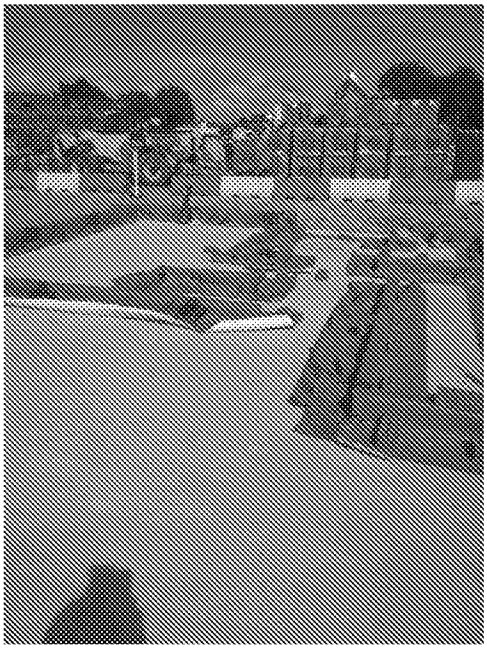
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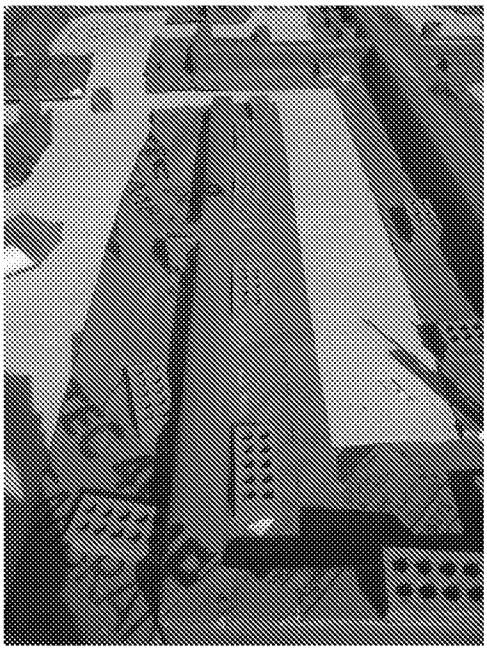
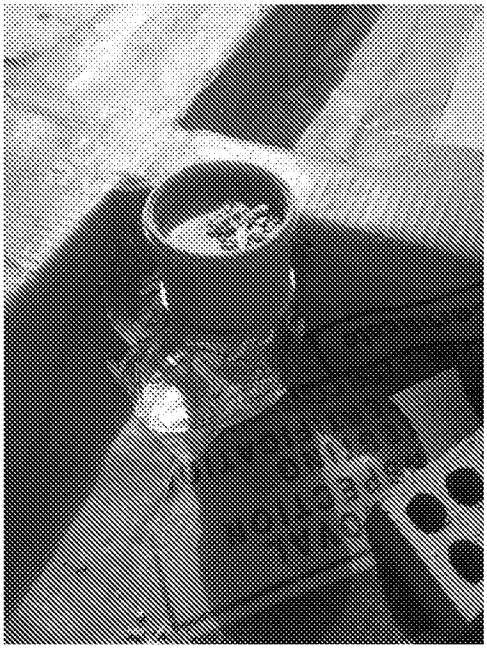
Photograph	*Photograph Title*

	Block B Overview
	Block B Block work

	Block B Rear of pit
	Plot 23

	Plot 23 services
	Plot 23 corners

	Plot 23 corner
	Plot 22 overview

	Plot 22 walls
	Plot 22 service detail

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	13/08/2020, 13:58
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Overcast, humid, slightly breezy, warm
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Blocks of terraced housing
Plot No.	Plots 24-33 (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	Underside in good condition
1.2 Gas membrane type	Keytech 400 gas resistant membrane- red
1.3 Gas membrane condition	Membrane in good condition some dust and mortar in places
Jointing tape product	Double sided tape on service seals all other joins heat sealed
1.5 Lapping design	150mm
1.6 Laps, welds and joints seals	Some seals came apart when pulled there are specific areas where remediation works are needed.
1.7 Service seals	Site formed seals with double sided tape

Engineer's Prelim Assessment (Mem)

Remedial Measures Required

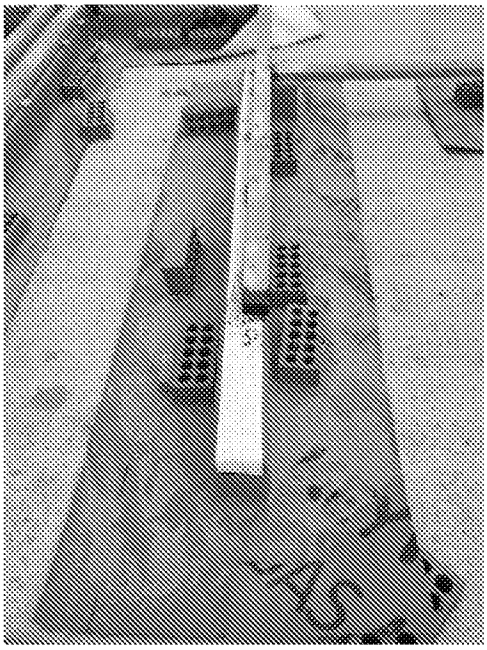
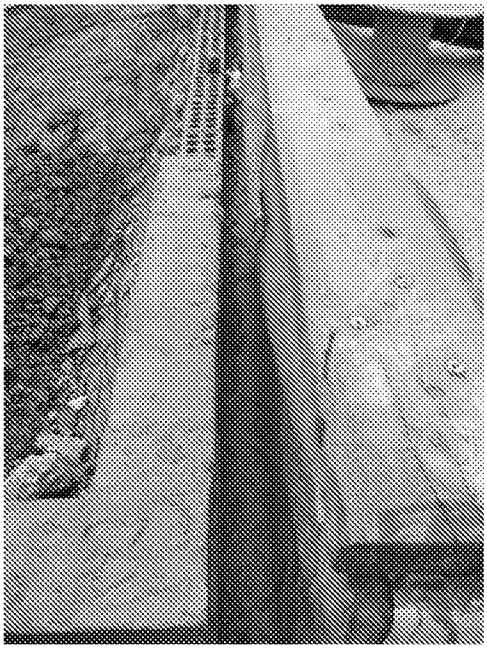
4. PHOTOGRAPHS

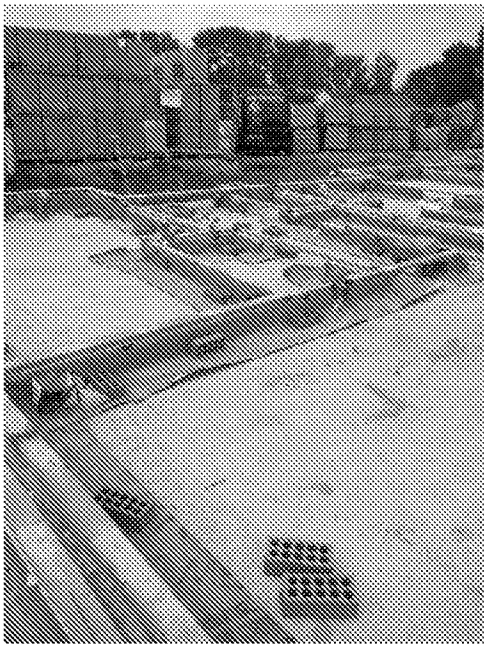
Photographs

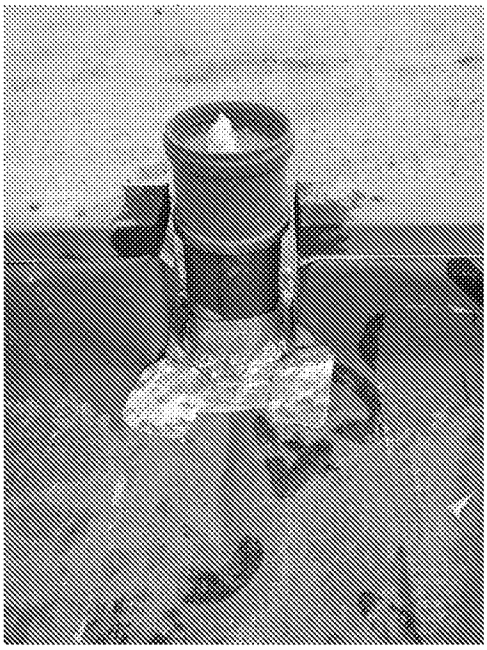
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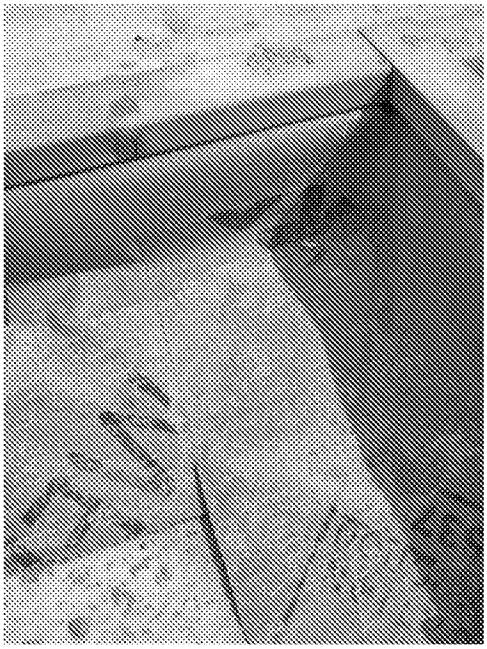
Photograph	*Photograph Title*

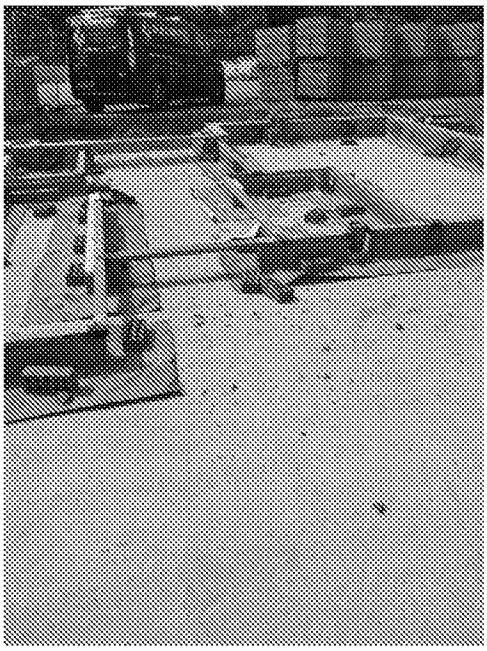
	Plot 24
	Plot 24 services

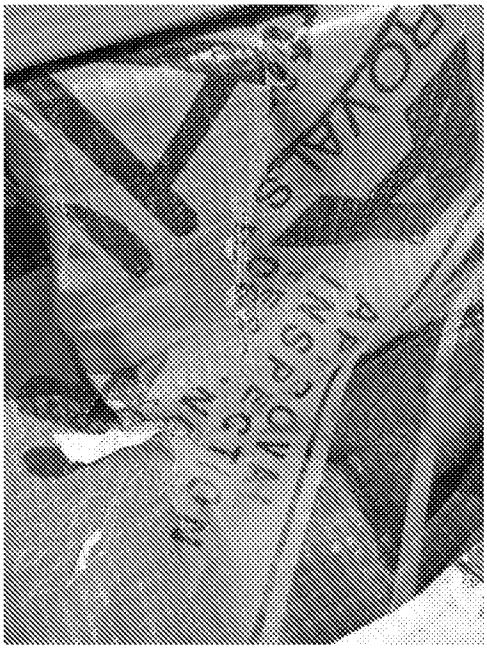
	Plot 24 tape for timber frame
	Plot 24 cavity

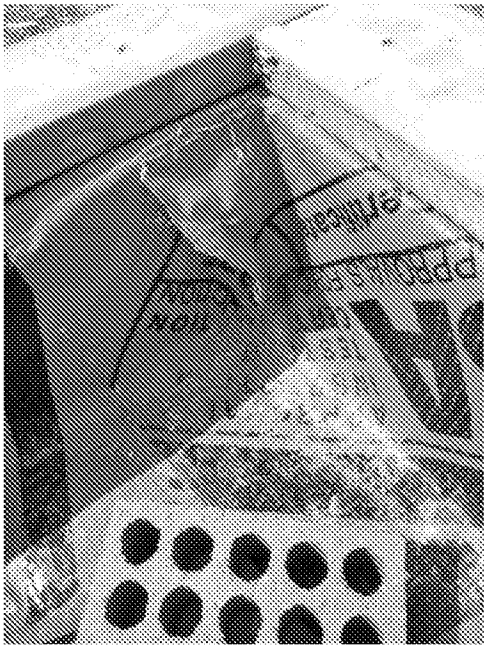
	Plot 25
	Plot 25 threshold

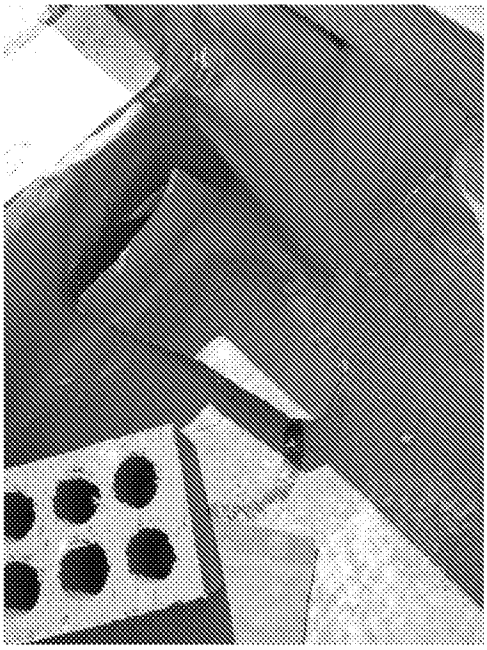
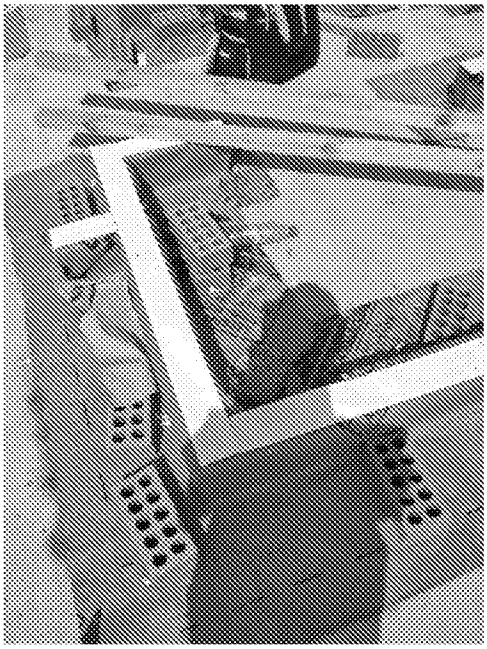
	Plot 25 service
	Plot 26

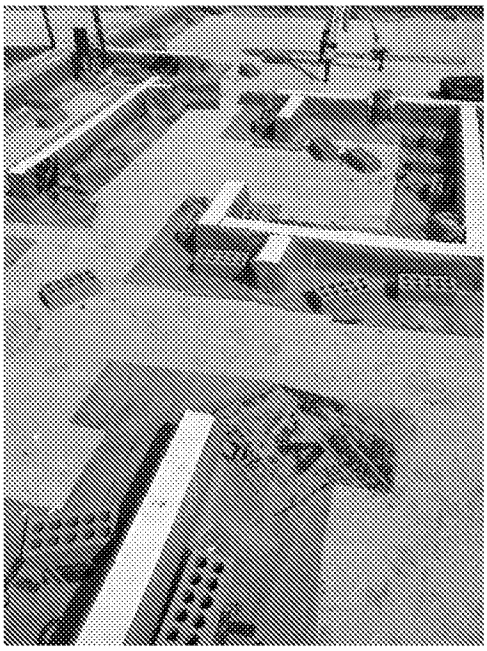
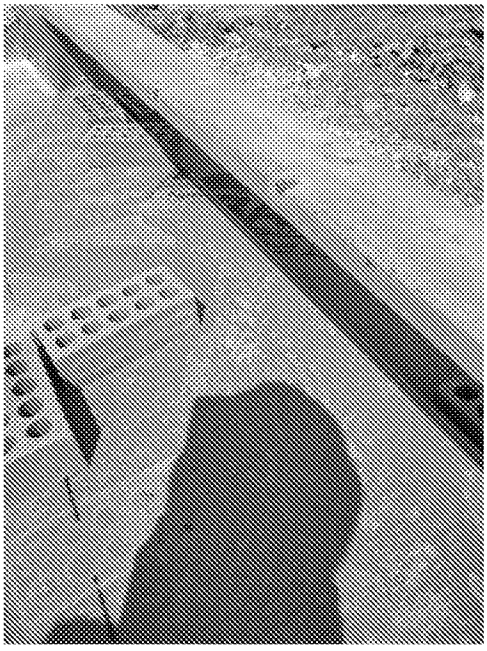
	Plot 26 corner
	Plot 26 lapping

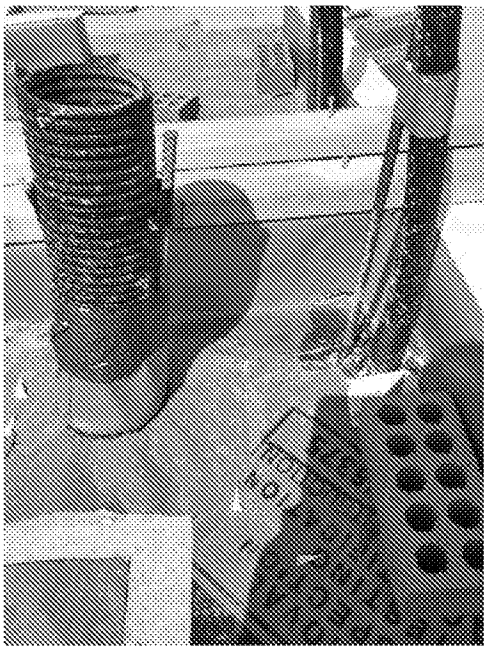
	Plot 27
	Plot 27 service

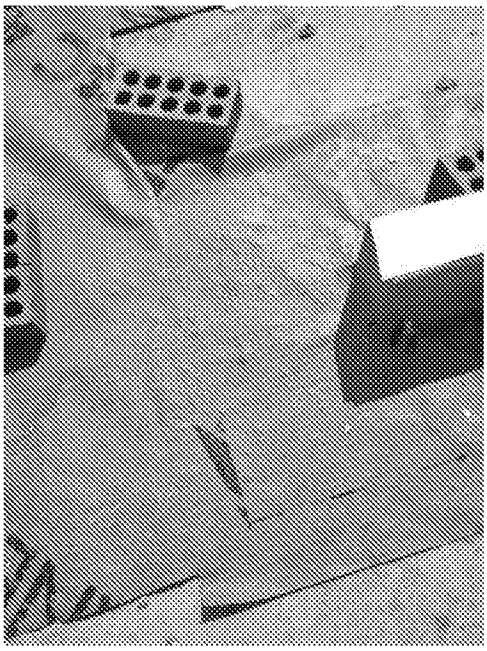
	Plot 27 damage
	Plot 27 corner damage

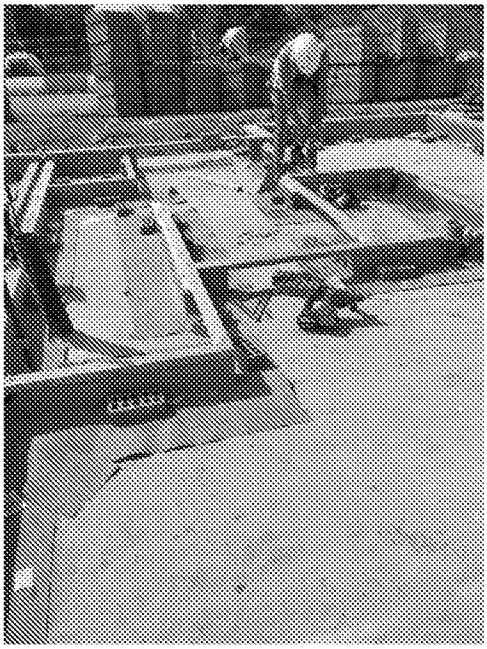
	Plot 28
	Plot 28 corner needs sealing

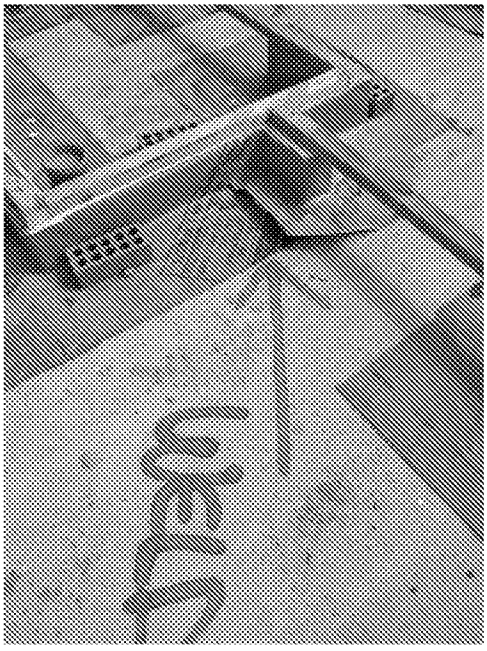
	Plot 28 lapping needs sealing
	Plot 28 tape for frame

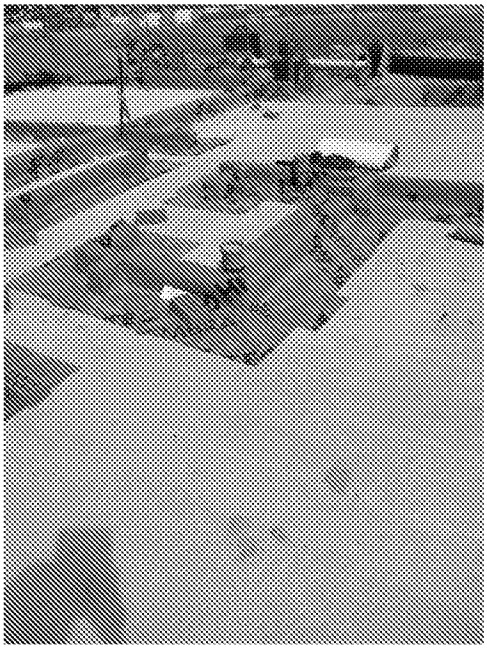
	Plot 29
	Plot 29 threshold

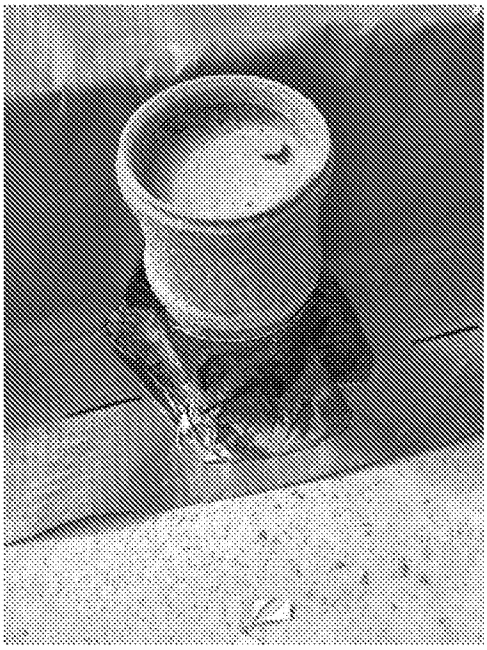
	Plot 29 services
	Plot 30

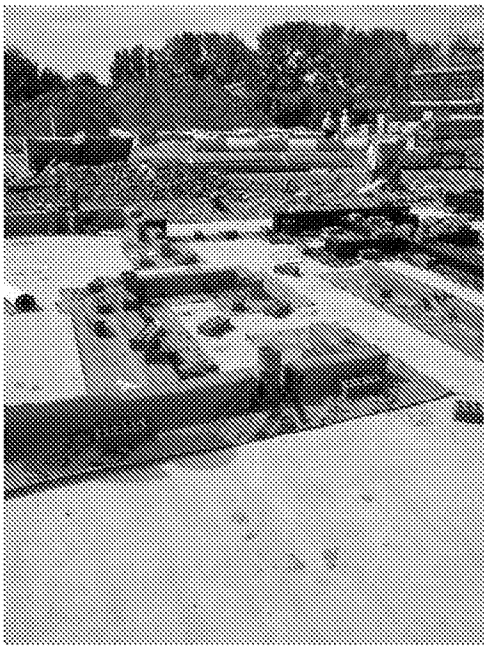
	Plot 30 joins
	Plot 30 services

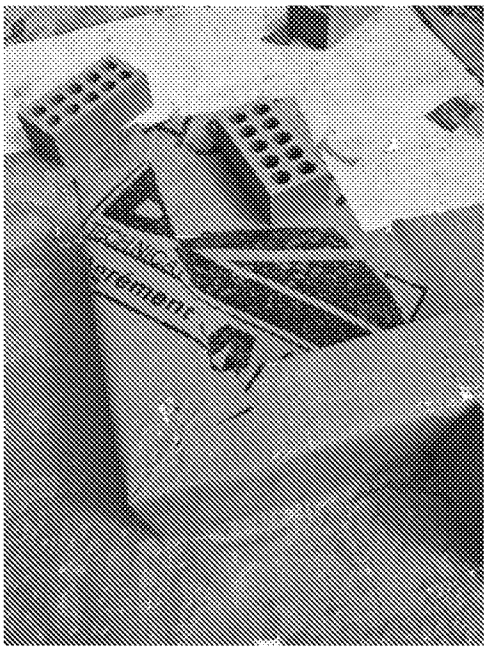
	Plot 30 corner
	Plot 31

	Plot 31 corner
	Plot 31 seal needs attention

	Plot 31 edge detail
	Plot 32

	Plot 32 service
	Plot 32 corner

	Plot 33
	Plot 33 service

	Plot 33 corner

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	01/10/2020, 11:52
Site Engineer	
William Hughes	[redacted]
Weather at time of inspection	Sunny
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential - terraced houses
Plot No.	Plots 36-37 complete, Plots 38-39 in progress
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. Membrane sealed in Plots 36-37
1.2 Gas membrane type	Keytec 400 HP
1.3 Gas membrane condition	Good condition. Any damage patched with tape
Jointing tape product	Heat welded joints
1.5 Lapping design	Min 150mm overlap
1.6 Laps, welds and joints seals	Welded joints sealed. In good condition
1.7 Service seals	Sealed using membrane and tape. All well sealed, no damage

Engineer's Prelim Assessment (Mem)

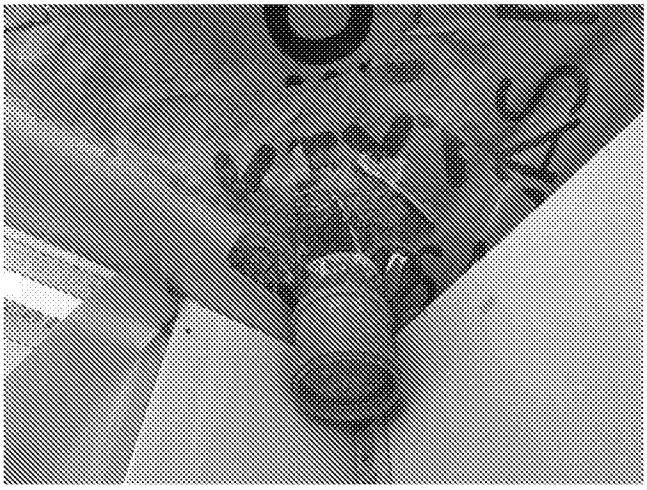
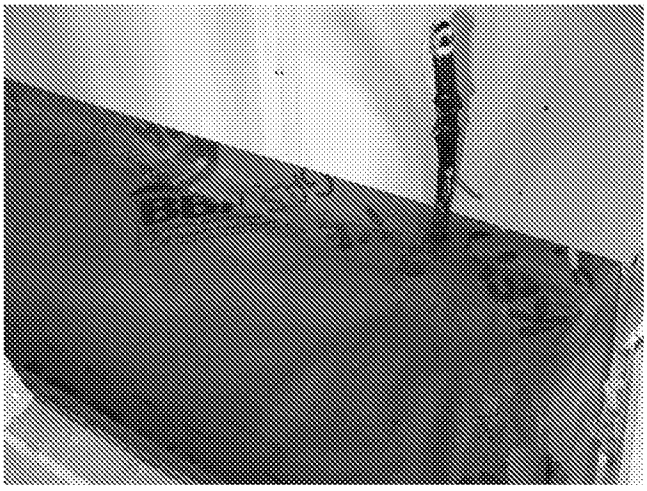
Pass

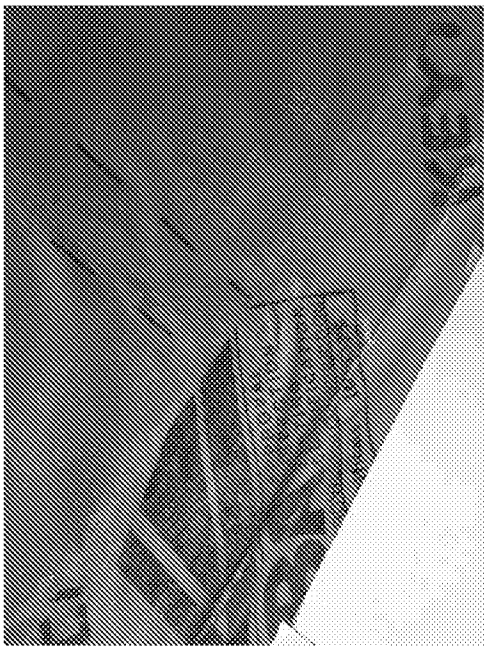
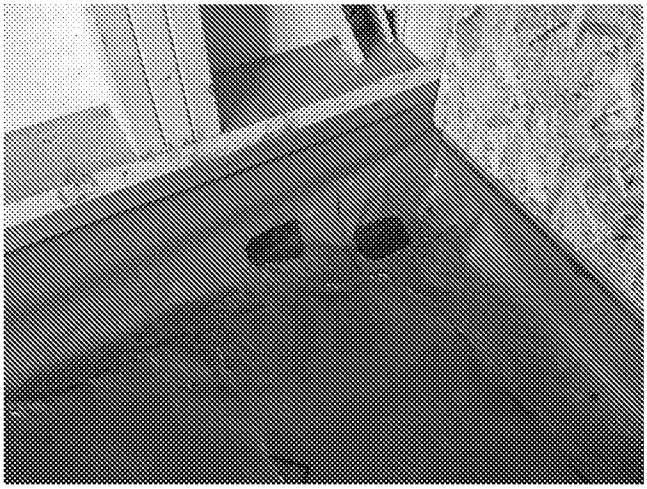
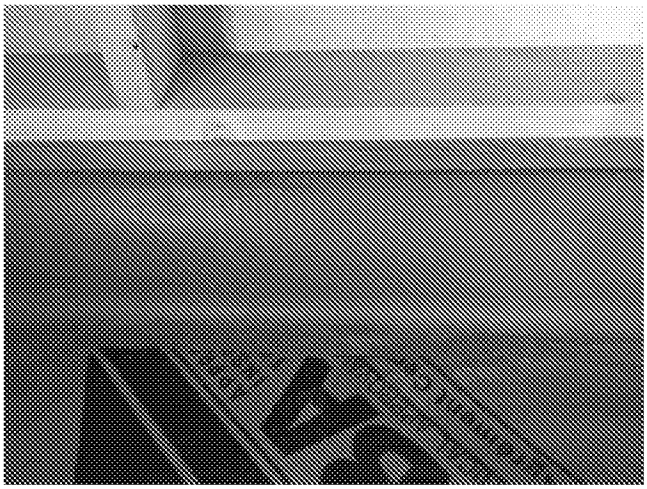
4. PHOTOGRAPHS

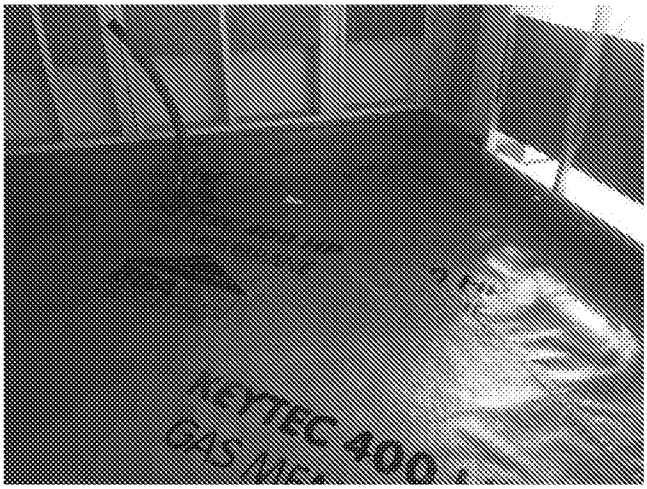
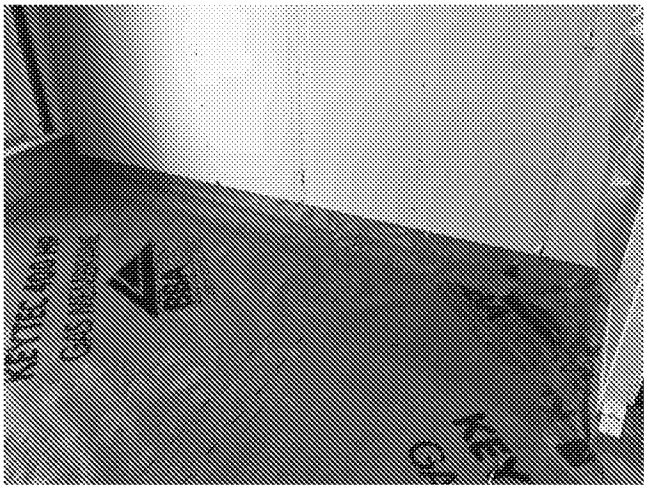
Photographs

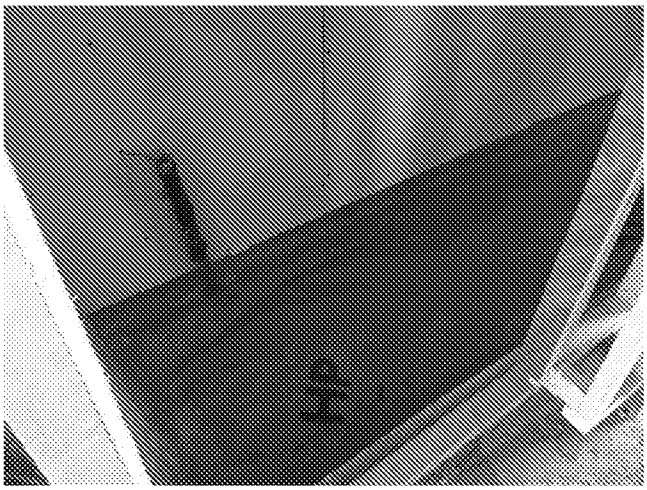
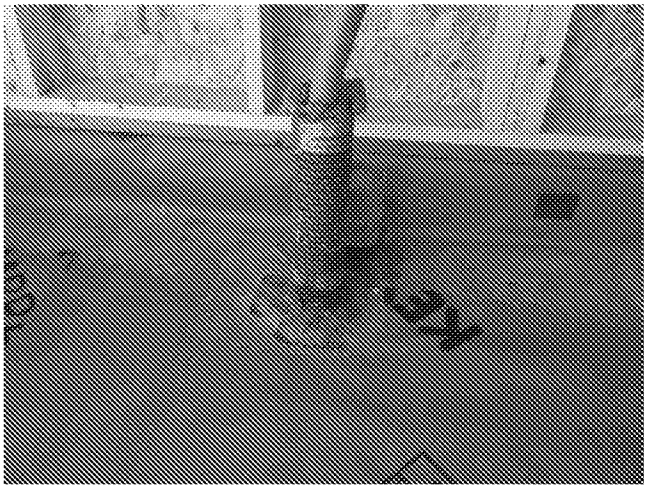
(14 records)

Photograph	*Photograph Title*

	Plot 36
	Plot 36 Service seal
	Plot 36 Under stairs

	Plot 36 Joins
	Plot 36 Patch repairs
	Plot 36 sides

	Plot 36 Front room
	Plot 37
	Plot 37 Joins and a patch repair

	Plot 37 Under stairs
	Plot 37 Service seal
	Plot 37 Front room

	Plot 38
	Plot 39 in progress

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham
Geo-Environmental Project Manager's Email	[redacted]
Date	15/10/2020, 12:17
Site Engineer	

No users

Weather at time of inspection	Warm, dry, sunny
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential.
Plot No.	40-42 complete, 43 inpl progress
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 (Plot 42 & 43). Membranes sealed in Plots 40 & 41.
1.2 Gas membrane type	Red Keytec gas membrane.
1.3 Gas membrane condition	Good condition. Holes patched during inspection.
Jointing tape product	Heat welded joints.
1.5 Lapping design	Min 150mm overlap.
1.6 Laps, welds and joints seals	Welded joints well sealed and in good condition. Awaiting final site photos of Plot 43 complete.
1.7 Service seals	Service seals using membrane and tape. All in good condition

Engineer's Prelim Assessment (Mem)

Pass

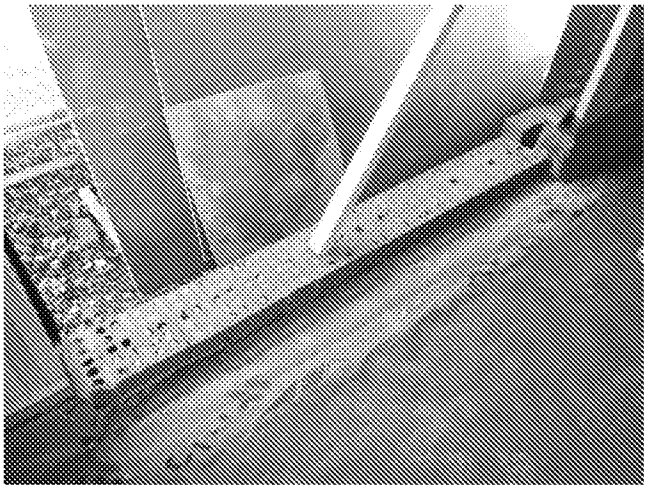
4. PHOTOGRAPHS

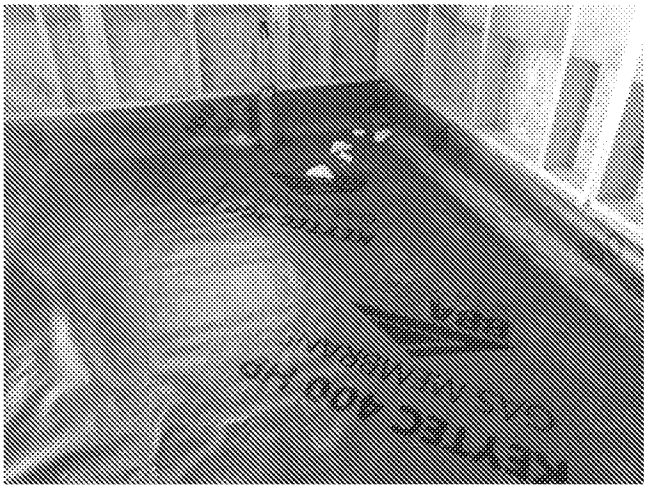
Photographs

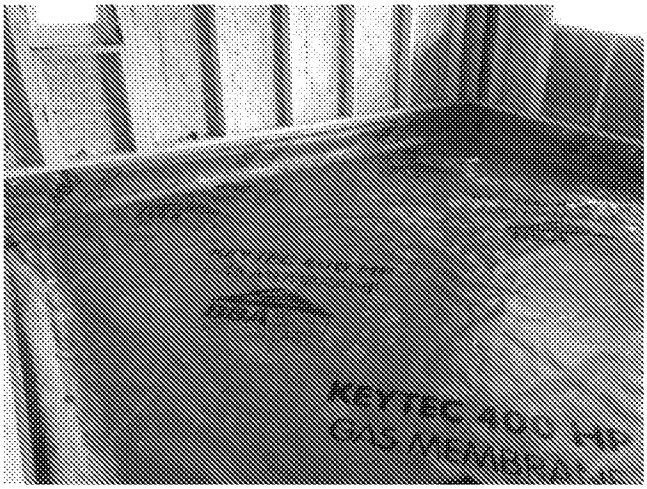
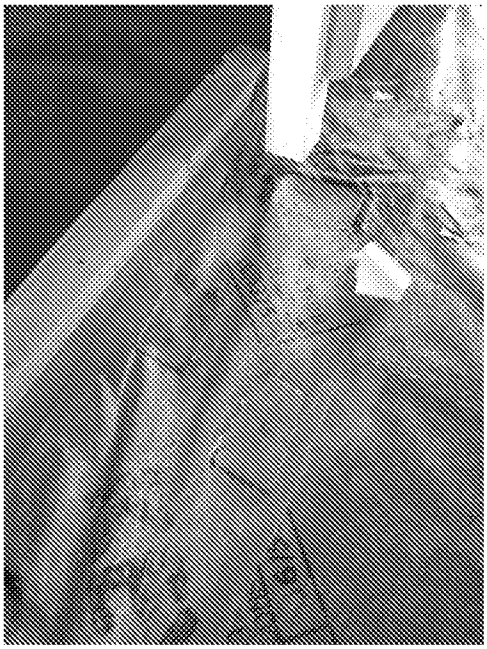
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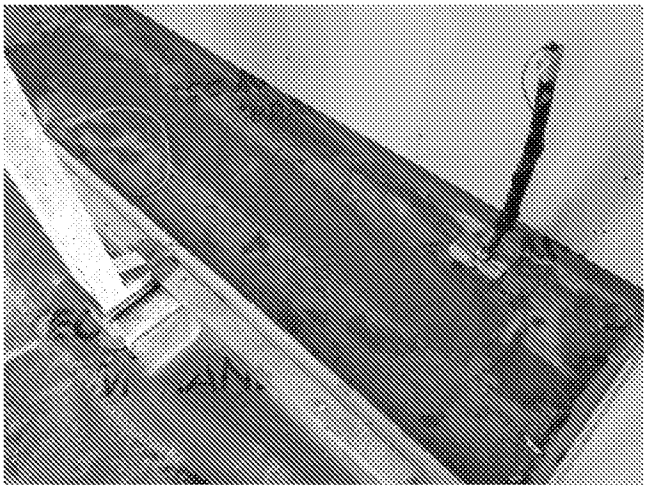
Photograph	*Photograph Title*

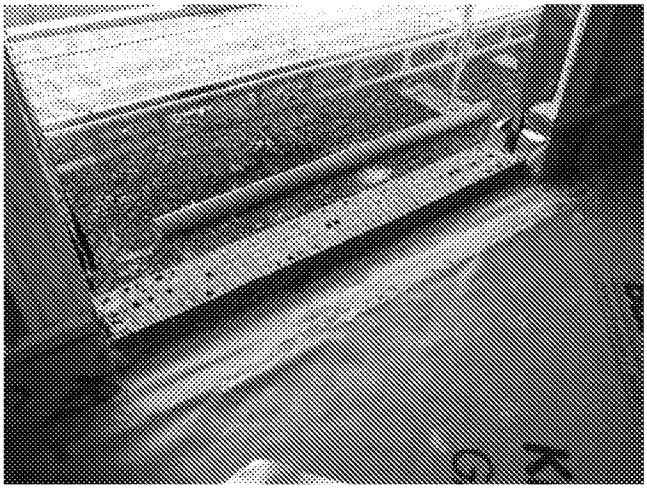
	Plot 40 - floors sealed
	Plot 40 - example of service seal
	Plot 40 - Corner detail

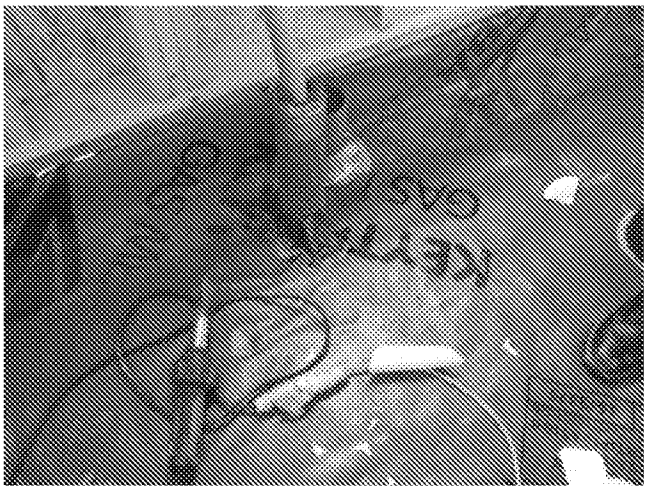
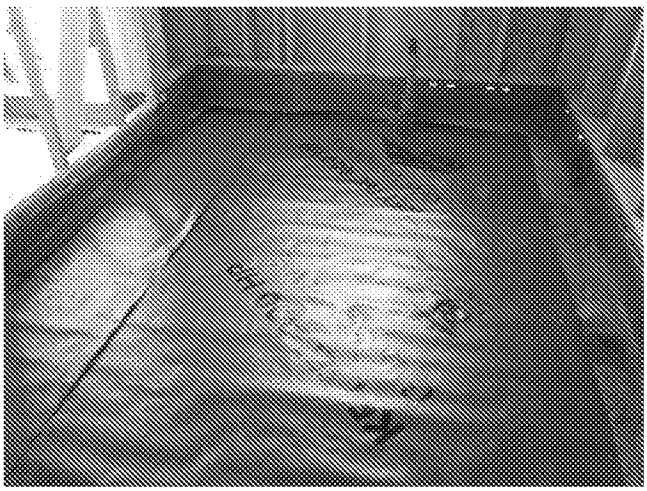
	Plot 40 - under stairs
	Plot 40 - floors sealed
	Plot 40 - Threshold

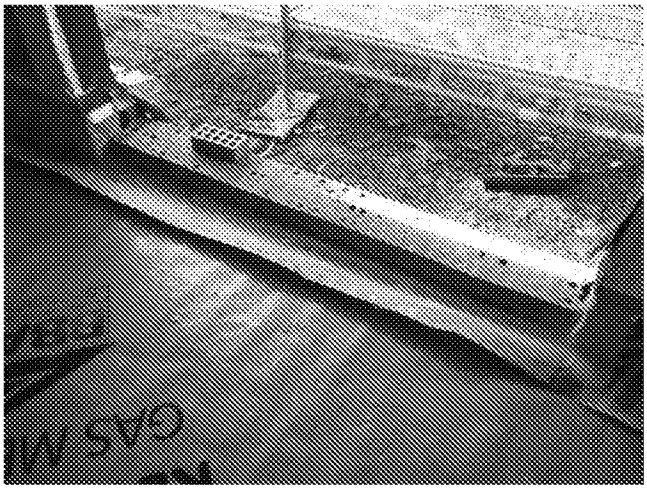
	Plot 41 - Threshold
	Plot 41 - Floor and services sealed
	Plot 41 - under stairs sealed

	Plot 41 - floors sealed
	Plot 41 - Threshold
	Plot 41 - Holes patched during inspection

	Plot 42 - services in progress
	Plot 42 - Floor in progress
	Plot 42 - under stairs sealed

	Plot 42 - floors sealed
	Plot 42 - Threshold sealed
	Plot 42 - Floor completed during visit

	Plot 42 - service seals completed during inspection
	Plot 43 - in progress
	Plot 43 - in progress

	Plot 43 - in progress
	Plot 43 - in progress
	Plot 43 - in progress

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	29/10/2020, 11:01
Site Engineer	*No users*
Weather at time of inspection	Drizzle, overcast, cool
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Semi detached houses
Plot No.	Plots 32-35 (infills) plot 35 incomplete
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 so unable to inspect
1.2 Gas membrane type	Keytech 400 HP gas membrane (red)
1.3 Gas membrane condition	Membrane generally in good condition some dust ad saw dust
Jointing tape product	Heat sealed joins, tape around services
1.5 Lapping design	At least 150mm
1.6 Laps, welds and joints seals	All joins, welds and seals heat sealed and well sealed. A few holes/damage identified during visit, ut were repaired in the presence of the engineer.
1.7 Service seals	Services sealed with site made seals and eated tape

Engineer's Prelim Assessment (Mem)

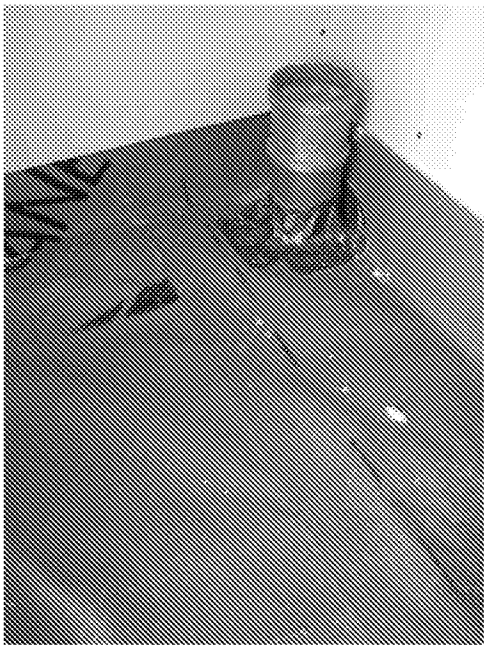
Pass

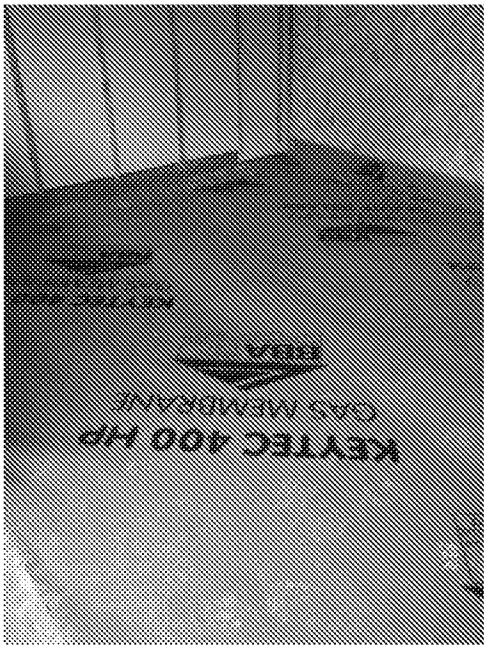
4. PHOTOGRAPHS

Photographs

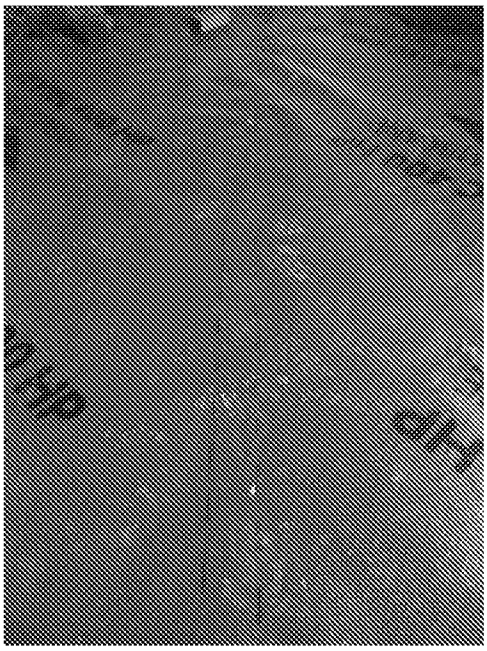
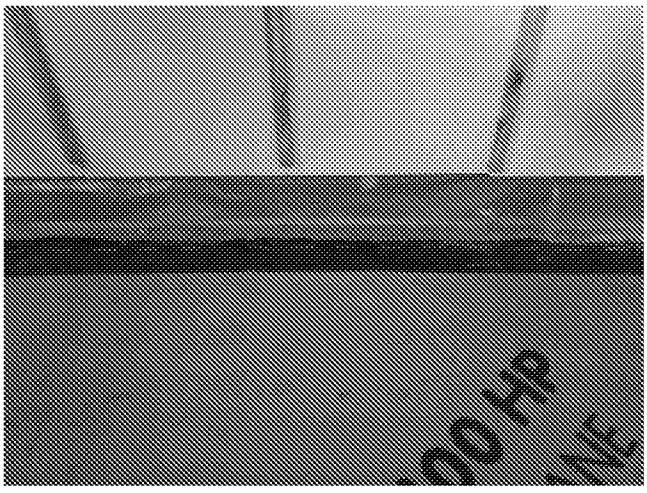
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Photograph	*Photograph Title*

	Plot 32 overview
	Plot 32 services
	Plot 32 detail

	Plot 33 overview
	Plot 33 threshold
	Plot 33 patch repair

	Plot 33 repair
	Plot 33 timber frame
	Plot 34 overview

	Plot 34 membrane seal
	Plot 34 services
	Plot 34 detail extra membrane to protect threshold beneath

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	12/11/2020, 12:24
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
Plot No.	Plots 28-31
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	Underside of membrane unable to be inspected as fully sealed. Gravel removed from some areas of subgrade and membrane subsequently patched up in Plots 28 and 30.
1.2 Gas membrane type	Keytec gas membrane.
1.3 Gas membrane condition	Good condition. Dusty with some debris in areas due to construction work within the plots. Any holes identified were patched during the inspection visit.
Jointing tape product	Heat sealed joints with some tape patching.
1.5 Lapping design	Min 150mm overlap
1.6 Laps, welds and joints seals	Heat sealed joints with some tape patching.
1.7 Service seals	Services sealed with tape.

Engineer's Prelim Assessment (Mem)

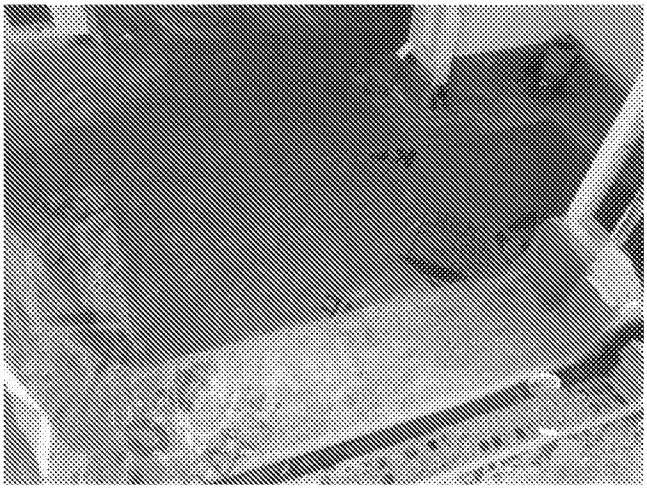
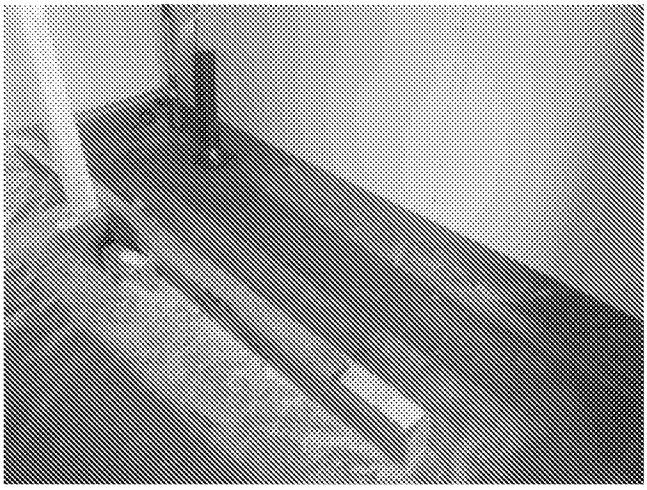
Pass

4. PHOTOGRAPHS

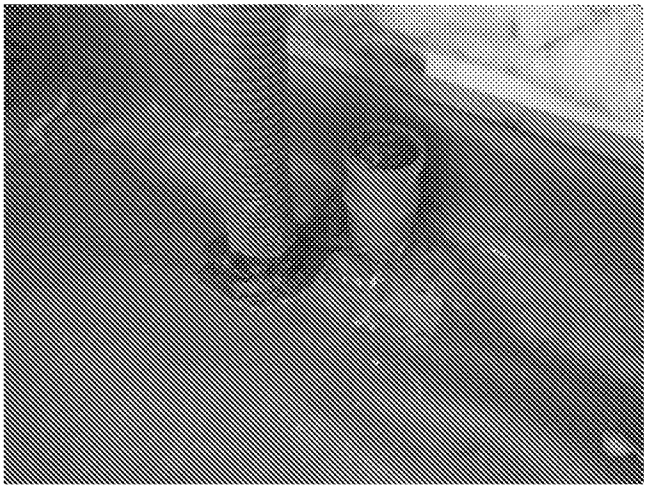
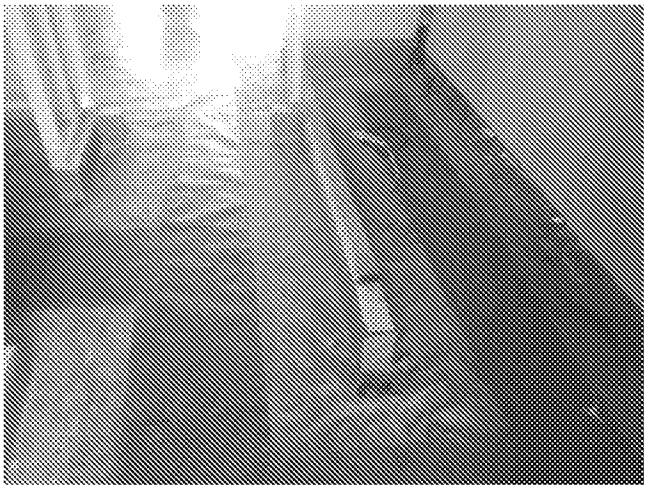
Photographs

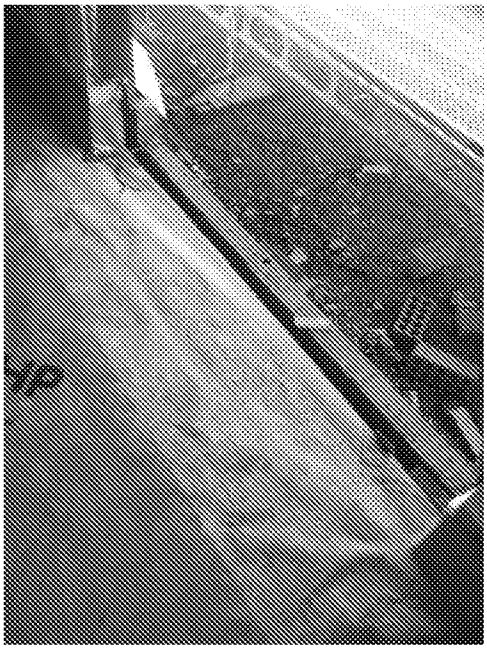
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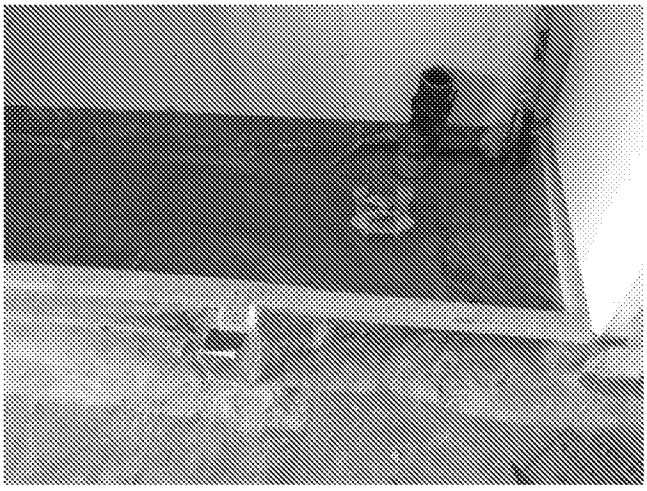
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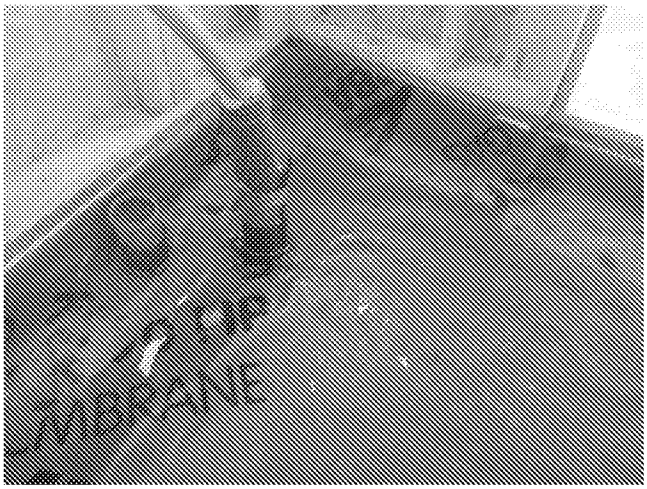
	Plot 31 - Threshold
	Plot 31 - Under stairs
	Plot 31 - Floor and service seals

	Plot 31 - Service seals. Bricks to hold membrane in shape
	Plot 31 - Floor
	Plot 31 - Threshold

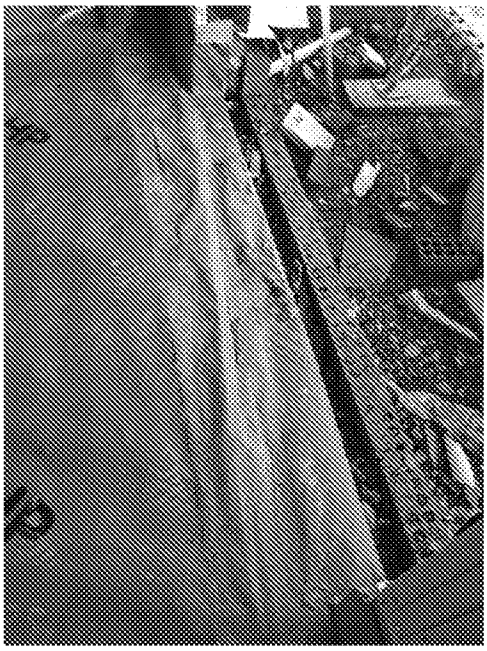
	Plot 30 - Threshold
	Plot 30 - Service seals
	Plot 30 - Under stairs

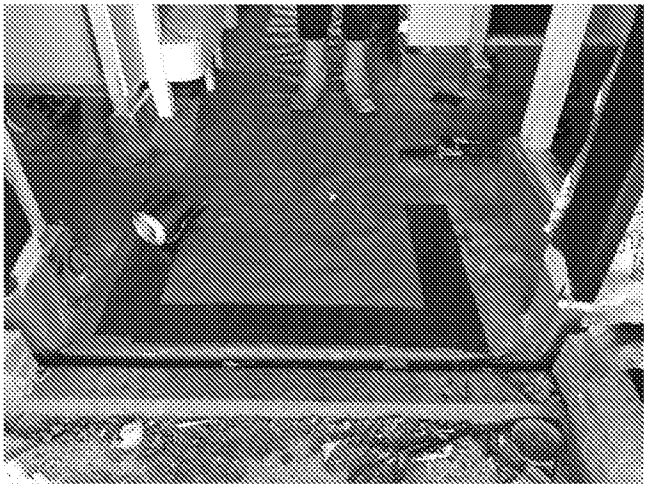
	Plot 30 - Floor
	Plot 30 - Patching after removal of debris under membrane
	Plot 30 - Threshold

	Plot 29 - Threshold and entrance hallway
	Plot 29 - Floor
	Plot 29 - Under stairs

	Plot 29 - Patching after removal of debris under membrane
	Plot 29 - Floor with some patching
	Plot 28 - Service seals

	Plot 28 - Floor
	Plot 28 - Floor with patching after removal of debris from under membrane
	Pot 28 - Floor with some patching

	Plot 28 - Threshold with some patching
	Plot 28 - Floor
	Plot 28 - Floor with patching after removal of debris from under membrane

	Plot 28 - Debris visible under membrane in doorway
	Plot 28 - Doorway area with patching after removal of debris from under membrane

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham
Geo-Environmental Project Manager's Email	[redacted]
Date	19/11/2020, 14:23
Site Engineer	

No users

Weather at time of inspection	Dry, cold, slightly cloudy
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Terrace houses
Plot No.	24-27
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 so unable to inspect
1.2 Gas membrane type	Key tech 400hp gas membrane (Red)
1.3 Gas membrane condition	Generally in good condition
Jointing tape product	Heat sealed double sided tape
1.5 Lapping design	At least 150mm
1.6 Laps, welds and joints seals	All heat sealed and taped joins
1.7 Service seals	Site made seals, all well sealed with heat sealed taped joins

Engineer's Prelim Assessment (Mem)

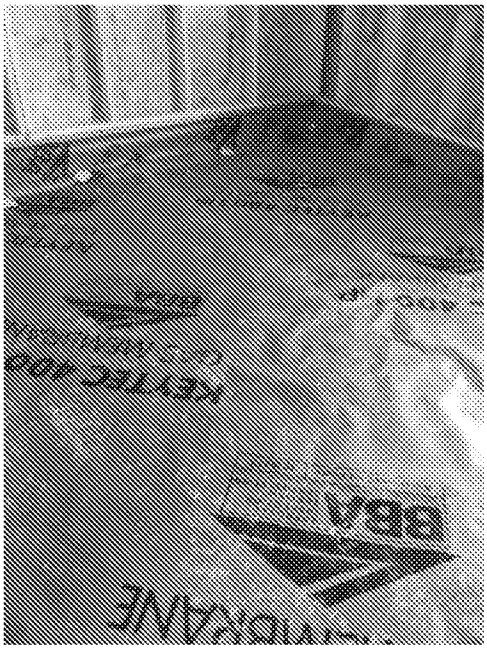
Pass

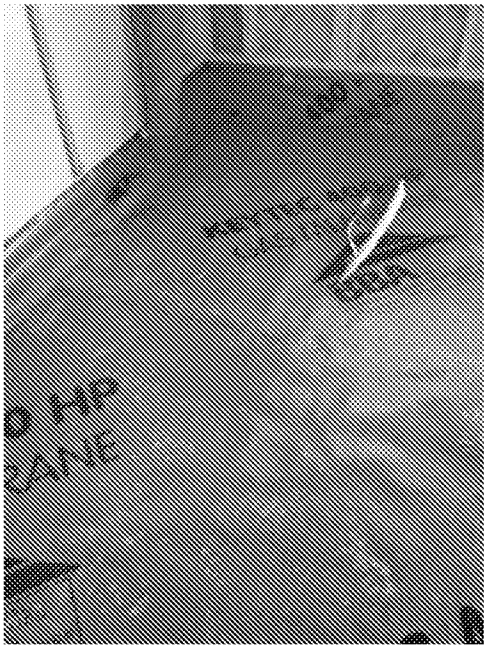
4. PHOTOGRAPHS

Photographs

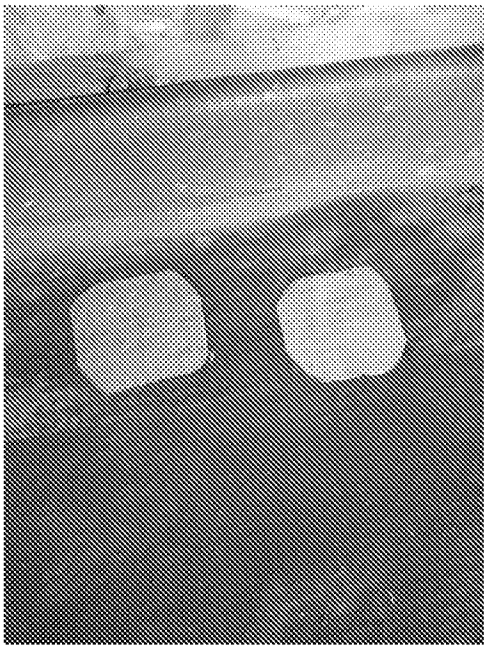
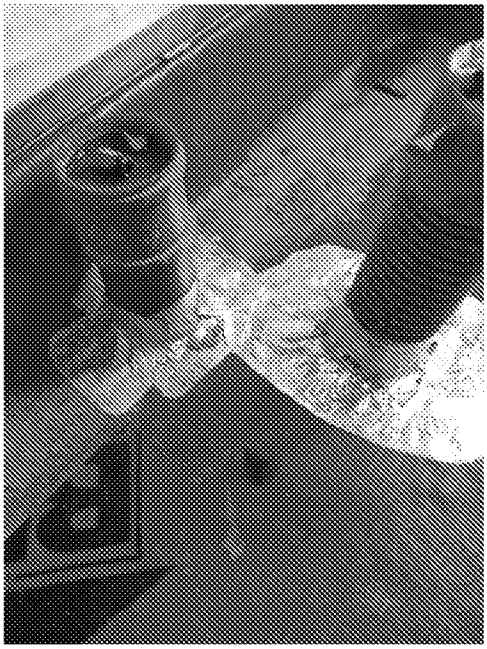
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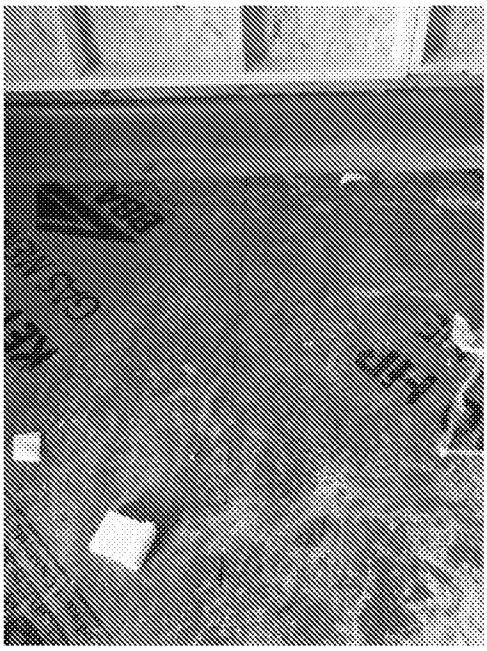
	Plot 27 services
	Plot 27 detail
	Plot 27 overview

	Plot 26 corner and service
	Plot 26 overview

	Plot 26 repair
	Plot 25 overview

	Plot 25 repairs
	Plot 25 services

	Plot 24 services
	Plot 24 detail

	Plot 24 membrane join

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close, Littlehampton
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	26/11/2020, 13:34
Site Engineer	

No users

Weather at time of inspection	Cool, cloudy dry
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential with garages
Plot No.	16-17
Foundation Type	Raft
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. Fully sealed.
1.2 Gas membrane type	Red Keytec gas membrane
1.3 Gas membrane condition	Generally good condition. Any holes identified were patched during the visit.
Jointing tape product	Heat sealed joints.
1.5 Lapping design	Min 150mm overlap
1.6 Laps, welds and joints seals	Heat sealed joints with some tape patching.
1.7 Service seals	Services sealed with tape.

Engineer's Prelim Assessment (Mem)

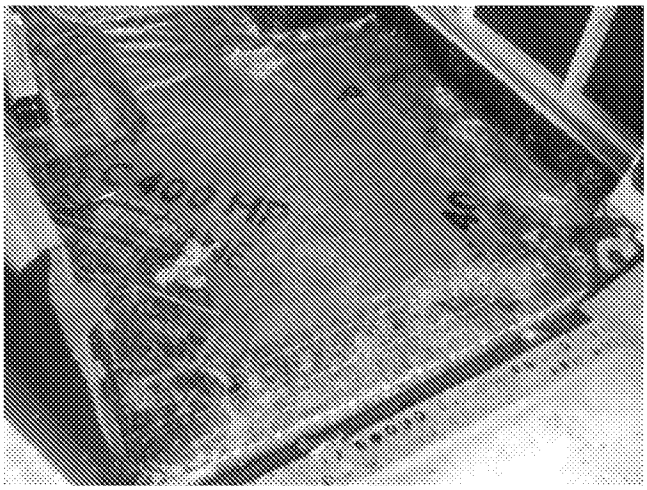
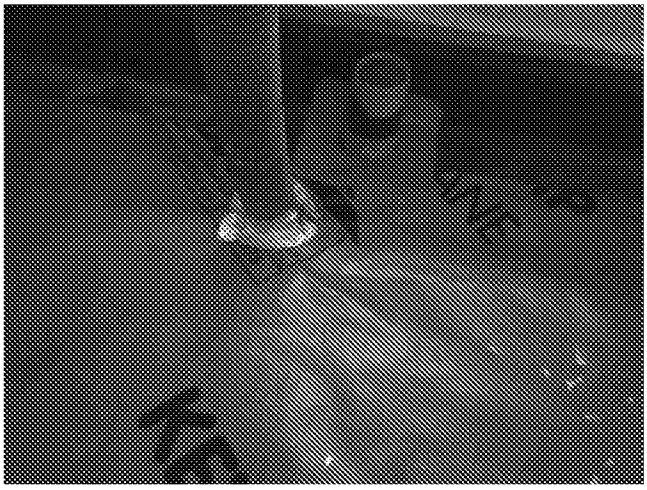
Pass

4. PHOTOGRAPHS

Photographs

(10 records)

Photograph	*Photograph Title*

	Plot 16 - threshold
	Plot 16 - service seals
	Plot 16 - under stairs

	Plot 16 - floor and corner
	Plot 16 - threshold
	Plot 17 - entrance

	Plot 17 - floor and service seal
	Plot 17 - under stairs
	Plot 17 - floor

	Plot 17 - floor and corner details

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	03/12/2020, 12:30
Site Engineer	
Katie O'Dea	[redacted]
Weather at time of inspection	Rainy, cold
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential
Plot No.	18-19 complete, 50-59 perimeters
Foundation Type	Raft
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	Underside of 18-19 unable to inspect - sealed. Underside if 50-59 in good condition.
1.2 Gas membrane type	Red Keytec gas membrane
1.3 Gas membrane condition	Generally good condition. Perimeter 50-59 membrane held in pace with bricks to prevent wind damage.
Jointing tape product	Heat welded joints with some tape.
1.5 Lapping design	Minimum 150mm overlap
1.6 Laps, welds and joints seals	Heat welded joints with some tape. Al well sealed.
1.7 Service seals	Services well sealed in Plots 18-19. Plots 50-59 service seals in progress.

Engineer's Prelim Assessment (Mem)

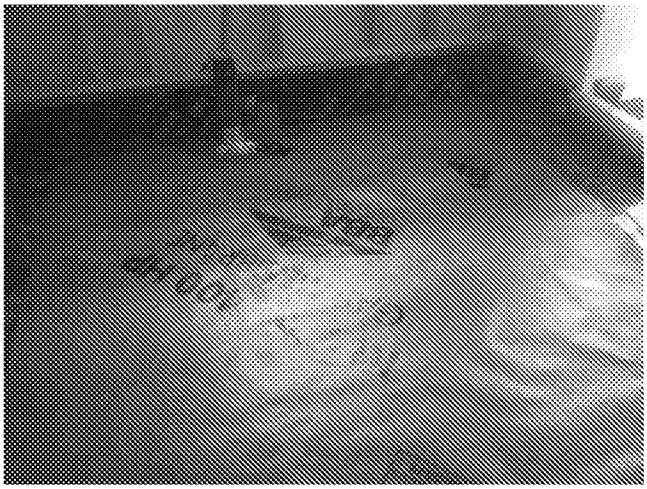
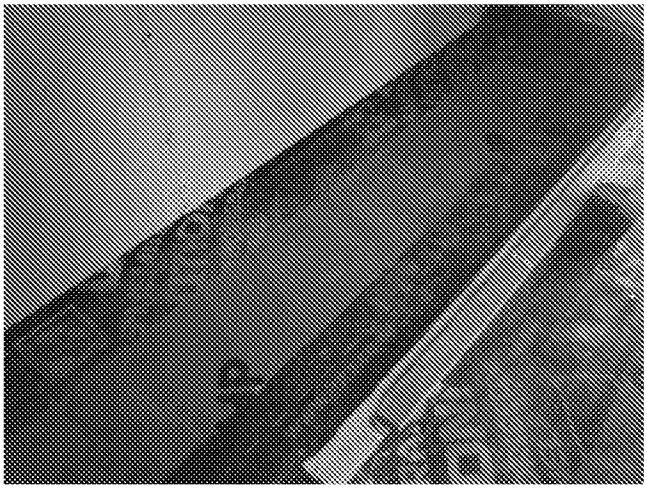
Pass

4. PHOTOGRAPHS

Photographs

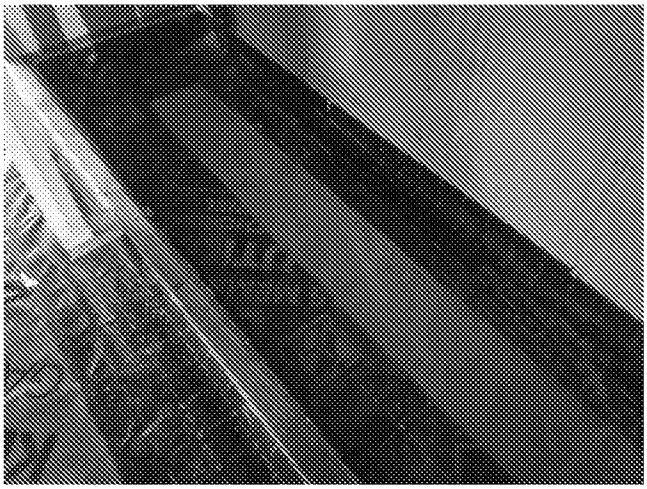
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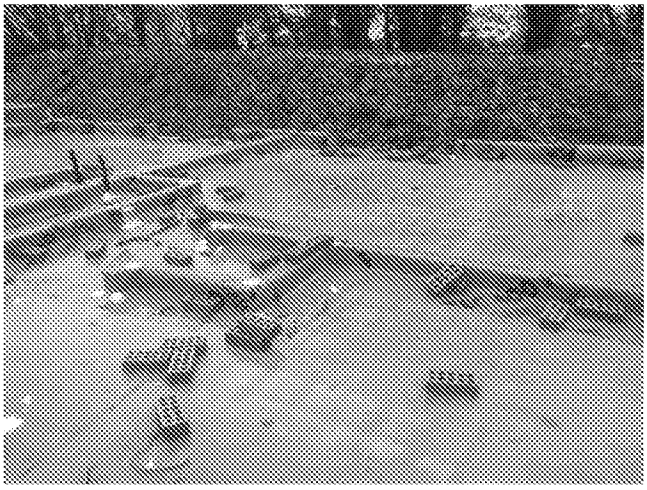
Photograph	*Photograph Title*

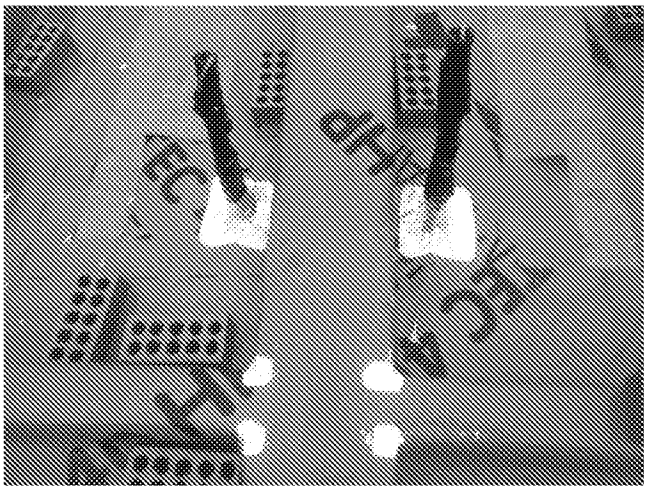
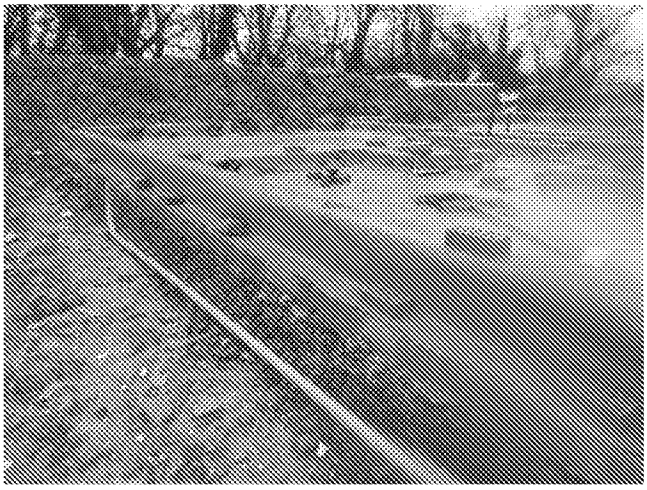
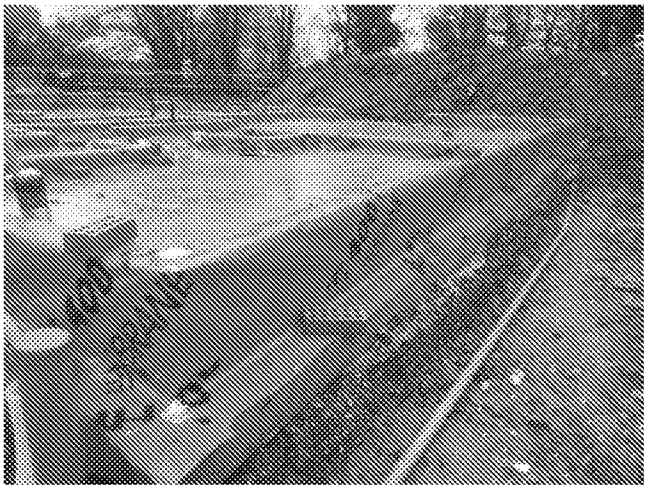
	Plot 18 - floor
	Plot 18 - under stairs
	Plot 18 - floor

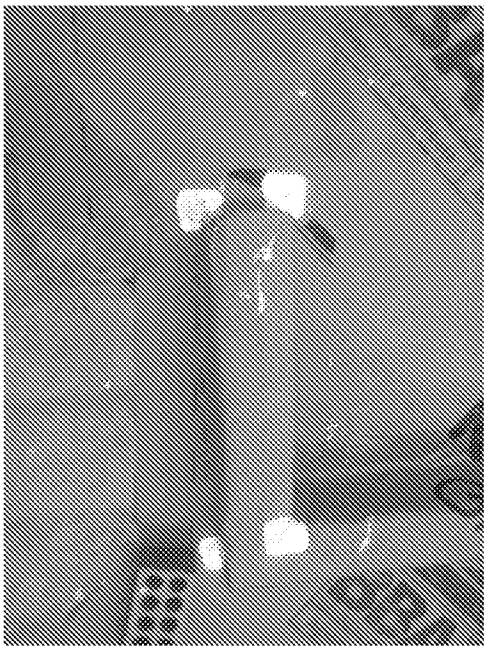
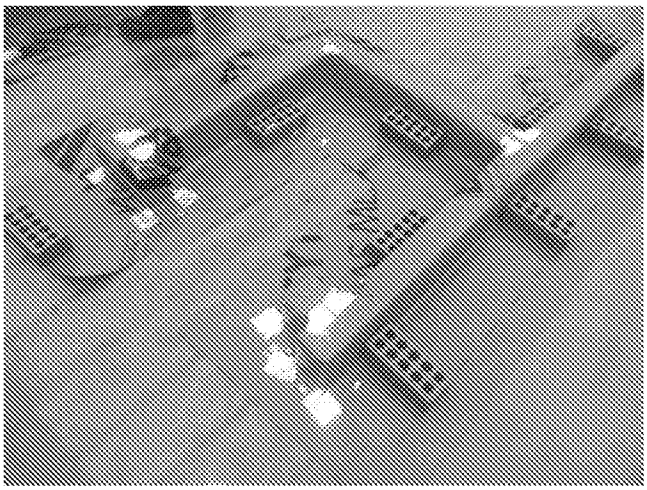
	Plot 18 - Threshold
	Plot 18 - Patching
	Plot 18 - service seal

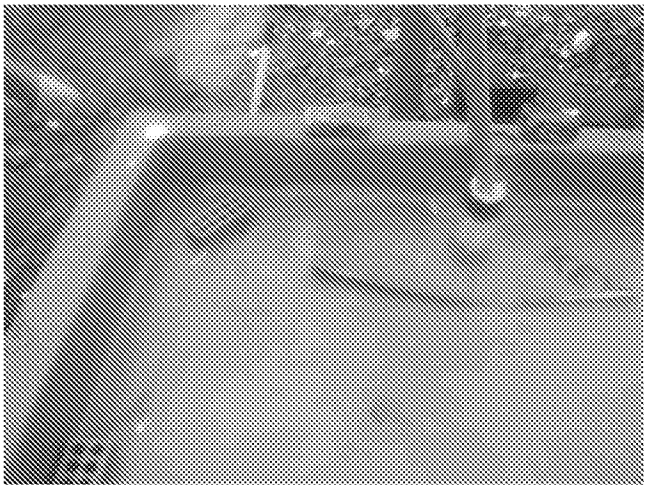
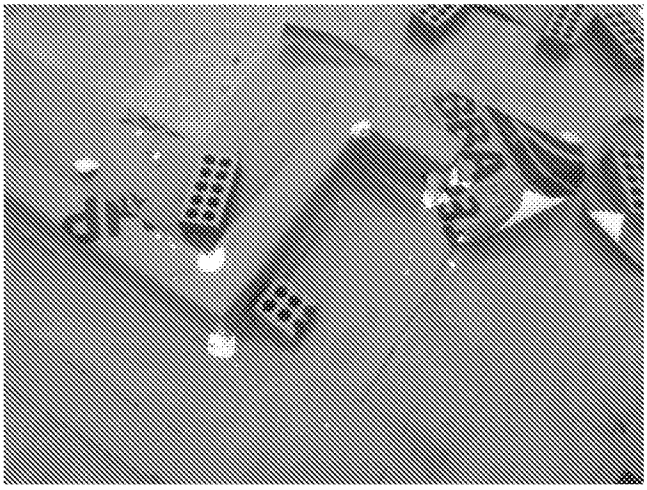
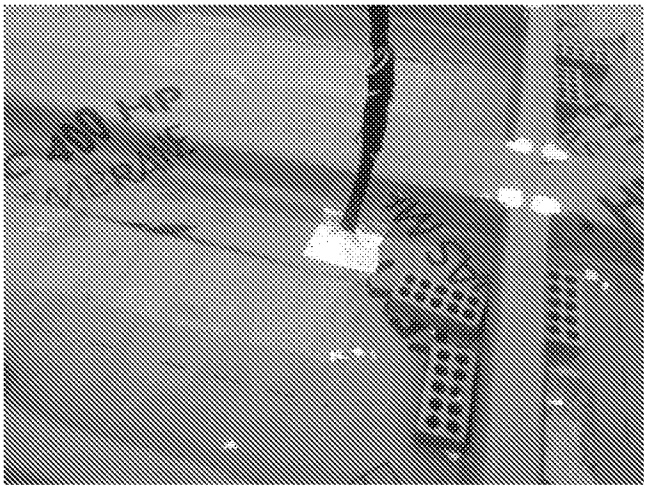
	Plot 19 - Floor
	Plot 19 - service seal
	Plot 19 - floor

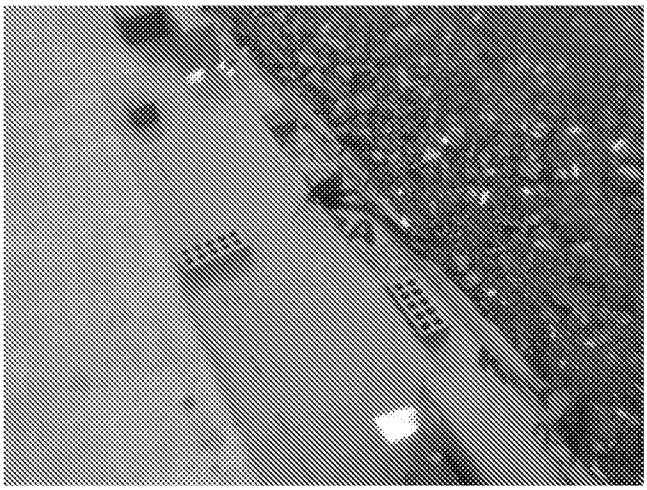
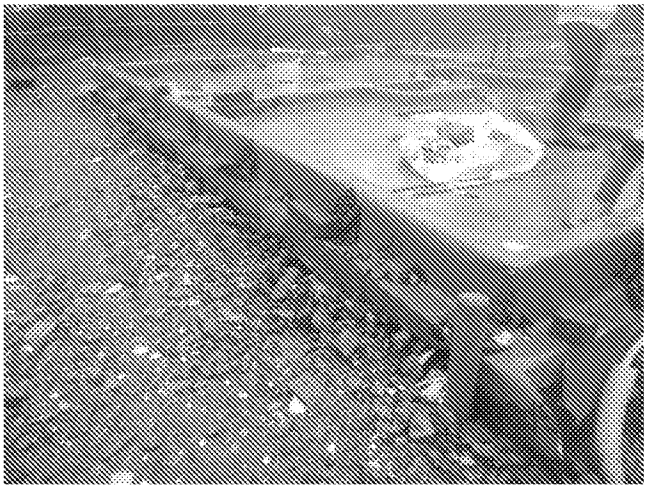
	Plot 19 - under stairs
	Plot 19 - Threshold
	Plot 19 - Floor

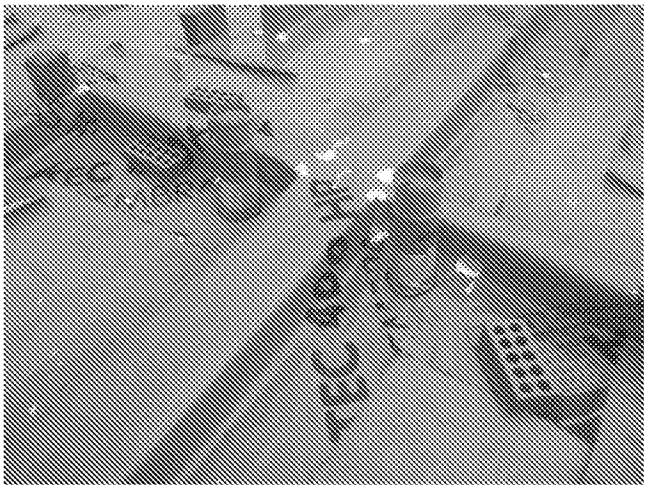
	Plot 50-51 perimeter
	Plot 50-51 - perimeter
	Plot 50-51 perimeter

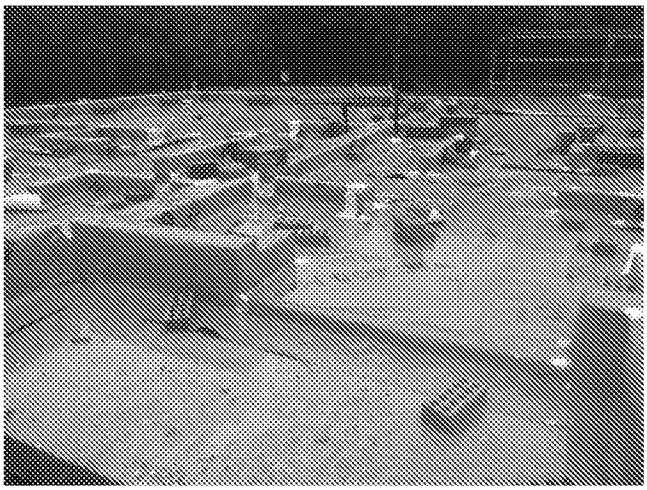
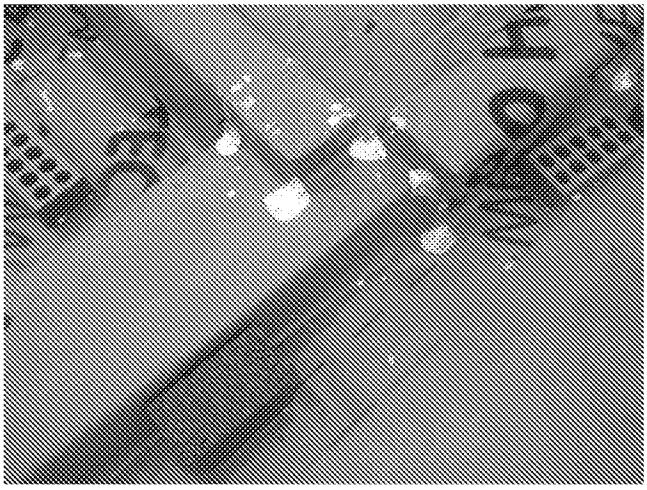
	Plot 50-51 service seals
	Plot 50-51 perimeter
	Plot 52-53 perimeter

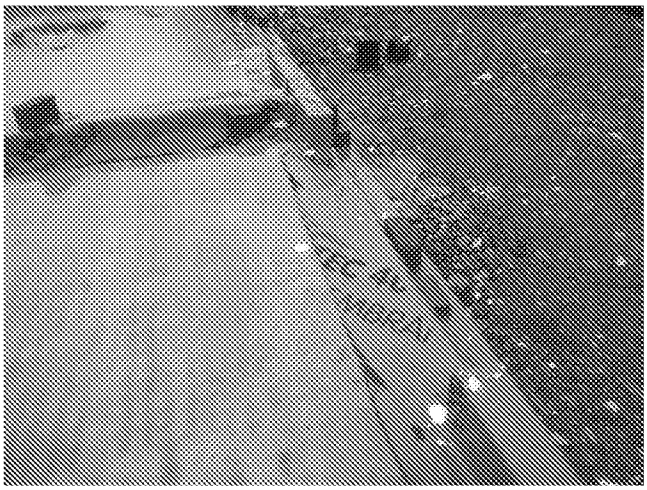
	Plot 52-53 perimeter corner detail
	Plot 52-53 perimeter
	Plot 52-53 perimeter

	Plot 52-53 perimeter services not yet sealed
	Plot 52-53 perimeter
	Plot 52-53 perimeter services sealed

	Plot 52-53 perimeter
	Plot 52-53 perimeter
	Plot 56-57 perimeter

	Plot 56-57 perimeter Service seals
	Plot 56-57 perimeter
	Plot 56-57 perimeter

	Plot 58-59 perimeter
	Plot 58-59 perimeter
	Plot 58-59 perimeter service seal

	Plot 58-59 perimeter Threshold

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	10/12/2020, 08:32
Site Engineer	Tom Grace [redacted]
Weather at time of inspection	Overcast with light rain, 8 degrees C.
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential semi-detached with private gardens.
Plot No.	20 - 21 complete
Foundation Type	Raft
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	Concrete slab in good condition. Inspected roll of red Keytec gas membrane, new roll in good condition.
1.2 Gas membrane type	Red Keytec 400 HP gas membrane
1.3 Gas membrane condition	New rolls, good condition.
Jointing tape product	Heat welded joints with occasional tape
1.5 Lapping design	>150mm overlap
1.6 Laps, welds and joints seals	All neat and well sealed
1.7 Service seals	Services sealed correctly.

Engineer's Prelim Assessment (Mem)

Pass

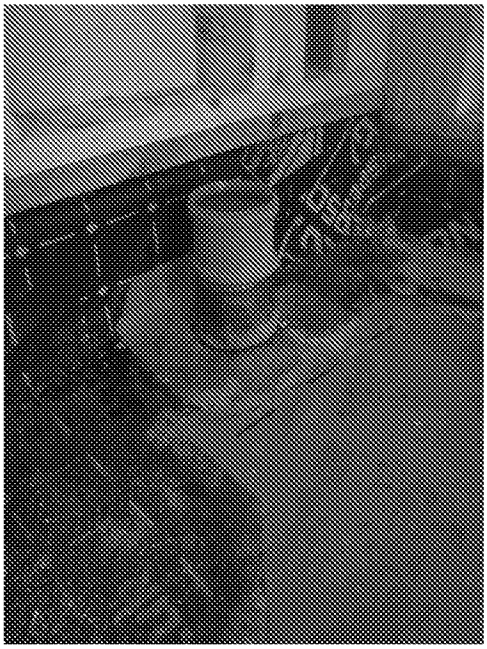
4. PHOTOGRAPHS

Photographs

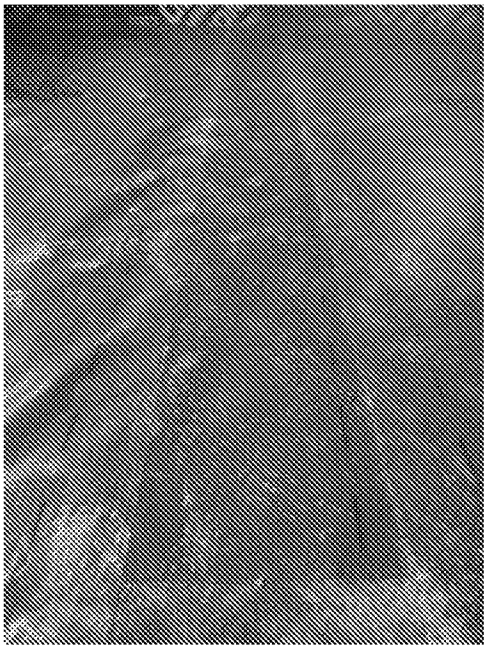
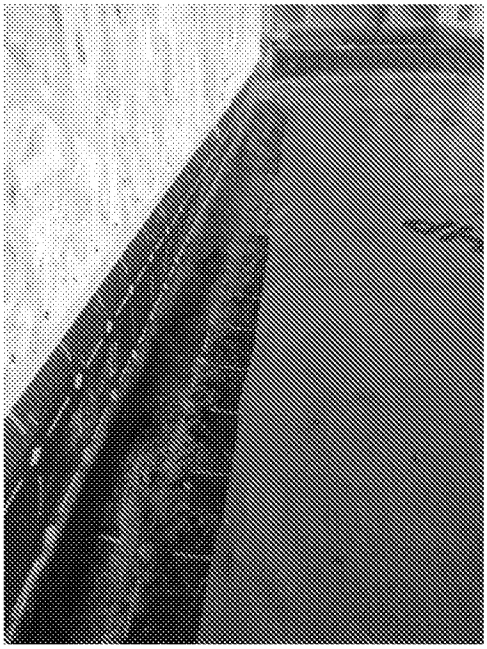
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Photograph	*Photograph Title*

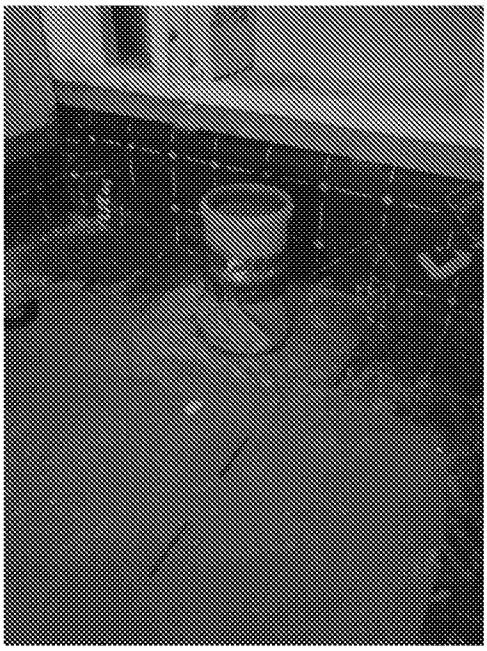
	Plot 20 prior to install. Concrete slab in good condition.
	Plot 21 prior to install concrete slab in good condition.

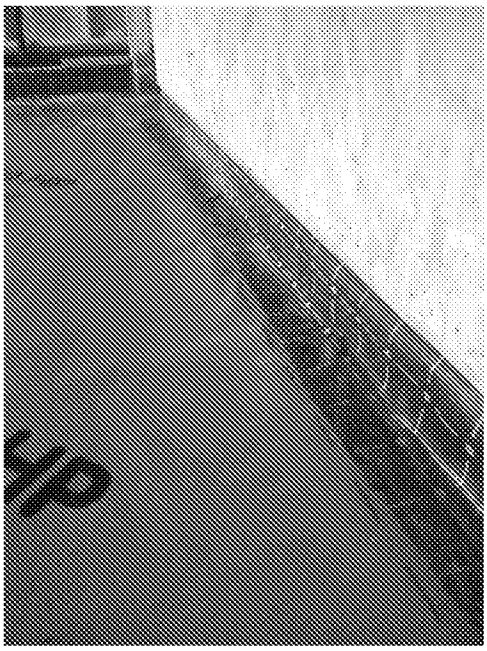
	Plot 20 - entrance
	Plot 20 - sealed foul outlet WC

	Plot 20 - sealed water in & foul outlet Kitchen
	Plot 20 - front of property all good.
	Plot 20 - rear of property all good.

	Plot 20 - all overlaps well jointed and sealed, >150mm overlap.
	Plot 20 - perimeter seals all good.

	Plot 20 - tape well sealed
	Plot 21 - entrance

	Plot 21 - foul outlet sealed WC
	Plot 21 - water in and foul outlet sealed Kitchen.
	Plot 21 - front of property all good.

	Plot 21 - rear of property all good.
	Plot 21 - all overlaps well jointed and sealed with >150mm overlap.
	Plot 21 - perimeter well sealed.

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	GE18103
Project No.	Cornfield Close
Client	Thakeham
Geo-Environmental Project Manager's Email	[redacted]
Date	17/12/2020, 12:35
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Cool, slight breeze, dry
Gas Characteristic Situation	Characteristic Situation 3
Type of development and building/block checked	Semi-detached
Plot No.	22 and 23 (infills)
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 as sealed
1.2 Gas membrane type	Keytec 400 hp gas resistant membrane
1.3 Gas membrane condition	Generally in good condition
Jointing tape product	Heat sealed joins with some taping
1.5 Lapping design	At least 150mm
1.6 Laps, welds and joints seals	All heat sealed and well sealed
1.7 Service seals	Services sealed with site made seals, all well sealed

Engineer's Prelim Assessment (Mem)

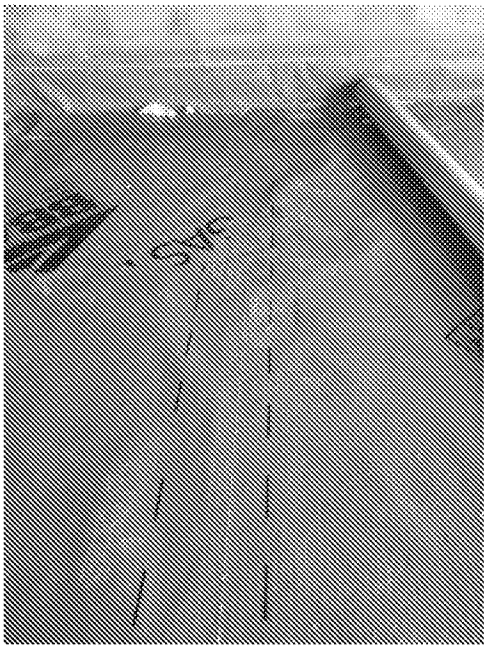
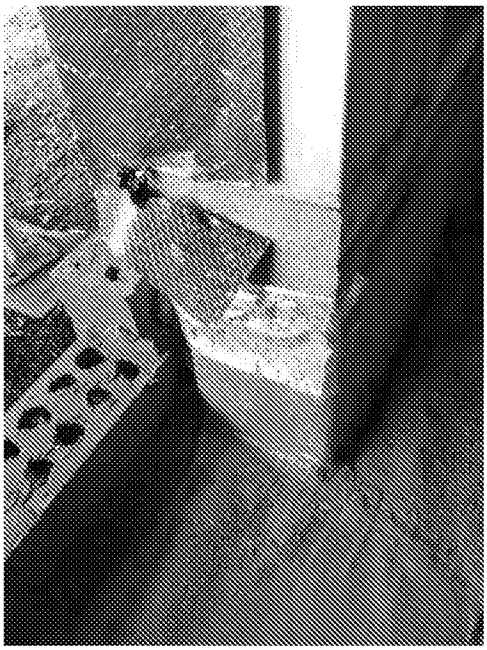
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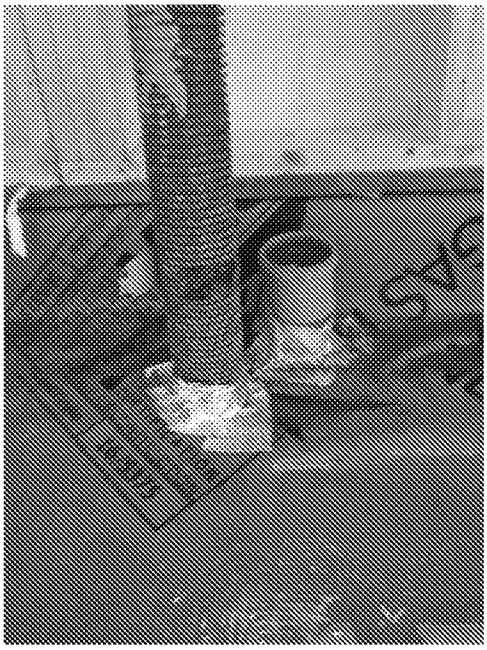
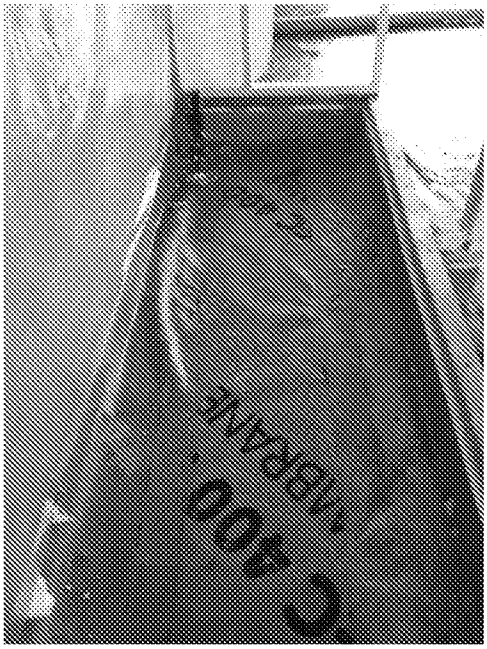
4. PHOTOGRAPHS

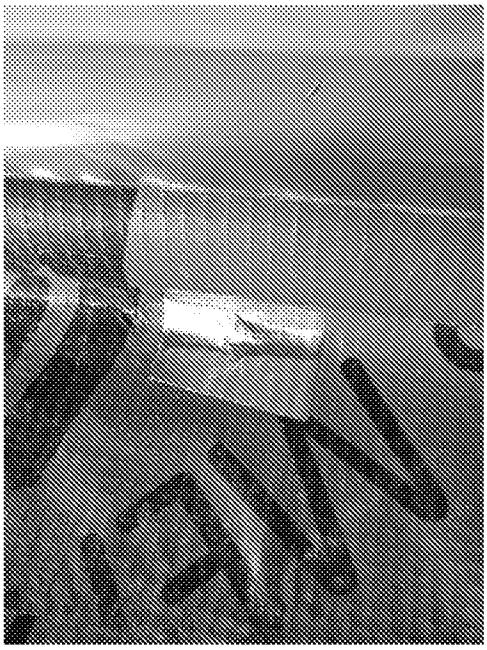
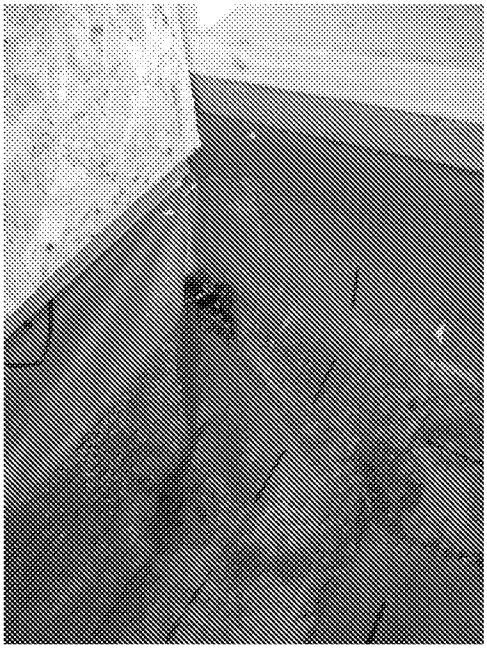
Photographs

(10 records)

Photograph	*Photograph Title*

	Plot 22 overview
	Plot 22 membrane joins
	Plot 22 patch repair

	Plot 22 services
	Plot 22 understair detail

	Plot 23 patch repair
	Plot 23 corner detail

	Plot 23 overview
	Plot 23 membrane joins

	Plot 23 services

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close, Littlehampton
Project No.	GE18103
Client	Thakeham
Geo-Environmental Project Manager's Email	[redacted]
Date	21/01/2021, 11:32
Site Engineer	

No users

Weather at time of inspection	Dry, cool.
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential and garages
Plot No.	Plots 47-49
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 fully sealed, unable to see underside.
1.2 Gas membrane type	Black gas membrane
1.3 Gas membrane condition	Surface muddy due to foot traffic in bad weather. Some leaves and debris on surface as plots not fully roofed and without windows. Otherwise in good condition. Any holes patched during site visit.
Jointing tape product	Heat welded joints.
1.5 Lapping design	Min 150mm
1.6 Laps, welds and joints seals	All in good condition.
1.7 Service seals	Service seals in good condition.

Engineer's Prelim Assessment (Mem)

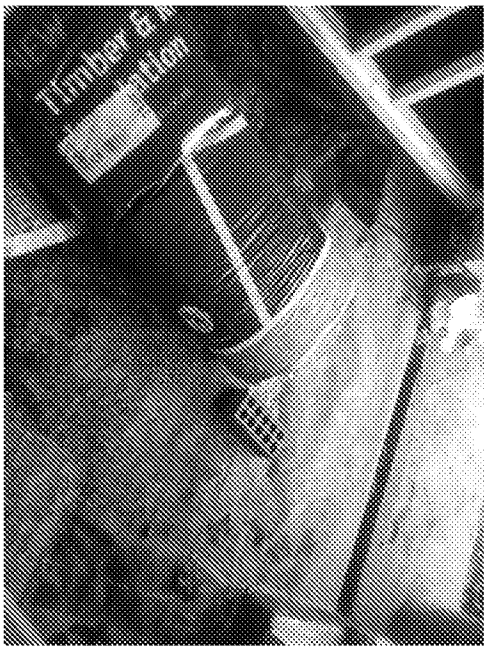
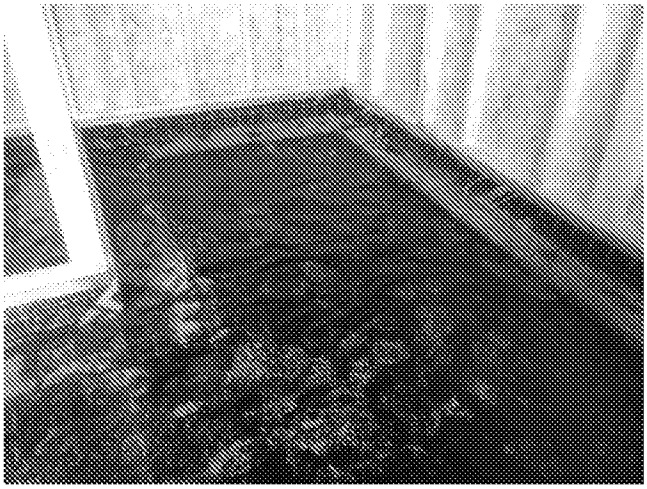
Pass

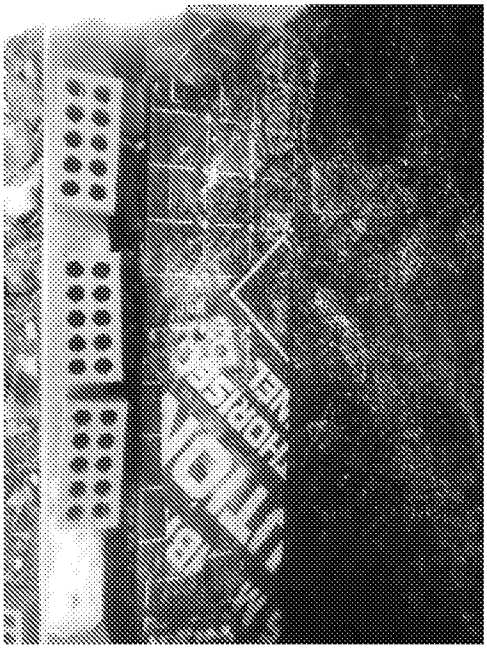
4. PHOTOGRAPHS

Photographs

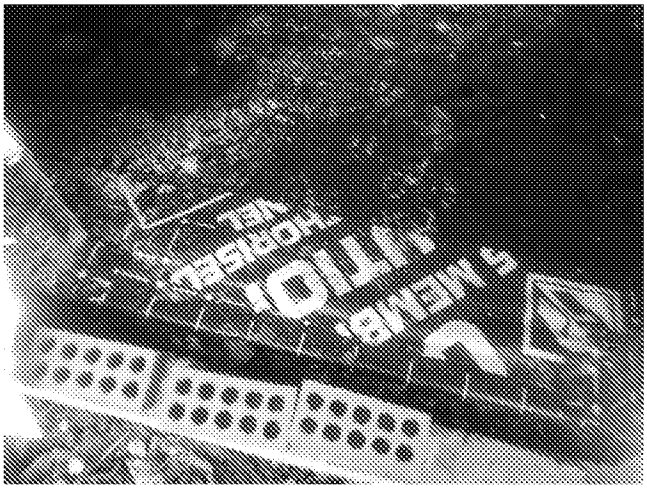
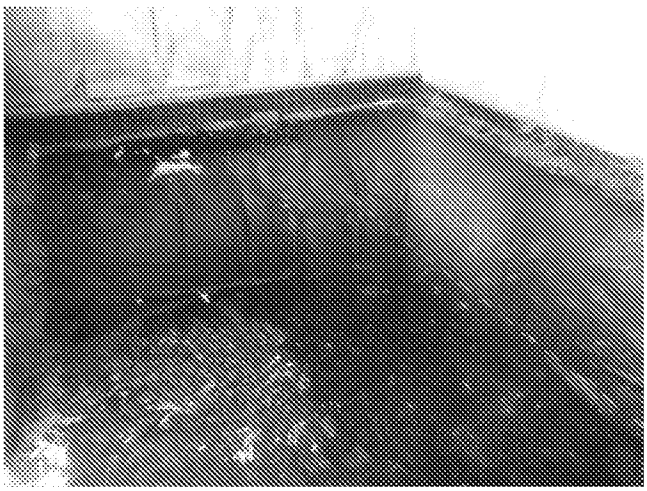
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Photograph	*Photograph Title*

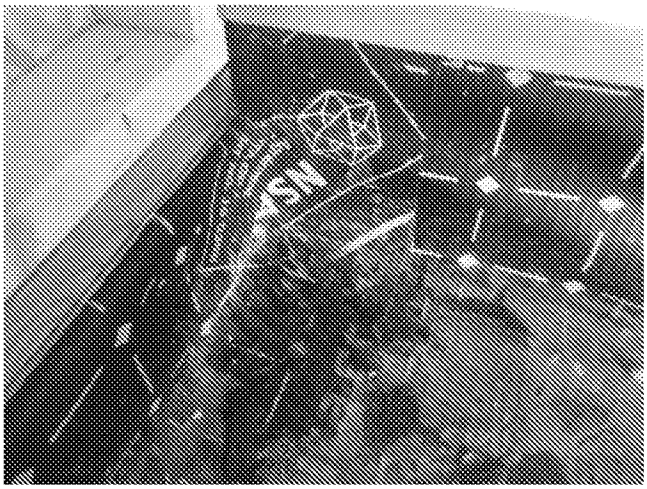
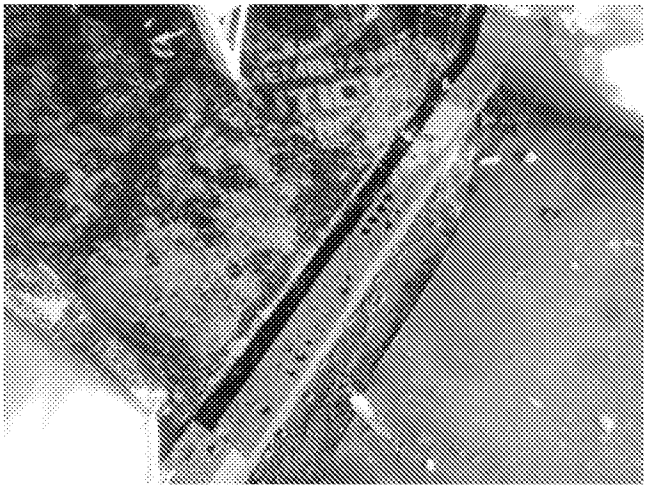
	Plot 49 entrance. Undergoing insulation.
	Plot 49 floor.
	Plot 49 floor and service seal.

	Plot 49 floor.
	Plot 49 Threshold.
	Plot 49 patching.

	Plot 48 floor.
	Plot 48 under stairs and service seal.
	Plot 48 hallway.

	Plot 48 floor.
	Plot 48 threshold.
	Plot 47 floor.

	Plot 47 under stairs.
	Plot 47 service seals.
	Plot 47 floor.

	Plot 47 corner detail.
	Plot 47 Threshold
	Plot 47 patching.

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	26/01/2021, 09:38
Site Engineer	
Katie Brayne	[redacted]
Weather at time of inspection	Light rain, overcast.
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential and garages
Plot No.	Block A (60 +61) 44, 45, 46
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 fully sealed, underside appears to have been sweeped.
1.2 Gas membrane type	Red gas membrane.
1.3 Gas membrane condition	60 and 61 selotex laid, lifted to inspect below.
Jointing tape product	Heat welded.
1.5 Lapping design	150mm minimum
1.6 Laps, welds and joints seals	All in very good condition.
1.7 Service seals	Sealed satisfactory.

Engineer's Prelim Assessment (Mem)

Pass

4. PHOTOGRAPHS

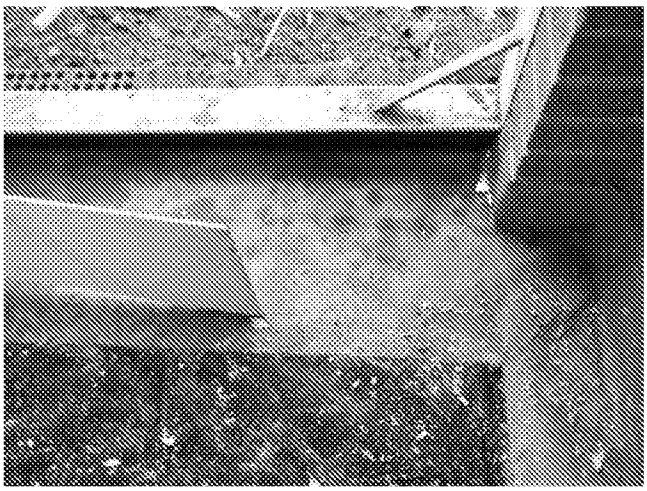
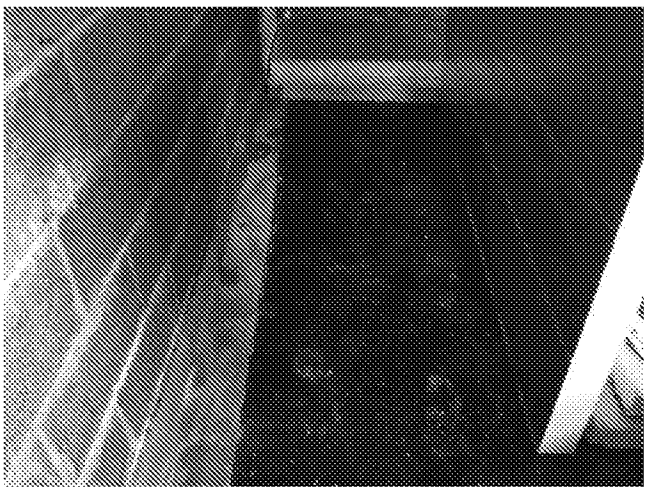
Photographs

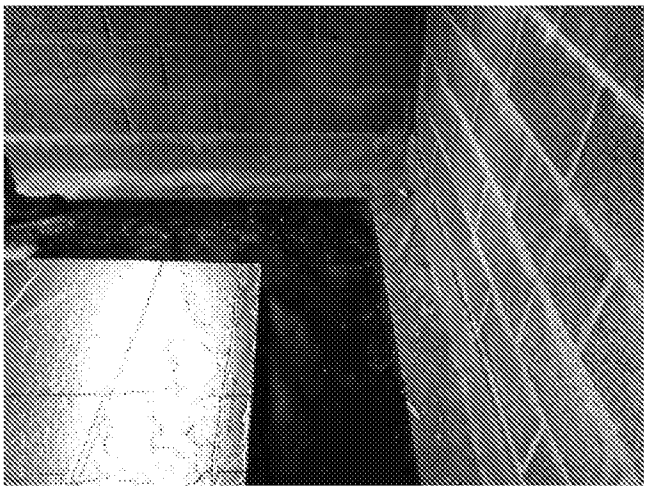
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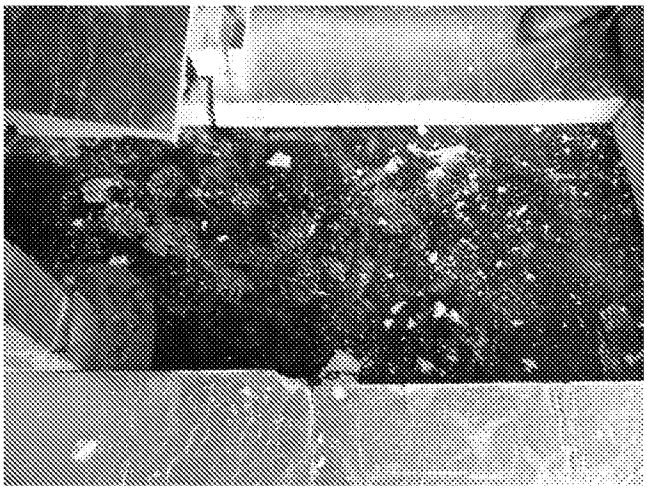
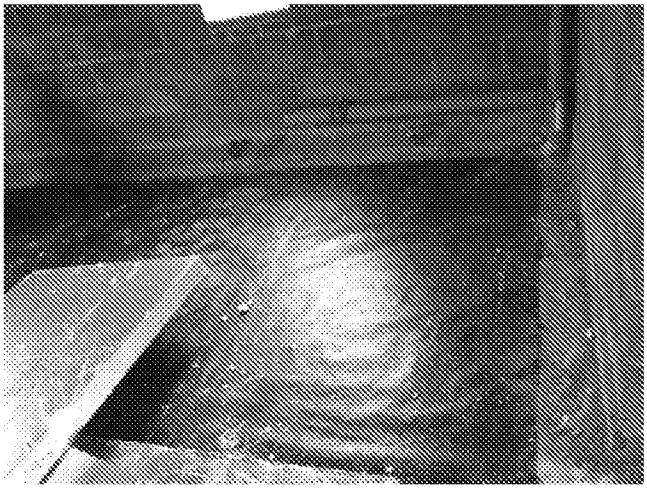
Photograph	*Photograph Title*

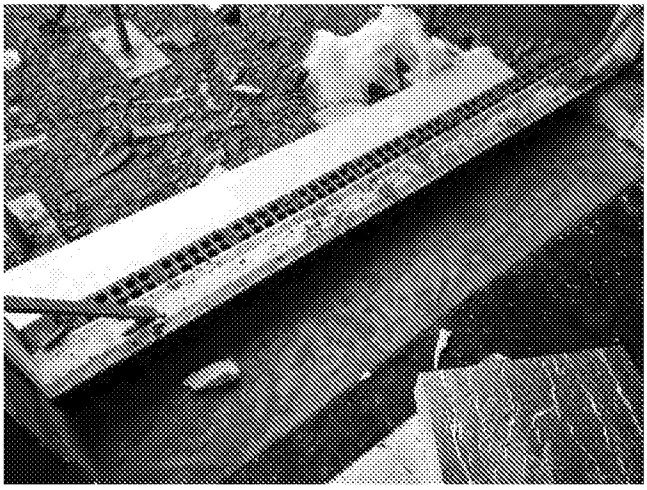
	60 bathroom
	60 lounge
	60 lounge

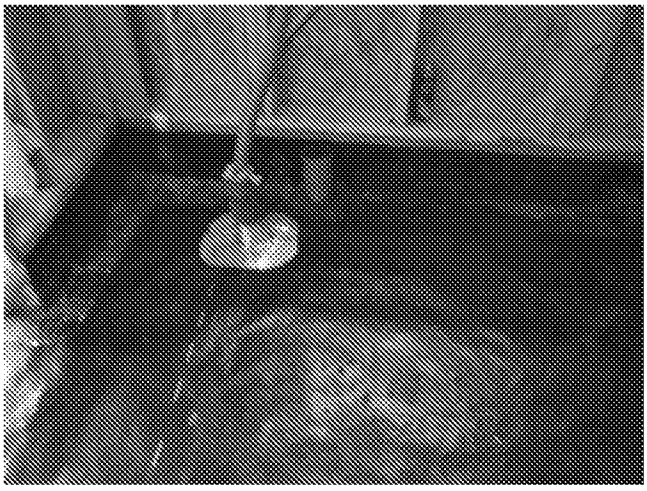
	60 lounge
	60 kitchen
	

	Service sealed and laped.
	Laped patio.
	60 kitchen diner.

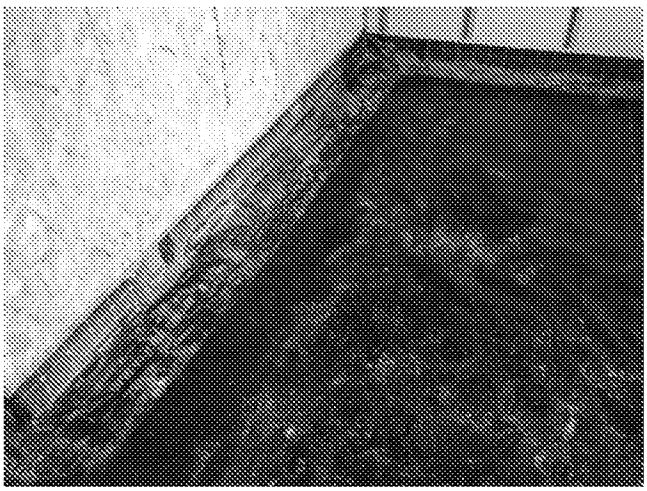
	60 Kitchen diner.
	61
	61

	61
	61
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	61

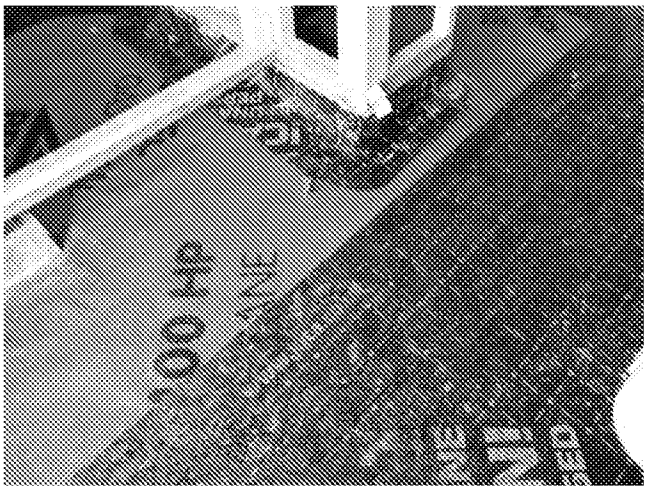
	44
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	46
	46

	Nail under walkway. Plot 46 fail.

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	11/02/2021, 14:04
Site Engineer	Fiona Goode [redacted]
Weather at time of inspection	Cold, overcast, breezy
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Semi-detached houses
Plot No.	Plot 50 - 53
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 as sealed
1.2 Gas membrane type	Black unbranded juta GP1 gas resistant membrane
1.3 Gas membrane condition	Membrane in very good condition well swept
Jointing tape product	Heat sealed double sided tape
1.5 Lapping design	At least 150mm overlap
1.6 Laps, welds and joints seals	Heat sealed, all well sealed
1.7 Service seals	Site made seals, well sealed

Engineer's Prelim Assessment (Mem)

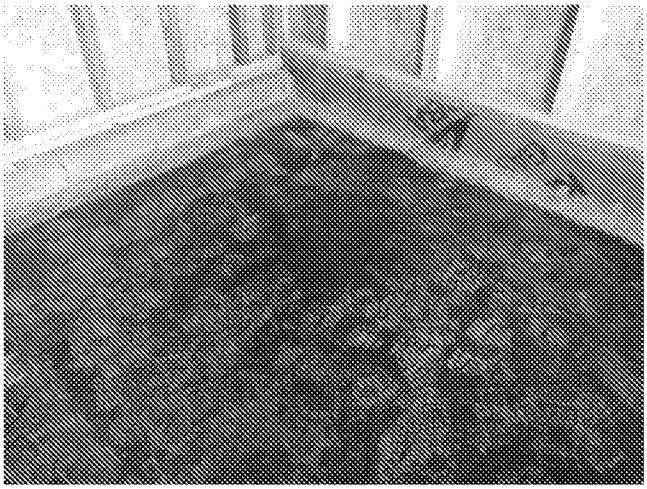
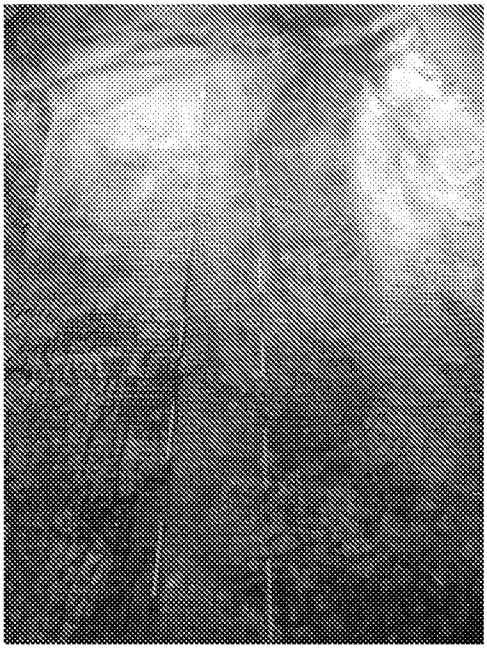
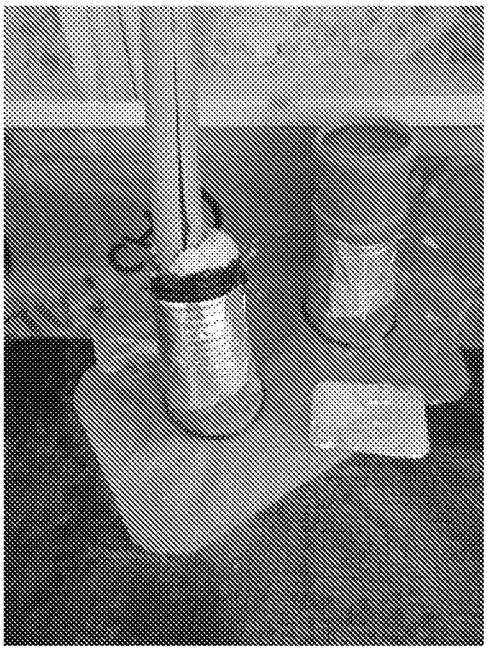
Pass

4. PHOTOGRAPHS

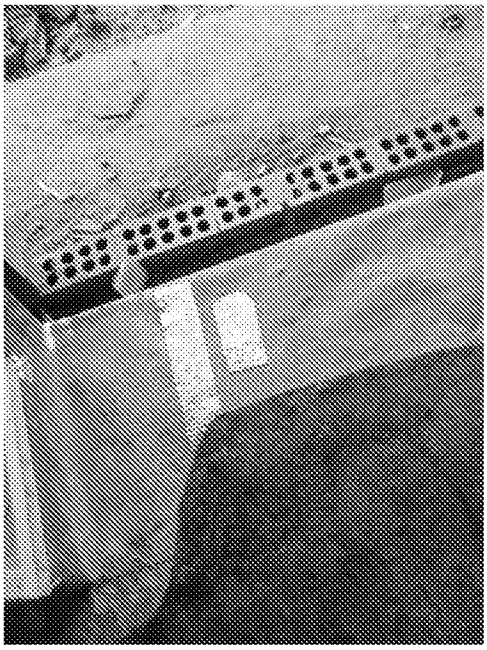
Photographs

(14 records)

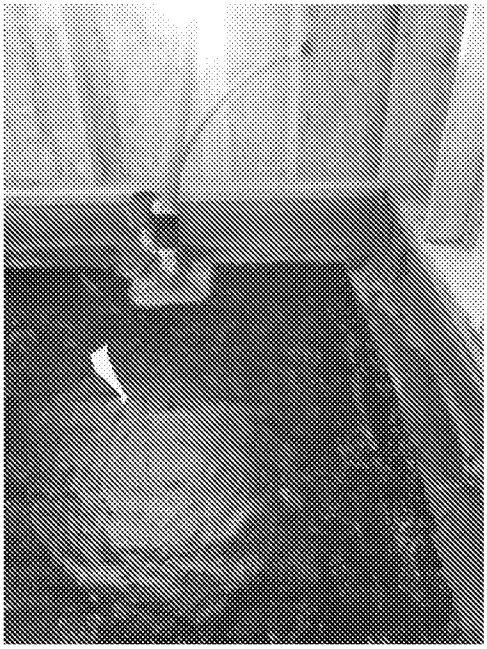
Photograph	*Photograph Title*

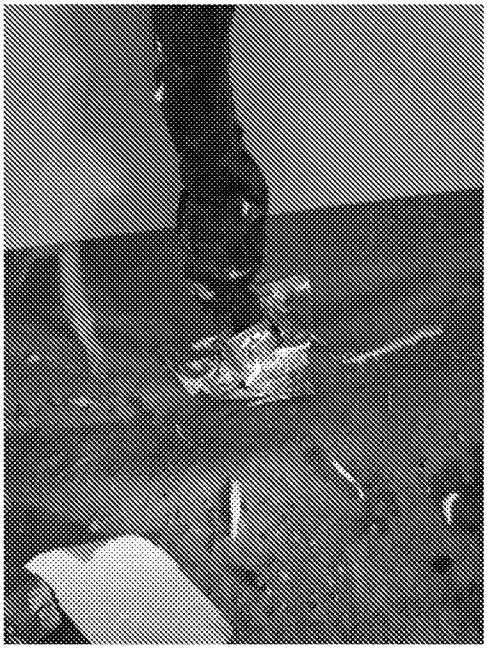
	Plot 50 overview
	Plot 50 joins
	Plot 50 services

	Plot 50
	Plot 51

	Plot 51 services
	Plot 51 overview
	Plot 51 repairs

	Plot 52
	Plot 52 overview

	Plot 52 patch repair
	Plot 53

	Plot 53 joins
	Plot 53 service seal

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close, Littlehampton
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	25/02/2021, 11:39
Site Engineer	

No users

Weather at time of inspection	Dry, cloudy, mild
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential
Plot No.	Plots 54-57
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, membrane fully sealed.
1.2 Gas membrane type	Red Keytec gas membrane.
1.3 Gas membrane condition	Gas membrane generally in good condition. Any holes identified were repaired during the site visit.
Jointing tape product	Heat welded joints.
1.5 Lapping design	Min 150mm overlap.
1.6 Laps, welds and joints seals	All in good condition.
1.7 Service seals	Service seals all in good condition.

Engineer's Prelim Assessment (Mem)

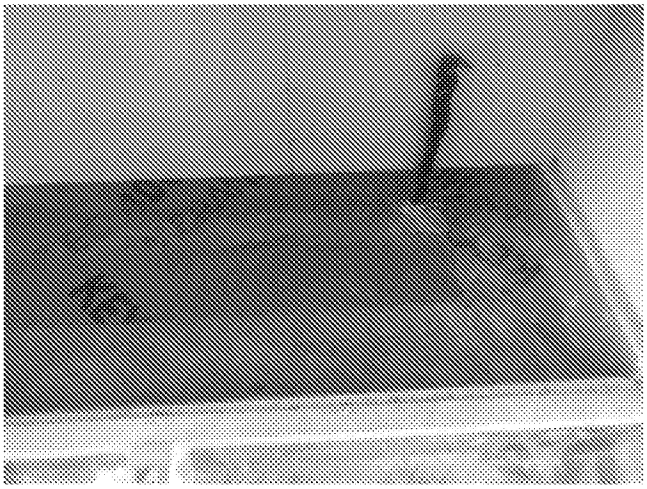
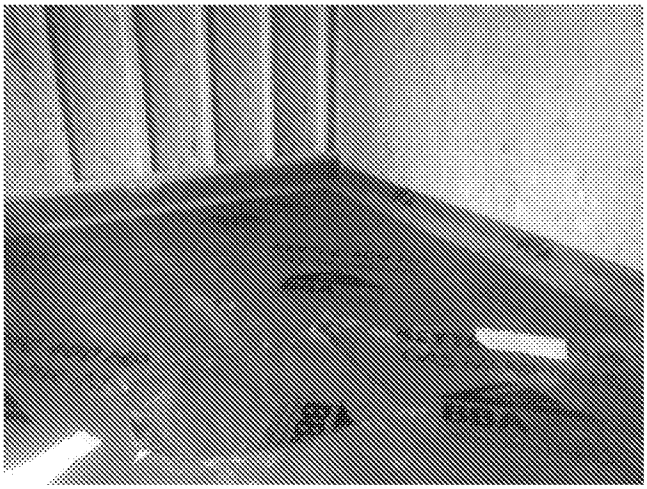
Pass

4. PHOTOGRAPHS

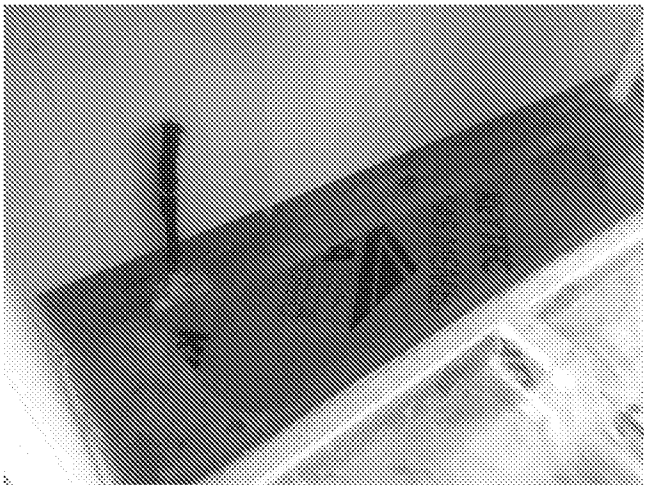
Photographs

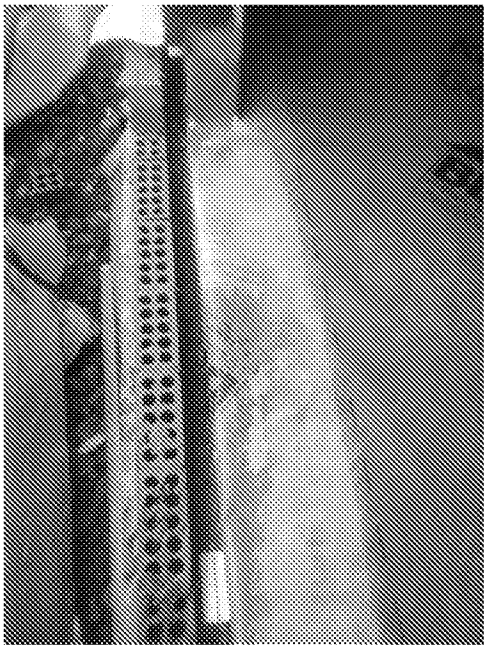
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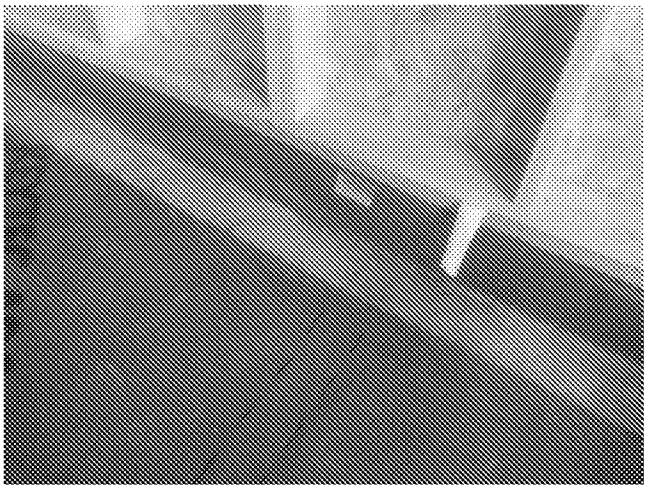
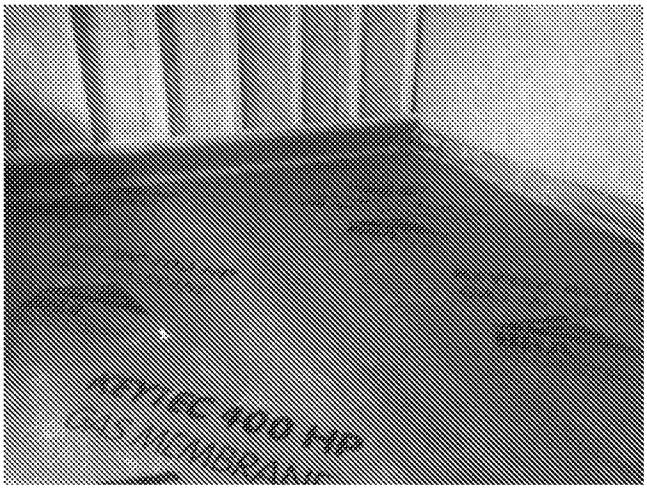
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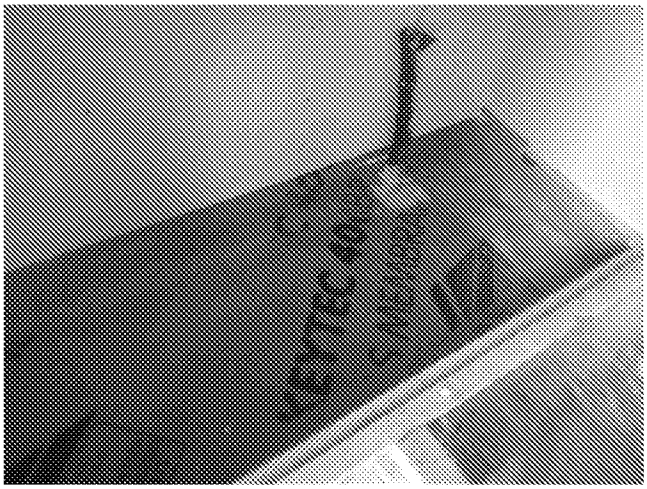
	Plot 54 entrance
	Plot 54 under stairs
	Plot 54 floor

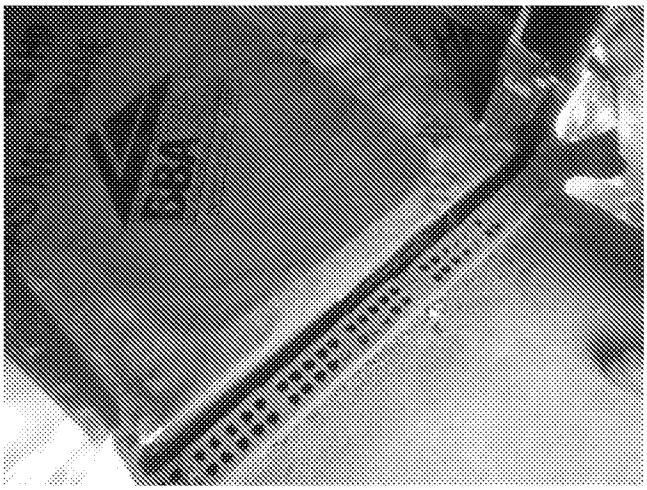
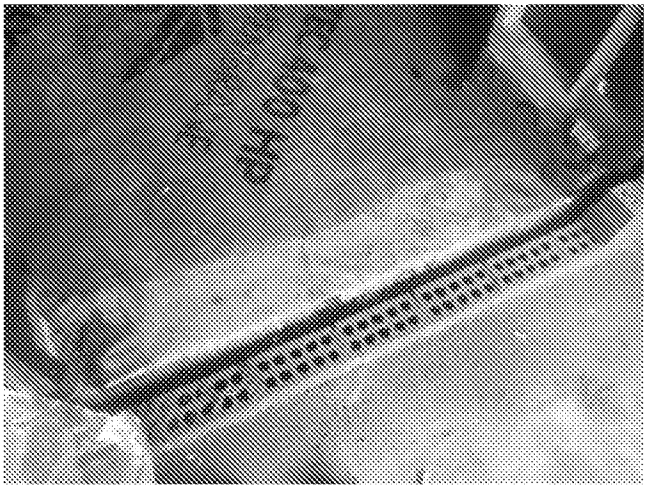
	Plot 54 threshold
	Plot 54 corner detail
	Plot 55 entrance

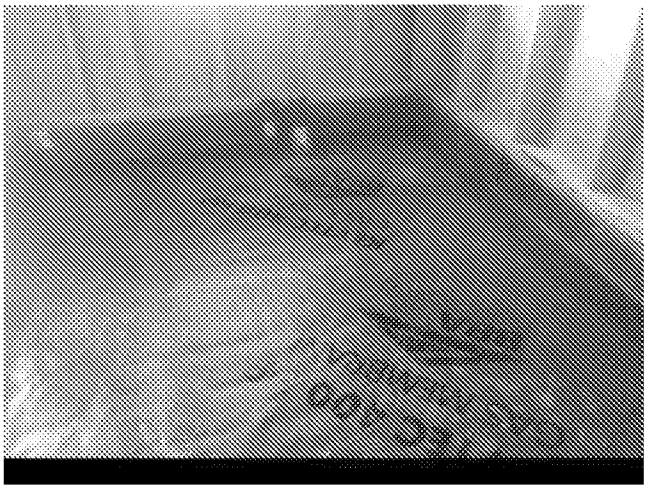
	Plot 55 service seal
	Plot 55 floor
	Plot 55 under stairs

	Plot 55 floor
	Plot 55 floor and threshold
	Plot 55 threshold

	Plot 55 patch repair
	Plot 56 threshold
	Plot 56 floor

	Plot 56 under stairs
	Plot 56 service seals
	Plot 56 floor

	Plot 56 threshold
	Plot 57 threshold
	Plot 57 service seals

	Plot 57 floor and service seals
	Plot 57 under stairs
	Plot 57 threshold

	Plot 57 floor and patching underway

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham Homes
Geo-Environmental Project Manager's Email	[redacted]
Date	11/03/2021, 13:36
Site Engineer	
Katie O'Dea	[redacted]
Weather at time of inspection	Sunny, cool, windy
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Residential
Plot No.	58-59
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	.
1.2 Gas membrane type	.
1.3 Gas membrane condition	.
Jointing tape product	.
1.5 Lapping design	.
1.6 Laps, welds and joints seals	.
1.7 Service seals	.

Engineer's Prelim Assessment (Mem)

Pass

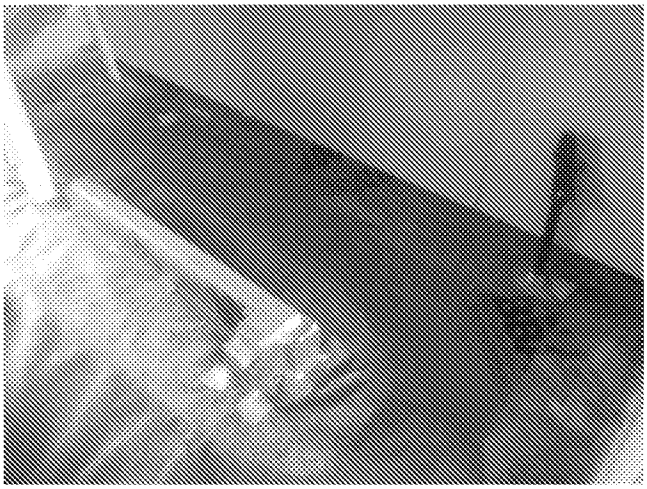
4. PHOTOGRAPHS

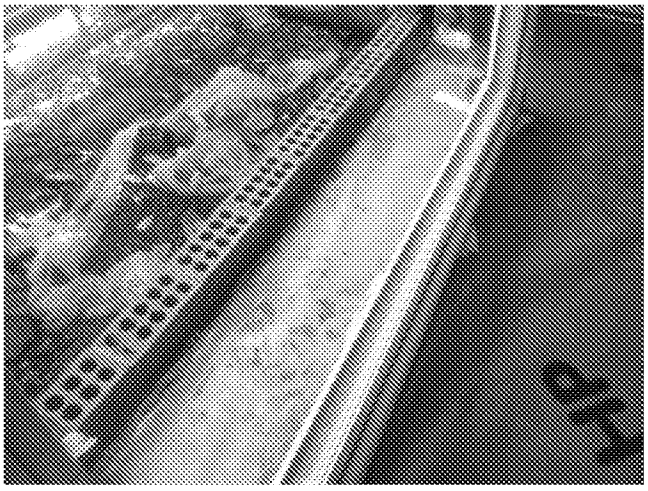
Photographs

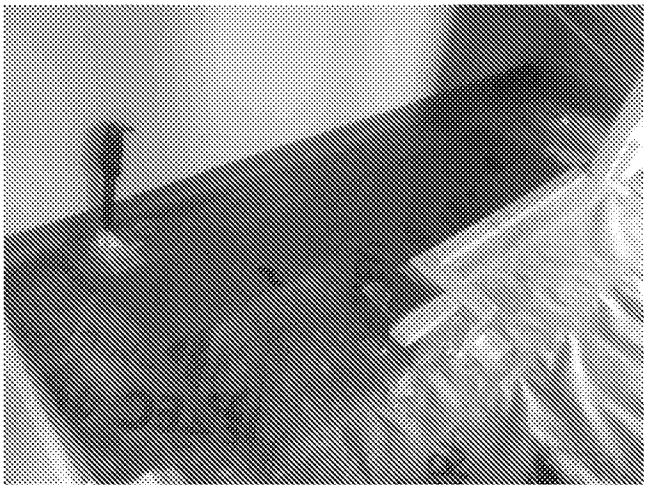
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Photograph	*Photograph Title*

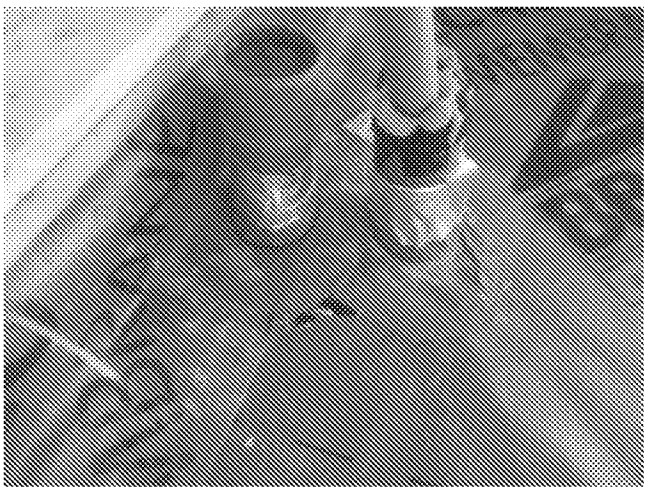
	Plot 58
	Plot 58 floor and service seal
	

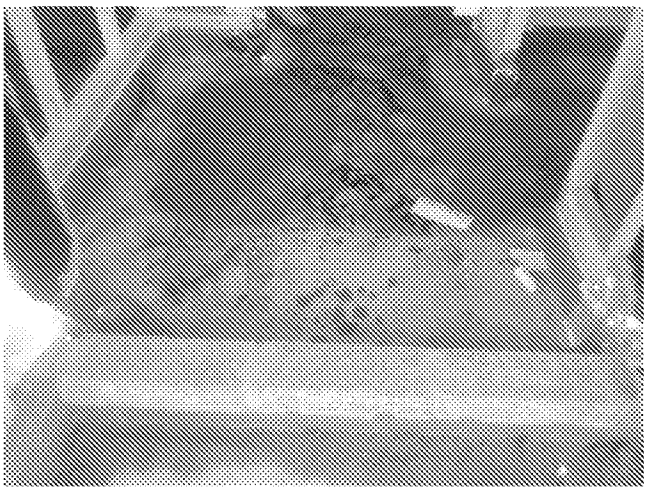
	Plot 58 under stairs
	Plot 58 floor
	Plot 58 Threshold

	Plot 58 patch repair
	Plot 59
	







5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Geo-Environmental

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham
Geo-Environmental Project Manager's Email	[redacted]
Date	17/03/2021, 10:39
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Dry, cool, breezy
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Flats
Plot No.	Block A and Block B
Foundation Type	Suspended
Gas Protection Type	Passive
What is being inspected	[ ] Venting [X] Membrane [ ] Venting and Membrane

1. MEMBRANE

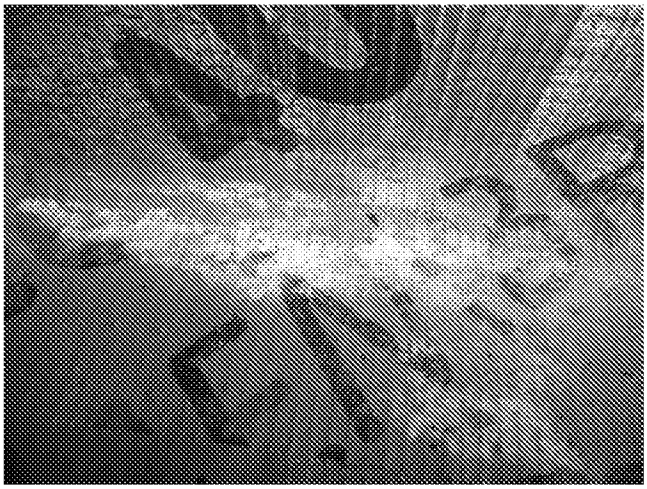
1.1 Condition of sub-grade and underside of membrane	Unable to inspect as sealed
1.2 Gas membrane type	Keytec 400 gas resistant membrane
1.3 Gas membrane condition	Block B - Main floor area generally clear however membrane did require sweeping. Materials were being stored on top of membrane in stairwell and a lot of rubble and debris on membrane in the smaller rooms Block A membrane needs clearing and materials being stored on it
Jointing tape product	Heat sealed joins mainly welded some heat sealed taped joins
1.5 Lapping design	At least 150mm overlap
1.6 Laps, welds and joints seals	All heat sealed joins. Block B - A large number of patch repairs are required Block A - seal around stairs is not sufficient
1.7 Service seals	Services sealed with site made seals, all well sealed
Engineer's Prelim Assessment (Mem)	
Remedial Measures Required	

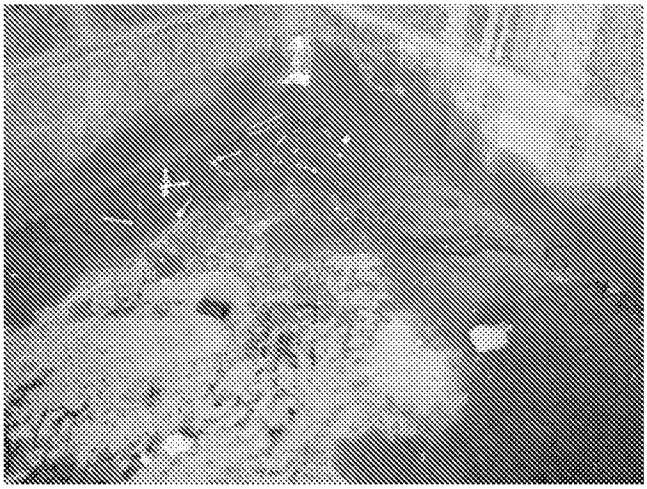
4. PHOTOGRAPHS

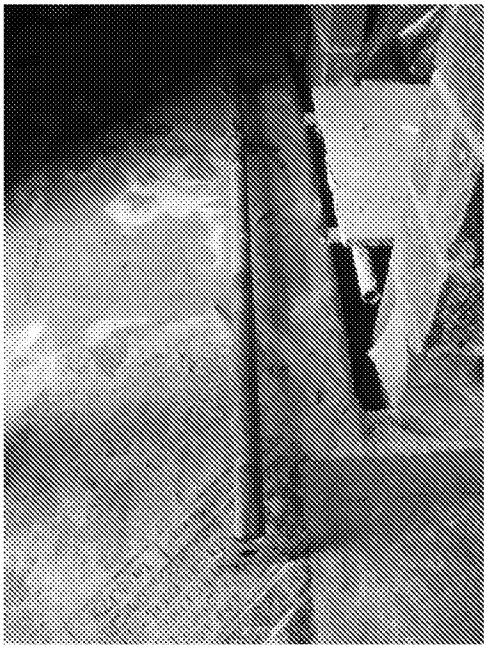
Photographs

(15 records)

Photograph	*Photograph Title*
	Block B overview
	Block B membrane joins
	Block B patch repairs

	Block B damage
	Block B damage
	Block B materials stored

	Block B materials
	Block B
	Block B understairs

	Block B damage
	Block B
	Block A stairs

	Block A not sealed
	Block A
	Bock A materials

5. PASS/FAIL

The gas protection measures inspected:

Details of issues

Approved by

No users

Date

Project Name	Cornfield Close
Project No.	GE18103
Client	Thakeham
Geo-Environmental Project Manager's Email	[redacted]
Date	26/03/2021, 08:49
Site Engineer	
Fiona Goode	[redacted]
Weather at time of inspection	Cool, breezy, sunny
Gas Characteristic Situation	Characteristic Situation 2
Type of development and building/block checked	Flats
Plot No.	Block A and B
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 as sealed
1.2 Gas membrane type	Keytec gas resistant 400 hp membrane
1.3 Gas membrane condition	Generally in good condition, insulation board laid over walkways to protect membrane
Jointing tape product	Double sided heat sealed butyle tape and liquid membrane on concrete stairs
1.5 Lapping design	At least 150mm overlap
1.6 Laps, welds and joints seals	All heat sealed joins and well sealed. Patch repairs over areas of membrane that had been installed as part of the timber frame construction and therefore exposed for sometime
1.7 Service seals	Site made seals, well sealed

Engineer's Prelim Assessment (Mem)

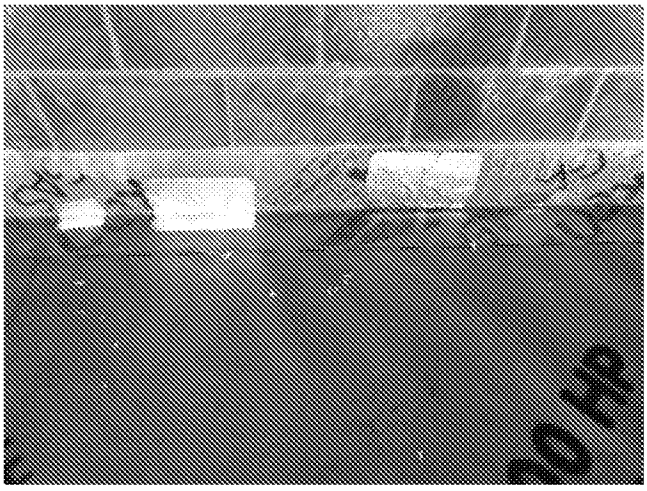
Pass

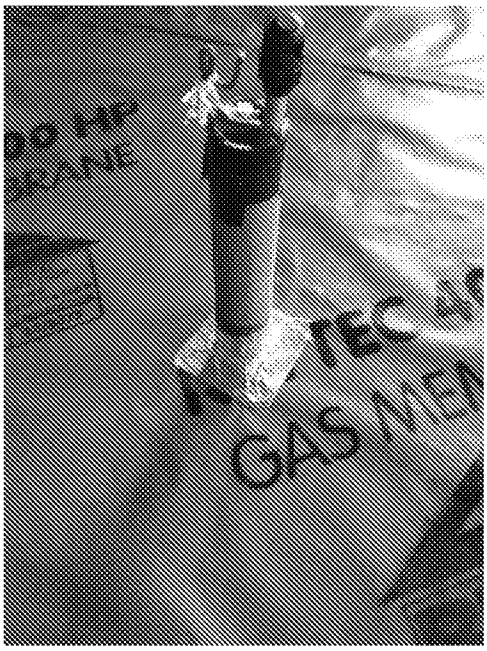
4. PHOTOGRAPHS

Photographs

(15 records)

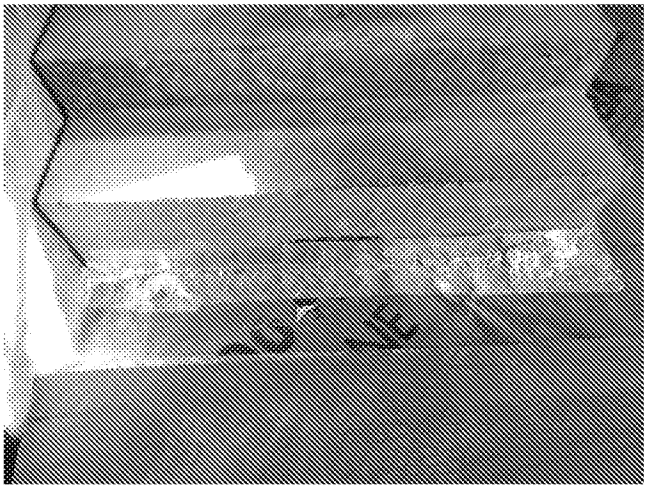
Photograph	*Photograph Title*

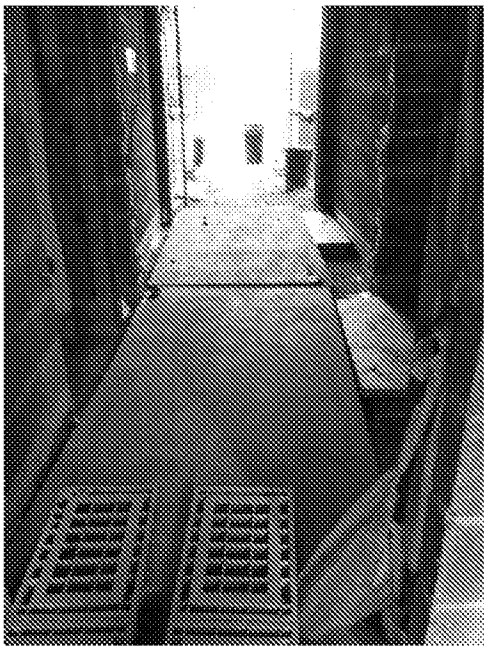
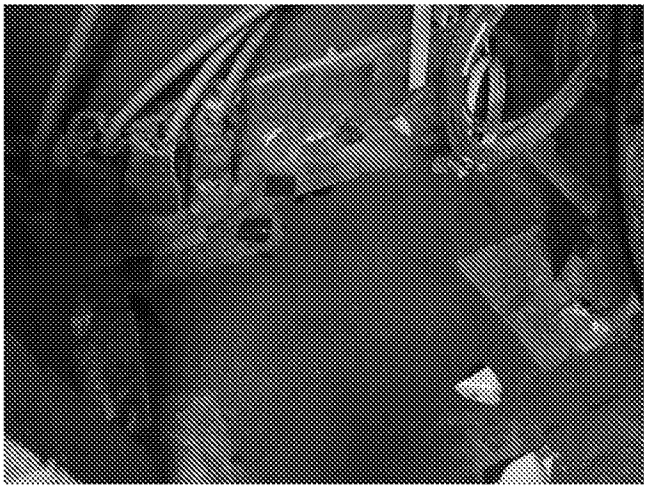
	Block B overview
	Block B repairs
	Block B repairs

	Block B services
	Block B walkway

	Block B stairs
	Block B service cardboards

	Block B overview
	Block B patch repairs
	Block B

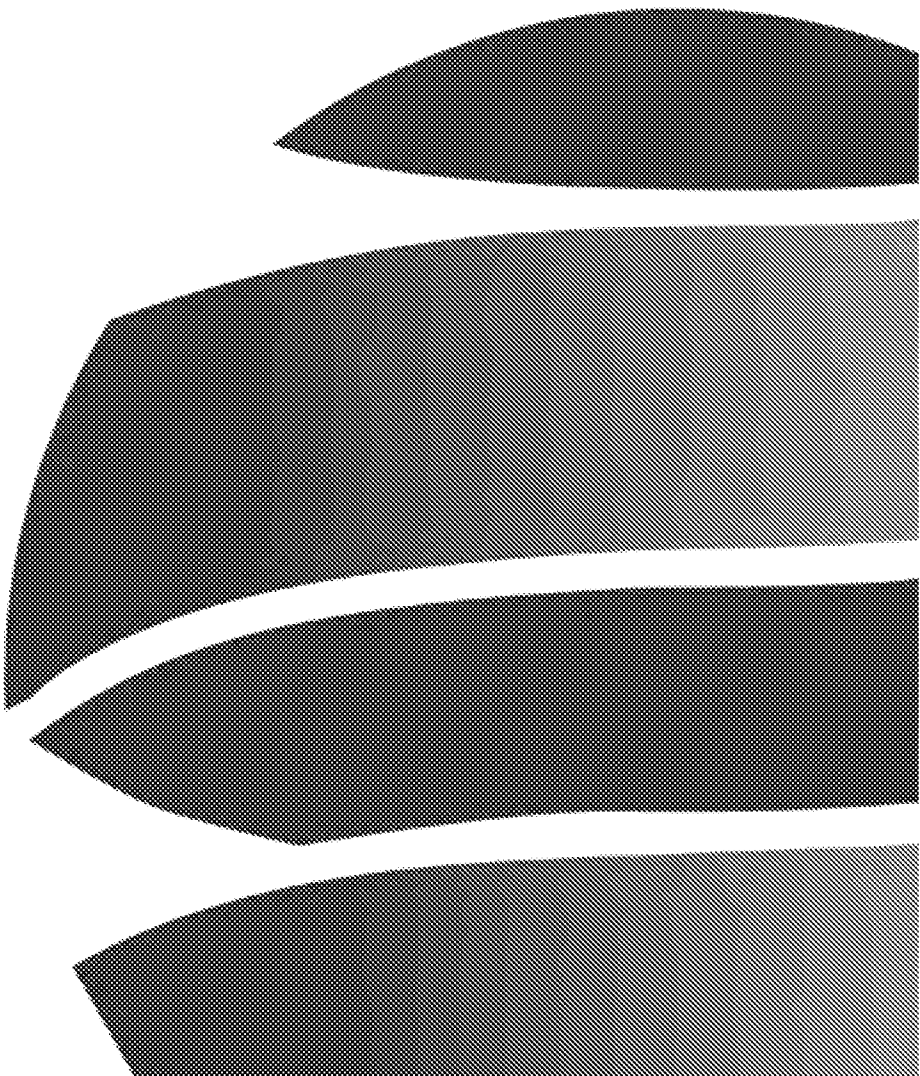
	Block B
	Block A stairs
	Block A under stairs

	Block A walkway
	Block A service cardboard

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

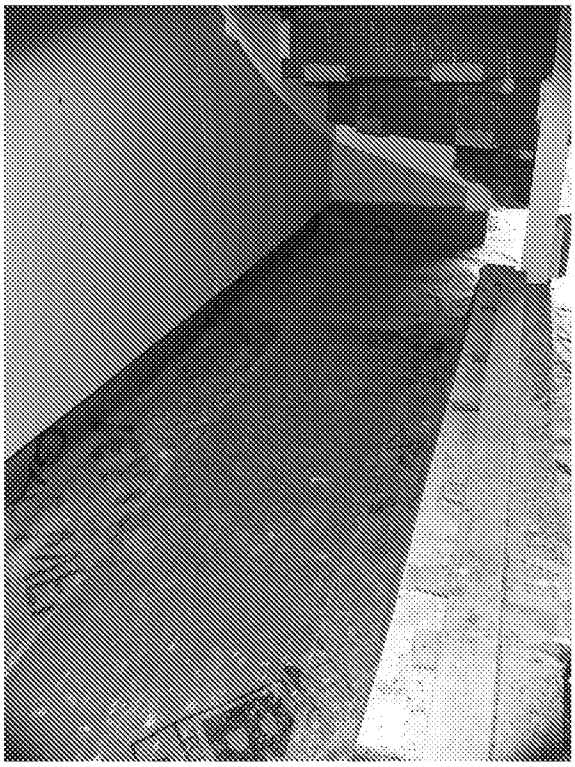


Plate 2 – Infills Plot 11

ARUN DISTRICT COUNCIL LU/191/21/DOC

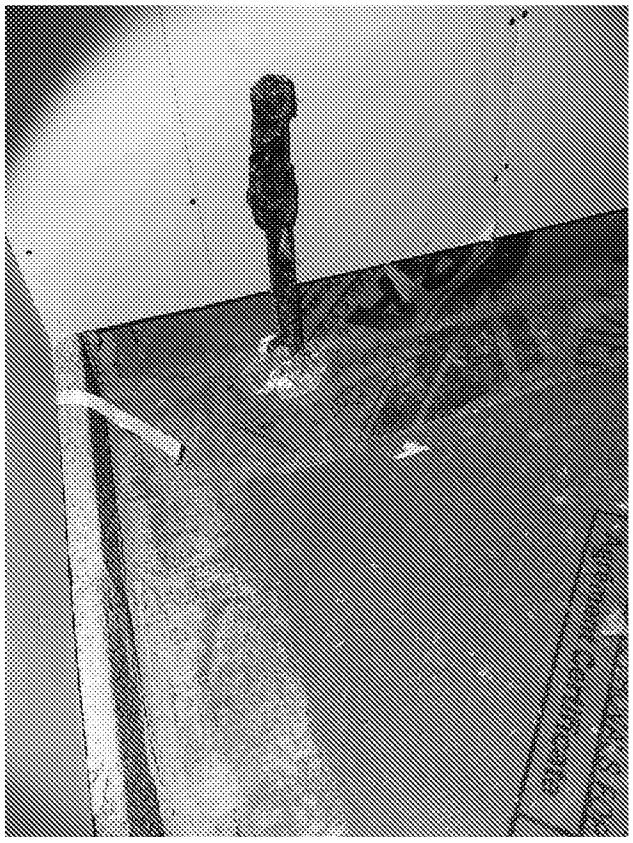


Plate 3 – Infills Plot 11

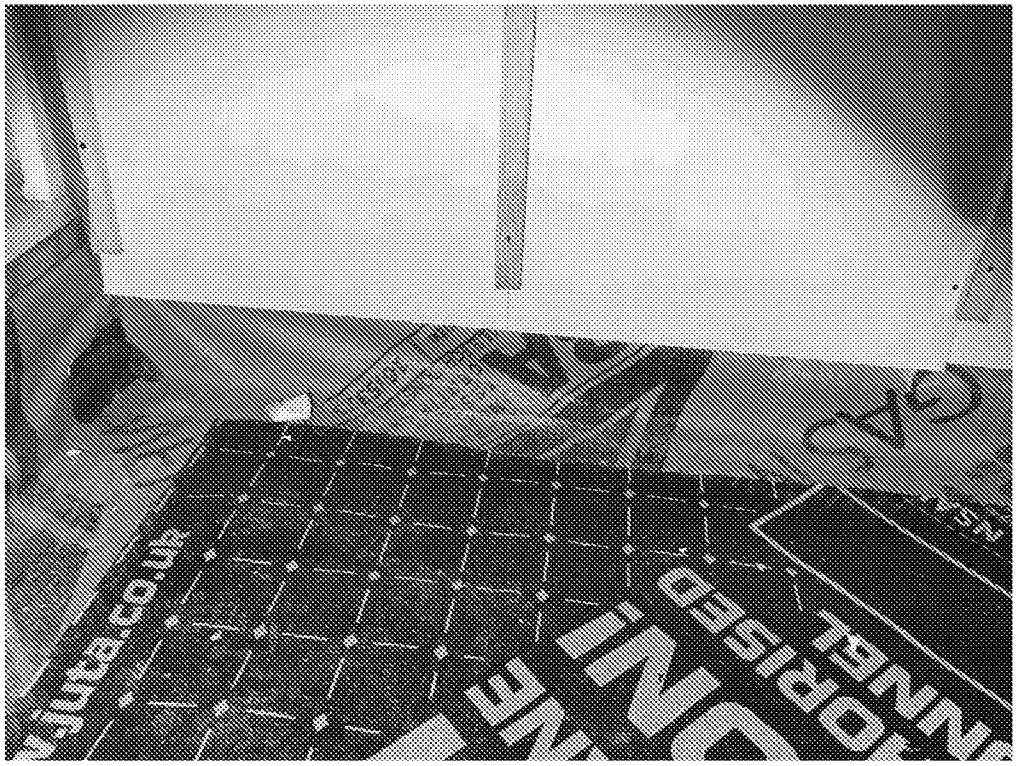


Plate 4 – Infills Plot 11

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 5 – Infills Plot 11

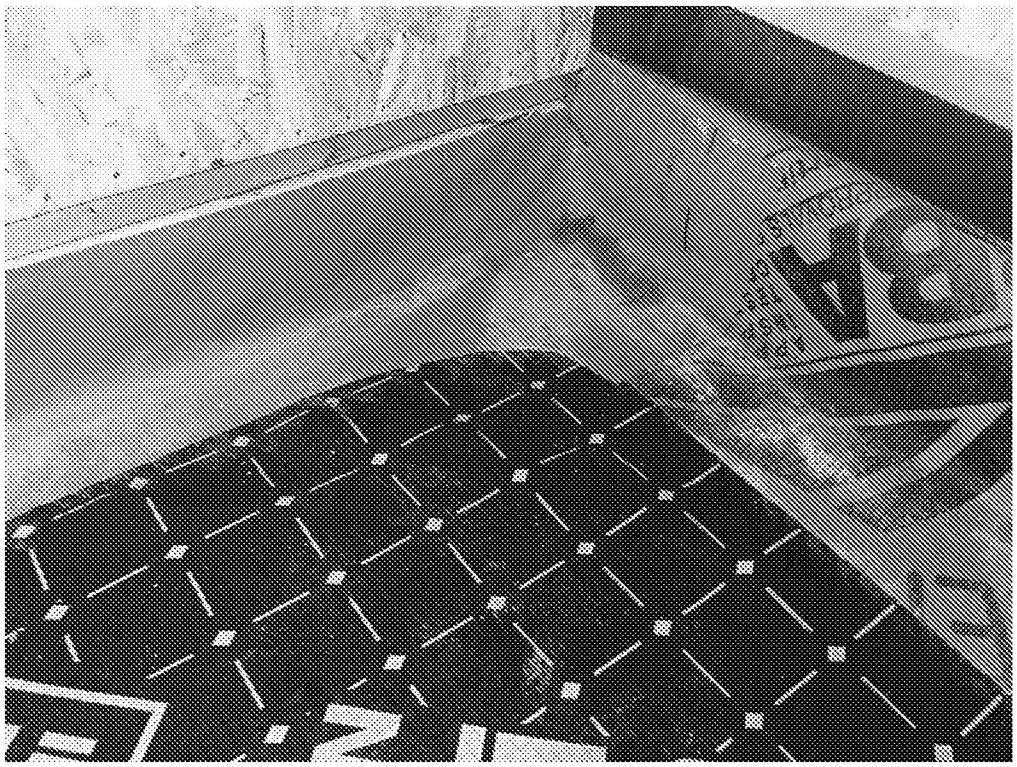


Plate 6 – Infills Plot 11

ARUN DISTRICT COUNCIL LU/191/21/DOC



Plate 7 – Infills Plot 11

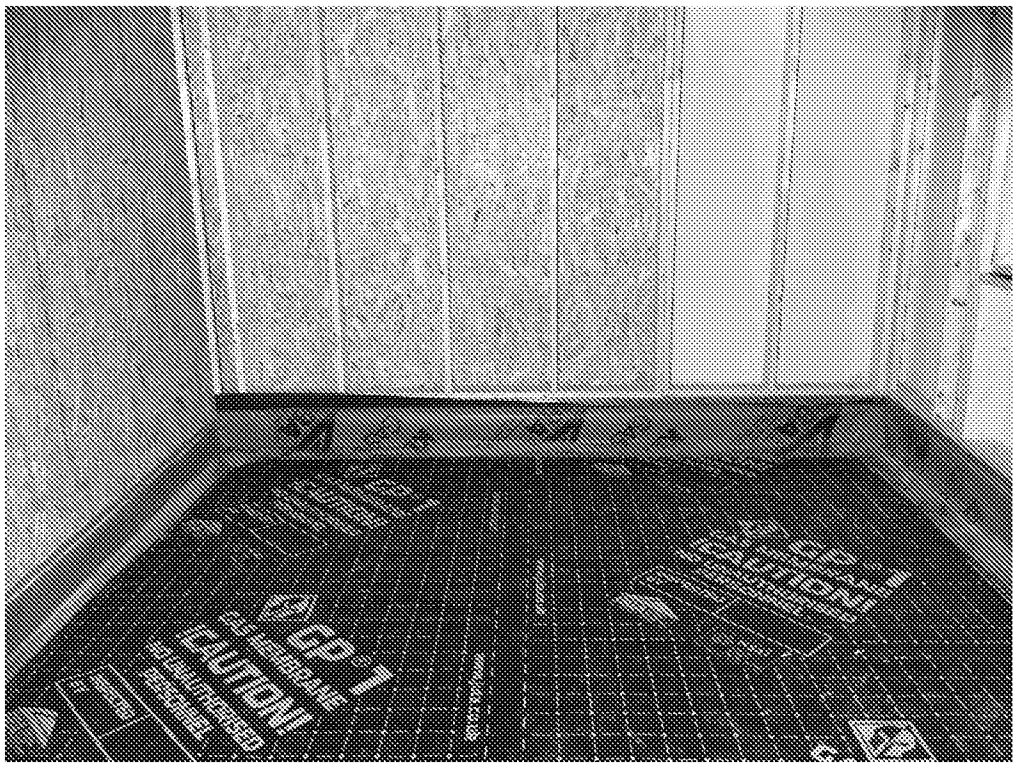


Plate 8 – Infills Plot 11

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

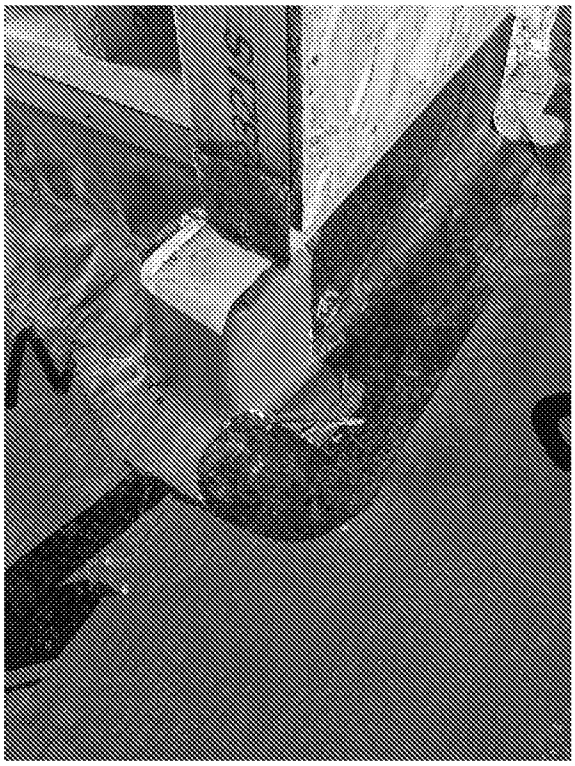


Plate 13 – Infills Plot 14



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

Photographs provided by client (Thakeham)

Plot 35







ARUN DISTRICT COUNCIL LU/191/21/DOC

Plot 38





ARUN DISTRICT COUNCIL LU/191/21/DOC





ARUN DISTRICT COUNCIL LU/191/21/DOC

Plot 39





ARUN DISTRICT COUNCIL LU/191/21/DOC





ARUN DISTRICT COUNCIL LU/191/21/DOC

Plot 43



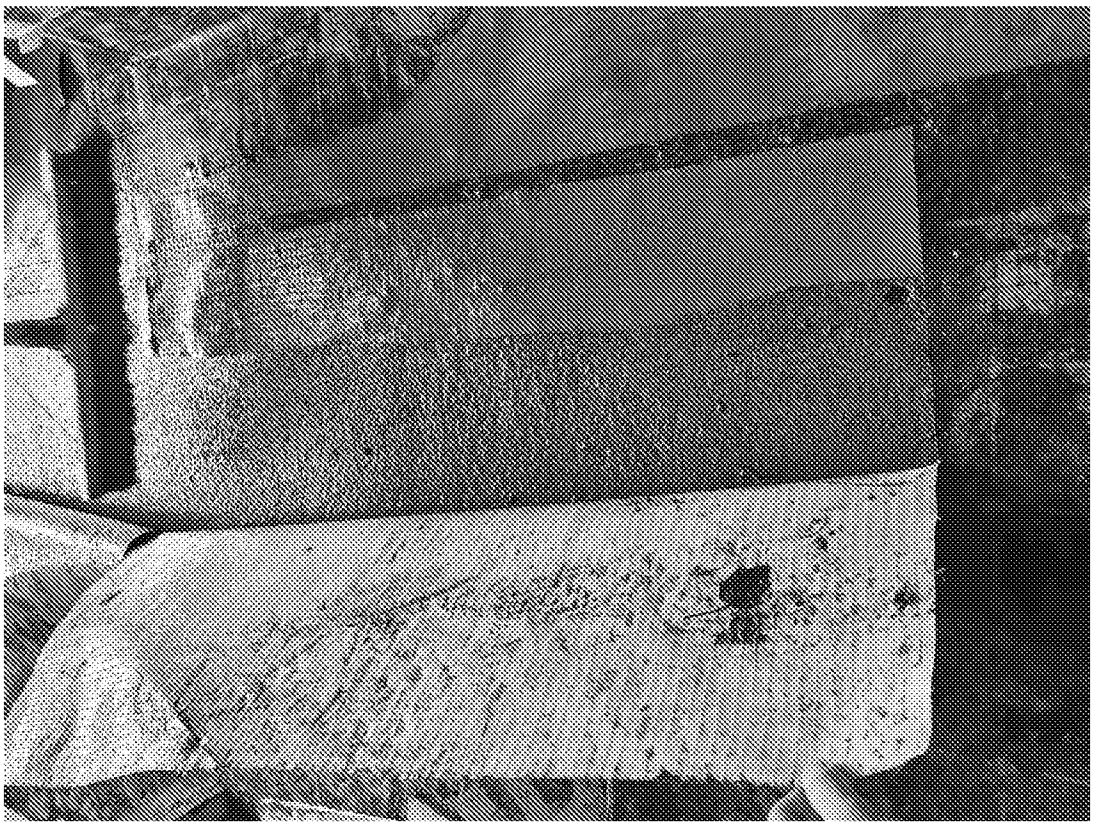
ARUN DISTRICT COUNCIL LU/191/21/DOC





ARUN DISTRICT COUNCIL LU/191/21/DOC

Plot 46





ARUN DISTRICT COUNCIL LU/191/21/DOC



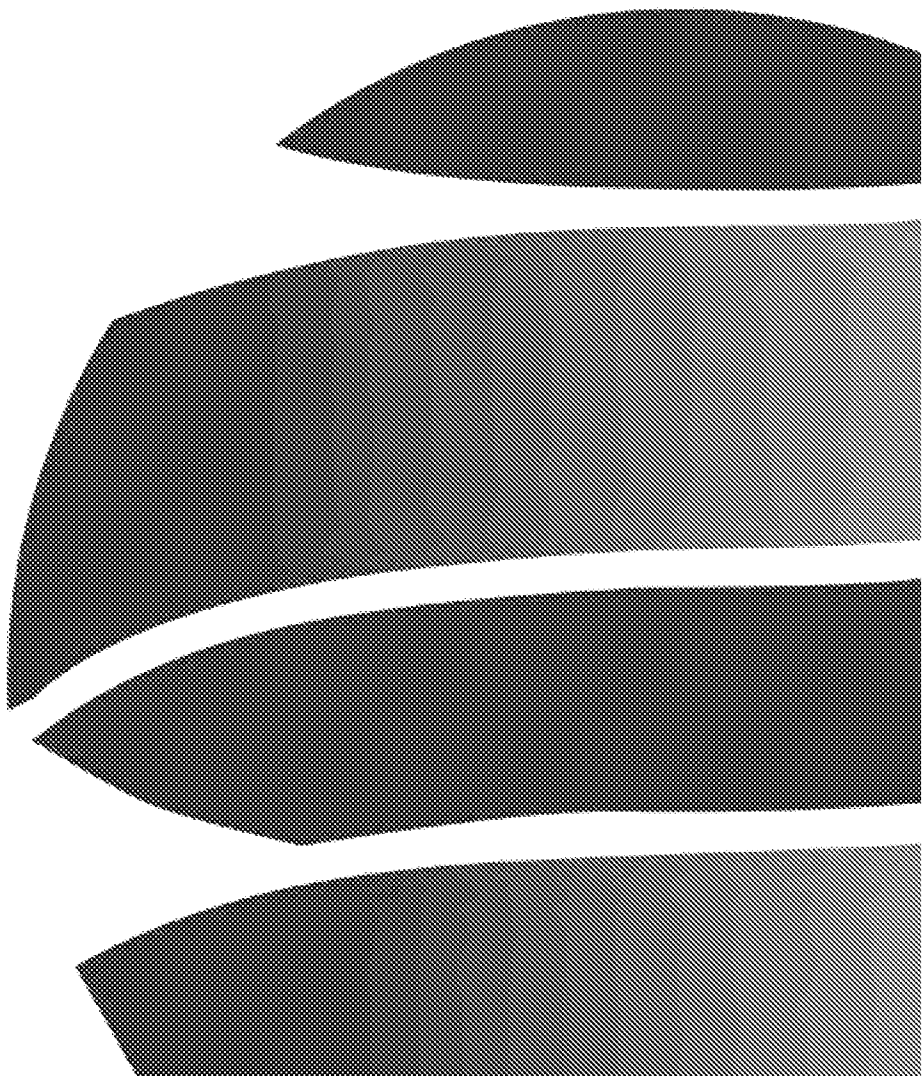
ARUN DISTRICT COUNCIL LU/191/21/DOC

Geo-Environmental

APPENDIX A

Topsoil Delivery Tickets

(provided by client)





BELL & SONS
CONSTRUCTION LIMITED

WTN 08112

DATE 27/11/22

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 Topsoil EWC
- ☐ Description of waste:
- ☐ CL:AIRE:

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 Fitzalan Hotels Ltd

SITE ADDRESS Kingsfield Lodge

[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
- ☐ 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 07649

DATE [2][7][/][2]

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, Warnlands 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 12 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 Little Cottage Nurseries Ltd

SITE ADDRESS Little Cottage Nurseries Ltd
Little Cottage Lane

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

[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 | 41302

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 06242
DATE 17/7/20
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 | 41302

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: Top Soil
- ☐ CL:AIRE

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

- ☐ LOOSE 12.5 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 Fitzpatrick Homes
SITE ADDRESS Little Queens Park

[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

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 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 170304
- ☐ Other EWC
- ☐ Description of waste
- ☐ CL_ABPE

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 08314

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 170302
- [ ] Bituminous mixture (tarmac) 170302
- [ ] Mixed Construction & Demo Waste 170904
- [x] Other [redacted] EWC [redacted]
- [ ] Description of waste:
- [ ] CL:AIRE:

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

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

SKIP SIZE [redacted]
- [ ] 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 08189

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

WTN 08191

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

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- ☐ 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 [redacted]

SITE ADDRESS [redacted]

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08307
DATE 4/11/24
TIME ON SITE 07:10
TIME OFF SITE 17:30

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 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 T HAZELDEN HOMES

SITE ADDRESS CORNFIELD CLOSE.
[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 04917

DATE 16/12/20

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Winlands 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: Top Soil 170504
- ☐ CLARIE:

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 Thornhill Homes

SITE ADDRESS 2 Hazelhurst Rise

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 07626

DATE 27/7/20

TIME ON SITE

TIME OFF SITE

North Grange Farm House, Wiwlands 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
- ☐ 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 07974

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 [redacted]
- ☐ CL:AIRE [redacted]

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 [redacted]

SITE ADDRESS [redacted]

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08305

DATE [redacted]

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 [redacted] 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 [redacted]

SITE ADDRESS [redacted]

[redacted]

BELL & SONS
CONSTRUCTION LIMITED

WTN 08303

DATE [redacted]

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 [redacted] EWC
- ☐ Description of waste
- ☐ CL:AIRE

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

☐ LOOSE [redacted] 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 08306

DATE 13/11/20

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 Timber EWC
- ☐ Description of waste:
- ☐ CL:AIRE:

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

- ☑ LOOSE 12 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 04915
DATE 20/7/21
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 Hollycroft Homes

SITE ADDRESS Land at Ellinswood

[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

Excel copies of reports are only valid when accompanied by this PDF certificate.

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
This certificate should not be reproduced, except in full, without the express permission of the laboratory.
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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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

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.

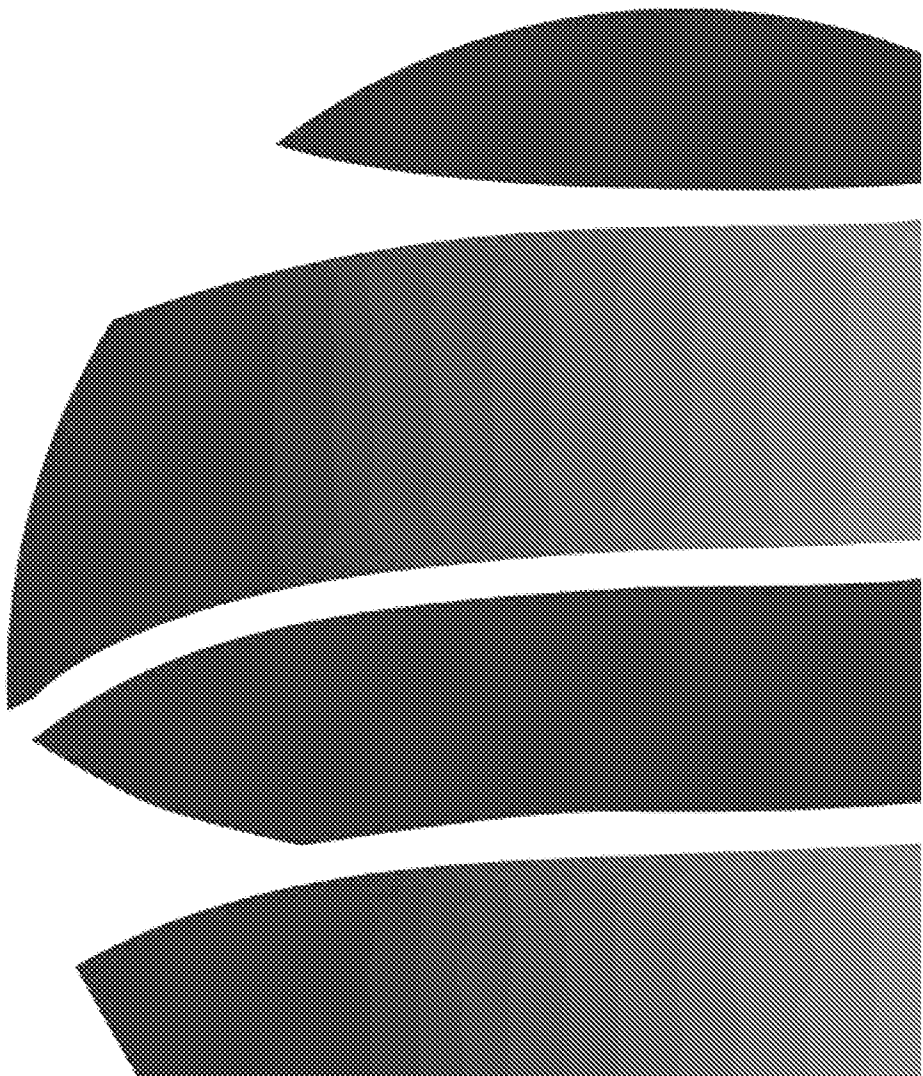
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The results included within the report are representative of the samples submitted for analysis.

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

APPENDIX E

Visual Inspection Records of Soil Cover System



Geo-Environmental

ID	GE18103
Project Name	Cornfield Cl
Client	Thakeham Homes
Engineers	
Katie O'Dea	[redacted]
Project Manager	
	No users
Location	Littlehampton
Date	11/03/2021

Details of Hole

(7 records)

Hole ID	Plot 42
Plot No./Position	Plot 42
Date of Hole	11/03/2021, 12:29
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.
0.25	0.65	Orangish brown slightly clayey fine SAND with some black flecking.

Samples

(2 records)

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

Pass/Fail

(X) Pass
( ) Fail

Remarks

Photo of Spoil



Photo of hole with tape in place



Photographs

(1 record)

Photograph



Description	Plot 42-43

Hole ID	Plot 30
Plot No./Position	Plot 30
Date of Hole	11/03/2021, 12:38
Hole Type	HP
Final Depth	0.7

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.2	Dark brown slightly clayey gravelly fine SAND with some brick fragments and some rootlets. Gravel is fine to medium sub angular flint.
0.2	0.7	Orangish brown slightly clayey slightly gravelly fine SAND with rare brick fragments. Gravel is fine to medium sub angular flint.

Samples

(2 records)

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

0.4		ES	2

Pass/Fail	(X) Pass ( ) Fail
Remarks	Unable to see orange terram due to water in base of pit

Photo of Spoil



Photo of hole with tape in place



Photographs

(2 records)

Photograph



Description	Plot 30

Photograph



Description	Plots 30-35

Hole ID	Plot 32
Plot No./Position	Plot 32
Date of Hole	11/03/2021, 12:55
Hole Type	HP
Final Depth	0.75

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.3	Dark brown slightly clayey gravelly SAND with rare brick fragments and some rootlets. Gravel is fine to medium sub angular flint.
0.3	0.75	Orangish brown slightly clayey gravelly SAND with some black flecking.

Samples

(2 records)

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

Pass/Fail	(X) Pass ( ) Fail
Remarks	Unable to see orange terram due to water in base of pit

Photo of Spoil



Photo of hole with tape in place



Hole ID	Plot 33
Plot No./Position	Plot 33
Date of Hole	11/03/2021, 13:01
Hole Type	HP
Final Depth	0.6

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.2	Dark brown slightly clayey gravelly fine SAND with some rootlets and rare brick fragments.
0.2	0.6	Orangish brown slightly clayey slightly gravelly fine SAND with some black flecking.

Samples

(2 records)

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

Pass/Fail

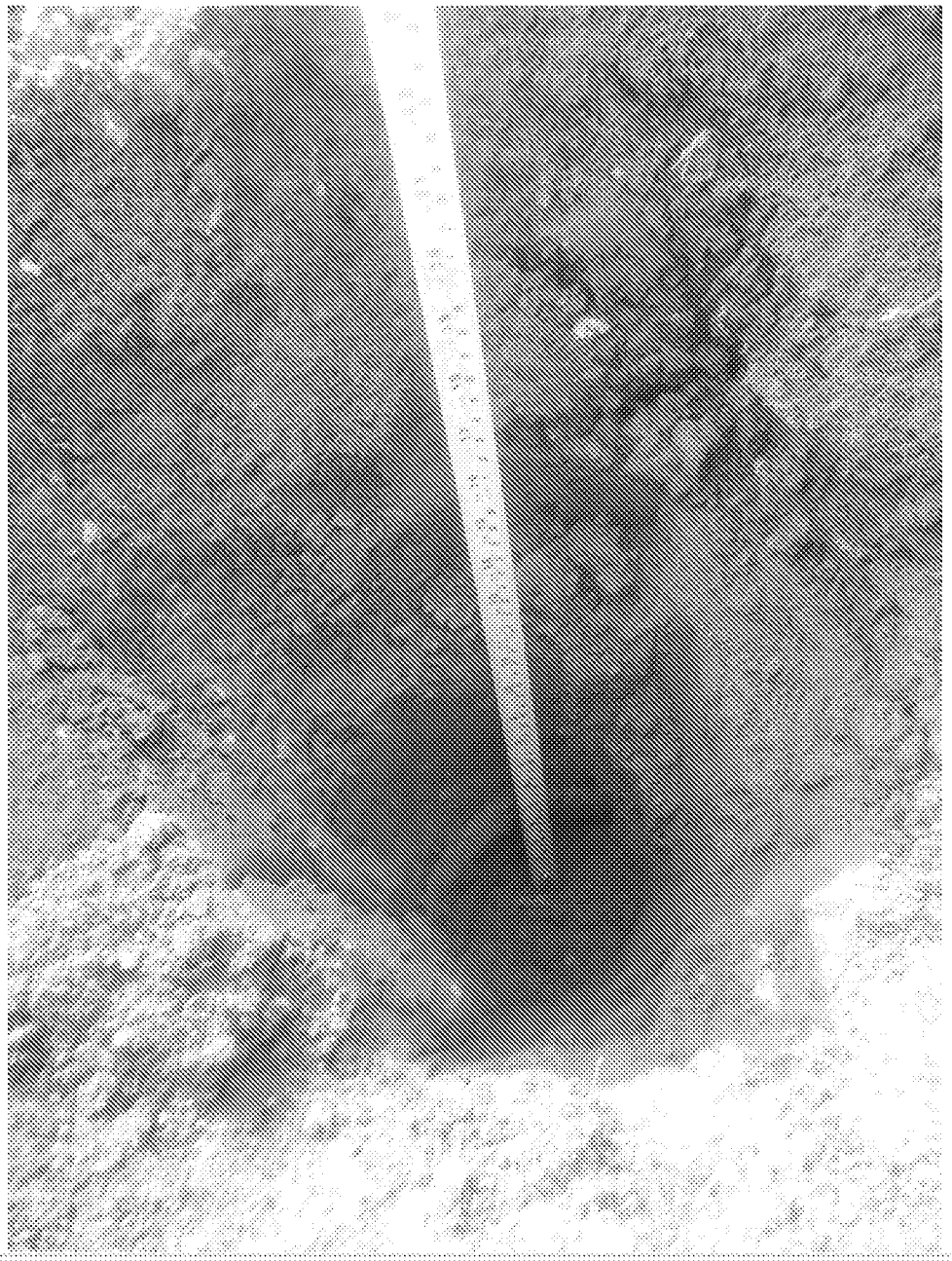
(X) Pass
( ) Fail

Remarks

Photo of Spoil



Photo of hole with tape in place



Hole ID	Plot34
Plot No./Position	Plot 34
Date of Hole	11/03/2021, 13:09
Hole Type	HP
Final Depth	0.7

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.2	Dark brown slightly clayey gravelly SAND with rare brick fragments and some rootlets
0.2	0.7	Orangish brown slightly gravelly clayey fine SAND with some black flecking

Samples

(2 records)

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

Pass/Fail

(X) Pass
( ) Fail

Remarks

Photo of Spoil

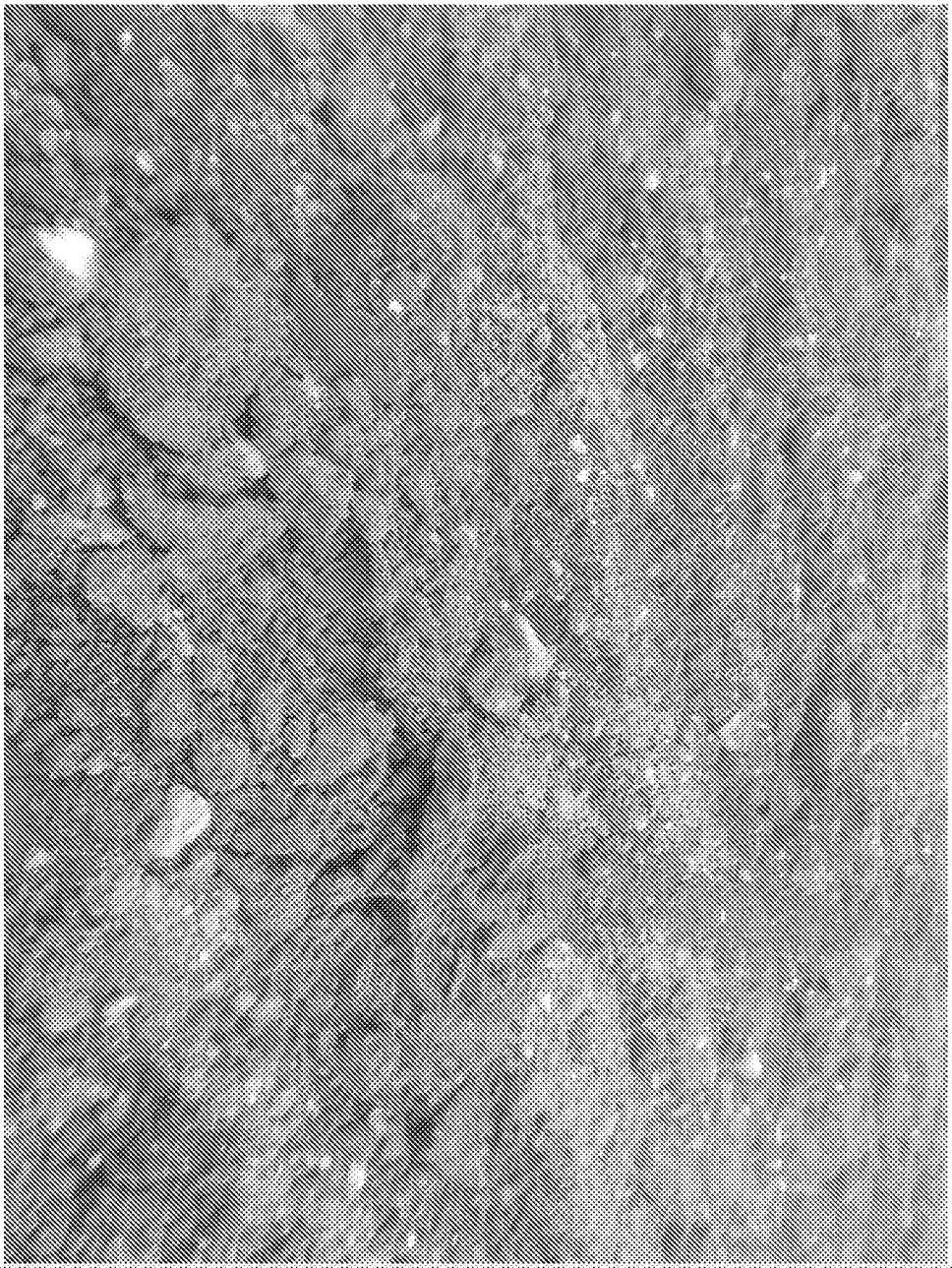
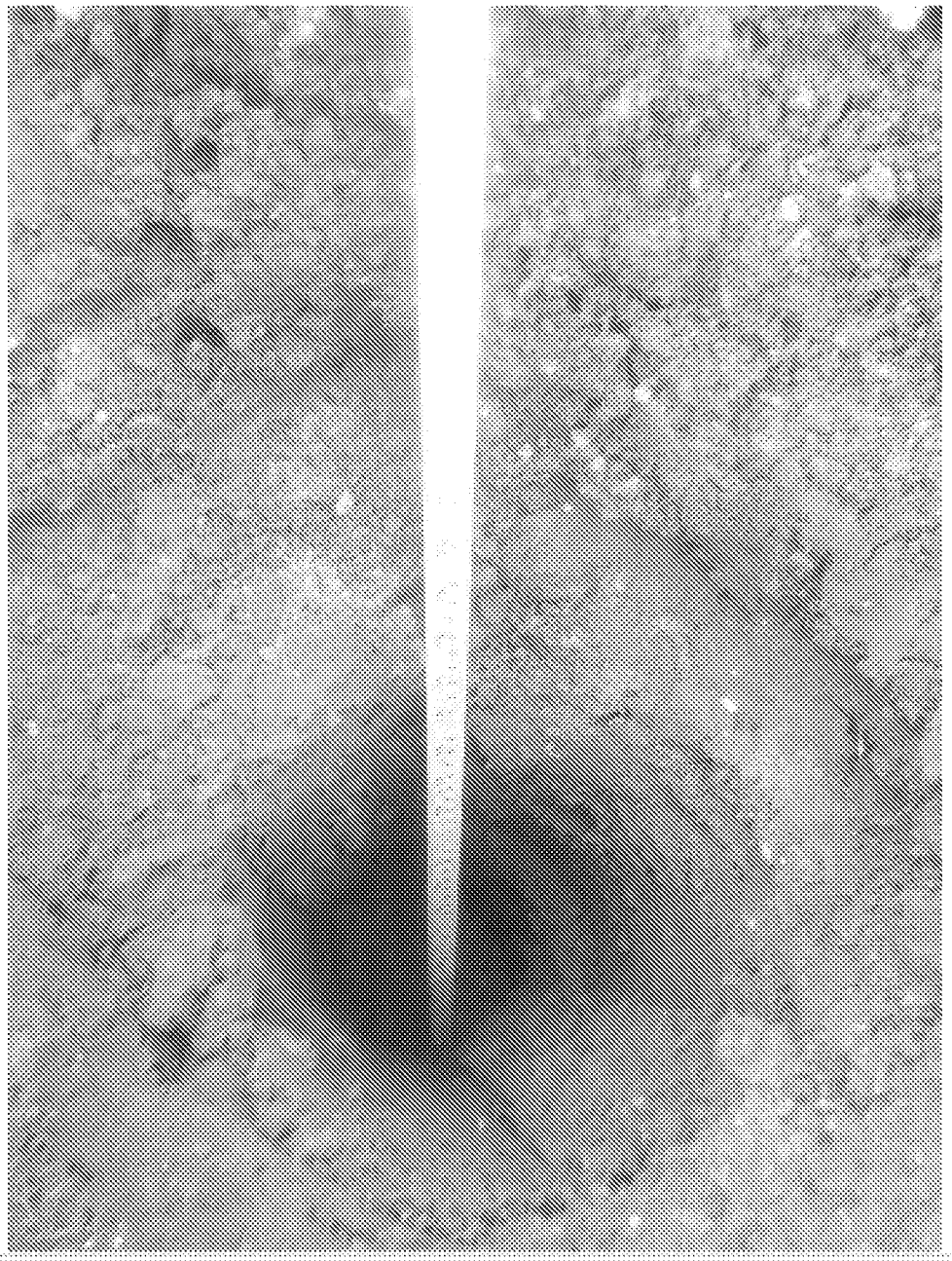


Photo of hole with tape in place



Hole ID	Plot 35
Plot No./Position	Plot 35
Date of Hole	11/03/2021, 13:16
Hole Type	HP
Final Depth	0.7

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.25	Dark brown slightly clayey gravelly SAND with rare brick fragments and some rootlets.
0.25	0.7	Orangish brown slightly gravelly clayey fine SAND with some black flecking.

Samples

(2 records)

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

Pass/Fail

(X) Pass
( ) Fail

Remarks

Photo of Spoil

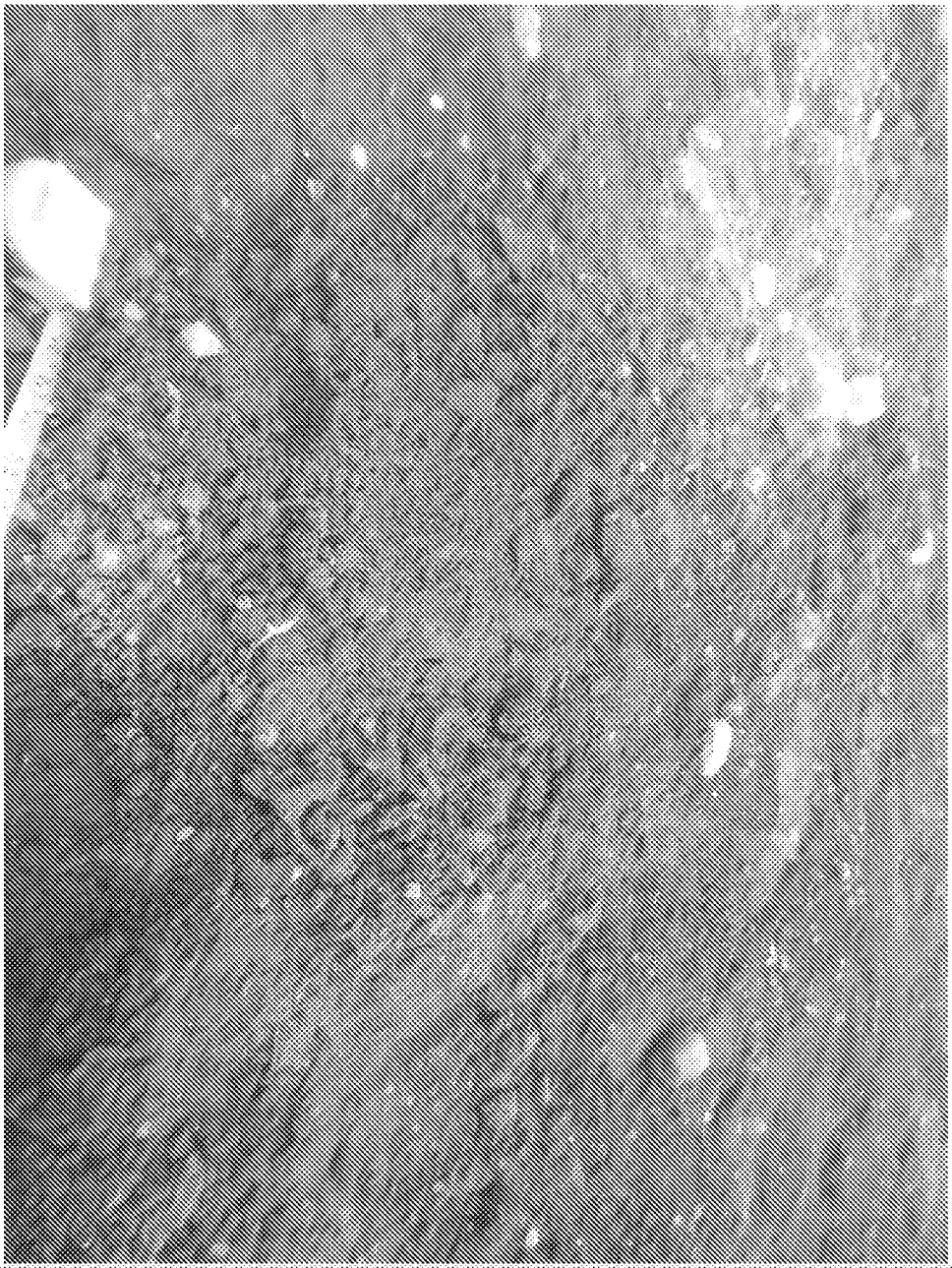


Photo of hole with tape in place



Photographs

(1 record)

Photograph



Description	Plot 35 looking towards plot 30

Hole ID	Plot 43
Plot No./Position	Plor 43
Date of Hole	11/03/2021, 13:28
Hole Type	HP
Final Depth	0.6

Ground Conditions

(2 records)

Top Depth	*Base Depth*	*General description of stratum*
0	0.2	Dark brown clayey gravelly fine SAND with some rootlets and some brick fragments.
0.2	0.6	Orangish brown slightly clayey gravelly SAND with brick fragments and some concrete rubble. Gravel is fine to coarse sub angular flint.

Samples

(2 records)

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

Pass/Fail	(X) Pass ( ) Fail
Remarks	

Photo of Spoil



Photo of hole with tape in place



Photographs

(1 record)

Photograph



Description	Plot 43

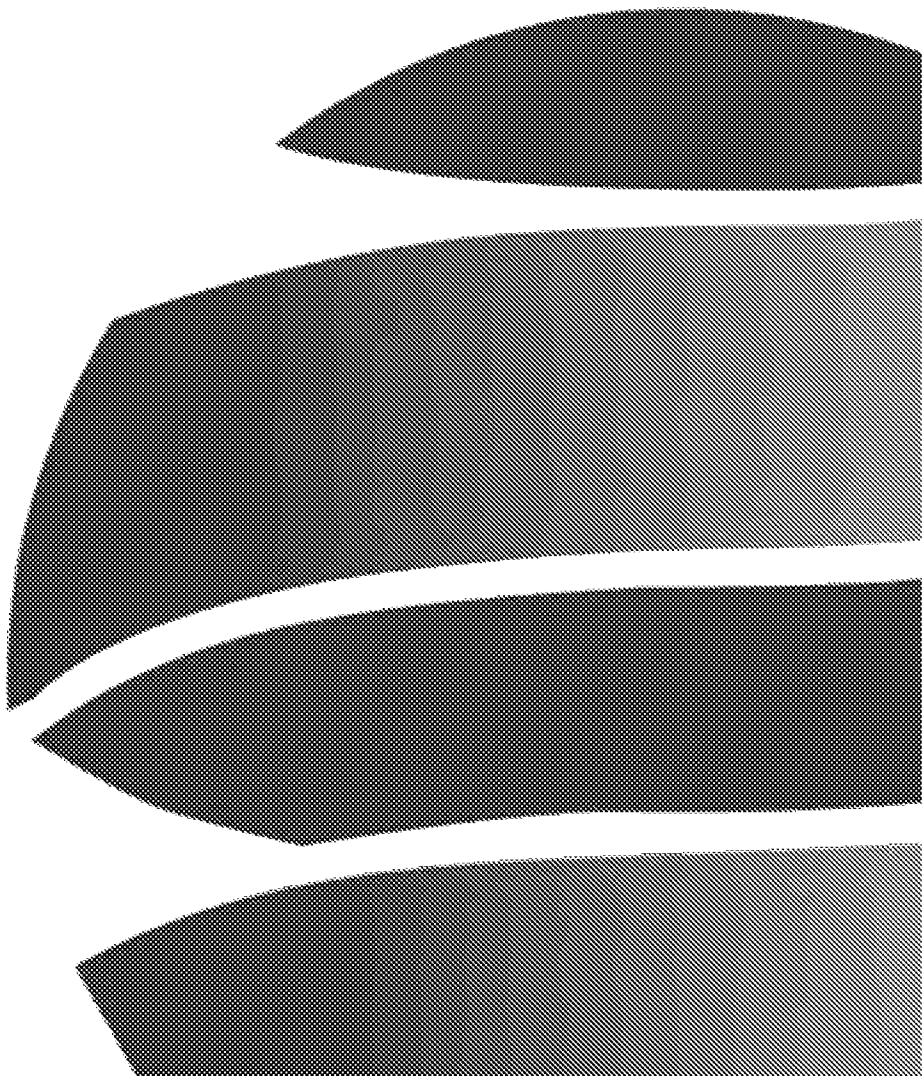
Approved By

No users

Geo-Environmental

APPENDIX F

Geochemical Laboratory Results



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

[redacted]

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33115
Issue:	Preliminary Report
Date of Issue:	16/04/2021
Contact:	Fiona Goode
Customer Details:	GESL Unit 7 Danworth Farm Hurstpierpoint West SussexBN6 9GL
Quotation No:	Q19-01488
Order No:	PO-3834
Customer Reference:	GE18103
Date Received:	12/03/2021
Date Approved:	16/04/2020
Details:	Cornfield Close
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.: 21-33115, issue number 0

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
233022	Plot 30 0.10	11/03/2021	09/04/2021	Sandy silty loam	
233023	Plot 30 0.40	11/03/2021	09/04/2021		
233024	Plot 32 0.20	11/03/2021	09/04/2021		
233025	Plot 32 0.40	11/03/2021	09/04/2021	Silty loam	
233026	Plot 33 0.15	11/03/2021	09/04/2021		
233027	Plot 33 0.30	11/03/2021	09/04/2021		
233028	Plot 34 0.10	11/03/2021	09/04/2021	Sandy silty loam	
233029	Plot 34 0.30	11/03/2021	09/04/2021		
233030	Plot 35 0.20	11/03/2021	09/04/2021	Sandy silty loam	
233031	Plot 35 0.40	11/03/2021	09/04/2021		
233032	Plot 42 0.10	11/03/2021	09/04/2021	Sandy silty loam	
233033	Plot 42 0.40	11/03/2021	09/04/2021		
233034	Plot 43 0.10	11/03/2021	09/04/2021		
233035	Plot 43 0.40	11/03/2021	09/04/2021	Silty loam	

Results Summary

Report No.: 21-33115, issue number 0

ELAB Reference				233022	233025	233028	233030	233032
Customer Reference								
Sample ID								
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				Plot 30	Plot 32	Plot 34	Plot 35	Plot 42
Sample Depth (m)				0.10	0.40	0.10	0.20	0.10
Sampling Date				11/03/2021	11/03/2021	11/03/2021	11/03/2021	11/03/2021
Determinand	**Codes**	**Units**	**LOD**					
Soil sample preparation parameters								
Material removed	N	%	0.1	12.8	< 0.1	9.7	11.6	18.6
Description of Inert material removed	N		0	Stones	None	Stones	Stones	Stones
Metals								
Arsenic	M	mg/kg	1	^ 13.4	^ 15.3	n/t	^ 13.6	^ 12.6
Beryllium	U	mg/kg	1	< 1.0	< 1.0	n/t	< 1.0	< 1.0
Cadmium	M	mg/kg	0.5	^ < 0.5	^ < 0.5	n/t	^ < 0.5	^ < 0.5
Chromium	M	mg/kg	5	^ 22.8	^ 20.7	n/t	^ 25.7	^ 23.3
Copper	M	mg/kg	5	^ 29.2	^ 12.8	^ 32.6	^ 26.9	^ 28.6
Lead	M	mg/kg	5	^ 163	^ 34.6	n/t	^ 134	^ 124
Mercury	M	mg/kg	0.5	^ < 0.5	^ < 0.5	n/t	^ < 0.5	^ < 0.5
Nickel	M	mg/kg	5	^ 15.4	^ 11.8	^ 18.5	^ 15.7	^ 15.2
Selenium	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ 1.9	^ < 1.0
Vanadium	M	mg/kg	5	^ 36.6	^ 35.9	n/t	^ 37.9	^ 35.6
Zinc	M	mg/kg	5	^ 130	^ 60.3	^ 150	^ 127	^ 124
Anions								
Water Soluble Chloride	M	mg/kg	40	^ 45	^ 98	n/t	^ 60	^ 69
Water Soluble Sulphate	M	g/l	0.02	^ 0.13	^ 0.04	n/t	^ 0.13	^ 0.22
Inorganics								
Carbonate	N	%	0.1	n/t	n/t	1.9	n/t	n/t
Elemental Sulphur	M	mg/kg	20	^ < 20	^ < 20	n/t	^ < 20	^ < 20
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	n/t	< 0.8	< 0.8
Total Sulphide	N	mg/kg	2	< 2	< 2	n/t	< 2	< 2
Total Cyanide	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
Acid Soluble Sulphate (SO4)	U	%	0.02	0.05	0.03	n/t	0.05	0.08
Water Soluble Boron	N	mg/kg	0.5	0.8	< 0.5	n/t	0.9	0.9
Miscellaneous								
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	n/t	n/t	2600	n/t	n/t
Carbon Nitrogen Ratio	N	ratio	0.1	n/t	n/t	17.1	n/t	n/t
Loss On Ignition (450°C)	M	%	0.01	n/t	n/t	^ 4.14	n/t	n/t
pH	M	pH units	0.1	^ 8.0	^ 7.3	^ 7.7	^ 8.0	^ 7.9
Density	N	g/ml	0	n/t	n/t	1.15	n/t	n/t
Total Carbon	N	%	0.01	n/t	n/t	2.4	n/t	n/t
Total Organic Carbon	N	%	0.01	1.8	0.85	n/t	1.9	1.6
Total Nitrogen	N	%	0.01	n/t	n/t	0.14	n/t	n/t
Extractable Potassium	N	mg/l	20	n/t	n/t	225	n/t	n/t
Extractable Magnesium	N	mg/l	20	n/t	n/t	96	n/t	n/t
Extractable Phosphate	N	mg/l	1	n/t	n/t	88	n/t	n/t
Sand content	NS	%	1	n/t	n/t	to follow	n/t	n/t
Silt content	NS	%	1	n/t	n/t	to follow	n/t	n/t
Clay content	NS	%	1	n/t	n/t	to follow	n/t	n/t
Stones > 2mm	NS	%	1	n/t	n/t	to follow	n/t	n/t
Stones > 20mm	NS	%	1	n/t	n/t	to follow	n/t	n/t
Stones > 50mm	NS	%	1	n/t	n/t	to follow	n/t	n/t
Total Visible Contaminants	N	%	0.01	n/t	n/t	< 0.01	n/t	n/t
Plastics	N	%	0.01	n/t	n/t	< 0.01	n/t	n/t
Sharps	N	n/kg	0	n/t	n/t	0	n/t	n/t

Results Summary

Report No.: 21-33115, issue number 0

ELAB Reference				233022	233025	233028	233030	233032
Customer Reference								
Sample ID								
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				Plot 30	Plot 32	Plot 34	Plot 35	Plot 42
Sample Depth (m)				0.10	0.40	0.10	0.20	0.10
Sampling Date				11/03/2021	11/03/2021	11/03/2021	11/03/2021	11/03/2021
Determinand	**Codes**	**Units**	**LOD**					
Phenols								
Total Phenols	N	mg/kg	6	< 6	< 6	n/t	< 6	< 6
Polyaromatic hydrocarbons								
Naphthalene	M	mg/kg	0.1	^ < 0.1	^ < 0.1	n/t	^ < 0.1	^ < 0.1
Acenaphthylene	M	mg/kg	0.1	^ < 0.1	^ < 0.1	n/t	^ < 0.1	^ < 0.1
Acenaphthene	M	mg/kg	0.1	^ < 0.1	^ < 0.1	n/t	^ < 0.1	^ < 0.1
Fluorene	M	mg/kg	0.1	^ < 0.1	^ < 0.1	n/t	^ < 0.1	^ < 0.1
Phenanthrene	M	mg/kg	0.1	^ 0.1	^ < 0.1	n/t	^ 0.1	^ < 0.1
Anthracene	M	mg/kg	0.1	^ < 0.1	^ < 0.1	n/t	^ < 0.1	^ < 0.1
Fluoranthene	M	mg/kg	0.1	^ 0.5	^ < 0.1	n/t	^ 0.6	^ 0.2
Pyrene	M	mg/kg	0.1	^ 0.4	^ < 0.1	n/t	^ 0.5	^ 0.2
Benzo(a)anthracene	M	mg/kg	0.1	^ 0.2	^ < 0.1	n/t	^ 0.3	^ 0.1
Chrysene	M	mg/kg	0.1	^ 0.3	^ < 0.1	n/t	^ 0.4	^ 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	^ 0.3	^ < 0.1	n/t	^ 0.5	^ 0.2
Benzo(k)fluoranthene	M	mg/kg	0.1	^ 0.2	^ < 0.1	n/t	^ 0.4	^ 0.1
Benzo(a)pyrene	M	mg/kg	0.1	^ 0.3	^ < 0.1	n/t	^ 0.3	^ 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	^ 0.2	^ < 0.1	n/t	^ 0.3	^ 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	^ 0.1	^ < 0.1	n/t	^ 0.1	^ < 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	^ 0.2	^ < 0.1	n/t	^ 0.5	^ < 0.1
Total PAH(16)	M	mg/kg	0.4	^ 2.9	^ < 0.4	n/t	^ 4.1	^ 1.5
BTEX								
Benzene	M	ug/kg	10	^ < 10.0	^ < 10.0	n/t	^ < 10.0	^ < 10.0
Toluene	M	ug/kg	10	^ < 10.0	^ < 10.0	n/t	^ < 10.0	^ < 10.0
Ethylbenzene	M	ug/kg	10	^ < 10.0	^ < 10.0	n/t	^ < 10.0	^ < 10.0
Xylenes	M	ug/kg	10	^ < 10.0	^ < 10.0	n/t	^ < 10.0	^ < 10.0
MTBE	N	ug/kg	10	< 10.0	< 10.0	n/t	< 10.0	< 10.0
TPH CWG								
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	n/t	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	n/t	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	n/t	< 1.0	< 1.0
>C10-C12 Aliphatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
>C12-C16 Aliphatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
>C16-C21 Aliphatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
>C21-C35 Aliphatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
>C35-C40 Aliphatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
Total aliphatic hydrocarbons (>C5 - C40)	N	mg/kg	1	< 1.0	< 1.0	n/t	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	n/t	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	n/t	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0	n/t	< 1.0	< 1.0
>C10-C12 Aromatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
>C12-C16 Aromatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
>C16-C21 Aromatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
>C21-C35 Aromatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
>C35-C40 Aromatic	M	mg/kg	1	^ < 1.0	^ < 1.0	n/t	^ < 1.0	^ < 1.0
Total aromatic hydrocarbons (>C5 - C40)	N	mg/kg	1	< 1.0	< 1.0	n/t	1.5	< 1.0
Total petroleum hydrocarbons (>C5 - C40)	N	mg/kg	1	1.0	< 1.0	n/t	1.9	< 1.0

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 21-33115, issue number 0

ELAB Reference	233035
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	Plot 43
Sample Depth (m)	0.40
Sampling Date	11/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	20.3
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	^ 21.4
Lead	M	mg/kg	5	n/t
Mercury	M	mg/kg	0.5	n/t
Nickel	M	mg/kg	5	^ 17.9
Selenium	M	mg/kg	1	n/t
Vanadium	M	mg/kg	5	n/t
Zinc	M	mg/kg	5	^ 97.0
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	2.4
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	2560
Carbon Nitrogen Ratio	N	ratio	0.1	16.4
Loss On Ignition (450°C)	M	%	0.01	^ 3.28
pH	M	pH units	0.1	^ 8.2
Density	N	g/ml	0	1.12
Total Carbon	N	%	0.01	1.9
Total Organic Carbon	N	%	0.01	n/t
Total Nitrogen	N	%	0.01	0.12
Extractable Potassium	N	mg/l	20	152
Extractable Magnesium	N	mg/l	20	58
Extractable Phosphate	N	mg/l	1	72
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	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.
The Environmental Laboratory Ltd. Reg. No. 3882193

Results Summary

Report No.: 21-33115, issue number 0

ELAB Reference	233035
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	Plot 43
Sample Depth (m)	0.40
Sampling Date	11/03/2021

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.: 21-33115, issue number 0

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	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
233022	0.10	Plot 30	Brown Sandy Soil,Stones,Glass	No asbestos detected	n/t	n/t	n/t	n/t
233025	0.40	Plot 32	Brown Sandy Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
233030	0.20	Plot 35	Brown Sandy Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
233032	0.10	Plot 42	Brown Sandy Soil,Stones,Brick,Concrete,Clinker	No asbestos detected	n/t	n/t	n/t	n/t

ELAB

Method Summary

Report No.: 21-33115, issue number 0

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	12/04/2021		
Extractable cations - BS3882	N	Air dried sample	12/04/2021		ICPMS
Visible Contaminants	N		12/04/2021		
Sulphide	N	As submitted sample	14/04/2021	109	Colorimetry
Hexavalent chromium	N	As submitted sample	14/04/2021	110	Colorimetry
pH	M	Air dried sample	16/04/2021	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	13/04/2021	114	Electromeric
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Phenols in solids	N	As submitted sample	14/04/2021	121	HPLC
Elemental Sulphur	M	Air dried sample	13/04/2021	122	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	15/04/2021	129	Gravimetry
PAH (GC-FID)	M	As submitted sample	12/04/2021	133	GC-FID
Extr. Phos	N	Air dried sample	12/04/2021	140	ICPMS
Water soluble anions	M	Air dried sample	13/04/2021	172	Ion Chromatography
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/04/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/04/2021	181	GC-MS
BTEX in solids	M	As submitted sample	14/04/2021	181A	GC-MS
Water soluble boron	N	Air dried sample	14/04/2021	202	Colorimetry
Total cyanide	M	As submitted sample	14/04/2021	204	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	13/04/2021	210	IR
TPH CWG soil by gc-gc	M	As submitted sample	12/04/2021	271	
Asbestos identification	U	Air dried sample	14/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	13/04/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-33115, issue number 0

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