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Bugley Farm, Warminster Proposed Residential Development Controlled Waters Risk Assessment (CWRA)

Report Reference: ESP.8917.4155

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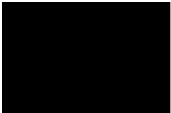
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Bugley Farm, Warminster Proposed Residential Development Controlled Waters Risk Assessment (CWRA)

Prepared for:
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Report Reference: **ESP.8917.4155**

Revision	Status	Date	Written by	Checked & approved by
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General Notes

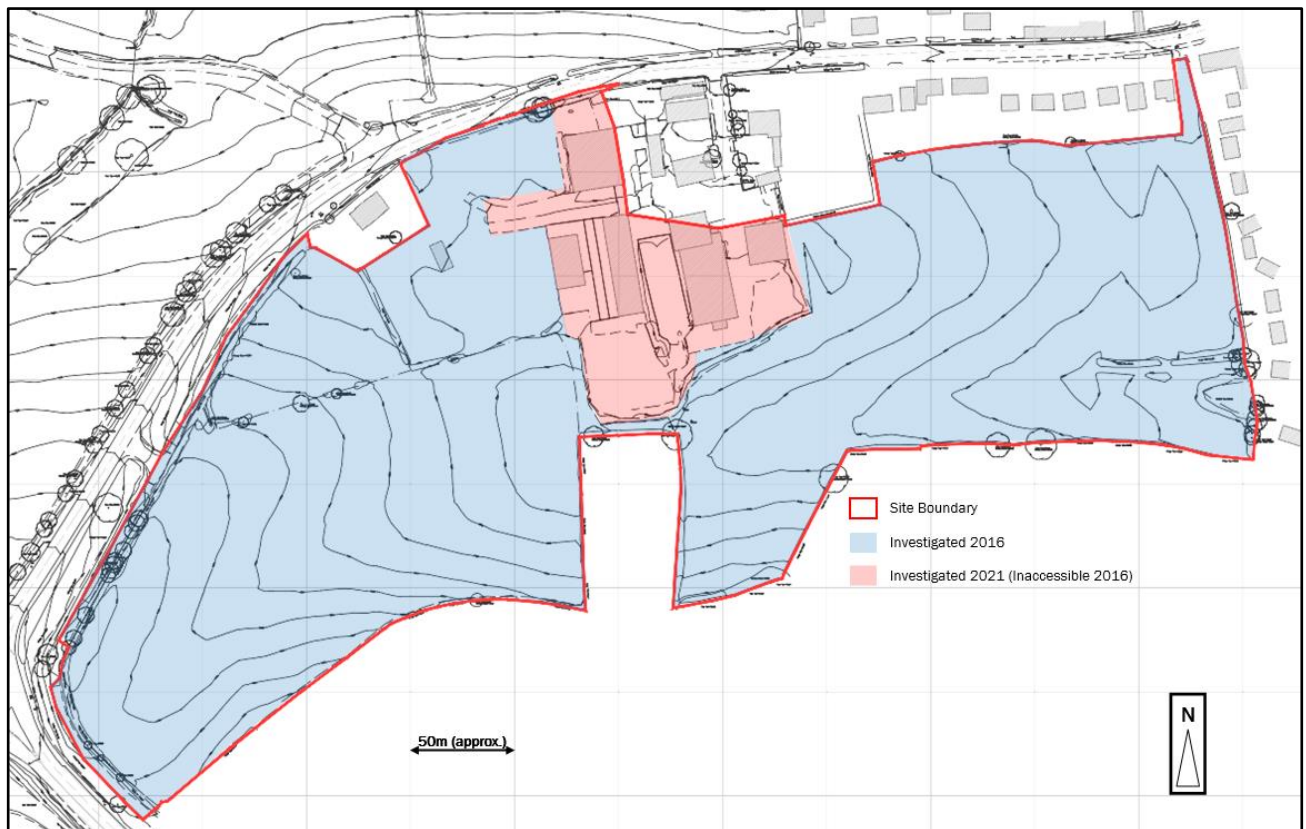
General Construction Advice

1 Introduction

1.1 Background

1.1.1 Previous ESP Investigation and Assessment (ESP, 2017 & ESP, 2022)

ESP have previously undertaken integrated geotechnical and geo-environmental investigations and assessments across the site (excluding the central farmyard area) in 2016, with the final report issued in January 2017 (Ref: ESP.6271t.2676). During this investigation, the farmyard area in the north could not be accessed, therefore the remainder of the site was investigated. The investigation works in the farmyard area were undertaken in July 2021, with the final report issued in February 2022 (Ref: 6271t.02.3602). Insert 1 below indicates the extent of the previous assessments.



Insert 1 – Investigation Areas – 2016 and 2021

These works were undertaken for Persimmon Homes (Wessex), who we now understand are in the process of selling the land to Keepmoat.

The previous reports should be read in conjunction with this supplementary assessment.

1.1.2 Recent ESP Investigation & Assessment (ESP, 2024)

In April 2024, ESP were approached by Protech-PDS Limited (PPDS), a project management company acting on behalf of Keepmoat. PPDS requested ESP to provide feedback on any supplementary investigation and assessment that remained outstanding, in order that Keepmoat could fully understand the land requirements prior to purchase.

The four areas PPDS requested clarification on are:

1. *Soil Strength – review of the foundation solutions previously advised and whether supplementary works could refine the previous advice.*

Reported July 2024 (ESP.8917.4133.Bugley Farm - Supplementary Foundation Assessment).

2. **Groundwater Source Protection Zone – no previous assessment of the potential risks to controlled waters was undertaken and ESP have previously advised this should be completed.**
3. Gas Protection Measures – review of the ground gas assessment previously advised and whether supplementary works could refine previous advice.
4. Slurry Pit – provide preliminary advice on removal/remediation of the existing slurry pit located in the central area of the site.

This report is for Item 2 above and provides further investigation and assessment with regards to controlled waters at the site. A summary of the previous pertinent information with regards to this Controlled Waters Risk Assessment (CWRA) is presented in Section 2.

1.1.3 Proposed Development

Keepmoat Homes Limited (Midlands/Southwest), hereafter known as the Client, are proposing to redevelop the subject site for residential purposes. The Earth Science Partnership Ltd (ESP), Consulting Engineers, Geologists and Environmental Scientists, were instructed by PPDS, acting on behalf of the Client, to undertake an integrated supplementary geotechnical and geo-environmental investigation and assessment to further assess the key area as detailed in Section 1.1.2. The site location is shown on Insert 3 in Section 2.1. This report relates to the CWRA for the development only. Item 3 will be reported once the ongoing gas monitoring has been completed and Item 4 will be reported at a later date, likely during the early stages of development.

For all other geo-environmental and geotechnical aspects of the site, the previous assessments (ESP, 2017 and ESP, 2022) should be reviewed.

The proposed development comprises 227no. private and affordable residential units of varying size, with associated areas of private gardens, landscaping and hardstanding. A proposed site layout is shown as Insert 2 below.



Insert 2 – Proposed Development Layout (after PPDS, document ref: STD001-PRO-X-XX-SP-DT-0122)

1.2 Objective and Scope of Works

The objective of this investigation was to obtain supplementary information on the chemical properties of the soils (and leachate generated from them) as well as obtain samples of the groundwater beneath the site, which previously had not been undertaken. This would then allow the development of a Level 2 Controlled Waters Risk Assessment (CWRA).

The scope of works for the investigation was mutually developed with PPDS by ESP within an agreed budget, and comprised a review of all previous findings, an up-to-date field reconnaissance visit, the supervision and direction of cable percussion boreholes, rotary boreholes, windowless sample boreholes, geotechnical laboratory testing, assessment and reporting.

The contract was awarded based on a competitive tender quotation. The terms of reference for the assessment are as laid down in the Earth Science Partnership proposal of 16th April 2024 (ref: ESP.8917.It1.Proposal - Bugley Farm, Warminster), which was instructed by PPDS on behalf of the Client on the 21st May 2024.

The investigation was completed in June 2024, followed by groundwater sampling visits which have now been completed. This CWRA was completed in August 2024.

1.3 Report Format

This report includes a brief outline of the site setting (Section 2) and a summary of the previous assessment in relation to the controlled waters at the site (Section 3), with details of the recent investigation undertaken of BS5930:2020 (Section 4) and updated ground model (Section 5). The Level Two Controlled Waters Risk Assessment (CWRA) is presented in Section 6, with a discussion on the findings presented in Section 7.

This report is issued as a digital version only.

1.4 Limitations of Report

This report represents the findings of the brief relating to the proposed end use and geotechnical category of structure(s) as detailed in Section 1.1 above. The brief did not require an assessment of the implications for any other end use or structures, nor is the report a comprehensive site characterisation and should not be construed as such. Should an alternative end use or structure be considered, the findings of the assessment should be re-examined relating to the new proposals.

Where preventative, ameliorative or remediation works are required, professional judgement will be used to make recommendations that satisfy the site-specific requirements in accordance with good practice guidance.

Consultation with regulatory authorities will be required with respect to proposed works as there may be overriding regional or policy requirements which demand additional work to be undertaken. It should be noted that both regulations and their interpretation by statutory authorities are continually changing.

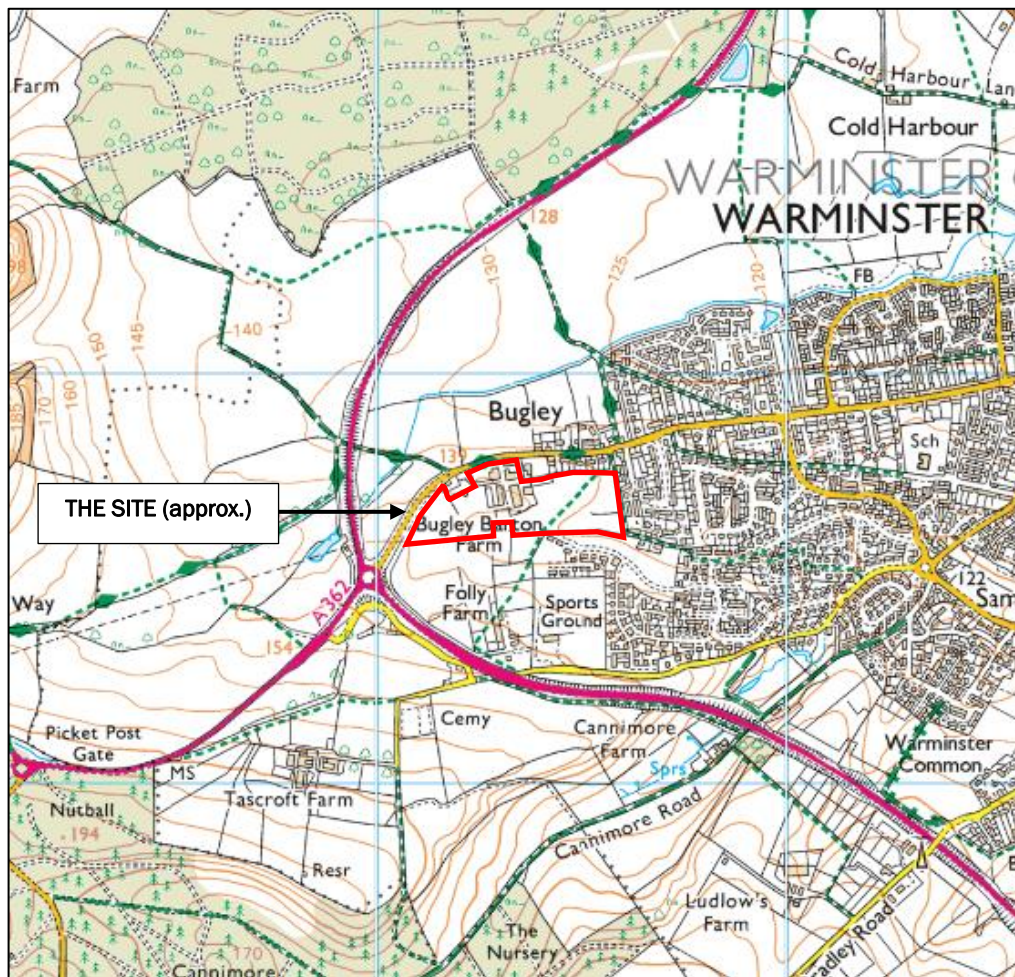
This report represents the findings and opinions of experienced geotechnical specialists. Earth Science Partnership does not provide legal advice and the advice of lawyers may also be required.

2 Site Setting

The site description is largely based on a field reconnaissance and site inspection visit made at the site on 29th May 2024 during dry and sunny weather, and general views of the site are included as a series of photographs within the Plates.

2.1 Site Location

The site is located off Victoria Road on the south-western margins of Warminster in Wiltshire. The National Grid Reference of the approximate centre of the site is (ST) 385328E, 144677N and the postcode is BA12 8HF. A Site Location Plan is presented as Insert 3 below.



Insert 3 - Site Location Plan from Ordnance Survey 1:25,000 scale map.
Reproduced with permission (OS License No.: AL100015788).

2.2 General Overview

The site comprises an irregular shaped parcel of land some 100m to 250m in width (north to south) and around 550m in length (west to east), occupying an area of approximately 9ha. It currently comprises a previously operational arable farm, with two main large fields to the south-west and south-east of the central farm buildings complex – a plan of existing site is presented as Figure 1.

We understand that the farm is no longer fully operational; the southwest field was covered by grass/wildflowers, whilst the southeast field appeared to have been recently cut and possibly ploughed.

Previous discussions (ESP, 2017) with the farmer identified that it was formerly operated as a dairy farm, and several former cattle housing structures (barns, large capacity sheds etc.) remain within the central area. Areas of concrete hardstanding and loose gravel surfacing surround the farm complex with apparent remnant concrete slabs in the north-western part of the farm buildings.

Immediately to the south of the hardstanding and farm buildings in the central part of the site, lies a former slurry pit. This is now heavily overgrown, and has a predominantly solid surface, albeit very soft, however, the southern part of the pit remains a liquid and could not be accessed safely. An apparent outlet pipe runs from this pit into the field to the east.

The farm buildings are generally of brick or concrete block construction with asbestos cement roofs, and some asbestos cement panel side cladding. One of the buildings includes a large generator/engine which was apparently used to power a probable air extraction system for the barns (probably used during the dairy farming). A small above-ground, steel diesel tank lies adjacent to the engine, within the building. Large plastic, circular tanks are located adjacent to the farmhouse around 10m north of the site boundary and are apparently for the storage of heating oil.

Vehicular access to the site is currently gained via a gate and access track in the northwest, off Victoria Road.

2.3 Site Boundaries:

The site is bounded by:

- To the north: Victoria Road, extending west to east across the north of the site, followed by open farmland. A private dwelling is located to the south-east of Victoria Road on the northern boundary of the western field, immediately to the east of the farm buildings complex. Further residential dwellings lie to the north of the eastern field, between it and Victoria Road.
- To the east: by residential properties off Haygrove Close.
- To the south: by a field and housing development followed by sports pitches. The central area of the site is narrower than the remainder and, immediately to the south of the slurry pit, the land comprises further agricultural land.
- To the west: by Victoria Road and the junction with the A36 road, followed by open farmland.

The boundaries of the site comprise mature hedgerows with some large deciduous trees. We are not aware of a tree survey having been undertaken to date.

2.4 Topography

No topographical information was available during the previous investigations. As part of the proposal process for these revised works, PPDS provided a Due Diligence Report (ref: STD001-PRO-X-XX-SP-DT-0122) which was prepared for the Client, which has a summary of the topography at the site, as summarised below.

- The area surrounding the farm buildings has an elevation of around 139m AOD.
- The surrounding fields to the southwest and southeast are around 1.5m to 2.0m below the farm complex.
- The elevation gradually decreases to approximately 132m AOD in the southeast and increases to around 146m AOD in the southwestern portion.

2.5 Existing Services

The Client has provided ESP with a series of plans showing the locations of recorded underground services near the farmyard site. Site observations and these utility plans indicate that the site is crossed by the following services:

- A water main trending north to south through the centre of the site.
- A low voltage electricity cable running west to east, marginally entering the site in the north portion.
- BT cables trending northeast to southwest along the margins of the northwest and west boundaries.

2.6 Unexploded Ordnance

A recent Preliminary (Pre-Desk Study) UXO Desk Study assessment of risk has been completed by a specialist Ordnance consultant in accordance with CIRIA guidelines (Stone et al, 2009) and is presented in Appendix A.

The assessment concludes that *'a detailed desk study, whilst always prudent, is not considered essential in this instance'*.

2.7 Previous Investigations and Assessments

ESP have previously undertaken integrated geotechnical and geo-environmental investigations and assessments across the site, reported in January 2017 (Ref: ESP.6271t.2676) and February 2022 (Ref: 6271t.02.3602). Pertinent information from the previous reports relevant to this assessment are presented in the remainder of this report, where appropriate.

2.8 Geology

The published 1:50,000 scale geological map for the area (Sheet 281) indicates the farmyard site to be substantially underlain by Boyne Hollow Chert Member bedrock. The Boyne Hollow Chert is part of the Upper Greensand Formation of Cretaceous age. Chalk bedrock is shown to crop out to the north of Victoria Road but is not present beneath the site.

The Shaftesbury Sandstone Member indicated to crop out in the south-eastern margins of the wider site, however, could be present beneath the investigation as it underlies the Boyne Hollow Chert in succession.

No superficial deposits are shown within the farmyard site boundaries, but deposits of Head are shown to the south, and River Alluvium is shown around the stream to the east of the wider site.

2.9 Hydrology

2.9.1 Surface Water Features

The nearest major surface water feature is an unnamed Tertiary River some 110m to the north-west. Several wells and a spring are shown in the area on historical maps.

A small stream is present extending to within 30m of the eastern wider site boundary, just to the east of Haygrove Close. This appears to be a tributary to the river Wylfe.

During the previous assessment (ESP, 2016), a marshy area in the eastern margins of the wider site was identified to potentially represent a continuation of this stream.

2.9.2 Surface Water Abstractions

An environmental data report obtained during the previous works (ESP, 2016) indicates that there are no surface water abstractions within 2km. For reference, this has been included within the appendices of this report as Appendix L.

2.10 Hydrogeology

2.10.1 Aquifer Classification

Reference to the aquifer maps published in the environmental data report (Appendix C) and the Environment Agency website (EA, 2016) indicates that the Boyne Hollow Chert Member and the Shaftesbury Sandstone Member bedrock beneath the site are both classed as Principal Aquifers.

Principal Aquifers generally correspond with the previously classified major aquifers and are described by the Environment Agency as 'rock or drift deposits that have high intergranular and/or fracture permeability.' They may support water supply and/or river base flow on a strategic scale. Principal Aquifers are particularly sensitive to pollution.

2.10.2 Anticipated Groundwater Bodies

2.10.2.1 Overview

Reference to the Hydrogeological Map of the Chalk and Associated Minor Aquifers of Wessex (IGS, 1979) indicates the piezometric surface of the main groundwater body within the chalk and Upper Greensand strata beneath the site to be at around 140m AOD beneath the central part of the wider site, falling to around 130m AOD just east of the site. Therefore, groundwater levels would be expected to be at around 142m AOD beneath the western margins and at around 132m AOD beneath the eastern margins.

2.10.2.2 Previous Findings (ESP, 2016 & 2021)

Based on previous findings within the farmyard complex (see Insert 1), no groundwater was identified to a depth of 3.0m. The monitoring identified all the wells to be dry to a maximum depth of 3.0m.

The previous investigation of the wider site area (generally at a lower elevation) identified the main groundwater body beneath the site appears to be located within the coarse-grained Upper Greensand Formation, generally at between 1.0 and 3.0m depth.

The farmyard area is noted to be in the order of 1.5m to 2.0m above the wider site (at its highest elevation). The wider site also falls to the southeast and southwest, with the topography then rising further southwest.

2.10.3 Abstractions and Groundwater Vulnerability

The environmental data report (Appendix L) and the Environment Agency website (EA, 2024) indicate that there are groundwater abstractions within 2km of the site. The site lies within a Zone 3 Source Protection Zone (SPZ).

Zone 3 is defined as the total catchment around an abstraction well, within which all groundwater recharge is presumed to be discharged at the source, i.e., the area in which any pollution of the groundwater could lead to pollution at the abstraction. The associated abstraction well is indicated to be a public water supply well some 1km to the east of the site (within the town centre of Warminster) operated by Warminster Maltings Ltd, and abstracting 30m³ per day.

The groundwater vulnerability is shown in the environmental data report to be 'major aquifer high'.

2.10.4 Groundwater Movement

Groundwater movement within the Upper greensands Formation bedrock will likely be controlled by intergranular flow.

3 Previous Investigation & Assessment (ESP, 2017 & ESP, 2022)

The following section provides a brief summary of the pertinent ground investigation information from previous investigations, followed by details of the previous assessments of the risks to controlled waters.

For full details of the previous investigations and assessments, the past reports should be referred to in full.

3.1 Overview

As detailed in Section 1.1, ESP have previously undertaken integrated geotechnical and geo-environmental investigations and assessments across the site, with the general wider site (excluding the central farmyard area) investigated in 2016 (final reporting in 2017, ESP, 2017), and the farmyard area investigated in 2021 (final reporting in 2022, ESP, 2022).

The investigation of the wider site comprised windowless sample boreholes, trial pits, CBR testing by Dynamic Cone Penetrometer (DCP), soakaway testing and gas/groundwater monitoring. Within the farmyard area, the investigation comprised windowless sample boreholes and hand excavated trial pits.

For reference, the pertinent previous investigation points (excluding the DCP test and soakaway test locations) are presented on Figure 2 and the investigation point records are presented in Appendices B to D.

3.2 Generalised Ground Model

The previous investigations identified the site to be generally underlain by Topsoil overlying variable, localised, superficial deposits (of possible Head Deposits in the west only and Alluvium in the southeast only), followed by weathered Upper Greensand Formation (comprising both the Boyne Hollow Chert member and Shaftesbury Sandstone Formation).

During the previous investigation (ESP, 2016), probable fine-grained Made Ground was identified adjacent to the existing Slurry pit immediately to the west and southeast, to a maximum depth of around 2.5m; testing indicated these soils to be of low strength. It was thought that this Made Ground could be associated with previous excavations for the slurry pit.

Within the farmyard complex (ESP, 2021), variable thicknesses of Made Ground were identified overlying weathered Upper Green Sand Formation bedrock. In general, the Made Ground was identified to be between 0.2m and 0.6m. In WS208 in the southeast of the farmyard complex, made Ground was identified to around 1.9m depth; this position was located near the southern retaining wall and was likely infill.

3.3 Groundwater Bodies

The main groundwater body beneath the site was identified within the coarse-grained Shaftesbury Sandstone Formation, generally at between 1.0 and 3.0m depth. However, in the south-east of the site, groundwater was identified within the River Alluvium at a shallow depth of 0.5m (Well WS3).

No groundwater was noted during the investigation in the farmyard complex, nor in the subsequent monitoring, to a maximum depth of 3.5m. The farmyard complex is noted to be in the order of 1.5m to 2.0m above the fields to the southwest and southeast.

3.4 Salient Environmental Features

The recent site walkover of the farmyard areas has identified past and existing contaminative uses on the site, including an above ground storage tank (unknown materials) and herbicide cannisters, chemical storage, oil tanks, fuel tanks, an engine and diesel tank and an outflow pipe from the slurry pit (see Figure 1 for details).

A slurry pit is present in the central area which has also been recorded as a waste storage/processing feature.

A pollution incident is recorded at the site in May 2003 when 'agricultural materials and wastes (silage liquors)' reportedly spilt into water, with a reported 'minor impact' to water and air and 'no impact' to land. This is likely to be associated with the operation of the slurry pit.

3.5 Previous Contamination Assessments

3.5.1 Soil Contamination

The 2016/2017 and 2021/2022 investigations and assessments identified the levels of soil contamination to be below the adopted Generic Assessment Criteria (GAC), with the exception of one sample collected during the 2021 investigation from WS208 within the Made ground of the farmyard complex. This sample identified elevated levels of Benzo(a)pyrene (8.8mg/kg), Benzo(b)fluoranthene (11mg/kg) and Dibenzo(a,h)anthracene (0.94mg/kg) from one sample, from WS208 at 0.45m within the Made Ground.

3.5.2 Leachate Contamination

During the 2016/2017 investigation and assessment the majority of leachable contaminants were at levels below the assessment criteria were not considered to pose an unacceptable risk to the abstraction well to the east. However, the measured concentrations of polyaromatic hydrocarbon (PAH) compounds exceeded the assessment criteria in several samples, and the recorded pH value in the Upper Greensand in TP19 was below the acceptable pH for drinking water supplies.

During the 2021/2022 investigation and assessment, two marginally elevated levels of metals (arsenic and copper) and five marginally elevated levels of PAH's were identified.

The elevated level of arsenic and copper were identified from the same sample collected from WS207 at 0.55m within the Made Ground. The elevated PAH levels were identified from the same sample collected from WS08 at 0.45m within the Made Ground.

3.5.3 Previous Assessment of Potential Risks to Controlled Waters

The historic Level One assessments of risks to controlled waters indicated that the levels of most contaminants within the shallow soils beneath the site are unlikely to pose an unacceptable risk to controlled waters.

However, elevated levels of metals (ESP, 2021) and elevated levels of polyaromatic hydrocarbon contamination have been recorded (ESP, 2016 and ESP, 2021) in samples of leachate tested.

Further investigation and assessment were recommended in order to further assess the potential risks to controlled waters. This has now been undertaken and is detailed in the remainder of this report.

4 Supplementary Investigation – ESP, 2024

4.1 Investigation Points

4.1.1 Introduction

The intrusive investigation was undertaken between 29th May and 6th June 2024 in accordance with BS5930:2020 and was designed to refine the previous foundation assessments (see Section 3). It comprised cable percussion (and rotary – see below) boreholes across the site. Information from other investigation points (undertaken as part of the other aspects of supplementary works at the site) has also been included where relevant.

Rotary boreholes were not originally included in the scope of works, however during initial cable percussion drilling, likely bedrock was encountered at shallow depth, with limited groundwater strikes. As these boreholes were intended to reach groundwater for the CWRA assessment (see Section 1.1.2), rotary drilling was substituted in to complete the deeper borehole investigation.

Pertinent information from the previous investigations is also included where required.

The investigation points were supervised and logged by an engineering geologist in general accordance with BS5930:2020, BS EN ISO 14688-1:2002, BS EN ISO 14688-2:2018, and BS EN ISO 14689:2018, along with published weathering schemes.

The historical investigation point positions are shown on Figure 2, with the recent investigation points presented on Figure 3.

4.1.2 Investigation Strategy

The investigation strategy was designed to further assess the potential risk to controlled waters, most notably with installation of groundwater sampling wells to enable a Level 2 risk assessment to be undertaken.

4.1.3 Cable Percussion Boreholes

5no. 150mm diameter cable percussion boreholes (CP01 to CP05) were constructed to depths between 2.1m and 6.3m between 29th and 31st May 2024. The borehole records are presented as Appendix F, and their positions are shown on Figure 5.

At the commencement of each borehole, a service inspection pit excavated by hand to a depth of 1.2m. SPTs were undertaken at around 1m intervals (see Section 4.2.6 for details).

4.1.4 Rotary Drillholes

4.1.4.1 General Information

3no. no. rotary drillholes were constructed (R001 to R003) to depths of between 8.0m and 9.0m between the 3rd and 4th June 2024. The boreholes were progressed using open hole method. The records are presented as Appendix G and their positions are shown on Figure 5.

At the commencement of each borehole, a square of the grass landscaping was cut, and a service inspection pit excavated by hand to a depth of 1.2m, after which, the boreholes were progressed using open hole method.

The ODEX 115 system of simultaneous drilling and casing was used in the superficial deposits, and the depth of casing in each drillhole is shown on the drillhole records.

During the drilling process, the soil/rock chippings returned to the surface were described by the driller and the rate of progress monitored. It should be noted that, although adequate for identification purposes, the nature of the drilling method does not permit an accurate description of the strata.

4.2 Instrumentation

Gas and groundwater monitoring wells were installed in selected windowless sample, cable percussion and rotary boreholes. Where relevant, the gas monitoring wells may also provide shallow water samples for the groundwater assessment.

A 50mm diameter monitoring well was installed in selected boreholes in accordance with BS8576:2013 in order to allow monitoring of hazardous ground gases. Although not pertinent to this assessment, the gas monitoring data will be used for separate assessment (see section 1.1.2). The groundwater monitoring data is relevant for this foundation assessment.

The wells, comprising slotted plastic pipe with a gravel surround (the response zone), bentonite seals above and below the response zone, and a lockable vandal proof cover, were installed as detailed on the borehole records and summarised in the table below.

Table 1: Monitoring Well Installations

Well ID	Date of Installation	Response Zone depth	Response Zone Stratum
WS01	04/06/2024	0.5 – 3.0m	Upper Greensand Formation
WS02	04/06/2024	1.0 – 3.0m	Alluvium & Upper Greensand Formation
WS03	06/06/2024	1.0 – 4.9m	Alluvium & Upper Greensand Formation
WS04	06/06/2024	1.0 – 3.0m	Upper Greensand Formation
WS08	05/06/2024	1.0 – 3.0m	Upper Greensand Formation
WS09	05/06/2024	0.5 – 2.6m	Upper Greensand Formation
WS12	05/06/2024	1.0 – 3.0m	Upper Greensand Formation
CP01	29/05/2024	1.0 – 3.5m	Upper Greensand Formation
CP02	29/05/2024	1.0 – 3.4m	Upper Greensand Formation
CP03	30/05/2024	1.0 – 5.9m	Upper Greensand Formation
CP04	30/05/2024	1.0 – 2.05	Upper Greensand Formation
CP05	31/05/2024	2.0 – 6.3m	Upper Greensand Formation
RO01	03/06/2024	2.0 – 10.0m	Upper Greensand Formation
RO02	04/06/2024	2.0 – 8.0m	Upper Greensand Formation
RO03	04/06/2024	6.0 – 9.0m	Upper Greensand Formation
Notes:			
1. Details of each monitoring well are presented on the individual borehole records (Appendices E, F and G).			

Two groundwater monitoring and sampling visits have been completed of the recently installed monitoring wells and the findings are presented in Section 5.2. This completes the current requirement for groundwater monitoring/sampling.

4.3 Sampling Strategy

4.3.1 Soil Sampling

Soil samples were collected from the previous and current exploratory holes, with the sampling procedures selected based on the suitability for the laboratory testing proposed.

Environmental samples (denoted as ES on the exploratory holes records) were collected for possible geo-environmental laboratory testing and generally comprised a plastic tub, an amber glass jar and an amber glass vial. The sample containers provided clean by the testing laboratory appropriate for the proposed testing to be scheduled. Immediately after collection the samples were placed in sealed cool boxes with ice packs where they remained during storage and transport to the laboratory.

Samples for logging purposes were collected at regular intervals within the exploratory holes.

4.3.2 Groundwater Sampling

To establish the groundwater quality beneath the site, samples of groundwater were collected from the installed wells on the dates shown in the right-hand column of Table 2, in general accordance with BS ISO 5667-11 (2009). Prior to sampling, the wells were purged by the removal of three well volumes where practical, to obtain a water sample representative of the groundwater in the vicinity.

All groundwater samples taken for possible laboratory chemical analysis were collected in suitable clean containers provided by the testing laboratory for (e.g., clean polyethylene jars/bottles with fitted lids for routine soil testing, clear or amber glass bottles with screw on air-tight caps for organic contaminants, glass vials for volatile contaminants, etc.). Immediately after collection the samples were placed in sealed cool boxes with an ice pack where they remained during storage and transport to the laboratory.

5 Development of the Revised Conceptual Model

The following section summarises the information obtained from the previous and recent investigations across the whole site. The slurry pit area has been discussed separately in Section 5.1.6.

In previous assessments, the bedrock has been separated into the Boyne Hollow Chert member and the Shaftesbury Sandstone Formation. For this assessment and for ease of interpretation for the supplementary foundation assessment, the bedrock has been assessed under the parent unit of Upper Greensand Formation.

5.1 Conceptual Ground Model - Geology

The exploratory holes (ESP, 2016 & ESP, 2024) have identified the site to be generally underlain by a thin veneer of Topsoil overlying weathered Boyne Hollow Chert Member and Shaftesbury Sandstone Member bedrock (both of the Upper Greensand formation).

5.1.1 Made Ground

During the 2016 investigation, no Made Ground was identified across the wider site.

During the 2024 investigation, limited Made Ground was identified in CP05 as a likely re-worked natural soil with rare fragments of brick to a depth of 1.2m below surface level. In R002, Made Ground was identified to a maximum depth of 0.7m. Rare brick fragments were noted in R003, with natural soils and anthropogenic materials (including concrete, metal, brick and wire) noted in R002.

5.1.2 Topsoil

Encountered generally across the site to a maximum depth of around 0.5m, as a brown and dark brown, clay of soft consistency, with fragments of sandstone gravel and sand. Rootlets were present.

During the 2016 investigation, WS9, TP14, TP15 identified 200mm of clayey, slightly organic sand/very sandy clay beneath the Topsoil, which may represent a subsoil stratum. This was not noted during the recent works in nearby investigation points (WS09 & WS10 - ESP, 2024).

5.1.3 Possible Head Deposits

Encountered in TP16 and TP17 during the 2016 investigation, in the west of the site beneath the Topsoil as a brown, very sandy, very gravelly clay of soft consistency to 1.0m depth, which may be a Head Deposit.

Possible Head Deposits were not identified in the 2024 investigation. Investigation points WS09 and WS10 in the area of the previously constructed TP16 and TP17 identified soft clays and loose sand to a depth of around 2.0m.

5.1.4 Possible River Alluvium

Identified in 2016 investigation the low-lying eastern margins of the site in Boreholes WS1, WS2 and WS3 to a depth of between 1.5 and 2.2m as a brown and orange, brown with patches of grey and white, silty, gravelly clay of soft or very soft consistency. Sandstone and flint gravel and sandstone cobbles were present.

In the 2024 investigation in the same area in WS02 and WS03 to depths of between 2.45m and 2.8m as a very soft to soft, generally brown with patches of grey and orange/brown silty, sandy, gravelly clay. Organic materials were identified in WS02 between 1.45m and 2.5m as soft to firm brown plant fragments.

In R003, possible alluvial soils were identified between 0.6m and 6.0m depth, with the drillers noting that the casing progressed under its own weight between 2.0m and 6.0m depth. This was logged as possible Alluvium.

Laboratory testing (from previous and recent investigations) within the possible River Alluvium indicated liquid limits between 36% and 61%, plasticity indices between 10% and 38%, and natural moisture contents between 22% and 35%. The modified plasticity indices (after the coarse-grained particles have been removed) suggest that the soils would be generally of medium volume change potential.

Field SPT N-values within the possible River Alluvium were recorded as between 0 (the test rods sank under their own weight) and 10 (average of 4) indicating clays of generally a soft consistency (locally very soft, with one sample indicating a firm clay).

5.1.5 Upper Greensand Formation

Identified across the site beneath the Topsoil/Made Ground and localised superficial deposits, generally as a coarse-grained soil, with localised areas of fine-grained soils, as summarised below.

Fine-Grained Upper Greensand Formation

Identified in the 2016 investigation in WS5 and in 2024 in WS02 and WS04 to WS12, CP03, CP05, and R001 to a maximum depth of 4.0m, generally as a light brown clay (with occasional greenish mottling) with fractions of sand and gravel.

Laboratory testing (from previous and recent investigations) within the fine-grained weathered bedrock indicated liquid limits between 27% and 62%, plasticity indices between 11% and 39%, and natural moisture contents between 14% and 38%. The modified plasticity indices (after the coarse-grained particles have been removed) suggest that the soils would be generally of medium volume change potential, with some soils within this stratum indicating low volume change potential.

Field SPT N-values within the fine-grained weathered bedrock (from previous and recent investigations) were recorded as between 1 and 18 (average of 8) indicating clays of variable consistency, generally soft, with localised variations of very soft and firm to stiff.

Coarse-Grained Upper Greensand Formation

Identified across the site beneath the superficial deposits and/or fine-grained Upper Greensand Formation to a maximum depth of 10m below surface level, generally as greenish grey sand, with fractions of silt/clay and gravel.

Competent bedrock (sandstone, was identified during the recent investigations in the cable percussion and rotary boreholes, from depths of between 1.1m and 6.2m as a strong light green sandstone.

Field SPT N-values within the coarse-grained weathered bedrock (from previous and recent investigations) were recorded as between 3 and 50 (average of 28) indicating sands (occasionally gravels) of variable strength. Where SPT N-Values were 50, this likely indicated competent sandstone bedrock.

5.1.6 Slurry Pit

During the 2016 investigation, boreholes WS6 and WS8 were constructed around the slurry pit to the southeast and west respectively (see Figure 2) and identified Probable Made Ground.

Within Borehole WS6, around 1.7m of probable reworked natural soils (Made Ground) were identified above a 200mm suspected Buried Topsoil layer. In Borehole WS8, 2.5m of possible predominantly fine-grained Made Ground was identified. This Made Ground could be associated with previous excavations for the slurry pit.

During the 2021 investigation of the farmyard area, 1no. hand pit (HDP01) was constructed near the previously constructed WS6 (ESP, 2016). A further 2no. hand excavated pits (HDP02 and HDP03) were constructed within the slurry pit where access was possible (see Figure 2).

HDP01 identified similar shallow conditions as were identified in WS6 previously, with soft silt/clay identified to 0.6m depth, noted to be probable re-worked natural soils (Made Ground).

HDP02 and HDP03 within an accessible portion of the slurry pit identified a soft brown clay with black mottling, to a maximum depth of 0.6m below the surface level. Occasional glass, plastic and wood were also noted. In HDP02, brown/green reworked sand was also noted from 0.35m to 0.6m.

5.2 Conceptual Ground Model - Hydrogeology

The groundwater conditions identified in the previous and recent investigation are summarised in the table below.

During the 2021 investigation and subsequent monitoring, no groundwater was identified to a depth of 3.0m and the monitoring identified all the wells to be dry to a maximum depth of 3.0m.

Table 2 - Summary of Groundwater Ingress in the Investigation

Hole ID	Stratum	Comment on groundwater encountered
ESP, 2016		
TP1	UGF	Very slow seepage at base of pit at 2.2m depth.
TP7	UGF	Very slow seepage at base of pit at 2.7m depth.
TP8	UGF	Very slow seepage at base of pit at 3.5m depth.
TP9	UGF	Very slow seepage at base of pit at 3.4m depth.
WS1	UGF	Water strike at 2.2m depth. Standing levels between 1.69m and 2.19m in well.
WS2	UGF	Water strike at 3.0m depth. Standing levels between 1.85m and 2.36m in well.
WS3	UGF	Water strike at 2.5m depth. Standing levels between 0.52m and 1.07m in well.
WS4	UGF	Water strike at 3.2m depth.
WS6	UGF	Water strike at 3.0m depth. Standing levels between 1.81m and 2.31m in well.
WS8	UGF	Water strike at 2.8m depth. Standing levels between 2.46m and 2.87m in well.
ESP, 2024		
WS01	UGF	Monitored levels between 2.03m and 2.77m.
WS02	ALLUV	Monitored levels between 1.59m and 1.60m.
WS03	UGF/ALLUV	Water strike at 3.0m Monitored levels between 1.25m and 1.38m.
WS04	UGF	Monitored level of 2.03m during one visit. Found to be dry during second visit.
WS05	UGF	Water strike at 2.1m Measured at 2.0m after 20 minutes.
WS08	UGF	Monitored levels between 1.64m and 1.66m.
WS09	UGF	Dry to 2.6m depth during both monitoring visits to date.
WS12	UGF	Dry to 3.0m depth during both monitoring visits to date.
CP01	UGF	Dry to 3.5m depth during both monitoring visits to date.
CP02	UGF	Dry to 3.4m depth during both monitoring visits to date.
CP03	UGF	Water Strike at 1.7m, standing at 1.4m after 20 minutes. Monitored levels between 0.90m and 0.95m.
CP04	UGF	Dry to 2.05m depth during both monitoring visits to date.
CP05	UGF/MG	Water Strike at 2.3m., standing at 1.7m after 20 minutes. Monitored levels between 0.90m and 1.00m.
RO01	UGF	Water strike at 6.0m, standing at 4.0m after 20 minutes. Monitored levels between 4.30m and 4.39m.
RO02	UGF	Water strike at 4.0m, standing at 3.0m after 20 minutes. Monitored levels between 3.12m and 3.60m.
RO03	UGF.	Probable perched water strike at 0.6m in Made Ground, standing at 0.5m after 20 minutes. Deeper water strike at 7.0m. Monitored levels between 1.18m and 1.28m.
Notes: - Full details of groundwater ingress presented on investigation point records in Appendices B to G. - Monitoring is currently ongoing and therefore the above comments for the 2024 investigation are subject to the final readings. - UGF = Upper Greensands Formation. ALLUV = Alluvium. MG = Made Ground.		

Based on the Conceptual Ground Model, we consider that the main groundwater body beneath the site is within the coarse-grained Upper Greensands at a depth of between 1.0m and 3.0m depth. A deeper water body is also present as demonstrated in the rotary boreholes, at a depth of around 4.0 – 7.0m.

Shallow perched water bodies are also likely present within the Made Ground in and around the farmyard complex (CP05). We cannot discount that perched water bodies may also be present in the southeast of the site within the alluvial soils.

The groundwater information obtained to date generally correlates with the topography of the site and is in line with the previous hydrogeological findings.

6 Level Two Controlled Waters Risk Assessment

As detailed in Section 3.4, potential contamination sources are present on site that could impact on controlled waters, most notably the diesel tank and generator in the south portion of the farmyard complex and the slurry pit in the centre of the site.

These sources have been targeted during the investigation with associated laboratory testing to determine any potential contamination risks associated with the sources.

It should be noted that the slurry pit materials and the ground in the vicinity of the slurry pit will require excavation and removal (see Section 1.2.2). ESP have provided a proposal for these works, which we understand will be completed in the future. Supplementary soil sampling and groundwater sampling will also be undertaken following the removal/remediation of this area and an updated assessment will be completed.

6.1 Assessment of Soil Contamination

The soil chemical data has been collated from all previous and recent works to assess the site as a whole. The assessment has been undertaken in line with the proposed residential development and the methodologies and assessment criteria for undertaking this has been summarised below.

The stand-alone reports for the 2016 and 2021 investigations should be referred to along with this report for completeness.

6.1.1 Assessment Methodology

The long-term risks to health have been assessed using methodologies and frameworks determined by the Environment Agency within documents SR2, SR3, SR4 and the CLEA Technical Review published to support the Contaminated Land Exposure Assessment Model (CLEA). Where applicable, reference has been made to the supporting toxicological reports (TOX Series) and the Soil Guideline Value reports (SGV Series). It is assumed that the reader is familiar with the above documents, and it is not intended to repeat these described methodologies in detail, for further information, please refer directly to the specific documents.

To provide an initial 'screen' to identify elevated levels of contaminants, a Generic Quantitative Risk Assessment (GQRA) has been undertaken using the most appropriate Generic Assessment Criteria (GAC) determined by assessment of exposure frequency/duration relevant to the critical receptor.

6.1.2 Assessment Criteria

In 2013, CL:AIRE published the Category 4 Screening Levels (C4SL – CL:AIRE, 2013) for use in Part 2A determinations. The C4SL are designed to be more pragmatic, but still strongly precautionary, assessment criteria compared to the previous assessment criteria (SGV – see below) used to assess chronic human health risks. The C4SL have been calculated for a limited number of contaminants at this stage, and range of land uses including residential, commercial, and public open space, but are based on a 'low level' of risk rather than the 'minimal level' of risk adopted by the Environment Agency in preparing their Soil Guideline Values (SGV).

The C4SL have also only been published for a limited number of contaminants commonly identified in contaminated land risk assessments at present (arsenic, cadmium, chromium VI, lead, benzene, benzo[a]pyrene). However, the C4SL have been published for a range of land uses, including residential, commercial, allotments and two types of public open space.

The C4SL are designed for use in deciding whether land is suitable for use and definitely not contaminated, and DEFRA and the Welsh Government have recommended that they be used in assessing human health risks during the planning regime (i.e., as part of standard development investigations). The Welsh Local Government Association and Natural Resources Wales (WLGA/NRW) have confirmed that, *'where the site conditions are applicable to the land use scenarios adopted in their calculation, the C4SL levels can be used as screening tools'* for development site risk assessments (WLGA/NRW, 2017). The C4SL have also been accepted by the NHBC for use as generic screening levels on residential developments in England and Wales (NHBC, 2014). Given this, where available and applicable, the C4SL have been adopted as the Generic Assessment Criteria in this assessment.

Where no C4SL is currently available, the Suitable For Use Levels (S4ULs) published in January 2015 by the Chartered Institute of Environmental Health (CIEH) and Land Quality Management (LQM) (Nathanail et al, 2015) have been adopted. These assessment criteria adopt updated toxicological data and exposure models, and the same 'minimal level' of risk as the SGV (i.e., unlike the C4SL). The S4ULs have been published for many contaminants typically found on brownfield sites in the UK, and for the same range of land uses as the C4SL, i.e., including public open space scenarios.

Where no C4SL or S4UL is available, the Soil Guideline Values (SGV) published by the Environment Agency have been adopted as the Generic Assessment Criteria (GAC) – note several SGV have been withdrawn since originally published. However, the SGV are only available for a limited number of contaminants for three proposed land uses (residential, commercial and allotments – and not public open space).

For more exotic, predominantly organic, compounds no SGV, S4UL or C4SL assessment criteria have been published. In this instance, GAC published by CL:AIRE and the Environmental Industries Commission (CL:AIRE/EIC, 2010) have been adopted. These GAC have also been developed using the CLEA UK software based on a 'minimal level' of risk and for the same land use scenarios as the SGVs (i.e., not public open space).

Details of the Generic Assessment Criteria (GAC) adopted for each contaminant are presented on the assessment tables in the following section.

The proposed development comprises conventional residential properties with private gardens. Therefore, the GAC appropriate for the residential land use with plant uptake have been adopted in this assessment.

The GAC for most organic compounds is dependent on the organic content of the soil. Analysis has shown that the soil organic content in the soils analysed ranged from 0.2% to 8.0% (average 2.75%). Therefore, for the purposes of this assessment, GAC for a soil organic content of 1% has been adopted. This again is considered a conservative approach for most of the soils at the site.

6.1.3 Generic Quantitative Risk Assessment

The samples analysed for soil contaminants (past and recent) comprised eight Topsoil, twelve Made Ground, three samples of the upper slurry pit soils, one Alluvium and eleven samples of the natural Upper greensand Formation. At this stage, all samples have been considered across the site as one averaging area.

The risks from biological contamination with regards to the slurry pit will be addressed under separate cover once the proposal for the removal of the slurry pit soils has been confirmed.

The results of the Generic Quantitative Risk Assessment for the proposed development are presented in the table below. It should be appreciated that if the development were to change, the following assessment should be reviewed and, if necessary, updated.

Table 3- Generic Assessment of Human Health Risks (Residential *with* Plant Uptake)

Determinand	Minimum Recorded (mg/kg)	Maximum Recorded (mg/kg)	GAC (mg/kg)	Source of GAC	Exceedances
Metals and Semi-metals					
Arsenic	2.5	22	37	C4SL ²	None of 36
Beryllium	<0.2	1.5	1.7	S4UL ⁴	None of 36
Boron	<0.2	1.7	290	S4UL ⁴	None of 36
Cadmium	<0.1	1.4	22	C4SL ²	None of 36
Chromium (total) ⁵	4.6	28	910	S4UL ⁴	None of 36
Chromium (hexavalent)	<1	<1	21	C4SL ²	None of 36
Copper	3.7	110	2,400	S4UL ⁴	None of 36
Lead	7.4	1700	200	C4SL ²	3 of 36
Mercury ⁶	<0.05	0.66	40	S4UL ⁴	None of 36
Nickel	2.7	26	130	S4UL ⁴	None of 36
Selenium	<0.5	1.2	250	S4UL ⁴	None of 36
Vanadium	6	36	410	S4UL ⁴	None of 36
Zinc	20	470	3,700	S4UL ⁴	None of 36
Polyaromatic Hydrocarbons (PAH)					
Acenaphthene	<0.03	0.15	210	S4UL ^{4,7}	None of 36
Acenaphthylene	<0.03	0.57	170	S4UL ^{4,7}	None of 36
Anthracene	<0.03	0.59	2,400	S4UL ^{4,7}	None of 36
Benzo(a)anthracene	<0.03	5.8	7.2	S4UL ^{4,7}	None of 36
Benzo(a)pyrene	<0.03	8.8	5.0	C4SL ^{2,7}	1 of 36
Benzo(b)fluoranthene	<0.03	11	2.6	S4UL ^{4,7}	1 of 36
Benzo(ghi)perylene	<0.03	4.8	320	S4UL ^{4,7}	None of 36
Benzo(k)fluoranthene	<0.03	4.9	77	S4UL ^{4,7}	None of 36
Chrysene	<0.03	4.6	15	S4UL ^{4,7}	None of 36
Dibenzo(a,h)anthracene	<0.03	0.94	0.24	S4UL ^{4,7}	1 of 36
Fluoranthene	<0.03	8.4	280	S4UL ^{4,7}	None of 36
Fluorene	<0.03	0.33	170	S4UL ^{4,7}	None of 36
Indeno(123-cd)pyrene	<0.03	3.4	27	S4UL ^{4,7}	None of 36
Naphthalene	<0.03	0.03	2.3	S4UL ^{4,7}	None of 36
Phenanthrene	<0.03	1.7	95	S4UL ^{4,7}	None of 36
Pyrene	<0.03	8.9	620	S4UL ^{4,7}	None of 36
BTEX Compounds					
Benzene	<0.01	<0.01	0.87	C4SL ^{2,7}	None of 36
Toluene	<0.01	<0.01	130	S4UL ^{4,7}	None of 36
Ethyl benzene	<0.01	<0.01	47	S4UL ^{4,7}	None of 36
Xylene ⁷	<0.01	<0.01	56	S4UL ^{4,7}	None of 36
Aliphatic Petroleum Hydrocarbons (Equivalent Carbon Number)					
Ali EC 5-6	<0.01	<0.01	42	S4UL ^{4,7}	None of 36
Ali EC 6-8	<0.01	<0.01	100		None of 36
Ali EC 8-10	<0.01	<0.01	27		None of 36
Ali EC 10-12	<1.5	2.4	130*		None of 36
Ali EC 12-16	<1.2	75	1,100*		None of 36
Ali EC 16-35	<1.5	170	65,000*		None of 36

Continued Over.

Table 3 (Continued)- Generic Assessment of Human Health Risks (Residential with Plant Uptake)

Determinand	Minimum Recorded (mg/kg)	Maximum Recorded (mg/kg)	GAC (mg/kg)	Source of GAC	Exceedances
Aromatic Petroleum Hydrocarbons (Equivalent Carbon Number)					
Aro EC 5-7	<0.01	<0.01	70	S4UL ^{4,7}	None of 36
Aro EC 7-8	<0.01	<0.01	130		None of 36
Aro EC 8-10	<0.01	<0.01	34		None of 36
Aro EC 10-12	<0.9	3.2	74		None of 36
Aro EC 12-16	<0.5	95	140		None of 36
Aro EC 16-21	<0.6	190	260		None of 36
Aro EC 21-35	<1.4	320	1,100		None of 36
Other Organic Compounds					
Phenol	<0.3	0.9	280	S4UL ^{4,7}	None of 36
Notes:					
1. Assessment for residential land use <u>with home-grown produce uptake</u> .					
2. C4SL: Category 4 Screening Level, published by CL:AIRE.					
3. SGV: Soil Guideline Value published by Environment Agency.					
4. S4ULs Suitable 4 Use Levels. Copyright Land Quality Management Limited, reproduced with permission; Publication No. S4UL3156. All Rights Reserved.					
5. In the absence of Chromium VI, all chromium present likely to be Chromium III. GAC for Chromium III adopted.					
6. GAC for inorganic mercury adopted.					
7. GAC for organic compounds based on 1% soil organic content.					
8. GAC for xylene based on p-xylene (lowest S4UL).					
9. Exceedances highlighted in red and bold.					
10. Laboratory results presented in Appendices H to J.					
* GAC exceeds solubility or vapour saturation limit.					

As shown in the table above, except for elevated lead in three samples and elevated PAH levels in one sample, the levels of all determinands were below the adopted GAC.

All levels of Volatile Organic Compounds (VOCs) and Semi-Volatile organic Compounds (SVOCs) were below detection limits.

The elevated levels of lead were identified in HDP01, 0.3m (1,700mg/kg) adjacent to the slurry pit outflow pipe, WS07, 0.55m (310mg/kg) within Made Ground soils in the south of the farmyard complex and CP02, 0.2m (210mg/kg) within Made Ground soils in the south of the farmyard complex (adjacent to WS07).

The slurry pit soils are likely to be removed in the future as part of the remedial works in this area and the Made Ground soils from WS07 and CP02 have likely been impacted by the adjacent engine and diesel tank (see Figure 1). These soils will likely be removed as part of the site preparation works.

The elevated levels of Benzo(a)pyrene (8.8mg/kg), Benzo(b)fluoranthene (11mg/kg) and Dibenzo(a,h)anthracene (0.94mg/kg) were all identified from one sample, from WS208 at 0.45m within the Made Ground (ESP, 2021).

This is discussed further in Section 7.

6.2 Assessment of Leachate Contamination

6.2.1 Methodology

The potential impact of contamination originating at the site on controlled waters around the site (i.e., groundwater and surface water) has been initially evaluated in line with the Environment Agency guidance (Carey et al, 2006).

Levels of leachable contamination within the soil samples recovered at the site have been analysed, which represents a 'Level One' risk assessment (Carey et al, 2006).

6.2.2 Assessment Criteria

As for the assessment of human health risks above, the results of the contamination testing have been compared to assessment criteria appropriate to the controlled water receptors in the area.

The Preliminary Risk Assessment has identified that the following controlled water receptors are potentially at risk from contamination originating at the site:

- The groundwater within the Upper Greensand strata beneath the site (classified as a Principal Aquifer and within a Zone 3 SPZ around a potable groundwater abstraction).

Given the available information, we consider that the most vulnerable receptor with regards to leachable and mobile contamination would be the groundwater beneath the site and our assessment has concentrated on this receptor.

Potable Groundwater:

To assess the potential risk to potable groundwater beneath the site, and in particular the abstraction well some 1km to the east of the site (within the town centre of Warminster), the published Prescribed Concentration Values (PCV) of the Water Supply (Water Quality) Regulations (WSR, 2016), which relate to the use of groundwater as a potable resource, have been adopted as the assessment criteria.

Where no PCV is published, the 'concentrations of hazardous substances within groundwater below which the danger of deterioration of the groundwater quality is avoided' published by UKTAG (2016) have been adopted as assessment criteria. These UKTAG concentrations have been calculated from thresholds designed to be protective of drinking water.

Hazardous Substances:

Some contaminants which can impact on controlled waters have been classed as hazardous substances (JAGDAG, 2019) and include arsenic, lead, mercury, and some of the polyaromatic and petroleum hydrocarbon compounds. Natural Resources Wales (NRW) require that the entry of hazardous substances into controlled waters is phased out, or at least any further entry should be minimised. The remaining contaminants are classed as non-hazardous. The classification of each determinand analysed is presented in Table 7.

Petroleum Hydrocarbons:

There are currently no EU or UK guidelines for ethylbenzene and the World Health Organisation criteria (WHO, 2011) have been adopted for this compound. Similarly, except for the BTEX compounds, there are no published assessment criteria for petroleum hydrocarbons within controlled waters. The Environment Agency/NRW have previously stipulated an assessment criterion of 10µg/l for all bands of petroleum hydrocarbons, and this has been used tentatively as the assessment criteria. However, it should be appreciated that this only represents a preliminary, broad-brush appraisal of the levels of contamination present and an exceedance does not necessarily define an unacceptable risk.

The actual assessment criteria adopted are shown in the following table(s), and further details on them can be found in the respective published documents.

6.2.3 Assessment of Leachate Test Results

The results of the leachate testing and their comparison to the relevant assessment criteria are presented in Table 4 below, based on the Potentially Potable Groundwater as the most vulnerable receptor. The assessment is based on sixteen leachate sample generated during the previous and recent investigations of the Made Ground, natural Alluvium and natural Upper Greensand Formation.

Table 4: Level One Controlled Waters Risk Assessment – Leachate Results (Potable Groundwater)

Compound	Range Recorded	PCV ⁶	UKTAG ⁷	Exceedances
Metals				
Arsenic ¹	0.16 - 18 µg/l	10µg/l	5.0µg/l	1 of 16 (PCV & UKTAG)
Boron ²	<12 - 170µg/l	1,000µg/l	-	None of 16
Cadmium ²	<0.03 - 0.04µg/l	5.0µg/l	-	None of 16
Chromium VI ^{1,3}	<0.25 - 1.6µg/l	50µg/l	5.0µg/l	None of 16
Copper ²	0.9 - 7.8 µg/l	2.0µg/l	-	4 of 16 (PCV)
Lead ¹	<0.09 - 3.6µg/l	10µg/l	5.0µg/l	None of 16
Mercury ¹	<0.01 - 0.01µg/l	1.0µg/l	0.5µg/l	None of 16
Nickel ²	<0.5 - 4.2µg/l	20µg/l	-	None of 16
Selenium ²	<0.25 - 0.71µg/l	10µg/l	-	None of 16
Polyaromatic Hydrocarbons				
Anthracene ¹	<0.01 - 0.06µg/l	-	0.05µg/l	1 of 16 (UKTAG)
Benzo[a]pyrene ¹	<0.01 - 0.58 µg/l	0.01µg/l	0.005µg/l	7 of 16 (PCV & UKTAG)
BbF ¹	<0.01 - 0.58 µg/l	-	0.05µg/l	3 of 16 (UKTAG)
BghiP ¹	<0.01 - 0.44 µg/l	-	0.05µg/l	4 of 16 (UKTAG)
BkF ¹	<0.01 - 0.25 µg/l	-	0.05µg/l	4 of 16 (UKTAG)
IDP ¹	<0.01 - 0.43 µg/l	-	0.05µg/l	3 of 16 (UKTAG)
Petroleum Hydrocarbons				
Benzene ¹	<1.0µg/l	1.0µg/l	0.5µg/l	None of 16
Toluene ¹	<1.0µg/l	-	350µg/l	None of 16
Other Contaminants				
Cyanide ²	<40µg/l	50µg/l	-	None of 16
Notes: - Hazardous substance (JAGDAG, 2019). - Non-hazardous substance (JAGDAG, 2019). - All chromium present assumed to be chromium VI (conservative approach). - All four PAH compounds classed as hazardous. - Assessment based on potable groundwater beneath the site. - PCV – Prescribed Concentration Value, drinking water only – measured at consumers tap (WSR, 2016). - UKTAG – UK TAG concentration below which the danger of deterioration in the groundwater quality is avoided. For hazardous substances only. - Exceedances indicated in bold, and colour coded as shown. - Test results presented in Appendices H to J.				
Key to PAH compounds: BbF: benzo[b]fluoranthene BkF: benzo[k]fluoranthene BghiP: benzo[ghi]perylene IDP: indeno[123-cd]pyrene				

As shown by the table above, two marginally elevated levels of metals were identified, and five marginally elevated levels of PAH's were identified.

The elevated level of arsenic was identified from the sample collected from WS207 a 0.55m within the Made Ground.

The elevated levels of copper were identified from the samples collected from WS207 at 0.55m within Made Ground, WS208 at 0.45m within Made Ground, WS01 (ESP, 2024) at 0.3m within Made Ground and CP02 at 0.3m within Made Ground.

The elevated PAH levels identified as summarised in the table below.

Table 5 - Summary of Elevated Leachate PAH Levels

Investigation	Hole ID	Depth (m)	Soil Type	PAH Compound	Assessment Criteria	Level Recorded (µg/l)
ESP, 2016	TP3	0.1	MG	Benzo(a)anthracene	PCV (0.01 µg/l) UKTAG (0.005 µg/l)	0.15
	TP11	0.4	MG			0.06
	TP12	0.4	MG			0.06
	TP19	0.2	MG			0.58
ESP, 2021	WS08	0.45	MG			0.3
ESP, 2024	CP02	0.3	MG			0.03
	R001	0.6	MG			0.02
ESP, 2016	TP11	0.4	MG	Benzo(b)fluoranthene	UKTAG (0.05 µg/l)	0.07
	TP12	0.2	MG			0.58
ESP, 2021	WS08	0.45	MG			0.42
ESP, 2016	TP3	0.1	MG	Benzo(g,h,i)perylene	UKTAG (0.05 µg/l)	0.11
	TP12	0.4	MG			0.44
	TP19	0.2	MG			0.08
ESP, 2021	WS08	0.45	MG			0.32
ESP, 2016	TP3	0.1	MG	Benzo(k)fluoranthene	UKTAG (0.05 µg/l)	0.07
	TP12	0.4	MG			0.25
ESP, 2021	WS08	0.45	MG			0.15
ESP, 2016	TP12	0.4	MG	Indeno(1,2,3-c,d)pyrene	UKTAG (0.05 µg/l)	0.43
	TP19	0.2	MG			0.06
ESP, 2021	WS08	0.45	MG			0.42

These results are discussed further in Section 7.

6.2.4 Assessment of Groundwater Test Results

The groundwater beneath the site has been analysed on two occasions, with samples collected from installed wells on 24th June (Visit 1) and 10th July (Visit2).

The wells from which samples were collected are shown in Table 6 below and a plan showing the locations of the groundwater sampling wells is presented as Figure 4.

Table 6 - Summary of Sampled Groundwater Wells

Hole ID	Stratum
WS2	Upper Greensand Formation
CP03	Upper Greensand Formation
CP05	Made Ground/Upper Greensand Formation
R001	Upper Greensand Formation
R002	Upper Greensand Formation
R003	Upper Greensand Formation

The results of the groundwater testing for Visits 1 and 2 and their comparison to the relevant assessment criteria are presented in Table 7 below, based on the Potentially Potable Groundwater as the most vulnerable receptor. The assessment is based on twelve samples collected from six wells over two visits.

Table 7: Level One Controlled Waters Risk Assessment – Groundwater Results Visits 1 & 2 (Potable Groundwater)

Compound	Range Recorded	PCV ⁶	UKTAG ⁷	Exceedances
Metals				
Arsenic ¹	0.47 – 4.8µg/l	10µg/l	5.0µg/l	None of 12
Boron ²	26 – 63µg/l	1,000µg/l	-	None of 12
Cadmium ²	<0.03 – 0.04µg/l	5.0µg/l	-	None of 12
Chromium VI ^{1,3}	<0.25 – 0.63µg/l	50µg/l	5.0µg/l	None of 12
Copper ²	<0.4 – 4.5 µg/l	2.0µg/l	-	7 of 12 (PCV)
Lead ¹	<0.09 – 0.62µg/l	10µg/l	5.0µg/l	None of 12
Mercury ¹	<0.01 – 0.01µg/l	1.0µg/l	0.5µg/l	None of 12
Nickel ²	1.6 – 7.6µg/l	20µg/l	-	None of 12
Selenium ²	<0.25 – 1.1µg/l	10µg/l	-	None of 12
Polyaromatic Hydrocarbons				
Anthracene ¹	<0.01µg/l	-	0.05µg/l	None of 12
Benzo[a]pyrene ¹	<0.01 – 0.24µg/l	0.01µg/l	0.005µg/l	1 of 12 (PCV & UKTAG)
BbF ¹	<0.01 – 0.35µg/l	-	0.05µg/l	1 of 12 (UKTAG)
BghiP ¹	<0.01 – 0.31µg/l	-	0.05µg/l	1 of 12 (UKTAG)
BkF ¹	<0.01 – 0.14µg/l	-	0.05µg/l	1 of 12 (UKTAG)
IDP ¹	<0.01 – 0.32µg/l	-	0.05µg/l	1 of 12 (UKTAG)
Petroleum Hydrocarbons				
Benzene ¹	<1.0µg/l	1.0µg/l	0.5µg/l	None of 12
Toluene ¹	<1.0µg/l	-	350µg/l	None of 12
Other Contaminants				
Cyanide ²	<40µg/l	50µg/l	-	None of 12
Notes: - Hazardous substance (JAGDAG, 2019). - Non-hazardous substance (JAGDAG, 2019). - All chromium present assumed to be chromium VI (conservative approach). - All four PAH compounds classed as hazardous. - Assessment based on potable groundwater beneath the site. - PCV – Prescribed Concentration Value, drinking water only – measured at consumers tap (WSR, 2016). - UKTAG – UK TAG concentration below which the danger of deterioration in the groundwater quality is avoided. For hazardous substances only. - Exceedances indicated in bold, and colour coded as shown. - Test results presented in Appendix K.				
Key to PAH compounds: BbF: benzo[b]fluoranthene BghiP: benzo[ghi]perylene BkF: benzo[k]fluoranthene IDP: indeno[123-cd]pyrene				

As shown by the above table, seven marginally elevated levels of copper were identified across the two visits: four during the first and three during the second. During Visit 1 the elevations were recorded in water collected from R001, R002, R003 and CP05. During Visit 2 the elevations were recorded in water collected from R001, R002 and CP05.

A marginally elevated level of Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene and Indeno(1,2,3-c,d)pyrene was recorded in water collected from CP03 during Visit 1 only.

No elevated levels of PAH were recorded during Visit 2.

These results are discussed further in Section 7.

7 Discussion

7.1 Summary of Findings

The previous and recent investigations undertaken confirm that the majority of the site is underlain by natural soils, with limited Made Ground. Made Ground is present across the area of the farmyard complex and was notably deeper in WS207 and WS208 in the southeast (near the retaining wall), likely due to historical filling during the development of the farm buildings and yard.

No significant visual or olfactory evidence of contamination was identified during the past or recent investigation.

Made Ground is present within and around the slurry pit in the centre of the site, which has been identified to be locally deeper. During the 2016 investigation, around 1.7m of probable reworked natural soils (Made Ground) were identified above a 200mm suspected Buried Topsoil layer in WS07. In Borehole WS08, 2.5m of possible predominantly fine-grained Made Ground was identified. This Made Ground could be associated with previous excavations for the slurry pit.

In general, the levels of soil contamination were below the assessment criteria levels. Elevated levels of lead were identified in HDP01, 0.3m adjacent to the slurry pit outflow pipe and in WS07 (0.55m) and CP02 (0.2m) within Made Ground soils in the south of the farmyard complex near the diesel engine. Elevated levels of PAH were identified in one soil sample from WS208 (0.45m) within the Made Ground of possible historic slurry pit excavation.

We are not aware of the proposed changes to ground levels at this stage; however, we understand that earthworks will be undertaken to create the required development levels. It is likely that the soils within and around the slurry pit will be removed (see Section 1.1.2) and therefore the contaminant source will no longer remain. Given the elevation of the farmyard above the wider site, it is likely that the Made ground soils beneath the farmyard complex (e.g., as identified in WS07 and CP02) may be removed from site.

Leachate testing has indicated two marginally elevated levels of metals and five marginally elevated levels of PAH's (all from samples of Made ground) against the stringent assessment criteria.

All tests for TPH indicated low levels, with the majority below detection in the soil, leachate and groundwater analyses completed. All levels of VOCs and SVOCs were below detection in the soil, leachate and groundwater analyses completed.

Current contamination levels of the groundwater are identified to be generally low, with marginally elevated levels of copper identified and one occurrence of elevated PAH compounds identified against the stringent assessment criteria during Visit 1, which were below the assessment criteria during Visit 2.

7.2 Conclusions & Considerations

Identified potential contamination sources have been targeted during the investigation with associated laboratory testing to determine any potential contamination risks associated with the sources. Marginally elevated levels of soil and leachate contamination have been identified in the soils around the diesel tank and generator and soils impacted by the slurry pit.

It should be noted that the slurry pit materials and the ground in the vicinity of the slurry pit will require excavation and removal which we understand will be completed in the future. Supplementary soil sampling and groundwater sampling will also be undertaken following the removal/remediation of this area and an updated assessment will be completed. Depending on the final site levels, it is likely that the Made Ground in the vicinity of the diesel tank and generator will also require removal.

Groundwater testing in the vicinity of the identified sources has not identified any significant contamination.

Given the above and the results of this Level 2 assessment, we consider that the overall risk to controlled waters from the development of the site is likely to be low. As the site is located within a SPZ-3, this report should be reviewed by the Environment Agency (EA) to confirm their opinion; we presume this will be undertaken as part of the planning process.

We cannot discount that as part of future planning submissions, additional testing and assessment may be requested in accordance with specific local authority and EA requirements.

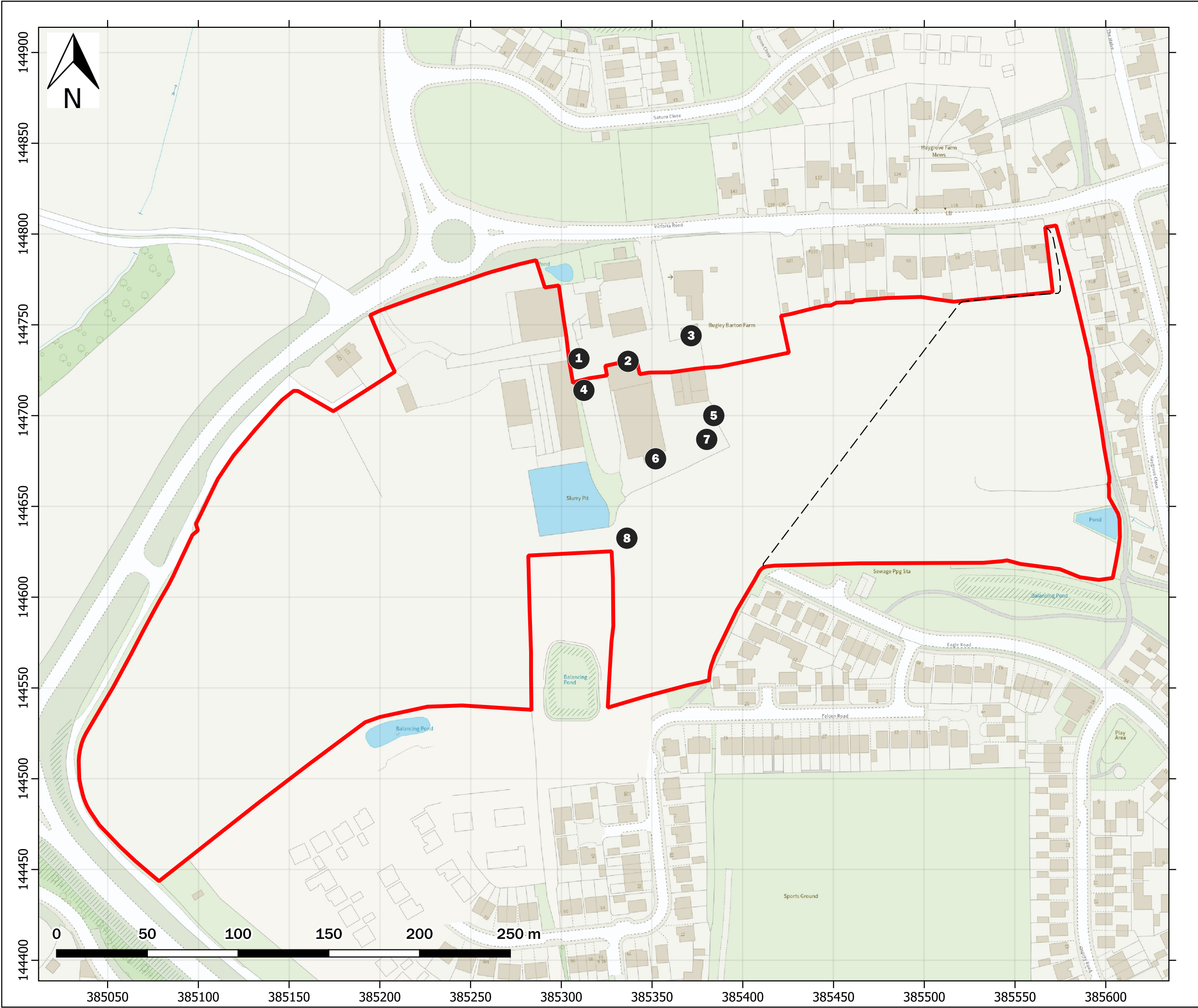
Some risk mitigation is likely to be required if soakaways are used to dispose of surface water run-off.

If a piled foundation is the chosen option for the proposed development, a standalone risk assessment may be requested by the regulatory authorities to demonstrate that the foundation construction will not create additional contamination pathways that could detriment underlying aquifers.

8 References

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Figures



LEGEND:

Site Boundary

Public Footpath

Site Features

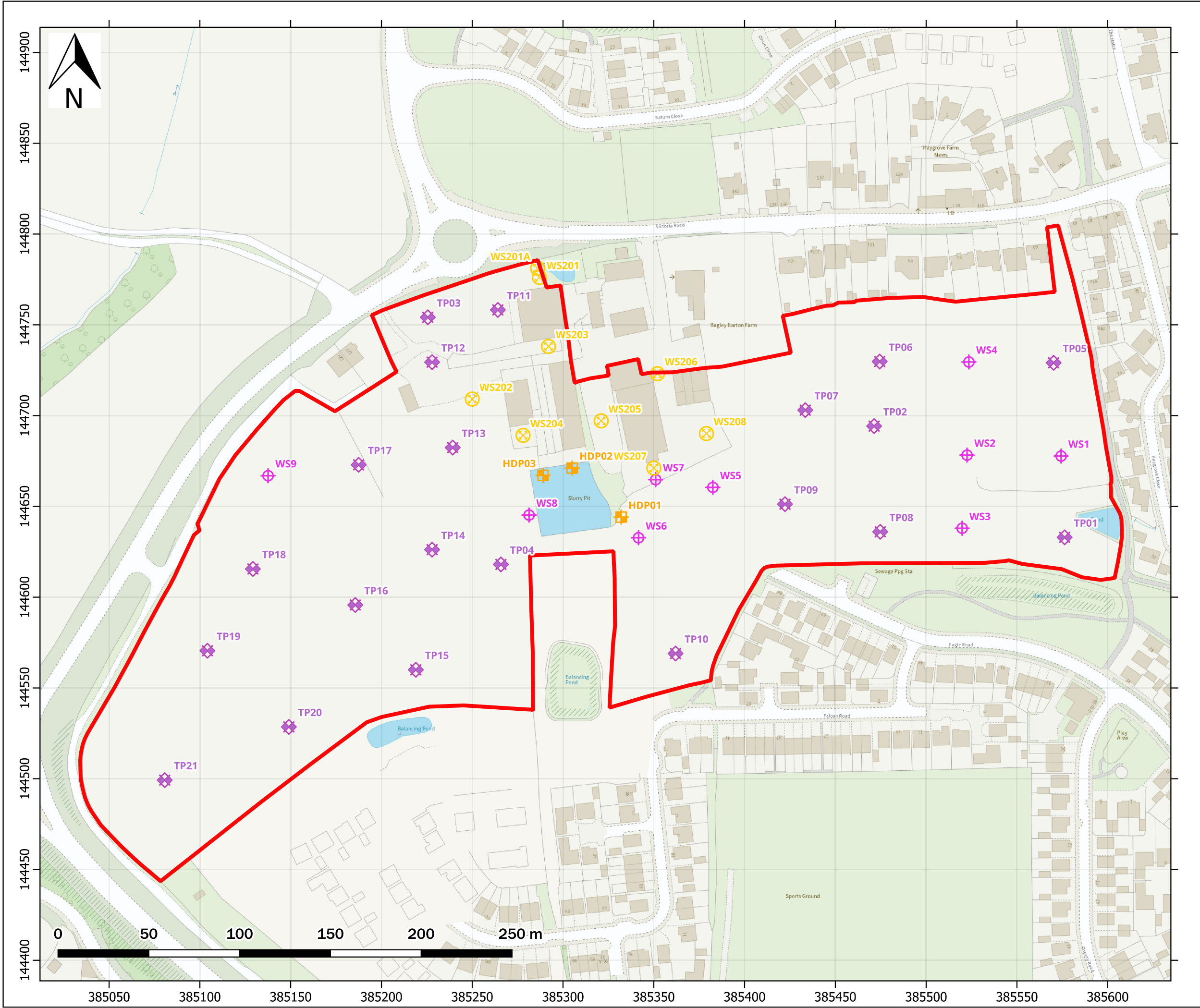
- 1 Above-ground Storage Tank (unknown material) and Herbicide Cannisters.
- 2 Chemical Storage
- 3 Oil Tanks (Farm Building Heating - Outside Site Boundary)
- 4 Stockpile (Possible Asbestos Cement Tile)
- 5 Fuel Tanks
- 6 Diesel Tank and Engine - Generator
- 7 Stockpiles (Gravel and Construction Rubble)
- 8 Outflow Pipe (Slurry Pit)

NOTES:

1. Do not scale from drawing. This drawing should be read in conjunction with all other associated project information.

2. Contains OS data © Crown copyright and database right (2022). Data may be re-used under the terms of the Open Government Licence (OGL).

PROJECT NAME:	Proposed Residential Development Bugley Farm, Warminster		
REPORT REF:	ESP.8917		
CLIENT:	Keepmoat Homes Ltd		
FIGURE TITLE:	Site Plan		
FIGURE NO:	01	REV.:	00
DATE:	09/07/2024	SCALE:	1: 2000
DRAWN BY:	NS	CHECKED BY:	DT



LEGEND:

Site Boundary

ESP Investigation - 2021

Windowless Sampler Locations

Hand Pit Locations

ESP Investigation - 2016

Windowless Sampler Locations

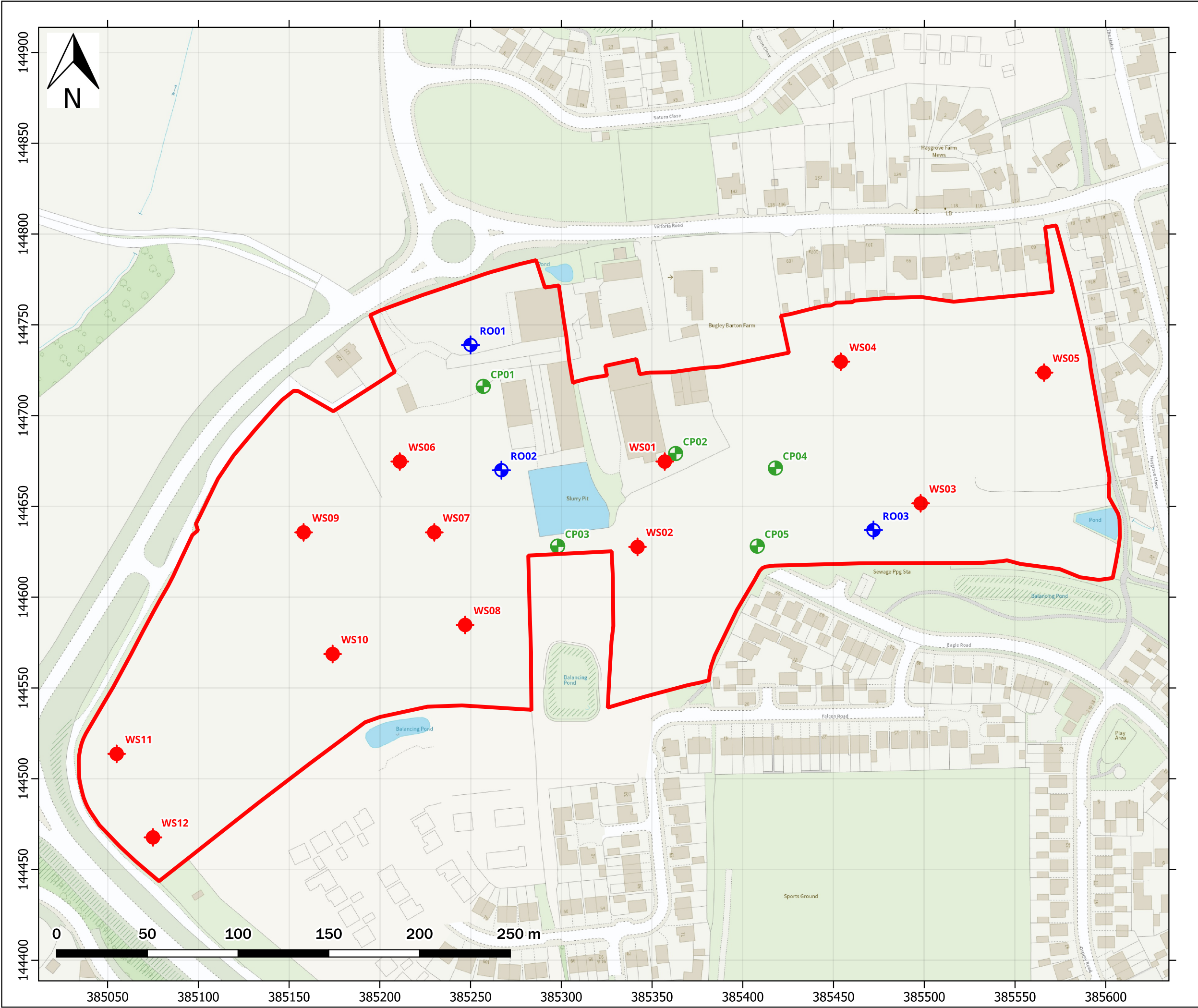
Trial Pit Locations

NOTES:

1. Do not scale from drawing. This drawing should be read in conjunction with all other associated project information.

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PROJECT NAME:	Proposed Residential Development Bugley Farm, Warminster		
REPORT REF:	ESP.8917		
CLIENT:	Keepmoat Homes Ltd		
FIGURE TITLE:	Previous ESP Site Investigation Plan - 2016 & 2021		
FIGURE NO:	02	REV.:	00
DATE:	09/07/2024	SCALE:	1: 2000
DRAWN BY:	NS	CHECKED BY:	DT



LEGEND:

Site Boundary

Investigation Points

- Cable Percussion Locations
- Rotary Openhole Locations
- Windowless Sampler Locations

NOTES:

1. Do not scale from drawing. This drawing should be read in conjunction with all other associated project information.

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PROJECT NAME: Proposed Residential Development Bugley Farm, Warminster

REPORT REF: ESP.8917

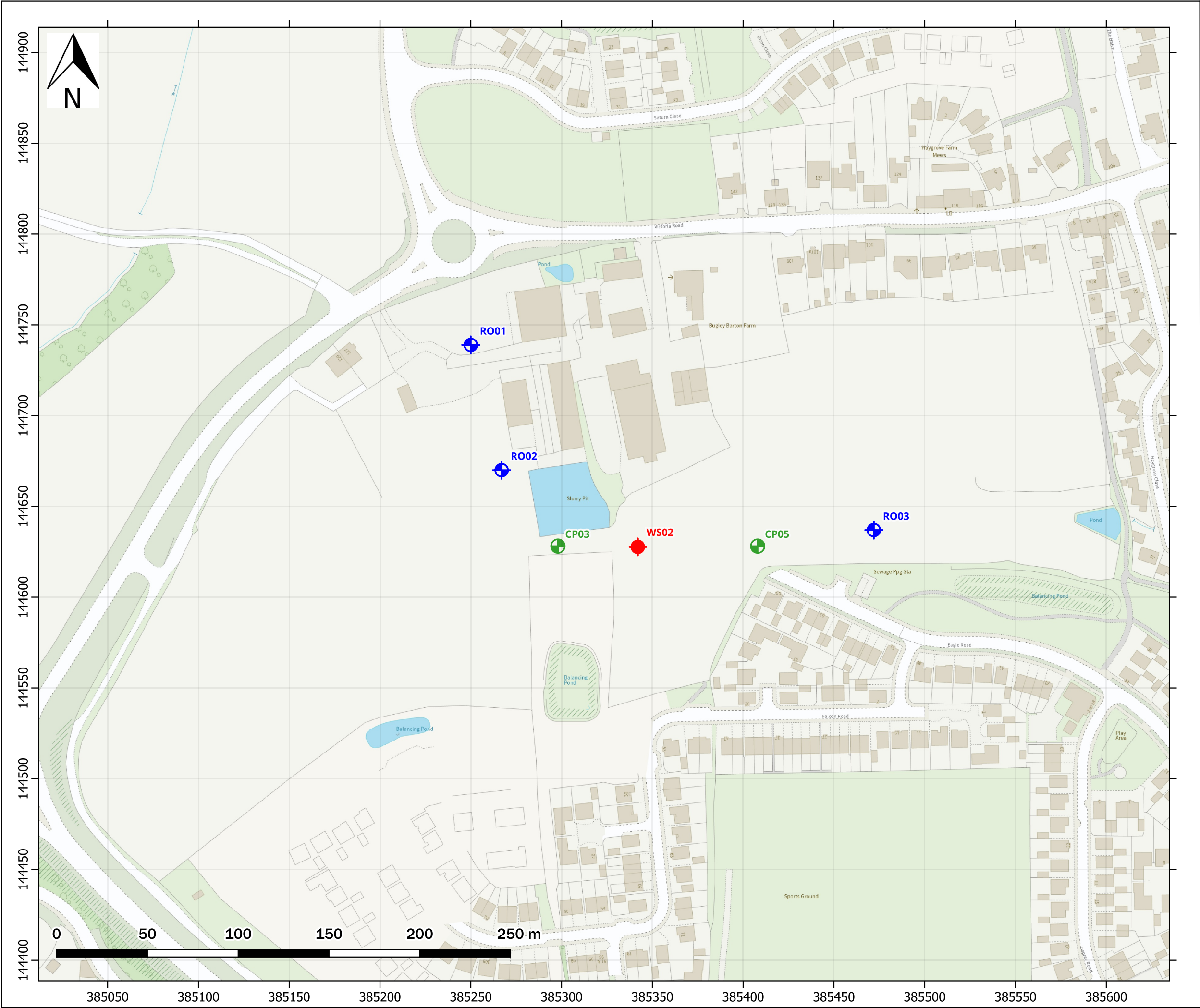
CLIENT: Keepmoat Homes Ltd

FIGURE TITLE: Investigation Point Plan

FIGURE NO: 03 REV.: 00

DATE: 09/07/2024 SCALE: 1: 2000

DRAWN BY: NS CHECKED BY: DT



LEGEND:

Site Boundary

Investigation Points
- with Groundwater Sampling

- Cable Percussion Locations
- Rotary Openhole Locations
- Windowless Sampler Locations

NOTES:

1. Do not scale from drawing. This drawing should be read in conjunction with all other associated project information.

2. Contains OS data © Crown copyright and database right (2024). Data may be re-used under the terms of the Open Government Licence (OGL).

PROJECT NAME: Proposed Residential Development Bugley Farm, Warminster

REPORT REF: ESP.8917

CLIENT: Keepmoat Homes Ltd

FIGURE TITLE: Investigation Point Plan - Groundwater Sampling Locations

FIGURE NO: 04 REV.: 00

DATE: 07/08/2024 SCALE: 1: 2000

DRAWN BY: NS CHECKED BY: DT

Appendix A

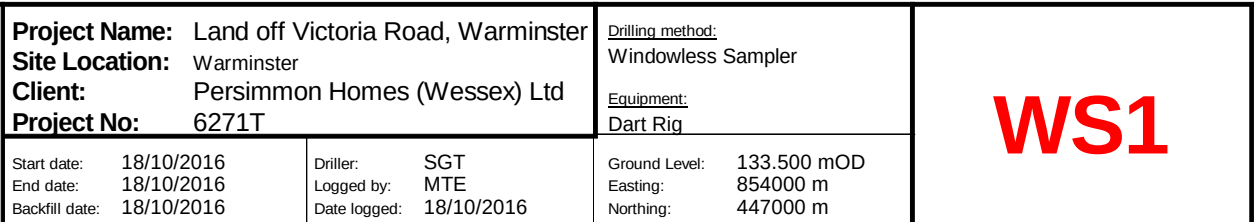
Pre-Desk Study Assessment

Site:	Land at Bugley Barton Farm, Warminster, Wiltshire
Client:	Earth Science Partnership
Contact:	Daniel Thomas
Date:	29 th April 2024
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: ■ Transport infrastructure and public utilities. ■ Military barracks, camps, depots, and training areas.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified.
WWII Military Activity on or Affecting the Site	1No. Anti-Aircraft (AA) searchlight and Light AA (LAA) gun emplacement was established on land adjacent to the Site.
WWII Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: ■ Transport infrastructure and public utilities. ■ Military barracks, camps, depots, and training areas. ■ AA and anti-invasion defences.
WWII Bombing Decoys (within 5km of Site)	None.
WWII Bombing	During WWII the Site was located in the Urban District (UD) of Warminster, which officially recorded 1No. High Explosive (HE) bomb with a bombing density of 0.2 bombs per 405 hectares (ha). No readily available records have been found to indicate that the Site was bombed.
Post-WWII Military Activity on or Affecting the Site	The LAA and searchlight emplacement adjacent to the Site was removed.
Recommendation	A detailed desk study, whilst always prudent, is not considered essential in this instance.
Further information	For information about Zetica's detailed UXO desk studies and other UXO services, please visit our website: www.zeticauxo.com . Details and downloadable resources covering the most common sources of UXO hazard affecting sites in the UK can be found here . If you have any further queries, please don't hesitate to get in contact with us at uxo@zetica.com or 01993 886 682.

This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary.

It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO desk study and risk assessment may identify other potential sources of UXO hazard on the Site.

Appendix B

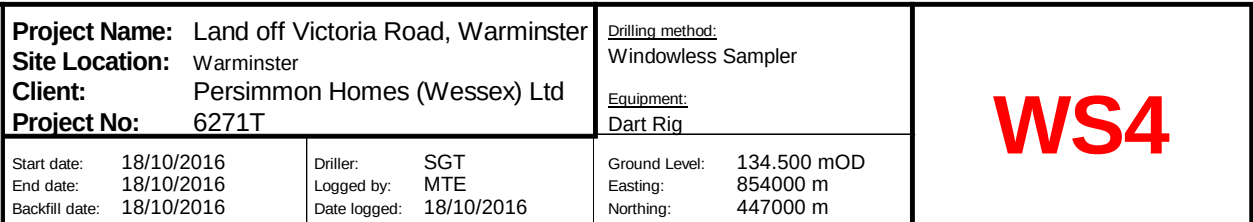


Progress & Standing Water Levels					Water Strikes							Chiselling			Hole and Casing Diameters			
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed minutes	Depth to Water	Depth Sealed	From Depth	To Depth	Minutes Taken	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					18/10/2016	-	2.20	-	-	-	-							

1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey.
2. Drillhole undertaken adjacent to pond/marsh area to install gas monitoring well.
3. Well installation installed with upstanding cover on completion.
4. 50mm diameter gas and groundwater monitoring well installed with response zone between 0.7m to 3.0m depth.

1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey.
2. Drillhole undertaken adjacent to pond/marsh area to install gas monitoring well.
3. Well installation installed with upstanding cover on completion.
4. 50mm diameter gas and groundwater monitoring well installed with response zone between 0.7m to 2.9m depth.

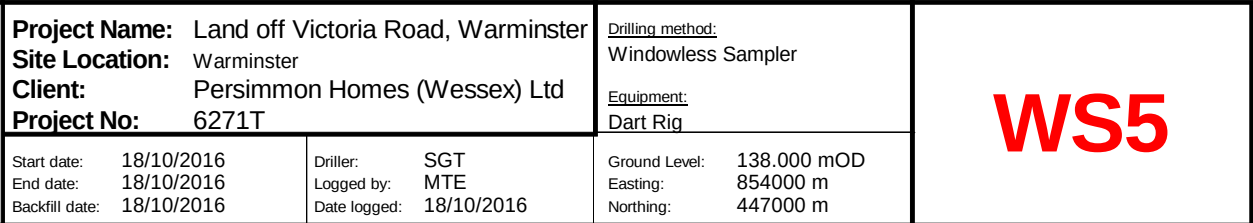
- General Remarks.**
1. Grid reference of centre of site only . Ground level approximate only and interpolated from Topographical Survey.
 2. Drillhole undertaken adjacent to pond/marsh area to install gas monitoring well.
 3. Well installation installed with upstanding cover on completion.
 4. 50mm diameter gas and groundwater monitoring well installed with response zone between 0.7m to 3.8m depth.



Progress & Standing Water Levels					Water Strikes							Chiselling			Hole and Casing Diameters			
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed minutes	Depth to Water	Depth Sealed	From Depth	To Depth	Minutes Taken	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					18/10/2016	-	3.20	-	-	-	-							

General Remarks:

1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey.
2. Drillhole undertaken in north east of site to obtain general ground information.
3. Drillhole backfilled with arisings on completion and grass surface reinstated.

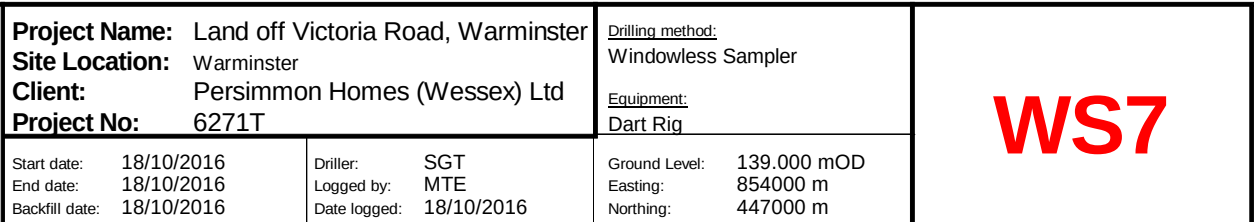


Progress & Standing Water Levels					Water Strikes							Chiselling			Hole and Casing Diameters			
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed minutes	Depth to Water	Depth Sealed	From Depth	To Depth	Minutes Taken	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth

1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey.
2. Drillhole undertaken in south of site to obtain general ground information.
3. Drillhole backfilled with arisings on completion and grass surface reinstated.
4. No groundwater encountered to base of drillhole.

- General Remarks:
1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey.
 2. Drillhole undertaken adjacent slurry pit outflow pipe to install gas monitoring well.
 3. Well installation installed with upstanding cover on completion.
 4. 50mm diameter gas and groundwater monitoring well installed with response zone between 0.7m to 4.9 depth.

		Project Name: Land off Victoria Road, Warminster										Drilling method: Windowless Sampler					WS6							
		Site Location: Warminster										Equipment: Dart Rig												
		Client: Persimmon Homes (Wessex) Ltd																						
Project No: 6271T										Start date: 18/10/2016 End date: 18/10/2016 Backfill date: 18/10/2016					Driller: SGT Logged by: MTE Date logged: 18/10/2016					Ground Level: 137.000 mOD Easting: 854000 m Northing: 447000 m				
Sample Details and SPT Data										Strata Details										Water				
Depth	Type	PID (ppm)	SPT-N (penetration / sampler blows)	Water Depth	Casing Depth	Depth (Thickness)	Description					Legend	Strikes / Standing	Depth	Backfill / Installations									
							fine to coarse SAND with occasional fine gravel of sandstone. (Probable SHAFTESBURY SANDSTONE MEMBER). End of Borehole at 5.35 m							6 7 8 9										
Progress & Standing Water Levels					Water Strikes							Chiselling			Hole and Casing Diameters									
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed minutes	Depth to Water	Depth Sealed	From Depth	To Depth	Minutes Taken	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth						
General Remarks: 1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey. 2. Drillhole undertaken adjacent slurry pit outflow pipe to install gas monitoring well. 3. Well installation installed with upstanding cover on completion. 4. 50mm diameter gas and groundwater monitoring well installed with response zone between 0.7m to 4.9 depth.																								



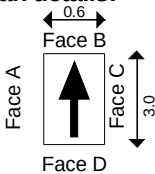
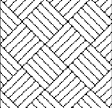
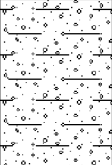
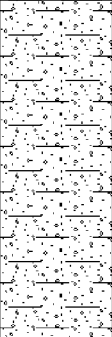
Progress & Standing Water Levels					Water Strikes							Chiselling			Hole and Casing Diameters			
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed minutes	Depth to Water	Depth Sealed	From Depth	To Depth	Minutes Taken	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth

1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey.
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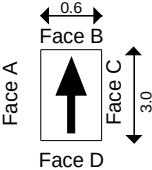
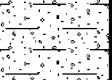
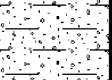
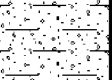
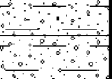
- General Remarks:**
1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey.
 2. Drillhole undertaken adjacent slurry pit outflow pipe to install gas monitoring well.
 3. Well installation installed with upstanding cover on completion.
 4. 50mm diameter gas and groundwater monitoring well installed with response zone between 0.7m to 3.0 depth.

- General Remarks:**
1. Grid reference of centre of site only. Ground level approximate only and interpolated from Topographical Survey.
 2. Drillhole undertaken in north west of site to obtain general ground information.
 3. Drillhole backfilled with arisings on completion and surface reinstated.
 4. No groundwater encountered to base of drillhole.

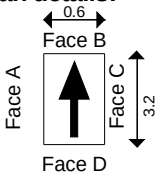
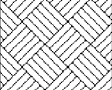
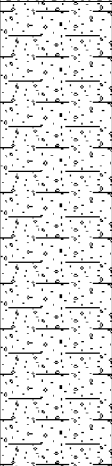
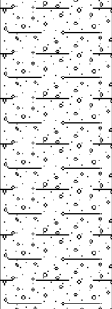
Appendix C

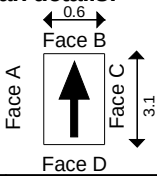
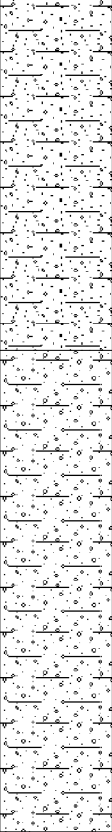
				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP1		
Survey details: Ground Level: 132.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Excavation date: 18/10/2016 Backfill date: 18/10/2016 Logged by: LD		Excavation method/plant: Trial Pitting 6T Tracked		Shoring/support: None	
				Plan details: 		Face stability: Major sidewall collapse after pit excavation.			
Sampling & Testing				Stratum Details					
Depth		Type	PID (ppm)	S_u (kPa)	(Thk) & Depth	Description			Legend
0.20		E			(0.40)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).			
0.50		E			0.40	Medium dense light grey to grey silty very sandy fine to coarse angular to subangular sandstone and flint GRAVEL. (Possible SHAFTESBURY SANDSTONE FORMATION - 'Ragstone')			
0.80		D			(0.60)				
					1.00	Soft to firm brown and grey very sandy gravelly CLAY with a low angular sandstone cobble content. (Probable SHAFTESBURY ANDSTONE MEMBER).			
					(1.20)				
2.10		B			2.20	End of trial pit at 2.20 m depth.			
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate and interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm 3. Location of BRE 365 Soakaway Test (SA1). 4. Backfilled with arisings upon completion.									

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP2		
Excavation date: 18/10/2016 Backfill date: 19/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting 6T Tracked		Shoring/support: None			
Survey details: Ground Level: 136.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 2.8 Face D		Face stability: Minor sidewall spalling during soakaway testing.		Groundwater observations: No groundwater encountered.	
Sampling & Testing				Stratum Details					
Depth		Type	PID (ppm)	S _u (kPa)	(Thk) & Depth	Description	Legend		
0.15		E			(0.30)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).			
0.40		E			0.30	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone. (Probable BOYNE HOLLOW CHERT MEMBER).			
1.00		D			(1.30)				
1.50		D			1.60				
2.00		D			(0.60)	Medium dense to dense light grey to grey slightly silty very sandy gravelly angular to subangular sandstone COBBLES. Gravel is fine to coarse angular sandstone. (Probable SHAFTESBURY SANDSTONE MEMBER - 'Ragstone').			
2.20		B			2.20	End of trial pit at 2.20 m depth.			
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm 3. Location of BRE 365 Soakaway Test (SA2). 4. Pit secured with heras fencing overnight. 5. Backfilled with arisings upon completion.									

	Site Location: Land off Victoria Road, Warminster		TP3			
	Client: Persimmon Homes (Wessex) Ltd					
	Project No: 6271T					
Survey details: Ground Level: 139.500 mOD Easting: 854000 m Northing: 447000 m Bearing: -	Excavation date: 18/10/2016		Excavation method/plant: Trial Pitting		Groundwater observations: No groundwater encountered.	
	Backfill date: 19/10/2016		Shoring/support: None			
	Logged by: LD		6T Tracked			
Plan details: 		Face stability: Minor sidewall spalling during soakaway testing.				
Sampling & Testing		Stratum Details				
Depth	Type	PID (ppm)	S_u (kPa)	(Thk) & Depth	Description	Legend
0.10	E			(0.30)	Loose black slightly clayey sandy coarse angular GRAVEL with occasional fragments of brick and concrete block. (MADE GROUND - part demolition rubble).	
0.40	E			0.30	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone and fine to coarse flint fragments. (Probable BOYNE HOLLOW CHERT MEMBER)	
1.00	D			(1.10)		
1.60	D			1.40	Medium dense to dense light grey to grey slightly silty slightly gravelly sandy angular to subangular sandstone COBBLES. (Probable SHAFTESBURY SANDSTONE MEMBER - 'Ragstone').	
2.10	B			(0.90)		
				2.30	End of trial pit at 2.30 m depth.	
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.						
Weather and environmental conditions: Clear and dry.						
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm 3. Location of BRE 365 Soakaway Test (SA3). 4. Pit secured with heras fencing overnight. 5. Backfilled with arisings upon completion.						

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP4		
Excavation date: 18/10/2016 Backfill date: 19/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting 6T Tracked		Shoring/support: None			
Survey details: Ground Level: 137.500 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 2.9 Face D		Face stability: Minor sidewall spalling during soakaway testing.		Groundwater observations: No groundwater encountered.	
Sampling & Testing				Stratum Details					
Depth		Type	PID (ppm)	S _u (kPa)	(Thk) & Depth	Description	Legend		
0.20		E			(0.40)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).			
0.50		E			0.40	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone and fine to coarse angular flint fragments. (Probable BOYNE HOLLOW CHERT MEMBER)			
1.20		D			(1.70)				
2.00		D			2.10				
2.50		D			(0.70)	Probably loose to medium dense brown and grey very clayey gravelly SAND with low angular sandstone cobble content. Gravel is fine to coarse angular to subangular sandstone. (Probable SHAFTESBURY SANDSTONE MEMBER)			
2.70		B			2.80	End of trial pit at 2.80 m depth.			
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm 3. Location of BRE 365 Soakaway Test (SA4). 4. Pit secured with heras fencing overnight. 5. Backfilled with arisings upon completion.									

		Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T		TP5			
Survey details: Ground Level: 134.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -		Excavation date: 18/10/2016 Backfill date: 18/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting 6T Tracked	
		Plan details: 		Face stability: No stability issues.		Groundwater observations: No groundwater encountered.	
Sampling & Testing				Stratum Details			
Depth	Type	PID (ppm)	S_u (kPa)	(Thk) & Depth	Description	Legend	
0.20	E			(0.35)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).		
0.55	E			0.35	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone and fine to coarse flint nodules. (Probable BOYNE HOLLOW CHERT MEMBER)		
1.10	D			(1.65)			
1.90	D			2.00	Medium dense light grey to grey silty very sandy fine to coarse angular to subangular sandstone GRAVEL. (Probable SHAFTESBURY SANDSTONE MEMBER - 'Ragstone').		
2.70	D			(1.10)			
3.00	B			3.10	End of trial pit at 3.10 m depth.		
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.							
Weather and environmental conditions: Clear and dry.							
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.							

				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T Excavation date: 18/10/2016 Backfill date: 18/10/2016 Logged by: LD Excavation method/plant: Trial Pitting 6T Tracked Shoring/support: None			TP6							
Survey details: Ground Level: 136.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 		Face stability: No stability issues.		Groundwater observations: No groundwater encountered.						
Sampling & Testing <table><tr><th>Depth</th><th>Type</th><th>PID (ppm)</th><th>S_u (kPa)</th></tr></table>				Depth	Type	PID (ppm)	S _u (kPa)	Stratum Details <table><tr><th>(Thk) & Depth</th><th>Description</th><th>Legend</th></tr></table>				(Thk) & Depth	Description	Legend
Depth	Type	PID (ppm)	S _u (kPa)											
(Thk) & Depth	Description	Legend												
0.15	E			(0.25)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).									
0.35	E			0.25	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone and subrounded to rounded flint fragments. (Probable BOYNE HOLLOW CHERT MEMBER)									
1.15	D			(1.25)										
1.60	D			1.50	Medium dense light grey to grey silty very sandy fine to coarse angular to subangular sandstone GRAVEL. (Probable SHAFTESBURY SANDSTONE MEMBER - 'Ragstone').									
2.30	D			(1.70)										
3.00	B			3.20	End of trial pit at 3.20 m depth.									

General notes:

1. All linear dimensions are in metres unless stated otherwise.

2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data.

3. Trial pit logged from the ground surface.

Weather and environmental conditions:

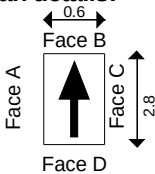
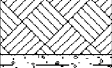
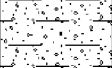
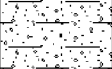
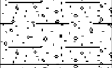
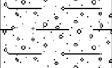
Clear and dry.

Other comments:

1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey.

2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm.

3. Backfilled with arisings upon completion.

				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP7				
Survey details: Ground Level: 138.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Excavation date: 18/10/2016 Backfill date: 18/10/2016 Logged by: LD		Excavation method/plant: Trial Pitting 6T Tracked		Shoring/support: None			
				Plan details: 		Face stability: Significant sidewall collapse during and after excavation.			Groundwater observations: Groundwater at base of pit, very slow inflow.		
Sampling & Testing				Stratum Details							
Depth		Type	PID (ppm)	S_u (kPa)	(Thk) & Depth	Description			Legend		
0.15		E			(0.20)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).					
0.40		E				Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone. (Probable BOYNE HOLLOW CHERT MEMBER)					
0.90		D			(1.30)						
1.80		D			1.50	Medium dense light grey to grey silty very sandy fine to coarse angular to subangular sandstone GRAVEL. (Probable SHAFTESBURY SANDSTONE MEMBER - 'Ragstone').					
2.60		D			(1.20)						
2.70		B			2.70	End of trial pit at 2.70 m depth.					
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.											
Weather and environmental conditions: Clear and dry.											
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.											

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP8		
Excavation date: 18/10/2016 Backfill date: 18/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting Shoring/support: None 6T Tracked					
Survey details: Ground Level: 134.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 3.3 Face D		Face stability: Significant sidewall collapse during and after excavation.		Groundwater observations: Groundwater at base of pit, very slow inflow.	
Sampling & Testing Depth Type PID (ppm) S_u (kPa)				Stratum Details (Thk) & Depth Description Legend					
0.15 E				(0.30) Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).					
0.45 E				0.30 Loose to medium dense light grey to grey silty very sandy fine to coarse angular to subangular sandstone GRAVEL. (Probable SHAFTESBURY SANDSTONE MEMBER).					
0.80 D				(0.70)					
1.50 D				1.00 Medium dense and grey very clayey gravelly SAND with low angular sandstone cobble content. Gravel is fine to coarse angular to subangular sandstone. (Probable SHAFTESBURY SANDSTONE MEMBER).					
3.00 D				(2.50)					
3.50 B				3.50 End of trial pit at 3.50 m depth.					
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.									



Survey details:
Ground Level: 135.500 mOD
Easting: 854000 m
Northing: 447000 m
Bearing: -

Site Location: Land off Victoria Road, Warminster
Client: Persimmon Homes (Wessex) Ltd
Project No: 6271T

Excavation date: 18/10/2016	Excavation method/plant: Trial Pitting	Shoring/support: None
Backfill date: 18/10/2016	6T Tracked	
Logged by: LD		

Plan details:

0.6

Face B

Face A

Face C

3.1

Face D

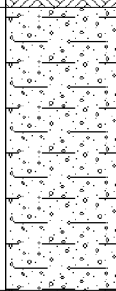
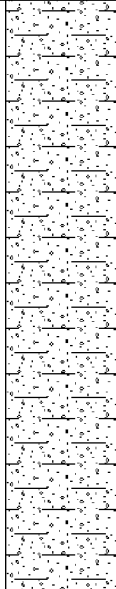
Face stability:

Significant sidewall collapse during and after excavation.

TP9

Groundwater observations:

Groundwater at base of pit, very slow inflow.

Sampling & Testing				Stratum Details		
Depth	Type	PID (ppm)	S _u (kPa)	(Thk) & Depth	Description	Legend
0.10	E			(0.30)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).	
0.50	E			0.30	Loose to medium dense light grey to grey silty very sandy fine to coarse angular to subangular sandstone GRAVEL. (Probable SHAFTESBURY SANDSTONE MEMBER).	
1.00	D			(1.00)		
1.70	D			1.30	Loose to medium dense brown and grey very clayey gravelly SAND with low angular sandstone cobble content. Gravel is fine to coarse angular to subangular sandstone. (Probable SHAFTESBURY SANDSTONE MEMBER).	
2.80	D			(2.10)		
3.00	B					
				3.40	End of trial pit at 3.40 m depth.	

General notes:

1. All linear dimensions are in metres unless stated otherwise.
2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data.
3. Trial pit logged from the ground surface.

Weather and environmental conditions:
Clear and dry.

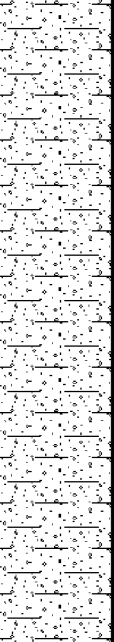
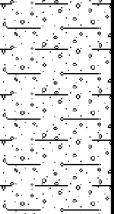
Other comments:

1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey.
2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm.
3. Backfilled with arisings upon completion.

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP10		
Survey details: Ground Level: 138.500 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Excavation date: 18/10/2016 Backfill date: 18/10/2016 Logged by: LD		Excavation method/plant: Trial Pitting Shoring/support: None 6T Tracked		Groundwater observations: No groundwater encountered.	
Plan details: 0.6 Face B Face A Face C 3.0 Face D				Face stability: No stability issues.					
Sampling & Testing				Stratum Details					
Depth		Type	PID (ppm)	S _u (kPa)	(Thk) & Depth	Description	Legend		
0.15		E			(0.30)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).			
0.50		E			0.30	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone. (Probable BOYNE HOLLOW CHERT MEMBER)			
1.00		D			(2.10)				
1.70		D							
2.40						Medium dense light grey to grey silty very sandy fine to coarse angular to subangular sandstone GRAVEL. (Probable SHAFTESBURY SANDSTONE MEMBER - 'Ragstone').			
3.20		B			(1.00)				
3.20		D							
3.40						End of trial pit at 3.40 m depth.			
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.									

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP11		
Excavation date: 19/10/2016 Backfill date: 19/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting 6T Tracked		Shoring/support: None			
Survey details: Ground Level: 139.500 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 3.2 Face D		Face stability: No stability issues.		Groundwater observations: No groundwater encountered.	
Sampling & Testing Depth Type PID (ppm) S_u (kPa)				Stratum Details (Thk) & Depth Description Legend					
0.10 E				(0.60) Loose black slightly clayey sandy coarse angular GRAVEL with some fragments of brick and concrete block fragments. Suspected asbestos cement materials. (MADE GROUND - demolition rubble).					
0.40 E				0.60					
0.90 D				(0.90) Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone. (Probable BOYNE HOLLOW CHERT MEMBER)					
1.30 D				1.50					
2.00 D				(1.50) Medium dense light grey to grey silty cobbly very sandy fine to coarse angular to subangular sandstone GRAVEL. Cobbles are angular sandstone. (Probable SHAFTESBURY SANDSTONE - 'Ragstone')					
2.90 B				3.00 End of trial pit at 3.00 m depth.					
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.									

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP12		
Excavation date: 19/10/2016 Backfill date: 19/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting 6T Tracked		Shoring/support: None			
Survey details: Ground Level: 139.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 3.1 Face D		Face stability: No stability issues.		Groundwater observations: No groundwater encountered.	
Sampling & Testing Depth Type PID (ppm) Su (kPa)				Stratum Details (Thk) & Depth Description Legend					
0.20 E				(0.40) Loose black slightly clayey sandy coarse angular GRAVEL with some fragments of brick and concrete block. (MADE GROUND - demolition rubble).					
0.50 E				(0.20) 0.40 Soft brown very sandy very gravelly CLAY. Gravel is fine to coarse subangular to angular sandstone. (Possible SUBSOIL).					
				0.60 Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone. (Probable BOYNE HOLLOW CHERT MEMBER)					
1.20 D				(0.90)					
				1.50 Medium dense becoming very dense grey to light grey slightly clayey very sandy fine to coarse angular to subangular sandstone GRAVEL. (Probable SHAFTESBURY SANDSTONE FORMATION - 'Ragstone').					
2.00 D				(1.50)					
3.00 B				3.00 End of trial pit at 3.00 m depth.					
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.									

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP13		
Excavation date: 19/10/2016 Backfill date: 19/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting Shoring/support: None					
Survey details: Ground Level: 138.500 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 2.7 Face D		Face stability: No stability issues.		Groundwater observations: No groundwater encountered.	
Sampling & Testing Depth Type PID (ppm) S_u (kPa)				Stratum Details (Thk) & Depth Description Legend					
0.20 E				(0.30) 0.30 Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL). 					
0.60 E				Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone and fine to coarse angular flint. (Probable BOYNE HOLLOW CHERT MEMBER) 					
1.30 D				(2.30)					
3.00 D				(0.80) 2.60 Medium dense grey to light grey slightly clayey very sandy fine to coarse angular to subangular sandstone GRAVEL. Becoming dense with depth. (Probable SHAFTESBURY SANDSTONE FORMATION - 'Ragstone'). 					
3.30 B				3.40 End of trial pit at 3.40 m depth.					
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.									

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP14		
Excavation date: 19/10/2016 Backfill date: 19/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting 6T Tracked		Shoring/support: None			
Survey details: Ground Level: 138.500 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 3.0 Face D		Face stability: No stability issues.		Groundwater observations: No groundwater encountered.	
Sampling & Testing Depth Type PID (ppm) S_u (kPa)				Stratum Details (Thk) & Depth Description Legend					
0.15 E				(0.30) Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).					
0.45 E				(0.30) Soft brown very sandy very gravelly CLAY. Gravel is fine to coarse subangular to angular sandstone. (Probable SUBSOIL).					
1.10 D				0.60 Loose to medium dense green very clayey very gravelly fine to medium SAND. Gravel is fine to coarse subangular to angular sandstone. Occasional angular sandstone cobbles from 3.0m. (Probable BOYNE HOLLOW CHERT MEMBER).					
2.50 D				(2.60)					
3.10 B				3.20 End of trial pit at 3.20 m depth.					
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.									

1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey.
2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm.
3. Backfilled with arisings upon completion.

EARTH SCIENCE PARTNERSHIP ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T Excavation date: 19/10/2016 Excavation method/plant: Trial Pitting Shoring/support: None Backfill date: 19/10/2016 Logged by: LD 6T Tracked			TP16		
Survey details: Ground Level: 140.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 3.3 Face D		Face stability: No stability issues.		Groundwater observations: No groundwater encountered.	
Sampling & Testing Depth Type PID (ppm) S_u (kPa)				Stratum Details (Thk) & Depth Description Legend					
0.20 E				(0.30) Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).					
0.50 E				0.30 Soft brown very sandy very gravelly CLAY. Gravel is fine to coarse subangular to angular sandstone. (Possible HEAD DEPOSITS).					
(0.70)									
1.30 D				1.00 Loose to medium dense green very clayey very gravelly fine to medium SAND. Gravel is fine to coarse subangular to angular sandstone. (Probable BOYNE HOLLOW CHERT MEMBER).					
(2.00)									
2.50 D									
3.30 B				3.00 Medium dense grey slightly clayey very sandy fine to coarse angular to subangular sandstone GRAVEL. Occasional angular sandstone cobbles from 3.0m. Becoming dense with depth. (Probable SHAFTESBURY SANDSTONE FORMATION - 'Ragstone')					
(0.50)									
3.50				3.50 End of trial pit at 3.50 m depth.					
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.									

1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey.
2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm.
3. Backfilled with arisings upon completion.

1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey.
2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm.
3. Backfilled with arisings upon completion.

• EARTH SCIENCE PARTNERSHIP • ESP				Site Location: Land off Victoria Road, Warminster Client: Persimmon Homes (Wessex) Ltd Project No: 6271T			TP19		
Excavation date: 19/10/2016 Backfill date: 19/10/2016 Logged by: LD				Excavation method/plant: Trial Pitting 6T Tracked		Shoring/support: None			
Survey details: Ground Level: 143.000 mOD Easting: 854000 m Northing: 447000 m Bearing: -				Plan details: 0.6 Face B Face A Face C 3.0 Face D		Face stability: No stability issues.		Groundwater observations: No groundwater encountered.	
Sampling & Testing				Stratum Details					
Depth	Type	PID (ppm)	S _u (kPa)	(Thk) & Depth	Description	Legend			
0.15	E			(0.30)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).				
0.45	E			0.30	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone and fine to coarse angular flint. (Probable BOYNE HOLLOW CHERT MEMBER)				
1.30	D			(1.60)					
2.00	D			1.90	Medium dense grey to light grey slightly clayey very sandy fine to coarse angular to subangular sandstone GRAVEL. Becoming dense with depth. (Probable SHAFTESBURY SANDSTONE FORMATION - 'Ragstone')				
2.70	B			(0.90)					
				2.80	End of trial pit at 2.80 m depth.				
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.									
Weather and environmental conditions: Clear and dry.									
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.									



Survey details:
Ground Level: 143.500 mOD
Easting: 854000 m
Northing: 447000 m
Bearing: -

Site Location: Land off Victoria Road, Warminster
Client: Persimmon Homes (Wessex) Ltd
Project No: 6271T

Excavation date: 19/10/2016	Excavation method/plant: Trial Pitting	Shoring/support: None
Backfill date: 19/10/2016	6T Tracked	
Logged by: LD		

Plan details:

Face A (Left), Face B (Top), Face C (Right), Face D (Bottom)

Width: 0.6

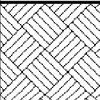
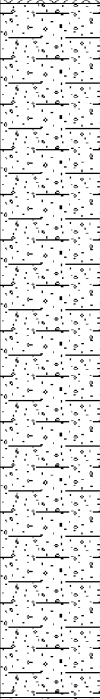
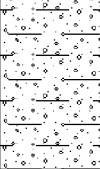
Height: 3.1

Face stability:

No stability issues.

TP20

Groundwater observations:
No groundwater encountered.

Sampling & Testing				Stratum Details		
Depth	Type	PID (ppm)	S _u (kPa)	(Thk) & Depth	Description	Legend
0.30	E			(0.35)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).	
0.55	E			0.35	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone and fine to coarse angular flint. (Probable BOYNE HOLLOW CHERT MEMBER)	
1.25	D			(2.45)		
2.90	D			2.80	Medium dense grey to light grey slightly clayey very sandy fine to coarse angular to subangular sandstone GRAVEL. Becoming dense with depth. (Probable SHAFTESBURY SANDSTONE FORMATION - 'Ragstone').	
3.20	B			(0.60)		
				3.40	End of trial pit at 3.40 m depth.	

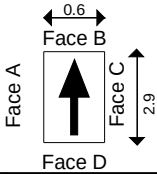
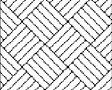
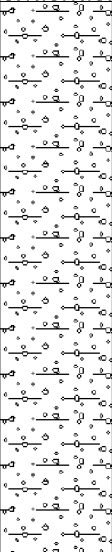
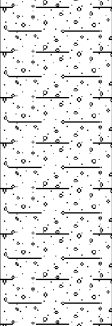
General notes:

1. All linear dimensions are in metres unless stated otherwise.
2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data.
3. Trial pit logged from the ground surface.

Weather and environmental conditions:
Clear and dry.

Other comments:

1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey.
2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm.
3. Backfilled with arisings upon completion.

	Site Location: Land off Victoria Road, Warminster		TP21			
	Client: Persimmon Homes (Wessex) Ltd					
	Project No: 6271T					
Survey details: Ground Level: 143.500 mOD Easting: 854000 m Northing: 447000 m Bearing: -	Excavation date: 19/10/2016		Excavation method/plant: Trial Pitting		Groundwater observations: No groundwater encountered.	
	Backfill date: 19/10/2016		Shoring/support: None			
	Logged by: LD		6T Tracked			
Plan details: 			Face stability: No stability issues.			
Sampling & Testing			Stratum Details			
Depth	Type	PID (ppm)	S_u (kPa)	(Thk) & Depth	Description	Legend
0.10	E			(0.35)	Soft dark brown to black slightly gravelly sandy CLAY with rootlets. Gravel is fine to coarse subangular sandstone. (TOPSOIL).	
0.35	E			0.35	Loose brown becoming green very clayey gravelly fine to coarse glauconitic SAND. Gravel is fine to coarse subangular to angular sandstone and fine to coarse angular flint. (Probable BOYNE HOLLOW CHERT MEMBER)	
1.00	D			(1.95)		
2.60	D			2.30	Medium dense grey to light grey slightly clayey very sandy fine to coarse angular to subangular sandstone GRAVEL. Becoming dense with depth. (Probable SHAFTESBURY SANDSTONE FORMATION - 'Ragstone').	
3.40	B			(1.20)		
				3.50	End of trial pit at 3.50 m depth.	
General notes: 1. All linear dimensions are in metres unless stated otherwise. 2. All relative density and shear strength descriptions are based only on field observations and available in-situ shear vane data. 3. Trial pit logged from the ground surface.						
Weather and environmental conditions: Clear and dry.						
Other comments: 1. Grid reference of centre of site only. Ground level approximate only interpolated from Topographical Survey. 2. Environmental samples 'E' consist of a plastic tub, amber glass jar and a vial. Environmental samples taken from the top 600mm. 3. Backfilled with arisings upon completion.						

Appendix D

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Warminster South

Site Location:

Warminster, Wiltshire

Client:

Persimmon Homes (Wessex)

Project No:

6271t.02

Drilling method

Equipment

GEO 032

Ground Level:

137.00 mOD

Easting:

385287 m

Northing:

144777 m

Start date:

27/07/2021

End date:

27/07/2021

Backfill date:

27/07/2021

Driller:

SGT

Logged by:

CD

Date logged:

27/07/2021

WS201

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/Standing	Depth		Backfill/Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.25	ES							Firm reddish brown sandy gravelly CLAY with low subangular to rounded cobble content. Gravel is fine to coarse subrounded of sandstone. Abundant gravel sized fragments of brick, metal and wood (MADE GROUND).			(0.60)		
0.50	D										0.60	136.40	
0.75	D							Brown slightly gravelly fine to coarse SAND with occasional angular sandstone cobbles. Gravel is fine to coarse angular of sandstone (BOYNE HOLLOW CHERT MEMBER).			(0.40)		
1.30	D		SPT-C	8 (3,2/2,2,2,2)				Loose becoming medium dense brown mottled green very clayey silty SAND with occasional angular sandstone cobbles (BOYNE HOLLOW CHERT MEMBER).			1.00	136.00	
1.90	D										(1.00)		
2.00 - 2.70	B		SPT-C	14 (15,14/4,3,4,3)				Medium dense becoming very dense green fine to medium glauconitic SAND (BOYNE HOLLOW CHERT MEMBER).			2.00	135.00	
											(0.80)		
			SPT-C	50 (15,9/50 for 255mm)				End of Borehole at 2.800m			2.80	134.20	
											3		
											4		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth

General Remarks

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.

2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.

3. 50mm gas and groundwater monitoring well installed with a response zone between 0.5 and 2.5 m depth.

4. Groundwater was not encountered.

[illegible]

Consulting Engineers | Geologists | Environmental Scientists

Client: Persimmon Homes
(Wessex)
Project No: 6271t.02

Ground Level:	137.00 mOD
Easting:	385250 m
Northing:	144710 m

Start date: 27/07/2021	Driller: SGT
End date: 27/07/2021	Logged by: CD
Backfill date: 27/07/2021	Date logged: 27/07/2021

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.
2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.
3. 50mm gas and groundwater monitoring well installed with a response zone between 0.5 and 2.0m depth.
4. Groundwater was not encountered during construction of the borehole.

Consulting Engineers | Geologists | Environmental Scientists

Client: Persimmon Homes
(Wessex)
Project No: 6271t.02

Ground Level:	137.00 mOD
Easting:	385292 m
Northing:	144739 m

Start date: 27/07/2021	Driller: SGT
End date: 27/07/2021	Logged by: CD
Backfill date: 27/07/2021	Date logged: 27/07/2021

[illegible]

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.
2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.
3. Borehole backfilled with arisings upon completion.
4. Groundwater was not encountered.

Consulting Engineers | Geologists | Environmental Scientists

Client: Persimmon Homes
(Wessex)
Project No: 6271t.02

Equipment
GEO 032

Ground Level:	137.00 mOD
Easting:	385278 m
Northing:	144690 m

Start date: 27/07/2021	Driller: SGT
End date: 27/07/2021	Logged by: CD
Backfill date: 27/07/2021	Date logged: 27/07/2021

[illegible]

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.
2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.
3. Borehole backfilled with arisings upon completion.
4. Groundwater was not encountered.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Warminster South

Site Location:

Warminster, Wiltshire

Client:

Persimmon Homes (Wessex)

Project No:

6271t.02

Drilling method

Equipment

GEO 032

Ground Level:

137.00 mOD

Easting:

385321 m

Northing:

144698 m

Start date:

28/07/2021

End date:

28/07/2021

Backfill date:

28/07/2021

Driller:

SGT

Logged by:

CD

Date logged:

28/07/2021

WS205

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.30	ES							Concrete (MADE GROUND).			(0.20)		
								Brown gravelly clayey SAND. Gravel is fine to coarse subangular to angular of sandstone (BOYNE HOLLOW CHERT MEMBER).			0.20	136.80	
0.60	D							Dense becoming very dense light grey gravelly fine to coarse SAND. Gravel is fine to coarse angular of light grey sandstone (SHAFTESBURY SANDSTONE MEMBER).			(0.20)		
											0.40	136.60	
1.00	D										(0.80)		
			SPT-C	50 (4,6/50 for 105mm)				End of Borehole at 1.200m			1		
											1.20	135.80	
											2		
											3		
											4		

Progress & Standing Water Levels					Water Strikes						Chiselling			Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth

General Remarks

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.

2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.

3. Borehole backfilled with arisings upon completion.

4. Groundwater was not encountered.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Warminster South

Site Location:

Warminster, Wiltshire

Client:

Persimmon Homes (Wessex)

Project No:

6271t.02

Drilling method

Equipment

GEO 032

Ground Level:

137.00 mOD

Easting:

385352 m

Northing:

144724 m

Start date:

28/07/2021

End date:

28/07/2021

Backfill date:

28/07/2021

Driller:

SGT

Logged by:

CD

Date logged:

28/07/2021

WS206

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/Standing	Depth		Backfill/Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.55	ES							Concrete (MADE GROUND).			(0.20)	136.80	
								Firm reddish brown mottled grey sandy gravelly CLAY. Gravel is fine to coarse angular of sandstone (BOYNE HOLLOW CHERT MEMBER).			0.20		
1.20 1.20 - 1.65 1.40 - 2.00 1.60	D ES B D		SPT	21 (5,5/5,5,4,7)				Medium dense brown mottled green fine to medium glauconitic SAND (BOYNE HOLLOW CHERT MEMBER).			0.70	136.10	
											0.90		
											1		
			SPT	50 (5,6/50 for 265mm)				Medium dense becoming very dense green fine to coarse glauconitic SAND with occasional angular sandstone cobble (BOYNE HOLLOW CHERT MEMBER).			(0.50)	135.60	
								End of Borehole at 2.000m			(0.60)	135.00	
											2.00		
											3		
											4		

Progress & Standing Water Levels					Water Strikes						Chiselling			Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth

General Remarks

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.

2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.

3. 50mm gas and groundwater monitoring well installed with a response zone between 0.5 and 2.0m depth.

4. Groundwater was not encountered during construction of the borehole.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Warminster South

Site Location:

Warminster, Wiltshire

Client:

Persimmon Homes (Wessex)

Project No:

6271t.02

Drilling method

Equipment

GEO 032

Ground Level:

137.00 mOD

Easting:

385350 m

Northing:

144672 m

Start date:

28/07/2021

End date:

28/07/2021

Backfill date:

28/07/2021

Driller:

SGT

Logged by:

CD

Date logged:

28/07/2021

WS207

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/Standing	Depth		Backfill/Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.55	ES							Concrete (MADE GROUND).			(0.25)	136.75	
								Firm dark grey mottled brown sandy gravelly CLAY. Gravel is fine to coarse angular to subangular of sandstone. Abundant brick, metal and wood. Possible Asbestos containing material identified in the form of concrete tiles (MADE GROUND).			0.25		
1.00	D							Firm to stiff brown mottled green very sandy silty CLAY (BOYNE HOLLOW CHERT MEMBER).			0.85	136.15	
1.00	ES										(0.35)		
1.20 - 1.95	B		SPT	10 (2,1/2,2,3,3)							1.20	135.80	
1.50	D							Medium dense becoming very dense green gravelly clayey fine to coarse glauconitic SAND with occasional light grey angular sandstone cobbles. Gravel is fine to coarse angular of sandstone (BOYNE HOLLOW CHERT MEMBER).			(1.30)		
			SPT	38 (8,8/10,9,8,11)							2		
			SPT	50 (11,10/50 for 180mm)				End of Borehole at 2.500m			2.50	134.50	
											3		
											4		

Progress & Standing Water Levels					Water Strikes					Chiselling			Hole Diameter		Casing Diameter			
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth

General Remarks

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.

2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.

3. 50mm gas and groundwater monitoring well installed with a response zone between 0.5 and 2.5m depth.

4. Groundwater was not encountered during construction of the borehole.

Consulting Engineers | Geologists | Environmental Scientists

Client: Persimmon Homes
(Wessex)
Project No: 6271t.02

Ground Level:	137.00 mOD
Easting:	385379 m
Northing:	144691 m

Start date: 28/07/2021	Driller: SGT
End date: 28/07/2021	Logged by: CD
Backfill date: 28/07/2021	Date logged: 28/07/2021

[illegible]

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.
2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.
3. 50mm gas and groundwater monitoring well installed with a response zone between 0.5 and 3.0m depth.
4. Groundwater was not encountered during construction of the borehole.

Earth Science Partnership Consulting Engineers Geologists Environmental Scientists				Excavation method/plant: Hand Tools		Shoring/support: None		HDP01		
Project Name: Warminster South				Excavation date: 28/07/2021						
Site Location: Warminster, Wiltshire				Backfill date: 28/07/2021						
Client: Persimmon Homes				Logged by: CD						
Project No: 6271t.02				Plan details: Face A Face B Face C		Face Stability: Stable			Groundwater observations: No Groundwater	
Survey details: Ground Level: 137.0 mOD Easting: 385332 mOD Northing: 144645 mOD Bearing:										
Depth		Sample		Test Details		Strata Details				
m	Type	Class	Type	Result	Description	Depth (thickness)	mOD	Legend		
0.30	ES				Soft to firm brown slightly sandy gravelly SILT (TOPSOIL).	(0.30)	136.70			
					End of Trialpit at 0.300m	0.30				
						1.0				

Weather and environmental conditions:

1. Intermittent Rain

Other comments:

1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.

2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.

3. Trial pit constructed with hand tools and backfilled with arisings upon completion.

4. Groundwater was not encountered.

Earth Science Partnership Consulting Engineers Geologists Environmental Scientists				Excavation method/plant: Hand Tools		Shoring/support: None		HDP02		
Project Name: Warminster South			Excavation date: 28/07/2021			Groundwater observations: No Groundwater				
Site Location: Warminster, Wiltshire			Backfill date: 28/07/2021							
Client: Persimmon Homes			Logged by: CD							
Project No: 6271t.02			Plan details: Face A Face B Face C							
Survey details: Ground Level: 137.0 mOD Easting: 385305 mOD Northing: 144672 mOD Bearing:			Face Stability: Stable							
Depth m		Sample Type Class		Test Details Type Result		Strata Details				
						Description		Depth (thickness)	mOD	Legend
0.40		ES				Soft to firm brown slightly sandy gravelly CLAY. Gravel is fine to coarse angular of sandstone. Rare glass fragments (Probably reworked natural material - MADE GROUND).		(0.35)	136.65	
						Brown mottled green glauconitic SAND (Probably reworked natural material - MADE GROUND).		0.35		
								(0.25)		
						End of Trialpit at 0.600m		0.60	136.40	
								1.0		
Weather and environmental conditions: 1. Intermittent Rain										
Other comments: 1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only. 2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground. 3. Trial pit constructed with hand tools and backfilled with arisings upon completion. 4. Groundwater was not encountered.										

Earth Science Partnership Consulting Engineers Geologists Environmental Scientists				Excavation method/plant: Hand Tools		Shoring/support: None		HDP03	
Project Name: Warminster South			Excavation date: 28/07/2021			Groundwater observations: No Groundwater			
Site Location: Warminster, Wiltshire Persimmon Homes			Backfill date: 28/07/2021						
Client: (Wessex)			Logged by: CD						
Project No: 6271t.02			Plan details: Face A Face B Face C						
Face Stability: Stable									
Survey details: Ground Level: 137.0 mOD Easting: 385289 mOD Northing: 144668 mOD Bearing:									
Depth		Sample		Test Details		Strata Details			
m	Type	Class	Type	Result	Description	Depth (thickness)	mOD	Legend	
0.35	ES				Soft to firm brown mottled black sandy gravelly CLAY. Occasional plastic and wood (Probably reworked natural material - MADE GROUND).	(0.50)	136.50		
					End of Trialpit at 0.500m	0.50			
						1.0			
Weather and environmental conditions:									
1. Intermittent Rain									
Other comments:									
1. Coordinates and ground level obtained from Garmin Etrex20 handheld GPS and should be considered approximate only.									
2. Service plans inspected and position scanned with a cable avoidance tool prior to breaking ground.									
3. Trial pit constructed with hand tools and backfilled with arisings upon completion.									
4. Groundwater was not encountered.									

Appendix E

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
139.00 mOD

Easting:
385357 m

Northing:
144676 m

Start date:
04/06/2024

End date:
04/06/2024

Backfill date:
04/06/2024

Driller:
SGT - NJ/EA

Logged by:
NS

Date logged:
04/06/2024

WS01

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.20 0.30	ES ES							Light grey CONCRETE over a thin bed of medium to coarse angular light grey siltstone GRAVEL. (MADE GROUND)			(0.25)	138.75	
0.60	ES							Black and dark green loose slightly gravelly silty SAND. Gravel of medium to fine sub-angular glauconitic sandstone. Strong hydrocarbon odour. (Interpreted as Grade E UPPER GREENSAND FORMATION - Potentially Contaminated)			(1.05)		
1.00	D		SPT	10 (2,2/3,2,2,3)							1		
2.00	D		SPT	14 (1,2/2,3,4,5)	100			Dark green mottled brown becoming green medium loose slightly gravelly silty SAND. Gravel of medium to fine sub-angular glauconitic sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			1.30 (1.20)	137.70	
2.50 - 2.70	D				100			At 1.75 - 1.8m depth: Thin bed of light green slightly sandy silty/clayey medium to coarse sub-angular glauconitic sandstone GRAVEL.			2		
2.90 - 3.00	D		SPT	50 (2,15/50 for 150mm)				Very strong to strong light green glauconitic fine- to medium-grained SANDSTONE. (Grade A UPPER GREENSAND FORMATION)			2.50 (0.20)	136.50	
								Recovered as: Slightly sandy medium to coarse angular to sub-angular GRAVEL.			2.70 (0.30)	136.30	
								Green slightly gravelly silty SAND. Gravel of medium to fine sub-angular glauconitic sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			3.00	136.00	
								End of Borehole at 3.000m					
											4		
											5		
											6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00 3.00	86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. No groundwater encountered.

4. BH refused at 3.0m depth on probable bedrock. (See SPT-3.0m results)

5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 0.5 and 3.0m depth.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
137.50 mOD

Easting:
385342 m

Northing:
144629 m

Start date:
04/06/2024

End date:
04/06/2024

Backfill date:
04/06/2024

Driller:
SGT - NJ/EA

Logged by:
NS

Date logged:
04/06/2024

WS02

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.30	ES							Grass over soft brown gravelly very sandy silty CLAY with frequent fine rootlets and occasional medium roots . Fine to coarse angular gravel of white and pale green glauconitic sandstone. (TOPSOIL)			(0.40)		
0.60	ES							Very soft to soft brown sandy gravelly silty CLAY. Gravel of fine to coarse sub-rounded to sub-angular glauconitic sandstone. (Possible ALLUVIUM)			0.40	137.10	
1.00	D										(1.05)		
1.20 - 1.40	D		SPT	3 (0,0/0,1,1,1)									
1.60 - 1.70	D				100			Very soft to soft grey mottled orange-brown sandy gravelly silty CLAY with medium organic content. Gravel of fine to coarse sub-rounded to sub-angular glauconitic sandstone. Organic content is soft to firm brown pseudo-fibrous plant fragments up to 20mm length and 10mm width. (Possible ALLUVIUM)			1.45	136.05	
2.00 - 2.45	SPT		SPT	6 (1,1/1,2,1,2)				At 1.9 to 2.0m depth: Thin bed of coarse sub-rounded sandstone GRAVEL.			(0.55)		
2.20 - 2.30	D							Very soft grey mottled black slightly gravelly organic CLAY. Gravel is fine to medium rounded sandstone. (Possible ALLUVIUM)			2.00	135.50	
2.90 - 3.00	D				100			Soft grey slightly sandy CLAY. (Possible ALLUVIUM)			(0.50)		
3.00 - 3.30	SPT		SPT	14 (3,2/3,2,4,5)				Soft grey gravelly very sandy CLAY with pockets of green medium dense fine to medium sand. Gravel of fine to medium sub angular glauconitic sandstone and chert. (Grade E UPPER GREENSAND FORMATION)			2.50	135.00	
								End of Borehole at 3.000m			(0.30)	134.70	
											(0.20)	134.50	
											3.00		
											4		
											5		
											6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00 3.00	86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. No groundwater encountered.

4. Borehole terminated at 3.0m depth for well installation.

5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.0 and 3.0m depth.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
135.00 mOD

Easting:
385498 m

Northing:
144653 m

Start date:
06/06/2024

End date:
06/06/2024

Backfill date:
06/06/2024

Driller:
SGT - NJ/EA

Logged by:
AC

Date logged:
06/06/2024

WS03

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Install- ations	
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD		
0.30	ES				100			Soft dark brown sandy gravelly CLAY with occasional rootlets up to 4cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (TOPSOIL)			(0.55)			
0.60	ES							Soft light brown slightly sandy gravelly CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Possible ALLUVIUM)			0.55	134.45		
1.00	ES		SPT	6 (0,0/1,1,2,2)	50			AZCL [Assessed Zone of Core Loss] (Possible ALLUVIUM)			1.00	134.00		
1.50	D							Soft dark brown sandy gravelly CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Possible ALLUVIUM)			1.50	133.50		
1.80	ES		SPT	2 (0,0/0,0,1,1)	100			Very soft light brown slightly sandy gravelly CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Possible ALLUVIUM)			1.70	133.30		
2.50	D							Very loose brown mottled light brown slightly gravelly fine to coarse SAND. Gravel is sub angular to sub rounded fine to medium sandstone. (Probable Grade E UPPER GREENSAND FORMATION)			2.45	132.55		
			SPT	7 (2,4/3,2,1,1)	50			AZCL [Assessed Zone of Core Loss] (Probable Grade E UPPER GREENSAND FORMATION) From 3.00m depth: Becomes medium dense.			3.00	132.00		
3.60	D							Loose becoming medium dense with depth brown mottled light brown slightly gravelly fine to coarse SAND. Gravel is sub angular to sub rounded fine to medium sandstone. (Probable Grade E UPPER GREENSAND FORMATION)			3.50	131.50		
3.60	ES		SPT	12 (1,2/2,3,3,4)	100						4.60	130.40		
4.50	D							Medium dense dark greyish green slightly gravelly fine to coarse SAND. Gravel is sub angular to sub rounded fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION) End of Borehole at 4.900m			4.90	130.10		
			SPT	50 (25 for 75mm/50 for 150mm)							5			
											6			

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					06/06/2024	12:00	3.00		60.00	0.00					2.00 3.00 4.00 4.90	86 86 86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. Medium groundwater inflow encountered at 3.00m.

4. A 50mm diameter gas monitoring well installed upon completion with a response zone between 1.00m and 4.90m.

5. Borehole terminated early due to very dense / very stiff ground conditions.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
136.00 mOD

Easting:
385454 m

Northing:
144731 m

Start date:
06/06/2024

End date:
06/06/2024

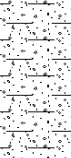
Backfill date:
06/06/2024

Driller:
SGT - NJ/EA

Logged by:
AC

Date logged:
06/06/2024

WS04

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.30	ES							Grass over soft dark brown slightly sandy gravelly CLAY with occasional rootlets up to 6cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine. (TOPSOIL)			(0.40)		
0.60	ES							Soft light brown sandy gravelly CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Probable Grade E UPPER GREENSAND FORMATION)			0.40	135.60	
1.00	ES		SPT	7 (3,5/2,2,1,2)							(1.1q)		
1.60	D				100			Loose dark green silty fine to coarse SAND. (Interpreted as Grade E UPPER GREENSAND FORMATION)			1.50	134.50	
			SPT	25 (2,2/7,6,6,6)				Medium dense light green mottled light grey clayey gravelly fine to coarse SAND. Gravel is sub angular fine to coarse sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			(0.35)	134.15	
2.50	D				100						1.85		
2.60	ES										2		
			SPT	45 (10,14/13,10,10,12)							(1.15)		
								End of Borehole at 3.000m			3.00	133.00	
											4		
											5		
											6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00 3.00	86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. No groundwater encountered.

4. A 50mm diameter gas monitoring well installed upon completion with a response zone between 1.00m and 3.00m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
136.00 mOD

Easting:
385566 m

Northing:
144725 m

Start date:
06/06/2024

End date:
06/06/2024

Backfill date:
06/06/2024

Driller:
SGT - NJ/EA

Logged by:
AC

Date logged:
06/06/2024

WS05

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.20	ES							Grass over soft dark brown slightly sandy gravelly CLAY with occasional rootlets up to 6cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine. (TOPSOIL)			(0.50)		
0.60	ES							Very soft light brown sandy gravelly CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Possible ALLUVIUM)			0.50	135.50	
1.00	ES		SPT	4 (1,1/1,1,1,1)							(1.10)		
1.60	ES				100						1.60 (0.30)	134.40	
2.10	D		SPT	5 (1,1/0,1,2,2)	100			Soft light brown mottled greyish green sandy gravelly CLAY. Gravel is sub angular to sub rounded fine to coarse sandstone. Sand is fine to coarse. (Interpreted as Grade E UPPER GREENSAND FORMATION)			1.90 2 (0.40)	134.10	
								Loose light greyish green very gravelly fine to coarse SAND. Gravel is sub angular to sub rounded fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			2.30	133.70	
			SPT	50 (25 for 75mm/50 for 150mm)				End of Borehole at 2.300m					
											3		
											4		
											5		
											6		

Progress & Standing Water Levels					Water Strikes						Chiselling			Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					06/06/2024	12:00	2.10		60.00	2.00					2.00 2.30	86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. Medium inflow groundwater encountered at 2.10m. 4. Upon completion boreholes backfilled with arising.

5. Borehole terminated early due to very dense / very stiff ground conditions.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
139.00 mOD

Easting:
385211 m

Northing:
144676 m

Start date:
05/06/2024

End date:
05/06/2024

Backfill date:
05/06/2024

Driller:
SGT - NJ/EA

Logged by:
AC

Date logged:
05/06/2024

WS06

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.30	ES							Grass over soft dark brown slightly sandy gravelly CLAY with occasional rootlets up to 10cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine. (TOPSOIL)			(0.45)		
0.60	ES							Firm light brown sandy gravelly CLAY with low cobble content. Gravel is sub angular fine to coarse sandstone. Cobbles are sub rounded sandstone. Sand is fine to coarse. (Interpreted as Grade E UPPER GREENSAND FORMATION)			0.45	138.55	
1.00	ES		SPT	7 (1,2/1,2,2,2)				Soft light brown slightly gravelly sandy CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Interpreted as Grade E UPPER GREENSAND FORMATION)			(0.75)		
1.80	D		SPT	3 (0,1/0,1,1,1)	100			Very soft light brown mottled brown very sandy CLAY with occasional lenses of gravel. Gravel is sub rounded fine to medium sandstone. Sand is fine to coarse. (Interpreted as Grade E UPPER GREENSAND FORMATION)			1	137.80	
2.20	ES		SPT	16 (1,1/2,5,4,5)	100			End of Borehole at 3.000m			(0.30)	137.50	
											1.20		
											1.50		
											2		
											(1.50)		
											3.00	136.00	
											4		
											5		
											6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00 3.00	86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. No groundwater encountered.

4. Upon completion boreholes backfilled with arising.

Earth Science Partnership Consulting Engineers Geologists Environmental Scientists					Project Name: Proposed Residential Development Site Location: Bugley Farm, Warminster Client: Keepmoat Homes Ltd Project No: 8917			Drilling method Windowless Sampler Equipment Dando Terrier MK1 Ground Level: 138.00 mOD Easting: 385230 m Northing: 144637 m			WS07							
Start date: 05/06/2024		Driller: SGT - NJ/EA		Client: Keepmoat Homes Ltd		Ground Level: 138.00 mOD		Easting: 385230 m		Northing: 144637 m								
End date: 05/06/2024		Logged by: AC		Project No: 8917														
Backfill date: 05/06/2024		Date logged: 05/06/2024																
Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations					
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD						
0.20	ES							Grass over soft dark brown slightly sandy gravelly CLAY with occasional rootlets up to 10cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine. (TOPSOIL)			(0.40)							
0.50	ES							Firm light brown slightly sandy gravelly CLAY with low cobble content. Gravel is sub angular fine to coarse sandstone. Cobbles are sub rounded sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			0.40	137.60						
1.00	ES		SPT	6 (1,2/1,2,1,2)				Soft light brown sandy gravelly CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			(0.80)							
1.80	D		SPT	1 (0,0/0,0,0,1)	100			AZCL [Assessed Zone of Core Loss] (Possible Grade E UPPER GREENSAND FORMATION)			1.20	136.80						
2.60	D							Very soft light brown slightly gravelly very sandy CLAY. Gravel is sub rounded fine to medium sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			(0.80)							
2.90	ES		SPT	18 (3,5/4,5,4,5)	60			End of Borehole at 3.000m			2.00	136.00						
											(0.40)	135.60						
											(0.60)	135.00						
											3.00							
											4							
											5							
											6							
Progress & Standing Water Levels					Water Strikes						Chiselling			Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00	86		
															3.00	76		
General Remarks																		
1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.																		
2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.																		
3. No groundwater encountered.																		
4. Upon completion boreholes backfilled with arising.																		

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
136.00 mOD

Easting:
385247 m

Northing:
144586 m

Start date:
05/06/2024

End date:
05/06/2024

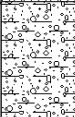
Backfill date:
05/06/2024

Driller:
SGT - NJ/EA

Logged by:
AC

Date logged:
05/06/2024

WS08

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.20	ES							Grass over soft dark brown slightly sandy gravelly CLAY with occasional rootlets up to 10cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine. (TOPSOIL)			(0.40)		
0.60	ES							Soft light brown sandy gravelly CLAY with low cobble content. Gravel is sub angular fine to coarse sandstone. Cobbles are sub rounded sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			0.40	135.60	
1.00	ES		SPT	5 (1,2/2,1,1,1)				Soft light brown slightly gravelly sandy CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			(0.80)		
					100			Very soft light brown mottled brown very sandy CLAY with occasional lenses of gravel. Gravel is sub rounded fine to medium sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			1.20	134.80	
2.00	ES		SPT	3 (1,0/1,0,1,1)							(0.40)	134.40	
					80						2		
											(1.10)		
2.80	D		SPT	11 (2,2/2,2,3,4)				Firm light brown mottled brown very sandy CLAY with occasional lenses of gravel. Gravel is sub rounded fine to medium sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			2.70	133.30	
								End of Borehole at 3.00m			(0.30)	133.00	
											3.00		
											4		
											5		
											6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00 3.00	86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. No groundwater encountered.

4. A 50mm diameter gas monitoring well installed upon completion with a response zone between 1.00m and 3.00m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
139.00 mOD

Easting:
385158 m

Northing:
144637 m

Start date:
05/06/2024

End date:
05/06/2024

Backfill date:
05/06/2024

Driller:
SGT - NJ/EA

Logged by:
AC

Date logged:
05/06/2024

WS09

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Install- ations	
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD		
0.30	ES							Grass over soft dark brown sandy CLAY with occasional rootlets up to 5cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine.			(0.40)			
0.60	ES							(TOPSOIL)			0.40	138.60		
1.00	ES		SPT	6 (2,2/2,1,1,2)				Firm light brown sandy gravelly CLAY with low cobble content. Gravel is sub angular fine to coarse sandstone. Cobbles are sub rounded sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			(0.80)			
					100			Loose light greyish green silty gravelly fine to coarse SAND. Gravel is sub angular fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			1.20	137.80		
2.00	D		SPT	17 (1,2/2,4,5,6)				From 1.60m to 1.70m depth: Lense of silty sandy sub angular fine to coarse GRAVEL of sandstone.			(0.60)			
					100			Stiff dark greyish green slightly gravelly very sandy CLAY. Gravel is sub angular fine to medium sandstone. Sand is fine to coarse. (Interpreted as Grade E UPPER GREENSAND FORMATION)			1.80	137.20		
			SPT	50 (25 for 75mm/50 for 150mm)				Medium dense light greyish green silty gravelly fine to coarse SAND. Gravel is sub angular fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			2			
								End of Borehole at 2.600m			(0.55)	2.35	136.65	
											(0.25)	2.60	136.40	
												3		
												4		
												5		
												6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00	86		
															2.60	76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. No groundwater encountered.

4. A 50mm diameter gas monitoring well installed upon completion with a response zone between 0.50m and 2.60m.

5. Borehole terminated early due to very dense / very stiff ground conditions.

Earth Science Partnership Consulting Engineers Geologists Environmental Scientists						Project Name: Proposed Residential Development Site Location: Bugley Farm, Warminster Client: Keepmoat Homes Ltd Project No: 8917			Drilling method Windowless Sampler Equipment Dando Terrier MK1 Ground Level: 137.00 mOD Easting: 385174 m Northing: 144570 m			WS10						
Start date: 05/06/2024		Driller: SGT - NJ/EA																
End date: 05/06/2024		Logged by: AC																
Backfill date: 05/06/2024		Date logged: 05/06/2024																
Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations					
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD						
0.20	ES							Grass over firm dark brown slightly sandy gravelly CLAY with occasional rootlets up to 8cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine. (TOPSOIL)			(0.35) 0.35	136.65						
0.60	ES						Firm light brown sandy gravelly CLAY with low cobble content. Gravel is sub angular fine to coarse sandstone. Cobbles are sub rounded sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			(0.85) 1								
1.00	ES		SPT	7 (1,1/1,2,2,2)			Soft light brown mottled light green slightly gravelly very sandy CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			1.20 (0.20) 1.40	135.80 135.60							
1.50	D				100		Loose dark greyish green mottled dark orangish brown clayey gravelly fine to coarse SAND. Gravel is sub angular fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			2 (1.35)								
2.50	ES		SPT	9 (4,3/2,2,3,2)		100												
2.80	D						Light greyish green mottled grey slightly clayey slightly gravelly fine to coarse SAND. Gravel is sub angular fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION) End of Borehole at 2.900m			2.75 (0.15) 2.90	134.25 134.10							
Progress & Standing Water Levels					Water Strikes					Chiselling			Hole Diameter		Casing Diameter			
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00 2.90	86 76		
General Remarks																		
1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works. 2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth. 3. No groundwater encountered. 4.Upon completion boreholes backfilled with arising. 5. Borehole terminated early due to very dense / very stiff ground conditions.																		

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
137.00 mOD

Eastings:
385055 m

Northing:
144515 m

Start date:
05/06/2024

End date:
05/06/2024

Backfill date:
05/06/2024

Driller:
SGT - NJ/EA

Logged by:
AC

Date logged:
05/06/2024

WS11

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations	
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD		
0.20	ES							Grass over soft dark brown slightly sandy gravelly CLAY with occasional rootlets up to 9cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine. (TOPSOIL)			(0.40)			
0.60	ES							Firm light brown slightly sandy gravelly CLAY with low cobble content. Gravel is sub angular fine to coarse sandstone. Cobbles are sub rounded sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			0.40	136.60		
1.00	ES		SPT	6 (2,2/2,1,2,1)				Light greyish green silty gravelly fine to coarse SAND. Gravel is sub angular fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			(0.70)			
1.70	D				100			Loose light greyish green clayey gravelly fine to coarse SAND. Gravel is sub angular fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			1 1.10 1.20	135.90 135.80		
2.50	D		SPT	10 (1,0/2,4,2,2)				Loose to medium dense light greyish green mottled grey slightly clayey very sandy sub angular fine to coarse GRAVEL of sandstone. Sand is fine to coarse. (Interpreted as Grade E UPPER GREENSAND FORMATION)			(0.70)			
			SPT	50 (12,12/50 for 150mm)	100			End of Borehole at 2.700m			1.90 2	135.10		
											(0.80)			
											2.70	134.30		
											3			
											4			
											5			
											6			

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00 2.70	86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. No groundwater encountered. 4. Upon completion boreholes backfilled with arising.

5. Borehole terminated early due to very dense / very stiff ground conditions.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Windowless Sampler

Equipment
Dando Terrier MK1

Ground Level:
136.00 mOD

Easting:
385075 m

Northing:
144469 m

Start date:
05/06/2024

End date:
05/06/2024

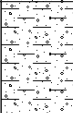
Backfill date:
05/06/2024

Driller:
SGT - NJ/EA

Logged by:
AC

Date logged:
05/06/2024

WS12

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.10	ES							Grass over soft dark brown slightly sandy gravelly CLAY with occasional rootlets up to 10cm long. Gravel is sub angular fine to coarse sandstone. Sand is fine. (TOPSOIL)			(0.40)		
0.60	ES							Soft to firm light brown slightly sandy gravelly CLAY with low cobble content. Gravel is sub angular fine to coarse sandstone. Cobbles are sub rounded sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			0.40	135.60	
1.00	ES		SPT	5 (1,1/1,1,2,1)				Soft light brown sandy gravelly CLAY. Gravel is sub angular fine to coarse sandstone. Sand is fine to coarse. (Possible Grade E UPPER GREENSAND FORMATION)			(0.80)		
					100						1	134.80	
2.10	ES		SPT	18 (2,2/4,5,4,5)							(1.30)		
2.50	D				90			Medium dense dark greyish green slightly clayey slightly gravelly fine to coarse SAND. Gravel is sub rounded fine to medium sandstone. (Interpreted as Grade E UPPER GREENSAND FORMATION)			2.50	133.50	
2.80	D		SPT	50 (8,15/50 for 150mm)				End of Borehole at 3.000m			(0.50)		
											3.00	133.00	
											4		
											5		
											6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
															2.00 3.00	86 76		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. No groundwater encountered.

4. A 50mm diameter gas monitoring well installed upon completion with a response zone between 1.00m and 3.00m.

Appendix F

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Cable Percussive Drilling

Equipment
Dando 2500 Cable Percussive Rig

Ground Level:
139.50 mOD

Easting:
385257 m

Northing:
144717 m

Start date:
29/05/2024

End date:
29/05/2024

Backfill date:
29/05/2024

Driller:
Jackson Drilling - AR/LP

Logged by:
NS

Date logged:
29/05/2024

CP01

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Install- ations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.30 0.30 0.50 0.50	B ES B ES							Grass over soft loose black slightly fine angular gravelly sandy CLAY with frequent rootlets. (TOPSOIL)			(0.10) 0.10 (0.50) 0.60	139.40	
1.00 1.20 1.20 - 1.70 1.20 - 1.70	D B D SPT		SPT	9 (1,1/2,1,3,3)				Soft slightly dense dark brown mottled brown sandy fine to coarse angular gravelly CLAY with medium angular cobble content and rare thin rootlets. Gravel and cobbles of white and green sandstone and occasional blue-grey siltstone, brick and concrete fragments. (MADE GROUND)			1	138.90	
2.00 2.00 - 2.50 2.00 - 2.50	B D SPT		SPT	27 (8,8/5,4,8,10)		1.70		Green loose becoming dense slightly gravelly silty fine to medium glauconitic SAND. Fine to medium gravel of sub-angular white sandstone. (Interpreted Grade E UPPER GREENSAND FORMATION) Visible lithorelics of extremely weak extremely weathered white/red/green/dark green sandstone and mudstone, presents as sand.			(2.60) 2		
3.00 3.00 - 3.40 3.00 - 3.40 3.40 - 3.50	B D SPT B		SPT SPT-C	50 (8,10/50 for 120mm) 50 (25 for 20mm/50 for 30mm)		3.00 3.00		Strong to very strong light green glauconitic fine- to medium-grained SANDSTONE. (Grade A UPPER GREENSAND FORMATION) Recovered as: Small sub-angular cobbles and coarse angular to sub angular gravel.			3 3.20 (0.30) 3.50	136.30 136.00	
								End of Borehole at 3.500m			4 5 6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
												3.50	3.50	00:30	3.50	150	150	3.00

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.
2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
3. No groundwater encountered.
4. BH refused at 3.4m depth on probable bedrock.
5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.0 and 3.4m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential
Development
Site Location:
Bugley Farm, Warminster

Drilling method
Cable Percussive Drilling

Equipment
Dando 2500 Cable Percussive Rig

Ground Level: 139.20 mOD

Easting: 385363 m

Northing: 144680 m

CP02

Start date: 29/05/2024

Driller: Jackson Drilling - AR/LP

End date: 29/05/2024

Logged by: NS

Backfill date: 29/05/2024

Date logged: 29/05/2024

Client:
Keepmoat Homes Ltd

Project No:
8917

[illegible][illegible]

General Remarks

- Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.
- Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
- No groundwater encountered.
- BH refused at 3.4m depth on probable bedrock.
- 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.0 and 3.5m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential
Development
Site Location:
Bugley Farm, Warminster

Drilling method
Cable Percussive Drilling

Equipment
Dando 2500 Cable Percussive Rig

Ground Level: 137.00 mOD

Easting: 385298 m

Northing: 144629 m

CP03

Start date: 30/05/2024

Driller: Jackson Drilling - AR/LP

End date: 30/05/2024

Logged by: NS

Backfill date: 30/05/2024

Date logged: 30/05/2024

Client:

Keepmoat Homes Ltd

Project No:

8917

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.20	ES							Grass over soft brown gravelly very sandy silty CLAY with frequent fine rootlets and occassional medium roots . Fine to coarse angular gravel of white and pale green glauconitic sandstone. (TOPSOIL)					
0.50	ES										(1.00)		
1.00	D							Very soft brown mottled orange-brown slightly gravelly sandy CLAY with low cobble content. Fine to medium sub-angular gravel and cobbles of glauconitic sandstone and weak green sandstone. Occassional fine to medium sub-rounded gravel of chert. (Interpreted Grade E UPPER GREENSAND FORMATION)			1.00	136.00	
1.20 - 1.70	B		SPT	4 (1,1/1,1,1,1)							(1.00)		
1.20 - 1.70	D												
2.00 - 2.50	B		SPT-C	4 (1,1/1,1,1,1)		1.5	1.70	Very soft light brown gravelly very sandy CLAY. Gravel of fine to medium sub-angular glauconitic sandstone. (Interpreted Grade E UPPER GREENSAND FORMATION)			2.00	135.00	
2.00 - 2.50	D										(0.50)		
								Very soft to soft light brown mottled green gravelly very sandy silty CLAY. Gravel of fine to medium sub-angular glauconitic sandstone. (Interpreted Grade E UPPER GREENSAND FORMATION)			2.50	134.50	
3.00	SPT		SPT	12 (2,3/2,3,3,4)		1.5	3.00				3		
											(1.50)		
3.50 - 4.00	B												
3.50 - 4.00	D												
4.00 - 4.50	B		SPT-C	14 (2,3/3,3,4,4)		1.5	4.00	Green medium dense slightly fine angular gravelly silty/clayey fine to medium SAND. (Interpreted Grade D UPPER GREENSAND FORMATION)			4.00	133.00	
4.00 - 4.50	D												
5.00 - 5.50	B		SPT-C	16 (3,3/4,4,4,4)		1.5	4.50				(1.90)		
5.00 - 5.50	D												
6.00	B		SPT-C	50 (25 for 75mm/50 for		1.4	5.90	Strong to very strong pale green glauconitic			5.90	131.10	
											(0.10)	131.00	

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					30/05/2024	12:00	1.70	1.20	20.00	1.40		5.90	6.00	00:30	6.00	150	150	6.00

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.
2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
3. Groundwater strike at 1.7m depth, rising to 1.4m after 20 minutes.
4. BH refused at 6.0m depth on probable bedrock.
5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.5 and 6.0m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Proposed Residential Development

Site Location:

Bugley Farm, Warminster

Client:

Keepmoat Homes Ltd

Project No:

8917

Drilling method

Cable Percussive Drilling

Equipment

Dando 2500 Cable Percussive Rig

Ground Level:

137.00 mOD

Eastng:

385298 m

Northng:

144629 m

Start date:

30/05/2024

Driller:

Jackson Drilling - AR/LP

End date:

30/05/2024

Logged by:

NS

Backfill date:

30/05/2024

Date logged:

30/05/2024

CP03

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water	Depth		Backfill/Installations
	Type	Class	Type	Result				Description	Legend		Strikes/Standing	Depth (Thickness)	
				10mm)				Strong to very strong pale green glauconitic SANDSTONE. (Grade A UPPER GREENSAND FORMATION)				6.00	
								Recovered as: Small sub-angular cobbles and coarse angular to sub angular gravel.					
								End of Borehole at 6.000m					
												7	
												8	
												9	
												10	
												11	
												12	

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					30/05/2024	12:00	1.70	1.20	20.00	1.40		5.90	6.00	00:30	6.00	150	150	6.00

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. Groundwater strike at 1.7m depth, rising to 1.4m after 20 minutes.

4. BH refused at 6.0m depth on probable bedrock.

5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.5 and 6.0m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Proposed Residential Development

Site Location:

Bugley Farm, Warminster

Client:

Keepmoat Homes Ltd

Project No:

8917

Drilling method

Cable Percussive Drilling

Equipment

Dando 2500 Cable Percussive Rig

Ground Level:

136.50 mOD

Easting:

385418 m

Northing:

144672 m

Start date:

30/05/2024

Driller:

Jackson Drilling - AR/LP

End date:

30/05/2024

Logged by:

NS

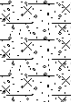
Backfill date:

30/05/2024

Date logged:

30/05/2024

CP04

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.30	ES							Grass over soft dark brown slightly gravelly CLAY with frequent fine rootlets and low cobble content. Fine to coarse gravel and cobbles of sub-angular glauconitic sandstone. (TOPSOIL)			(0.70)		
0.50	ES										0.70	135.80	
1.00	D							Green loose to medium dense slightly gravelly silty fine to medium glauconitic SAND with low cobble content. Gravel and cobbles of sub-angular glauconitic sandstone. (Interpreted Grade D UPPER GREENSAND FORMATION)			1		
1.20	B		SPT	11 (5,4/4,5,1,1)							(1.35)		
1.20 - 1.70	D												
1.20 - 1.70	SPT												
2.10	B		SPT-C	50 (25 for 75mm/50 for 30mm)			1.70	Strong to very strong pale green glauconitic SANDSTONE. (Grade A UPPER GREENSAND FORMATION)			2.05 (0.05)	134.45 134.40	
								Recovered as: Small sub-angular cobbles and coarse angular to sub angular gravel.			2.10		
								End of Borehole at 2.100m					
											3		
											4		
											5		
											6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
												2.00	2.10	00:30	2.10	150	150	1.70

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit refused at 1.1m depth on sandstone cobble.

3. No groundwater encountered.

4. BH refused at 2.1m depth on probable bedrock.

5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.0 and 2.1m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Cable Percussive Drilling

Equipment
Dando 2500 Cable Percussive Rig

Ground Level:
135.20 mOD

Easting:
385408 m

Northing:
144629 m

Start date:
31/05/2024

End date:
31/05/2024

Backfill date:
31/05/2024

Driller:
Jackson Drilling - AR/LP

Logged by:
NS

Date logged:
31/05/2024

CP05

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/ Standing	Depth		Backfill/ Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.20	ES							Grass over soft brown gravelly very sandy silty CLAY with frequent fine rootlets and occasional medium roots . Fine to coarse angular gravel of white and pale green glauconitic sandstone. (TOPSOIL)			(0.40)		
0.60	ES							Very soft to soft grey-brown becoming grey gravelly very sandy CLAY with low cobble content and rare brick fragment. Gravel and cobbles of sub-angular glauconitic sandstone. (MADE GROUND)			0.40	134.80	
1.00	D										(0.80)		
1.20	B		SPT	4 (1,1/1,1,1,1)							1	134.00	
1.20 - 1.70	D										1.20		
1.20 - 1.70	SPT							Very soft to soft brown gravelly very sandy CLAY with occasional extremely weak green sandstone lithorelics. Fine to coarse gravel of sub-angular glauconitic sandstone. (Interpreted Grade E UPPER GREENSAND FORMATION)					
2.00	B		SPT	6 (1,1/2,1,2,1)		1.7	1.70				2		
2.00 - 2.50	D										(1.80)		
2.00 - 2.50	SPT												
3.00	B		SPT	11 (1,1/2,3,3,3)		1.7	3.00				3.00	132.20	
3.00 - 3.50	SPT							Green loose very gravelly clayey fine to medium glauconitic SAND. Gravel of fine angular to sub-rounded white sandstone, red sandstone and chert. (Interpreted Grade E UPPER GREENSAND FORMATION)			(0.30)	131.90	
			SPT-C	22 (3,4/4,5,5,8)		1.7	4.00	Green loose to medium dense very sandy very clayey medium to coarse sub-angular glauconitic sandstone GRAVEL. (Interpreted Grade E UPPER GREENSAND FORMATION)			(1.10)		
4.50 - 5.00	B										4		
4.50 - 5.00	D							Green medium dense clayey fine to medium glauconitic SAND. (Interpreted Grade D UPPER GREENSAND FORMATION)			4.40	130.80	
5.00 - 5.50	B		SPT-C	20 (3,3/4,5,5,6)		1.7	5.00				5		
5.00 - 5.50	D										(1.80)		
6.00	SPT		SPT	50 (6,8/50 for 150mm)		1.7	6.00				6		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					31/05/2024	12:00	2.30	1.70	20.00	1.70		6.20	6.30	00:30	6.30	150	150	6.30

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. Groundwater strike at 2.3m depth, rising to 1.7m after 20 minutes.

4. BH refused at 6.3m depth on probable bedrock.

5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 2.0 and 6.3m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential
Development
Site Location:
Bugley Farm, Warminster

Drilling method

Cable Percussive Drilling

Equipment
Dando 2500 Cable Percussive Rig

Ground Level: 135.20 mOD

Easting: 385408 m
Northing: 144629 m

CP05

Start date: 31/05/2024

Driller: Jackson Drilling - AR/LP

End date: 31/05/2024

Logged by: NS

Backfill date: 31/05/2024

Date logged: 31/05/2024

Client: Keepmoat Homes Ltd

Project No:

8917

[illegible][illegible]

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.
2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
3. Groundwater strike at 2.3m depth, rising to 1.7m after 20 minutes.
4. BH refused at 6.3m depth on probable bedrock.
5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 2.0 and 6.3m.

Appendix G

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Rotary open hole

Equipment
GEO 205 Comacchio Crawler

Ground Level:
138.50 mOD

Easting:
385250 m

Northing:
144740 m

RO01

Start date: 03/06/2024

End date: 03/06/2024

Backfill date: 03/06/2024

Driller: Jackson Drilling - Ltd

Logged by: HW

Date logged: 03/06/2024

Core Details and SPT Data							Strata Details			Water	Depth		Backfill/Installations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
					0.10 - 0.20/ES			Moss over brown very sandy clayey fine to coarse angular GRAVEL with low cobble content. Gravel and cobbles of concrete, brick fragments, slate and grey siltstone. (MADE GROUND)			(0.20)	138.30	
					0.60/ES		0.5				0.20		
					1.00/D		1.0				(0.50)		
							1.5	Soft brown slightly sandy gravelly CLAY with low cobble content. Gravel and cobbles of concrete, brick fragments, slate and grey siltstone. (MADE GROUND)			0.70	137.80	
							2.0				(0.40)		
							2.5	Brown-green loose to medium dense slightly gravelly very clayey fine to medium SAND. Fine to coarse sub-angular gravel of glauconitic sandstone. (Interpreted Grade E UPPER GREENSAND FORMATION)			1.10	137.40	
							3.0						
							3.5	Interbedded glauconitic SANSTONE and green SAND. [Drillers Logs] (UPPER GREENSAND FORMATION)					
							4.0						
							4.5						
							5.0						
							5.5						
							6.0				(8.90)		
							6.5						
							7.0						
							7.5						
							8.0						
							8.5						
							9.0						
							9.5						
							10.0				10.00	128.50	
							10.5						

Progress & Standing Water Levels					Water Strikes								Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed		Hole Depth	Hole Diameter	Casing Diameter	Casing Depth	
					03/06/2024	12:00	6.00	6.00	20.00	4.00			10.00	140	140	10.00	

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit refused at 1.1m depth on sandstone cobble.

3. Groundwater strike at 6.0m depth, rising to 4.0m after 20 minutes.

4. BH terminated at 10m depth.

5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 2.0 and 10.0m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Rotary open hole

Equipment
GEO 205 Comacchio Crawler

Ground Level:
137.80 mOD

Easting:
385267 m

Northing:
144671 m

RO02

Start date: 03/06/2024

End date: 04/06/2024

Backfill date: 04/06/2024

Driller: Jackson Drilling - Ltd

Logged by: HW

Date logged: 04/06/2024

Core Details and SPT Data							Strata Details			Water	Depth		Backfill/Installations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N	Depth	Description	Legend	Strikes/Standing	Depth (Thickness)	mOD	
					0.30/ES			Vegetation over soft brown slightly gravelly sandy CLAY with low cobble content. Fine to coarse angular gravel and cobbles of concrete, tarmac, metal, brick, chicken wire, other rubble and glauconitic sandstone. (MADE GROUND)			(0.60)		
					0.60/ES		0.5				0.60	137.20	
					1.00/D		1.0				(0.50)		
							1.10				1.10	136.70	
							1.20				(0.10)	136.60	
							1.5	Green loose to medium dense brown slightly gravelly clayey fine to medium glauconitic SAND. Fine to medium sub-angular gravel of glauconitic sandstone. (Interpreted Grade E UPPER GREENSAND FORMATION)			1.20		
							2.0						
							2.5						
							3.0	Green medium dense clayey fine to medium glauconitic SAND. (Interpreted Grade D UPPER GREENSAND FORMATION)		↘			
							3.5	Interbedded glauconitic SANDSTONE and green SAND. [Drillers Logs]					
							4.0	(UPPER GREENSAND FORMATION)		→			
							4.5						
							5.0						
							5.5						
							6.0						
							6.5						
							7.0						
							7.5						
							8.0						
							8.00				8.00	129.80	
							8.5						
							9.0						
							9.5						
							10.0						
							10.5						

Progress & Standing Water Levels					Water Strikes								Hole Diameter		Casing Diameter		
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed		Hole Depth	Hole Diameter	Casing Diameter	Casing Depth	
					04/06/2024	12:00	4.00	4.00	20.00	3.00			8.00	140	140	7.00	

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. Groundwater strike at 4.0m depth, rising to 3.0m after 20 minutes.

4. BH refused at 7.0m depth on probable bedrock.

5. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 2.0 and 7.0m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Consulting Engineers | Geologists | Environmental Scientists

Start date:	04/06/2024
-------------	------------

End date: 04/06/2024

Backfill date: 04/06/2024

Driller: Jackson Drilling - LG/

Logged by: NS

Date logged: 04/06/2024

Project Name:

Proposed Residential
Development

Site Location:

Bugley Farm, Warminster

Client:

Keepmoat Homes Ltd

Project No:

8917

Drilling method

Rotary open hole

Equipment

GEO 205 Comacchio Crawler

Mounted Rig:
Ground Level:

Fasting: 285472 m

North: 144628

Northings:	144638 m
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R003

Core Details and SPT Data							Strata Details			Water	Depth		Backfill/ Install- ations					
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD						
					0.10 - 0.20/ES			Grass over soft brown gravelly very sandy silty CLAY with frequent fine rootlets and occassional medium roots . Fine to coarse angular gravel of white and pale green glauconitic sandstone. (TOPSOIL)			(0.20) 0.20	133.30						
					0.50 - 0.60/ES		0.5		(0.40) 0.60		132.90							
					0.90 - 1.00/D		1.0		(0.10) 0.70		132.80							
							1.5		(1.30)									
							2.0		2.00		131.50							
							2.5											
									3.0	Firm brown mottled grey slightly fine to medium sub-angular gravelly CLAY. (Possible ALLUVIUM)								
									3.5	Unknown Material. Casing sunk under own weight. [Drillers Logs] (Possible ALLUVIUM)								
									4.0									
									4.5									
									5.0									
									5.5									
									6.0	Green SAND. [Drillers Log] (UPPER GREENSAND FORMATION)						6.00	127.50	
									6.5									
									7.0									
			7.5															
			8.0															
			8.5						(5.00)									
			9.0															
			9.5															
			10.0															
			10.5															

Progress & Standing Water Levels					Water Strikes										Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed				Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					04/06/2024	12:00	0.60		20.00	0.50					9.00	140	140	9.00
					04/06/2024	12:00	7.00	6.00	20.00	0.00					11.00	140		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.
2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
3. Perched Water Table at 0.6m depth. Groundwater strike at 7m depth.
4. Casing self-sunk under own weight between 2 and 6m in unknown material.
5. BH terminated at 11m in Green Sands but collapsed to 9m on extraction.
6. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 6.0 and 9.0m.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:
Proposed Residential Development

Site Location:
Bugley Farm, Warminster

Client:
Keepmoat Homes Ltd

Project No:
8917

Drilling method
Rotary open hole

Equipment
GEO 205 Comacchio Crawler

Ground Level:
133.50 mOD

Easting:
385472 m

Northing:
144638 m

RO03

Start date: 04/06/2024

End date: 04/06/2024

Backfill date: 04/06/2024

Driller: Jackson Drilling - Ltd

Logged by: HW

Date logged: 04/06/2024

Core Details and SPT Data							Strata Details			Water	Depth		Backfill/Installations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N	Depth	Description	Legend	Strikes/ Standing	Depth (Thickness)	mOD	
							11.5				11.00	122.50	
							12.0						
							12.5						
							13.0						
							13.5						
							14.0						
							14.5						
							15.0						
							15.5						
							16.0						
							16.5						
							17.0						
							17.5						
							18.0						
							18.5						
							19.0						
							19.5						
							20.0						
							20.5						
							21.0						
							21.5						

Progress & Standing Water Levels					Water Strikes								Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed		Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
					04/06/2024	12:00	0.60	6.00	20.00	0.50			9.00	140	140	9.00
					04/06/2024	12:00	7.00		20.00	0.00			11.00	140		

General Remarks

1. Co-ordinates and ground levels of investigation points obtained upon completion of site works by Mobile GPS and interpolated from topographic survey.

2. Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.

3. Perched Water Table at 0.6m depth. Groundwater strike at 7m depth.

4. Casing self-sunk under own weight between 2 and 6m in unknown material.

5. BH terminated at 11m in Green Sands but collapsed to 9m on extraction.

6. 63mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 6.0 and 9.0m.

Appendix H



Certificate of Analysis

Certificate Number 16-83470a

02-Dec-16

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 16-83470a

Client Reference 6271T

Order No 5575

Contract Title Warminster

Description 34 Soil samples

Date Received 09-Nov-16

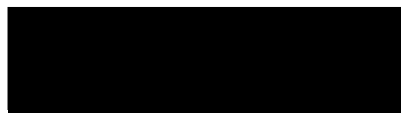
Date Started 09-Nov-16

Date Completed 02-Dec-16

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Rob Brown
Business Manager



Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081355	1081356	1081357	1081358	1081359	1081360
Sample ID	TP11	TP10	TP12	TP15	TP16	TP17
Depth	0.40	0.50	0.20	0.35	0.20	0.15
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Subcon to CSL	\$	0							
CSL Subcon Prep	\$	0							
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	6.6	4.9	4.7	6.8	4.7	5.8
Barium	DETSC 2301#	1.5	mg/kg	190	32	93	46	38	74
Beryllium	DETSC 2301#	0.2	mg/kg	0.5	0.5	0.3	0.5	0.4	0.4
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg	0.7	0.4	1.7	0.8	0.6	0.6
Cadmium	DETSC 2301#	0.1	mg/kg	0.5	0.4	0.4	0.1	0.1	0.3
Chromium	DETSC 2301#	0.15	mg/kg	13	22	12	22	16	12
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	19	7.2	13	10	26	14
Lead	DETSC 2301#	0.3	mg/kg	45	17	35	23	47	84
Mercury	DETSC 2325#	0.05	mg/kg	0.08	< 0.05	< 0.05	< 0.05	< 0.05	0.10
Nickel	DETSC 2301#	1	mg/kg	9.5	10	6.5	12	6.0	8.3
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301	0.8	mg/kg	16	23	14	30	25	17
Zinc	DETSC 2301#	1	mg/kg	110	34	190	47	38	62
Inorganics									
pH	DETSC 2008#			7.6	6.2	7.5	5.3	5.6	6.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3	0.6	0.7	0.4	0.7	0.5
Organic matter	DETSC 2002#	0.1	%	3.6	1.3	4.2	1.5	3.8	3.5
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l						
Sulphur as S, Total	DETSC 2320	0.01	%						
Sulphate as SO4, Total	DETSC 2321#	0.01	%						
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.03	< 0.03	0.04	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.06	< 0.03	0.05	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.08	< 0.03	0.06	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.07	< 0.03	0.06	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.24	< 0.10	0.20	< 0.10	< 0.10	< 0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081355	1081356	1081357	1081358	1081359	1081360
Sample ID	TP11	TP10	TP12	TP15	TP16	TP17
Depth	0.40	0.50	0.20	0.35	0.20	0.15
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.5	< 0.3	0.4	< 0.3	0.8	0.8

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
Client Ref 6271T
Contract Title Warminster

Lab No	1081361	1081362	1081363	1081364	1081365	1081366
Sample ID	TP18	TP19	TP21	TP3	TP5	TP6
Depth	0.40	0.45	0.10	0.10	0.20	0.15
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Subcon to CSL	\$	0							
CSL Subcon Prep	\$	0							
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	5.5	3.0	4.0	3.0	4.3	5.1
Barium	DETSC 2301#	1.5	mg/kg	35	24	43	100	110	79
Beryllium	DETSC 2301#	0.2	mg/kg	0.6	0.5	0.3	< 0.2	0.4	0.4
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg	0.8	0.5	0.5	0.2	0.6	0.9
Cadmium	DETSC 2301#	0.1	mg/kg	0.1	< 0.1	0.1	0.3	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	18	12	12	4.6	11	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	10	6.9	11	5.8	16	13
Lead	DETSC 2301#	0.3	mg/kg	46	14	39	16	54	48
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	0.16	< 0.05
Nickel	DETSC 2301#	1	mg/kg	7.2	6.5	5.4	2.7	6.9	6.9
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301	0.8	mg/kg	22	15	17	6.0	13	17
Zinc	DETSC 2301#	1	mg/kg	40	22	34	29	46	43
Inorganics									
pH	DETSC 2008#			4.9	5.5	5.0	8.1	6.1	6.1
Cyanide, Total	DETSC 2130#	0.1	mg/kg	1.0	0.2	0.6	< 0.1	0.6	0.9
Organic matter	DETSC 2002#	0.1	%	2.9	1.2	2.6	1.0	4.2	5.4
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l						
Sulphur as S, Total	DETSC 2320	0.01	%						
Sulphate as SO4, Total	DETSC 2321#	0.01	%						
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.05	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081361	1081362	1081363	1081364	1081365	1081366
Sample ID	TP18	TP19	TP21	TP3	TP5	TP6
Depth	0.40	0.45	0.10	0.10	0.20	0.15
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.5	< 0.3	0.6	< 0.3	0.5	0.7

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
Client Ref 6271T
Contract Title Warminster

Lab No	1081367	1081368	1081369	1081370	1081371	1081372
Sample ID	TP7	TP8	TP9	WS1	WS4	WS8
Depth	0.40	0.45	0.10	0.60	0.50	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Subcon to CSL	\$	0							Y
CSL Subcon Prep	\$	0							Y
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	2.5	4.6	3.8	5.7	3.4	3.9
Barium	DETSC 2301#	1.5	mg/kg	24	37	42	120	21	45
Beryllium	DETSC 2301#	0.2	mg/kg	0.4	0.4	0.4	1.5	0.4	0.3
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg	0.3	0.7	0.7	1.1	< 0.2	0.8
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.1	0.2	0.2	< 0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg	14	15	14	22	13	8.7
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	6.0	11	9.5	35	5.1	8.4
Lead	DETSC 2301#	0.3	mg/kg	11	110	44	59	10	37
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.06	0.09	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	7.6	6.4	6.7	26	6.9	5.3
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301	0.8	mg/kg	14	18	16	35	16	12
Zinc	DETSC 2301#	1	mg/kg	28	44	38	48	20	49
Inorganics									
pH	DETSC 2008#			6.5	4.8	5.6	6.4	5.9	7.6
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.1	0.6	0.6	0.5	0.2	0.3
Organic matter	DETSC 2002#	0.1	%	0.7	3.0	3.8	3.9	0.7	2.3
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l						
Sulphur as S, Total	DETSC 2320	0.01	%						
Sulphate as SO4, Total	DETSC 2321#	0.01	%						
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.07
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.06
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.07
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.20

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081367	1081368	1081369	1081370	1081371	1081372
Sample ID	TP7	TP8	TP9	WS1	WS4	WS8
Depth	0.40	0.45	0.10	0.60	0.50	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.8	0.4	0.5	0.4	0.4	< 0.3

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081373	1081374	1081375	1081376	1081377	1081378
Sample ID	SP1	SP2	SP3	WS6	TP21	TP18
Depth					1.00	1.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Subcon to CSL	\$	0		Y	Y	Y	Y		
CSL Subcon Prep	\$	0		Y	Y	Y	Y		
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg						
Barium	DETSC 2301#	1.5	mg/kg						
Beryllium	DETSC 2301#	0.2	mg/kg						
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg						
Cadmium	DETSC 2301#	0.1	mg/kg						
Chromium	DETSC 2301#	0.15	mg/kg						
Chromium, Hexavalent	DETSC 2204*	1	mg/kg						
Copper	DETSC 2301#	0.2	mg/kg						
Lead	DETSC 2301#	0.3	mg/kg						
Mercury	DETSC 2325#	0.05	mg/kg						
Nickel	DETSC 2301#	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg						
Vanadium	DETSC 2301	0.8	mg/kg						
Zinc	DETSC 2301#	1	mg/kg						
Inorganics									
pH	DETSC 2008#							6.5	7.1
Cyanide, Total	DETSC 2130#	0.1	mg/kg						
Organic matter	DETSC 2002#	0.1	%						
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l					< 10	< 10
Sulphur as S, Total	DETSC 2320	0.01	%					< 0.01	< 0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%					0.02	0.01
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg						
Acenaphthylene	DETSC 3303#	0.03	mg/kg						
Anthracene	DETSC 3303	0.03	mg/kg						
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg						
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg						
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg						
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg						
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg						
Chrysene	DETSC 3303	0.03	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg						
Fluoranthene	DETSC 3303#	0.03	mg/kg						
Fluorene	DETSC 3303	0.03	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg						
Naphthalene	DETSC 3303#	0.03	mg/kg						
Phenanthrene	DETSC 3303#	0.03	mg/kg						
Pyrene	DETSC 3303#	0.03	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg						

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081373	1081374	1081375	1081376	1081377	1081378
Sample ID	SP1	SP2	SP3	WS6	TP21	TP18
Depth					1.00	1.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081379	1081380	1081381	1081382	1081383	1081384
Sample ID	TP14	TP12	TP10	TP9	TP6	WS1
Depth	1.10	1.20	1.70	1.00	1.60	2.00
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Subcon to CSL	\$	0							
CSL Subcon Prep	\$	0							
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg						
Barium	DETSC 2301#	1.5	mg/kg						
Beryllium	DETSC 2301#	0.2	mg/kg						
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg						
Cadmium	DETSC 2301#	0.1	mg/kg						
Chromium	DETSC 2301#	0.15	mg/kg						
Chromium, Hexavalent	DETSC 2204*	1	mg/kg						
Copper	DETSC 2301#	0.2	mg/kg						
Lead	DETSC 2301#	0.3	mg/kg						
Mercury	DETSC 2325#	0.05	mg/kg						
Nickel	DETSC 2301#	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg						
Vanadium	DETSC 2301	0.8	mg/kg						
Zinc	DETSC 2301#	1	mg/kg						
Inorganics									
pH	DETSC 2008#			6.9	8.0	6.3	6.6	7.8	8.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg						
Organic matter	DETSC 2002#	0.1	%						
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	< 10	< 10	< 10	< 10	< 10	< 10
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	< 0.01	0.02	< 0.01	0.02	0.02	0.05
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg						
Acenaphthylene	DETSC 3303#	0.03	mg/kg						
Anthracene	DETSC 3303	0.03	mg/kg						
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg						
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg						
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg						
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg						
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg						
Chrysene	DETSC 3303	0.03	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg						
Fluoranthene	DETSC 3303#	0.03	mg/kg						
Fluorene	DETSC 3303	0.03	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg						
Naphthalene	DETSC 3303#	0.03	mg/kg						
Phenanthrene	DETSC 3303#	0.03	mg/kg						
Pyrene	DETSC 3303#	0.03	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg						

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081379	1081380	1081381	1081382	1081383	1081384
Sample ID	TP14	TP12	TP10	TP9	TP6	WS1
Depth	1.10	1.20	1.70	1.00	1.60	2.00
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081385	1081386	1082298	1082299
Sample ID	TP5	WS3	BH7	TP9
Depth	1.90	2.00	1.50	1.70
Other ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Subcon to CSL	\$	0					
CSL Subcon Prep	\$	0					
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg				
Barium	DETSC 2301#	1.5	mg/kg				
Beryllium	DETSC 2301#	0.2	mg/kg				
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg				
Cadmium	DETSC 2301#	0.1	mg/kg				
Chromium	DETSC 2301#	0.15	mg/kg				
Chromium, Hexavalent	DETSC 2204*	1	mg/kg				
Copper	DETSC 2301#	0.2	mg/kg				
Lead	DETSC 2301#	0.3	mg/kg				
Mercury	DETSC 2325#	0.05	mg/kg				
Nickel	DETSC 2301#	1	mg/kg				
Selenium	DETSC 2301#	0.5	mg/kg				
Vanadium	DETSC 2301	0.8	mg/kg				
Zinc	DETSC 2301#	1	mg/kg				
Inorganics							
pH	DETSC 2008#			6.9	8.5	6.8	7.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg				
Organic matter	DETSC 2002#	0.1	%				
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	< 10	13	< 10	31
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01	0.02	0.02	< 0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.04	0.04	0.03	0.03
PAHs							
Acenaphthene	DETSC 3303#	0.03	mg/kg				
Acenaphthylene	DETSC 3303#	0.03	mg/kg				
Anthracene	DETSC 3303	0.03	mg/kg				
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg				
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg				
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg				
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg				
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg				
Chrysene	DETSC 3303	0.03	mg/kg				
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg				
Fluoranthene	DETSC 3303#	0.03	mg/kg				
Fluorene	DETSC 3303	0.03	mg/kg				
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg				
Naphthalene	DETSC 3303#	0.03	mg/kg				
Phenanthrene	DETSC 3303#	0.03	mg/kg				
Pyrene	DETSC 3303#	0.03	mg/kg				
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg				

Summary of Chemical Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081385	1081386	1082298	1082299
Sample ID	TP5	WS3	BH7	TP9
Depth	1.90	2.00	1.50	1.70
Other ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Phenols							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg				

Summary of Asbestos Analysis

Soil Samples

Our Ref 16-83470a
 Client Ref 6271T
 Contract Title Warminster

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1081355	TP11 0.40	SOIL	NAD	none	Michael Kay
1081356	TP10 0.50	SOIL	NAD	none	Michael Kay
1081357	TP12 0.20	SOIL	NAD	none	Michael Kay
1081358	TP15 0.35	SOIL	NAD	none	Michael Kay
1081359	TP16 0.20	SOIL	NAD	none	Michael Kay
1081360	TP17 0.15	SOIL	NAD	none	Michael Kay
1081361	TP18 0.40	SOIL	NAD	none	Michael Kay
1081362	TP19 0.45	SOIL	NAD	none	Michael Kay
1081363	TP21 0.10	SOIL	NAD	none	Michael Kay
1081364	TP3 0.10	SOIL	NAD	none	Michael Kay
1081365	TP5 0.20	SOIL	NAD	none	Michael Kay
1081366	TP6 0.15	SOIL	NAD	none	Michael Kay
1081367	TP7 0.40	SOIL	NAD	none	Michael Kay
1081368	TP8 0.45	SOIL	NAD	none	Michael Kay
1081369	TP9 0.10	SOIL	NAD	none	Michael Kay
1081370	WS1 0.60	SOIL	NAD	none	Michael Kay
1081371	WS4 0.50	SOIL	NAD	none	Michael Kay
1081372	WS8 0.20	SOIL	NAD	none	Michael Kay

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 16-83470a
 Client Ref 6271T
 Contract Warminster

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1081355	TP11 0.40 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081356	TP10 0.50 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081357	TP12 0.20 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081358	TP15 0.35 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081359	TP16 0.20 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081360	TP17 0.15 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081361	TP18 0.40 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081362	TP19 0.45 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081363	TP21 0.10 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081364	TP3 0.10 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081365	TP5 0.20 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081366	TP6 0.15 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081367	TP7 0.40 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081368	TP8 0.45 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081369	TP9 0.10 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081370	WS1 0.60 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	

Information in Support of the Analytical Results

Our Ref 16-83470a
Client Ref 6271T
Contract Warminster

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1081371	WS4 0.50 SOIL	19/10/16	GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1081372	WS8 0.20 SOIL	19/10/16	PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	Naphthalene, PAH MS
1081373	SP1 SOIL	19/10/16	PT 1L		
1081374	SP2 SOIL	19/10/16	PT 1L		
1081375	SP3 SOIL	19/10/16	PT 1L		
1081376	WS6 SOIL	19/10/16	PT 1L		
1081377	TP21 1.00 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081378	TP18 1.10 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081379	TP14 1.10 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081380	TP12 1.20 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081381	TP10 1.70 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081382	TP9 1.00 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081383	TP6 1.60 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081384	WS1 2.00 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081385	TP5 1.90 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1081386	WS3 2.00 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1082298	BH7 1.50 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	
1082299	TP9 1.70 SOIL	19/10/16	PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



Certificate of Analysis

Certificate Number 16-83470b

02-Dec-16

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 16-83470b

Client Reference 6271T

Order No 5575

Contract Title Warminster

Description 5 Leachate samples.

Date Received 09-Nov-16

Date Started 09-Nov-16

Date Completed 02-Dec-16

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Rob Brown
Business Manager



Summary of Chemical Analysis

Leachate Samples

Our Ref 16-83470b
 Client Ref 6271T
 Contract Title Warminster

Lab No	1081387	1081388	1081389	1081390	1081391
Sample ID	TP11	TP12	TP19	TP3	TP7
Depth	0.40	0.20	0.45	0.10	0.40
Other ID					
Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date	19/10/16	19/10/16	19/10/16	19/10/16	19/10/16
Sampling Time	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Metals								
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.45	0.39	< 0.16	0.44	0.24
Barium, Dissolved	DETSC 2306	0.26	ug/l	2.0	2.4	1.7	5.8	1.6
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron	DETSC 2123	100	ug/l	< 100	170	120	130	140
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	< 0.4	< 0.4	< 0.4	< 0.4	1.0
Iron, Dissolved	DETSC 2306	5.5	ug/l	66	100	130	77	150
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09	< 0.09	< 0.09	0.28	0.14
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Zinc, Dissolved	DETSC 2306	1.3	ug/l	3.5	5.1	3.8	3.8	4.0
Inorganics								
pH	DETSC 2008			8.4	7.5	5.7	8.7	9.3
Cyanide, Total	DETSC 2130	40	ug/l	< 40	< 40	< 40	< 40	< 40
Phenol - Monohydric	DETSC 2131*	0.5	ug/l	0.9	0.8	< 0.5	0.8	< 0.5
PAHs								
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	0.02	< 0.01	0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	0.01	0.06	< 0.01	0.02	0.01
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	0.02	0.16	0.03	0.05	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.06	0.58	0.09	0.15	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.07	0.58	0.10	0.15	< 0.01
Benzo(g,h,i)perylene	DETSC 3304*	0.01	ug/l	0.05	0.44	0.08	0.11	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.03	0.25	0.05	0.07	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.05	0.37	0.06	0.10	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	0.02	0.14	0.03	0.04	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.05	0.38	0.06	0.08	0.02
Fluorene	DETSC 3304	0.01	ug/l	0.02	0.02	< 0.01	< 0.01	0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3304*	0.01	ug/l	0.05	0.43	0.06	0.10	< 0.01
Naphthalene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.05	0.09	0.03	0.04	0.08
Pyrene	DETSC 3304	0.01	ug/l	0.05	0.27	0.05	0.07	0.01
PAH Total	DETSC 3304	0.04	ug/l	0.54	3.8	0.64	1.0	0.18

Information in Support of the Analytical Results

Our Ref 16-83470b
Client Ref 6271T
Contract Warminster

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1081387	TP11 0.40 LEACHATE	19/10/16	GJ 250ml, PT 1L		
1081388	TP12 0.20 LEACHATE	19/10/16	GJ 250ml, PT 1L		
1081389	TP19 0.45 LEACHATE	19/10/16	GJ 250ml, PT 1L		
1081390	TP3 0.10 LEACHATE	19/10/16	GJ 250ml, PT 1L		
1081391	TP7 0.40 LEACHATE	19/10/16	GJ 250ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Appendix I



Certificate of Analysis

Certificate Number 21-16377

Issued: 07-Sep-21

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 21-16377

Client Reference ESP.6271t.02

Order No 9995

Contract Title WARMINSTER SOUTH

Description 15 Soil samples, 9 Leachate samples.

Date Received 04-Aug-21

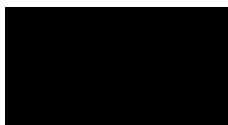
Date Started 04-Aug-21

Date Completed 07-Sep-21

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Adam Fenwick
Contracts Manager



Summary of Chemical Analysis

Soil Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	1885427	1885428	1885429	1885430	1885431	1885432
Sample ID	WS01	WS01	WS02	WS02	WS05	WS06
Depth	0.25	1.30	0.50	0.85	0.30	0.55
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	2.9		3.0	6.1	8.0	7.0
Barium	DETSC 2301#	1.5	mg/kg	33		110	42	69	46
Beryllium	DETSC 2301#	0.2	mg/kg	0.3		0.2	1.1	0.2	0.9
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.5		0.5	0.3	0.4	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1		0.3	0.2	0.7	0.1
Chromium	DETSC 2301#	0.15	mg/kg	9.7		9.5	27	7.4	28
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	9.1		12	9.8	6.5	10
Lead	DETSC 2301#	0.3	mg/kg	15		21	15	36	17
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	5.5		6.9	15	4.5	14
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5		0.9	< 0.5	0.8	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	12		12	33	9.3	36
Zinc	DETSC 2301#	1	mg/kg	28		79	40	77	85
Inorganics									
pH	DETSC 2008#		pH	8.2	7.3	7.6	7.5	8.8	7.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3		0.8	0.2	0.3	0.2
Organic matter	DETSC 2002#	0.1	%	0.5		4.4	0.9	1.7	0.7
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	29	380		62	90	
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01	0.03		0.02	0.04	
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03	0.11		0.04	0.08	
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01					< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01					< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01					< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5					< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2					< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5					< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4					< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10					< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01					< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01					< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01					< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9					< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5					< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6					< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4					< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10					< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10					< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01					< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01					< 0.01

Summary of Chemical Analysis

Soil Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	1885427	1885428	1885429	1885430	1885431	1885432
Sample ID	WS01	WS01	WS02	WS02	WS05	WS06
Depth	0.25	1.30	0.50	0.85	0.30	0.55
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01					< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01					< 0.01
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03		0.39	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03		0.08	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03		0.53	0.48	0.43	0.46
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03		0.51	< 0.03	0.28	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03		0.50	0.14	0.13	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03		0.17	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03		0.17	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03		0.35	0.22	0.20	0.21
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03		0.64	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03		< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03		0.14	< 0.03	< 0.03	< 0.03
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03		0.34	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03		0.59	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10		4.4	0.84	1.0	0.67
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.8		0.6	< 0.3	< 0.3	< 0.3
Subcontracted Analysis									
E. coli	\$*	10	cfu/g						
Total coliforms	\$*	10	cfu/g						
Faecal coliforms	\$*	10	cfu/g						

Summary of Chemical Analysis

Soil Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	1885433	1885434	1885435	1885436	1885437	1885438
Sample ID	WS06	WS07	WS07	WS08	WS08	WS08
Depth	1.20	0.55	1.00	0.45	1.30	2.00
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg		6.8		8.2		
Barium	DETSC 2301#	1.5	mg/kg		150		120		
Beryllium	DETSC 2301#	0.2	mg/kg		0.4		0.3		
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg		0.7		0.3		
Cadmium	DETSC 2301#	0.1	mg/kg		0.4		0.4		
Chromium	DETSC 2301#	0.15	mg/kg		11		14		
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0		< 1.0		
Copper	DETSC 2301#	0.2	mg/kg		15		13		
Lead	DETSC 2301#	0.3	mg/kg		310		22		
Mercury	DETSC 2325#	0.05	mg/kg		0.08		< 0.05		
Nickel	DETSC 2301#	1	mg/kg		12		9.6		
Selenium	DETSC 2301#	0.5	mg/kg		1.0		1.2		
Vanadium	DETSC 2301#	0.8	mg/kg		14		28		
Zinc	DETSC 2301#	1	mg/kg		100		110		
Inorganics									
pH	DETSC 2008#		pH	8.0	10.0	8.5	8.7	8.2	7.7
Cyanide, Total	DETSC 2130#	0.1	mg/kg		0.4		0.1		
Organic matter	DETSC 2002#	0.1	%		6.7		5.8		
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	13		37		26	16
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01		0.01		0.03	0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.02		0.03		0.05	0.04
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01		< 0.01		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		< 0.01		< 0.01		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01		< 0.01		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		< 1.5		< 1.5		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2		< 1.2		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5		2.3		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4		79		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		< 10		82		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01		< 0.01		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01		< 0.01		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01		< 0.01		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9		1.2		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		< 0.5		3.5		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		< 0.6		21		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		< 1.4		320		
Aromatic C5-C35	DETSC 3072*	10	mg/kg		< 10		350		
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg		< 10		430		
Benzene	DETSC 3321#	0.01	mg/kg		< 0.01		< 0.01		
Ethylbenzene	DETSC 3321#	0.01	mg/kg		< 0.01		< 0.01		

Summary of Chemical Analysis

Soil Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	1885433	1885434	1885435	1885436	1885437	1885438
Sample ID	WS06	WS07	WS07	WS08	WS08	WS08
Depth	1.20	0.55	1.00	0.45	1.30	2.00
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Toluene	DETSC 3321#	0.01	mg/kg		< 0.01		< 0.01		
Xylene	DETSC 3321#	0.01	mg/kg		< 0.01		< 0.01		
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg		0.04		0.15		
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03		0.57		
Anthracene	DETSC 3303	0.03	mg/kg		< 0.03		0.59		
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.07		5.8		
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.03		8.8		
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.08		11		
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.17		4.8		
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		< 0.03		4.9		
Chrysene	DETSC 3303	0.03	mg/kg		0.07		4.6		
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03		0.94		
Fluoranthene	DETSC 3303#	0.03	mg/kg		0.17		8.4		
Fluorene	DETSC 3303	0.03	mg/kg		0.06		0.12		
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		< 0.03		3.4		
Naphthalene	DETSC 3303#	0.03	mg/kg		< 0.03		0.03		
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.22		1.7		
Pyrene	DETSC 3303#	0.03	mg/kg		0.20		8.9		
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		1.1		64		
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		< 0.3		< 0.3		
Subcontracted Analysis									
E. coli	\$*	10	cfu/g						
Total coliforms	\$*	10	cfu/g						
Faecal coliforms	\$*	10	cfu/g						

Summary of Chemical Analysis

Soil Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	1885439	1885440	1885441
Sample ID	HDP01	HDP02	HDP03
Depth	0.30	0.40	0.35
Other ID			
Sample Type	SOIL	SOIL	SOIL
Sampling Date	30/07/2021	30/07/2021	30/07/2021
Sampling Time	n/s	n/s	n/s

Test	Method	LOD	Units			
Metals						
Arsenic	DETSC 2301#	0.2	mg/kg	17	4.0	3.4
Barium	DETSC 2301#	1.5	mg/kg	76	19	60
Beryllium	DETSC 2301#	0.2	mg/kg	0.5	1.1	0.5
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	1.3	0.4	1.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	< 0.1	0.2
Chromium	DETSC 2301#	0.15	mg/kg	22	24	13
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	21	4.3	15
Lead	DETSC 2301#	0.3	mg/kg	1700	15	160
Mercury	DETSC 2325#	0.05	mg/kg	0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	12	11	8.1
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	25	30	16
Zinc	DETSC 2301#	1	mg/kg	110	31	86
Inorganics						
pH	DETSC 2008#		pH	7.1	7.4	7.1
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.9	0.3	0.9
Organic matter	DETSC 2002#	0.1	%	4.8	1.0	5.4
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l			
Sulphur as S, Total	DETSC 2320	0.01	%			
Sulphate as SO4, Total	DETSC 2321#	0.01	%			
Petroleum Hydrocarbons						
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg			
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg			
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg			
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg			
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg			
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg			
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg			
Aliphatic C5-C35	DETSC 3072*	10	mg/kg			
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg			
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg			
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg			
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg			
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg			
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg			
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg			
Aromatic C5-C35	DETSC 3072*	10	mg/kg			
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg			
Benzene	DETSC 3321#	0.01	mg/kg			
Ethylbenzene	DETSC 3321#	0.01	mg/kg			

Summary of Chemical Analysis

Soil Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	1885439	1885440	1885441
Sample ID	HDP01	HDP02	HDP03
Depth	0.30	0.40	0.35
Other ID			
Sample Type	SOIL	SOIL	SOIL
Sampling Date	30/07/2021	30/07/2021	30/07/2021
Sampling Time	n/s	n/s	n/s

Test	Method	LOD	Units			
Toluene	DETSC 3321#	0.01	mg/kg			
Xylene	DETSC 3321#	0.01	mg/kg			
PAHs						
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.43	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	0.05	< 0.03	0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.58	0.45	0.46
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.42	0.26	0.27
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.40	0.14	0.19
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.10	< 0.03	0.08
Chrysene	DETSC 3303	0.03	mg/kg	0.36	0.21	0.24
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.54	< 0.03	0.10
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.05	< 0.03	< 0.03
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.10	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.61	< 0.03	0.10
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	3.7	1.1	1.4
Phenols						
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.5	< 0.3	0.9
Subcontracted Analysis						
E. coli	\$*	10	cfu/g	90	<10	240
Total coliforms	\$*	10	cfu/g	90	<10	740
Faecal coliforms	\$*	10	cfu/g	90	<10	240

Summary of Chemical Analysis

Leachate Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	1885442	1885443	1885444	1885445	1885446	1885447
Sample ID	WS01	WS02	WS05	WS06	WS07	WS08
Depth	0.25	0.85	0.30	0.55	0.55	0.45
Other ID						
Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.1	1.6	6.4	2.1	18	1.3
Barium, Dissolved	DETSC 2306	0.26	ug/l	3.8	3.0	7.7	3.9	12	10
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12	18	< 12	150	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	0.04	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	1.6	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.1	1.1	1.5	0.9	6.6	2.9
Iron, Dissolved	DETSC 2306	5.5	ug/l	48	87	15	98	720	34
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.19	0.15	0.36	0.21	3.6	0.29
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	2.0	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	0.71	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	0.9	1.6	3.1	2.2	14	3.0
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	< 1.3	44	8.9	14	2.8
Inorganics									
pH	DETSC 2008		pH	6.7	6.7	6.7	6.9	7.3	6.8
Cyanide, Total	DETSC 2130	40	ug/l	< 40	< 40	< 40	< 40	< 40	< 40
Phenol - Monohydric	DETSC 2131	1.5	ug/l	< 1.5	< 1.5	< 1.5	< 1.5	1.5	< 1.5
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1			< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1			< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1			< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0			< 1.0	6.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0			< 1.0	10	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0			< 1.0	21	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0			< 1.0	29	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10			< 10	67	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1			< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1			< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1			< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0			< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0			< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0			< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0			< 1.0	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10			< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10			< 10	67	< 10
Benzene	DETSC 3322	1	ug/l	< 1.0			< 1.0	< 1.0	< 1.0
Toluene	DETSC 3322	1	ug/l	< 1.0			< 1.0	< 1.0	< 1.0
Ethylbenzene	DETSC 3322	1	ug/l	< 1.0			< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	1885442	1885443	1885444	1885445	1885446	1885447
Sample ID	WS01	WS02	WS05	WS06	WS07	WS08
Depth	0.25	0.85	0.30	0.55	0.55	0.45
Other ID						
Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021	30/07/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Xylene	DETSC 3322	1	ug/l	< 1.0			< 1.0	< 1.0	< 1.0
PAHs									
Acenaphthene	DETSC 3304	0.01	ug/l	0.01	0.01	0.01	< 0.01	0.02	0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.01	0.04
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	0.01	< 0.01	< 0.01	< 0.01	0.22
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.30
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.42
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.32
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.15
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.20
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.10
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.17
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.42
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	DETSC 3304	0.01	ug/l	0.01	0.01	< 0.01	< 0.01	0.05	0.03
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.18
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	2.6

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 21-16377
Client Ref ESP.6271t.02
Contract Title WARMINSTER SOUTH
Sample Id HDP01 0.30

Sample Numbers 1885439 1885448
Date Analysed 07/09/2021

Test Results On Waste		
Determinand and Method Reference	Units	Result
DETSC 2084# Total Organic Carbon	%	4.5
DETSC 2003# Loss On Ignition	%	8.2
DETSC 3321# BTEX	mg/kg	< 0.04
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10
DETSC 3301 PAHs	mg/kg	< 1.6
DETSC 2008# pH	pH Units	7.1
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached* mg/kg
	10:1	LS10
DETSC 2306 Arsenic as As	1.1	0.011
DETSC 2306 Barium as Ba	7.4	< 0.1
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02
DETSC 2306 Chromium as Cr	< 0.25	< 0.1
DETSC 2306 Copper as Cu	2.8	0.028
DETSC 2306 Mercury as Hg	< 0.010	< 0.002
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1
DETSC 2306 Nickel as Ni	0.69	< 0.1
DETSC 2306 Lead as Pb	0.49	< 0.05
DETSC 2306 Antimony as Sb	< 0.17	< 0.05
DETSC 2306 Selenium as Se	< 0.25	< 0.03
DETSC 2306 Zinc as Zn	6.4	0.064
DETSC 2055 Chloride as Cl	690	< 100
DETSC 2055* Fluoride as F	< 100	< 0.1
DETSC 2055 Sulphate as SO4	2500	< 100
DETSC 2009* Total Dissolved Solids	36000	360
DETSC 2130 Phenol Index	< 100	< 1
DETSC 2085 Dissolved Organic Carbon	2300	< 50

WAC Limit Values		
Limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

Additional Information

DETSC 2008 pH	6.8
DETSC 2009 Conductivity uS/cm	51.7
* Temperature*	21.0

Mass of Sample Kg*	0.130
Mass of dry Sample Kg*	0.102

Stage 1

Volume of Leachant L2*	0.996
Volume of Eluate VE1*	0.93

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive
Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

* DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 21-16377
Client Ref ESP.6271t.02
Contract Title WARMINSTER SOUTH
Sample Id HDP02 0.40

Sample Numbers 1885440 1885449
Date Analysed 07/09/2021

Test Results On Waste		
Determinand and Method Reference	Units	Result
DETSC 2084# Total Organic Carbon	%	0.9
DETSC 2003# Loss On Ignition	%	4.3
DETSC 3321# BTEX	mg/kg	< 0.04
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10
DETSC 3301 PAHs	mg/kg	< 1.6
DETSC 2008# pH	pH Units	7.4
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached* mg/kg
	10:1	LS10
DETSC 2306 Arsenic as As	0.97	< 0.01
DETSC 2306 Barium as Ba	1.4	< 0.1
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02
DETSC 2306 Chromium as Cr	< 0.25	< 0.1
DETSC 2306 Copper as Cu	1.8	< 0.02
DETSC 2306 Mercury as Hg	< 0.010	< 0.002
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1
DETSC 2306 Nickel as Ni	0.61	< 0.1
DETSC 2306 Lead as Pb	0.37	< 0.05
DETSC 2306 Antimony as Sb	< 0.17	< 0.05
DETSC 2306 Selenium as Se	< 0.25	< 0.03
DETSC 2306 Zinc as Zn	2	0.02
DETSC 2055 Chloride as Cl	650	< 100
DETSC 2055* Fluoride as F	< 100	< 0.1
DETSC 2055 Sulphate as SO4	970	< 100
DETSC 2009* Total Dissolved Solids	15000	150
DETSC 2130 Phenol Index	< 100	< 1
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50

WAC Limit Values		
Limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

Additional Information

DETSC 2008 pH	7.0
DETSC 2009 Conductivity uS/cm	21.1
* Temperature*	21.0

Mass of Sample Kg*	0.120
Mass of dry Sample Kg*	0.098

Stage 1

Volume of Leachant L2*	0.956
Volume of Eluate VE1*	0.91

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive
Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 21-16377
Client Ref ESP.6271t.02
Contract Title WARMINSTER SOUTH
Sample Id HDP03 0.35

Sample Numbers 1885441 1885450
Date Analysed 07/09/2021

Test Results On Waste		
Determinand and Method Reference	Units	Result
DETSC 2084# Total Organic Carbon	%	4.5
DETSC 2003# Loss On Ignition	%	12.0
DETSC 3321# BTEX	mg/kg	< 0.04
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10
DETSC 3301 PAHs	mg/kg	< 1.6
DETSC 2008# pH	pH Units	7.1
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached* mg/kg
	10:1	LS10
DETSC 2306 Arsenic as As	0.36	< 0.01
DETSC 2306 Barium as Ba	3.2	< 0.1
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02
DETSC 2306 Chromium as Cr	< 0.25	< 0.1
DETSC 2306 Copper as Cu	1.7	< 0.02
DETSC 2306 Mercury as Hg	< 0.010	< 0.002
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1
DETSC 2306 Nickel as Ni	< 0.50	< 0.1
DETSC 2306 Lead as Pb	0.17	< 0.05
DETSC 2306 Antimony as Sb	< 0.17	< 0.05
DETSC 2306 Selenium as Se	< 0.25	< 0.03
DETSC 2306 Zinc as Zn	1.6	0.016
DETSC 2055 Chloride as Cl	540	< 100
DETSC 2055* Fluoride as F	< 100	< 0.1
DETSC 2055 Sulphate as SO4	940	< 100
DETSC 2009* Total Dissolved Solids	19000	190
DETSC 2130 Phenol Index	< 100	< 1
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50

WAC Limit Values		
Limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

Additional Information

DETSC 2008 pH	6.7
DETSC 2009 Conductivity uS/cm	27.5
* Temperature*	21.0

Mass of Sample Kg*	0.120
Mass of dry Sample Kg*	0.098

Stage 1

Volume of Leachant L2*	0.955
Volume of Eluate VE1*	0.91

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive
Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

* DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.

Summary of Asbestos Analysis Soil Samples

Our Ref 21-16377

Client Ref ESP.6271t.02

Contract Title WARMINSTER SOUTH

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1885427	WS01 0.25	SOIL	NAD	none	Jordan Farley
1885429	WS02 0.50	SOIL	NAD	none	Jordan Farley
1885430	WS02 0.85	SOIL	NAD	none	Jordan Farley
1885431	WS05 0.30	SOIL	NAD	none	Jordan Farley
1885432	WS06 0.55	SOIL	NAD	none	Jordan Farley
1885434	WS07 0.55	SOIL	Chrysotile	Chrysotile present in visible cement and loose bundles	Jordan Farley
1885436	WS08 0.45	SOIL	Chrysotile	Loose bundles of Chrysotile	Jordan Farley
1885439	HDP01 0.30	SOIL	NAD	none	Jordan Farley
1885440	HDP02 0.40	SOIL	NAD	none	Jordan Farley
1885441	HDP03 0.35	SOIL	NAD	none	Jordan Farley

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 21-16377
 Client Ref ESP.6271t.02
 Contract WARMINSTER SOUTH

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Hold time exceeded for tests	Inappropriate container for tests
1885427	WS01 0.25 SOIL	30/07/21	PT 1L		Aliphatics/Aromatics, BTEX, Naphthalene. PAH MS
1885428	WS01 1.30 SOIL	30/07/21	PT 1L		
1885429	WS02 0.50 SOIL	30/07/21	GJ 250ml x2, PT 1L x2		
1885430	WS02 0.85 SOIL	30/07/21	GJ 250ml, PT 1L		
1885431	WS05 0.30 SOIL	30/07/21	GJ 60ml x2, PT 1L		
1885432	WS06 0.55 SOIL	30/07/21	GJ 60ml x4, PT 1L x2		
1885433	WS06 1.20 SOIL	30/07/21	GJ 60ml x2, PT 1L		
1885434	WS07 0.55 SOIL	30/07/21	GJ 60ml x4, PT 1L x2		
1885435	WS07 1.00 SOIL	30/07/21	GJ 60ml x2, PT 1L		
1885436	WS08 0.45 SOIL	30/07/21	GJ 60ml x6, PT 1L x2		
1885437	WS08 1.30 SOIL	30/07/21	GJ 60ml x4, PT 1L x2		
1885438	WS08 2.00 SOIL	30/07/21	GJ 60ml x2, PT 1L		
1885439	HDP01 0.30 SOIL	30/07/21	GJ 250ml, PT 1L		
1885440	HDP02 0.40 SOIL	30/07/21	GJ 250ml, PT 1L		
1885441	HDP03 0.35 SOIL	30/07/21	GJ 250ml, PT 1L		
1885442	WS01 0.25 LEACHATE	30/07/21	PT 1L		
1885443	WS02 0.85 LEACHATE	30/07/21	GJ 250ml, PT 1L		
1885444	WS05 0.30 LEACHATE	30/07/21	GJ 60ml x2, PT 1L		
1885445	WS06 0.55 LEACHATE	30/07/21	GJ 60ml x4, PT 1L x2		
1885446	WS07 0.55 LEACHATE	30/07/21	GJ 60ml x4, PT 1L x2		
1885447	WS08 0.45 LEACHATE	30/07/21	GJ 60ml x6, PT 1L x2		
1885448	HDP01 0.30 LEACHATE	30/07/21	GJ 250ml, PT 1L		
1885449	HDP02 0.40 LEACHATE	30/07/21	GJ 250ml, PT 1L		
1885450	HDP03 0.35 LEACHATE	30/07/21	GJ 250ml, PT 1L		

Key: P-Plastic T-Tub G-Glass J-Jar

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Appendix J



Certificate of Analysis

Certificate Number 24-11934

Issued: 19-Jun-24

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 24-11934

Client Reference ~ 8917

Order No ~ 12579

Contract Title ~ Bugley Farm, Warminster

Description 9 Soil samples, 2 Leachate prepared by DETS samples.

Date Received 11-Jun-24

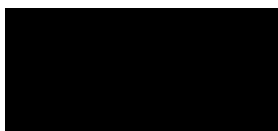
Date Started 11-Jun-24

Date Completed 19-Jun-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Kirk Bridgewood
General Manager



2139

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Symbol key at end of report Tel: 01207 582333 • email: info@dets.co.uk • www.dets.co.uk

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Summary of Chemical Analysis

Soil Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349601	2349602	2349603	2349604	2349605	2349606	2349607
Sample ID ~	CP01	CP01	CP02	CP02	CP03	CP03	CP03
Depth ~	0.50	1.20-1.70	0.30	1.20-2.00	0.20	2.00-2.50	4.00-4.50
Other ID ~							
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	29/05/2024	29/05/2024	29/05/2024	29/05/2024	30/05/2024	30/05/2024	30/05/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	2.9		9.6		3.6		
Beryllium	DETSC 2301#	0.2	mg/kg	0.3		0.7		0.4		
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2		1.3		< 0.2		
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1		1.4		< 0.1		
Chromium	DETSC 2301#	0.15	mg/kg	11		18		13		
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0		< 1.0		< 1.0		
Copper	DETSC 2301#	0.2	mg/kg	5.7		110		8.3		
Lead	DETSC 2301#	0.3	mg/kg	9.8		210		23		
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05		0.66		< 0.05		
Nickel	DETSC 2301#	1	mg/kg	5.2		15		6.5		
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5		< 0.5		< 0.5		
Vanadium	DETSC 2301#	0.8	mg/kg	11		22		16		
Zinc	DETSC 2301#	1	mg/kg	30		470		45		
Inorganics										
pH	DETSC 2008#		pH	7.6	8.4	7.6	7.9	8.8	8.6	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2		0.9		0.3		
Organic matter	DETSC 2002#	0.1	%	0.4		8.0		1.2		
Sulphate Aqueous Extract as SO ₄ (2:1)	DETSC 2076#	10	mg/l		12		17		< 10	< 10
Sulphur as S, Total	DETSC 2320	0.01	%		0.02		0.02		< 0.01	< 0.01
Sulphate as SO ₄ , Total	DETSC 2321#	0.01	%		0.05		0.03		0.03	0.01
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg			< 1.5		< 1.5		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg			5.7		< 1.2		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg			18		< 1.5		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg			69		< 3.4		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg			92		< 10		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg			< 0.9		< 0.9		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg			< 0.5		< 0.5		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg			5.6		< 0.6		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg			110		< 1.4		
Aromatic C5-C35	DETSC 3072*	10	mg/kg			120		< 10		
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg			210		< 10		
Benzene	DETSC 3321#	0.01	mg/kg			< 0.01		< 0.01		
Ethylbenzene	DETSC 3321#	0.01	mg/kg			< 0.01		< 0.01		
Toluene	DETSC 3321#	0.01	mg/kg			< 0.01		< 0.01		

Summary of Chemical Analysis

Soil Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349601	2349602	2349603	2349604	2349605	2349606	2349607
Sample ID ~	CP01	CP01	CP02	CP02	CP03	CP03	CP03
Depth ~	0.50	1.20-1.70	0.30	1.20-2.00	0.20	2.00-2.50	4.00-4.50
Other ID ~							
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	29/05/2024	29/05/2024	29/05/2024	29/05/2024	30/05/2024	30/05/2024	30/05/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Xylene	DETSC 3321#	0.01	mg/kg			< 0.01		< 0.01	
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03		< 0.03	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03		< 0.03	
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03		0.05		< 0.03	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03		0.22		< 0.03	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03		0.35		< 0.03	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03		0.45		< 0.03	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03		0.31		< 0.03	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03		0.16		< 0.03	
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03		0.20		< 0.03	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03		0.06		< 0.03	
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03		0.38		< 0.03	
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03		< 0.03		< 0.03	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03		0.21		< 0.03	
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03		< 0.03	
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03		0.12		< 0.03	
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03		0.38		< 0.03	
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10		2.9		< 0.10	
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3		< 0.3		< 0.3	

Summary of Chemical Analysis

Soil Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349608	2349609
Sample ID ~	CP05	CP05
Depth ~	0.60	5.00-5.50
Other ID ~		
Sample Type ~	SOIL	SOIL
Sampling Date ~	31/05/2024	31/05/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	3.3	
Beryllium	DETSC 2301#	0.2	mg/kg	0.4	
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	
Chromium	DETSC 2301#	0.15	mg/kg	14	
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	
Copper	DETSC 2301#	0.2	mg/kg	8.4	
Lead	DETSC 2301#	0.3	mg/kg	23	
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	
Nickel	DETSC 2301#	1	mg/kg	6.1	
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	
Vanadium	DETSC 2301#	0.8	mg/kg	16	
Zinc	DETSC 2301#	1	mg/kg	34	
Inorganics					
pH	DETSC 2008#		pH	7.1	8.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.4	
Organic matter	DETSC 2002#	0.1	%	2.0	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		< 10
Sulphur as S, Total	DETSC 2320	0.01	%		0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%		0.01
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		
Aromatic C5-C35	DETSC 3072*	10	mg/kg		
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg		
Benzene	DETSC 3321#	0.01	mg/kg		
Ethylbenzene	DETSC 3321#	0.01	mg/kg		
Toluene	DETSC 3321#	0.01	mg/kg		

Summary of Chemical Analysis

Soil Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349608	2349609
Sample ID ~	CP05	CP05
Depth ~	0.60	5.00-5.50
Other ID ~		
Sample Type ~	SOIL	SOIL
Sampling Date ~	31/05/2024	31/05/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Xylene	DETSC 3321#	0.01	mg/kg		
PAHs					
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349610	2349611
Sample ID ~	CP02	CP03
Depth ~	0.30	0.20
Other ID ~		
Sample Type ~	LEACHATE	LEACHATE
Sampling Date ~	29/05/2024	30/05/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	2.8	0.51
Barium, Dissolved	DETSC 2306	0.26	ug/l	10	4.3
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1
Boron, Dissolved	DETSC 2306*	12	ug/l	34	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	7.8	1.4
Iron, Dissolved	DETSC 2306	5.5	ug/l	41	110
Lead, Dissolved	DETSC 2306	0.09	ug/l	1.2	0.50
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	4.2	0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.51	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	6.4	0.9
Zinc, Dissolved	DETSC 2306	1.3	ug/l	15	2.1
Inorganics					
pH	DETSC 2008		pH	8.0	7.0
Cyanide, Total Low Level	DETSC 2131	0.1	ug/l	0.3	0.7
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	< 1.5	< 1.5
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	1.4	3.1
Aliphatic C16-C21	DETSC 3072*	1	ug/l	19	13
Aliphatic C21-C35	DETSC 3072*	1	ug/l	12	18
Aliphatic C5-C35	DETSC 3072*	10	ug/l	32	36
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	33	36
Benzene	DETSC 3322	1	ug/l	< 1.0	< 1.0
Toluene	DETSC 3322	1	ug/l	< 1.0	< 1.0
Ethylbenzene	DETSC 3322	1	ug/l	< 1.0	< 1.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349610	2349611
Sample ID ~	CP02	CP03
Depth ~	0.30	0.20
Other ID ~		
Sample Type ~	LEACHATE	LEACHATE
Sampling Date ~	29/05/2024	30/05/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Xylene	DETSC 3322	1	ug/l	< 1.0	< 1.0
PAHs					
Acenaphthene	DETSC 3304	0.01	ug/l	0.06	0.04
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	0.03	0.02
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.02	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.03	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.04	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.03	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.02	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.08	0.05
Fluorene	DETSC 3304	0.01	ug/l	0.05	0.05
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.03	< 0.01
Naphthalene	DETSC 3304	0.05	ug/l	0.12	0.10
Phenanthrene	DETSC 3304	0.01	ug/l	0.06	0.06
Pyrene	DETSC 3304	0.01	ug/l	0.07	0.04
PAH Total	DETSC 3304	0.2	ug/l	0.65	0.36

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349610	2349611
Sample ID ~	CP02	CP03
Depth ~	0.30	0.20
Other ID ~		
Sample Type ~	LEACHATE	LEACHATE
Sampling Date ~	29/05/2024	30/05/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
VOCs					
Dichlorodifluoromethane	DETSC 3432	1	ug/l	< 1	< 1
Chloromethane	DETSC 3432	1	ug/l	< 1	< 1
Vinyl Chloride	DETSC 3432	1	ug/l	< 1	< 1
Bromomethane	DETSC 3432	1	ug/l	< 1	< 1
Chloroethane	DETSC 3432	1	ug/l	< 1	< 1
Trichlorofluoromethane	DETSC 3432*	1	ug/l	< 1	< 1
1,1-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1
Methylene Chloride	DETSC 3432*	27	ug/l	< 270	< 2700
Trans-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1
1,1-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1
Cis-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1
2,2-dichloropropane	DETSC 3432*	2	ug/l	< 2	< 2
Bromochloromethane	DETSC 3432	4	ug/l	< 4	< 4
Chloroform	DETSC 3432	1	ug/l	< 1	< 1
1,1,1-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1
1,1-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1
Carbon tetrachloride	DETSC 3432	1	ug/l	< 1	< 1
Benzene	DETSC 3432	1	ug/l	< 1	< 1
1,2-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1
Trichloroethylene	DETSC 3432*	1	ug/l	< 1	< 1
1,2-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1
Dibromomethane	DETSC 3432	1	ug/l	< 1	< 1
Bromodichloromethane	DETSC 3432	4	ug/l	< 4	< 4
cis-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1
Toluene	DETSC 3432	1	ug/l	< 1	< 1
trans-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1
1,1,2-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1
Tetrachloroethylene	DETSC 3432	1	ug/l	< 1	< 1
1,3-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1
Dibromochloromethane	DETSC 3432	1	ug/l	< 1	< 1
1,2-dibromoethane	DETSC 3432	1	ug/l	< 1	< 1
Chlorobenzene	DETSC 3432	1	ug/l	< 1	< 1
1,1,1,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1
Ethylbenzene	DETSC 3432	1	ug/l	< 1	< 1
m+p-Xylene	DETSC 3432	2	ug/l	< 2	< 2
o-Xylene	DETSC 3432	1	ug/l	< 1	< 1
Styrene	DETSC 3432	1	ug/l	< 1	< 1
Bromoform	DETSC 3432	1	ug/l	< 1	< 1
Isopropylbenzene	DETSC 3432	1	ug/l	< 1	< 1
1,1,2,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1
Bromobenzene	DETSC 3432	1	ug/l	< 1	< 1

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349610	2349611
Sample ID ~	CP02	CP03
Depth ~	0.30	0.20
Other ID ~		
Sample Type ~	LEACHATE	LEACHATE
Sampling Date ~	29/05/2024	30/05/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
1,2,3-trichloropropane	DETSC 3432	1	ug/l	< 1	< 1
n-propylbenzene	DETSC 3432	1	ug/l	< 1	< 1
2-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1
1,3,5-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1
4-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1
Tert-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1
1,2,4-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1
sec-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1
p-isopropyltoluene	DETSC 3432	1	ug/l	< 1	< 1
1,3-dichlorobenzene	DETSC 3432	2	ug/l	< 2	< 2
1,4-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1
n-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1
1,2-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1
1,2-dibromo-3-chloropropane	DETSC 3432	1	ug/l	< 1	< 1
1,2,4-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1
Hexachlorobutadiene	DETSC 3432	1	ug/l	< 1	< 1
1,2,3-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1
MTBE	DETSC 3432*	1	ug/l	< 1	< 1
SVOCs					
Phenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Aniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2-Chlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Benzyl Alcohol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Bis(2-chloroisopropyl)ether	DETSC 3434*	1	ug/l	< 1.0	< 1.0
3&4-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Bis(2-chloroethoxy)methane	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2,4-Dimethylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2,4-Dichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
1,2,4-Trichlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
4-Chloro-3-methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Hexachlorocyclopentadiene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2,4,6-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2,4,5-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2-Chloronaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2,4-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
3-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0
4-Nitrophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Dibenzofuran	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2,6-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2349610	2349611
Sample ID ~	CP02	CP03
Depth ~	0.30	0.20
Other ID ~		
Sample Type ~	LEACHATE	LEACHATE
Sampling Date ~	29/05/2024	30/05/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
2,3,4,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Diethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0
4-Chlorophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0
4-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Diphenylamine	DETSC 3434*	1	ug/l	< 1.0	< 1.0
4-Bromophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Hexachlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Bis(2-ethylhexyl)ester	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Pentachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Di-n-butylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Butylbenzylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Bis(2-ethylhexyl)phthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Di-n-octylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0
1,4-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Dimethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0
1,3-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
2,3,5,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Azobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0
Carbazole	DETSC 3434*	1	ug/l	< 1.0	< 1.0
1-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0

Summary of Asbestos Analysis Soil Samples

Our Ref 24-11934

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2349601	CP01 0.50	SOIL	NAD	none	Darryl Fletcher
2349603	CP02 0.30	SOIL	Chrysotile	Bundles of Chrysotile fibres	Darryl Fletcher
2349605	CP03 0.20	SOIL	NAD	none	Darryl Fletcher
2349608	CP05 0.60	SOIL	NAD	none	Darryl Fletcher

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 24-11934
 Client Ref ~ 8917
 Contract ~ Bugley Farm, Warminster

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2349601	CP01 0.50 SOIL	29/05/24	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2349602	CP01 1.20-1.70 SOIL	29/05/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2349603	CP02 0.30 SOIL	29/05/24	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2349604	CP02 1.20-2.00 SOIL	29/05/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2349605	CP03 0.20 SOIL	30/05/24	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2349606	CP03 2.00-2.50 SOIL	30/05/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2349607	CP03 4.00-4.50 SOIL	30/05/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2349608	CP05 0.60 SOIL	31/05/24	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2349609	CP05 5.00-5.50 SOIL	31/05/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2349610	CP02 0.30 LEACHATE	29/05/24	GJ 250ml, GJ 60ml, PT 1L	Aliphatics/Aromatics (4 days), pH/Cond (1 days), PAH MS (4 days), SVOC (7 days)	VOC
2349611	CP03 0.20 LEACHATE	30/05/24	GJ 250ml, GJ 60ml, PT 1L	Aliphatics/Aromatics (4 days), pH/Cond (1 days), PAH MS (4 days), SVOC (7 days)	VOC

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

Information in Support of the Analytical Results

Our Ref 24-11934

Client Ref ~ 8917

Contract ~ Bugley Farm, Warminster

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report



Certificate of Analysis

Certificate Number 24-12083

Issued: 20-Jun-24

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 24-12083

Client Reference ~ 8917

Order No ~ 12626

Contract Title ~ BUGLEY FARM

Description 19 Soil samples, 3 Leachate prepared by DETS samples.

Date Received 13-Jun-24

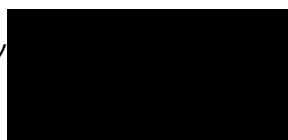
Date Started 13-Jun-24

Date Completed 20-Jun-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Kirk Bridgewood
General Manager



2139

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Symbol key at end of report Tel: 01207 582333 • email: info@dets.co.uk • www.dets.co.uk

Page 1 of 17

Summary of Chemical Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350624	2350625	2350626	2350627	2350628	2350629
Sample ID ~	R01	R02	WS01	WS03	WS03	WS04
Depth ~	0.60	0.30	0.30	0.60	3.60	2.60
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	04/06/2024	04/06/2024	04/06/2024	06/06/2024	06/06/2024	06/06/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	22	5.3	4.8	3.9		
Beryllium	DETSC 2301#	0.2	mg/kg	0.2	0.6	0.6	0.3		
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.5	0.5	< 0.2		
Cadmium	DETSC 2301#	0.1	mg/kg	1.3	0.3	0.2	< 0.1		
Chromium	DETSC 2301#	0.15	mg/kg	11	18	16	13		
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0		
Copper	DETSC 2301#	0.2	mg/kg	15	15	9.4	3.7		
Lead	DETSC 2301#	0.3	mg/kg	65	27	22	7.4		
Mercury	DETSC 2325#	0.05	mg/kg	0.07	< 0.05	< 0.05	< 0.05		
Nickel	DETSC 2301#	1	mg/kg	4.7	8.9	8.3	6.1		
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5		
Vanadium	DETSC 2301#	0.8	mg/kg	8.8	21	20	19		
Zinc	DETSC 2301#	1	mg/kg	160	190	110	40		
Inorganics									
pH	DETSC 2008#		pH	8.2	7.6	10.5	7.6	8.9	8.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3	0.3	0.2	< 0.1		
Organic matter	DETSC 2002#	0.1	%	2.3	1.9	1.4	0.2		
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	19		100	13	16	13
Sulphur as S, Total	DETSC 2320	0.01	%	0.06		0.03	< 0.01	0.02	0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.11		0.07	0.01	0.05	0.04
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01			
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01			
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01			
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5		2.4			
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2		75			
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5		170			
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4		53			
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10		300			
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01			
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01			
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01		< 0.01			
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9		3.2			
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5		95			
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6		190			
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4		56			
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10		340			
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10		640			
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01		< 0.01			
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01		< 0.01			
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01		< 0.01			

Summary of Chemical Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350624	2350625	2350626	2350627	2350628	2350629
Sample ID ~	R01	R02	WS01	WS03	WS03	WS04
Depth ~	0.60	0.30	0.30	0.60	3.60	2.60
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	04/06/2024	04/06/2024	04/06/2024	06/06/2024	06/06/2024	06/06/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01		< 0.01			
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.12	< 0.03		
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04	< 0.03		
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.04	< 0.03		
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.13	< 0.03	< 0.03		
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.14	< 0.03	< 0.03		
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.04	0.19	< 0.03	< 0.03		
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	0.09	< 0.03	< 0.03		
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.07	< 0.03	< 0.03		
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	0.11	< 0.03	< 0.03		
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03		
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.25	0.06	< 0.03		
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.33	< 0.03		
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.04	0.08	< 0.03	< 0.03		
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03		
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.08	0.88	< 0.03		
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.28	0.29	< 0.03		
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	1.4	1.8	< 0.10		
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.4	< 0.3	< 0.3	< 0.3		

Summary of Chemical Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350630	2350631	2350632	2350633	2350634	2350635
Sample ID ~	WS05	WS06	WS06	WS07	WS08	WS09
Depth ~	1.60	1.00	2.20	1.00	2.00	1.00
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	06/06/2024	06/06/2024	06/06/2024	05/06/2024	05/06/2024	05/06/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg						
Beryllium	DETSC 2301#	0.2	mg/kg						
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg						
Cadmium	DETSC 2301#	0.1	mg/kg						
Chromium	DETSC 2301#	0.15	mg/kg						
Chromium, Hexavalent	DETSC 2204*	1	mg/kg						
Copper	DETSC 2301#	0.2	mg/kg						
Lead	DETSC 2301#	0.3	mg/kg						
Mercury	DETSC 2325#	0.05	mg/kg						
Nickel	DETSC 2301#	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg						
Vanadium	DETSC 2301#	0.8	mg/kg						
Zinc	DETSC 2301#	1	mg/kg						
Inorganics									
pH	DETSC 2008#		pH	7.8	7.8	7.5	6.6	6.7	6.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg						
Organic matter	DETSC 2002#	0.1	%						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	< 10	12	10	12	18	18
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01	< 0.01	< 0.01	0.01	< 0.01	0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.02	0.02	0.03	0.04	0.01	0.02
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg						
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg						
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg						
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg						
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg						
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg						
Aliphatic C5-C35	DETSC 3072*	10	mg/kg						
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg						
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg						
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg						
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg						
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg						
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg						
Aromatic C5-C35	DETSC 3072*	10	mg/kg						
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg						
Benzene	DETSC 3321#	0.01	mg/kg						
Ethylbenzene	DETSC 3321#	0.01	mg/kg						
Toluene	DETSC 3321#	0.01	mg/kg						

Summary of Chemical Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350630	2350631	2350632	2350633	2350634	2350635
Sample ID ~	WS05	WS06	WS06	WS07	WS08	WS09
Depth ~	1.60	1.00	2.20	1.00	2.00	1.00
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	06/06/2024	06/06/2024	06/06/2024	05/06/2024	05/06/2024	05/06/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Xylene	DETSC 3321#	0.01	mg/kg						
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg						
Acenaphthylene	DETSC 3303#	0.03	mg/kg						
Anthracene	DETSC 3303	0.03	mg/kg						
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg						
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg						
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg						
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg						
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg						
Chrysene	DETSC 3303	0.03	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg						
Fluoranthene	DETSC 3303#	0.03	mg/kg						
Fluorene	DETSC 3303	0.03	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg						
Naphthalene	DETSC 3303#	0.03	mg/kg						
Phenanthrene	DETSC 3303#	0.03	mg/kg						
Pyrene	DETSC 3303#	0.03	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						

Summary of Chemical Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350636	2350637	2350638	2350639	2350640	2350641
Sample ID ~	WS10	WS10	WS11	WS11	WS12	WS12
Depth ~	0.60	2.50	0.60	1.00	0.60	1.00
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	05/06/2024	05/06/2024	05/06/2024	05/06/2024	05/06/2024	05/06/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg						
Beryllium	DETSC 2301#	0.2	mg/kg						
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg						
Cadmium	DETSC 2301#	0.1	mg/kg						
Chromium	DETSC 2301#	0.15	mg/kg						
Chromium, Hexavalent	DETSC 2204*	1	mg/kg						
Copper	DETSC 2301#	0.2	mg/kg						
Lead	DETSC 2301#	0.3	mg/kg						
Mercury	DETSC 2325#	0.05	mg/kg						
Nickel	DETSC 2301#	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg						
Vanadium	DETSC 2301#	0.8	mg/kg						
Zinc	DETSC 2301#	1	mg/kg						
Inorganics									
pH	DETSC 2008#		pH	6.0	6.9	6.1	6.2	5.7	6.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg						
Organic matter	DETSC 2002#	0.1	%						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	14	15	11	11	15	13
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.02	< 0.01	0.02	0.01	0.04	0.02
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg						
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg						
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg						
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg						
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg						
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg						
Aliphatic C5-C35	DETSC 3072*	10	mg/kg						
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg						
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg						
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg						
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg						
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg						
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg						
Aromatic C5-C35	DETSC 3072*	10	mg/kg						
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg						
Benzene	DETSC 3321#	0.01	mg/kg						
Ethylbenzene	DETSC 3321#	0.01	mg/kg						
Toluene	DETSC 3321#	0.01	mg/kg						

Summary of Chemical Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350636	2350637	2350638	2350639	2350640	2350641
Sample ID ~	WS10	WS10	WS11	WS11	WS12	WS12
Depth ~	0.60	2.50	0.60	1.00	0.60	1.00
Other ID ~						
Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	05/06/2024	05/06/2024	05/06/2024	05/06/2024	05/06/2024	05/06/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Xylene	DETSC 3321#	0.01	mg/kg						
PAHs									
Acenaphthene	DETSC 3303#	0.03	mg/kg						
Acenaphthylene	DETSC 3303#	0.03	mg/kg						
Anthracene	DETSC 3303	0.03	mg/kg						
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg						
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg						
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg						
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg						
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg						
Chrysene	DETSC 3303	0.03	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg						
Fluoranthene	DETSC 3303#	0.03	mg/kg						
Fluorene	DETSC 3303	0.03	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg						
Naphthalene	DETSC 3303#	0.03	mg/kg						
Phenanthrene	DETSC 3303#	0.03	mg/kg						
Pyrene	DETSC 3303#	0.03	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						

Summary of Chemical Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350642
Sample ID ~	WS12
Depth ~	2.10
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	05/06/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	
Beryllium	DETSC 2301#	0.2	mg/kg	
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	
Cadmium	DETSC 2301#	0.1	mg/kg	
Chromium	DETSC 2301#	0.15	mg/kg	
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	
Copper	DETSC 2301#	0.2	mg/kg	
Lead	DETSC 2301#	0.3	mg/kg	
Mercury	DETSC 2325#	0.05	mg/kg	
Nickel	DETSC 2301#	1	mg/kg	
Selenium	DETSC 2301#	0.5	mg/kg	
Vanadium	DETSC 2301#	0.8	mg/kg	
Zinc	DETSC 2301#	1	mg/kg	
Inorganics				
pH	DETSC 2008#		pH	6.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	
Organic matter	DETSC 2002#	0.1	%	
Sulphate Aqueous Extract as SO ₄ (2:1)	DETSC 2076#	10	mg/l	13
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01
Sulphate as SO ₄ , Total	DETSC 2321#	0.01	%	0.02
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	
Aromatic C5-C35	DETSC 3072*	10	mg/kg	
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	
Benzene	DETSC 3321#	0.01	mg/kg	
Ethylbenzene	DETSC 3321#	0.01	mg/kg	
Toluene	DETSC 3321#	0.01	mg/kg	

Summary of Chemical Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350642
Sample ID ~	WS12
Depth ~	2.10
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	05/06/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
Xylene	DETSC 3321#	0.01	mg/kg	
PAHs				
Acenaphthene	DETSC 3303#	0.03	mg/kg	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	
Anthracene	DETSC 3303	0.03	mg/kg	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	
Chrysene	DETSC 3303	0.03	mg/kg	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	
Fluoranthene	DETSC 3303#	0.03	mg/kg	
Fluorene	DETSC 3303	0.03	mg/kg	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	
Naphthalene	DETSC 3303#	0.03	mg/kg	
Phenanthrene	DETSC 3303#	0.03	mg/kg	
Pyrene	DETSC 3303#	0.03	mg/kg	
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350643	2350644	2350645
Sample ID ~	R01	WS01	WS03
Depth ~	0.60	0.30	0.60
Other ID ~			
Sample Type ~	LEACHATE	LEACHATE	LEACHATE
Sampling Date ~	04/06/2024	04/06/2024	06/06/2024
Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
Preparation						
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y
Metals						
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	3.0	6.4	0.42
Barium, Dissolved	DETSC 2306	0.26	ug/l	18	11	0.60
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1	< 0.1
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.41	0.56	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.2	2.8	0.5
Iron, Dissolved	DETSC 2306	5.5	ug/l	77	19	410
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.94	0.12	0.27
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	0.70	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	1.2	11	0.9
Zinc, Dissolved	DETSC 2306	1.3	ug/l	3.6	< 1.3	1.5
Inorganics						
pH	DETSC 2008		pH	6.4	8.3	8.1
Cyanide, Total Low Level	DETSC 2131	0.1	ug/l	0.2	< 0.1	0.3
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	< 1.5	< 1.5	< 1.5
Petroleum Hydrocarbons						
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10
Benzene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0
Toluene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0
Ethylbenzene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350643	2350644	2350645
Sample ID ~	R01	WS01	WS03
Depth ~	0.60	0.30	0.60
Other ID ~			
Sample Type ~	LEACHATE	LEACHATE	LEACHATE
Sampling Date ~	04/06/2024	04/06/2024	06/06/2024
Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
Xylene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0
PAHs						
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20	< 0.20

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350643	2350644	2350645
Sample ID ~	R01	WS01	WS03
Depth ~	0.60	0.30	0.60
Other ID ~			
Sample Type ~	LEACHATE	LEACHATE	LEACHATE
Sampling Date ~	04/06/2024	04/06/2024	06/06/2024
Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
VOCs						
Dichlorodifluoromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Chloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Vinyl Chloride	DETSC 3432	1	ug/l	< 1	< 1	< 1
Bromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Chloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Trichlorofluoromethane	DETSC 3432*	1	ug/l	< 1	< 1	< 1
1,1-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Methylene Chloride	DETSC 3432*	27	ug/l	< 27	< 27	< 27
Trans-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Cis-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
2,2-dichloropropane	DETSC 3432*	2	ug/l	< 2	< 2	< 2
Bromochloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4
Chloroform	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1,1-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Carbon tetrachloride	DETSC 3432	1	ug/l	< 1	< 1	< 1
Benzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Trichloroethylene	DETSC 3432*	1	ug/l	< 1	< 1	< 1
1,2-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Dibromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Bromodichloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4
cis-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Toluene	DETSC 3432	1	ug/l	< 1	< 1	< 1
trans-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1,2-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Tetrachloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,3-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Dibromochloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2-dibromoethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Chlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1,1,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Ethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
m+p-Xylene	DETSC 3432	2	ug/l	< 2	< 2	< 2
o-Xylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Styrene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Bromoform	DETSC 3432	1	ug/l	< 1	< 1	< 1
Isopropylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1,2,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Bromobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350643	2350644	2350645
Sample ID ~	R01	WS01	WS03
Depth ~	0.60	0.30	0.60
Other ID ~			
Sample Type ~	LEACHATE	LEACHATE	LEACHATE
Sampling Date ~	04/06/2024	04/06/2024	06/06/2024
Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
1,2,3-trichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1
n-propylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
2-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,3,5-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
4-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Tert-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2,4-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
sec-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
p-isopropyltoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,3-dichlorobenzene	DETSC 3432	2	ug/l	< 2	< 2	< 2
1,4-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
n-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2-dibromo-3-chloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2,4-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Hexachlorobutadiene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2,3-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
MTBE	DETSC 3432*	1	ug/l	< 1	< 1	< 1
SVOCs						
Phenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Aniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Chlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Benzyl Alcohol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Bis(2-chloroisopropyl)ether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
3&4-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Bis(2-chloroethoxy)methane	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4-Dimethylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4-Dichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Chloro-3-methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Hexachlorocyclopentadiene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4,6-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4,5-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Chloronaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
3-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Nitrophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Dibenzofuran	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,6-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	2350643	2350644	2350645
Sample ID ~	R01	WS01	WS03
Depth ~	0.60	0.30	0.60
Other ID ~			
Sample Type ~	LEACHATE	LEACHATE	LEACHATE
Sampling Date ~	04/06/2024	04/06/2024	06/06/2024
Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
2,3,4,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Diethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Chlorophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Diphenylamine	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Bromophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Hexachlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)ester	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Pentachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Di-n-butylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Butylbenzylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)phthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Di-n-octylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
1,4-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Dimethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
1,3-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,3,5,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Azobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Carbazole	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
1-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0

Summary of Asbestos Analysis

Soil Samples

Our Ref 24-12083

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2350624	R01 0.60	SOIL	NAD	none	Vicky Convery
2350625	R02 0.30	SOIL	NAD	none	Vicky Convery
2350626	WS01 0.30	SOIL	NAD	none	Vicky Convery
2350627	WS03 0.60	SOIL	NAD	none	Vicky Convery

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected.

Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 24-12083
 Client Ref ~ 8917
 Contract ~ BUGLEY FARM

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2350624	R01 0.60 SOIL	04/06/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	Aliphatics/Aromatics, BTEX / C5-C10, Naphthalene, PAH MS
2350625	R02 0.30 SOIL	04/06/24	GJ 250ml, PT 1L	pH + Conductivity (7 days)	
2350626	WS01 0.30 SOIL	04/06/24	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350627	WS03 0.60 SOIL	06/06/24	GJ 250ml, GJ 60ml, PT 1L		
2350628	WS03 3.60 SOIL	06/06/24	PT 1L		
2350629	WS04 2.60 SOIL	06/06/24	PT 1L		
2350630	WS05 1.60 SOIL	06/06/24	PT 1L		
2350631	WS06 1.00 SOIL	06/06/24	GJ 250ml, GJ 60ml, PT 1L		
2350632	WS06 2.20 SOIL	06/06/24	PT 1L		
2350633	WS07 1.00 SOIL	05/06/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350634	WS08 2.00 SOIL	05/06/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350635	WS09 1.00 SOIL	05/06/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350636	WS10 0.60 SOIL	05/06/24	GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350637	WS10 2.50 SOIL	05/06/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350638	WS11 0.60 SOIL	05/06/24	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350639	WS11 1.00 SOIL	05/06/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350640	WS12 0.60 SOIL	05/06/24	GJ 250ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350641	WS12 1.00 SOIL	05/06/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350642	WS12 2.10 SOIL	05/06/24	PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2350643	R01 0.60 LEACHATE	04/06/24	PT 1L	Aliphatics/Aromatics (4 days), pH/Cond (1 days), PAH MS (4 days), SVOC (7 days)	Aliphatics/Aromatics, BTEX / C5-C10, Metals (Soluble) ICPMS, Naphthalene, PAH MS, SVOC
2350644	WS01 0.30 LEACHATE	04/06/24	GJ 250ml, GJ 60ml, PT 1L	Aliphatics/Aromatics (4 days), pH/Cond (1 days), PAH MS (4 days), SVOC (7 days)	VOC
2350645	WS03 0.60 LEACHATE	06/06/24	GJ 250ml, GJ 60ml, PT 1L	Aliphatics/Aromatics (4 days), pH/Cond (1 days), PAH MS (4 days)	VOC

Information in Support of the Analytical Results

Our Ref 24-12083

Client Ref ~ 8917

Contract ~ BUGLEY FARM

Key: P-Plastic T-Tub G-Glass J-Jar

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Appendix K



Certificate of Analysis

Certificate Number 24-13232

Issued: 04-Jul-24

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 24-13232

Client Reference ~ 8917

Order No ~ 12679

Contract Title ~ Bugley Farm, Warminster

Description 6 Water No Information Supplied samples.

Date Received 28-Jun-24

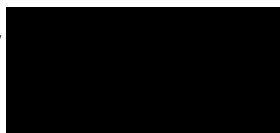
Date Started 28-Jun-24

Date Completed 04-Jul-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Kirk Bridgewood
General Manager



2139

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Symbol key at end of report Tel: 01207 582333 • email: info@dets.co.uk • www.dets.co.uk

Page 1 of 7

Summary of Chemical Analysis

Water Samples

Our Ref 24-13232

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2357373	2357374	2357375	2357376	2357377	2357378
Sample ID ~	R001	R002	R003	WS02	CP03	CP05
Depth ~						
Other ID ~						
Sample Type ~	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN
Sampling Date ~	24/06/2024	24/06/2024	25/06/2024	25/06/2024	24/06/2024	25/06/2024
Sampling Time ~	00PM	00PM	00PM	00PM	00PM	00PM

Test	Method	LOD	Units						
Metals									
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	4.5	0.51	0.49	4.8	1.3	1.4
Barium, Dissolved	DETSC 2306	0.26	ug/l	99	47	38	190	46	120
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron, Dissolved	DETSC 2306*	12	ug/l	50	41	33	63	26	57
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	0.04	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.63	0.38	0.36	< 0.25	< 0.25	0.30
Copper, Dissolved	DETSC 2306	0.4	ug/l	4.5	2.5	2.1	1.2	1.4	3.5
Iron, Dissolved	DETSC 2306	5.5	ug/l	33	14	11	12	15	40
Iron, Total	DETSC 2306*	5.5	ug/l	2200	74000	1900	470000	27000	8200
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.49	0.19	< 0.09	0.13	0.16	0.27
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	4.1	1.6	2.2	7.6	5.7	4.2
Selenium, Dissolved	DETSC 2306	0.25	ug/l	1.1	0.41	0.35	0.40	< 0.25	0.40
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	1.5	< 0.6	< 0.6	< 0.6	< 0.6	1.7
Zinc, Dissolved	DETSC 2306	1.3	ug/l	97	14	17	95	16	100
Inorganics									
pH	DETSC 2008		pH	6.9	6.9	7.0	6.8	6.9	7.0
Cyanide, Free Low Level	DETSC 2131	0.1	ug/l	0.3	0.2	0.2	0.5	0.3	0.5
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	2.6	3.1	2.6	4.1	3.9	3.6
Sulphate as SO4	DETSC 2055	100	ug/l	7500	17000	14000	34000	17000	16000
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis

Water Samples

Our Ref 24-13232

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2357373	2357374	2357375	2357376	2357377	2357378
Sample ID ~	R001	R002	R003	WS02	CP03	CP05
Depth ~						
Other ID ~						
Sample Type ~	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN
Sampling Date ~	24/06/2024	24/06/2024	25/06/2024	25/06/2024	24/06/2024	25/06/2024
Sampling Time ~	00PM	00PM	00PM	00PM	00PM	00PM

Test	Method	LOD	Units						
Xylene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs									
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.10	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.10	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.10	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	0.01	< 0.01	0.13	0.02
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.24	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.35	0.02
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.31	0.02
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	0.14	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	0.01	< 0.01	0.14	0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.10	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.01	< 0.01	0.02	< 0.01	0.24	0.03
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.10	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	0.02	< 0.01	0.32	0.02
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	0.07	< 0.50	< 0.05
Phenanthrene	DETSC 3304	0.01	ug/l	0.02	< 0.01	0.01	0.01	0.24	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	0.02	< 0.01	0.03	< 0.01	0.30	0.03
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	2.4	< 0.20

Summary of Chemical Analysis

Water Samples

Our Ref 24-13232

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2357373	2357374	2357375	2357376	2357377	2357378
Sample ID ~	R001	R002	R003	WS02	CP03	CP05
Depth ~						
Other ID ~						
Sample Type ~	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN
Sampling Date ~	24/06/2024	24/06/2024	25/06/2024	25/06/2024	24/06/2024	25/06/2024
Sampling Time ~	00PM	00PM	00PM	00PM	00PM	00PM

Test	Method	LOD	Units						
VOCs									
Dichlorodifluoromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Bromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Trichlorofluoromethane	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Methylene Chloride	DETSC 3432*	27	ug/l	< 27	< 27	< 27	< 27	< 27	< 27
Trans-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Cis-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
2,2-dichloropropane	DETSC 3432*	2	ug/l	< 2	< 2	< 2	< 2	< 2	< 2
Bromochloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4	< 4	< 4	< 4
Chloroform	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Carbon tetrachloride	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Benzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4	< 4	< 4	< 4
cis-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,3-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dibromoethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
m+p-Xylene	DETSC 3432	2	ug/l	< 2	< 2	< 2	< 2	< 2	< 2
o-Xylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Isopropylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1

Summary of Chemical Analysis

Water Samples

Our Ref 24-13232

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2357373	2357374	2357375	2357376	2357377	2357378
Sample ID ~	R001	R002	R003	WS02	CP03	CP05
Depth ~						
Other ID ~						
Sample Type ~	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN
Sampling Date ~	24/06/2024	24/06/2024	25/06/2024	25/06/2024	24/06/2024	25/06/2024
Sampling Time ~	00PM	00PM	00PM	00PM	00PM	00PM

Test	Method	LOD	Units						
1,2,3-trichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
n-propylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
2-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
4-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Tert-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
sec-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
p-isopropyltoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,3-dichlorobenzene	DETSC 3432	2	ug/l	< 2	< 2	< 2	< 2	< 2	< 2
1,4-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
n-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dibromo-3-chloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
MTBE	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1

SVOCs									
Phenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Aniline	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2-Chlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Benzyl Alcohol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Bis(2-chloroisopropyl)ether	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
3&4-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Bis(2-chloroethoxy)methane	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2,4-Dimethylphenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2,4-Dichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
4-Chloro-3-methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Hexachlorocyclopentadiene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2,4,6-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2,4,5-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2-Chloronaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2,4-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
3-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
4-Nitrophenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Dibenzofuran	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2,6-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0

Summary of Chemical Analysis

Water Samples

Our Ref 24-13232

Client Ref ~ 8917

Contract Title ~ Bugley Farm, Warminster

Lab No	2357373	2357374	2357375	2357376	2357377	2357378
Sample ID ~	R001	R002	R003	WS02	CP03	CP05
Depth ~						
Other ID ~						
Sample Type ~	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN	WATER UNKNOWN
Sampling Date ~	24/06/2024	24/06/2024	25/06/2024	25/06/2024	24/06/2024	25/06/2024
Sampling Time ~	00PM	00PM	00PM	00PM	00PM	00PM

Test	Method	LOD	Units						
2,3,4,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Diethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
4-Chlorophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
4-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Diphenylamine	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
4-Bromophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Hexachlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Bis(2-ethylhexyl)ester	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Pentachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Di-n-butylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Butylbenzylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Bis(2-ethylhexyl)phthalate	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Di-n-octylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
1,4-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Dimethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
1,3-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
2,3,5,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Azobenzene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
Carbazole	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0
1-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0

2357373, 2357374, 2357375, 2357376, 2357377,
2357378 - WATER UNKNOWN testing is not
accredited

Information in Support of the Analytical Results

Our Ref 24-13232

Client Ref ~ 8917

Contract ~ Bugley Farm, Warminster

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2357373	R001 WATER	24/06/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2357374	R002 WATER	24/06/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2357375	R003 WATER	25/06/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2357376	WS02 WATER	25/06/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2357377	CP03 WATER	24/06/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2357378	CP05 WATER	25/06/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	

Key: G-Glass P-Plastic B-Bottle V-Vial

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report



Certificate of Analysis

Certificate Number 24-14443

Issued: 18-Jul-24

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 24-14443

Client Reference ~ 8917

Order No ~ 12721

Contract Title ~ BUGLEY FARM , WARMINISTER

Description 6 Other Water samples.

Date Received 12-Jul-24

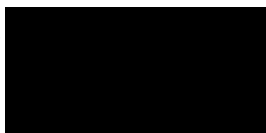
Date Started 12-Jul-24

Date Completed 18-Jul-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Kirk Bridgewood
General Manager



2139

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Symbol key at end of report Tel: 01207 582333 • email: info@dets.co.uk • www.dets.co.uk

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Summary of Chemical Analysis Water Samples

Our Ref 24-14443

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM , WARMINISTER

Lab No	2363769	2363770	2363771	2363772	2363773	2363774
Sample ID ~	R003	WS02	CP05	R002	CP03	R001
Depth ~	4.00	2.00	4.20	4.00	4.00	6.50
Other ID ~						
Sample Type ~	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER
Sampling Date ~	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.47	4.6	1.5	0.56	0.77	4.8
Barium, Dissolved	DETSC 2306	0.26	ug/l	150	140	190	56	50	28
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron, Dissolved	DETSC 2306*	12	ug/l	51	60	58	44	33	33
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.28	< 0.25	0.42	0.39	< 0.25	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.9	< 0.4	4.3	2.8	1.9	3.5
Iron, Dissolved	DETSC 2306	5.5	ug/l	14	14	200	120	42	51
Iron, Total	DETSC 2306*	5.5	ug/l	750	22000	530	3700	370	110
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.18	< 0.09	0.62	0.60	< 0.09	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	2.6	6.7	4.6	2.1	5.0	3.8
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.31	0.33	0.33	< 0.25	< 0.25	0.58
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	< 0.6	< 0.6	2.1	< 0.6	< 0.6	1.2
Zinc, Dissolved	DETSC 2306	1.3	ug/l	110	32	140	25	13	18
Inorganics									
pH	DETSC 2008		pH	6.9	6.8	6.6	6.9	6.8	7.1
Cyanide, Free Low Level	DETSC 2131	0.1	ug/l	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	< 100.0	< 100.0	< 100.0	< 100.0	< 100.0	< 100.0
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylene	DETSC 3322	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis

Water Samples

Our Ref 24-14443

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM , WARMINISTER

Lab No	2363769	2363770	2363771	2363772	2363773	2363774
Sample ID ~	R003	WS02	CP05	R002	CP03	R001
Depth ~	4.00	2.00	4.20	4.00	4.00	6.50
Other ID ~						
Sample Type ~	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER
Sampling Date ~	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
PAHs									
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	0.07	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

Summary of Chemical Analysis

Water Samples

Our Ref 24-14443

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM , WARMINISTER

Lab No	2363769	2363770	2363771	2363772	2363773	2363774
Sample ID ~	R003	WS02	CP05	R002	CP03	R001
Depth ~	4.00	2.00	4.20	4.00	4.00	6.50
Other ID ~						
Sample Type ~	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER
Sampling Date ~	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
VOCs									
Dichlorodifluoromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Bromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Trichlorofluoromethane	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Methylene Chloride	DETSC 3432*	27	ug/l	< 27	< 27	< 27	< 27	< 27	< 27
Trans-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Cis-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
2,2-dichloropropane	DETSC 3432*	2	ug/l	< 2	< 2	< 2	< 2	< 2	< 2
Bromochloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4	< 4	< 4	< 4
Chloroform	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Carbon tetrachloride	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Benzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4	< 4	< 4	< 4
cis-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,3-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dibromoethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
m+p-Xylene	DETSC 3432	2	ug/l	< 2	< 2	< 2	< 2	< 2	< 2
o-Xylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Isopropylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1

Summary of Chemical Analysis

Water Samples

Our Ref 24-14443

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM , WARMINISTER

Lab No	2363769	2363770	2363771	2363772	2363773	2363774
Sample ID ~	R003	WS02	CP05	R002	CP03	R001
Depth ~	4.00	2.00	4.20	4.00	4.00	6.50
Other ID ~						
Sample Type ~	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER
Sampling Date ~	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Bromobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-trichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
n-propylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
2-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
4-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Tert-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
sec-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
p-isopropyltoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,3-dichlorobenzene	DETSC 3432	2	ug/l	< 2	< 2	< 2	< 2	< 2	< 2
1,4-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
n-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2-dibromo-3-chloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
MTBE	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1	< 1
SVOCs									
Phenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzyl Alcohol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-chloroisopropyl)ether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3&4-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-chloroethoxy)methane	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dimethylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chloro-3-methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorocyclopentadiene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4,6-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4,5-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloronaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Nitrophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis Water Samples

Our Ref 24-14443

Client Ref ~ 8917

Contract Title ~ BUGLEY FARM , WARMINISTER

Lab No	2363769	2363770	2363771	2363772	2363773	2363774
Sample ID ~	R003	WS02	CP05	R002	CP03	R001
Depth ~	4.00	2.00	4.20	4.00	4.00	6.50
Other ID ~						
Sample Type ~	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER	WATER OTHER
Sampling Date ~	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Dibenzofuran	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,6-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,3,4,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Diethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Diphenylamine	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Bromophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)ester	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Pentachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Di-n-butylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)phthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Di-n-octylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dimethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,3,5,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Azobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbazole	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

2363769, 2363770, 2363771, 2363772, 2363773,
2363774 - WATER OTHER testing is not accredited

Information in Support of the Analytical Results

Our Ref 24-14443
 Client Ref ~ 8917
 Contract ~ BUGLEY FARM , WARMINISTER

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2363769	R003 4.00 WATER	10/07/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2363770	WS02 2.00 WATER	10/07/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2363771	CP05 4.20 WATER	10/07/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2363772	R002 4.00 WATER	10/07/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2363773	CP03 4.00 WATER	10/07/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	
2363774	R001 6.50 WATER	10/07/24	GB 1L, GV, PB 1L	pH/Cond (1 days)	

Key: G-Glass P-Plastic B-Bottle V-Vial

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Appendix L



Earth Science Partnership Ltd
33, CARDIFF ROAD,
TAFFS WELL, CF15 7RB

Groundsure ESP-3375072
Reference:
Your Reference: ESP6271t_PO5501_DT

Report Date 14 Oct 2016

Report Delivery Email - pdf
Method:

Groundsure Enviro Insight

Address: LAND AT BUGLEY BARTON FARM, VICTORIA ROAD, WARMINSTER, BA12 7RB

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact the Groundsure helpline on 08444 159 000 quoting the above report reference number.

Yours faithfully,

Earth Science Partnership Ltd

Enc.
Groundsure Enviroinsight

Groundsure Enviro Insight

Address: LAND AT BUGLEY BARTON FARM, VICTORIA ROAD, WARMINSTER, BA12 7RB
Date: 14 Oct 2016
Reference: ESP-3375072
Client: Earth Science Partnership Ltd



Aerial Photograph Capture date: 18-May-2014
Grid Reference: 385329,144645
Site Size: 9.83ha

Report Reference: ESP-3375072
Client Reference: ESP6271t_PO5501_DT

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	0	6	3
1.2 Additional Information – Historical Tank Database	0	0	0	9
1.3 Additional Information – Historical Energy Features Database	0	0	7	11
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Potentially Infilled Land	3	0	4	15
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	1	1	3
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	1	0	0	0
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
---	---------	-------	--------	---------	----------	-----------

3.1 Landfill Sites						
3.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency Historic Landfill Sites	0	0	0	0	1	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	0	0	2	1

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	1	5	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	3
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	1	0	0	1	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	2	0	2	1	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500

Section 6: Hydrogeology and Hydrology

0-500m

6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	0	0	5	5	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 8: Designated Environmentally Sensitive Sites

On-site 0-50m 51-250 251-500 501-1000 1000-2000

8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	1	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	4	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	1
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	1	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	0	1	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 What is the maximum risk of natural ground subsidence?	Very Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Negligible
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

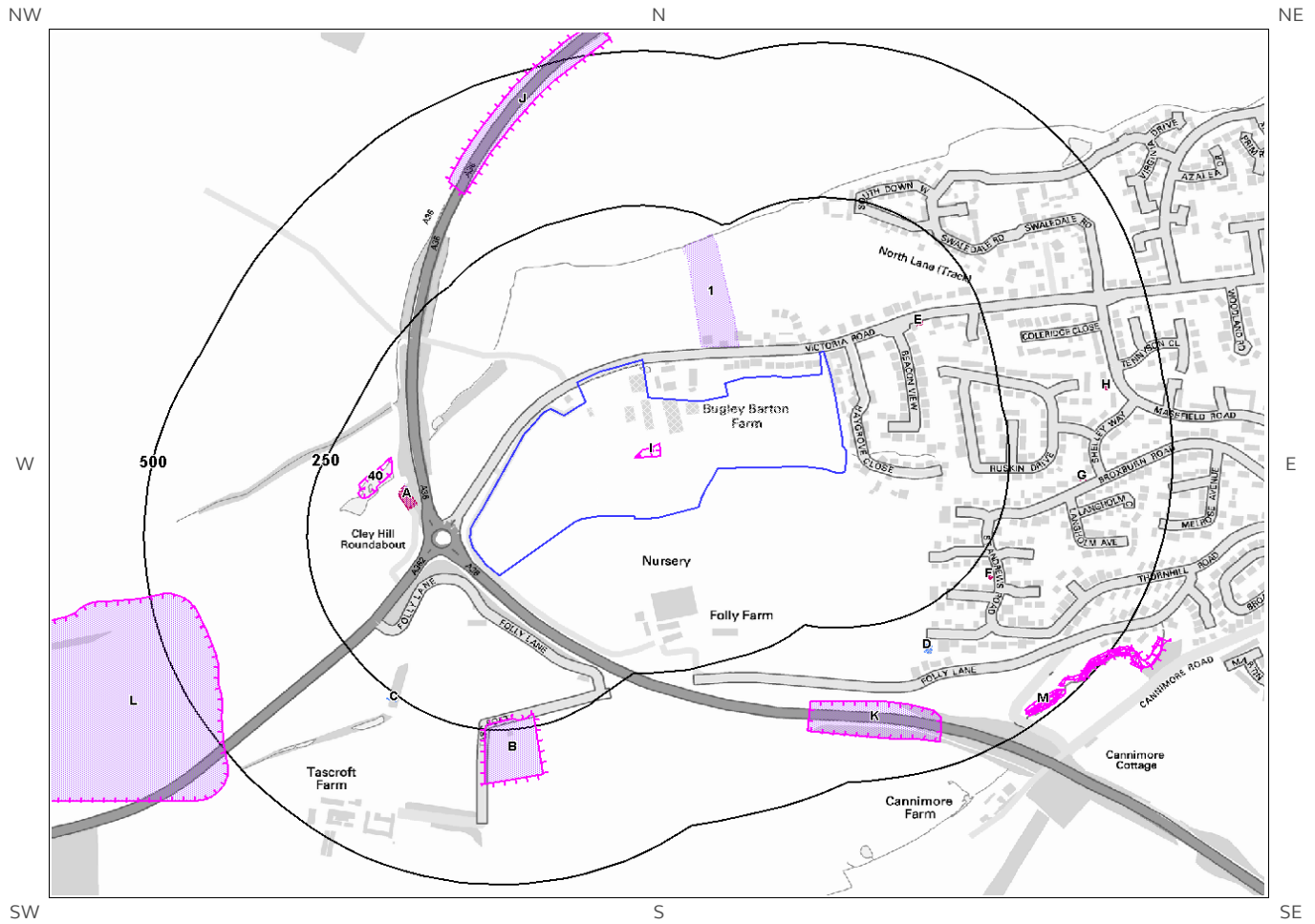
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

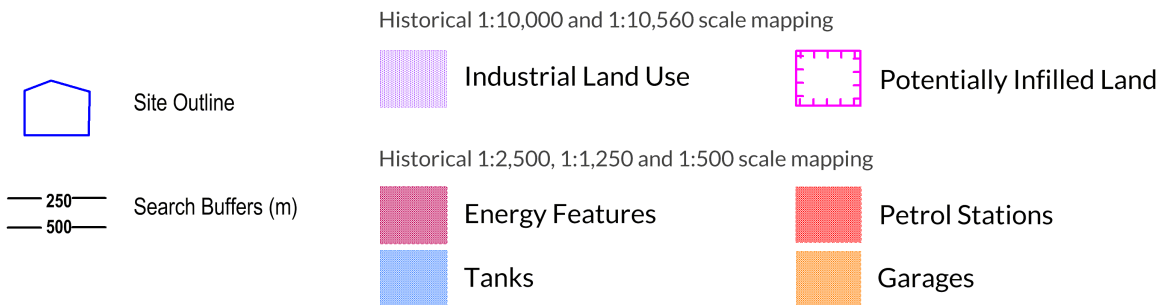
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 9

ID	Distance [m]	Direction	Use	Date
1	52	N	Nursery	1886
2A	93	NW	Electric Substation	1992
3A	93	NW	Electric Substation	1974
4B	230	S	Cemetery	1992
5B	230	S	Cemetery	1984
6B	230	S	Cemetery	1974
7J	349	NW	Cuttings	1992
8K	357	SE	Cuttings	1992
9L	430	W	Disused Burial Ground	1941

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary: 9

ID	Distance (m)	Direction	Use	Date
10C	255	SW	Unspecified Tank	1996
11C	256	SW	Unspecified Tank	1972
12C	257	SW	Unspecified Tank	1989
13D	303	SE	Tanks	1989
14D	303	SE	Tanks	1982
15D	305	SE	Tanks	1972
16D	306	SE	Tanks	1988
17D	306	SE	Tanks	1994
18D	306	SE	Tanks	1988

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

18

ID	Distance (m)	Direction	Use	Date
19A	91	NW	Electricity Substation	1996
20A	93	NW	Electricity Substation	1972
21A	95	NW	Electricity Substation	1989
22E	148	E	Electricity Substation	1982
23E	148	E	Electricity Substation	1989
24E	152	E	Electricity Substation	1972
25E	155	E	Electricity Substation	1988
26F	275	SE	Electricity Substation	1989
27F	275	SE	Electricity Substation	1982
28F	278	SE	Electricity Substation	1988
29F	278	SE	Electricity Substation	1994
30F	279	SE	Electricity Substation	1988
31G	359	E	Electricity Substation	1989
32G	359	E	Electricity Substation	1982
33G	364	E	Electricity Substation	1988
34H	409	E	Electricity Substation	1975
35H	409	E	Electricity Substation	1982
36H	410	E	Electricity Substation	1989

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary:

0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary:

0

Database searched and no data found.

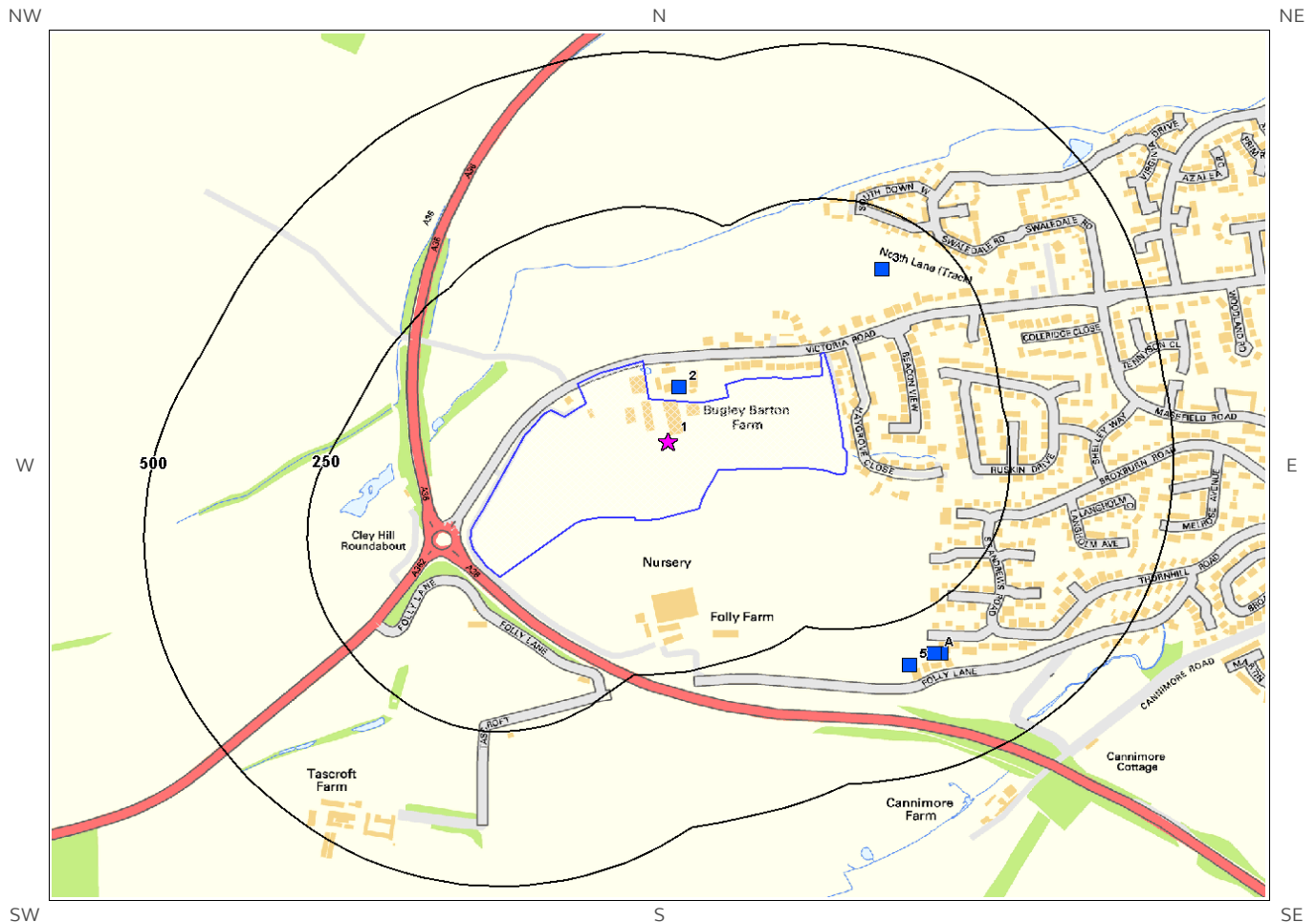
1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 22

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
37I	0	On Site	Pond	1974
38I	0	On Site	Pond	1984
39I	0	On Site	Pond	1992
40	148	NW	Pond	1992
41B	230	S	Cemetery	1974
42B	230	S	Cemetery	1992
43B	230	S	Cemetery	1984
44J	349	NW	Cuttings	1992
45K	357	SE	Cuttings	1992
46L	430	W	Disused Burial Ground	1941
47M	473	SE	Pond	1992
48M	473	SE	Pond	1984
49N	473	SE	Ponds	1899
50N	473	SE	Ponds	1923
51M	477	SE	Pond	1956
52M	477	SE	Pond	1974
53M	477	SE	Pond	1886
54M	479	SE	Pond	1923
55M	479	SE	Pond	1899
56M	479	SE	Pond	1941
57N	487	SE	Ponds	1956
58N	488	SE	Water Body	1886

2. Environmental Permits, Incidents and Registers Map



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- | | | |
|-------------------------------|---|--|
| Site Outline | Recorded Pollution Incident | RAS 3 & 4 Authorisations |
| Dangerous Substances (List 1) | Dangerous Substances (List 2) | Part A(1) Authorised Processes and Historic IPC Authorisations |
| Water Industry Referrals | Licenced Discharge Consents | Part A(2) and Part B Authorised Processes |
| Red List Discharge Consents | Sites Determined as Contaminated Land | COMAH / NIHHS Sites |
| | Hazardous Substance Consents and Enforcements | |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

5

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
2	22	N	385350 144750	Address: BUGLEY BARTON FARM(WARMINSTER), BUGLEY BARTON, WARMINSTER, WILTSHIRE Effluent Type: AGRICULTURE - ARABLE FARMING Permit Number: 050455 Permit Version: 1 Receiving Water: - Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: - Effective Date: 31-May-1963 Revocation Date: 25/01/2000
3	161	NE	385660 144940	Address: CHALET, 96 VICTORIA ROAD, WARMINSTER, WILTSHIRE, ., BA12 8HG Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 402144 Permit Version: 1 Receiving Water: GROUNDWATER VIA A SOAKAWAY Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 16/04/2007 Effective Date: 16-Apr-2007 Revocation Date: -
4A	320	SE	385740 144320	Address: 18 FOLLY LANE, WARMINSTER, WILTSHIRE, . Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 042401 Permit Version: 1 Receiving Water: SOAKAWAY Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 13/10/1992 Effective Date: 07-Oct-1992 Revocation Date: 23/11/2006
5	324	S	385702 144301	Address: 18 FOLLY LANE, WARMINSTER, WILTSHIRE, ., BA12 7RG Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 402236 Permit Version: 1 Receiving Water: GROUNDWATER VIA SOAKAWAY Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 23/11/2006 Effective Date: 23-Nov-2006 Revocation Date: -
6A	325	SE	385750 144320	Address: 2 PLOTS ADJACENT TO 18 FOLLY LANE, WARMINSTER, WILTSHIRE, . Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 042973 Permit Version: 1 Receiving Water: SOAKAWAY Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 113 & SCHED 12) Issue date: 01/05/1995 Effective Date: 28-Apr-1995 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

1

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
1	0	On Site	385332 144662	Incident Date: 06-May-2003 Incident Identification: 156323 Pollutant: Agricultural Materials and Wastes Pollutant Description: Silage Liquors	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

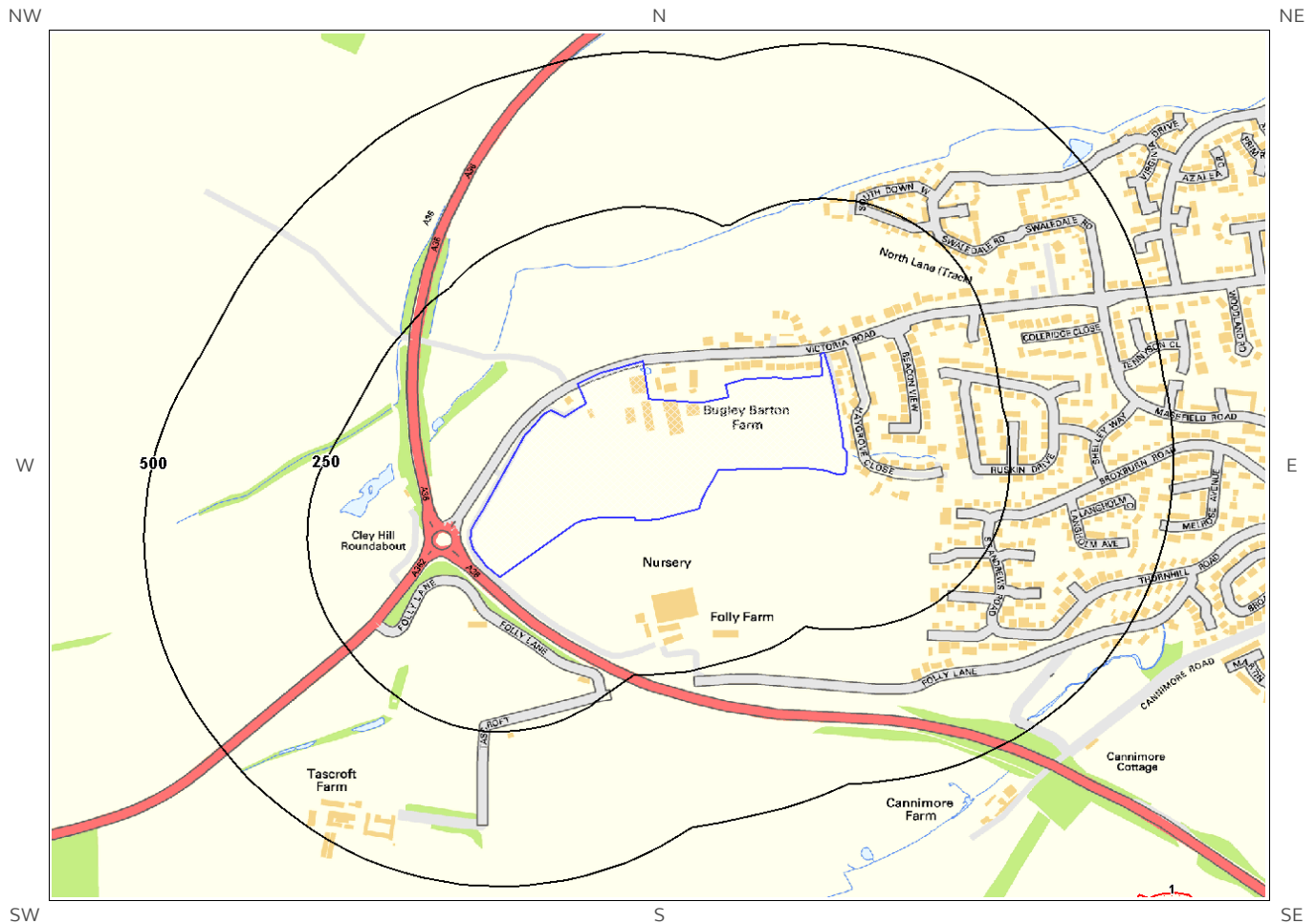
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

1

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1	815	SE	386000 143800	Site Address: Ludlow's Farm, Bradley Road, Warminster, Wiltshire Waste Licence: Yes Site Reference: W/89/0061/WD Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: DOR/L/HUS001 Licence Issue: 17-Apr-1989 Licence Surrendered: Licence Holder Address: Hussey and Son, Silver Street Lane, Trowbridge, Wiltshire Operator: Richard Hussey Licence Holder: Mr Richard Hussey, The Barn First Recorded: 17-Apr-1989 Last Recorded: -

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

0

Database searched and no data found.

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

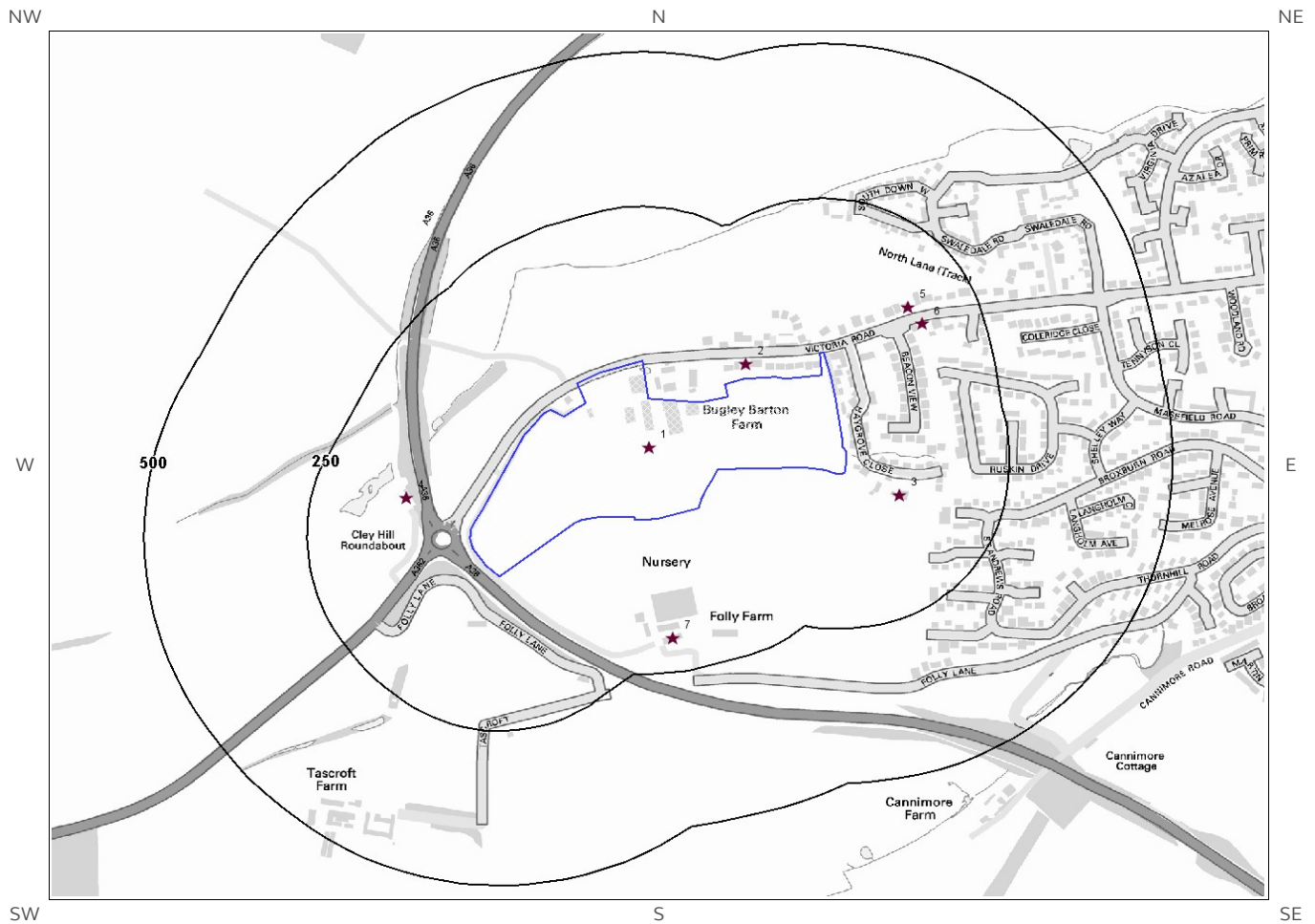
3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

3

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	838	SE	386050 143900	Site Address: Bradley Road, Warminster, Wiltshire Type: Landfill taking Non-Biodegradable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HUS001 EPR reference: EA/EPR/WP3897HB/A001 Operator: Richard Hussey Waste Management licence No: 23540 Annual Tonnage: 150000.0 Issue Date: 29/01/1997 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Ludlow's Farm Correspondence Address: -
Not shown	838	SE	386050 143900	Site Address: Bradley Road, Warminster, Wilts Type: Landfill taking Non-Biodegradable Wastes Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: HUS001 EPR reference: - Operator: Richard Hussey Waste Management licence No: 23540 Annual Tonnage: 0.0 Issue Date: 29/01/1997 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Ludlow's Farm Correspondence Address: The Barn, Pomeroy Lane, Wingfield, Nr Trowbridge, Wilts, BA14 9LJ
Not shown	1429	SE	386714 143710	Site Address: Bore Hill Farm Biodigester, Deverill Road, Warminster, Wiltshire, BA12 8BD Type: Biological Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAL048 EPR reference: EA/EPR/AB3036RT/V003 Operator: Malaby Biogas Limited Waste Management licence No: 102953 Annual Tonnage: 27999.0 Issue Date: 21/02/2012 Effective Date: - Modified: 27/04/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Bore Hill Farm Biodigester Correspondence Address: -

4. Current Land Use Map



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- | | | |
|--|--|--|
|  Site Outline |  Current Industrial Sites |  Electricity Transmission Cables |
|  Search Buffers (m) |  Petrol & Fuel Sites |  Gas Transmission Pipelines |

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

7

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Slurry Pit	385304 144653	BA12	Waste Storage, Processing and Disposal	Infrastructure and Facilities
2	25	N	Metal Art	385453 144788	105, Victoria Road, Warminster, BA12 8HD	Metalworkers Including Blacksmiths	Construction Services
3	91	E	Total Gas Care	385688 144576	17, Haygrove Close, Warminster, BA12 8SL	Industrial Repairs and Servicing	Repair and Servicing
4	112	NW	Electricity Sub Station	384933 144572	BA12	Electrical Features	Infrastructure and Facilities
5	148	NE	The Cupcake Diva	385700 144879	92, Victoria Road, Warminster, BA12 8HG	Baking and Confectionery	Foodstuffs
6	157	E	Electricity Sub Station	385723 144853	BA12	Electrical Features	Infrastructure and Facilities
7	193	S	Folly Farm Herbs	385341 144345	68, Folly Lane, Warminster, BA12 7RG	Fruit, Flower and Vegetable Growers	Farming

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
SHYS-SDST	SHAFTESBURY SANDSTONE MEMBER	SANDSTONE
BHC-SDST	BOYNE HOLLOW CHERT MEMBER	SANDSTONE

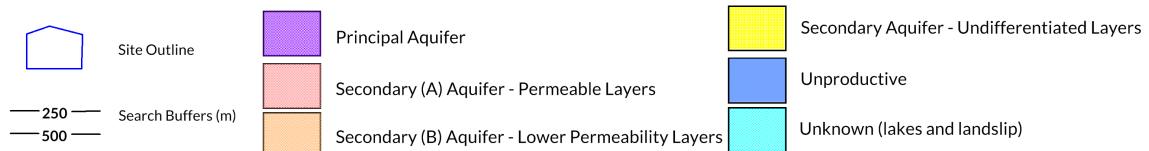
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

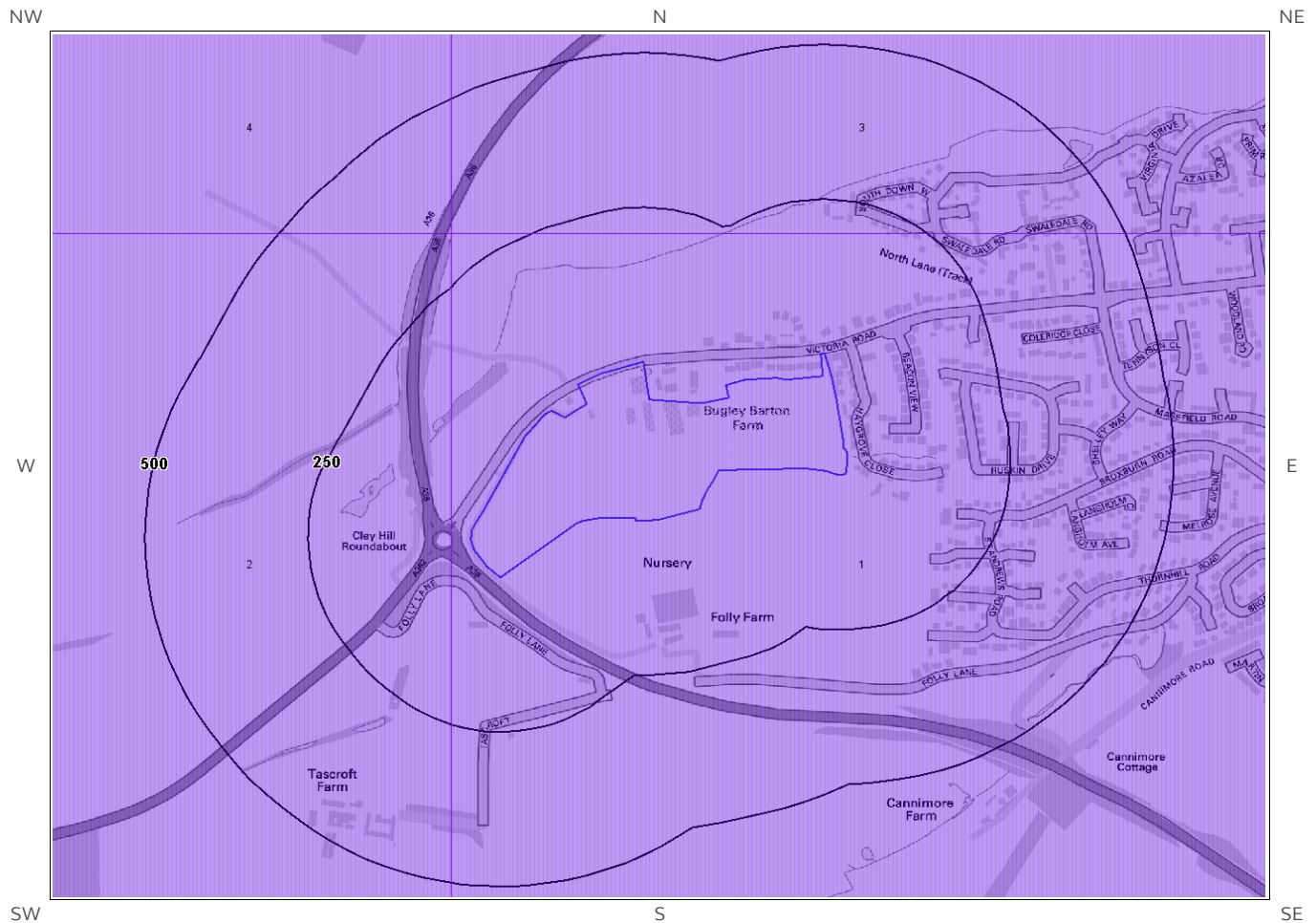
6a. Aquifer Within Superficial Geology



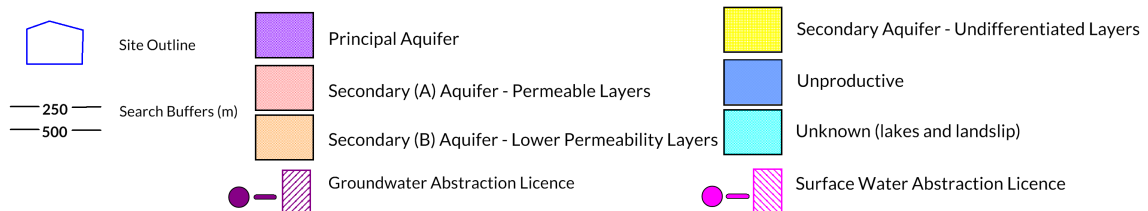
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6b. Aquifer Within Bedrock Geology and Abstraction Licenses



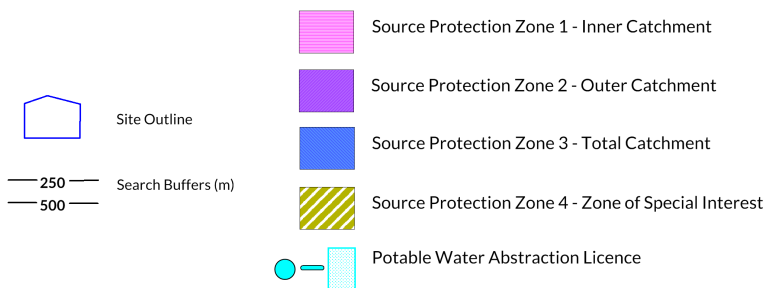
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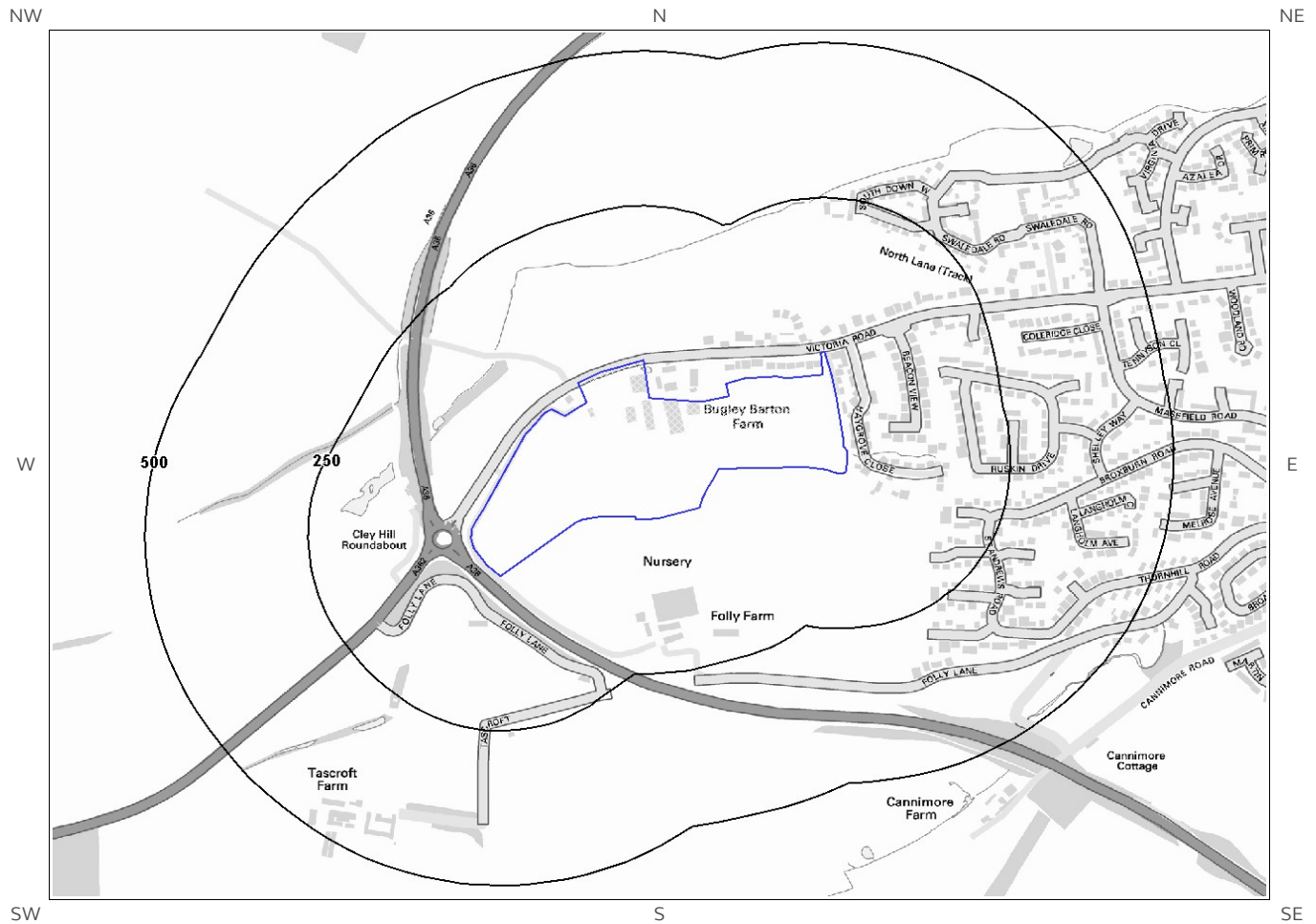
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



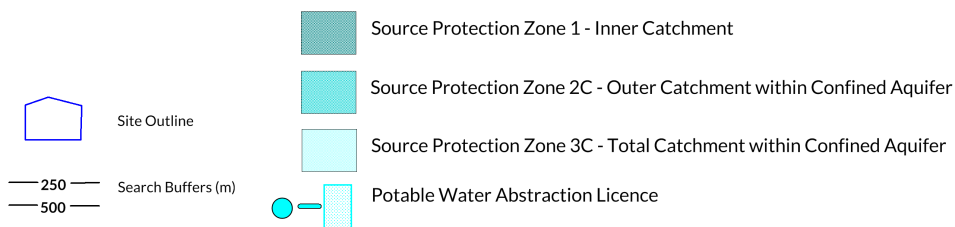
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6d. Hydrogeology – Source Protection Zones within confined aquifer



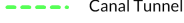
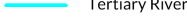
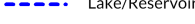
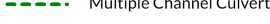
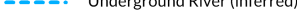
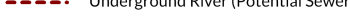
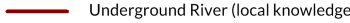
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6e. Hydrology – Detailed River Network and River Quality



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- | | | |
|--|---|--|
|  Site Outline |  Primary River |  Canal |
|  250 Search Buffers (m) |  Secondary River |  Canal Tunnel |
|  500 Search Buffers (m) |  Tertiary River |  Culvert |
| |  Lake/Reservoir |  Multiple Channel Culvert |
| |  Underground River (inferred) |  Underground River (Potential Sewer) |
| |  General Quality Assessment: Biology |  Underground River (local knowledge) |
| |  General Quality Assessment: Chemistry | |

6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	255	N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	447	SE	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	31	W	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
3	195	N	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
4	312	NW	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site?

Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	1005	E	386600 144800	Status: Historical Licence No: 13/43/023/G/087 Details: Process water Direct Source: Ground Water - Fresh Point: Well At The Malt House, Point #1 Data Type: Point Name: Warminster Maltings Ltd Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 13/43/023/G/087 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 1/4/1999 Version End Date:
Not shown	1092	E	386670 144900	Status: Historical Licence No: 13/43/023/G/087 Details: Process water Direct Source: Ground Water - Fresh Point: "well At The Malt House, Point #1" Data Type: Point Name: Warminster Maltings Ltd Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 13/43/023/G/087 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 1/4/1999 Version End Date:
Not shown	1092	E	386670 144900	Status: Historical Licence No: 13/43/023/G/087 Details: Process Water Direct Source: Ground Water - Fresh Point: Well At The Malt House, Point #1 Data Type: Point Name: Warminster Maltings Ltd Annual Volume (m³): 7700 Max Daily Volume (m³): 30 Original Application No: - Original Start Date: 1/4/1999 Expiry Date: - Issue No: 101 Version Start Date: 30/6/2008 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

Yes

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (6c):

ID	Distance (m)	Direction	Zone	Description
2	0	On Site	3	Total catchment
1	309	N	2	Outer catchment

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site?

Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
0	On Site	Major Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
68	NW	Major Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
127	N	Major Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
362	S	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.

6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site?

No

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	111	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2	123	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3	124	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
4	199	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
5	219	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
6	308	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
7	353	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
8	482	SE	River Name: Cannimore Stream Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
9	493	SE	River Name: Cannimore Stream Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
10	494	SE	River Name: Cannimore Stream Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined

6.11 Surface Water Features

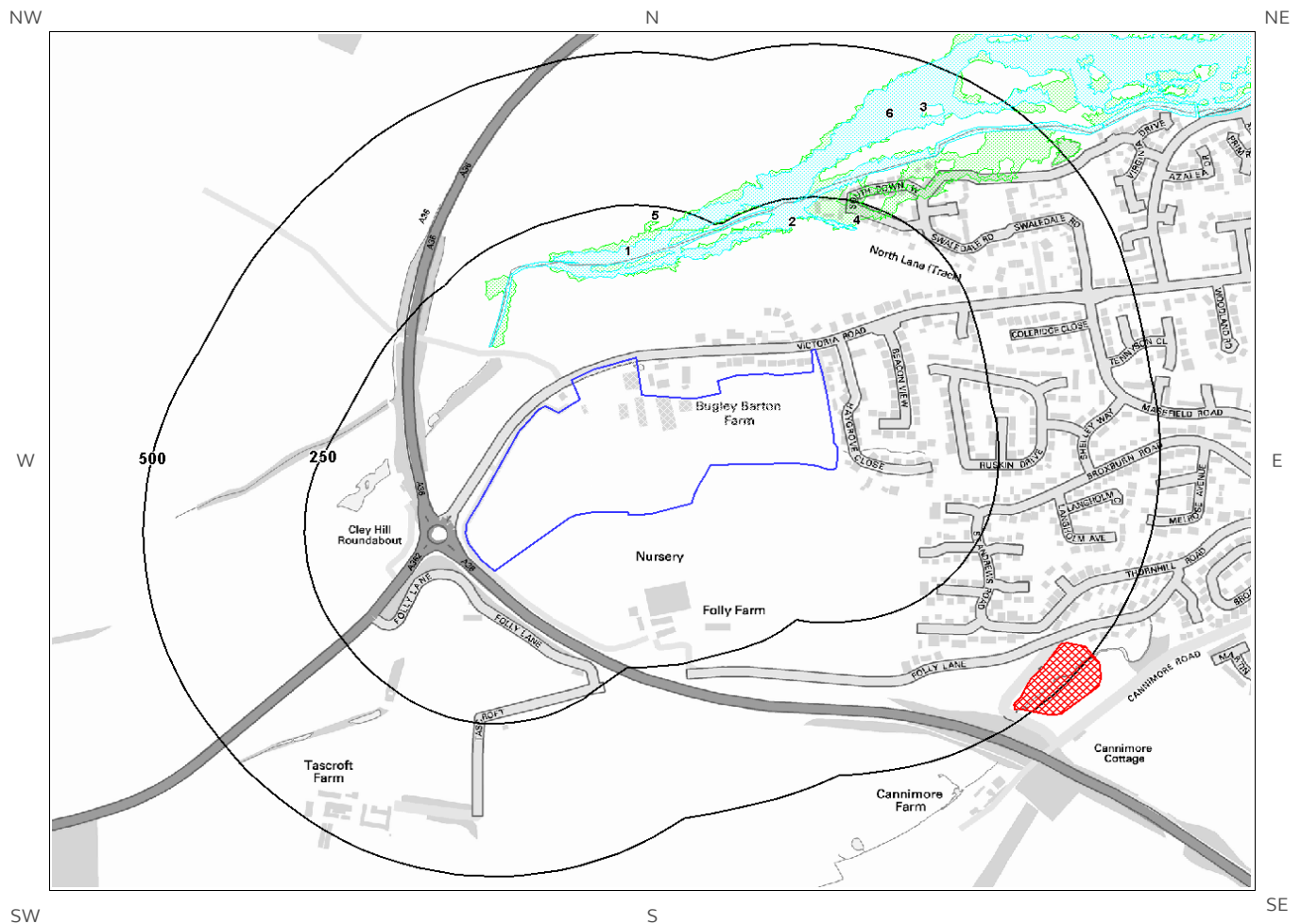
Are there any surface water features within 250m of the study site?

Yes

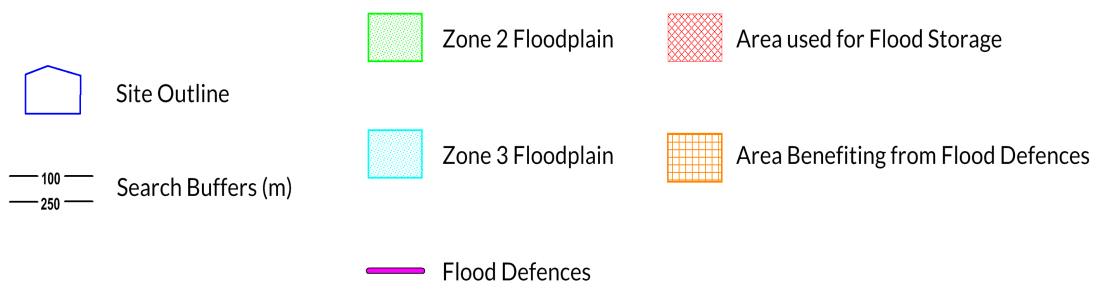
The following surface water records are not represented on mapping:

Distance (m)	Direction
8	E
33	E
112	NW
124	NW
129	NW
144	NW
180	N
202	NW
203	NW
219	NW
244	N
250	NW

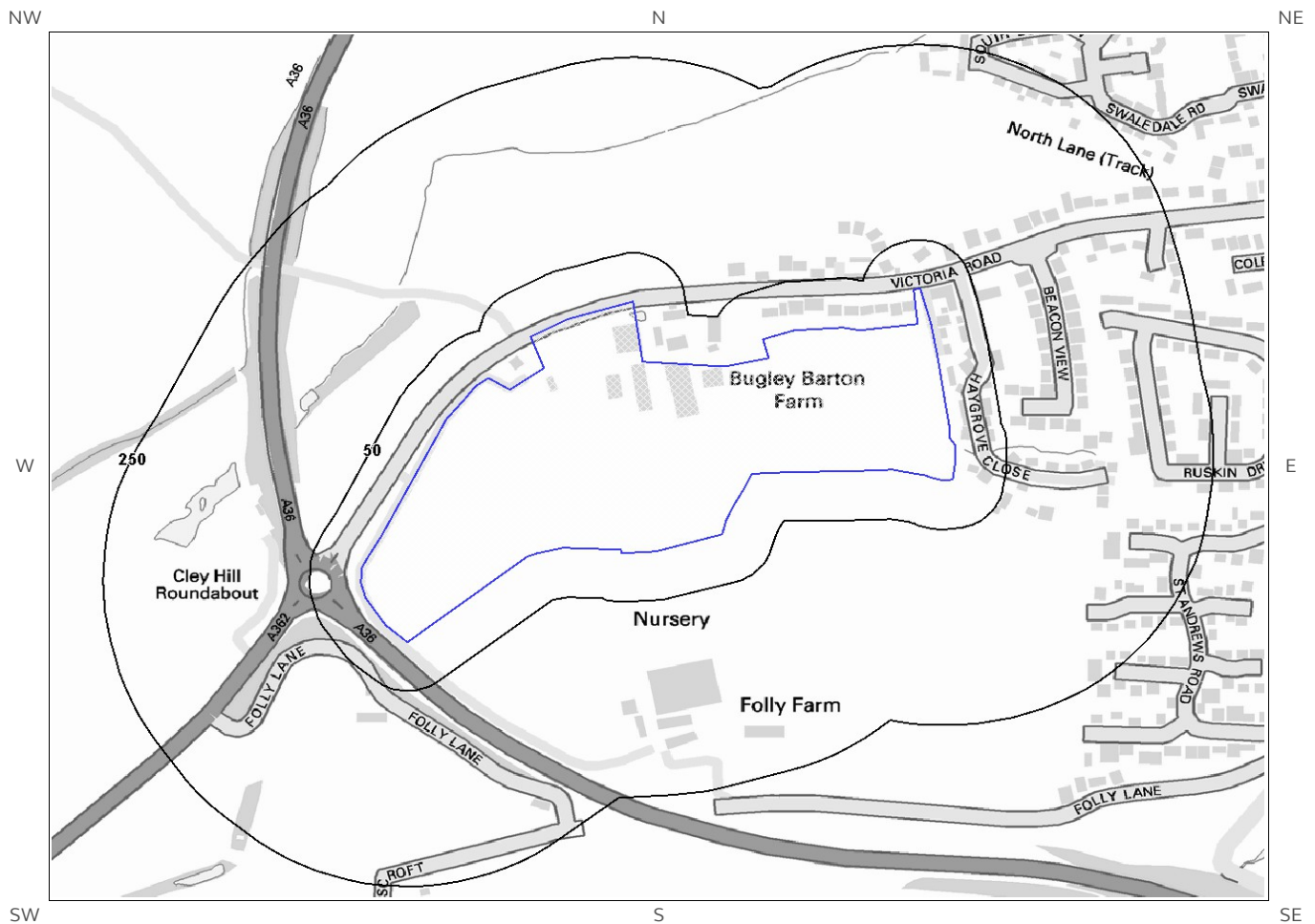
7a. Environment Agency Flood Map for Planning (from rivers and the sea)



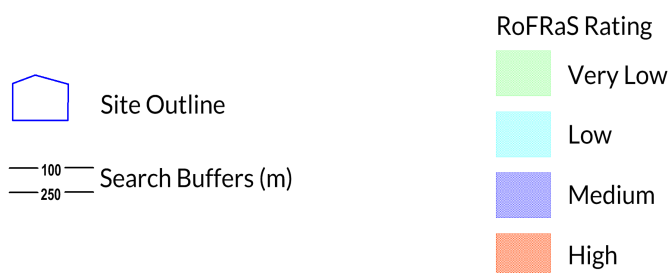
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7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? Yes

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	121	NW	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
2	196	N	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
3	199	N	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
4	204	N	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
5	211	N	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? Yes

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1	127	NW	09-Sep-2016	Zone 3 - (Fluvial Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite?

Very Low

The Environment Agency RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site?

No

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site?

No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding?

Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

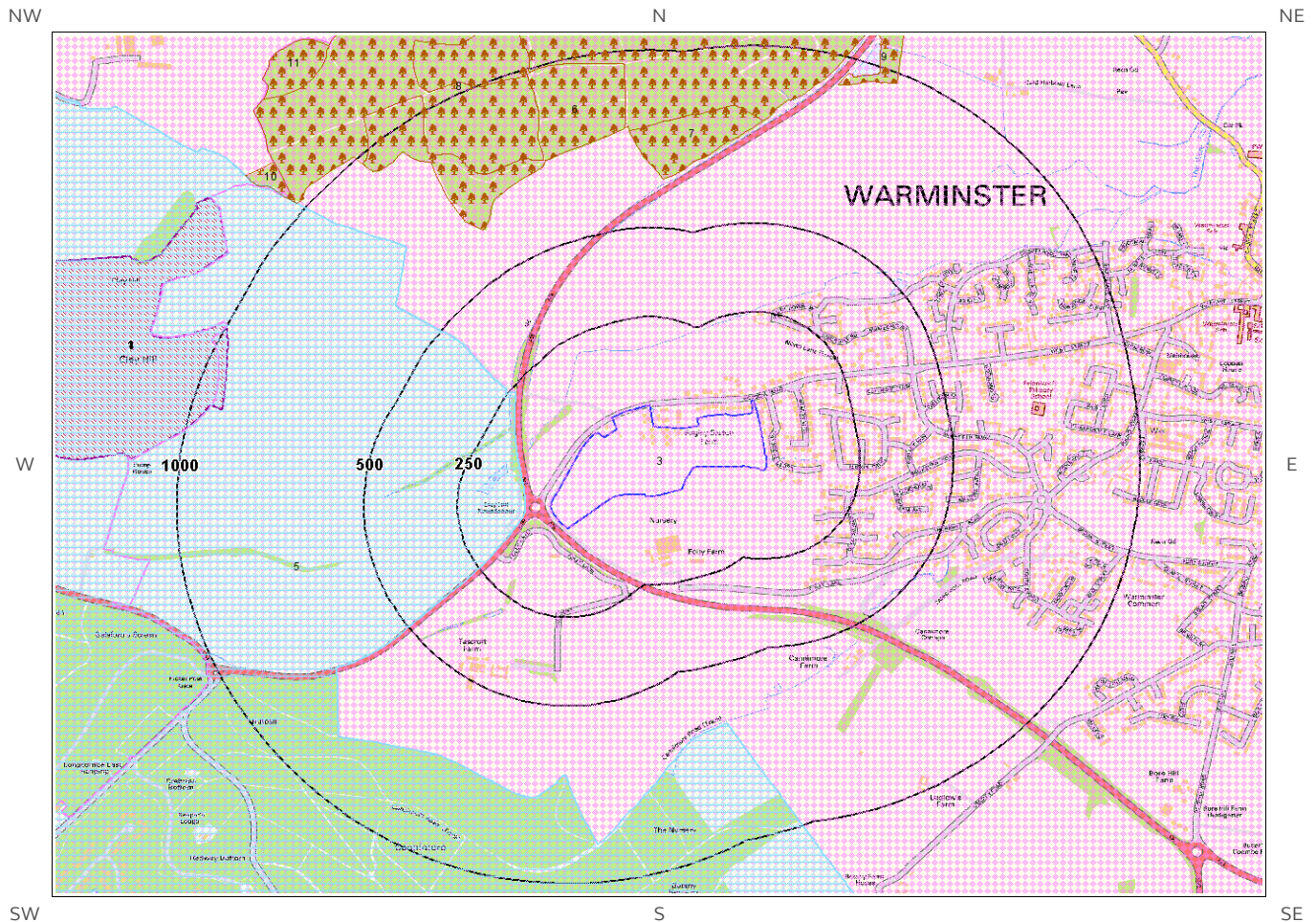
What is the British Geological Survey confidence rating in this result?

Low

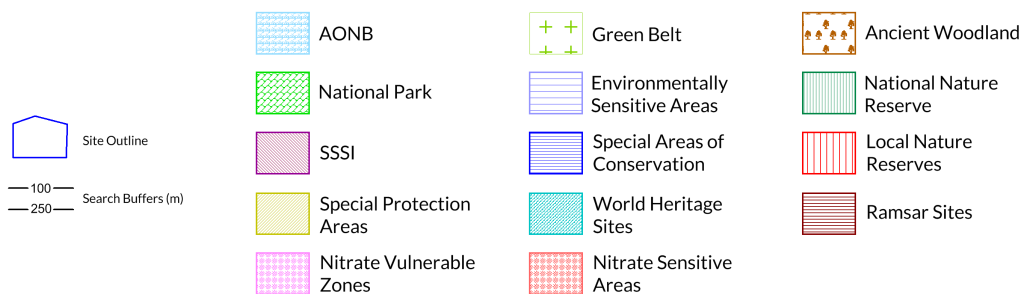
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?

Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

1

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
1	917	W	Cley Hill	Natural England

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

6

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
6	633	NW	UNKNOWN	Ancient and Semi-Natural Woodland
7	640	N	UNKNOWN	Ancient and Semi-Natural Woodland
8	742	N	UNKNOWN	Ancient Replanted Woodland
9	919	N	UNKNOWN	Ancient Replanted Woodland
10	1034	NW	UNKNOWN	Ancient and Semi-Natural Woodland
11	1248	NW	UNKNOWN	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

1

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
Not shown	1978	E	Smallbrook Meadows	Natural England

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

1

The following Area of Outstanding Natural Beauty (AONB) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	AONB/NSA Name	Data Source
5	69	W	Cranborne Chase & West Wiltshire Downs	Natural England

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

2

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
3	0	On Site	Existing	DEFRA
4	945	W	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our **website**. The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site?

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site?

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site?

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? ☐ No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No

Guidance: No Guidance Required.

Contact Details

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Local Authority
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Phone: 0300 456 0100
Web: <http://www.wiltshire.gov.uk/>
Address: County Hall, Bythesea Road, Trowbridge, Wiltshire, BA14

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Hampshire RG27 8NW
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Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.

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<https://www.groundsure.com/terms-and-conditions-sept-2016>

General Notes

GENERAL NOTES

1. Earth Science Partnership (ESP) believes that providing information about limitations is essential to help clients identify and therefore manage their risks. These risks can be mitigated through further investigation or research, but they cannot be eliminated. This report may not be used for any purpose other than that for which it was commissioned.
2. This report includes available factual data for the site as obtained only from the sources described in the text. The data are related to the site on the basis of the site location and boundary information provided by the client. The findings and opinions conveyed in this assessment are based on the information obtained from a variety of sources as detailed in the report, which ESP believe are reliable. Nevertheless, ESP cannot and does not guarantee the authenticity or reliability of the information it has relied on. It is possible that the assessment failed to indicate the existence of further sources of information on the site. Assuming such sources do exist, their information could not have been considered in the formulation of the opinions and findings in this report. It should be recognised that different conditions on site may have existed between and subsequent to the various map surveys.
3. In preparing this report it has been assumed that all past and present occupants of the site have provided all relevant and other information, especially relating to known or potential hazards. This report is not required to identify insufficiencies or mistakes in the information provided by the user/owner or from any other source, but has sought to compensate for these where obvious in the light of other information.
4. Reports are normally prepared and written in the context of a stated purpose, and should not, therefore be used in a different context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission.
5. The opinions presented in this report are based on the findings derived from a site inspection, investigations and a review of historical and other records. The report details any indicators that may suggest that hazardous substances exist at the site at levels likely to warrant mitigation. Not finding such indicators does not mean that hazardous substances do not exist at the site. The most recent site inspection was undertaken as detailed within the report. Circumstances on sites are subject to change and certain indicators of the presence of hazardous substances that may have been latent at the time of this inspection may subsequently have become observable.
6. The work carried out for the assessment can only investigate a small portion of the subsurface conditions. Certain indicators or evidence of hazardous substances may have been outside the limited portion of the subsurface investigated, latent at the time of the work or only partially intercepted by the works, and thus their full significance could not be appreciated. In this regard, groundwater levels are particularly susceptible to variation and it should be noted that groundwater levels are subject to diurnal, seasonal, and climatic changes and are solely dependent on the time the ground investigation was carried out and the weather before and during the investigation.
7. Accordingly, it is possible that the assessment failed to indicate the presence or significance of hazardous substances. Assuming such substances exist, their presence could not have been considered in the formulation of the report's findings and opinions. The conclusions resulting from this study and contained in this report are not necessarily indicative of future conditions or operating practices at or adjacent to the site. Where differing ground conditions or suspect materials are encountered during future site works, additional specialist advice should be sought to assess whether the new information will materially affect the recommendations currently provided herein and whether further consideration is required. Any limiting factors should be assessed by an appropriately qualified specialist.
8. The assessment was prepared for the sole internal use and reliance of the Client. The report shall not be relied upon by or transferred to other parties without the express written authorisation of the Earth Science Partnership. If an unauthorised party comes into possession of the report, they rely on it at their peril and the authors owe them no duty of care and skill.
9. The copyright in this report and other plans and documents prepared by the ESP is owned by them and no such report, plan or document may be reproduced, published or adapted without their consent. Complete copies of this report may, however, be made and distributed by the Client as an expedient in dealing with matters related to its commission.

General Construction Advice

GENERAL GEOTECHNICAL CONSTRUCTION ADVICE

1. The locations of all buried services should be accurately determined prior to detailed design in order that zones of influence, easements, diversions etc. can be considered. Care should be undertaken that any field drains encountered are carefully and satisfactorily blocked to prevent water seeping through the drains and into any excavations.
2. A site strip should be undertaken with all surface vegetation and topsoil either stockpiled for future re-use or disposed at a suitable licensed facility. In particular, all areas of Japanese Knotweed should be excavated and disposed in accordance with published guidelines.
3. All areas of hardstandings or old foundations, basements or other substructures should be broken out and either processed for re-use on site or disposed of at a suitable licensed landfill facility.
4. For all spread foundation options, formations should be cleaned, and subsequently inspected by a suitably qualified engineer prior to placing concrete. Should any soft, compressible or otherwise unsuitable materials be encountered they should be removed and replaced by lean mix concrete or suitable compacted granular material. A blinding layer of concrete should be placed after excavation and inspection in order to protect the formation against softening and disturbance.
5. Generally, all foundations should be placed wholly within the same material type, unless specific geotechnical inspection and assessment has been undertaken.
6. The location of the exploratory holes undertaken as part of this report should be accurately surveyed in order that their precise location is known and that appropriate precautions can be taken when building over or near to these locations.
7. Appropriate precautions should be adopted to prevent the disturbance of foundations or services by roots associated with trees or hedges where shallow foundations are considered within the influence zone of such trees and hedges. Any such roots should be removed from foundation excavations and the foundations located below such disturbance strata. Where the natural soil bounded by the foundations could increase in volume greater than that outside the foundations (e.g. where a shallow foundation is sited over a previous tree or severed major roots) a compressible material / loose backfill should be placed on the faces of the footing.
8. Where the distance from foundations to existing trees/hedgerows is less than twice the foundation depth, as determined by NHBC Practice Note 3 (1985), a compressible material or loose backfill shall be placed on the outside of the foundation to absorb potential forces.