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FORMER MOLINS SITE, SAUNDERTON REMEDIATION VERIFICATION REPORT

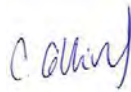
REMEDIATION VERIFICATION REPORT FORMER MOLINS SITE, SAUNDERTON

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List of Abbreviations

AAE - AA Environmental
Enterprise – Enterprise Skip Hire
RS – Remediation Strategy
RSA – Remediation Strategy Addendum
RTC – Remedial Target Concentrations
RC – Re-use Criteria
WCDS – Waste Characterisation and Discovery Strategy

EXECUTIVE SUMMARY

Ramboll UK Limited ("Ramboll") was instructed by Avalon DC Limited (the "Client"), to prepare a remediation verification report for the former Molins site, Haw Lane, Saunderton, Buckinghamshire (the "site"). This report relates to remediation and enabling earthworks undertaken to prepare areas of the site known as Phase 1, Phase 2, the substation cable route and three additional areas of land located to the immediate north, east and west ("the development area") only.

The redevelopment enabling earthworks has initially comprised the removal of remaining existing structures and preparation of a development platform. This will be followed by the construction of the new data centre facility.

A Remediation Strategy produced by RPS in 2010, and Remediation Strategy Addendum, produced by Ramboll in 2022, were previously prepared in relation to the proposed development. The former was submitted to the Local Authority to support the discharge of Condition 7 (PI11/00197/ADRC) of planning permission 08/05740/FULEA. The later Addendum was prepared to supplement the existing Strategy with new information about the site and reflect changes to guidance and best practice in the intervening period since the 2010 strategy was developed.

This verification report aims to demonstrate completion of the works set out in the Remediation Strategy and Addendum, as they relate to the development area and current enabling works phase and thereby support the discharge of Planning Condition 8 (Remediation Verification Report). In summary, the work required and completed comprised:

- wholesale removal of Made Ground and impacted soils within the development area, including removal of identified 'hot spots' of chemical and asbestos contamination, off-site disposal of contaminated soils and validation of the 'hot spot' removal;
- implementation of a discovery strategy for unforeseen contamination during the ground works;
- implementation of a waste strategy to ensure appropriate characterisation and disposal of waste materials and documentation of material imports and re-use;
- implementation of a groundwater monitoring programme;
- documentation of the remediation work by the contractor detailing on-site activities, excavation records, stockpile plans, waste duty of care information and special measures for the disposal of asbestos contaminated soils; and
- preparation of this report and a record of the work undertaken and actions completed.

The implementation of the Remediation Strategy and Addendum has been successful and potential risks to controlled waters are considered to have been appropriately mitigated.

No additional validation or verification works, or longer-term monitoring is required in relation to the development area prior to construction.

1. INTRODUCTION

1.1 Background

Ramboll UK Limited ("Ramboll") was instructed by Avalon DC Limited (the "Client"), to prepare a remediation verification report for the former Molins site, Haw Lane, Saunderton, Buckinghamshire (the "site"). A site location plan and site layout plan are provided as Figure 1 and Figure 2, Appendix 1.

This verification report is required to support the Client with the discharge of Planning Condition 8 relating to the development of the site as a data centre.

This report relates to remediation and enabling earthworks undertaken to prepare areas of the site known as Phase 1, Phase 2, the substation cable route and three additional adjacent areas of land, located to the immediate north, east and west, as presented in Figure 3, Appendix 1 and referred to as "the development area" herein.

1.2 Previous Assessments

A Remediation Strategy¹ (RS) was produced by RPS in 2010. This document was submitted to Local Authority Planning Department and the associated planning condition (refer to section 1.3) was subsequently discharged.

Ramboll produced a Remediation Strategy Addendum² (RSA) in August 2022 (see Appendix 14). This report provided updates to the 2010 strategy to reflect changes to guidance and best practice in the intervening period since the agreed Remediation Strategy was developed, including:

- UK Government guidance on land contamination risk management (LCRM); Environment Agency, October 2020 (<https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>).

The RSA also took into consideration additional investigation data collected in 2014 and the condition of the site at the time of writing.

This verification report aims to demonstrate that the requirements set out in the RS and RSA for the development area and enabling works have been fulfilled and it should therefore be read in conjunction with both reports.

1.2.1 Recent Work

As detailed in the RSA, additional stages of environmental work have taken place since submission of the RPS RS in 2010. These include the following:

- Desk Study and Ground Investigation – Former Molins Factory; Hydrock, dated November 2014 (ref: R/13649/004)
- Remediation Statement – Former Molins Site; GEA, dated June 2020 (ref: J20063A)

The 2014 Hydrock assessments were carried out in connection with a proposed alternative residential development scheme and the 2020 GEA Statement was not submitted to the regulatory authorities.

The 2014 Hydrock investigation included two groundwater monitoring wells at down-hydraulic gradient positions to the former factory buildings and 37 No. trial pits.

¹ Site Remediation Strategy – Saunderton Data Centre; RPS, dated November 2010 (ref: BES0131 R 101103)

² Remediation Strategy Addendum – Former Molins Site, Saunderton; Ramboll, dated August 2022 (ref: 16200011947-004)

The investigation recorded asbestos in the made ground and seven 'hot spots' where elevated concentrations of polyaromatic hydrocarbons (PAHs), total petroleum hydrocarbon (TPH) and semi-volatile organic compounds (SVOCs) were recorded in shallow soil in excess of generic assessment criteria for a residential end-use.

Groundwater sampling carried out as part of the investigation did not identify dissolved hydrocarbons and risks to controlled water were assessed to be low.

The 2020 Remediation Statement was developed by GEA in the context of the proposed residential end-use and alternative remediation target levels developed. Ten 'hot spots' of either organic or asbestos impacted soils were identified as requiring excavation and off-site disposal.

Where relevant to a commercial end use scenario, information provided in these 2014 and 2020 assessments was carried forward to inform Ramboll's 2022 RSA.

1.2.2 Conceptual Site Model

The additional investigation data since 2010 did not alter the overarching remediation objectives and conceptual site model which formed the basis of the 2010 RPS RS. The principal receptor identified was groundwater within the underlying chalk aquifer. The future development includes widespread hardstanding and building cover which limits the risk to future site users from localised contamination in the underlying soil.

The 2010 RS included removal of contaminated soil 'hot spots' identified at this time. Update information identified the presence of other 'hot spots' and potential sources of contamination outside of the proposed development footprint. These additional potential source areas were included within Ramboll's 2022 RSA.

1.3 The Proposed Development

The development includes four data centre buildings. The planning application for the development (re: 08/05740/FULEA) was approved in November 2008. Ramboll understand that since this time the proposed development scheme has not been significantly altered albeit, in 2022, a Section 73 application was submitted in relation to proposed minor amendment to the proposed scheme. This only involves the relocation of the proposed electricity substation from the south of the site to the north-east. The proposed development layout is presented in Figure 4, Appendix 1.

1.3.1 Planning Conditions 7 & 8

The planning decision notice included contaminated land conditions, including Condition 7 (remediation method statement Discharged under PI11/00197/ADRC on 21 March 2011) and Condition 8 (remediation verification report). For ease of reference, this report relates to and is intended to support the discharge of Planning Condition 8, which is re-produced below:

"Prior to construction above ground a verification report demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a long-term monitoring and maintenance plan) for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the local planning authority."

1.4 Scope of Works and Key Parties

The purpose of this report is to confirm the completion of remediation works undertaken within the development area to support the discharge of Planning Condition 8.

Ramboll was appointed by the Client to fulfil the role of the remediation consultant and attended site on a part-time basis during the remediation work. The enabling works and remediation were delivered by the Principal Contractor, Enterprise Skip Hire Ltd ("Enterprise"). Enterprise has produced a Completion Report³ which is included as Appendix 2 and should be referenced in conjunction with this report.

Enterprise's scope of work comprised:

- demolition of remaining above ground structures, removal of debris and hardstanding within the development area;
- facilitation of further investigation of known contamination hotspots;
- removal of all Made Ground from the development area;
- break out and removal of sub-surface obstructions;
- materials management and off-site disposal of waste; and
- execution of cut and fill earthworks and compaction to facilitate creation of a development platform at circa 125m AOD across the development area.

On the Client's behalf, Ramboll appointed AA Environmental Ltd ("AAE") to undertake additional investigation for waste classification and hotspot delineation purposes and to document and validate the remediation works undertaken by Enterprise. AAE provided a scope for the investigation in the form of a Waste Characterisation and Discovery Strategy⁴ (WCDS), which was adapted to meet the requirements of the RSA and changes in the scope of enabling works (see Appendix 3).

This Ramboll report is intended to provide a summary of the remediation and verification of the works completed by Enterprise and AAE.

1.5 General Limitations and Reliance

This report has been prepared by Ramboll exclusively for the intended use by the client in accordance with the agreement between Ramboll and the client (Appointment between Avalon DC Limited and Ramboll UK Limited dated 30th September 2022) defining, among others, the purpose, the scope and the terms and conditions for the services. No other warranty, expressed or implied, is made as to the professional advice included in this report or in respect of any matters outside the agreed scope of the services or the purpose for which the report and the associated agreed scope were intended or any other services provided by Ramboll.

In preparation of the report and performance of any other services, Ramboll has relied upon publicly available information, information provided by the client and information provided by third parties. Accordingly, this report is valid only to the extent that the information provided to Ramboll was accurate, complete and available to Ramboll within the reporting schedule.

Ramboll's services are not intended as legal advice, nor an exhaustive review of site conditions and/or compliance. This report and accompanying documents are initial and intended solely for the use and benefit of the client for this purpose only and may not be used by or disclosed to, in whole or in part, any other person without the express written consent of Ramboll. Ramboll

³ Contractors Completion Report; Enterprise Skip Hire Limited, dated November 2022

⁴ Waste Segregation and Discovery Strategy (Enabling Works Phase); AAE, dated 10th May 2022 (Ref: 223159/WSDS/001)

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2. REMEDIATION STRATEGY

2.1 Remediation Approach

The following sections summarise the remediation approach set out by both the RS and RSA.

2.2 RPS Remediation Strategy

The 2010 RS included requirements for:

- delineation / removal of nine soil 'hot spots' of chemical and asbestos contamination (which had been identified at the time) and associated validation;
- measures around appropriate stockpiling of excavated materials;
- the implementation of a discovery strategy for identifying and managing unforeseen contamination during the ground works; and
- groundwater monitoring during development (as referenced in appended correspondence with the Environment Agency)

The RS also required the relevant contractor to maintain an audit trail documenting the remediation works. This included daily record sheets detailing on-site activities, excavation records, stockpile plans, duty of care register of contamination waste removal and special measures for the disposal of asbestos contaminated soils.

2.3 Ramboll Remediation Strategy Addendum

The 2022 RSA outlined the following additional remediation requirements for the site:

- additional hotspot / potential source area removal in light of more recent (post 2010) site investigation data;
- updated guidance / approach around materials management;
- updated requirements for implementation of a groundwater monitoring programme;
- requirements around groundwater well management and decommissioning;
- testing and documentation of material imports to site, including imported soils for landscaped areas (if required);
- remediation and validation requirements in relation to areas of proposed landscaping;
- updates to the remediation target criteria (RTCs);
- requirements in relation to documentation of permits and licensing; and
- requirements in relation to water supply pipes.

2.3.1 Additional Hotspot / Potential Source Area Removal

The RSA also recognised the presence of additional potential sources of contamination outside the footprint of the development area, (e.g. a soakaway, a disused substation, a possible groundwater abstraction well-head and pump-house). These are outside of the scope of work considered in this report.

2.3.2 Updated Remedial Target Concentrations and Re-use Criteria

As part of the 2022 RSA, Ramboll reviewed and updated the proposed Remedial Target Concentrations (RTC) and Re-use Criteria (RC) to reflect updates to methodologies and toxicology information since the original RTC were derived in 2010. Where the existing RTC were not considered stringent enough (i.e. current generic assessment criteria (GAC) are lower than the RTC), Ramboll reviewed and derived updated RTC to meet current standards. The updated RTC are presented in the RSA which is included as Appendix 14 of this report.

3. REMEDIATION VALIDATION

3.1 Introduction

Remediation and enabling earthworks required to prepare the development area for future construction works were undertaken by Enterprise between 23rd May and 2nd November 2022.

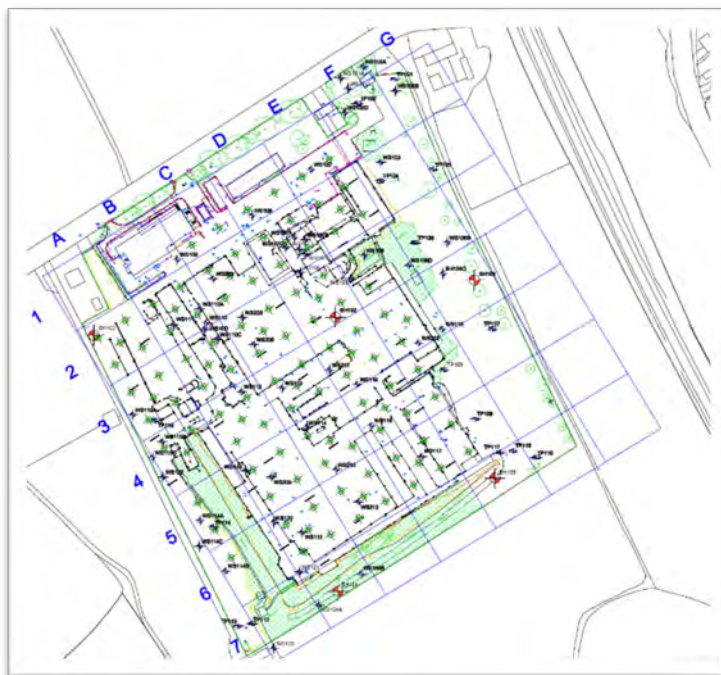
3.2 Waste Classification

Wastes arising from the remediation and enabling earthworks were classified by AAE in accordance with the AAE WCDS and Environment Agency guidance WM3 'Guidance on the classification and assessment of waste'.

Phase I and II Area: As part of the implementation of the Waste Characterisation and Discovery Strategy, AAE undertook a supplementary trial pit investigation across Phases 1 and 2 of the development area (grid lines A to D excluding the face of the western embankment - see Figure 3, in Appendix 1) to assess ground conditions for waste classification purposes prior to the

commencement of the enabling works.

Figure 1. AAE Grid Layout



A similar exercise was also undertaken in the eastern section of the site (grid squares E3 to E6) at a later date following completion of ecological clearance works.

The site was zoned into grid squares based on a 50m x 50m master grid pattern (see Figure 1). The grid squares were grouped into five areas, A to E, for reporting purposes as presented in AAE drawing ref.223159/D/VAL/001 included in Appendix 1.

A minimum of five trial pits were excavated within each 50m grid square. Samples of both Made Ground and underlying natural soils were taken from each location.

The waste classification data comprising trial pit logs, photo plates, laboratory analysis results and HazWaste Online (HWOL) assessment) from each area (A to E) were collated along with existing soil data from previous ground investigations (Arup 2007, RPS 2010 and Hydrock 2014) for provision to the contractor. This information is presented in AAE's 'Proforma A' reports, included as Appendix 4 of this report.

In areas where hazardous wastes were identified, further delineation and testing to confirm the nature and extent was undertaken by AAE. This is documented in Table 3 of each AAE Proforma A report.

Cable Route: In addition to the above, further ground investigation for waste characterisation and discovery purposes comprising four trial pits was undertaken along the proposed substation cable route in the north-eastern corner of the site (see AAE drawing ref.223159/D/VAL/001, Appendix 1 as above). Logs, photographs and the results of the soil chemical analysis from this sampling are also presented in AAE's Proforma A records (see Appendix 4 as above).

3.3 Remediation of Contamination 'Hot Spots' and Source Area Delineation

Contamination 'hot spots' within the development area identified as requiring remediation in the 2010 RS and 2022 RSA were addressed by wholesale excavation and disposal of Made Ground and contaminated soil as this was required to achieve the required development platform level (125m AOD).

Soil test data obtained through implementation of the WCDS was compared with the RTC and RC specified in the RSA as appropriate.

3.4 Previously Unidentified Contamination

Following delineation, further sampling and assessment, three areas of the site were identified where removal of previously unidentified structures and / or excavation of contamination below development platform level (approximately 125m AOD) was required. In addition, a redundant pipe encountered during clearance works around the embankment in the west of the site was also removed and validated. Table 3.1 below presents a summary of these identified sources and how each of these was addressed (e.g. through additional excavation and validation). The locations of each of these areas are included in AAE drawing reference 223159/D/VAL/002 included in Appendix 1 of this report.

Table 3.1 Previously Unidentified Sources of Contamination and Hotspots Below Formation Level

Date	Grid Square (Sample Location)	Suspected Object / Source	Outcome	Rectified by
27/06/2022	D5	Underground fuel storage tank	Delineation of hotspot by AAE	Removal and validation of tank (Proforma B 001)
21/07/2022	B4 (TP01)	Hotspot of TPH and VOC contamination extending into underlying natural strata.	Delineation of hotspot by AAE	Removal and validation of contaminated soils (Proforma B 003)
29/06/2022	E5/D6 (TP01)	Hotspot of TPH and VOC contamination extending into underlying natural strata.	Delineation of hotspot by AAE	Removal and validation of contaminated soils (Proforma B 004)
20/10/2022	A5/A6	Redundant pipework	Investigation of feature by AAE	Removal of pipe and validation of soils (Proforma B 005)

Each feature was delineated and removed from site in accordance with the principles set out in the Remediation Strategy. Supporting evidence is presented AAE's Proforma B reports (see Appendix 5) which detail the delineation and provide validation that the remedial works in each of these areas were completed satisfactorily.

3.5 Asbestos Remediation

During the works, areas of Made Ground impacted by asbestos containing materials (ACM) were identified and delineated through implementation of the AAE WCDS. Where visible fragments of suspected ACM were identified they were hand-picked by Enterprise in accordance with its Asbestos Management Plan and removed from site under licence.

AAE's validation records noted the presence of residual ACM at two locations at the edge of the development platform and substation cable route cut as summarised in Table 3.2 below (note: other residual contamination may be present outside of the development area, see RSA / previous investigations):

Table 3.2 Residual Asbestos

Sample Location / Grid Square	Description
A2 / TP01	Chrysotile Cement: suspected residual ACM observed in Made Ground forming part of the batter at the western edge of the development area. Material left in-situ for structural/stability purposes. Future phases of development will address residual asbestos risk.
Cable 1 & Cable 4	Chrysotile Cement: suspected residual ACM identified in soils of cable route excavation. This area of the site is not due to be remediated in this phase of works. Future remediation will address residual asbestos risk (if required).

Waste duty of care information relating to the disposal of ACMs is included in Appendix 6 of this report. Mitigation measures implemented by the contractor to manage risks associated with ACM are discussed further in Section 3.12 below.

3.6 Disposal of Waste Material

A summary of the waste materials generated during the works is provided in Enterprise's completion report and reproduced in Table 3.3 below. Copies of waste duty of care information including waste transfer notes and relevant licenses and permits for each disposal facility have been provided by the contractor and can be made available on request.

Table 3.3 Off-Site Disposal of Material

Facility Name	Facility Postcode	Waste Management License Ref.	Waste Type	No. of Loads	Approximate Volume m ³
C Putnams	HP27 9QD	UP3997E7EJ	Concrete	3,124	46,860
A&J	SL6 6NL	EPR/CB3908LP	Soil/Stones	1,753	26,295
M&M	OX29 4EB	FB3633AL/A001	Soil/Stones	280	4,200
O'Malley	OX29 4EG	JB3108TQ/T001	Soil/Stones	51	765
O'Malley	UB9 4HF	CB37065Q/V00 2	Non-Haz	1,314	19,710
Hazel	OX10 6HE	BP3695EW/V00 3	Soil/Stones	391	5,865

Table 3.3 Off-Site Disposal of Material

Soil & Water	SL6 6ND	EPR/JB2102FY/A001	Soil/Stones	71	1,065
Soil & Water	SL3 6ND	EPR/JB3102FY	Soil/Stones	114	1,710
FCC	OX29 5BJ	EPR/HP363RD	Soil/Stones	37	555
Clarks	OX9 3HW	U1/U10	Soil/Stones	317	4,755
Enterprise	HP22 5GX	DB3904US/T00 1	General	3	45
ASM	HP19 8BB	EAWML 86046	Metals	21	315
FCC	B65 9BT	EPR/HP363RP	Hazardous	37	555

A summary of total waste volumes generated by waste type based on included in the contractor's completion report is presented in Table 3.4 below:

Table 3.4 Summary of Total Waste Volumes

Waste Stream	Waste Code	No. of Vehicle Loads	Approximate Volume m ³
Concrete	17.01.01	3124	46,860
Soil/Stones	17.05.04	3014	45,210
Non-Haz Soil/Stones	17.05.04	1314	19,710
Metals	17.04.07	21 loads	315
General Mixed	17.09.04	3	45
Hazardous	17.05.03*	213	3198
Hazardous	17.03.01*	8	120

3.7 Direct Transfer of Material Off-site

In order to reduce volumes of waste soil disposed to landfill, surplus uncontaminated naturally occurring soils generated as part of the enabling works were transferred to other sites for re-use. A summary of direct transfer volumes included in Enterprise's completion is reproduced in Table 3.5 below.

Table 3.5 Summary of Direct Transfer Material Volumes

Site Name	Facility	MMP Ref	Material	Quantity (m ³)
Oaklands	SL2 4NL	TT-Burnham Beeches/Saunderton	Fill material (chalk)	10,037
Oaklands	SL1 8DP	TT-South Bucks/Saunderton	Fill material (chalk)	1,216

The contractor's completion report confirms the material transfer was undertaken in accordance with the principles set out in the CL:AIRE Definition of Waste Code of Practice (DoWCoP). Materials Management Plan (MMP) Declarations for the receiving sites provided by the contractor are included in Appendix 7 of this report.

3.8 Material Re-Use

Material re-use on site was limited to excavation and emplacement of naturally occurring site-won chalk only.

Investigation and sampling of site-won natural soils identified as requiring excavation to achieve the proposed development level was undertaken as part of the implementation of AAE's WCDS.

Suitable material was identified from grid squares C3, C5, C6, D3 and D5 (screening of the results of the sampling against the RC specified in the RSA is presented in Appendix 8). In addition to this testing, verification of the chemical quality of re-used site-won material was undertaken in-situ by sampling of the development platform on completion of the enabling works as discussed further in Section 5.7 below.

3.9 Verification of the Development Platform

AAE was commissioned to undertake confirmatory soil sampling to confirm the final condition of the development platform within the development area on completion of the enabling works and demonstrate compliance of near-surface soils with the RTC and RC. This was additional testing over and above what was required by the RS and RSA.

Validation of the development area, excluding the embankment (see Figure 3, Appendix 1), was completed in two phases using the same grid-based rationale as implemented under the previous WCDS works described in Section 3.2 as shown in AAE drawing 223159/D/VAL/003 also included in Appendix 1. The first and second phases of validation were undertaken between

06/09/22 and 13/10/22 and 31/10/22 and 08/11/22 respectively.

The validation data, including photo plates and laboratory results from each grid square, was collated by AAE and presented in a 'Proforma C - Final Land Quality Report' as included in Appendix 9 of this report. The Proforma C report includes a consolidated table where the soil laboratory results are screened against the RTC for commercial use below buildings and hardstanding. No exceedances of the RTC were recorded.

Upon completion of the excavation of the proposed cable route, validation sampling was also undertaken at six locations along the base and sides of the trench. These works are documented in a second Proforma C – Final Land Quality Report also included in Appendix 9.

3.10 Imported Aggregates

Enterprise's completion report confirms that approximately 1,470m³ of recycled aggregate (6F5 crushed concrete) was imported on to site. The material was reported to have been produced in compliance with the WRAP Quality Protocol. The imported material was emplaced in the area for the proposed substation compound (north-eastern corner of Phase 1) to create a working platform to facilitate future construction works in this area.

A summary of imported materials provided by the contractor is presented in Table 3.6 below.

Table 3.6 Summary of Material Imports

Import Date	Product	Producer	Volume (m ³)
10/10/22	6F5	C. Putnam	262.50
11/10/22	6F5	C. Putnam	63.00
12/10/22	6F5	C. Putnam	241.50
13/10/22	6F5	C. Putnam	535.50
14/10/22	6F5	C. Putnam	21.00
16/10/22	6F5	C. Putnam	168.00

21/10/22	6F5	C. Putnam	73.50
24/10/22	6F5	C. Putnam	94.50
26/10/22	6F5	C. Putnam	10.50
TOTAL			1,470

Chemical analysis of the imported recycled aggregates was undertaken by AAE to demonstrate suitability for use. The results are presented in Appendix 10 (DETS report ref: 22-08609.1).

In addition to the above, approximately 1,600m² of recycled 6F2 material produced from recycling of concrete arising from the site clearance works was emplaced in the area of the proposed substation compound. Chemical analysis of the 6F2 crushed concrete was undertaken by AAE prior to emplacement to demonstrate suitability for use and no exceedances of the RTC were reported. The results are presented in Appendix 10 (Chemtest report ref: 22-26900-1).

3.11 Groundwater Monitoring Programme

A programme of groundwater monitoring was implemented by AAE in accordance with the requirements of the RSA. The groundwater monitoring utilised three existing monitoring wells from previous phases of assessment (BH101, BH103, BH105) and three new groundwater monitoring wells (BH401, BH402, BH403) installed in 2022 (locations are presented in Figure 5, Appendix 1). The monitoring wells selected are all installed into the chalk aquifer and include one well up-gradient (north-east corner of site) and two boreholes adjacent to the downgradient site boundary (west and south-west). Three rounds of groundwater monitoring were undertaken in July/August, October and November 2022.

Overall, concentrations of contaminants recorded during the monitoring period were generally consistent with (or lower than) those previously recorded at the site between 2007 and 2014. Concentrations of organic contaminants including total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs) were not detected above laboratory detection limits in any of the groundwater samples analysed across the three monitoring rounds.

A slightly elevated concentration of hexavalent chromium was detected in one groundwater sample from BH403 (south-west of the site) during the first monitoring round, however concentrations were below the laboratory detection limits in the subsequent monitoring rounds.

No unusual field observations or visual or olfactory indicators of contamination were reported during the sampling.

A summary of the results of the chemical analysis from the groundwater sampling in relation to previous investigations and the AAE level data is included in Appendix 11. The groundwater monitoring data does not indicate an adverse impact to groundwater as a result of the remediation and enabling works.

3.12 Groundwater Well Decommissioning

At the time of writing, the existing network of monitoring and abstraction wells has been retained to support future phases of work. The wells should be decommissioned in accordance with the requirements of the RSA following completion of the development works or at a time when they are no longer required.

3.13 Asbestos Management

Prior to commencing the works, the contractor prepared an Asbestos Management Plan and Method Statement detailing how risks associated with asbestos in soil would be monitored and

mitigated in accordance with the 2012 Control of Asbestos Regulations and 2016 CAR-SOIL guidance. This document is included as Appendix 12 of this report.

Measures implemented by the contractor included:

- During the site induction process, site personnel were given a toolbox talk in which they were briefed on the asbestos risk and resulting health and safety protocols, emergency procedures and methods for the appropriate storage and disposal of ACMs.
- Site personnel were required to wear appropriate personal protective equipment (PPE), including respiratory protective equipment (RPE) where necessary.
- Prior to excavation of Made Ground, a visual inspection was carried out by a competent person and any suspected ACMs were appropriately removed from site.
- Soil sampling was also undertaken prior to excavation as part of AAE's waste characterisation and discovery exercise (refer to Section 3.2), during which samples were analysed for asbestos identification and quantification.
- Soils found to contain ACMs were stockpiled separately upon suitable sheets or geo-textile covering and the area was fenced off prior to the removal of soils from site.
- Where excavation was undertaken in previously unsampled Made Ground (Ramboll understands this to have been limited), works were undertaken under a watching brief and supervision of a suitably competent person.
- During excavation and loading activities, dust emissions were suppressed using suitable dust suppression techniques such as water spray / misters.
- Transportation and disposal of asbestos was undertaken by specialist registered contractors and accompanied with a completed consignment note.

Waste duty of care information provided by the contractor relating to disposal of asbestos containing materials is presented in Appendix 6.

3.14 Permits and Licenses

It was the responsibility of the contractor to obtain all relevant permits and licenses (e.g. exemptions, consents and deployment forms relevant to the works) prior to beginning any work.

The contractor's completion report confirms that a mobile plant permit was implemented to facilitate recycling of crushed concrete on site:

- Local Authority Pollution Prevention and Control Part B Installation Permit (Ref. EH/00024636 V.7) for stockpiling, loading, unloading and crushing of bricks, tiles and concrete.

A copy of the relevant permit is included in Appendix 13.

No other permits or licenses were reported to be required in relation to the works.

3.15 Long-term Monitoring and Maintenance

No additional validation or verification works, or longer-term monitoring are required in relation to the areas of the site covered by this report. The remediation strategy has been successfully completed in respect of the development area and current enabling works phase and potential risks to controlled waters are considered to have been appropriately mitigated.

3.15.1 Residual Actions

Landscaping Validation

Finishing works associated with the development such as soft landscaping are yet to be completed. It is understood that some areas of landscaping will be created as part of the proposed development. These will consist of either existing soil where appropriate for use or the use of imported and tested clean soil. Ramboll's RSA outlines minimum requirements for sampling and capping of soil, including the verification criteria required and these measures will need to be implemented and validated at the time of the works.

Water Supply Pipes

New water supply pipes have not been installed on site at the time of writing. Follow-on contractors should liaise with the local water supply company and give consideration to detailed assessment of existing and future pipe materials in accordance with the requirements of Ramboll's RSA.

Areas Outside of Current Remediation Scope

At the time of writing, remediation of peripheral areas of the site (if required) outside of the development area as defined in this report has not been undertaken.

4. CONCLUSIONS

The actions forming the agreed remediation strategy for the Phase 1, Phase 2 and substation cable route areas of the subject site have been implemented and subsequently verified by Ramboll in accordance with the RS and RSA.

In summary, the work required and/or completed to support discharge of Planning Condition 8 comprised:

- Wholesale removal of Made Ground and impacted soils within the development area, including removal of identified 'hot spots' of chemical and asbestos contamination, off-site disposal of contaminated soils and validation of the 'hot spot' removal;
- implementation of a discovery strategy for unforeseen contamination during the ground works;
- implementation of a waste strategy to ensure appropriate characterisation and disposal of waste materials and documentation of material imports and re-use;
- implementation of a groundwater monitoring programme;
- documentation of the remediation work by the contractor detailing on-site activities, excavation records, stockpile plans, waste duty of care information and special measures for the disposal of asbestos contaminated soils;
- preparation of this report and a record of the work undertaken and actions completed.

The implementation of the remediation strategy has been successfully completed in relation to the development area and enabling phase and potential risks to controlled waters are considered to have been appropriately mitigated.

No additional validation or verification works, or longer-term monitoring is required in relation to the development area (as defined in this report) prior to construction.

This verification report should be made available to the Planning Department at Wycombe District Council to provide evidence the works were carried out and to support the discharge of the relevant planning condition.

APPENDIX 1

FIGURES

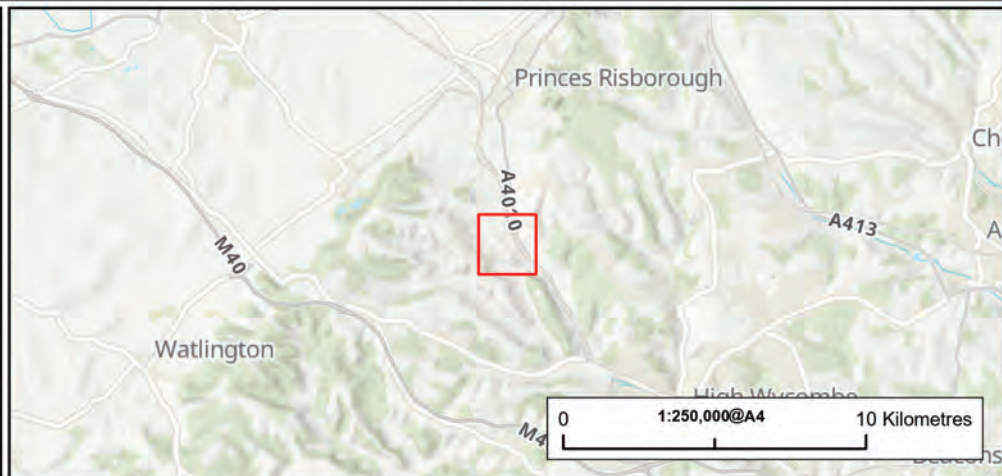


Figure Title Figure 1: Site Location	Project Name Former Molins Site, Saunderton	Date November 2022		
		Scale As shown		
Project Number 16200011947-004	Client Avalon DC	Issue 1	Prepared By BE	



Map data ©2022 Google

Legend

 Site Boundary

Figure Title

Site Layout

Project Name

Former Molins Site,
Saunderton

Project Number

16200011947-004

Figure No.

2

Date

November 2022

Prepared By

BE

Scale

1:3,000 @A4

Issue

1

Client

Avalon DC





Legend

- Site Boundary
- Phase 1
- Phase 2
- Embankment
- Additional Remediation Areas
- Cable Route

Figure Title

Phase 1, Phase 2 and the
substation cable route

Project Name

Former Molins Site,
Saunderton

Project Number

16200011947-004

Figure No.

3

Date

December 2022

Prepared By

BE

Scale

1:3,000 @A4

Issue

1

Client

Avalon DC

RAMBOLL



Legend

Site Boundary

Figure Title
Proposed Development Layout

Project Name
Former Molins Site, Haw Lane,
Saunderton

Project Number 1620011947-004	Figure No. 4
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Date July 2022	Prepared By CC
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Scale Not to Scale	Issue 1
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Client
Avalon DC

RAMBOLL



Legend

- Site Boundary
- Newly Installed Monitoring Wells (2022)
- Existing Abstraction Well
- Pre-existing Groundwater Monitoring Wells

Figure Title

Borehole Location Plan

Project Name

Former Molins Site, Saunderton

Project Number	Figure No.
1620011947-004	5
Date	Prepared By
July 2022	CTC
Scale	Issue
Not to Scale	1

Client

Avalon DC

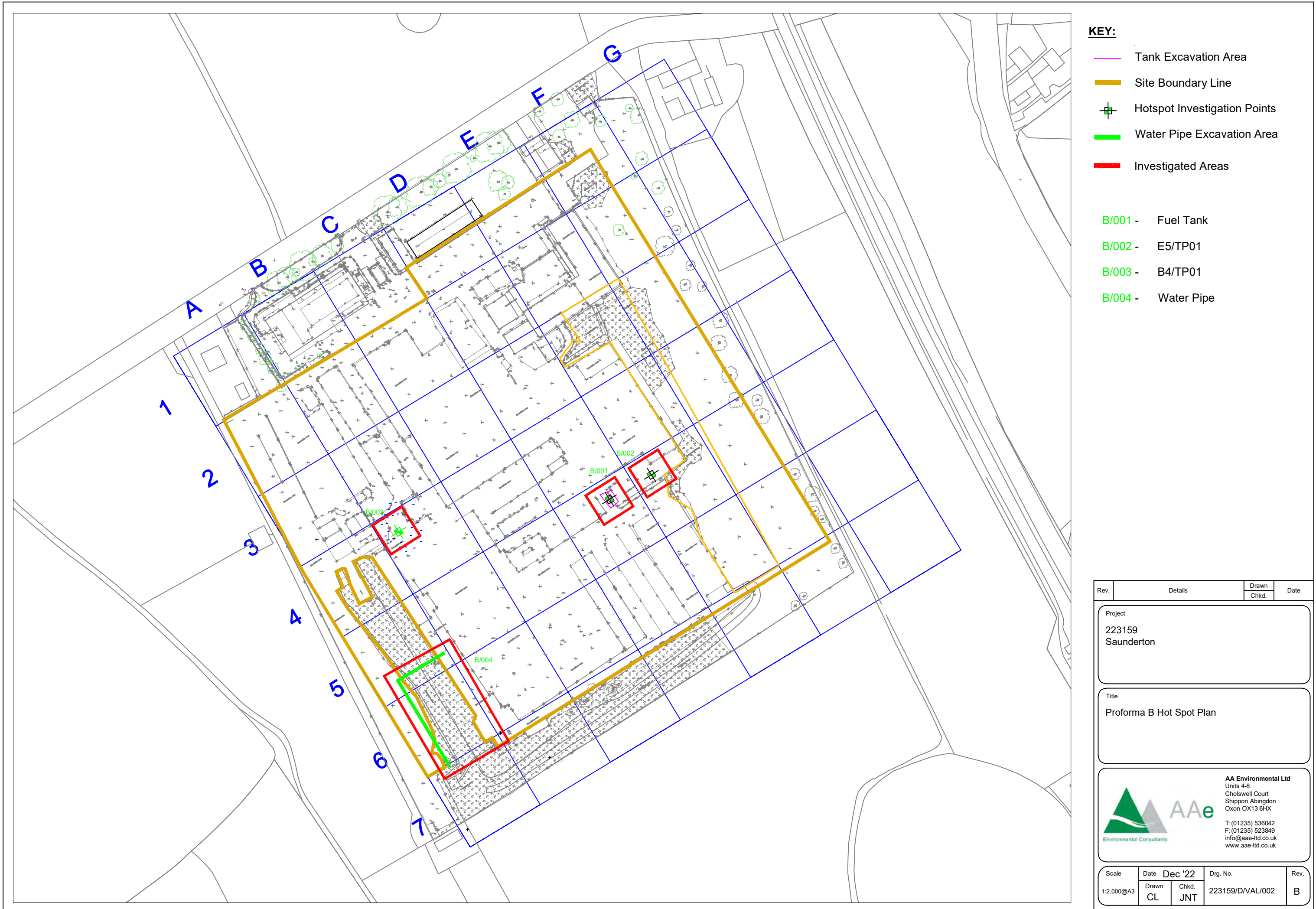
RAMBOLL



KEY:

 Proforma Area Extents
(Indicative Areas A to E and the
Cable Route)

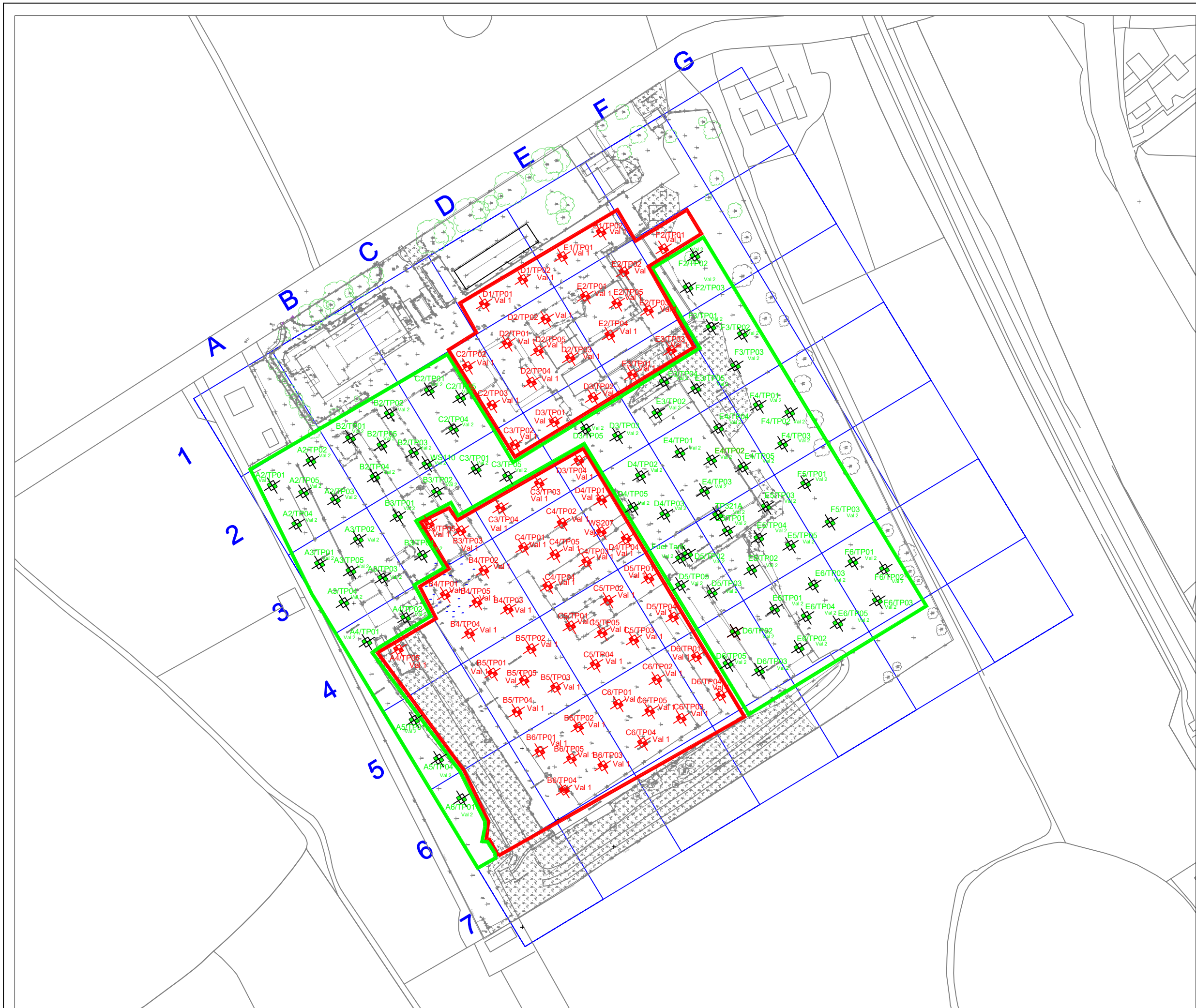
Rev.	Details	Drawn Chkd.	Date
Project			
223159 Saunderton			
Title			
Proforma Area Layout			
AREAS A to E and Cable route			
 AA Environmental Ltd Units 4-8 Cholswell Court Shippon Abingdon Oxon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk			
Scale	Date	Dec '22	Drg. No.
1:2,000@A3	Drawn	CL	223159/D/VAL/001
	Chkd.	JNT	Rev.
			A



- KEY:**
- Tank Excavation Area
 - Site Boundary Line
 - Hotspot Investigation Points
 - Water Pipe Excavation Area
 - Investigated Areas

- B/001 - Fuel Tank
- B/002 - E5/TP01
- B/003 - B4/TP01
- B/004 - Water Pipe

Rev.	Details	Drawn Chkd.	Date
Project 223159 Saunderton			
Title Proforma B Hot Spot Plan			
 AAe Environmental Consultants AA Environmental Ltd Units 4-8 Cholswell Court Shippon Abingdon Oxon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk			
Scale 1:2,000@A3	Date Dec '22	Drawn CL	Chkd. JNT
Drg. No. 223159/D/VAL/002			Rev. B



- KEY:**
- Phase 1 Validation Boundary Line
 - Phase 2 Validation Boundary Line
 - AAe Phase 1 Validation Sampling points
 - AAe Phase 2 Validation Sampling points

Rev.	Details		Drawn Chkd.	Date
Project 223159 Saunderton				
Title Site Validation Plan including Phase 1 and 2				
 AA Environmental Ltd Units 4-8 Cholswell Court Shippon Abingdon Oxon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk				
Scale 1:2,000@A3	Date Dec '22	Drawn CL	Chkd. JNT	Drg. No. 223159/D/VAL/003
				Rev. B

APPENDIX 2

CONTRACTOR'S COMPLETION REPORT

Contractors Completion Report

Former Molins Site

Haw Lane

Saunderton

Buckinghamshire

HP14 4JD

November 2022

Prepared by

Enterprise Skip Hire Limited

Wendover Road

Aylesbury

Buckinghamshire

HP22 5GX

CONTENTS

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3. Scope of works undertaken	Page 6
4. Scope of working area, demolition, and earthworks	Page 7
5. Excavation Records & Unexpected Contamination	Page 8
6. Final Levels, Filling and Surface Testing	Page 9
7. Waste and Material Management	Page 10
8. Asbestos Management	Page 11
9. Conclusion and Completion	Page 12

APPENDIX

See last page

1. INTRODUCTION

This document has been prepared on behalf of Enterprise Skip Hire Limited who was contracted to undertake the scope of works by Avalon DC Limited. Enterprise Skip Hire Limited are a Waste Management Company who have been established since 2012 and have all the appropriate knowledge and skills to comply with the requirements of the Construction (Design and Management) Regulations 2007. It contains all the information which could have relevance to future works on the sections (Phase 1 & 2) of the site in which works under contract took place. It also serves to record documentation of the earthworks by the contractor, environmental and sustainability information with references to the Remediation Strategy (RPS 2010) and to the Site Waste Management Plan Regulations (2008) and also the Construction Traffic Management Plan (CTMP).

Construction (Design and Management) Regulations 2007.

- Evidence of correct handling of arising's from the works intended to demonstrate that all the materials were completely and correctly removed.
- Evidence which came to light during the works as to positions of below ground obstructions and other reportable items.
- The nature and positioning of imported materials.

Site Waste Management Plan (SWMP) Regulations 2008.

These Regulations require a site waste management plan to be prepared for every construction project with an estimated cost greater than £300K. The information contained in this can be used to demonstrate compliance with the Regulations regarding the description, quantity and destination of each waste type produced.

RPS Remediation Strategy 2010

ESH's contractor requirements under the RPS strategy are limited to the below

- Daily Record sheets detailing activities on site.
- Excavation records, including details of the material removal from the excavation and the extent of any contamination within that material and plans showing the dimensions and nature of each excavation together with sampling locations.
- Details of any material changes to the remedial works due to findings on site.
- Where stockpiling was undertaken stockpile plans detailing the volume and nature of the stockpiled material.
- Site won material placement plans showing the extent of imported material placement at the site (if any). These will be presented with accompanying chemical analysis identifying the material as acceptable in accordance with the testing and reports undertaken by AAE.
- Sample records detailing the location and composition of each sample located within the laboratory chemical analysis.
- Duty of care register for waste removal, including a list of transfer notes and consignment notes against landfill weighbridge tickets, chemical test results for the material and any environmental agency pre-notification.
- Special measures for the disposal of asbestos contaminated soils

In addition to the RPS Remediation strategy, Ramboll also provided an addendum to reflect the changes to guidance and best practice and additional information about the site gathered since the RPS strategy was developed

Ramboll Remediation Strategy Addendum 2022

This addendum report required ESH to provide records of material management. Results can be found in the appendix, but cover excavation records, movement of material records, tracking and placement of materials and any CLAIRE direct transfer under DoWCoP requirements.

Within this addendum are other requirements that relate to groundwater monitoring and landscaping materials both of which are outside of ESH's scope of works.

Persons Responsible for Project

Principal Contractor: Enterprise Skip Hire Limited (ESH)

Project Manager: David Einig

Quantity Surveyor: Chris Andrews

Compliance: Lisa Wright

2. Initial Tender Documents, Purpose and ESH's Responsibilities

<u>TENDER DOCUMENT DRAWING NUMBER</u>	<u>NOTES</u>
Molins_TOPO-A0 Sheet 1 to 6	These six pages are the topographical survey of the existing site.
Molins_TOPO-DESIGN Overlayed markup	This document shows the existing layout overlayed with the new scheme
RUK2021N00114-RAM-BP-00001_2.0	This report was an initial review of 3rd party reports undertaken on behalf of Avalon. It summarises key ground contamination requirements based on these reports and the 2008 planning permission
Topographic Survey Report	This document forms the basis of ESH's tender and presents detailed information regarding the topographical survey and results of the cut and fill calculations. These calculations were used to form the quantities in the Bill of Quantities

The following documents were issued to ESH after ESH started onsite –

<u>DOCUMENT TITLE</u>	<u>NOTES</u>
08_05740_FULEA—431935	This is the town and country planning order 1995, this document provides the planning permission for the erection of 4no date centre buildings. Condition 8 verification of remediation and Condition 26 are most relevant to ESH's works which covers a Code of Practice for Construction.
Site Remediation Strategy (2010) produced by RPS Saunderton Data Centre (London One Date Centre Campus)	The remediation strategy forms the basis of ESHs works and is the overriding control document to be adhered to.
Reptile Survey & Mitigation Report (2022) produced by Ramboll	ESH are working within the parameters set out in this report.
Remediation Strategy 2022 Addendum produced by Ramboll	This addendum document sets outs additional requirements required in line with the updated guidance and best practice
Waste Characterisation and Discovery Strategy produced by AAE	This document sets outs the approach to waste characterisation and soil validation sampling implemented on site

3. Scope of works undertaken by Enterprise Skip Hire Limited.

The demolition and enabling earthworks prior to the construction, by others, of four data centre buildings and electricity substation.

The enabling works carried out by ESH included clearance of remaining debris and non-retained structures, excavation to reduce ground levels across most of the development area and installation of a substation compound.

The required reduced level excavation necessitates the removal of the majority of the made ground from across the future development platform. It was estimated that 195,000m³ of inert materials would be removed from site.

AA Environmental (AAE) and their role

AAE were commissioned by the client to prepare and implement a waste characterisation and discovery strategy. AAE's work included additional investigation on a grid-by-grid basis, contamination hotspot delineation and waste characterisation analysis.

Programme of works

Phase 1 started on 23/05/2022 and lasted for six weeks.

Phase 2 started on 01/07/2022 and paused on 25/08/2022 for a period of five weeks until all the reptiles were trapped and relocation. These works were undertaken by Ramboll. ESH then commenced their works on 2nd October and achieving practical completion on 2nd November 2022.

All works undertaken were within the operational hours of Monday to Friday 7.00am to 7.00pm and Saturday 8.00am to 1.00pm.

The following table lists the main remedial events:

Chronology of events

Date	Site Remedial Events
May 2022	Strip out vegetation and clear site. Prepare all Health and Safety paperwork, erect safety fencing, place obligatory site signage, position site welfare units.
June 2022	Testing of trial pits undertaken by AAE. Excavation started on phase 1. CTMP prepared. Routing agreement sent to hauliers along with instructions on 'Site Rules and Regulations'. Materials removed from site as test results received back.

July 2022	Testing of trial pits undertaken by AAE. Most of the excavation completed within this month and removal of stockpiles transferred off site.
August 2022	Testing of trial pits by AAE. Phase 2 excavation near completion. Site closed on Thursday 25 th August till month end.
September 2022	No works undertaken due to ecology visits for trapping and relocation of reptiles.
October 2022	3 rd October works continued. Final test results received from AAE and waste taken off site. All validation
November 2022	Final Contractors Report filed

4. Scope of working area.

ESH are only responsible for the working area as shown and can confirm that all works have followed recommendations and remained fully compliant to all policies when reasonably practicable.

ESH hold no liability for any follow-on contractors, the quality of their works or materials imported and exported to and from site and any contamination that occurs after the completion of ESH works.

Refer to appendix for drawing which shows the working area for ESH.

Demolition

Phase 1 and 2 covered by the scope of works by ESH was divided into grid squares by 50 x 50 sections. These sections are numbered A-F by 1-7. Each grid square was then further divided up into 5 trial pit areas, which was systematically tested by AAE. On completion of the trial holes and subsequent results provided by AAE. ESH used excavators with breaker attachments to break out the existing hardstanding and concrete slabs. Most of this material was taken offsite to an appropriate facility, tickets can be found in the appendix.

Approximately 1500m³ of this existing material was recycled and re-used to create a working platform in the compound for any follow-on contractors. Prior to installation, this material was tested by AAE and certified suitable for use prior to re-use. Results can be found in AAe's report.

Earthworks including Phasing of works

Post demolition works, ESH undertook the earthworks to Phase 1 & 2 (Phase 3 has yet to be awarded). Earthworks is also known as any excavation and filling to make up levels, down to or up to a certain datum.

Refer to document in appendix which shows the Phasing of the works

5. Excavation Records & Unexpected Contamination

All excavation areas listed by the site grid points are recorded onto the site daily record sheets. To back these daily recordings, site photographs were also taken at certain points throughout the working day which show the excavations taking place. Refer to site daily record sheets and photos can be found in the appendix.

If any unexpected potential contamination or contamination hotspots were uncovered during excavations. The site manager would halt all any further excavation in that area. All known details would be recorded, and additional photographs taken. The area would be cordoned off and all employees/subcontractors evacuated. Further investigations would then take place, reported and paperwork completed. Testing would then be authorised to be undertaken by AAE.

Additional Contamination finds and hotspots below formation level

Date	Grid Square	Suspected Object/Source	Outcome	Rectified by
27/06/2022	D5	Underground Tank	Delineation of hotspot by AAE	Removal and validation of tank
21/07/2022	B4	Hotspot of non-hazardous soil	Delineation of hotspot by AAE	Removal and validation of contaminated soils
29/06/2022	E5/D6	Hotspot of VOC impacted soil	Delineation of hotspot by AAE	Removal and validation of contaminated soils

Hotspots identified as requiring remediation in 2010 RS and 2022 RS addendum addressed by wholesale excavation and disposal of Made Ground soil in these areas where applicable – and that the underlying natural soils were validated by AAE prior to backfilling

Stockpile Tracking Records

All Stockpile Tracking was recorded in the exact same process as the excavation records, refer to drawings in the Appendix

Material Re-use

During the cut and fill works, the material re-used as fill was uncontaminated natural soils negating the need for a materials management plan.

During the process of the demolition works, all concrete was broken up and removed off site, except for approximately 1600m³. This site won material was then put through a crusher to produce a 6f5 material, which was re-used in the substation compound (grid squares D2, E2, D3, E3). Prior to reuse AAE tested this material to ensure it was of suitable quality. Refer to AAE's report for details.

Imported materials

140 lorry loads (approx. 1470m³) of crush concrete/6f2 material were imported on to site. This aggregate was produced all in compliance with the WRAP Quality Protocol. The imported product was installed in the area for the proposed Sub Station compound.

Date	Product	Producer	Volume	
10/10/22	6f5	C. Putnam	262.50 m ³	
11/10/22	6f5	C. Putnam	63.00 m ³	
12/10/22	6f5	C. Putnam	241.50 m ³	
13/10/22	6f5	C. Putnam	535.50 m ³	
14/10/22	6f5	C. Putnam	21.00 m ³	
16/10/22	6f5	C. Putnam	168.00 m ³	
21/10/22	6f5	C. Putnam	73.50 m ³	
24/10/22	6f5	C. Putnam	94.50 m ³	
26/10/22	6f5	C. Putnam	10.50 m ³	

6. Final Levels Survey

BCS undertook a final levels survey to demonstrate that the correct datum level had been achieved. This can be found in BCS report This was carried out by an independent engineer using calibrated GPS setting out equipment.

Filling to makeup levels

As part of the cut and fill works, the fill element was carried out in accordance with Volume 1 Specification for Highways works Series 600 earthworks along with the requirements of the remediation strategy and addendum documents. The fill material re-sued on site was tested by AAE prior to its use ensuring ESH had only used the correct material.

Final Surface testing – Incremental plate load testing

Incremental plate load testing was carried out to the substation compound area in accordance with the British Standards 1377 1990: Part 9 and consists of loading a steel plate and recording the settlements corresponding to each load increment. ESH undertook these tests on the final formation level to the substation area.

The following test parameters was used -

- A 30t excavator was used as kentledge in the test procedure.
- 450mm plate size was used
- Test pressure applied was 300Kpa
- A deflection of less than 5mm was required.

All tests achieved less than 5mm deflection and therefore passed. All test results can be found in appendix.

There was no requirement to test the remainder of the site.

Final Surface testing – Chemical Quality

On completion of ESH's work AAE had chemically tested all previously identified locations to ensure that the final formation level is free of any contamination. This testing demonstrates ESH's compliance with verification and re-use of material criteria.

Final Surface Preparation

The final surface preparation was carried out by a 13t smooth drum roller.

7. Waste Management

Waste Characterisation and Discovery Strategy

All procedures were followed to undertake the correct testing needed for managing soils. All waste was correctly classified using the 2 classifications for soils under the EWC codes available 17.05.03* Hazardous Soil and Stones or 17.05.04 Non-Hazardous Soil and Stones. The classification was determined by addressing the chemical composition of the soils which was undertaken by AAE through implementation of the waste characterisation and Discovery Strategy. ESH are a licensed waste broker and as such were able to determine waste classifications and once the classification was determined, all materials deemed for landfill disposal was transported under the correct EWC code to landfill or removal to an acceptable permitted disposal site.

Materials arising from the works comprised:

Site Name	Facility	WML	Waste Type	Nr of 8 wheel Loads	Approx Volume m3
C Putnams	HP27 9QD	UP3997E7EJ	Concrete	3,124	46,860
A&J	SL6 6NL	EPR/CB3908LP	Soil/Stones	1,753	26,295
M&M	OX29 4EB	FB3633AL/A001	Soil/Stones	280	4,200
O'Malley	OX29 4EG	JB3108TQ/T001	Soil/Stones	51	765
O'Malley	UB9 4HF	CB37065Q/V002	Non-Haz	1,314	19,710
Hazel	OX10 6HE	BP3695EW/V003	Soil/Stones	391	5,865
Soil & Water	SL6 6ND	EPR/JB2102FY/A001	Soil/Stones	71	1,065
Soil & Water	SL3 6ND	EPR/JB3102FY	Soil/Stones	114	1,710
FCC	OX29 5BJ	EPR/HP363RD	Soil/Stones	37	555
Clarks	OX9 3HW	U1/U10	Soil/Stones	317	4,755
Enterprise	HP22 5GX	DB3904US/T001	General	3	45
ASM	HP19 8BB	EAWML 86046	Metals	21	315
FCC	B65 9BT	EPR/HP363RP	Hazardous	37	555

Direct Transfer

Materials transferred for re-use on other sites under CL:AIRE DoWCoP which are summarised as follows

Site Name	Facility	MMP Ref	Material	Quantity – Number of 8 wheel loads
Oaklands	SL2 4NL	TT-BurnhamBeeches/Saunderton	Fill material	10,037
Oaklands	SL1 8DP	TT-SouthBucks/Saunderton	Fill material	1,216

Material schedule and analysis

The figures have been transferred from the weekly waste record spreadsheet and scanned WTN's (which can be found in the appendix), which should be consulted for a detailed understanding of the waste quantities handled, destinations and waste carrier.

Waste Stream	EWC	Total quantity of loads	Approx Volume m3
Concrete	17.01.01	3124	46,860
CL:AIRE	17.05.04	11,253	168,795
Soil/Stones	17.05.04	3014	45,210
Non-Haz Soil/Stones	17.05.04	1314	19,710
Metals	17.04.07	21 loads	315
General Mixed	17.09.04	3	45
Hazardous	17.05.03*	213	3198
Hazardous	17.03.01*	8	120

Waste records

Enterprise Skip Hire Limited will hold all the original waste transfer notes, disposal tickets and hazardous waste consignment notes in archive for the statutory required period. Reference to information in the Appendix

Site Management, Health and Safety Including Asbestos Controls.

Refer to Construction Traffic Management Plan (CTMP) and Asbestos Management Plan already prepared in the Appendix.

8. Asbestos Management

Asbestos Work Procedures.

This section has been prepared in accordance with CAR 2012 and it describes the procedures and possible methodologies to be used by contractors and construction workers during the excavation, handling and disposal or placement of potential asbestos containing materials identified during Phase 1 and 2 of the former Molins Site. This was all undertaken in accordance

Pre-Sampling Prior to Excavation

Where possible, prior to excavation, representative samples from areas of planned excavation works within the Made Ground shall be collected. The representative samples of the Made Ground should be obtained by a competent person and sent to the laboratory for asbestos identification and quantification.

Asbestos Containing Materials in Excavated Ground

Asbestos Work Procedures.

The works undertaken was carried out as non-licence works, precautions was taken during the works to prevent health impacts should ACMs be encountered during the works.

Through the site induction process, all site personnel attended a training course to be educated regarding the potential risks associated with asbestos containing materials which may be encountered on the surface or in excavated Made Ground. The information provided during this training included how to identify friable and non-friable asbestos, awareness of hazards associated with asbestos, emergency procedures and proper storage and disposal of asbestos material.

Plan of Work.

- The nature and probable duration of the works;
 - The number of people involved in the works;
 - The work address, location, and site layout with a description of where and nature of ACM that may be encountered.
 - The methods to be used to prevent or reduce exposure to asbestos, e.g. prevention and control measures and arrangements for the handling and disposal of asbestos waste;
 - The type of equipment, including PPE and RPE, used for:
 - o Protecting and decontaminating those carrying out the work;
 - o Protecting other people present at or near the worksite.
- All staff was supplied the equipment and use of:-
- Construction/maintenance workers to wear EN149 type FFP3 disposal respiratory protective equipment (RPE)
 - Manual/localised dust suppression measures implemented

- Localised and basic decontamination facilities provided.

Asbestos Management Procedures

Regulation 24 of the CAR 2012 requires that any detected raw asbestos and asbestos waste is properly packaged, labelled, stored and transported.

Prior to the commencement of excavation of Made Ground, a visual inspection would be carried out by a competent person and any identified ACMs removed following the procedures. During excavation and loading activities, dust emissions from the excavation face and trucks being loaded was suppressed at all times using water spray or other suitable dust suppression technique (Water Mistlers)

Excavator operators and truck drivers worked in an enclosed cabin with movements outside of the cabin to be reduced to a minimum. All site personnel in the work area are to wear appropriate personal protective equipment (PPE).

Asbestos Containing Materials at the Surface.

Where limited amounts of ACMs (i.e. asbestos fragments/sheets or any fibrous asbestos) was identified or suspected at the surface of the site, precautions to prevent fibre release was taken. The ACMs would be securely sealed and double-bagged in suitable, labelled bags or wrapping. The bags used was designed to ensure that no asbestos fibres could be released during handling and transport. Stronger packages were required if the waste contained sharp metal fragments or materials that could puncture the bags.

It was recommended that large items of rigid ACM such as sheets of asbestos cement should not be broken up or cut down for disposal in bags. The intact rigid waste should be double wrapped in suitable polythene sheeting (1000 gauge) or other suitable material and labelled accordingly.

If the asbestos waste was not disposed of immediately, the sealed bags or wrapped packages (for large rigid ACMs) would be locked in a suitable and clearly marked storage area, i.e. a lockable skip.

Pre-Sampling Prior to Excavation

Where possible, prior to excavation, representative samples from areas of planned excavation works within the Made Ground would be collected. The representative samples of the Made Ground should be obtained by a competent person and sent to the laboratory for asbestos identification and quantification.

Where large volumes of excavated waste contaminated by asbestos, it was not practicable to place material into plastic bags or bulk packaging. The potential Contaminated materials would loaded directly into an appropriate pre-lined bulk container such as a haulage vehicle or a roll-on, roll-off skip. Procedures was in place to minimise the spread of asbestos during the loading operation and to prevent spread from the load while it is being transported on the road.

Asbestos Containing Materials in Excavated Ground

Excavation works within Made Ground where pre-sampling had not occurred was undertaken under a watching brief and supervision of a suitably 'competent person' to visually check for the presence of potential ACM. The competent person possess adequate qualifications, such as suitable training and sufficient knowledge, experience and skill for the safe performance of the works.

Made Ground encountered during the excavation was quarantined first and stored with suitable sheets or geo-fabric covering pending asbestos assessments. Representative samples of the Made Ground were obtained by AAE and sent to the laboratory for asbestos identification.

The primary response would be to avoid any further disturbance of the material and prevent access to the stockpile area by the placement of barricades. If the materials appeared friable or there was a risk of further disturbance from the weather such as high winds the material would be dampened down and

covered with heavy gauge polythene or geo-fabric either of which would then be properly secured, and warning signs should be put in place and the discovery be included in any daily toolbox talks.

Considering all of the above control measures and methods in place regarding the management of asbestos. As a company we did not feel the need to monitor dust as per the Remediation Strategy.

Permits and Licenses

ESH carried out a element of crushing of suitable previously validated material by AAE to be re-used in the works, which enables ESH to stockpile, loading, unloading and crushing of bricks, tiles concrete. This material was re-used as crush concrete in the substation compound. This was carried out under permit number EH/00024636 V.7, of which can be found in the appendix

9. Conclusion and Completion.

On the completion of all works Enterprise Skip Hire Limited carried out within the scope of works and all in accordance with the Remediation Strategy Plan. ESH can confirm that the works were completed in accordance with the scope of work agreed with the client. This was clarified further after a thorough re-validation of all grid squares which was carried out by AAE. Enterprise Skip Hire limited, therefore cannot and will not be held liable for any contaminates of any kind that happen due to further contractors on site after the date of their departure.

All works undertaken by and on behalf of Enterprise Skip Hire limited was always undertaken duly following all written Requirements, Regulations and Policies held to cover site works.

Appendix

Schedule of Appendix

Appendix 1	Contractor Daily Record Sheets
Appendix 2	ESH working area – Scope of works
Appendix 3	Waste Duty of Care information
Appendix 4	Phasing of works plan
Appendix 5	Stockpile Tracking Drawing
Appendix 6	CBR test results
Appendix 7	Weekly waste record spreadsheets
Appendix 8	Construction Traffic Management plan
Appendix 9	Asbestos Management Plan
Appendix 10	Permits & Licenses

APPENDIX 3

WASTE CHARACTERISATION AND DISCOVERY STRATEGY

WASTE SEGREGATION & DISCOVERY STRATEGY (ENABLING WORKS PHASE)

Report for:

Document Ref: 223159/WSDS/001

Enterprise Skip Hire Limited
1 Wendover Road
Aylesbury
Buckinghamshire
HP22 5GX

1. INTRODUCTION

1.1 Overview

AA Environmental Limited (AAe) has been appointed by O'Malley Haulage Limited to produce a waste segregation and discovery strategy for the removal of hardstanding and underlying Made Ground associated with the redevelopment of land at the former Molins Site, Haw Lane, Saunderton, HP14 4JE (The Site). The National Grid Reference for the centre of the site is SU 80761 98495.

The site is located to the south-east of Haw Lane which forms the north western site boundary. The Chiltern Main Line railway runs parallel to the site, 100 m from the north-eastern site boundary. The site is bound by fields to the south-east and south-west. The site is predominantly vacant and comprises the footprint of the former Molins factory buildings, the exception being two remaining buildings in the north of site (the 'Ballroom' and an office block).

The site has been extensively studied since 2007 by several parties. And the following reports have been made available and reviewed:

- Ove Arup & Partners Ltd (November 2007) 'Geo Environmental Investigation – Phase Two Report (REP/123955/001)';
- RPS (20th October 2007) Letter to Environment Agency 'Groundwater Quality Results (Ref: BES0131L101020AGREGWM)';
- King Sturge (March 2008) 'Environmental Statement, Molins Site, Haw Lane, Saunderton';
- Environment Agency (16th November 2010) Letter to RPS (Ref WA/2010/108317/02-L01)';
- RPS (November 2010) 'Site Remediation Strategy - Saunderton Data Centre (Ref BES0131)';
- Hydrock 'Desk Study and Ground Investigation Report (Ref R/13649/004)';
- GEA (June 2020) 'Remediation Statement, former Molins Site, Haw Lane Saunderton (Ref J20063)'; and
- Rambol UK Ltd (June 2021) 'Former Molins Site, Saunderton. Initial Contaminated Land Report Review (Project ref 1620011947)'.

The studies show that the site was largely undeveloped and used as open fields until 1940 when it was developed as a scaffolding factory. This factory was used to manufacture ball bearings and tank parts during the war. After the war the factory was converted to produce pet food and furniture and in 1950 it was occupied by Molins for the manufacture of cigarette-making machinery. The site expanded over the years and in 1975 the slope in the south of the site was cut to allow an extension of the works. The Molins factory was demolished in 2009 to leave only the floor slabs and hardstandings along with a modern brick-built office and the former 1950s ball room and social club building at the front of the site. During its occupation by Molins several fuel, paint and lubricating oil tanks were present on site, which were removed during the demolition. The reports also indicate that the site was served by groundwater abstraction wells. The site is listed as being in a low risk area for unexploded ordnance.

1.2 Environmental Setting

Geology and Hydrogeology

The site is directly underlain by New Pit Chalk Formation (Middle Chalk) comprising principally blocky, white firm to moderately hard chalk with numerous marls or paired marl seams.

No superficial deposits are present on site. The Middle Chalk is designated as a principal aquifer. The site lies within the outer Source Protection Zone (SPZ) II and based on previous third party data groundwater flow is understood to be to the south-west. There are former groundwater abstraction boreholes present on site, both used for process waters. A public water supply borehole is situated approx. 2km to the south-west.

Hydrology

There are no surface water features in close vicinity of the site (1km). Based on the EA fluvial and tidal flood map for planning the site lies within Flood Zone 1 (low probability). This zone comprises land assessed as having a less than 1 in 1000 annual probability of river or sea flooding (<0.1% in any year).

1.3 Proposed Development, Planning and Previous Investigation

Proposed Development

The client intends to develop the site as a Data Centre and at present the development will match the scheme detailed within the 2008 planning application. The proposed data centre is designed to house computer equipment, servers and data storage devices. It is intended that the remaining buildings in the north of site shall be retained. The redevelopment requires a reduced excavation of in excess of 250,000 cu m of material, removing the concrete and excavating the Made Ground.

Planning Status

An application was submitted and approved in 2008 for development of a Data Centre (ref. application 08/05740/FULEA). The approval covered the construction of 4 data centre buildings together with associated groundworks, plant, electricity substation, security fence, gates and piers, landscaping, amendment to existing vehicular access(es), internal roads, service areas and provision of 150 car parking spaces with retention of the existing office building and "Ballroom" building fronting Haw Lane for ancillary operational uses and demolition of all other buildings and structures.

During the planning process conditions were discharged in regard to the Remediation Method Statement. The planning authority advised that *'the detail contained within the RPS Site Remediation Strategy and Quantitative Risk Assessment reports dated November 2010 (with regard to the detailed site investigation) are acceptable and in accordance with the pre-start element of Condition 7.'*

It is understood the planning permission has been implemented.

1.4 Scope of Enabling Works

The scope of the enabling works is to:

- Remove concrete slabs, hardstanding, internal road surfacing and sub-surface obstructions. Hardcore to be processed to produce recycled aggregate (6F2) for re-use;
- Excavation and off-site disposal of underlying Made Ground to formation level. Any residual Made Ground must be tested to demonstrate that it is acceptable; and
- Excavation and off-site disposal of natural chalk deposit to formation level for proposed development.

The enabling works phase of the development will generate Made Ground materials and natural chalk from the reduced excavation for installation of piling mat. Where materials cannot be re-used and are surplus to requirements then they are considered to be waste.

Waste producers are required to test waste to determine if it is hazardous or non-hazardous in accordance with Environment Agency (EA) guidance WM3 'Guidance on the classification and assessment of waste' (1st edition v1.1 GB). Testing of materials will also be used to advise on-site health and safety procedures in connection with identified contaminants in the form of TPH, PAH, Coal Tar Macadam and asbestos.

1.5 Ground Model

The site is directly underlain by the New Pit Chalk Formation. The chalk is classified as a Principal Aquifer and the site lies within the outer zone II of a Source Protection Area. The anticipated geological sequence has been confirmed by the ground investigations which have identified the presence of a cover of Made Ground below the existing hard surfacing which is underlain by the chalk. On the basis of the fieldwork, the ground conditions at the site can be characterised as follows:

- Below 0.1 m to 0.4 m thick cover of concrete or tarmac, Made Ground comprising gravel, cobbles and boulders of brick, concrete and chalk in a matrix of clayey silty sand is present which extends to depths of generally less than 0.5 m but which has been locally found to extend to depths of up to 2.9 m;
- The natural chalk was encountered below the Made Ground and in the north of the site where it had not been previously removed to form the cut, comprised grade Dc structureless off white chalk fragments in a matrix of silt sized putty chalk that was found to extend to depths in the order of 2.0 m to 2.5 m. However, in the south of the site where the chalk had been cut to form the development platform Grade B3 to B4 chalk was encountered and comprised gravel to cobble sized blocks of chalk surrounded by infilled discontinuities.
- Groundwater has been measured within the chalk at depths of 19 m to 40 m which equates to levels of between approximately 101.90 m AOD and 105.65 m AOD with a flow direction towards the south-southwest at a gradient of approximately 0.015.
- The contamination analyses have revealed the presence of isolated concentrations of the PAHs naphthalene, benzo(b)fluoranthene, Benzo(a)pyrene and, dibenzo(a,h)anthracene, together with aromatic hydrocarbons in the range C10 to C16 in the Made Ground at concentrations that could potentially pose a risk to controlled waters or human health at five locations across the site together with the presence of asbestos at another eight locations. The level of asbestos fibre in the soil samples has not been quantified. At three locations the hydrocarbon content was sufficient to render the soil as a hazardous waste if disposed of to landfill; however the majority of the elevated hydrocarbon concentrations were associated with PAHs with a speciation characteristic of coal tar based tarmac which has a hazardous waste classification;
- Groundwater analysis of samples recovered from the chalk has confirmed the groundwater to be generally alkaline and to be rich in calcium and nitrate with comparatively low concentrations of chloride and sulphate. Metal concentrations were generally low and significantly below their respective UK Drinking Water Standards. Low concentrations of PAHs were detected in BH101 and BH102, together with some trace
- Concentrations of chlorinated solvents in BH101 during the initial Arup investigation. These boreholes were located in the central eastern part of the site and upgradient of the main works and the measured concentrations are below their respective assessment criteria. VOCs were not identified in any other borehole sampled.
- Petroleum hydrocarbons were identified in the down gradient former supply borehole (ABS) in 2007. However, the petroleum hydrocarbons present were dominated by long-chain, heavy aliphatic and aromatic fractions of low mobility and these were measured at reduced concentrations that were below their respective WHO guideline values for drinking water by 2010. Following the site demolition, the former abstraction well was found to be blocked and so two additional down gradient wells were installed, and sampling of these and the original boreholes in 2014 confirmed the absence of PAH and hydrocarbon contamination in the groundwater.

1.6 Waste Segregation and Discovery Strategy

A preliminary waste classification for the Made Ground beneath the existing slab / hardstanding has been drawn from the completed site investigations (See Section 1.4). The chemical analysis recorded the underlying soils to be a mixture of Hazardous and Non-Hazardous waste (if removed from site). The hazardous properties primarily related to aromatic hydrocarbons, PAH's and asbestos within the Made Ground deposit.

The purpose of this strategy is:

- Establish the procedure for the delineation and segregation of the known Hazardous areas to be excavated to achieve the enabling works formation level;
- Set out the strategy to further characterise the areas with limited testing to zone up the site on a 50m grid-basis;
- Detail the strategy for verification testing of soils for off-site transfer;
- To provide guidance to the Contractor/Site Manager on the requirements to undertake a watching brief during the demolition phase/site clearance and procedures for reporting suspected contamination; and
- Set out the procedures to follow in the event suspected contamination is identified and requirement to notify the appointed Project Consultant/Client to allow the necessary inspection/testing to be undertaken and Risk Assessment/Remediation Strategy to be updated if required.

A copy of this strategy should be maintained in the site office for reference.

2. KEY CONTACTS

Table 2.1 sets out the key contacts for the project.

Table 2.1 Project Contacts

Role	Contact Details
Enabling Contractor	Enterprise Skip Hire Limited 1 Wendover Road, Aylesbury, Buckinghamshire. HP22 5GX Contact: David Einig M 07946 298455
Environmental Consultant	AA Environmental Limited 4-8 Cholswell Court Shippon Abingdon Oxfordshire OX13 6HX Contact: Jack Taylor, T 01235 536042 E jack.taylor@aae-ltd.co.uk

3. STAFF TRAINING/BRIEFING

3.1 Site induction/briefing

All site staff, site contractors and site visitors, should be briefed before commencing work on the site on the potential to encounter unforeseen contamination. Apart from any standard Health & Safety practices this will include the following information:

- The type of contamination that could be encountered at the site based on previous use and available site investigation information (see Section 4).
- Staff responsibilities under the discovery strategy (see Section 4) and examples of observations that should be recorded as part of a watching brief.

3.2 Enabling workers risk assessment

A detailed health and safety risk assessment and method statement (RAMS) should be carried out, in accordance with current guidance, before works commence onsite and appropriate personal protective equipment should be worn by all demolition operatives.

The enabling works contract will include provisions to ensure compliance with Control of Asbestos Regulations 2012.

4.0 SEGREGATION STRATEGY AND FURTHER TESTING

4.1 Overview

The purpose of the segregation strategy to maximise those materials that are suitable for recovery and minimising non-hazardous and hazardous wastes that have to be transferred off site for further recovery/disposal.

The following materials are to be segregated and crushed to be retained on site for use by follow on contractors: concrete, brick and stone.

4.2 Preliminary Waste Classification and further investigation

The site will be zoned into areas for supplementary ground investigation ahead of the main slab removal and enabling works. These zones will be based on a 50 x 50 m Master Grid pattern, as presented on the attached drawing 223159/D/001. Further site investigation will be completed into the Made Ground quality across each grid square. This will provide further information regarding the extent of asbestos contamination, most notably a quantification of asbestos within the soil matrix and provide additional information regarding the level of hydrocarbons within the soil.

A minimum of 5 further trial pits will be excavated within the 50m grid squares on a systematic basis. The trial pits will be set out within each master grid and progressed to formation level, or to the base of the Made Ground (whichever is deeper). The arisings will be inspected for visual and olfactory indicators of contamination, including hydrocarbons and ACM fragments. Where hotspots have been identified they will be further investigated and delineated.

A composite sample will be obtained per location per vertical linear meter and submitted for laboratory analysis, against a comprehensive environmental solids suite (including asbestos screen, heavy metals, speciated TPH and PAH). The results will be classified in accordance with EA guidance WM3 using HazWaste Online software.

4.3 Management of excavation process

The waste characterisation data (including waste chemistry, material observations, logs and photographs) from each Master Grid will be collated, along with existing Site investigation data from earlier investigations to provide a detailed plan of the anticipated ground conditions ahead of the site clearance / remedial works. This will enable planning for waste disposal and health and safety precautions to be made in advance of the groundwork. This information will be recorded for each Master Grid using a proforma based record.

Schematic 1 details the management process and identifies the role of Proforma A, B and C. Their use is further described below:

Proforma A – Land Condition: Prior to any intrusive works being completed in an area (a grid square or series of grid squares) a land condition proforma will be generated. The report will include details of the stratum depth, any known contamination and screens the material quality against the approved re-use standards as

set out in the RPS remediation Strategy. The review will identify the foreseeable remedial works and also identify potential additional “hotspots” areas where the stratum may require further investigation and validation.

The Proforma A Templates for each Master Grid square will be updated throughout the works as site investigations are completed.

Proforma B – Hot Spot Remedial Works: Areas of identified contamination exceeding the remedial standards will be delineated and removed. Proforma B will detail the delineation and any in-situ works and provide validation that the remedial works have been completed satisfactorily. This proforma will be initially raised for areas of known asbestos and hydrocarbon contamination highlighted in the GEA Remediation Statement of June 2020.

Proforma C – Segregated Stockpile Classification: The final inspection and classification of each stockpile will be characterised in line with WM3 guidance and recorded in proforma C.

Schematic 1. Material Management Process

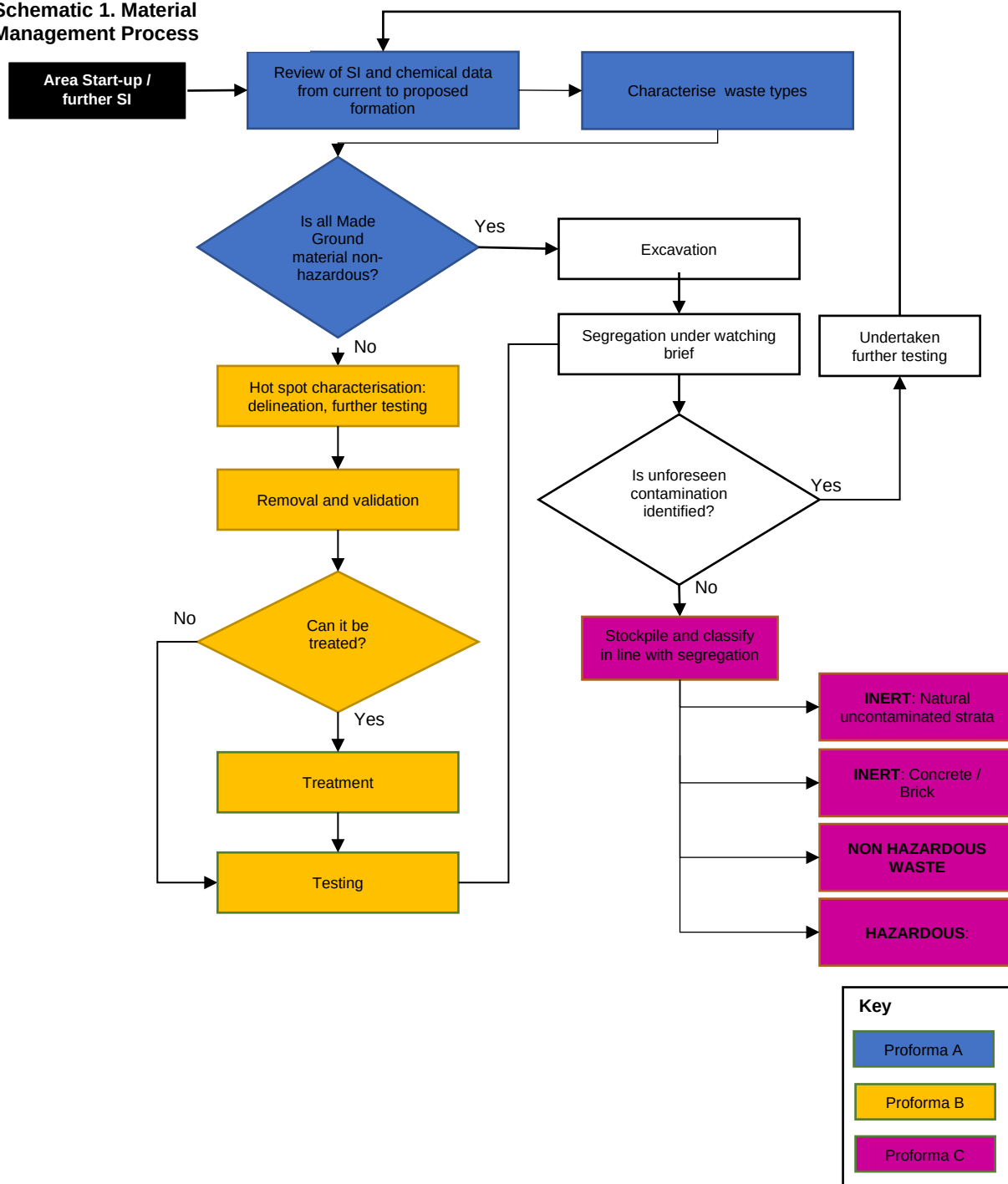




Figure 1 Summary of known contamination – GEA Remediation Statement, June 2020

4.4 Delineation of hotspots

The known contamination hotspots based on the existing GEA 2020 report data are presented in Figure 1. In the event additional hotspots are identified as a result of the trial pits completed as part of Paragraph 4.12 the following procedure will also be followed.

The earthworks contractor will excavate a 3 x 3 m square around the centre of the original investigation location to the required formation level. The soil will be stockpiled adjacent to the location on an area of remaining hardstanding or an impermeable membrane.

The base and sides of the excavation will be inspected by AAe for visual or olfactory indicators of contamination. If the inspection or on-site testing indicates contaminated soils are likely to still be present, the excavation will be expanded and further on-site testing undertaken.

Once the inspection and/or on-site testing indicates that the hotspot has been delineated verification samples will be collected from the sides and base for laboratory testing. Samples will be tested for a comprehensive environmental solids suite (including asbestos screen, heavy metals, speciated TPH and PAH). A composite sample of the segregated stockpile from the hotspot will be collected for laboratory analysis, in the event that there was limited prior testing of the upper strata / Made Ground.

4.5 Verification Testing and Watching Brief

Following excavation and delineation of the known Hazardous hotspots, the remaining areas will be subject to periodic watching brief and verification testing of segregated stockpiled material during excavation. The earthworks contractor will excavate impacted soils to the required formation level and stockpile in a designated management area. Verification testing will be completed at a frequency of 1 sample per 500 m³. Composite

samples will be obtained from the stockpiles and submitted to the laboratory for a comprehensive environmental solids suite (including asbestos screen, heavy metals, speciated TPH and PAH). The record of the quality of the segregated materials will be recorded by stockpile in Proforma C.

4.6 Sampling Plan

Samples from stockpiles and trial pits will be recovered using a systemic sampling procedure. This is where the samples are evenly spread across the population starting from a randomly chosen point. This method ensures that each part of the population has an equal chance of being sampled and a specified number of samples are taken from each strata. Population is divided into strata and a specified number of samples are taken systemically. All laboratory testing will be completed at a UKAS/MCERTS accredited laboratory.

5.0 DISCOVERY STRATEGY

5.1 General requirements

The discovery strategy sets out the actions that must be taken if suspected contamination is encountered during the site clearance and enabling works. Schematic 2 sets out the Discovery Strategy.

A significant observation includes any observation of suspected contamination. Examples of the types of observations that would be considered significant are set out in Table 5.1.

Table 5.1 Examples of observations to be reported

Evidence	Description
Visual	- Fuel tanks or drainage interceptor structures; - Fuel, tar or oil like substances mixed in with or smeared on the soil or floating on perched, groundwater or surface waters. - Waste materials (refuse, barrels, industrial wastes, ash, tar, etc.) buried at specific location or across the site. - Marked variation in colour. For example red, orange, yellow, green, light or dark blue, etc. may indicate contamination from a variety of contaminants. - Soils including large amounts of ash and clinker. - Evidence of asbestos – suspected fragments of ACM (cement bonded, fibrous board or lagging).
Odours	- Fuel, oil and chemical type odours - Unusual odours such as sweet odours, almonds or fishy odours
Wellbeing	- Light headedness and/or nausea when in/adjacent to excavations or exposed soils, at the working face of an excavation, when visual or olfactory evidence of contamination exists, etc. - Burning of nasal passages, throat, lungs or skin. - Blistering or reddening of skin due to contact with soil

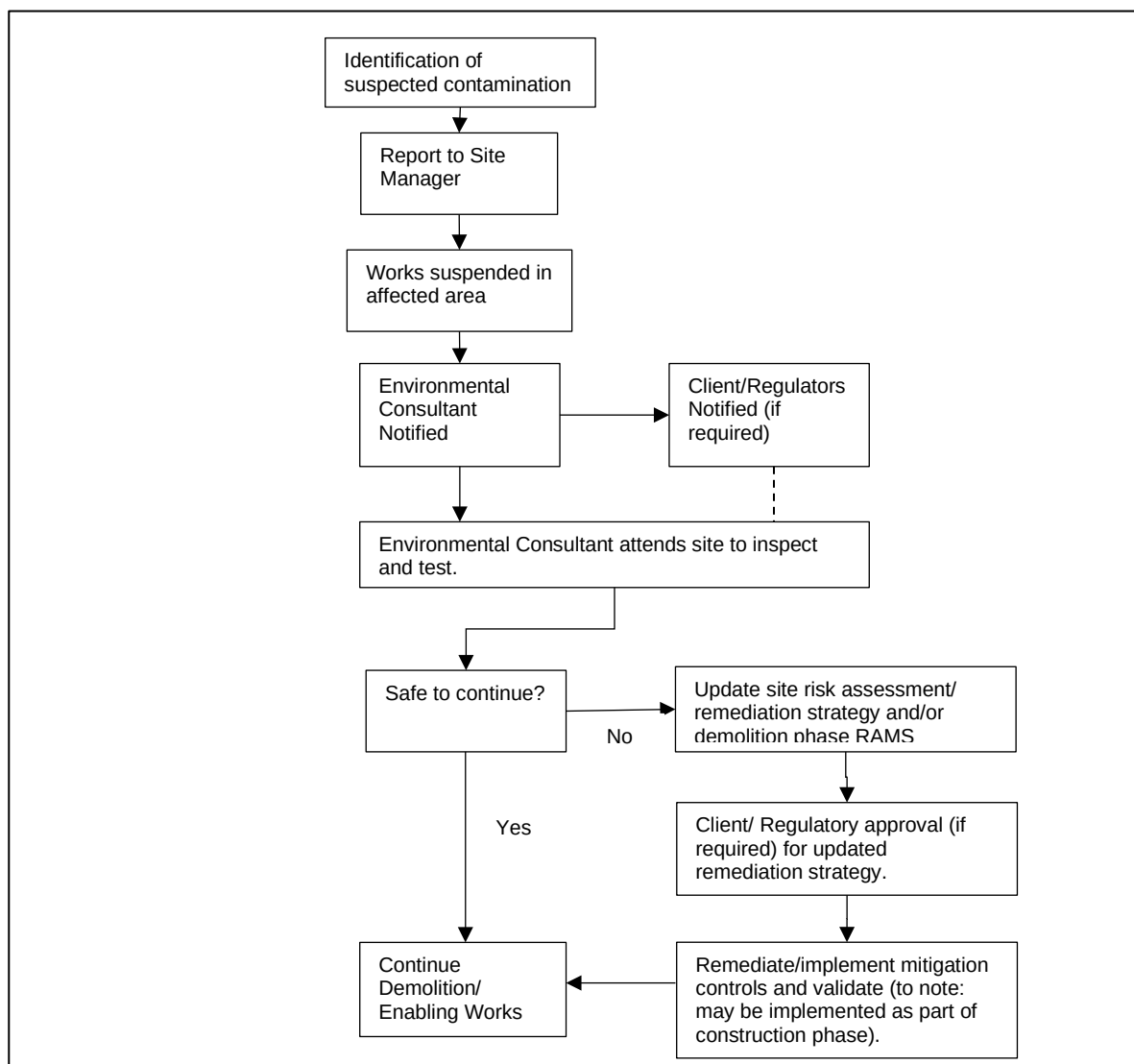
Note: The examples provided in this table are not exhaustive.

Table 5.2 sets out the actions that must be taken if significant or suspected land, water or air contamination is observed by site staff or contractors.

Table 5.2 Actions to be taken if contamination is suspected

Person Observing Contamination	To be reported to	Action to be taken
Demolition / Enabling Works Contractor (inc. Sub-Contractors) and Operatives	Must report observations to the Site Manager/Client and Environmental Consultant	Stop work in affected area and where possible, make area safe and secure area before reporting.
Environmental Consultant	Must report observations to the Site Manager/Client	Advise that work stops in affected area and where possible that the area is made safe before reporting

Person Observing Contamination	To be reported to	Action to be taken
		to others and undertaking further inspection/ investigation or testing.



Schematic 2. Discovery strategy

Table 5.3 identifies other organisations that may need to be contacted in an emergency or where pollution of controlled waters or nuisance is occurring.

Table 5.3 Other organisations which may need to be contacted

Occurrence	Description	Contact
Risk to the public	If at any point residents, the public or others may be at risk as a result of contamination found during the course of investigation, remediation or development works	• Contact the emergency services if there is a risk to life • Contaminated Land Officer/Planning Authority (Council) • Health & Safety Executive
Nuisance to residents/the public	If a nuisance has been or is likely to be caused to nearby residents, the public and others – for example odours, dust, noise, vibration, etc.	• Public Protection (Council)
Pollution of controlled waters	If any surface, culverted or groundwater has been polluted – for example contaminated soil/water or a chemical/fuel spillage entering a river or canal.	• Environment Agency • Planning Authority and Contaminated Land Officer at Council
Pollution of adjoining land	If land outside the boundary of the development site is polluted from site activities – for example contaminated soil/water or a chemical/fuel spillage	• The owner of the land • Planning Authority and Contaminated Land Officer at Council

5.2 Controls to be implemented if contamination is suspected

In the event that potential contamination is identified, works will be suspended in the affected area until it is tested and, if considered significant, delineated.

The Environmental Consultant will be notified. They will attend site and inspect/test the suspected contaminated material. Photographic records of suspected contaminants and ground conditions will be maintained and the location recorded by the site engineer.

Representative samples will be collected in accordance with quality control requirements and submitted to a UKAS/MCERTS accredited laboratory for analysis.

5.3 Potential contaminants which could be encountered

Table 5.4 sets the potential contaminants which could be encountered based on the current and former site uses.

Table 5.4 Potential contaminants based on former site uses

Land Use	Description
Current/Historical: Industrial and commercial uses.	• Fuels and Oils (Total Petroleum Hydrocarbons (TPH)) – leaks and spills from any tanks or vehicle/machinery storage, heating oil tanks/boilers. • Made Ground/Fill (containing heavy metals, Polycyclic Aromatic Hydrocarbons (PAH))– Reworked soils containing demolition rubble, ash and clinker. • Asbestos – Present in current/former buildings and structures. Asbestos containing materials (ACM) incorporated into soils/fill, under hardstanding. Evidence includes cement bonded fragments, floor tiles, degraded insulation board, insulation materials.

5.4 Review of results and Client notification

The laboratory results will be reviewed and the following determined:

- Requirement to update demolition / enabling working controls;
- Requirement to update risk assessment/remediation strategy for the proposed development (Stantec); and
- Implications for waste classification (enabling works and construction phase).

The Client and Project Consultant will be notified of the contamination encountered and, if significant, any requirement to update the existing risk assessment/remediation strategy agreed. Any proposed variation to the remediation strategy (including design mitigation control) to be implemented as part of the construction phase should be agreed with the Local Authority.

6. PHOTOGRAPHIC RECORD OF WORKS & DOCUMENTATION

The Enabling Works Contactor should maintain a photographic record during the key phases, including:

- Completion of demolition/site clearance (inc. removal of concrete floor slabs/hardstanding) showing condition of exposed soils.
- Excavation to formation level.

The Enabling Works Contractor will maintain copies of:

- Waste transfer notes for all waste transferred off-site;
- Material Transfer notes if arisings are transferred under the CL:AIRE Definition of Waste: Code of Practice; and
- Details of receiving sites: permit details for waste and the declaration for sites receiving waste under the CL:AIRE regime.

A completion report will be issued containing:

- Testing results for supplementary trial pits;
- Testing results for delineation of hazardous hotspots;
- On-site testing results;
- Watching Brief inspection reports for visits; and
- Verification testing results for stockpiles prior to removal from site.

Author: Roger Dunn
Reviewed: Matthew Lawman
Date: 10th May 2022

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DRAWINGS

APPENDIX 4

WASTE CHARACTERISATION - AAE PROFORMA A

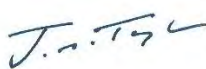
Proforma A – Baseline Land Quality Characteristics/Waste Classification

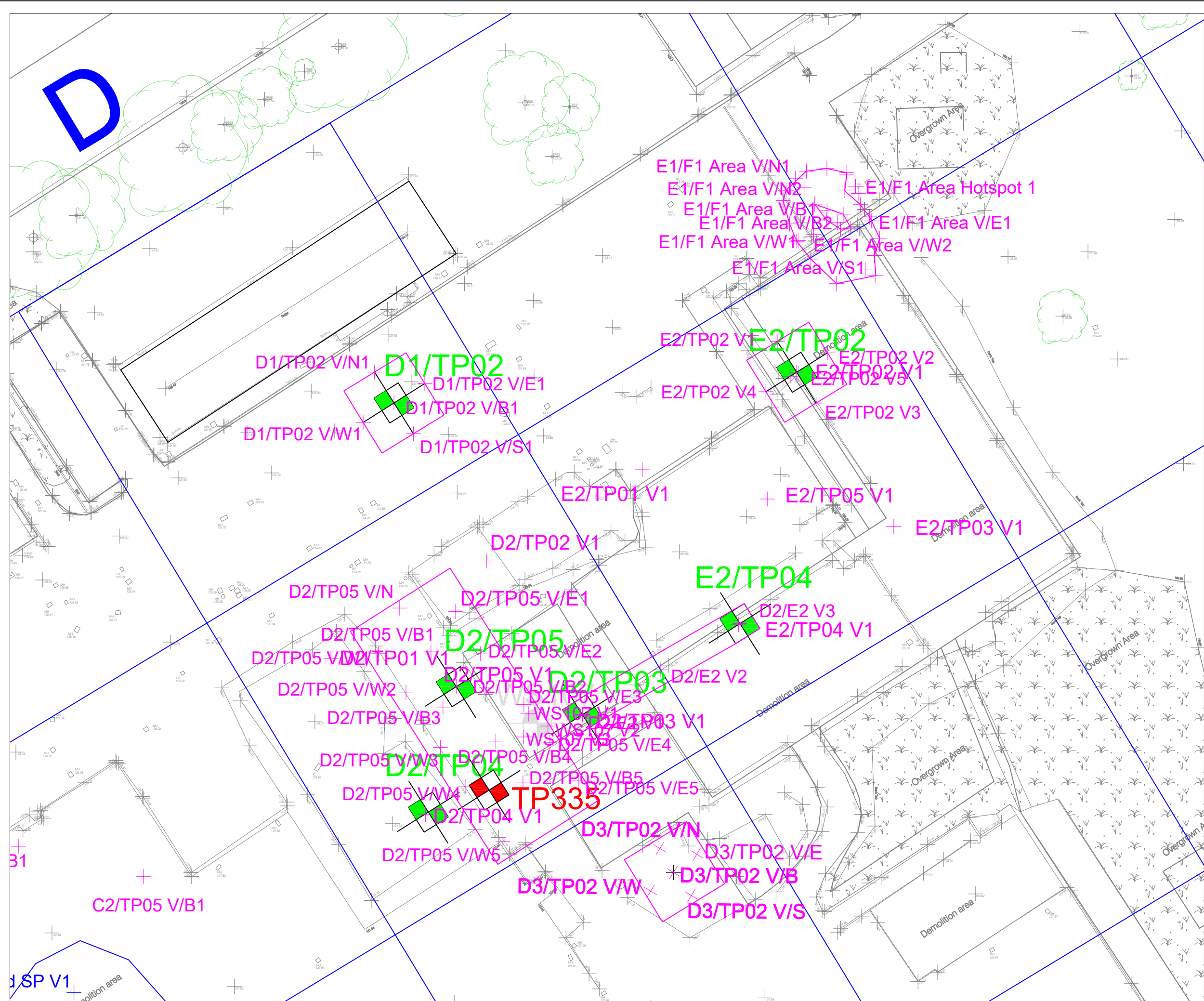
TABLE 1. SITE DETAILS	
Site	SAUNDERTON DATA CENTRE, HAW LANE
Plan reference	Area A – Grid Squares D1, E1, D2, E2
Area (sq m)	Approx 7,200 m ²
Plan	223159/C/A
Ground Level	Approx 123-125 m AOD
Relevant Previous Reports	Ove Arup & Partners Ltd (November 2007) 'Geo Environmental Investigation – Phase Two Report (REP/123955/001) Hydrock 'Desk Study and Ground Investigation Report (Ref R/13649/004)
AAe Investigation Date(s)	24/05/22 25/05/22 07/07/22
Scope and attachments	Pre-characterisation of soils for waste classification in accordance with AAe WASTE SEGREGATION & DISCOVERY STRATEGY (ENABLING WORKS PHASE) (Ref. 223159/WSDS/001). Excavation of Trial Pits on 25 m grid across areas of proposed bulk excavation. Sampling and inspection of Made Ground and Natural Chalk Subsoils for waste classification purposes. Samples submitted to Chemtest Eurofins, UKAS/MCERTS accredited laboratory, for chemical analysis against a comprehensive solids suite. Results classified in accordance with Environment Agency guidance WM3 using HazWaste Online software. Results combined with previous data from Hydrock/Arup/RPS investigations. Attachments: • Trial Pit Logs and Photo Plates • Certificates of Analysis • HWOL Classification Report

TABLE 2. STRATA		
Strata	Strata thickness	Comments/Data
Surfacing - Macadam - Concrete	0.05-0.40 m	Hardstanding removed from some areas prior to AAe investigation.
Made Ground	Absent-2.50m	Relevant previous SI: WS102, WS107, WS108, TP314-317, TP335 & TP339. Note: Not all strata tested in previous SI. Relevant data incorporated. AAe Report References: 22-19663 & 22-19836 The Made Ground classification plan is presented on drawing 223159/C/A. Details of the recorded Hazardous areas and further delineation testing are presented in Table 3.
Natural Chalk	Proved to maximum 3.0 m BGL	Relevant previous SI: WS102, WS107, WS108, TP314-317, TP335 & TP339. Note: Not all strata tested in previous SI. Relevant data incorporated. AAe Report References: 22-19663 & 22-19836 All natural strata samples classified as Non-Hazardous.

Proforma A – Baseline Land Quality Characteristics/Waste Classification

TABLE 3: DELINEATION OF HAZARDOUS					
Location	Hazardous Properties	Strata	Extend into underlying Natural? (Yes/No)	Further delineation testing and inspection	Laboratory report reference(s)
D1/TP02	TPH	Made Ground	No	07/07/22 Refer to attached photo plates	22-25927
E2/TP02	Visible asbestos fragments	Made Ground	No	09/06/22 Refer to attached photo plates	22-21797
D2/TP05 & TP335	TPH	Made Ground	No	16/06/22 Refer to attached photo plates	22-22904 22-22906 22-22910
WS107, D2/TP03 & E2/TP04	Amosite asbestos (WS107 – not quantified) and ACM bitumen pipe run in D2/TP03 & E2/TP04	Made Ground	No	09/06/22 Refer to attached photo plates	22-21794
E1-F1	Potential visible staining surrounding historic buried cylinders	Made Ground	No	07/07/22 Refer to attached photo plates	22-26011
Delineation sample locations presented on drawing 223159/D/A/REVA. Reduced level/survey drawings to be provided by Enterprise.					

Sign off	Name	Signature	Date
	J Taylor		29/11/22 (FINAL)



Rev.	Details	Drawn Chkd.	Date
Project 223159 Saunderton			
Title Validation Plan - Area A			
 AA Environmental Ltd Units 4-8 Cholswell Court Shippon Abingdon Oxon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk			
Scale 1:500(A3)	Date Sep '22	Drawn CAL	Chkd. ML
Drg. No. 223159/D/A/REVA		Rev.	



Trial Pit Log

TrialPit No
D1/TP01
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480731.22 - 198609.60
Level:

Date
24/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.50

Scale
1:20

Client: Avalon/Ramboll

Depth
1.30

2.00

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.05 - 0.80	ES		0.05			MACADAM. Greyish-brown, cobbly, sandy GRAVEL. Cobbles of angular to sub-angular concrete and flint. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded of concrete and flint. Occasional rootlets throughout (sub-base, MADE GROUND).	
				0.35			Firm to stiff, greyish-brown, slightly cobbly, slightly gravelly CLAY. Cobbles of angular brick. Gravels are fine to medium, sub-angular of chalk, flint, brick and charcoal (MADE GROUND).	
	0.80 - 1.30	ES		0.80			Light, whitish-brown, cobbly, gravelly SAND. Cobbles of sub-angular chalk. Gravels are fine to coarse, sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	1
				1.30			End of Pit at 1.30m	
								2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
D1/TP02
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480752.36 - 198622.97
Level:

Date
24/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.50

Scale
1:20

Client: Avalon/Ramboll

Depth
1.40

2.00

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.05 - 0.80	ES		0.05			MACADAM. Greyish-brown, cobbly, sandy GRAVEL. Cobbles of angular to sub-angular concrete and flint. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded of concrete and flint. Occasional rootlets throughout (sub-base, MADE GROUND).
				0.35			Firm to stiff, greyish-brown, slightly gravelly CLAY. Gravels are fine to medium, sub-angular of chalk, flint, brick and charcoal (MADE GROUND).
	0.80 - 1.40	ES		0.80			Whitish, mid-brown, slightly gravelly, slightly clayey SAND. Gravels are fine to medium, sub-angular of chalk, flint and sporadic charcoal. Sand is fine to medium (potentially re-worked),
				1.10			Light, whitish-brown, cobbly, gravelly SAND. Cobbles of sub-angular chalk. Gravels are fine to coarse, sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).
				1.40			End of Pit at 1.40m

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
D2/TP01
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480743.69 - 198587.93
Level:

Date
25/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.10

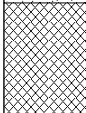
Scale
1:20

Client: Avalon/Ramboll

Depth
1.45

1.60

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20 - 0.50	ES		0.20			Reinforced CONCRETE.	
	0.50 - 1.45	ES		0.50			Light yellowish-brown, cobbly, gravelly SAND. Cobbles of angular to sub-angular brick, concrete and flint. Gravels are fine to coarse, angular to sub-angular of brick, concrete and flint. Sand is fine to coarse (MADE GROUND).	
							White, cobbly, gravelly SAND. Cobbles of angular to sub-angular chalk. Gravels are fine to coarse, angular to sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	1
				1.45			End of Pit at 1.45m	2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
D2/TP02
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480764.94 - 198601.27
Level:

Date
24/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.00

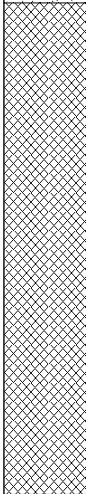
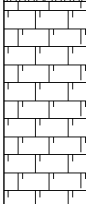
Scale
1:20

Client: Avalon/Ramboll

Depth
2.05

1.50

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20 - 1.20	ES		0.20			CONCRETE.	
	1.50 - 2.05	ES		1.50			Light brownish-grey, cobbly, gravelly SAND. Cobbles of angular to sub-angular brick, concrete and flint. Gravels are fine to coarse, angular to sub-angular of brick, concrete and flint. Sand is fine to coarse (MADE GROUND).	1
				2.05			White, cobbly, gravelly SAND. Cobbles of angular to sub-angular chalk. Gravels are fine to coarse, angular to sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	2
							End of Pit at 2.05m	3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
D2/TP03
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480778.24 - 198580.19
Level:

Date
25/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 3.50

Scale
1:20

Client: Avalon/Ramboll

Depth
1.85

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.00 - 0.50	ES		0.25			Dark brown, slightly gravelly, slightly clayey SAND. Gravels are fine to coarse, sub-angular of concrete and flint. Sand is fine to coarse. Frequent rootlets and roots throughout (re-worked topsoil, MADE GROUND).	
				0.50			Light, whitish-brown, cobbly, gravelly, clayey SAND. Cobbles of sub-angular chalk, brick and flint. Gravels are fine to coarse, angular to sub-angular of chalk, brick and flint. Sand is fine to coarse (MADE GROUND).	
							White, cobbly, slightly sandy, GRAVEL. Cobbles of sub-angular chalk. Sand is fine to coarse. Gravels are fine to coarse, angular to sub-angular of chalk and sporadic flint. At 0.60 m BGL, a pipe section (0.13 m diameter) suspected to contain ACM (NEW PIT CHALK FORMATION).	1
	1.30 - 1.85	ES		1.85			End of Pit at 1.85m	2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. Suspected ACM pipe fragment encountered at 0.60 m BGL.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
D2/TP04
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480757.15 - 198566.75
Level:

Date
25/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

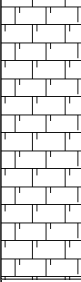
Dimensions (m): 1.80

Scale
1:20

Client: Avalon/Ramboll

Depth
1.15

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.40 - 1.15	ES		0.40			Reinforced CONCRETE.	
				1.15			White, cobbly, slightly sandy, GRAVEL. Cobbles of sub-angular chalk. Sand is fine to coarse. Gravels are fine to coarse, angular to sub-angular of chalk and sporadic flint (NEW PIT CHALK FORMATION).	1
							End of Pit at 1.15m	2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
D2/TP05
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480760.97 - 198583.95
Level:

Date
25/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.50

Scale
1:20

Client: Avalon/Ramboll

Depth
1.60

2.00

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.25			Reinforced CONCRETE.
	0.35 - 0.70	ES		0.35			MACADAM.
				0.55			Dark blackish-brown, cobbly, gravelly SAND. Cobbles of angular to sub-angular concrete and flint. Gravels are fine to coarse, angular to sub-angular of brick, concrete, macadam and flint. Sand is fine to coarse (MADE GROUND).
	0.70 - 1.60	ES		0.70			White, cobbly, gravelly SAND. Cobbles of angular to sub-angular sporadic brick, concrete and chalk. Gravels are fine to coarse, angular to sub-angular of sporadic brick, concrete and chalk. Sand is fine to coarse (re-worked chalk, MADE GROUND).
							White, cobbly, gravelly SAND. Cobbles of angular to sub-angular chalk. Gravels are fine to coarse, angular to sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).
				1.60			End of Pit at 1.60m

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
E1/TP01
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480773.98 - 198635.47
Level:

Date
24/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.50

Scale
1:20

Client: Avalon/Ramboll

Depth
1.45

2.00

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.05 - 0.85	ES		0.05			MACADAM. Greyish-brown, cobbly, sandy GRAVEL. Cobbles of angular to sub-angular concrete and flint. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded of concrete and flint. Occasional rootlets throughout (sub-base, MADE GROUND).	
				0.45			Firm to stiff, brownish-grey, slightly cobbly, gravelly CLAY. Cobbles of angular brick. Gravels are fine to medium, sub-angular of chalk, flint, brick and charcoal (MADE GROUND).	
	0.85 - 1.45	ES		0.85			Whitish, mid-brown, slightly gravelly, slightly clayey SAND. Gravels are fine to medium, sub-angular of chalk, flint and sporadic charcoal. Sand is fine to medium (potentially re-worked),	1
				1.15			Light, whitish-brown, cobbly, gravelly SAND. Cobbles of sub-angular chalk. Gravels are fine to coarse, sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	
				1.45			End of Pit at 1.45m	
								2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
E1/TP02
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480795.12 - 198648.85
Level:

Date
24/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.50

Scale
1:20

Client: Avalon/Ramboll

Depth
1.80

2.00

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.30 - 1.30	ES		0.05			MACADAM. Greyish-brown, cobbly, sandy GRAVEL. Cobbles of angular to sub-angular concrete and flint. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded of concrete and flint. Occasional rootlets throughout (sub-base, MADE GROUND).	
				0.40			Firm to stiff, white, gravelly, sandy CLAY. Gravels are fine to coarse, sub-angular of chalk. Sand is fine (chalk layer, MADE GROUND).	
				0.50			Firm to stiff, brownish-grey, slightly cobbly, gravelly CLAY. Cobbles of angular brick. Gravel is fine to coarse, angular to sub-angular of sporadic brick and charcoal (MADE GROUND).	
				1.10			Whitish, mid-brown, slightly cobbly, slightly gravelly, slightly clayey SAND. Cobbles of sub-angular brick. Gravels are fine to medium, sub-angular of chalk, flint and sporadic charcoal. Sand is fine to medium (MADE GROUND),	1
	1.40 - 1.80	ES		1.40			Light, whitish-brown, cobbly, gravelly SAND. Cobbles of sub-angular chalk. Gravels are fine to coarse, sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	
				1.80			End of Pit at 1.80m	2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
E2/TP01
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480786.46 - 198613.80
Level:

Date
24/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m):

2.00

Scale
1:20

Client: Avalon/Ramboll

Depth
1.40

1.50

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.05 - 0.80	ES		0.05			MACADAM. Reddish-brown, sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, sub-angular of limestone and flint (sub-base, MADE GROUND).	
				0.20			Whitish-brownish grey, cobbly, gravelly SAND. Cobbles of angular to sub-angular brick and concrete. Gravels are fine to coarse, angular to sub-angular of brick, concrete and flint. Sand is fine to coarse. Plastic fragments throughout (MADE GROUND).	
	0.80 - 1.40	ES		0.80			White, cobbly, gravelly SAND. Cobbles of angular to sub-angular chalk. Gravels are fine to coarse, angular to sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	1
				1.40			End of Pit at 1.40m	2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
E2/TP02
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480807.79 - 198627.04
Level:

Date
24/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.10

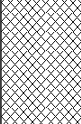
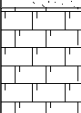
Scale
1:20

Client: Avalon/Ramboll

Depth
2.10

1.50

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 - 1.10	ES		0.10			Reinforced CONCRETE.	
							Greyish-brown, bouldery, cobbly, gravelly, slightly clayey SAND. Boulders of angular to sub-angular brick and concrete. Cobbles of angular to sub-angular brick, concrete and flint. Gravels are fine to coarse, angular to sub-angular of brick, concrete and flint. Sand is fine to coarse. Suspected ACM fragment (MADE GROUND).	1
				1.50			CONCRETE.	
	1.80 - 2.10	ES		1.80			White, cobbly, gravelly SAND. Cobbles of angular to sub-angular chalk. Gravels are fine to coarse, angular to sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	2
				2.10			End of Pit at 2.10m	
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. Suspected ACM fragment encountered between 0.10 m - 1.50 m BGL.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
E2/TP03
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480821.01 - 198606.03
Level:

Date
25/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 2.50

Scale
1:20

Client: Avalon/Ramboll

Depth
1.60

2.00

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.12 - 0.45	ES		0.12			Reinforced CONCRETE.	
				0.45			Dark reddish-brown, cobbly, gravelly, slightly clayey SAND. Cobbles of angular to sub-angular brick and concrete. Gravels are fine to coarse, angular to sub-angular of brick, concrete and limestone. Sand is fine to coarse. Frequent rootlets and roots throughout (re-worked topsoil, MADE GROUND).	
							CONCRETE.	
	0.80 - 1.60	ES		0.80			White, cobbly, gravelly SAND. Cobbles of angular to sub-angular chalk. Gravels are fine to coarse, angular to sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	1
				1.60			End of Pit at 1.60m	2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. No visual or olfactory evidence of contamination was encountered.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
E2/TP04
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480799.81 - 198592.69
Level:

Date
25/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 5.00

Scale
1:20

Client: Avalon/Ramboll

Depth
1.30

1.50

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.00 - 0.50	ES		0.15			Dark brown, slightly gravelly, slightly clayey SAND. Gravels are fine to coarse, sub-angular of concrete and flint. Sand is fine to coarse. Frequent rootlets and roots throughout (re-worked topsoil, MADE GROUND).	
				0.40			Yellowish-reddish-brown, cobbly, gravelly SAND. Cobbles of angular to sub-angular brick, concrete and limestone. Gravels are fine to coarse, angular to sub-angular of brick, concrete and limestone. Sand is fine to coarse. Several fragments of suspected ACM at 0.10 m BGL (MADE GROUND).	
	0.80 - 1.30	ES		1.30			White, cobbly, sandy, GRAVEL. Cobbles of sub-angular chalk. Sand is fine to coarse. Gravels are fine to coarse, angular to sub-angular of chalk and sporadic flint. At 0.60 m BGL, a pipe section (0.13 m diameter) suspected to contain ACM (NEW PIT CHALK FORMATION).	1
							End of Pit at 1.30m	2
								3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. Suspected ACM pipe fragment encountered at 0.60 m BGL. Suspected ACM fragments at 0.10 m BGL.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Trial Pit Log

TrialPit No
E2/TP05
Sheet 1 of 1

Project Name: Saunderton Data Centre

Project No.
223159

Co-ords: 480803.72 - 198609.89
Level:

Date
25/05/2022

Location: Former Molins Site, Haw Lane, Saunderton, HP14 4JG (approx)

Dimensions (m): 3.50

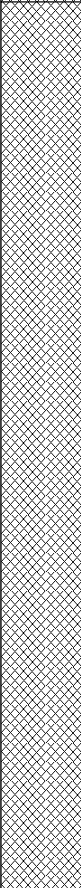
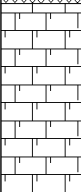
Scale
1:20

Client: Avalon/Ramboll

Depth
3.00

1.50

Logged
TRE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 - 1.30	ES		0.15			Dark brown, slightly gravelly, slightly clayey SAND. Gravels are fine to coarse, sub-angular of concrete and flint. Sand is fine to coarse. Frequent rootlets and roots throughout. Suspected fragments of ACM (re-worked topsoil, MADE GROUND).	
							White, cobbly, gravelly SAND. Cobbles of angular to sub-angular brick, concrete and chalk. Gravels are fine to coarse, angular to sub-angular of brick, concrete and chalk. Sand is fine to coarse. Metal pipe (re-worked chalk, MADE GROUND).	1
	2.50 - 3.00	ES		2.50			White, cobbly, gravelly SAND. Cobbles of angular to sub-angular chalk. Gravels are fine to coarse, angular to sub-angular of chalk. Sand is fine to coarse (NEW PIT CHALK FORMATION).	2
				3.00			End of Pit at 3.00m	3
								4

Remarks: Trial pit was constructed by a tracked 360 excavator. No groundwater was encountered. Suspected ACM fragment encountered between 0.00 m - 0.15 m BGL.

Stability: Stable. On completion of logging and sampling, trial pit was backfilled with arisings in order of sequence and compacted.





Comment Trial pit D1/TP01, excavated to 1.30 m Below Ground Level (m BGL).	Project 223159 - Sauderton
	Photo Plate 1
	Date 24/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D1/TP01 Made Ground arisings.	Project 223159 - Sauderton
	Photo Plate 2
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D1/TP01 Made Ground arisings (foreground) and natural arisings (background).	Project 223159 – Saunderton
	Photo Plate 3
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment Trial pit D1/TP02, excavated to 1.40 m BGL.	Project 223159 – Saunderton
	Photo Plate 4
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

D1/TP02 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

5

Date

24/05/2022

Originator

Tomos Eaves



AAe

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Comment

D1/TP02 possibly re-worked natural arisings (foreground) and natural arisings (background).

Project

223159 – Saunderton

Photo Plate

6

Date

24/05/2022

Originator

Tomos Eaves



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Comment Trial pit E1/TP01, excavated to 1.45 m BGL.	Project 223159 – Saunderton
	Photo Plate 7
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment E1/TP01 Made Ground arisings.	Project 223159 – Saunderton
	Photo Plate 8
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippin, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

E1/TP01 possibly re-worked natural arisings (foreground) and natural arisings (background).

Project

223159 – Saunderton

Photo Plate

9

Date

24/05/2022

Originator

Tomos Eaves



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Comment Trial pit E1/TP02, excavated to 1.80 m BGL.	Project 223159 – Saunderton
	Photo Plate 10
	Date 24/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment E1/TP02 Made Ground arisings.	Project 223159 – Saunderton
	Photo Plate 11
	Date 24/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

E1/TP02 re-worked natural arisings.

Project

223159 – Saunderton

Photo Plate

12

Date

24/05/2022

Originator

Tomos Eaves



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Comment E1/TP02 natural arisings.	Project 223159 – Saunderton
	Photo Plate 13
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

Trial pit E2/TP02, excavated to 2.10 m BGL (from concrete floor level).

Project

223159 – Saunderton

Photo Plate

14

Date

24/05/2022

Originator

Tomos Eaves



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Comment

Trial pit E2/TP02, excavated to 2.10 m BGL (from concrete floor level).

Project

223159 – Saunderton

Photo Plate

15

Date

24/05/2022

Originator

Tomos Eaves



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Comment

E2/TP02 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

16

Date

24/05/2022

Originator

Tomos Eaves



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Comment Fragment of suspected Asbestos Containing Material (ACM) encountered in E2/TP02.	Project 223159 – Saunderton
	Photo Plate 17
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment E2/TP02 natural arisings.	Project 223159 – Saunderton
	Photo Plate 18
	Date 24/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment Trial pit E2/TP01, excavated to 1.40 m BGL.	Project 223159 – Saunderton
	Photo Plate 19
	Date 24/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

E2/TP01 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

20

Date

24/05/2022

Originator

Tomos Eaves



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Comment

E2/TP01 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

21

Date

24/05/2022

Originator

Tomos Eaves



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Comment E2/TP01 natural arisings.	Project 223159 – Saunderton
	Photo Plate 22
	Date 24/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment Trial pit D2/TP02, excavated to 2.05 m BGL.	Project 223159 – Saunderton
	Photo Plate 23
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippin, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D2/TP02 Made Ground arisings.	Project 223159 – Saunderton
	Photo Plate 24
	Date 24/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

D2/TP02 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

25

Date

24/05/2022

Originator

Tomos Eaves



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Comment

D2/TP02 natural arisings.

Project

223159 – Saunderton

Photo Plate

26

Date

24/05/2022

Originator

Tomos Eaves



AA Environmental Limited

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Comment

Trial pit D2/TP01, excavated to 1.45 m Below Ground Level (m BGL).

Project

223159 - Saunderton

Photo Plate

1

Date

25/05/2022

Originator

Tomos Eaves



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Comment D2/TP01 Made Ground arisings.	Project 223159 - Saunderton
	Photo Plate 2
	Date 25/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D2/TP01 natural arisings (left) and Made Ground arisings (right).	Project 223159 – Saunderton
	Photo Plate 3
	Date 25/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment Trial pit D2/TP04, excavated to 1.15 m BGL.	Project 223159 – Saunderton
	Photo Plate 4
	Date 25/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

D2/TP04 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

5

Date

25/05/2022

Originator

Tomos Eaves



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Comment

D2/TP04 natural arisings.

Project

223159 – Saunderton

Photo Plate

6

Date

25/05/2022

Originator

Tomos Eaves



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Comment Trial pit D2/TP03, excavated to 1.85 m BGL.	Project 223159 – Saunderton
	Photo Plate 7
	Date 25/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D2/TP03 topsoil/Made Ground arisings.	Project 223159 – Saunderton
	Photo Plate 8
	Date 25/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D2/TP03 Made Ground arisings (foreground) and natural arisings (background).	Project 223159 – Saunderton
	Photo Plate 9
	Date 25/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippin, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment Suspected asbestos containing pipe encountered at 0.60 m BGL in D2/TP03.	Project 223159 – Saunderton
	Photo Plate 10
	Date 25/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk


Comment

Fragment of suspected Asbestos Containing Material (ACM) / pipe section encountered in D2/TP03.

Project

223159 – Saunderton

Photo Plate

11

Date

25/05/2022

Originator

Tomos Eaves


AA Environmental Limited

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Comment Trial pit E2/TP04, excavated to 1.30 m BGL.	Project 223159 – Saunderton
	Photo Plate 12
	Date 25/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

E2/TP04 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

13

Date

25/05/2022

Originator

Tomos Eaves



AAe

Environmental Consultants

AA Environmental Limited

Units 4-8 Cholswell Court

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Comment

E2/TP04 Made Ground arisings, which includes the same ACM suspected pipe that was encountered in D2/TP03.

Project

223159 – Saunderton

Photo Plate

14

Date

25/05/2022

Originator

Tomos Eaves



AA Environmental Limited

Units 4-8 Cholswell Court

Shippon, Abingdon

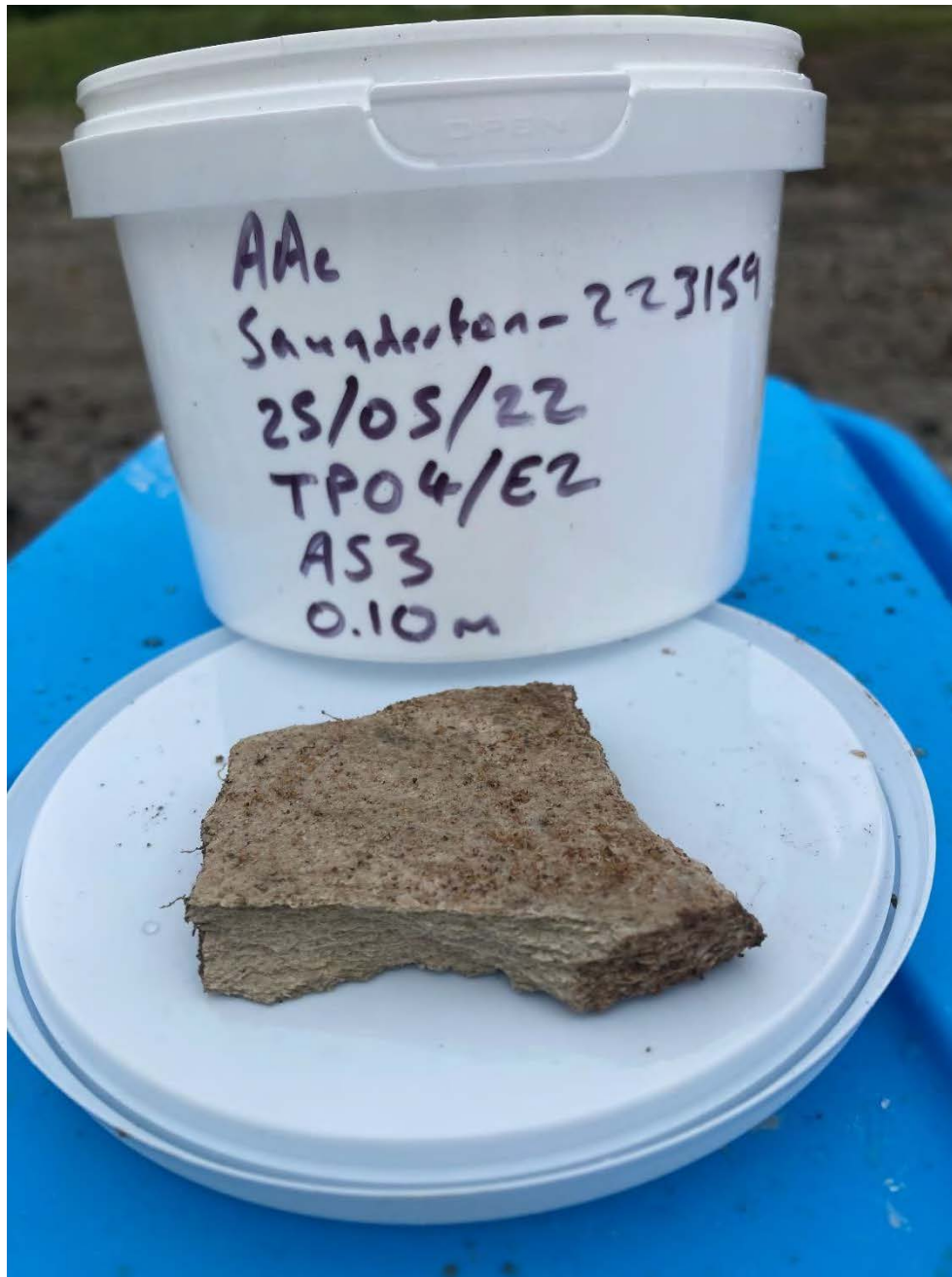
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Comment

Fragment of suspected ACM encountered in E2/TP04.

Project

223159 – Saunderton

Photo Plate

15

Date

25/05/2022

Originator

Tomos Eaves


AA Environmental Limited

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Shippon, Abingdon

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Comment

E2/TP04 natural arisings.

Project

223159 – Saunderton

Photo Plate

16

Date

25/05/2022

Originator

Tomos Eaves



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Comment Trial pit E2/TP03, excavated to 1.60 m BGL.	Project 223159 – Saunderton
	Photo Plate 17
	Date 25/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

E2/TP03 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

18

Date

25/05/2022

Originator

Tomos Eaves



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Comment

E2/TP03 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

19

Date

25/05/2022

Originator

Tomos Eaves



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Comment

E2/TP03 natural arisings.

Project

223159 – Saunderton

Photo Plate

20

Date

25/05/2022

Originator

Tomos Eaves



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Comment Trial pit E2/TP05, excavated to 3.00 m BGL.	Project 223159 – Saunderton
	Photo Plate 21
	Date 25/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

E2/TP05 re-worked natural arisings.

Project

223159 – Saunderton

Photo Plate

22

Date

25/05/2022

Originator

Tomos Eaves



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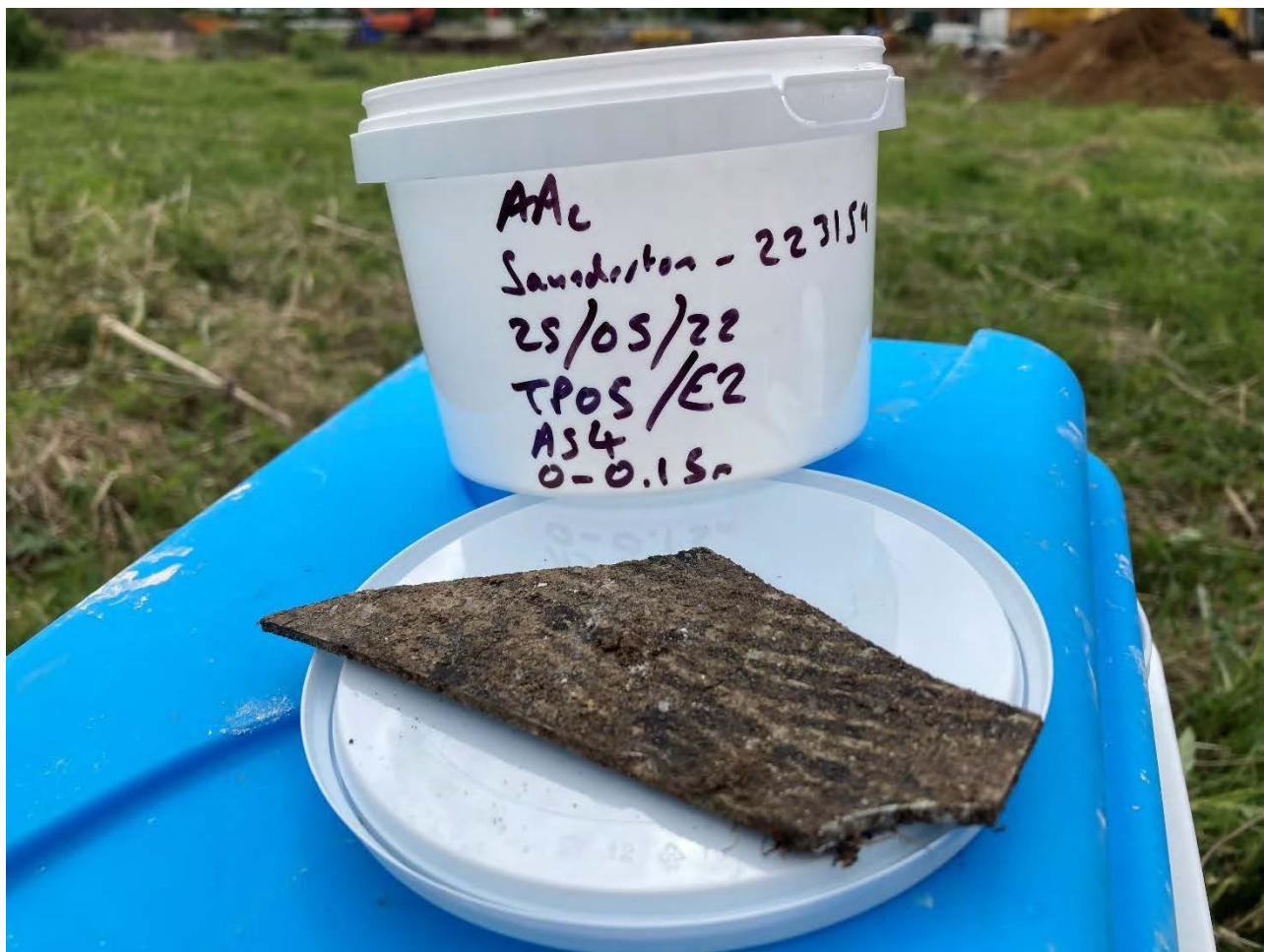
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Comment E2/TP05 re-worked natural arisings.	Project 223159 – Saunderton
	Photo Plate 23
	Date 25/05/2022
	Originator Tomos Eaves
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment Fragment of suspected ACM encountered in E2/TP05.	Project 223159 – Saunderton
	Photo Plate 24
	Date 25/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

E2/TP05 natural arisings.

Project

223159 – Saunderton

Photo Plate

25

Date

25/05/2022

Originator

Tomos Eaves



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Comment Trial pit D2/TP05, excavated to 1.60 m BGL.	Project 223159 – Saunderton
	Photo Plate 26
	Date 25/05/2022
	Originator Tomos Eaves
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

D2/TP05 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

27

Date

25/05/2022

Originator

Tomos Eaves



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Comment

D2/TP05 Made Ground arisings.

Project

223159 – Saunderton

Photo Plate

28

Date

25/05/2022

Originator

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Comment

D2/TP05 natural arisings.

Project

223159 – Saunderton

Photo Plate

29

Date

25/05/2022

Originator

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Final Report

Report No.: 22-19663-1
Initial Date of Issue: 31-May-2022
Client AA Environmental Ltd

Client Address: Units 4 to 8
Cholswell Court
Shippon
Abingdon
Oxfordshire
OX136HX

Contact(s): Reporting

Project 223159 Saunderton

Quotation No.: **Date Received:** 26-May-2022

Order No.: **Date Instructed:** 26-May-2022

No. of Samples: 15

Turnaround (Wkdays): 4 **Results Due:** 31-May-2022

Date Approved: 31-May-2022

Approved By:

Details: Stuart Henderson, Technical
Manager

Bulk Identification Certificate

Client: AA Environmental Ltd
Site Address:
Date Sampled: 24-May-2022
Date Received: 26-May-2022

Your Ref.:
Project: 223159 Saunderton
Job Number: 22-19663
No Samples:
Date Reported: 31-May-2022

Sample No.	Sample ID	Sample Ref.	Description	Top (m)	Bottom (m)	SOP	Accred.	Laboratory	Material	Result
1436284	AS1		TP02/E2	0.10	1.50	2185	U	COVENTRY	Cement	Chrysotile

The in-house procedure SOP2185 is in accordance with the requirements of Appendix 2 of the Analyst Guide (HSG 248).

The results relate only to items tested as supplied by the client.

Comments and interpretations are beyond the scope of UKAS accreditation.

Samples associated with asbestos in building surveys are retained for six months (HSG 264 refers)

Results - Soil

Project: 223159 Saunderton

Client: AA Environmental Ltd	Chemtest Job No.:				22-19663	22-19663	22-19663	22-19663	22-19663	22-19663	22-19663	22-19663
Quotation No.:	Chemtest Sample ID.:				1436270	1436271	1436272	1436273	1436274	1436275	1436276	1436277
	Sample Location:				TP01/D1	TP01/D1	TP02/D1	TP02/D1	TP01/E1	TP01/E1	TP02/E1	TP02/E1
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.05	0.80	0.05	0.80	0.05	0.85	0.30	1.40
	Bottom Depth (m):				0.80	1.30	0.80	1.40	0.85	1.45	1.30	1.80
	Date Sampled:				24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	18	17	7.8	15	15	18	16	15
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	None	Stones and chalk	chalk	chalk	Stones and chalk	Stones and chalk	chalk
Soil Texture	N	2040		N/A	Clay	Chalk	Sand	Sand	Sand	Clay	Clay	Sand
pH	M	2010		4.0	8.4	8.7	10.3	8.7	9.0	9.1	8.6	8.9
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.2	< 0.40	0.68	0.48	0.42	1.0	1.1	0.76
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.20	0.12	0.31	0.071	0.067	0.099	0.066	0.22
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	3.4	1.4	1.5	1.1	1.3	1.5	0.85	0.72
Arsenic	M	2455	mg/kg	0.5	3.0	1.4	6.6	2.2	1.6	2.3	1.9	1.9
Cadmium	M	2455	mg/kg	0.10	0.20	< 0.10	< 0.10	< 0.10	< 0.10	0.10	0.11	< 0.10
Chromium	M	2455	mg/kg	0.5	7.1	2.4	7.9	4.2	3.3	4.8	4.2	2.9
Copper	M	2455	mg/kg	0.50	6.1	2.7	3.4	2.8	2.4	3.4	2.8	2.5
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	6.3	2.9	7.0	4.8	3.4	3.3	4.1	3.8
Lead	M	2455	mg/kg	0.50	20	2.2	4.2	2.6	2.5	15	5.6	2.8
Selenium	M	2455	mg/kg	0.25	0.64	< 0.25	0.52	0.35	< 0.25	0.31	0.41	< 0.25
Vanadium	U	2455	mg/kg	0.5	9.4	3.8	13	6.1	4.4	5.6	6.0	4.3
Zinc	M	2455	mg/kg	0.50	26	8.2	16	10	8.0	14	12	7.0
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	1.5	< 0.20	0.44	0.40	0.28	1.1	0.99	< 0.20
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: 223159 Saunderton

Client: AA Environmental Ltd	Chemtest Job No.:				22-19663	22-19663	22-19663	22-19663	22-19663	22-19663	22-19663	22-19663
Quotation No.:	Chemtest Sample ID.:				1436270	1436271	1436272	1436273	1436274	1436275	1436276	1436277
	Sample Location:				TP01/D1	TP01/D1	TP02/D1	TP02/D1	TP01/E1	TP01/E1	TP02/E1	TP02/E1
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.05	0.80	0.05	0.80	0.05	0.85	0.30	1.40
	Bottom Depth (m):				0.80	1.30	0.80	1.40	0.85	1.45	1.30	1.80
	Date Sampled:				24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	83	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	380	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	780	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	58	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	1300	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	1300	< 10	< 10	< 10	< 10	< 10
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	1.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.58	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	12	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	76	0.78	< 0.10	1.3	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	19	0.30	< 0.10	0.32	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	98	0.95	< 0.10	1.8	0.67	< 0.10
Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	81	1.2	< 0.10	1.6	0.91	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	36	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	45	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	19	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	38	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	30	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	7.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	29	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0	560	3.2	< 2.0	5.1	< 2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 223159 Saunderton

Client: AA Environmental Ltd	Chemtest Job No.:				22-19663	22-19663	22-19663	22-19663	22-19663	22-19663
Quotation No.:	Chemtest Sample ID.:				1436278	1436279	1436280	1436281	1436282	1436283
	Sample Location:				TP02/E2	TP02/E2	TP01/E2	TP01/E2	TP02/D2	TP02/D2
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.10	1.80	0.05	0.80	0.20	1.50
	Bottom Depth (m):				1.10	2.10	0.80	1.40	1.20	2.05
	Date Sampled:				24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD						
ACM Type	U	2192		N/A	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	9.1	17	11	18	11	21
Soil Colour	N	2040		N/A	Brown	White	Brown	Beige	Brown	White
Other Material	N	2040		N/A	Stones	None	Stones and chalk	None	Stones and chalk	None
Soil Texture	N	2040		N/A	Sand	Chalk	Sand	Chalk	Sand	Chalk
pH	M	2010		4.0	9.9	10.1	9.8	9.3	11.0	8.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.6	< 0.40	0.51	1.7	0.66	1.2
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.55	0.19	0.17	0.11	0.57	0.22
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	0.86	11	4.4	1.8	1.7	1.2
Arsenic	M	2455	mg/kg	0.5	4.2	< 0.5	3.3	3.1	3.3	1.0
Cadmium	M	2455	mg/kg	0.10	< 0.10	< 0.10	0.52	0.17	0.12	0.10
Chromium	M	2455	mg/kg	0.5	7.1	0.9	3.9	4.0	5.1	1.4
Copper	M	2455	mg/kg	0.50	5.2	0.75	5.6	8.1	7.0	2.5
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	5.8	0.66	4.7	9.2	3.9	2.9
Lead	M	2455	mg/kg	0.50	6.8	0.74	30	6.3	6.2	1.5
Selenium	M	2455	mg/kg	0.25	0.29	< 0.25	0.37	0.42	0.29	0.25
Vanadium	U	2455	mg/kg	0.5	10	1.3	5.9	7.0	9.5	2.5
Zinc	M	2455	mg/kg	0.50	22	2.6	79	21	18	8.5
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	0.36	< 0.20	0.58	< 0.20	0.25	0.22
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: 223159 Saunderton

Client: AA Environmental Ltd	Chemtest Job No.:		22-19663	22-19663	22-19663	22-19663	22-19663	22-19663
Quotation No.:	Chemtest Sample ID.:		1436278	1436279	1436280	1436281	1436282	1436283
	Sample Location:		TP02/E2	TP02/E2	TP01/E2	TP01/E2	TP02/D2	TP02/D2
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.10	1.80	0.05	0.80	0.20	1.50
	Bottom Depth (m):		1.10	2.10	0.80	1.40	1.20	2.05
	Date Sampled:		24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
	Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD				
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	0.98	< 0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	0.45	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	2.3	< 0.10	< 0.10	< 0.10
Pyrene	M	2700	mg/kg	0.10	2.1	< 0.10	0.31	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	1.5	< 0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	1.7	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	2.1	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	1.5	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	2.0	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	15	< 2.0	< 2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2185	Asbestos	Asbestos	Polarised light microscopy
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N-dimethyl-p-phenylenediamine.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Amended Report

Report No.:	22-19836-2		
Initial Date of Issue:	01-Jun-2022	Date of Re-Issue:	06-Jun-2022
Client	AA Environmental Ltd		
Client Address:	Units 4 to 8 Cholswell Court Shippon Abingdon Oxfordshire OX136HX		
Contact(s):	Reporting		
Project	223159 Saunderton		
Quotation No.:		Date Received:	27-May-2022
Order No.:		Date Instructed:	27-May-2022
No. of Samples:	16		
Turnaround (Wkdays):	4	Results Due:	01-Jun-2022
Date Approved:	01-Jun-2022		
Approved By:			

Details: Stuart Henderson, Technical Manager

Bulk Identification Certificate

Client: AA Environmental Ltd
Site Address:
Date Sampled: 25-May-2022
Date Received: 27-May-2022

Your Ref.:
Project: 223159 Saunderton
Job Number: 22-19836
No Samples:
Date Reported: 01-Jun-2022

Sample No.	Sample ID	Sample Ref.	Description	Top (m)	Bottom (m)	SOP	Accred.	Laboratory	Material	Result
1437267		AS2	TP03/D2	0.60		2185	U	DURHAM	Cement	Chrysotile
1437268		AS3	TP04/E2	0.10		2185	U	DURHAM	-	No Asbestos Detected
1437269		AS4	TP05/E2	0	0.15	2185	U	DURHAM	-	No Asbestos Detected

The in-house procedure SOP2185 is in accordance with the requirements of Appendix 2 of the Analyst Guide (HSG 248).

The results relate only to items tested as supplied by the client.

Comments and interpretations are beyond the scope of UKAS accreditation.

Samples associated with asbestos in building surveys are retained for six months (HSG 264 refers)

Results - Soil

Project: 223159 Saunderton

Client: AA Environmental Ltd	Chemtest Job No.:				22-19836	22-19836	22-19836	22-19836	22-19836	22-19836	22-19836	22-19836
Quotation No.:	Chemtest Sample ID.:				1437254	1437255	1437256	1437257	1437258	1437259	1437260	1437261
	Sample Location:				TP01/D2	TP01/D2	TP04/D2	TP03/D2	TP03/D2	TP04/E2	TP04/E2	TP03/E2
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.20	0.50	0.40	0	1.30	0	0.80	0.12
	Bottom Depth (m):				0.50	1.45	1.15	0.50	1.85	0.50	1.30	0.45
	Date Sampled:				25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022
	Asbestos Lab:				DURHAM	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	12	20	20	13	20	8.9	20	12
Soil Colour	N	2040		N/A	Brown	White	White	Brown	White	Brown	White	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones and Roots	Stones	Roots and Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Clay	Clay	Sand	Clay	Sand	Sand	Sand
pH	M	2010		4.0	10.6	8.9	11.2	8.6	8.9	8.9	9.0	10.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.60	0.58	0.52	1.9	< 0.40	1.0	< 0.40	0.55
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.39	0.11	0.25	0.024	0.026	0.046	0.026	0.20
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	2.8	3.2	0.92	0.86	1.6	0.99	11	1.7
Arsenic	M	2455	mg/kg	0.5	5.7	0.7	2.4	3.5	< 0.5	2.9	< 0.5	5.1
Cadmium	M	2455	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.23	< 0.10	0.50	< 0.10	0.24
Chromium	M	2455	mg/kg	0.5	8.2	1.3	1.8	7.7	< 0.5	3.1	0.6	7.8
Copper	M	2455	mg/kg	0.50	5.1	1.8	1.6	10	0.99	4.3	1.2	7.6
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	7.0	1.8	2.0	8.2	0.54	2.9	1.1	6.2
Lead	M	2455	mg/kg	0.50	3.9	1.2	0.89	16	0.81	17	0.97	35
Selenium	M	2455	mg/kg	0.25	< 0.25	< 0.25	< 0.25	0.34	< 0.25	< 0.25	< 0.25	< 0.25
Vanadium	U	2455	mg/kg	0.5	14	2.1	4.2	12	0.6	5.1	0.9	11
Zinc	M	2455	mg/kg	0.50	17	7.3	6.4	51	3.7	48	4.5	82
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	< 0.20	< 0.20	0.23	1.6	< 0.20	1.2	< 0.20	1.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	7.0	7.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	11	14	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	34	33	42	< 1.0	17	< 1.0	20	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	64	54	42	< 5.0	17	< 5.0	20	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: 223159 Saunderton

Client: AA Environmental Ltd	Chemtest Job No.:				22-19836	22-19836	22-19836	22-19836	22-19836	22-19836	22-19836	22-19836
Quotation No.:	Chemtest Sample ID.:				1437254	1437255	1437256	1437257	1437258	1437259	1437260	1437261
	Sample Location:				TP01/D2	TP01/D2	TP04/D2	TP03/D2	TP03/D2	TP04/E2	TP04/E2	TP03/E2
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.20	0.50	0.40	0	1.30	0	0.80	0.12
	Bottom Depth (m):				0.50	1.45	1.15	0.50	1.85	0.50	1.30	0.45
	Date Sampled:				25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022
	Asbestos Lab:				DURHAM	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	8.1	< 1.0	< 1.0	8.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	8.1	< 5.0	< 5.0	8.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	64	62	42	< 10	25	< 10	20	< 10
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.3
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.50
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	5.4
Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	5.9
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.3
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.9
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.5
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.5
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.8
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.1
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.87
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.0
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	32
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 223159 Saunderton

Client: AA Environmental Ltd	Chemtest Job No.:				22-19836	22-19836	22-19836	22-19836	22-19836
Quotation No.:	Chemtest Sample ID.:				1437262	1437263	1437264	1437265	1437266
	Sample Location:				TP03/E2	TP05/E2	TP05/E2	TP05/D2	TP05/D2
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.80	0.10	2.50	0.35	0.70
	Bottom Depth (m):				1.60	1.30	3.00	0.70	1.60
	Date Sampled:				25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022
	Asbestos Lab:				NEW-ASB	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD					
ACM Type	U	2192		N/A	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	28	17	22	15	21
Soil Colour	N	2040		N/A	White	Brown	White	White	White
Other Material	N	2040		N/A	None	Stones and Roots	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Sand	Clay	Sand	Clay
pH	M	2010		4.0	9.4	8.4	8.8	11.0	9.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	0.50	0.57
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.054	0.072	0.027	0.076	0.033
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	2.2	1.2	1.3	3.7	0.98
Arsenic	M	2455	mg/kg	0.5	< 0.5	1.8	< 0.5	6.8	0.6
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.12	< 0.10	0.28	< 0.10
Chromium	M	2455	mg/kg	0.5	< 0.5	4.1	0.5	7.7	0.9
Copper	M	2455	mg/kg	0.50	0.76	9.6	1.5	87	2.9
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	0.73	4.1	1.3	13	2.3
Lead	M	2455	mg/kg	0.50	1.3	11	0.85	670	2.2
Selenium	M	2455	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Vanadium	U	2455	mg/kg	0.5	0.7	5.6	0.9	7.4	1.3
Zinc	M	2455	mg/kg	0.50	3.4	32	4.4	190	6.8
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	< 0.20	0.73	< 0.20	1.1	< 0.20
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	8.4	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	19	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	9.4	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	28	86	< 1.0	39	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	80	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	65	86	< 5.0	120	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	7.2	< 1.0

Results - Soil

Project: 223159 Saunderton

Client: AA Environmental Ltd	Chemtest Job No.:				22-19836	22-19836	22-19836	22-19836	22-19836
Quotation No.:	Chemtest Sample ID.:				1437262	1437263	1437264	1437265	1437266
	Sample Location:				TP03/E2	TP05/E2	TP05/E2	TP05/D2	TP05/D2
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.80	0.10	2.50	0.35	0.70
	Bottom Depth (m):				1.60	1.30	3.00	0.70	1.60
	Date Sampled:				25-May-2022	25-May-2022	25-May-2022	25-May-2022	25-May-2022
	Asbestos Lab:				NEW-ASB	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD					
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	240	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	1200	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12	15	< 1.0	2500	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	210	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	12	15	< 5.0	4100	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	77	100	< 10	4300	< 10
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	2.5	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.74	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	3.4	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	4.5	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	37	3.2
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	10	0.74
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	1.8	< 0.10	43	3.2
Pyrene	M	2700	mg/kg	0.10	< 0.10	2.3	< 0.10	39	2.8
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	16	1.3
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	17	1.3
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	17	0.99
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	6.9	0.46
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	14	1.5
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	8.9	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	4.5	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	6.7	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	4.1	< 2.0	230	16
Total Phenols	M	2920	mg/kg	0.10	< 0.10	0.15	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2185	Asbestos	Asbestos	Polarised light microscopy
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N-dimethyl-p-phenylenediamine.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Comment

D1/TP02 verification excavation area
(facing southwards).

Project

223159 - Sauderton

Photo Plate

1

Date

07/07/2022

Originator

Kieran Evans



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Comment D1/TP02 V/N1.	Project 223159 - Sauderton
	Photo Plate 2
	Date 07/07/2022
	Originator Kieran Evans
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D1/TP02 V/N1 – natural material close up.	Project 223159 – Saunderton
	Photo Plate 3
	Date 07/07/2022
	Originator Kieran Evans
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D1/TP02 V/E1.	Project 223159 – Saunderton
	Photo Plate 4
	Date 07/07/2022
	Originator Kieran Evans
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk


Comment

D1/TP02 V/E1 – natural material close up.

Project

223159 – Saunderton

Photo Plate

5

Date

07/07/2022

Originator

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Comment

D1/TP02 V/S1.

Project

223159 – Saunderton

Photo Plate

6

Date

07/07/2022

Originator

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Comment

D1/TP02 V/W1.

Project

223159 – Saunderton

Photo Plate

7

Date

07/07/2022

Originator

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Comment

D1/TP02 V/B1.

Project

223159 – Saunderton

Photo Plate

8

Date

07/07/2022

Originator

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Comment

Asbestos pipe remediation excavation, centred along grid squares D2 and E2.

Project

223159 – Saunderton

Photo Plate

22

Date

09/06/2022

Originator

Tomos Eaves



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Comment

Asbestos pipe remediation excavation, centred along grid squares D2 and E2.

Project

223159 – Saunderton

Photo Plate

23

Date

09/06/2022

Originator

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Comment

Asbestos remediation excavation, centred on trial pit location E2/TP02.

Project

223159 - Sauderton

Photo Plate

1

Date

09/06/2022

Originator

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Comment

Asbestos remediation excavation, centred on trial pit location E2/TP02.

Project

223159 - Sauderton

Photo Plate

2

Date

09/06/2022

Originator

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Comment

D2/TP05 V/N excavated to 1.20 m Below Ground Level (m BGL).

Project

223159 - Saunderton

Photo Plate

1

Date

16/06/2022

Originator

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Comment

D2/TP05 V/E1 excavated to 0.80 m BGL.

Project

223159 - Saunderton

Photo Plate

2

Date

16/06/2022

Originator

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Comment

D2/TP05 V/W1 excavated to 0.80 m BGL.

Project

223159 – Saunderton

Photo Plate

3

Date

16/06/2022

Originator

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Comment

D2/TP05 V/B1 excavated to 0.80 m BGL.

Project

223159 – Saunderton

Photo Plate

4

Date

16/06/2022

Originator

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Comment

D2/TP05 V/W2 excavated to 0.60 m BGL.

Project

223159 – Saunderton

Photo Plate

5

Date

16/06/2022

Originator

Kieran Evans



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Comment

D2/TP05 V/E2 excavated to 0.80 m BGL.

Project

223159 – Saunderton

Photo Plate

6

Date

16/06/2022

Originator

Kieran Evans



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Comment

D2/TP05 V/B2 excavated to 2.30 m BGL.

Project

223159 – Saunderton

Photo Plate

7

Date

16/06/2022

Originator

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Comment

D2/TP05 V/B3 excavated to 2.50 m BGL (facing west).

Project

223159 – Saunderton

Photo Plate

8

Date

16/06/2022

Originator

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Comment D2/TP05 V/W3 excavated to 0.60 m BGL.	Project 223159 – Saunderton
	Photo Plate 9
	Date 16/06/2022
	Originator Kieran Evans
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D2/TP05 V/E3 excavated to 0.80 m BGL.	Project 223159 – Saunderton
	Photo Plate 10
	Date 16/06/2022
	Originator Kieran Evans
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment D2/TP05 V/B4 - initial excavation where potential hydrocarbon / organic contamination was observed.	Project 223159 – Saunderton
	Photo Plate 11
	Date 16/06/2022
	Originator Kieran Evans
	 AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment

D2/TP05 V/B4 excavated to 3.30 m BGL to remove potential hydrocarbon / organic contamination that was observed.

Project

223159 – Saunderton

Photo Plate

12

Date

16/06/22

Originator

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Comment

D2/TP05 V/E3 excavated to 3.30 m BGL at its lowest point (facing west).

Project

223159 – Saunderton

Photo Plate

13

Date

16/06/2022

Originator

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Comment

D2/TP05 V/W4 excavated to 1.20 m BGL.

Project

223159 – Saunderton

Photo Plate

14

Date

16/06/2022

Originator

Kieran Evans



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Comment

D2/TP05 V/E4 excavated to 1.00 m BGL.

Project

223159 – Saunderton

Photo Plate

15

Date

16/06/2022

Originator

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Comment

D2/TP05 V/B5 excavated to 1.30 m BGL. Potential hydrocarbon / organic contamination was observed at 0.90 m and subsequently removed.

Project

223159 – Saunderton

Photo Plate

16

Date

16/06/2022

Originator

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