ECE Planning
64 – 68 Brighton Road, Worthing
West Sussex, BN11 2EN

Shaping places.
Unlocking potential.

Client	Lake Investments Ltd		
Site	Jacksons, Hammerpond Road, Plummers Plain, Horsham, RH13 6PE	Revision	A
Date	22 December 2025		
Author	S Lower	Checked	C Barker

Whilst this statement/report was originally prepared in reference to a scheme comprising eight dwellings, the proposals have since been revised. The content and conclusions of this statement/report have been reviewed in full by ECE Planning and are considered to remain robust, relevant, and valid in respect of the revised scheme comprising **four residential units only**.

This approach has been discussed with officers at Horsham District Council, who have confirmed that the findings of this statement/report are acceptable and may be relied upon in support of the revised four-unit proposal.

For the avoidance of doubt, this statement/report is submitted solely in support of the current four-unit scheme, and all assessments, findings, and conclusions are considered appropriate and proportionate to this reduced scale of development.

ASHDOWN
SITE INVESTIGATION

GROUND CONTAMINATION RISK ASSESSMENT REPORT

JACKSONS FARM
HAMMERPOND ROAD
PLUMMERS PLAIN
LOWER BEEDING
WEST SUSSEX

PROJECT REFERENCE: P17132

REPORT REFERENCE: R16640

Report Beneficiary: Lake Investments Ltd

Document Control				
Issue No.	**Status**	**Issue Date**	**Notes**	
1	Final	8th May 2025		
Report Section			**Prepared By**	**Approved By**
Factual Section			Tom Hughes BA MA	Rebecca Webb BSc FGS
Quantitative Ground Contamination Risk Assessment			Stuart Card BA (Hons)	Alex Minchell-Bewick BSc MSc DIC AIEMA MIEnvSc CEnv

Limitations

This report was prepared specifically for the Client's project and may not be appropriate to alternative schemes. The copyright for the report and licence for its use shall remain vested in Ashdown Site Investigation Limited (the Company) who disclaim all responsibility or liability (whether at common law or under the express or implied terms of the Contract between the Company and the Client) for any loss or damage of whatever nature in the event that this report is relied on by a third party, or is issued in circumstances or for projects for which it was not originally commissioned.

Head Office:
Unit 3
The Old Grain Store
Ditchling Common Business Park
Ditchling
East Sussex
BN6 8SG

Telephone:
01273 483119
Email:
contact@ashdownsi.co.uk

Company Registration No.
242 6786

EXECUTIVE SUMMARY

The following presents a summary of the main findings of the report. It is emphasised that no reliance should be placed on any individual point until the whole of the report has been read as other sections of the report may put into context the information contained herein.

It is proposed to demolish the existing buildings at Jacksons Farm, Plummers Plain, West Sussex and construct three new detached houses with associated gardens, as part of a wider masterplan development for Stonehouse Farm. This report is specific to the Jacksons Farm development only.

The site currently contains a former dairy barn and associated milking parlour, feed silos and other derelict agricultural outbuildings, as well as a large barn used for scaffolding storage. A slurry lagoon is present to the south of the dairy barn along with a large cutting that was excavated with the intention of constructing a house that was never completed.

Reference to geological datasets indicates that the site is expected to be underlain by the sandstone and mudstone variants of the Upper Tunbridge Wells Sand, which are respectively classed as a Secondary A Aquifer and Unproductive Stratum. The ground investigation confirmed the underlying soils to comprise a variable thickness of made ground, overlying Upper Tunbridge Wells Sand deposits. The deepest made ground was encountered in the southern part of the site, adjacent to the slurry lagoon.

The site does not lie within a SPZ. No groundwater was recorded during the site investigation works or the subsequent monitoring works.

The ground investigation identified concentrations of PAH compounds within the made ground soils that are considered to pose an unacceptable risk to end users of the site. The made ground was also recorded to contain concentrations of petroleum hydrocarbons above the threshold value for the use of PE water supply pipework.

The soils in a small spoil heap in the south-east of the site recorded elevated concentrations of petroleum hydrocarbons.

From assessment of the results of the ground gas monitoring it has been concluded that the site may be classified as characteristic situation 1, very low risk, provided that the slurry pit is removed and backfilled with suitably inert material.

A remediation strategy should be prepared, setting out the works necessary to mitigate the complete pollutant linkages that have been identified by this assessment.

It is recommended that this report is submitted to the Local Authority in relation to the relevant conditions with respect to contaminated land. The report should also be submitted to any other relevant regulator.

The conclusions drawn in this report should be considered as provisional until such time as the report has been accepted and the relevant conditions have been discharged.

TABLE OF CONTENTS

FIGURES AND APPENDICES

FIGURES

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX G

1. INTRODUCTION

It is proposed to demolish the existing buildings at Jacksons Farm, Plummers Plain, West Sussex and construct three new detached houses with associated gardens. A copy of the proposed development layout is presented in Appendix A.

The development of the site forms part of a comprehensive masterplan redevelopment at Stonehouse Farm, with Jacksons Farm located in the northern-most part of the masterplan redevelopment area, for which a planning application has been made with Horsham District Council, planning application ref: DC/25/0403.

The masterplan includes:

1. Rationalisation and enhancement of existing commercial facilities (Use Classes E(g) B2 and B8 at Stonehouse Business Park, including demolition of two buildings and their replacement with new Class E(g), B2 and B8 facilities. Extension of existing building to form a new office and wardens' accommodation. Existing mobile home removed.
2. Decommissioning of the Anaerobic Digester and re-use of the existing 2no buildings for storage and office uses (Class E (g) and B8) and the diversion of a public footpath.
3. Residential redevelopment of the Jacksons Farm site including the demolition of existing barns to provide 3no. dwellings with access, parking, and landscaping.

Ashdown Site Investigation Ltd. has produced a preliminary ground contamination risk assessment for the Jacksons Farm development[1], which recommended that an intrusive ground investigation should be undertaken to allow a quantitative assessment to be carried out.

Ashdown Site Investigation Ltd was requested to undertake a ground investigation and undertake the quantitative assessment recommended by the previous report.

The specific objectives of the works were to:

a) Establish the expected geology and hydrogeology at the site;
b) Investigate the shallow ground and groundwater conditions in the area of the proposed development;
c) Test for the presence of contaminants identified by the preliminary conceptual model; and
d) Develop a quantitative conceptual model of the site, refining the preliminary model to identify any pollutant linkages that may be present.

The scope of the works covered by this report, and the terms and conditions under which they were undertaken, were set out within the offer letter Q14992, dated 19th February 2025. The instruction to proceed was received from the client, Lake Investments Ltd.

[1] Project Ref: P17028, Report Ref: R16576, Issue 2, dated 28th February 2025.

2. SITE CONTEXT

2.1 Site Description

The site is located to the south of Hammerpond Road, Plummers Plain, West Sussex, and is centred on the approximate Ordnance Survey national grid reference 522785 128778. A site location plan and site plan are presented as Figure 1 and Figure 2, respectively.

The site is accessed from the north off Hammerpond Road, into a compacted gravel yard between a former dairy barn to the west, and a barn used for storage of scaffolding equipment in the east.

An asbestos survey previously undertaken at the site[2] recorded the roofing material of the dairy barn to comprise asbestos cement and a series of water tanks and disinfectant storage drums were present in the north of this building. A milking parlour, two food silos and a portacabin are present to the west of the dairy barn.

The partial remains of a former barn are present to the south of the two silos, with evidence of another former structure further to the south, in the form of a series of brick/concrete plinths; a stockpile of rubble is present to the south of the plinths.

A slurry pit is located to the south of the dairy barn, covered by concrete grates and with a further area of concrete hardstanding to the south. The pit measures approximately 8m x 25m in plan and is understood to be some 2m deep.

A large cutting is located beyond the slurry pit to the south, understood to have been excavated some years ago with the intention of constructing a house within it. The cutting is around 3m to 4m deep along the northern elevation, and the earth excavated to form it was stockpiled on a field further to the south. The cutting currently contains the remnants of the foundations along with various items of household waste.

In the east of the site is a large barn being used for the storage of scaffolding equipment, with further areas of storage along the western elevation and to the south of the barn. The barn appeared to be clad and roofed with metal.

2.2 Geological Data

A review of the geological and hydrogeological data presented in the preliminary assessment is summarised below. Further information pertaining to the geological and hydrogeological setting of the site is presented within the preliminary ground contamination risk assessment.

2.2.1 Expected Geology and Aquifer Designation

The stratigraphic unit that may be expected to underlie the site has been established by reference to British Geological Survey (BGS) mapping and the BGS Lexicon of Named Rock Units. The expected stratigraphy is presented in the following table.

[2] ENV, Demolition Survey & Management, Ref. S00923/37, Dated October 2021

Table 1. Expected Strata and Aquifer Designation

Type	Stratum	Aquifer Designation
Bedrock	Upper Tunbridge Wells Sand – Sandstone	Secondary A Aquifer
	Upper Tunbridge Wells Sand - Mudstone	Unproductive Stratum

A majority of the site is anticipated to be underlain by the sandstone variation of the Upper Tunbridge Wells Sand, whilst the southern extent falls within the mudstone variant.

The Tunbridge Wells Sand Formation forms part of the Wealden Group. The formation is of Valanginian age (133.9 to 139.4 million years old; Early Cretaceous). The Tunbridge Wells Sand Formation predominantly comprises repeating sequences of fine to medium grained sandstone, siltstone and silty sand with finely-bedded mudstones and thin limestones. In the western High Weald (between Haywards Heath and Tunbridge Wells) the formation can be divided into three, the informally named Lower and Upper Tunbridge Wells Sand and the intervening Grinstead Clay Member. The succession commences with rhythmically bedded sandstones, siltstones and mudstones of the lower part of the Lower Tunbridge Wells Sand which pass up into the massive sandstones of the Ardingly Sandstone Member. These are overlain by the finely bedded mudstones, mudstones and silty mudstones with subordinate clay ironstones and shelly limestones of the Grinstead Clay Member. This clay member is itself locally divided into upper and lower parts by the cross-bedded fine sandstone of the Cuckfield Stone Bed. Above the Grinstead Clay Member, the Upper Tunbridge Wells Sand comprises a generally more argillaceous rhythmic succession, including mudstones, siltstones and silty sandstones. Outside the western High Weald the Grinstead Clay Member is not recognisable and the succession is mapped as undivided Tunbridge Wells Sand Formation. The formation is recorded by the BGS to range in thickness up to 122m.

2.2.2 Mining and Ground Workings

The geological units of the Wealden Group, including the Upper Tunbridge Wells Sand Formation, were locally mined for iron during the early Roman period, the Medieval period and significantly between the 15th and 18th centuries. The mining activities were associated with hammer and furnace ponds, and forges. The locations of many of the workings are unknown, the works mostly having been dismantled and sites overgrown with woodland. Many of the old ponds in the Weald may be representative of old hammer or furnace ponds.

The historical extraction was mostly from open pits excavated from surface, but during the Medieval period, extraction in the eastern Weald was increasingly from mine pits. These mine pits were typically five metres in diameter and up to twelve metres deep. The pits were worked in sequence with spoil from one pit used to in-fill the one before. In the western part of the Weald, the principal method of extracting iron ore was also the mine pit but smaller in scale; the pits consisted of a vertical shaft up to 2.5 metres in diameter and the base of the shaft would have been widened out.

The British Geological Survey GeoIndex Onshore viewer shows two records for Tulleys Stone Pit some 650m to the south-east with Bells Farm Pit and Middle Standford Pit some 900m to the south-east and south, respectively. A search of the Wealden Iron Research Group database revealed one record for a forge some 850m to the west of the site. The risk posed to the development is considered to be very low.

2.2.3 Radon

Table 2. Radon

Section	Groundsure Comment
Radon Affected Areas	The site is reported to be within an area where less than 1% of properties are at or above the action level requiring radon gas protection measures to be installed in new buildings.
Radon Protection Measures	No radon protection measures are reported by the British Geological Survey to be necessary in the construction of new dwellings or extensions.

2.3 Hydrogeological Data

2.3.1 Groundwater Source Protection Zones (SPZ)

The Environment Agency defines SPZs as those areas where groundwater supplies are at risk from potentially polluting activities and accidental releases of pollutants. SPZs are primarily a policy tool used to control activities close to water supplies intended for human consumption.

The site does not lie within a SPZ.

2.3.1 Groundwater Abstractions

No groundwater abstraction licences are indicated within 2km of the site.

2.3.2 Surface Water Abstractions

The closest surface water abstraction licence is recorded to lie 1197m to the west of the site and is used by Mannings Heath Golf Club for spray irrigation.

2.3.3 Potable Abstractions

No potable abstraction licences are indicated within 2km of the site.

2.3.4 Surface Water Features

No significant surface water features are recorded within 250m of the site.

3. SITE WORKS

3.1 Introduction

The intrusive site works comprised a series of dynamic sampler and hand auger boreholes. The intrusive works were undertaken between the 7th and 14th April 2025. The exploratory hole locations are shown on Figure 2.

Descriptions of the strata encountered and comments on groundwater conditions are shown in the exploratory hole records given in Appendix B, which also includes explanatory notes to assist in their interpretation.

3.2 Exploratory Holes

The following table summarises the intrusive works undertaken at the site.

Table 3. Summary of Intrusive Works Undertaken

Designation	Depth (m bgl)	Method
WS01	1.30	Dynamic Sampler
WS02	0.80	Dynamic Sampler
WS03	1.00	Dynamic Sampler
WS04	1.00	Dynamic Sampler
WS05	3.00	Dynamic Sampler
WS06	1.05	Hand Auger
WS07	1.00	Hand Auger
WS08	110	Hand Auger
WS09	3.00	Dynamic Sampler
WS10	3.00	Dynamic Sampler
WS11	3.00	Dynamic Sampler
WS12	1.15	Hand Auger
WS13	1.00	Hand Auger

3.3 Sampling

Samples of soil were taken from the exploratory holes at the depths shown in the exploratory hole records. The types of samples taken are indicated on the exploratory hole records. Details on the sample types are provided in the explanatory notes.

Where appropriate, samples were stored in cool boxes with cooling blocks to maintain temperatures below 4°C until transferred to refrigerators upon return to the office and subsequently forwarded to the external accredited chemical testing laboratory.

3.4 Installations

Gas and groundwater monitoring standpipes were installed to depths of 3.00m in three of the boreholes (WS09 to WS11). Descriptions of the installations are shown on the exploratory hole records.

The concentrations of gases and depths to groundwater were recorded within the standpipes on three occasions between 15th April and 30th April 2025. The readings are presented in Appendix C.

3.5 Laboratory Testing

Laboratory testing was scheduled by Ashdown Site Investigation Ltd.

Chemical testing was undertaken by a laboratory with recognised (UKAS and MCERTS) accreditation for quality control.

Results from the laboratory tests are provided in Appendix D.

4. GROUND CONDITIONS

4.1 Stratigraphy

4.1.1 Surface Covering

Exploratory holes WS01, WS04 to WS08 and WS10 to WS12 were excavated through a surface cover of concrete some 90mm to 350mm in thickness. No surfacing materials were encountered in the other exploratory holes.

4.1.2 Made Ground

Made ground, generally comprising either clay, with varying proportions of gravel and sand, or clayey/sandy gravel, was recorded to depths of between 0.20m and 1.70m below ground level. The gravel fraction comprised variable quantities of mudstone, sandstone, siltstone, brick, concrete, flint, chalk, crystalline rock, plastic and charcoal-like material.

The deepest made ground was recorded along the southern part of the site, to depths of 1.70m and 1.00m below ground level respectively within boreholes WS09 and WS11, and to the full depth of 1.15m within borehole WS12.

Suspected petroleum hydrocarbon odours and staining were noted within the made ground encountered in borehole WS12 between depths of 0.23m and 0.45m below ground level.

Borehole WS13 was excavated through a spoil heap of made ground soils to a depth of 1.0m. The soils comprised silty clay and gravelly clay. Organic odours were noted in the arisings and organic material, including wood fragments were present throughout the stockpiled material encountered.

4.1.3 Upper Tunbridge Wells Sand

Underlying the made ground, where penetrated, the investigation progressed into undisturbed slightly gravelly/gravelly clay deposits with varying sand and silt content. These soils continued to the full depth of the investigation. The gravel content comprised subangular to subrounded fine to coarse sandstone, siltstone and mudstone. Occasional bands of silt and mudstone and iron staining were also recorded at times.

These deposits are considered to represent the Upper Tunbridge Wells Sand indicated to underlie the site on BGS geological maps.

4.2 Stability

Each of the exploratory holes was recorded to remain stable during the course of drilling /excavation.

4.3 Groundwater Conditions

Each of the boreholes remained dry during the site investigation works and the stand-pipes were recorded to be dry during each of the subsequent monitoring visits.

It should be noted that water levels within the exploratory holes may not have equilibrated with the groundwater table at the time the readings were recorded and that groundwater levels should be expected to fluctuate seasonally.

5. QUANTITATIVE CONTAMINATION ASSESSMENT

5.1 Introduction

The risk assessment for the site considers the sources of contamination identified, the receptors that may be present in view of the development proposals and the contaminant pathways by which these may be linked.

A complete pollutant linkage is only deemed to exist where all three are present and a site is considered suitable for use where no complete pollutant linkages are identified.

Where a complete pollutant linkage is considered to be present, an assessment of the level of risk associated with the pollutant linkage has been carried out in line with published guidance[3].

The level of risk is determined using the risk matrix presented in the following table. Classifications of probability, consequence and risk are presented in Appendix E.

Table 4. Risk Assessment Matrix

		Probability			
		Very Low	**Low**	**Moderate**	**High**
Consequence	**Very Minor**	Negligible	Very Low	Low	Low/Moderate
	Minor	Very Low	Low	Low/Moderate	Moderate
	Moderate	Low	Low/Moderate	Moderate	High
	Severe	Low/Moderate	Moderate	High	Very High

5.2 Preliminary Conceptual Model

A copy of the preliminary conceptual model is presented in Appendix F.

5.3 Assessment Strategy

The design of the ground investigation considered the potential contaminant sources identified by the preliminary ground contamination risk assessment. The investigation strategy employed to assess the potential sources is detailed in the following table.

Table 5. Investigation Works Carried Out

Contaminant source	Exploratory Positions
Historical and ongoing use of the site for agricultural and light industrial purposes.	Even spatially distributed exploratory hole positions across the site and testing of samples for the contaminants of concern.

[3] Contaminated Land Risk Assessment: A guide to good practice, CIRIA C552, 2001.

Contaminant source	Exploratory Positions
Potential leakages from the slurry lagoon with the potential for deep made ground in the immediate vicinity.	Testing of deeper samples in WS09-WS11 adjacent to the slurry lagoon for contaminants of concern. Installation of ground gas monitoring boreholes in WS09-WS11 and subsequent monitoring.
Made ground and waste materials visible in parts of the site.	WS02 and WS03 where made ground was visible at ground level. Testing shallow samples of made ground for contaminants of concern. At WS13 a sample of stockpile material was obtained and tested for contaminants of concern.

5.4 Analysis of Contamination Test Results

5.4.1 Method of Assessment

For the assessment of risk to end users, comparison of the results of the laboratory testing has been made against published soil screening values (SSV) comprising the 'Suitable For Use Levels' (S4UL)[4] or, in lieu of an S4UL being developed for lead, the Category 4 Screening Level (C4SL)[5].

In view of the development proposal, the SSV utilised in this assessment are those calculated for the generic "Residential with homegrown produce" land use.

For the assessment of risk to controlled waters a qualitative assessment has been undertaken based upon the concentrations of contaminants recorded within the soil samples and the information obtained about the sensitivity of the underlying strata or nearby surface water receptors.

5.4.2 Heavy Metals & Polycyclic Aromatic Hydrocarbon (PAH) Compounds

The following table summarises the SSV for heavy metals and PAH compounds, along with the maximum and minimum concentrations recorded in the twelve samples of shallow made ground tested from across the site.

Table 6. Summary of Test Results – Heavy Metals and PAH Compounds

Contaminant	SSV (mg/kg)	No. of Samples	Minimum Concentration (mg/kg)	Maximum concentration (mg/kg)	Limit of Detection (mg/kg)	No of exceedances
Arsenic	37	12	2	14	< 2	0
Water Soluble Boron	290	12	<LOD	<LOD	< 1	0
Cadmium	11	12	<LOD	0.5	< 0.2	0
Chromium	910	12	2	19	< 2	0
Hexavalent Chromium	6	12	<LOD	<LOD	< 2	0
Copper	2400	12	4	86	< 4	0

[4] Nathanail, C.P, et al., The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015, Land Quality Press, Nottingham. Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3071.
[5] SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report, published by DEFRA, 2014.

Lead	200	12	7	132	< 3	0
Mercury	40	12	<LOD	<LOD	< 1	0
Nickel	180	12	<LOD	27	< 3	0
Selenium	250	12	<LOD	<LOD	< 3	0
Zinc	3700	12	13	152	< 3	0
Naphthalene	2.3	12	<LOD	0.94	< 0.1	0
Acenaphthylene	170	12	<LOD	0.23	< 0.1	0
Acenaphthene	210	12	<LOD	5.25	< 0.1	0
Fluorene	170	12	<LOD	5.31	< 0.1	0
Phenanthrene	95	12	<LOD	57.6	< 0.1	0
Anthracene	2400	12	<LOD	13.5	< 0.1	0
Fluoranthene	280	12	<LOD	70.4	< 0.1	0
Pyrene	620	12	<LOD	52.9	< 0.1	0
Benz(a)anthracene	7.2	12	<LOD	22.8	< 0.1	1
Chrysene	15	12	<LOD	21.1	< 0.1	1
Benzo(b)fluoranthene	2.6	12	<LOD	20.4	< 0.1	3
Benzo(k)fluoranthene	77	12	<LOD	6.17	< 0.1	0
Benzo(a)pyrene	2.2	12	<LOD	20	< 0.1	3
Indeno(123-cd)pyrene	27	12	<LOD	10.1	< 0.1	0
Dibenz(ah)anthracene	0.24	12	<LOD	2.85	< 0.1	3
Benzo(ghi)perylene	320	12	<LOD	7.83	< 0.1	0

None of the samples of the shallow made ground recorded concentrations of heavy metals below their respective SSV. However, three of the samples (from WS07, WS09 and WS11) recorded concentrations of individual PAH compounds above their respective SSV.

WS09 and WS11 were undertaken adjacent to the slurry lagoon, but WS07 was undertaken within the former dairy barn. It was in WS07 where the highest concentrations of PAH were recorded.

The made ground across the site was recorded to be visually similar, so with no point sources identified that could explain why the shallow soils in those three exploratory holes would contain higher concentrations of PAH compounds than elsewhere, there is not considered to be sufficient data to designate the made ground soils within these exploratory holes as “hot spots” or outliers compared to made ground elsewhere on the site.

There is the possibility for equally high concentrations of PAH compounds to be present in the made ground in between sampling positions and theses concentrations are considered to pose an unacceptable risk to end users in the context of the proposed development.

A deeper sample of made ground from WS09 (which recorded the deepest made ground adjacent to the slurry lagoon) and the two samples of the Upper Tunbridge Wells Sand from WS10 and WS11 (where

made ground did not extend to significant depths) were also tested for concentrations of heavy metals and PAH compounds.

Very low concentrations of heavy metals were recorded, significantly below their respective SSV in these samples and no detectable PAH compounds were recorded in any of the samples.

This suggest that whilst PAH compounds may be present in the shallow made ground, as these compounds do not exhibit any significant solubility they have not migrated to greater depths or into the undisturbed soils and are therefore not considered to pose an unacceptable risk to controlled waters.

The stockpiled material in WS13 did not contain concentrations of heavy metals or PAH compound above their respective SSV.

5.4.3 Asbestos

No suspected asbestos materials were noted within any of the exploratory holes undertaken at the site. 11 of the 12 samples of shallow made ground soils were screened for the presence of asbestos. Screening was also carried out on the sample of stockpiled material from WS13. None of the samples recorded the presence of any asbestos materials.

There is not considered to be an unacceptable risk to end users from asbestos materials within soils. Due to the heterogeneity of made ground, there will always remain the potential for localised asbestos materials to be encountered during construction works, though the likelihood of this is considered to be very low. All workers at the site should be made aware of what actions to take in the event that suspected asbestos materials are identified at any time during the development works.

It is noted that the asbestos survey provided to us has identified asbestos materials to be present within the dairy barn. The current risk assessment assumes that any asbestos identified within any buildings or infrastructure will be managed in accordance with current legislation and guidance, including its appropriate removal and disposal prior to demolition works taking place, in order to ensure that this does not represent an ongoing risk to end users and, specifically, to ensure that asbestos materials are not introduced into the underlying soils. Verification should be provided as to the removal of asbestos materials and their appropriate disposal.

5.4.4 Petroleum Hydrocarbons

21 samples were tested for concentrations of petroleum hydrocarbons. These samples included those from WS12, where suspected petroleum hydrocarbon odours were noted within the made ground, the stockpiled materials from WS13, where wood fragments were present in the made ground, and WS11, where black staining was noted in the Upper Tunbridge Wells Sand at depth.

The following table lists the SSV for petroleum hydrocarbon equivalent carbon weight fractions and BTEX compounds calculated for 1% organic content.

Table 7. SSV for petroleum hydrocarbon equivalent carbon weight fractions

Petroleum Hydrocarbon Fraction	SSV (mg/kg)	Petroleum Hydrocarbon Fraction	SSV (mg/kg)
Aliphatic EC 5-6	42	**Aromatic EC 5-7**	70
Aliphatic EC >6-8	100	**Aromatic EC >7-8**	130
Aliphatic EC >8-10	27	**Aromatic EC >8-10**	34
Aliphatic EC >10-12	130	**Aromatic EC >10-12**	74
Aliphatic EC >12-16	1100	**Aromatic EC >12-16**	140
Aliphatic EC >16-35	65000	**Aromatic EC >16-21**	260
Aliphatic EC >35-44	65000	**Aromatic EC >21-35**	1100
		Aromatic EC >35-44	1100

Whilst full speciation of the concentrations of petroleum hydrocarbons by aromatic and aliphatic fractions was not undertaken, the results of the testing undertaken can still be compared with the more stringent of the screening values for the respective equivalent carbon weight fraction and, where the concentration recorded is found to be lower, it can be reasonably concluded that no significant risk is present.

Generally, very low concentrations of petroleum hydrocarbons were recorded across the site. Where samples were taken at multiple depths within boreholes, the concentrations were shown to reduce with depth.

Where high PAH concentrations were recorded in the shallow made ground, correspondingly higher concentrations of petroleum hydrocarbons were recorded. However, these were still well below the respective, conservative, SSV for each of the equivalent carbon weight fractions.

No detectable concentrations of petroleum hydrocarbons were recorded in the sample from WS10 at 2.85m, where black staining was recorded in the Upper Tunbridge Wells Sand, or at the shallower depth of 1.50m.

The samples of made ground from WS12, where suspected petroleum hydrocarbon odours and staining were recorded, found slightly higher concentrations of petroleum hydrocarbons than elsewhere, but concentrations of each fraction were all lower than their respective SSV. It is possible that these concentrations represent a localised spill, and therefore are not considered to pose an unacceptable risk to end users in the context of the development of the site or controlled waters beneath the site.

The samples of the stockpiled made ground at WS13 recorded concentrations of individual petroleum hydrocarbon fractions above the more conservative SSV. Wood fragments were recorded in the stockpiled soils, and therefore the concentrations of petroleum hydrocarbons recorded may be indicative of creosote or some other form of wood treatment.

With the exception of the soils at the location of WS13, the concentrations of petroleum hydrocarbons recorded are not considered to pose an unacceptable risk to end users of the site or to controlled waters beneath the site.

Comparison of the test results has also been undertaken with the threshold value for PE water supply pipework[6]. Concentrations exceeding the threshold value have been recorded and it is likely that protective pipework (e.g. barrier pipe) will be required by the local water supply company.

5.5 Analysis of Ground Gas Monitoring Results

Assessment of the risk from ground gases has been undertaken following the guidance presented within BS8576[7] and BS8485[8]. Reference has also been made to good practice guidance provided within NF94[9].

5.5.1 Potential Source of Ground Gases

The potential source of ground gas identified by the preliminary assessment was the slurry lagoon.

5.5.2 Location and Construction of Standpipes

The location of the standpipes takes into account the guidance presented in section 8.4 of BS8576. Standpipes were located within boreholes WS09-WS11 which were located adjacent to the lagoon.

The standpipes were constructed with the response zone (slotted section) sealed within the Upper Tunbridge Wells Sand, below any shallow made ground soils and targeting any more permeable layers (gravelly clays) (in accordance with Section 9.23 of BS8576).

5.5.3 Monitoring Period

Monitoring of the gas concentrations within the three standpipes was carried out on three occasions at approximately weekly intervals, between 15th April and 30th April 2025. This is less than the idealised monitoring period recommended in Figure 6 of BS8576, and this is discussed further in Section 5.5.8.

5.5.4 Summary of Monitoring Results

Atmospheric pressures varied between 980 and 1010 during the monitoring period. Monitoring was carried out during periods of both rising and falling pressure.

The peak concentration of carbon dioxide recorded during the monitoring period was 13.7% by volume. The peak concentration of methane recorded during the monitoring period was 8.2% by volume. No detectable concentrations of methane or gas flow rates were recorded during the monitoring period.

The monitoring readings are presented in Appendix C.

[6] Set out within Table 3.1 of the Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites, UK Water Industry Research, 2010.
[7] BS8576:2013 Guidance on investigation for ground gas – Permanent gases and Volatile Organic Compounds (VOCs), BSI, April 2013,
[8] BS8485:2019+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings, BSI, January 2019
[9] NF94 Hazardous ground gas – an essential guidance for housebuilders, NHBC Foundation, April 2023

5.5.5 Assessment of Monitoring Results

Section 6.3 of BS8485 recommends that the gas monitoring data should be used to calculate the "borehole hazardous gas flow rate" (Q_{hg}) for each monitoring location and event for both carbon dioxide and methane. The Q_{hg} is calculated by multiplying the gas flow rate (l/hr) by gas concentration (percentage/100).

Where no detectable gas flow rates or gas concentrations are recorded, gas concentrations or the Q_{hg} are calculated assuming values equal to the limit of detection (LOD) of the instrument are present (0.1l/hr or 0.1%).

The following table summarises the calculated Q_{hg} for carbon dioxide and methane, along with the maximum gas flow rates and gas concentrations recorded for the standpipes for each monitoring visit.

Table 8. Summary of Monitoring Results and Calculated Q_{hg}

Standpipe	Date	Maximum Flow Rate (L/hr)	Maximum Methane Concentration (%)	Maximum Carbon Dioxide Concentration (%)	Q_{hg} Methane (L/hr)	Q_{hg} Carbon Dioxide (L/hr)
WS09	15/04/2025	0.1	0.1	6.5	0.0001	0.0065
WS10	15/04/2025	0.1	0.1	0.9	0.0001	0.0009
WS11	**15/04/2025**	**0.1**	**8.2**	**13.7**	**0.0082**	**0.0137**
WS09	22/04/2025	0.1	0.1	5.4	0.0001	0.0054
WS10	22/04/2025	0.1	0.1	1.2	0.0001	0.0012
WS11	22/04/2025	0.1	1.3	8.8	0.0013	0.0088
WS09	30/04/2025	0.1	0.1	5.6	0.0001	0.0056
WS10	30/04/2025	0.1	0.1	1.7	0.0001	0.0017
WS11	30/04/2025	0.1	1.7	8.0	0.0017	0.0080

The guidance requires that a gas screening value (GSV) is derived for the site, taking into account the Q_{hg} and, where necessary, undertaking a worst case check. The plausible worst case condition is obtained by multiplying the maximum recorded flow rate in a standpipe with the maximum gas concentration within the same strata.

Because no detectable gas flow was recorded in any standpipe during the monitoring period, the Q_{hg} for WS11 on the 15th April 2025 (highlighted within the table above) is already the "worst case" condition and can be used as the GSV for the site.

5.5.6 Assessment of Risk from Ground Gases

The calculated GSV for the site is then compared to the characteristic gas situations (CS) provided in Table 2 of BS8485, which is partially reproduced below:

Table 9. Reproduction of elements of Table 2 of BS8485 – CS by Site characteristic GSV

CS	Hazard potential	Site characteristics GSV (L/h)	Additional factors
CS1	Very Low	<0.07	Typically <1% methane concentration and <5% carbon dioxide concentration (otherwise consider an increase to CS2)
CS2	Low	0.07 to 0.7	Typical measured flow rate<70 L/h (otherwise consider an increase to CS3)
CS3	Moderate	0.7 to 3.5	-

The worst case GSV for the site of 0.0137 would put the site in CS1. However, it is noted that the maximum concentrations of both methane and carbon dioxide exceed those "typical" concentrations referred to in the "Additional Factors" section.

A comparison of the worst case results has been undertaken with the ternary plot (Figure 3.2) of the NF94 guidance. The results of this suggest the site is within an area of "very low rate of gas generation from made ground – low risk of emissions from ground"

5.5.7 Sufficiency of Ground Gas Monitoring

As noted in Section 5.5.3, the monitoring period was less than the idealised monitoring period suggested in Figure 6 of BS8576.

However, Appendix F of BS8576 sets out a method of assessment of the sufficiency of monitoring data, detailed in Table F1. This assessment has been reproduced and has been completed in Table 10. below.

Table 10. Assessment of sufficiency of Monitoring Data as set out in Table F1 of BS8576

Action	Result
From current results (concentrations, flow rates and pressure), estimate likely risk associated with ground gases (note steady state flow results are to be used, not peak values that only last a few seconds on opening the gas tap)	Current calculated GSV: 1 Site is categorised as Characteristic Situation 1 - very low risk.
What increase in gas concentrations is required to increase the estimate risk and the form of gas protection to be provided?	If it is assumed that the gas flow rate remains constant at <0.1l/hr, what concentration of carbon dioxide would need to be present for the GSV to exceed the threshold of Characteristic Situation 1 (0.07)? A concentration of carbon dioxide of 70% by volume would be required to calculate a GSV >0.07.
What increase in flow rate is required to increase the estimate risk and the form of gas protection to be provided?	If it is assumed that the concentrations of carbon dioxide are consistent at the current worst case level of 13.7% by volume, what flow rate would need to be present for the GSV to exceed the threshold of Characteristic Situation 1 (0.07)? A gas flow rate of 0.52l/hr would give a calculated GSV >0.07.

Action	Result
Is the increase in gas concentrations feasible given the known source of gas, the collected gas monitoring data and the conceptual site model?	No – a carbon dioxide concentration of 70% by volume is considered entirely unrealistic in the context of the site, as this would be some 5 times higher than the current highest gas concentration recorded.
Is the increase in flow rate feasible given the known source of gas, the collected gas monitoring data and the conceptual site model?	No - The only identifiable source of gas is the slurry pit. This is to be removed and backfilled as part of the development works, as the area forms part of the gardens. Following removal of the gas source, the potential for higher gas concentrations or higher gas flows would appear to be negligible.
Decide whether further monitoring is required.	Further monitoring is not considered to be necessary as part of the risk assessment. However, some further monitoring is recommended following the removal and backfilling of the slurry pit.

5.5.8 Conclusions

The gas risk assessment has concluded that, provided the slurry pit is removed and backfilled with suitable inert material, the site may be classified as Characteristic Situation 1.

Following the removal of the pit and its backfilling with suitably inert materials it is recommended that some further monitoring is carried out to confirm that the gas concentrations have reduced.

5.6 Quantitative Contamination Risk Assessment

5.6.1 Contaminant Pathways Identified

The development is to comprise new residential buildings together with areas of private garden.

Pathways associated with gas and vapour intrusion into new buildings are considered to be valid, along with direct contact and dust related pathways, and pathways associated with the consumption of home grown produce.

Should the proposed development plans be altered, a revised risk assessment may be required.

The site is underlain by slightly gravelly/gravelly clay deposits of the Upper Tunbridge Wells Sand which is classed as a Secondary A Aquifer. Whilst a Secondary A aquifer may theoretically be a potential pathway to groundwater receptors, no groundwater abstraction points of any kind were identified within 2km of the site, and the site is not located within a SPZ.

Although the site is not located within a SPZ, and no sensitive groundwater receptors are located within the vicinity of the site, Secondary A Aquifers are sensitive to contamination, and pathways to controlled waters may be present, though are considered highly unlikely given the soils encountered by the ground investigation. It is therefore considered that no viable pathways link potential contamination on the site with sensitive groundwater.

5.6.2 Contamination Sources Identified

The following sources of contamination have been identified by the quantitative contamination risk assessment:

- Made ground soils containing elevated concentrations of PAH compounds and concentrations of petroleum hydrocarbons above the threshold value for the use of PE water supply pipework.
- Localised petroleum hydrocarbon contamination within spoil heap in the south-east of the site.
- Ground gases from the slurry pit.

5.6.3 Quantitative Conceptual Model

The quantitative conceptual model for the proposed development is presented in Appendix G.

A remediation strategy should be prepared, setting out the works necessary to mitigate the complete pollutant linkages that have been identified.

5.7 Risks to Other Potential Receptors

All construction workers must undertake their own risk assessment, based upon the works to be carried out and the proposed method by which this will be achieved, in accordance with current health and safety legislation. Their assessment should take into account all available information about the site, including that present within this report.

Appropriate working procedures and PPE should be adopted to ensure the health and safety of the site operatives. Instruction should be given in the recognition of potentially hazardous materials. All site personnel should be appropriately briefed on the discovery strategy, presented below, and what actions they must take in the event that further evidence of contamination is identified or suspected.

5.8 Regulatory Approval

It is recommended that this report is submitted to the Local Authority in relation to the relevant conditions with respect to contaminated land. The report should also be submitted to any other relevant regulator.

The conclusions drawn in this report should be considered as provisional until such time as the report has been accepted and the relevant conditions have been discharged.

5.9 Discovery Strategy

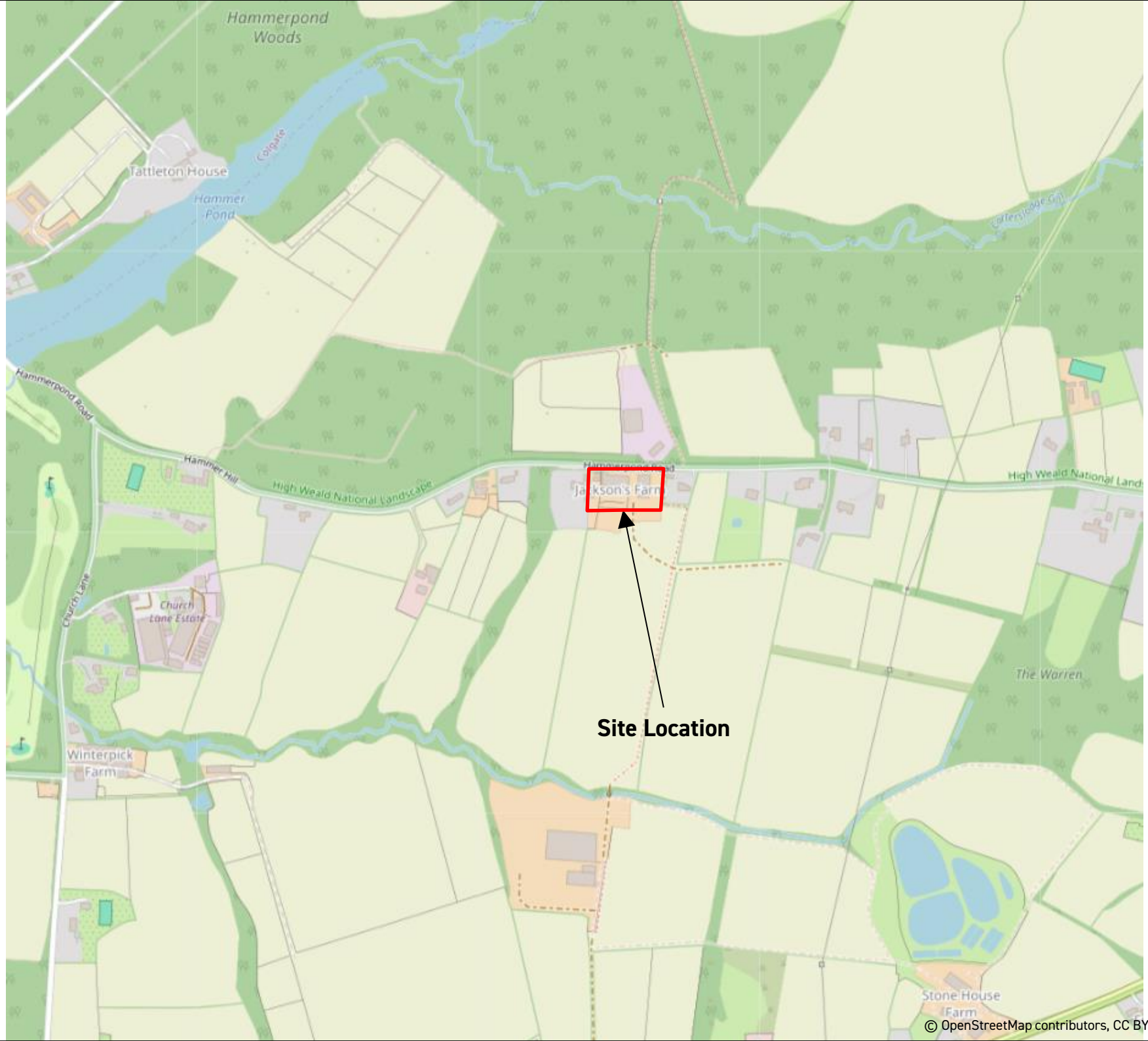
If, during the course of the site clearance and development works, any materials not previously identified by the investigation that are suspected of being 'contaminants' are encountered, then the following procedure should apply:

- All works in that area should cease and the site manager should be informed.
- Advice should be sought from suitably qualified and experienced personnel as to whether any further site inspection, sampling, testing and/or assessment is deemed necessary.
- If required, the conclusions of any assessment and any proposed remedial works (if required) should be agreed by the local authority.
- If necessary, full details of any remedial works should be included in the verification report for the site.

Suspected 'contamination' may take the following form, though it is noted that this list is not exhaustive and site operatives should ask if they are at all unsure of any findings:

- Soil or water looks oily and/or has an oily odour
- Soil or water has a solvent type of odour
- Significant quantities of man-made materials within fill such as paint cans, car parts, glass fragments
- Suspected asbestos containing materials (insulating boards, cement, loose fibres etc.)
- Significant volumes of clinker like or ashy material
- Sand bags, and/or subsurface concrete structures
- Animal carcasses or evidence of animal burial pits

FIGURES



N

ASHDOWN
SITE INVESTIGATION

Head Office

Unit 3
The Old Grain Store
Ditchling Common Business Park
Ditchling
East Sussex
BN6 8SG
contact@ashdownsi.co.uk

Site

Jacksons Farm
Hammerpond Road
Plummers Plain
Lower Beeding
West Sussex

Project Ref

P17132

Figure No

1

Drawing Title

Site Location Plan

Scale

Not To Scale

Jackson's Farm

Hammerpond Road

Silo

Building 1

Building 2

Building 3 - Open Sided

Building 4

Building 5

Temporary Building

WS01

WS02

WS03

WS04

WS05

WS06

WS07

WS08

WS09

WS10

WS11

WS12

WS13

Overhead Wires

Close Board Fence

Block Wall

Hedge Average 2.0ht

Concrete

Concrete Grate

Broken Concrete

Wooden Platform

Stones/Mud

Access Track

Dense Vegetation

Spoil Heap

Abandoned Building

Building - Surveyed on Extents of Green Cladding

N

ASHDOWN SITE INVESTIGATION

Head Office

Unit 3
The Old Grain Store
Ditchling Common Business Park
Ditchling
East Sussex
BN6 8SG
contact@ashdownsi.co.uk

Site

Jacksons Farm
Hammerpond Road
Plummers Plain
Lower Beeding
West Sussex

Project Ref

P17132

Figure No

2

Drawing Title

Site Plan

Scale

NTS

APPENDIX A

Proposed Development Layout

N

522740E 522760E 522780E 522800E 522820E 522840E

Hammerpond Road

T1 -B1
T2 -C1
T3 -C1
T4 -B1
T5 -B2
T6 -B2
T7 -B2
T8 -B2
T9 -B2
T10 -B2
T11 -B2
T12 -B2
T13 -B2
T14 -C1
T15 -B2
T16 -B2
T17 -C1
T18 -B2
T19 -C1
T20 -B1
H1 -B2
H2 -C2
H3 -B2
G1 -B2
G2 -C1

C B A

Public Footpath
Overhead Wires
Wooden Fence
Post and Wire Fence
Access Track
Dense Vegetation
Abandoned Building
Patio
Balcony
Awning

Proposed Site Plan

LLOYD HARDEN
Design • Planning • Architecture

- Proposed Grass
- Proposed Wild Flowers and Grass
- Existing Grass Verge
- Proposed Permeable Paviours - SUDS Refer To Drainage drawing
- Patio and Paths
- Existing Footpath to remain
- Retaining Walls
- Balconies
- Proposed Trees
- Existing Trees To Remain
- Proposed Bushes
- Proposed Estate Fencing
- Proposed Sliding Gate
- Proposed Inward Opening Gate

REV BY DATE DETAILS

SCALE @ A1 -1:200

0 2.5m 5m 7.5m 10m 1:200

CLIENT
Lee Goossons
Hammerpond Lane, Horsham, RH13 6PE

PROJECT
Jackson's Farm - Demolition of Barns - 3 new Build Houses

DRAWN BY LKH
CHECKED BY LKH

PLANNING

DRAWING TITLE
Proposed Site Plan

DATE 05.01.24
DRAWING NUMBER 259101-110
REVISION --

+44 (0)116 482 9284 www.lloydharden.co.uk

APPENDIX B

Explanatory Notes
Exploratory Hole Records

ASHDOWN
SITE INVESTIGATION

EXPLANATORY NOTES

Symbols and abbreviations on Exploratory Hole Records

Samples

U	'Undisturbed' Sample: - 100mm diameter by 450mm long. The number of blows to drive in the sampling tube is shown after the test index letter in the SPT column.
Pi	Piston Sample: 'Undisturbed' sample 100mm diameter by 600mm long.
D	Disturbed Sample
R	Root Sample
B	Bulk Disturbed Sample
W	Water Sample
ES	Environmental Suite (on older records may be referenced J T)

In Situ Testing

S	Standard penetration test (SPT): Using the split spoon sampler.
C	Standard Penetration Test (SPT): Using a solid cone instead of the sampler – conducted usually in coarse grained soils or weak rocks.
V	Shear Vane Test: Undrained shear strength (cohesion) (kN/m^2) shown within the Vane/Pen Test and N Value column.
H	Hand penetrometer Test: Undrained shear strength (cohesion) (kN/m^2) shown within the Vane/Pen Test and N Value column.
P	Perth Penetrometer Test: Number of blows for 300mm penetration shown under Vane/Pen Test and N Value column.

Excavation Method

CP	Cable Percussion Borehole
RC	Rotary Cored Borehole
WLS	Dynamic Sampler Borehole using windowless sampler tubes
WS	Dynamic Sampler Borehole using window sampler tubes
TP	Trial Pit excavated using mechanic excavator
HDP	Trial Pit excavated using hand tools

Soil Description

Description and classification of soils has been carried out using as a general basis the British Standard Geotechnical investigation and testing – Identification and classification of soil, Part 1 Identification and description (BS EN ISO 14688-1) and Part 2 Principles of classification (BS EN 14688-2) as well as the BS5930 code of Practice for Ground Investigations.

Rock Description

Description and classification of rocks has been carried out using as a general basis the British Standard Geotechnical investigation and testing – Identification and classification of rock, Part 1 Identification and classification (BS EN ISO 14689-1) as well as the BS5930 code of Practice for Ground Investigations. TCR – Total Core Recovery, SCR – Solid Core Recovery, RQD – Rock Quality Designation, NI – Non Intact, If – indicative fracture spacing (min/ave/max), FI – Fracture Index.

Chalk Description

Chalk description is based on BS EN ISO 14688, BS EN ISO 14689 and BS5930. The classification of chalk generally follows the guidance offered by the Construction Industry Research and Information Association (CIRIA) C574, 'Engineering in Chalk'. This is based on assessment of chalk density, discontinuity and aperture spacing, and the proportion of intact chalk to silt of chalk.

In Situ Strength Testing

Standard penetration testing (SPT) carried out in accordance with BS EN ISO 22476-3:2005.

Continuous dynamic probe testing conducted using a super heavy DPSH-B (As defined by BS EN ISO 22476-2:2005) probing geometry. The DPSH-B configuration is similar to that of the standard penetration test (SPT); the main differences being that the tip comprises a 90° cone, the driving rods are lighter than those used for SPT testing and the blow counts are recorded over 100mm increments rather than 300mm, as is the case for the SPT.

Perth penetrometer tests carried out in accordance with Australian Standard AS 1289:6.3.3-1997, Method of Testing Soils for Engineering Purposes; no equivalent European or British Standard having been published to date.

Undrained shear strength determinations made in-situ using a Geonor hand shear vane or a hand penetrometer.

Testing to determine the in-situ California Bearing Ratio (CBR) of soils conducted at shallow depths using a hand-held Transport Research Laboratory (TRL) cone penetrometer.

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 14/04/2025

End Date: 14/04/2025

Borehole Number: **WS01**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
	ES	0.30	0.35			0.30	MADE GROUND: Dark brown gravelly sandy clay. Gravel is subangular to subrounded fine to coarse mudstone with rare brick and concrete.
						0.35	Light brown and light grey gravelly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse siltstone and mudstone. (Upper Tunbridge Wells Sand)
	ES	0.80					
	ES	1.10					
						1.30	End of borehole at 1.30m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: No further progress below 1.30m depth - too hard/dense.

Excavation Method: WLS

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 07/04/2025

End Date: 07/04/2025

Borehole Number: **WS02**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
	ES	0.15				0.00	MADE GROUND: Broken concrete and sandy subangular to subrounded fine to coarse gravel of concrete, brick, flint and charcoal-like material.
						0.20	Light grey, orange brown and light brown gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse mudstone and siltstone. (Upper Tunbridge Wells Sand)
	ES	0.70					with occasional bands of mudstone below 0.50m depth.
						0.80	End of borehole at 0.80m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: No further progress below 0.80m depth - too hard/dense.

Excavation Method: WLS

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 07/04/2025

End Date: 07/04/2025

Borehole Number: **WS03**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	MADE GROUND: Off white silty subangular to subrounded fine to coarse gravel of chalk with occasional flint and charcoal-like material and frequent orange staining. (Chalk Fill)
	ES	0.20				0.30	with membrane at base.
	ES	0.60					Light grey and orange brown slightly gravelly CLAY with frequent orange staining. Gravel is subangular to subrounded fine to coarse mudstone. (Upper Tunbridge Wells Sand)
						1.00	End of borehole at 1.00m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: n/a

Excavation Method: WLS

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 07/04/2025

End Date: 07/04/2025

Borehole Number: **WS04**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
	ES	0.20				0.15	MADE GROUND: Brown gravelly sand. Gravel is subangular to subrounded fine to coarse concrete, brick and flint.
						0.25	Brown, dark brown and orange brown gravelly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse siltstone and mudstone. (Upper Tunbridge Wells Sand)
	ES	0.70					
						1.00	End of borehole at 1.00m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: n/a

Excavation Method: WLS

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 07/04/2025

End Date: 07/04/2025

Borehole Number: **WS05**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
						0.13	
	ES	0.20				0.25	MADE GROUND: Brown gravelly sandy clay. Gravel is subangular to subrounded fine to coarse sandstone, flint, concrete and charcoal-like material.
	ES	0.50					Light brown, brown, light grey and yellow brown gravelly silty CLAY with occasional bands of siltstone and mudstone. Gravel is subangular to subrounded fine to coarse siltstone and mudstone. (Upper Tunbridge Wells Sand)
	ES	1.10					becoming light grey and orange brown below 1.00m depth.
							becoming light grey below 1.50m depth.
	ES	2.00					becoming light grey and light brown with iron staining below 2.00m depth.
	ES	2.70					
						3.00	End of borehole at 3.00m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: n/a

Excavation Method: WLS

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 08/04/2025

End Date: 08/04/2025

Borehole Number: **WS06**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
	ES	0.15				0.09	MADE GROUND: Off white silty subangular to subrounded fine to coarse gravel of gravel of chalk with occasional concrete and flint. (Chalk Fill)
	ES	0.30				0.20	
						0.35	MADE GROUND: Dark brown slightly gravelly clay. Gravel is subangular to subrounded fine to medium chalk and charcoal-like material.
	ES	0.60					Light brown, yellow brown and brown slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse mudstone and siltstone. (Upper Tunbridge Wells Sand)
						1.05	End of borehole at 1.05m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: n/a

Excavation Method: HA

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 08/04/2025

End Date: 08/04/2025

Borehole Number: **WS07**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
	ES	0.15				0.11	MADE GROUND: Brown and black sandy subangular to subrounded fine to coarse gravel of concrete, flint and charcoal-like material.
	ES	0.25				0.21	
						0.38	MADE GROUND: Orange brown and light brown slightly gravelly silty clay. Gravel is subangular to subrounded fine to coarse mudstone, siltstone and charcoal-like material.
	ES	0.70					Light brown and orange brown slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse mudstone and siltstone. (Upper Tunbridge Wells Sand)
						1.00	End of borehole at 1.00m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: n/a

Excavation Method: HA

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 08/04/2025

End Date: 08/04/2025

Borehole Number: **WS08**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
	ES	0.25				0.22	MADE GROUND: Black sandy subangular to subrounded fine to coarse gravel of crystalline rock, flint and concrete.
	ES	0.35				0.33	Green grey slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to medium mudstone and siltstone. (Upper Tunbridge Wells Sand)
	ES	0.70				0.45	Light brown, yellow brown and orange brown slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse mudstone and siltstone. (Upper Tunbridge Wells Sand)
						1.10	End of borehole at 1.10m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: n/a

Excavation Method: HA

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 07/04/2025

End Date: 07/04/2025

Borehole Number: **WS09**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
	ES	0.10				0.00	MADE GROUND: Dark grey sandy subangular to subrounded fine to coarse gravel of flint, brick, sandstone, charcoal-like material and crystalline rock. with membrane at base.
	ES	0.60				0.45	MADE GROUND: Brown gravelly slightly sandy clay. Gravel is subangular to subrounded fine to coarse crystalline rock, sandstone and brick.
	ES	0.95				0.75	MADE GROUND: Sandy clayey subangular to subrounded fine to coarse gravel of sandstone, flint, crystalline rock and charcoal-like material.
	ES	1.30				0.90	MADE GROUND: Brown gravelly slightly sandy clay. Gravel is subangular to subrounded fine to coarse crystalline rock, sandstone, brick and charcoal-like material.
	ES	1.80				1.00	MADE GROUND: Light grey and orange brown clay with rare subangular to subrounded fine to coarse gravel of mudstone and charcoal-like material.
	ES	2.30				1.70	Light grey, yellow brown, orange brown and light brown gravelly CLAY. Gravel is subangular to subrounded fine to coarse mudstone. (Upper Tunbridge Wells Sand)
	ES	2.90				3.00	End of borehole at 3.00m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: Standpipe installed to 3.00m depth; 3.00m to 2.00m slotted pipe with gravel surround; 2.00m to ground level plain pipe with bentonite seal; completed with a gas tap and security cover concreted flush with the ground surface.

Excavation Method: WLS

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 14/04/2025

End Date: 14/04/2025

Borehole Number: **WS10**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
	ES	0.35				0.35	MADE GROUND: Brown gravelly clay. Gravel is subangular to subrounded fine to coarse brick and concrete. with occasional cobbles of brick below 0.45m depth.
	ES	0.70				0.60	Orange brown gravelly sandy CLAY. Gravel is subangular to subrounded fine to coarse mudstone. (Upper Tunbridge Wells Sand)
	ES	1.20				1.00	Light grey mottled yellow brown gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse siltstone and mudstone. (Upper Tunbridge Wells Sand)
	ES	1.90					
	ES	2.20					
	ES	2.70				3.00	End of borehole at 3.00m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: Standpipe installed to 3.00m depth; 3.00m to 2.00m slotted pipe with gravel surround; 2.00m to ground level plain pipe with bentonite seal; completed with a gas tap and security cover concreted flush with the ground surface.

Excavation Method: WLS

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 14/04/2025

End Date: 14/04/2025

Borehole Number: **WS11**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
	ES	0.40				0.35	MADE GROUND: Black and dark grey gravelly sandy clay. Gravel is subangular to subrounded fine to coarse brick, flint concrete and charcoal-like material.
	ES	0.55				0.45	MADE GROUND: Brown and orange brown gravelly clay. Gravel is subangular to subrounded fine to coarse flint, brick, sandstone, crystalline rock and plastic.
	ES	0.90				0.70	MADE GROUND/REWORKED: Grey mottled orange brown slightly sandy clay with rare subangular to subrounded fine to coarse gravel of charcoal-like material.
	ES	1.50				1.00	Grey brown and yellow brown gravelly slightly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse sandstone. (Upper Tunbridge Wells Sand)
	ES	2.10					
	ES	2.85					with black staining at 2.85m depth.
	ES	2.95				3.00	End of borehole at 3.00m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: Standpipe installed to 3.00m depth; 3.00m to 2.00m slotted pipe with gravel surround; 2.00m to ground level plain pipe with bentonite seal; completed with a gas tap and security cover concreted flush with the ground surface.

Excavation Method: WLS

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 08/04/2025

End Date: 08/04/2025

Borehole Number: **WS12**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	Concrete.
	ES	0.30				0.23	MADE GROUND: Dark grey sandy clayey subangular to subrounded fine to coarse gravel of concrete, flint and crystalline rock. With occasional cobbles and a hydrocarbon(?) odour/staining.
	ES	0.40				0.37	
	ES	0.55				0.45	MADE GROUND: Dark grey slightly gravelly slightly sandy silty clay. Gravel is subangular to subrounded fine to coarse flint and mudstone. With a hydrocarbon(?) odour/staining.
	ES	0.90				0.80	REWORKED: Brown, light brown, orange brown and light grey slightly gravelly silty clay. Gravel is subangular to subrounded fine to medium mudstone.
							REWORKED: Dark brown with occasional light brown pockets silty clay.
						1.15	End of borehole at 1.15m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: n/a

Excavation Method: HA

Borehole Diameter: Various

Made By: GRD

ASHDOWN SITE INVESTIGATION
E-mail: contact@ashdownsi.co.uk
Web: www.ashdownsi.co.uk
Tel: 01273 483119

Site Name: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Job Number: P17132

Start Date: 07/04/2025

End Date: 07/04/2025

Borehole Number: **WS13**

Standpipe	Samples and In Situ Testing: Sample/ Test Type	Depth From (m)	Depth To (m)	Test Result	Legend	Depth	Stratum Description
						0.00	MADE GROUND: Light grey silty clay with rare subangular to subrounded fine to medium gravel of brick and charcoal-like material.
	ES	0.40				0.50	MADE GROUND: Dark brown/black gravelly clay with an organic odour. Gravel is subangular to subrounded fine to coarse organic material and wood fragments.
	ES	0.90				1.00	End of borehole at 1.00m

Remarks

Groundwater: Borehole dry on completion.

Stability: Borehole stable on completion.

Notes: Hand auger undertaken through above ground stockpile material.

Excavation Method: HA

Borehole Diameter: Various

Made By: GRD

APPENDIX C

Gas Concentration and Groundwater Monitoring Results

ASHDOWN SITE INVESTIGATION

GAS AND GROUNDWATER MONITORING RESULTS

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Project Ref: P17132

Position	Date	Time	Dynamic Pressure (pa)	Atmospheric Pressure (mbar)	Atmospheric Trend	Standing Water Depth (m bgl)	Flow Rate (l/hr)				Methane (%)								Carbon Dioxide (%)								Oxygen (%)								CO (ppm)	H_2S (ppm)
							Seconds				Seconds								Seconds								Seconds									
							15	30	45	60	15	30	45	60	75	90	105	120	15	30	45	60	75	90	105	120	15	30	45	60	75	90	105	120		
WS09	15/04/2025	09:56	0	980	Rising	DRY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.4	6.5	6.4	6.4	6.4	6.4	6.3	9.9	8.7	8.3	8.3	8.3	8.4	8.5	8.6	10.0	0.0
WS10	15/04/2025	09:21	0	980	Rising	DRY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	17.6	17.3	17.3	17.2	17.1	17.1	17.0	16.9	10.0	0.0
WS11	15/04/2025	09:45	0	981	Rising	DRY	0.0	0.0	0.0	0.0	6.5	7.4	7.6	7.6	7.8	8.0	8.2	8.1	9.9	11.4	11.9	12.1	12.4	12.7	13.4	13.7	7.2	7.2	5.1	4.8	7.2	7.2	5.1	4.8	10.0	0.0
WS09	22/04/2025	09:30	0	1004	Rising	DRY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	5.2	5.3	5.4	5.4	5.4	5.4	5.4	13.6	12.5	12.3	12.2	12.1	12.1	12.1	12.1	0.0	0.0
WS10	22/04/2025	09:20	0	1004	Rising	DRY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1	1.2	1.2	1.2	1.1	1.1	1.1	16.5	16.3	16.2	16.2	16.2	16.2	16.2	16.2	0.0	0.0
WS11	22/04/2025	09:10	0	1004	Rising	DRY	0.0	0.0	0.0	0.0	0.7	1.3	1.3	1.3	1.3	1.3	1.3	1.2	4.6	7.9	8.8	8.8	8.8	8.7	8.7	8.7	17.7	11.2	10.0	10.0	10.0	10.0	10.1	10.1	0.0	0.0
WS09	30/04/2025	12:30	0	1010	Falling	DRY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5	5.5	5.5	5.6	5.6	5.6	5.6	11.6	11.6	11.6	11.6	11.5	11.4	11.4	11.4	0.0	0.0
WS10	30/04/2025	12:25	0	1010	Falling	DRY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Monitored for 60 seconds				1.5	1.6	1.6	1.7	Monitored for 60 seconds				14.7	15.1	14.7	14.5	Monitored for 60 seconds				0.0	0.0
WS11	30/04/2025	12:40	0	1010	Falling	DRY	0.0	0.0	0.0	0.0	1.3	1.7		1.7		1.6		1.6	5.9	8.0		7.9		7.5		7.3	10.2	8.5		8.7		9.1		9.5	0.0	0.0

APPENDIX D

Laboratory Test Results

Normec DETS

UKAS TESTING
4480

Alex Bewick
Ashdown Site Investigations Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex
BN6 8SG

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 25-04056

Site Reference:	Jackson Farm, Lower Beedling
Project / Job Ref:	P17132_2775
Order No:	12137
Sample Receipt Date:	09/04/2025
Sample Scheduled Date:	10/04/2025
Report Issue Number:	1
Reporting Date:	22/04/2025

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate						
DETS Report No: 25-04056	**~Date Sampled**	07/04/25	07/04/25	07/04/25	07/04/25	07/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS02	WS03	WS04	WS04	WS05
~Project / Job Ref: P17132_2775	**~Additional Refs**	T, J, V	T, J, V	T, J, V	J, V	T, J, V
~Order No: 12137	**~Depth (m)**	0.70	0.20	0.20	0.70	0.20
Reporting Date: 22/04/2025	**DETS Sample No**	772706	772707	772708	772709	772710

Determinand	Unit	RL	Accreditation		(n)			(n)
Asbestos Screen [S]	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected		Not Detected
pH	pH Units	N/a	MCERTS	8.2	8.4	9.8		8.9
Total Sulphate as SO_4	mg/kg	< 200	MCERTS	293	424	1215		788
Total Sulphate as SO_4	%	< 0.02	MCERTS	0.03	0.04	0.12		0.08
Organic Matter (SOM)	%	< 0.1	MCERTS	0.6	2.1	3.9		4.8
Arsenic (As)	mg/kg	< 2	MCERTS	2	2	7		7
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	0.4	< 0.2		0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	10	2	9		9
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		< 2
Copper (Cu)	mg/kg	< 4	MCERTS	9	6	26		24
Lead (Pb)	mg/kg	< 3	MCERTS	7	10	132		112
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1		< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	14	3	8		8
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2		< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	34	15	152		94

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate						
DETS Report No: 25-04056	**~Date Sampled**	08/04/25	08/04/25	08/04/25	07/04/25	08/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS06	WS07	WS08	WS09	WS12
~Project / Job Ref: P17132_2775	**~Additional Refs**	T, J, V	T, J, V	T, J, V	T, J, V	T, J, V
~Order No: 12137	**~Depth (m)**	0.15	0.25	0.35	0.10	0.30
Reporting Date: 22/04/2025	**DETS Sample No**	772711	772712	772713	772714	772715

Determinand	Unit	RL	Accreditation				(n)	
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	11.1	10.3	7.5	8.8	10.3
Total Sulphate as SO_4	mg/kg	< 200	MCERTS	2115	421	< 200	1704	2264
Total Sulphate as SO_4	%	< 0.02	MCERTS	0.21	0.04	< 0.02	0.17	0.23
Organic Matter (SOM)	%	< 0.1	MCERTS	0.8	2.1	0.7	5.6	2.8
Arsenic (As)	mg/kg	< 2	MCERTS	3	3	4	14	7
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.2	< 0.2	< 0.2	0.5	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	7	6	15	19	12
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	7	16	8	59	86
Lead (Pb)	mg/kg	< 3	MCERTS	7	29	10	114	27
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	6	< 3	6	18	27
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	26	27	23	132	59

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate						
DETS Report No: 25-04056	**~Date Sampled**	08/04/25	07/04/25	07/04/25		
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied		
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS12	WS13	WS13		
~Project / Job Ref: P17132_2775	**~Additional Refs**	J, V	T, J, V	J, V		
~Order No: 12137	**~Depth (m)**	0.40	0.40	0.90		
Reporting Date: 22/04/2025	**DETS Sample No**	772716	772717	772718		

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025		Not Detected			
pH	pH Units	N/a	MCERTS		8.0			
Total Sulphate as SO_4	mg/kg	< 200	MCERTS		245			
Total Sulphate as SO_4	%	< 0.02	MCERTS		0.02			
Organic Matter (SOM)	%	< 0.1	MCERTS		20			
Arsenic (As)	mg/kg	< 2	MCERTS		< 2			
W/S Boron	mg/kg	< 1	NONE		< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS		< 0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS		2			
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2			
Copper (Cu)	mg/kg	< 4	MCERTS		126			
Lead (Pb)	mg/kg	< 3	MCERTS		3			
Mercury (Hg)	mg/kg	< 1	MCERTS		< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS		< 3			
Selenium (Se)	mg/kg	< 2	MCERTS		< 2			
Zinc (Zn)	mg/kg	< 3	MCERTS		28			

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-04056	**~Date Sampled**	07/04/25	07/04/25	07/04/25	07/04/25	08/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS02	WS03	WS04	WS05	WS06
~Project / Job Ref: P17132_2775	**~Additional Refs**	T, J, V	T, J, V	T, J, V	T, J, V	T, J, V
~Order No: 12137	**~Depth (m)**	0.70	0.20	0.20	0.20	0.15
Reporting Date: 22/04/2025	**DETS Sample No**	772706	772707	772708	772710	772711

Determinand	Unit	RL	Accreditation		(n)		(n)	
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	0.19	< 0.1	0.34	3.30	0.11
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.54	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.70	< 0.1	0.44	3.87	0.11
Pyrene	mg/kg	< 0.1	MCERTS	0.70	< 0.1	0.40	3.28	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.41	< 0.1	0.20	1.28	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	0.50	< 0.1	0.24	1.40	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.71	< 0.1	0.23	1.19	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.30	< 0.1	< 0.1	0.50	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.77	< 0.1	0.23	1.17	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.71	< 0.1	0.19	0.79	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.16	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.50	< 0.1	0.14	0.55	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	5.5	< 1.6	2.4	18	< 1.6

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-04056	**~Date Sampled**	08/04/25	08/04/25	07/04/25	08/04/25	07/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS07	WS08	WS09	WS12	WS13
~Project / Job Ref: P17132_2775	**~Additional Refs**	T, J, V	T, J, V	T, J, V	T, J, V	T, J, V
~Order No: 12137	**~Depth (m)**	0.25	0.35	0.10	0.30	0.40
Reporting Date: 22/04/2025	**DETS Sample No**	772712	772713	772714	772715	772717

Determinand	Unit	RL	Accreditation			(n)		
Naphthalene	mg/kg	< 0.1	MCERTS	0.94	0.11	< 0.1	0.24	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	0.14	< 0.1	0.23	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	5.25	0.22	0.20	0.34	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	5.31	0.23	0.27	0.45	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	57.60	0.92	3.01	2.11	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	13.50	0.23	0.84	0.46	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	70.40	0.66	7.33	2.69	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	52.90	0.53	5.92	2.36	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	22.80	0.15	4.47	0.87	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	21.10	0.18	4.01	0.83	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	20.40	0.13	6.36	0.78	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	6.17	< 0.1	2.19	0.30	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	20	0.13	6.09	0.76	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	10.10	< 0.1	3.69	0.46	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	2.85	< 0.1	0.88	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	7.83	< 0.1	2.75	0.30	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	317	3.5	48.2	12.9	< 1.6

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Texas Banded						
DETS Report No: 25-04056	**~Date Sampled**	07/04/25	07/04/25	07/04/25	07/04/25	07/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS02	WS03	WS04	WS04	WS05
~Project / Job Ref: P17132_2775	**~Additional Refs**	T, J, V	T, J, V	T, J, V	J, V	T, J, V
~Order No: 12137	**~Depth (m)**	0.70	0.20	0.20	0.70	0.20
Reporting Date: 22/04/2025	**DETS Sample No**	772706	772707	772708	772709	772710

Determinand	Unit	RL	Accreditation	(n)				(n)
EPH Texas (C6 - C8) : HS_1D_MS _Total	mg/kg	< 0.05	NONE				< 0.05	
EPH Texas (>C8 - C10) : EH_1D_Total	mg/kg	< 1	**MCERTS**				< 1	
EPH Texas (>C10 - C12) : EH_1D_Total	mg/kg	< 1	**MCERTS**				< 1	
EPH Texas (>C12 - C16) : EH_1D_Total	mg/kg	< 1	**MCERTS**				< 1	
EPH Texas (>C16 - C21) : EH_1D_Total	mg/kg	< 1	**MCERTS**				< 1	
EPH Texas (>C21 - C40) : EH_1D_Total	mg/kg	< 6	**MCERTS**				< 6	
EPH Texas (C6 - C40) : HS_1D_MS+EH_1D_Total	mg/kg	< 6	NONE				< 6	

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Texas Banded						
DETS Report No: 25-04056	**~Date Sampled**	08/04/25	08/04/25	08/04/25	07/04/25	08/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS06	WS07	WS08	WS09	WS12
~Project / Job Ref: P17132_2775	**~Additional Refs**	T, J, V	T, J, V	T, J, V	T, J, V	T, J, V
~Order No: 12137	**~Depth (m)**	0.15	0.25	0.35	0.10	0.30
Reporting Date: 22/04/2025	**DETS Sample No**	772711	772712	772713	772714	772715

Determinand	Unit	RL	Accreditation				(n)	
EPH Texas (C6 - C8) : HS_1D_MS _Total	mg/kg	< 0.05	NONE					
EPH Texas (>C8 - C10) : EH_1D_Total	mg/kg	< 1	**MCERTS**					
EPH Texas (>C10 - C12) : EH_1D_Total	mg/kg	< 1	**MCERTS**					
EPH Texas (>C12 - C16) : EH_1D_Total	mg/kg	< 1	**MCERTS**					
EPH Texas (>C16 - C21) : EH_1D_Total	mg/kg	< 1	**MCERTS**					
EPH Texas (>C21 - C40) : EH_1D_Total	mg/kg	< 6	**MCERTS**					
EPH Texas (C6 - C40) : HS_1D_MS+EH_1D_Total	mg/kg	< 6	NONE					

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Texas Banded						
DETS Report No: 25-04056	**~Date Sampled**	08/04/25	07/04/25	07/04/25		
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied		
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS12	WS13	WS13		
~Project / Job Ref: P17132_2775	**~Additional Refs**	J, V	T, J, V	J, V		
~Order No: 12137	**~Depth (m)**	0.40	0.40	0.90		
Reporting Date: 22/04/2025	**DETS Sample No**	772716	772717	772718		

Determinand	Unit	RL	Accreditation					
EPH Texas (C6 - C8) : HS_1D_MS _Total	mg/kg	< 0.05	NONE	< 0.05		0.45		
EPH Texas (>C8 - C10) : EH_1D_Total	mg/kg	< 1	**MCERTS**	17		402		
EPH Texas (>C10 - C12) : EH_1D_Total	mg/kg	< 1	**MCERTS**	40		1280		
EPH Texas (>C12 - C16) : EH_1D_Total	mg/kg	< 1	**MCERTS**	89		22		
EPH Texas (>C16 - C21) : EH_1D_Total	mg/kg	< 1	**MCERTS**	98		20		
EPH Texas (>C21 - C40) : EH_1D_Total	mg/kg	< 6	**MCERTS**	56		97		
EPH Texas (C6 - C40) : HS_1D_MS+EH_1D_Total	mg/kg	< 6	NONE	299		1822		

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Banded (Type F)						
DETS Report No: 25-04056	**~Date Sampled**	07/04/25	07/04/25	07/04/25	07/04/25	08/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS02	WS03	WS04	WS05	WS06
~Project / Job Ref: P17132_2775	**~Additional Refs**	T, J, V	T, J, V	T, J, V	T, J, V	T, J, V
~Order No: 12137	**~Depth (m)**	0.70	0.20	0.20	0.20	0.15
Reporting Date: 22/04/2025	**DETS Sample No**	772706	772707	772708	772710	772711

Determinand	Unit	RL	Accreditation		(n)		(n)	
EPH (>C8 - C10) : EH_1D_Total	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
EPH (>C10 - C12) : EH_1D_Total	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
EPH (>C12 - C16) : EH_1D_Total	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
EPH (>C16 - C21) : EH_1D_Total	mg/kg	< 1	MCERTS	2	< 1	< 1	12	< 1
EPH (>C21 - C40) : EH_1D_Total	mg/kg	< 6	MCERTS	24	< 6	< 6	22	< 6
EPH (C8 - C40) : EH_1D_Total	mg/kg	< 6	MCERTS	26	< 6	< 6	34	< 6

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Banded (Type F)						
DETS Report No: 25-04056	**~Date Sampled**	08/04/25	08/04/25	07/04/25	08/04/25	07/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beedling	**~TP / BH No**	WS07	WS08	WS09	WS12	WS13
~Project / Job Ref: P17132_2775	**~Additional Refs**	T, J, V	T, J, V	T, J, V	T, J, V	T, J, V
~Order No: 12137	**~Depth (m)**	0.25	0.35	0.10	0.30	0.40
Reporting Date: 22/04/2025	**DETS Sample No**	772712	772713	772714	772715	772717

Determinand	Unit	RL	Accreditation	(n)				
EPH (>C8 - C10) : EH_1D_Total	mg/kg	< 1	MCERTS	< 1	< 1	< 1	14	< 1
EPH (>C10 - C12) : EH_1D_Total	mg/kg	< 1	MCERTS	< 1	< 1	< 1	32	2
EPH (>C12 - C16) : EH_1D_Total	mg/kg	< 1	MCERTS	28	< 1	3	79	4
EPH (>C16 - C21) : EH_1D_Total	mg/kg	< 1	MCERTS	174	2	42	85	284
EPH (>C21 - C40) : EH_1D_Total	mg/kg	< 6	MCERTS	308	< 6	268	42	726
EPH (C8 - C40) : EH_1D_Total	mg/kg	< 6	MCERTS	510	< 6	313	252	1017

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Sample Descriptions
DETS Report No: 25-04056
Ashdown Site Investigations Ltd
~Site Reference: Jackson Farm, Lower Beedling
~Project / Job Ref: P17132_2775
~Order No: 12137
Reporting Date: 22/04/2025

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
772706	WS02	T, J, V	0.70	6.7	Brown sandy clay with stones
772707	WS03	T, J, V	0.20	16.9	White chalk
772708	WS04	T, J, V	0.20	9	Brown sandy clay with stones and brick
772709	WS04	J, V	0.70	13.2	Light brown sandy clay with stones
772710	WS05	T, J, V	0.20	14.2	Brown sandy gravel with stones and concrete
772711	WS06	T, J, V	0.15	10.3	Light brown sandy clay with stones and chalk
772712	WS07	T, J, V	0.25	11.5	Brown sandy clay with stones
772713	WS08	T, J, V	0.35	12.7	Light brown sandy clay
772714	WS09	T, J, V	0.10	3.3	Brown sandy gravel with stones and concrete
772715	WS12	T, J, V	0.30	12.4	Black loamy sand with stones and oil / petroleum
772716	WS12	J, V	0.40	14.9	Black loamy sand with stones and oil / petroleum
772717	WS13	T, J, V	0.40	23.6	Grey loamy sand with vegetation
772718	WS13	J, V	0.90	72.5	Black loamy sand with vegetation

Moisture content is part of procedure E003 & is not an accredited test

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 25-04056

Ashdown Site Investigations Ltd

~Site Reference: Jackson Farm, Lower Beedling

~Project / Job Ref: P17132_2775

~Order No: 12137

Reporting Date: 22/04/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

List of HWOL Acronyms and Operators
DETS Report No: 25-04056
Ashdown Site Investigations Ltd
~Site Reference: Jackson Farm, Lower Beedling
~Project / Job Ref: P17132_2775
~Order No: 12137
Reporting Date: 22/04/2025

Acronym	**Description**
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

EPH Banded (C10 - C12) - EH_1D_Total
EPH Banded (C12 - C16) - EH_1D_Total
EPH Banded (C16 - C21) - EH_1D_Total
EPH Banded (C21 - C40) - EH_1D_Total
EPH Banded (C8 - C10) - EH_1D_Total
EPH Banded (C8 - C40) - EH_1D_Total
EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS _Total
EPH Texas (C8 - C10) - EH_1D_Total

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
n	Please note that we are MCERTS soil accredited (UK soils only) for sand, loam, and clay, and UKAS accredited for groundwater, tap water, surface water, and generated leachates. Other matrices are outside our scope of accreditation.
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

Normec DETS

UKAS TESTING
4480

Alex Bewick
Ashdown Site Investigations Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex
BN6 8SG

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 25-04146

Site Reference:	Jackson Farm, Lower Beeding
Project / Job Ref:	P17132_2775
Order No:	12137
Sample Receipt Date:	09/04/2025
Sample Scheduled Date:	15/04/2025
Report Issue Number:	1
Reporting Date:	25/04/2025

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate						
DETS Report No: 25-04146	**~Date Sampled**	07/04/25				
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS09				
~Project / Job Ref: P17132_2775	**~Additional Refs**	None Supplied				
~Order No: 12137	**~Depth (m)**	1.30				
Reporting Date: 25/04/2025	**DETS Sample No**	773346				

Determinand	**Unit**	**RL**	**Accreditation**					
pH	pH Units	N/a	**MCERTS**	7.5				
Organic Matter (SOM)	%	< 0.1	**MCERTS**	0.9				
Arsenic (As)	mg/kg	< 2	**MCERTS**	5				
W/S Boron	mg/kg	< 1	NONE	< 1				
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2				
Chromium (Cr)	mg/kg	< 2	**MCERTS**	13				
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2				
Copper (Cu)	mg/kg	< 4	**MCERTS**	14				
Lead (Pb)	mg/kg	< 3	**MCERTS**	12				
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1				
Nickel (Ni)	mg/kg	< 3	**MCERTS**	6				
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2				
Zinc (Zn)	mg/kg	< 3	**MCERTS**	58				

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-04146	**~Date Sampled**	07/04/25				
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS09				
~Project / Job Ref: P17132_2775	**~Additional Refs**	None Supplied				
~Order No: 12137	**~Depth (m)**	1.30				
Reporting Date: 25/04/2025	**DETS Sample No**	773346				

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1				
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1				
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1				
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1				
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1				
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1				
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1				
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1				
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6				

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Texas Banded						
DETS Report No: 25-04146	**~Date Sampled**	07/04/25				
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied				
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS09				
~Project / Job Ref: P17132_2775	**~Additional Refs**	None Supplied				
~Order No: 12137	**~Depth (m)**	1.30				
Reporting Date: 25/04/2025	**DETS Sample No**	773346				

Determinand	Unit	RL	Accreditation					
EPH Texas (C6 - C8) : HS_1D_MS _Total	mg/kg	< 0.05	NONE	< 0.05				
EPH Texas (>C8 - C10) : EH_1D_Total	mg/kg	< 1	**MCERTS**	< 1				
EPH Texas (>C10 - C12) : EH_1D_Total	mg/kg	< 1	**MCERTS**	< 1				
EPH Texas (>C12 - C16) : EH_1D_Total	mg/kg	< 1	**MCERTS**	< 1				
EPH Texas (>C16 - C21) : EH_1D_Total	mg/kg	< 1	**MCERTS**	< 1				
EPH Texas (>C21 - C40) : EH_1D_Total	mg/kg	< 6	**MCERTS**	< 6				
EPH Texas (C6 - C40) : HS_1D_MS+EH_1D_Total	mg/kg	< 6	NONE	< 6				

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-04146	
Ashdown Site Investigations Ltd	
~Site Reference: Jackson Farm, Lower Beeding	
~Project / Job Ref: P17132_2775	
~Order No: 12137	
Reporting Date: 25/04/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
773346	WS09	None Supplied	1.30	13.3	Brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 25-04146

Ashdown Site Investigations Ltd

~Site Reference: Jackson Farm, Lower Beeding

~Project / Job Ref: P17132_2775

~Order No: 12137

Reporting Date: 25/04/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

List of HWOL Acronyms and Operators
DETS Report No: 25-04146
Ashdown Site Investigations Ltd
~Site Reference: Jackson Farm, Lower Beeding
~Project / Job Ref: P17132_2775
~Order No: 12137
Reporting Date: 25/04/2025

Acronym	**Description**
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS _Total
EPH Texas (C8 - C10) - EH_1D_Total

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
M	MCERTS accredited test
U	UKAS accredited test

Normec DETS

UKAS TESTING
4480

Alex Bewick
Ashdown Site Investigations Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex
BN6 8SG

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 25-04246

Site Reference:	Jackson Farm, Lower Beeding
Project / Job Ref:	P17132_2781
Order No:	12147
Sample Receipt Date:	16/04/2025
Sample Scheduled Date:	16/04/2025
Report Issue Number:	1
Reporting Date:	25/04/2025

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate						
DETS Report No: 25-04246	**~Date Sampled**	14/04/25	14/04/25	14/04/25	14/04/25	14/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS01	WS01	WS10	WS10	WS11
~Project / Job Ref: P17132_2781	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 12147	**~Depth (m)**	0.30-0.35	1.10	0.35	1.90	0.55
Reporting Date: 25/04/2025	**DETS Sample No**	773610	773611	773612	773613	773614

Determinand	Unit	RL	Accreditation	(n)				
Asbestos Screen [S]	N/a	N/a	ISO17025			Not Detected		Not Detected
pH	pH Units	N/a	MCERTS	9.5		10.1	8.0	7.8
Total Sulphate as SO_4	mg/kg	< 200	MCERTS			1705		1000
Total Sulphate as SO_4	%	< 0.02	MCERTS			0.17		0.10
Organic Matter (SOM)	%	< 0.1	MCERTS	0.8		1.5	0.5	3.2
Arsenic (As)	mg/kg	< 2	MCERTS	2		11	6	11
W/S Boron	mg/kg	< 1	NONE	< 1		< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2		< 0.2	< 0.2	0.3
Chromium (Cr)	mg/kg	< 2	MCERTS	8		12	24	18
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	4		31	15	20
Lead (Pb)	mg/kg	< 3	MCERTS	7		45	12	53
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1		< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	6		9	13	12
Selenium (Se)	mg/kg	< 2	MCERTS	< 2		< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	13		64	54	63

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate						
DETS Report No: 25-04246	**~Date Sampled**	14/04/25	14/04/25			
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS11	WS11			
~Project / Job Ref: P17132_2781	**~Additional Refs**	None Supplied	None Supplied			
~Order No: 12147	**~Depth (m)**	1.50	2.85			
Reporting Date: 25/04/2025	**DETS Sample No**	773615	773616			

Determinand	Unit	RL	Accreditation					
Asbestos Screen [S]	N/a	N/a	ISO17025					
pH	pH Units	N/a	MCERTS		6.2			
Total Sulphate as SO_4	mg/kg	< 200	MCERTS					
Total Sulphate as SO_4	%	< 0.02	MCERTS					
Organic Matter (SOM)	%	< 0.1	MCERTS		0.6			
Arsenic (As)	mg/kg	< 2	MCERTS		10			
W/S Boron	mg/kg	< 1	NONE		< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS		< 0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS		18			
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2			
Copper (Cu)	mg/kg	< 4	MCERTS		14			
Lead (Pb)	mg/kg	< 3	MCERTS		11			
Mercury (Hg)	mg/kg	< 1	MCERTS		< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS		8			
Selenium (Se)	mg/kg	< 2	MCERTS		< 2			
Zinc (Zn)	mg/kg	< 3	MCERTS		36			

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-04246	**~Date Sampled**	14/04/25	14/04/25	14/04/25	14/04/25	14/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS01	WS10	WS10	WS11	WS11
~Project / Job Ref: P17132_2781	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 12147	**~Depth (m)**	0.30-0.35	0.35	1.90	0.55	2.85
Reporting Date: 25/04/2025	**DETS Sample No**	773610	773612	773613	773614	773616

Determinand	Unit	RL	Accreditation	(n)				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.45	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.23	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	< 0.1	1.84	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.85	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.25	0.36	< 0.1	6.55	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	0.21	0.34	< 0.1	6.59	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	0.21	< 0.1	2.33	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	0.13	0.28	< 0.1	2.50	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.16	0.37	< 0.1	3.65	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.12	< 0.1	1.22	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.12	0.26	< 0.1	2.80	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.17	< 0.1	1.56	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.36	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	0.20	< 0.1	1.49	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	2.3	< 1.6	32.4	< 1.6

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Texas Banded						
DETS Report No: 25-04246	**~Date Sampled**	14/04/25	14/04/25	14/04/25	14/04/25	14/04/25
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS01	WS01	WS10	WS10	WS11
~Project / Job Ref: P17132_2781	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 12147	**~Depth (m)**	0.30-0.35	1.10	0.35	1.90	0.55
Reporting Date: 25/04/2025	**DETS Sample No**	773610	773611	773612	773613	773614

Determinand	Unit	RL	Accreditation	(n)				
EPH Texas (C6 - C8) : HS_1D_MS _Total	mg/kg	< 0.05	NONE		< 0.05		< 0.05	
EPH Texas (>C8 - C10) : EH_1D_Total	mg/kg	< 1	**MCERTS**		< 1		4	
EPH Texas (>C10 - C12) : EH_1D_Total	mg/kg	< 1	**MCERTS**		< 1		< 1	
EPH Texas (>C12 - C16) : EH_1D_Total	mg/kg	< 1	**MCERTS**		< 1		< 1	
EPH Texas (>C16 - C21) : EH_1D_Total	mg/kg	< 1	**MCERTS**		< 1		< 1	
EPH Texas (>C21 - C40) : EH_1D_Total	mg/kg	< 6	**MCERTS**		< 6		< 6	
EPH Texas (C6 - C40) : HS_1D_MS+EH_1D_Total	mg/kg	< 6	NONE		< 6		< 6	

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Texas Banded						
DETS Report No: 25-04246	**~Date Sampled**	14/04/25	14/04/25			
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied			
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS11	WS11			
~Project / Job Ref: P17132_2781	**~Additional Refs**	None Supplied	None Supplied			
~Order No: 12147	**~Depth (m)**	1.50	2.85			
Reporting Date: 25/04/2025	**DETS Sample No**	773615	773616			

Determinand	Unit	RL	Accreditation					
EPH Texas (C6 - C8) : HS_1D_MS _Total	mg/kg	< 0.05	NONE		< 0.05			
EPH Texas (>C8 - C10) : EH_1D_Total	mg/kg	< 1	**MCERTS**		< 1			
EPH Texas (>C10 - C12) : EH_1D_Total	mg/kg	< 1	**MCERTS**		< 1			
EPH Texas (>C12 - C16) : EH_1D_Total	mg/kg	< 1	**MCERTS**		< 1			
EPH Texas (>C16 - C21) : EH_1D_Total	mg/kg	< 1	**MCERTS**		< 1			
EPH Texas (>C21 - C40) : EH_1D_Total	mg/kg	< 6	**MCERTS**		< 6			
EPH Texas (C6 - C40) : HS_1D_MS+EH_1D_Total	mg/kg	< 6	NONE		< 6			

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Banded (Type F)						
DETS Report No: 25-04246	**~Date Sampled**	14/04/25	14/04/25	14/04/25	14/04/25	
Ashdown Site Investigations Ltd	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Jackson Farm, Lower Beeding	**~TP / BH No**	WS01	WS10	WS11	WS11	
~Project / Job Ref: P17132_2781	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	
~Order No: 12147	**~Depth (m)**	0.30-0.35	0.35	0.55	1.50	
Reporting Date: 25/04/2025	**DETS Sample No**	773610	773612	773614	773615	

Determinand	Unit	RL	Accreditation	(n)				
EPH (>C8 - C10) : EH_1D_Total	mg/kg	< 1	MCERTS	4	9	1	< 1	
EPH (>C10 - C12) : EH_1D_Total	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	
EPH (>C12 - C16) : EH_1D_Total	mg/kg	< 1	MCERTS	< 1	< 1	10	< 1	
EPH (>C16 - C21) : EH_1D_Total	mg/kg	< 1	MCERTS	< 1	4	42	< 1	
EPH (>C21 - C40) : EH_1D_Total	mg/kg	< 6	MCERTS	16	87	191	< 6	
EPH (C8 - C40) : EH_1D_Total	mg/kg	< 6	MCERTS	20	100	244	< 6	

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-04246	
Ashdown Site Investigations Ltd	
~Site Reference: Jackson Farm, Lower Beeding	
~Project / Job Ref: P17132_2781	
~Order No: 12147	
Reporting Date: 25/04/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
773610	WS01	None Supplied	0.30-0.35	6.6	Light brown sandy clay with stones
773611	WS01	None Supplied	1.10	9.5	Orange sandy clay with stones
773612	WS10	None Supplied	0.35	10.6	Light brown sandy gravel with stones and concrete
773613	WS10	None Supplied	1.90	11.4	Light grey sandy clay
773614	WS11	None Supplied	0.55	12.8	Brown sandy clay with brick and concrete
773615	WS11	None Supplied	1.50	14.9	Light grey sandy clay
773616	WS11	None Supplied	2.85	10.5	Light grey sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 25-04246

Ashdown Site Investigations Ltd

~Site Reference: Jackson Farm, Lower Beeding

~Project / Job Ref: P17132_2781

~Order No: 12147

Reporting Date: 25/04/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

List of HWOL Acronyms and Operators
DETS Report No: 25-04246
Ashdown Site Investigations Ltd
~Site Reference: Jackson Farm, Lower Beeding
~Project / Job Ref: P17132_2781
~Order No: 12147
Reporting Date: 25/04/2025

Acronym	**Description**
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

EPH Banded (C10 - C12) - EH_1D_Total
EPH Banded (C12 - C16) - EH_1D_Total
EPH Banded (C16 - C21) - EH_1D_Total
EPH Banded (C21 - C40) - EH_1D_Total
EPH Banded (C8 - C10) - EH_1D_Total
EPH Banded (C8 - C40) - EH_1D_Total
EPH Texas (C10 - C12) - EH_1D_Total
EPH Texas (C12 - C16) - EH_1D_Total
EPH Texas (C16 - C21) - EH_1D_Total
EPH Texas (C21 - C40) - EH_1D_Total
EPH Texas (C6 - C40) - HS_1D_MS+EH_1D_Total
EPH Texas (C6 - C8) - HS_1D_MS _Total
EPH Texas (C8 - C10) - EH_1D_Total

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
n	Please note that we are MCERTS soil accredited (UK soils only) for sand, loam, and clay, and UKAS accredited for groundwater, tap water, surface water, and generated leachates. Other matrices are outside our scope of accreditation.
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

APPENDIX E

Classification of Probability, Consequence and Risk

Probability Of Risk Being Realised	
Classification	**Definition**
High	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Moderate	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Very Low	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Consequence Of Risk Being Realised		
Classification	**Category**	**Definition**
Severe	Human Health	Short term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA.
	Controlled Waters	Short term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource.
	Property	Catastrophic damage to buildings/property.
	Ecological Systems	A short term risk to a particular ecosystem or organisation forming part of such ecosystem.
Moderate	Human Health	Chronic damage to Human Health.
	Controlled Waters	Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution).
	Ecological System	A significant change in a particular ecosystem or organism forming part of such ecosystem.
Minor	Controlled Waters	Pollution of non-sensitive water resources.
	Property	Significant damage to crops, buildings, structures and services.
	Ecological Systems	Damage to sensitive buildings/structures/services or the environment.
Very Minor	Human Health	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc).
	Property	Easily repairable effects of damage to buildings, structures and services.
	Project	Harm, although not necessarily significant harm, which may result in a financial loss or expenditure to resolve.

Risk Classification Definitions	
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the long term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but there is a low likelihood of this hazard occurring and if realised, harm would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

APPENDIX F

Preliminary Conceptual Model

ASHDOWN SITE INVESTIGATION

PRELIMINARY CONCEPTUAL MODEL

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex **Project Ref:** P17028

Potential Source	Potential Receptor	Potential Contaminants	Potential Pathway	Complete Linkage Present?	Probability	Consequence	Risk
• Historical and ongoing use of the site for agricultural and light industrial purposes.	End Users	Asbestos, Heavy Metals, PAH Compounds and Petroleum Hydrocarbons	Dermal contact with soil and dust (indoor & outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Ingestion of soil and indoor dust	Yes	P3: Moderate	C3: Moderate	Moderate
			Consumption of home-grown produce and attached soil	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil dust (indoor and outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil vapours	Yes	P2: Low	C3: Moderate	Low/Moderate
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)	Petroleum Hydrocarbons	Contamination of incoming services	Yes	P2: Low	C3: Moderate	Low/Moderate
	Groundwater		Migration to groundwater	No significant pathway to groundwater exists			N/A
• Potential leakages from the slurry lagoon with the potential for deep made ground in the immediate vicinity.	End Users	Heavy Metals, PAH Compounds and Land Gases	Dermal contact with soil and dust (indoor & outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Ingestion of soil and indoor dust	Yes	P3: Moderate	C3: Moderate	Moderate
			Consumption of home-grown produce and attached soil	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil dust (indoor and outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil vapours	Identified contaminant(s) do not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	Yes	P2: Low	C3: Moderate	Low/Moderate
	End Users (via Water Supply Pipework)		Contamination of incoming services	Identified contaminant(s) do not pose a risk via this pathway			N/A
	Groundwater		Migration to groundwater	No significant pathway to groundwater exists			N/A

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex **Project Ref:** P17028

Potential Source	Potential Receptor	Potential Contaminants	Potential Pathway	Complete Linkage Present?	Probability	Consequence	Risk
• Made ground and waste materials visible in parts of the site.	End Users	Asbestos, Heavy Metals and PAH Compounds	Dermal contact with soil and dust (indoor & outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Ingestion of soil and indoor dust	Yes	P3: Moderate	C3: Moderate	Moderate
			Consumption of home-grown produce and attached soil	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil dust (indoor and outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil vapours	Identified contaminant(s) do not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)		Contamination of incoming services	Identified contaminant(s) do not pose a risk via this pathway			N/A
	Groundwater		Migration to groundwater	No significant pathway to groundwater exists			N/A

APPENDIX G

Quantitative Conceptual Model

ASHDOWN SITE INVESTIGATION

QUANTITATIVE CONCEPTUAL MODEL

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex **Project Ref:** P17132

Source	Receptor	Contaminants	Pathway	Complete Linkage Present?	Probability	Consequence	Risk
• Made ground soils containing elevated concentrations of PAH compounds and concentrations of petroleum hydrocarbons above the threshold value for the use of PE water supply pipework.	End Users	PAH Compounds	Dermal contact with soil and dust (indoor & outdoor)	Yes	P2: Low	C3: Moderate	Low/Moderate
			Ingestion of soil and indoor dust	Yes	P2: Low	C3: Moderate	Low/Moderate
			Consumption of home-grown produce and attached soil	Yes	P2: Low	C3: Moderate	Low/Moderate
			Inhalation of soil dust (indoor and outdoor)	Yes	P2: Low	C3: Moderate	Low/Moderate
			Inhalation of soil vapours	Identified contaminant does not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	Identified contaminant does not pose a risk via this pathway			N/A
	End Users (via Water Supply Pipework)	Petroleum Hydrocarbons	Contamination of incoming services	Yes	P2: Low	C3: Moderate	Low/Moderate
	Groundwater		Migration to groundwater	No contaminants present at concentrations posing risk to groundwater			N/A
• Localised petroleum hydrocarbon contamination within spoil heap in the south east of the site.	End Users	Petroleum Hydrocarbons	Dermal contact with soil and dust (indoor & outdoor)	Yes	P2: Low	C2: Minor	Low
			Ingestion of soil and indoor dust	Yes	P2: Low	C2: Minor	Low
			Consumption of home-grown produce and attached soil	Yes	P2: Low	C2: Minor	Low
			Inhalation of soil dust (indoor and outdoor)	Yes	P2: Low	C2: Minor	Low
			Inhalation of soil vapours	Yes	P1: Very Low	C2: Minor	Very Low
			Inhalation of soil gases/ Risk of explosion	Identified contaminant does not pose a risk via this pathway			N/A
	End Users (via Water Supply Pipework)	Petroleum Hydrocarbons	Contamination of incoming services	Yes	P2: Low	C3: Moderate	Low/Moderate
	Groundwater		Migration to groundwater	No contaminants present at concentrations posing risk to groundwater			N/A

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex **Project Ref:** P17132

Source	Receptor	Contaminants	Pathway	Complete Linkage Present?	Probability	Consequence	Risk
• Ground gases from the slurry pit	End Users	Ground Gases	Dermal contact with soil and dust (indoor & outdoor)	Identified contaminant does not pose a risk via this pathway			N/A
			Ingestion of soil and indoor dust	Identified contaminant does not pose a risk via this pathway			N/A
			Consumption of home-grown produce and attached soil	Identified contaminant does not pose a risk via this pathway			N/A
			Inhalation of soil dust (indoor and outdoor)	Identified contaminant does not pose a risk via this pathway			N/A
			Inhalation of soil vapours	Identified contaminant does not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	Yes	P1: Very Low	C2: Minor	Very Low
	End Users (via Water Supply Pipework)		Contamination of incoming services	N/A			N/A
	Groundwater		Migration to groundwater	N/A			N/A