Verification Report

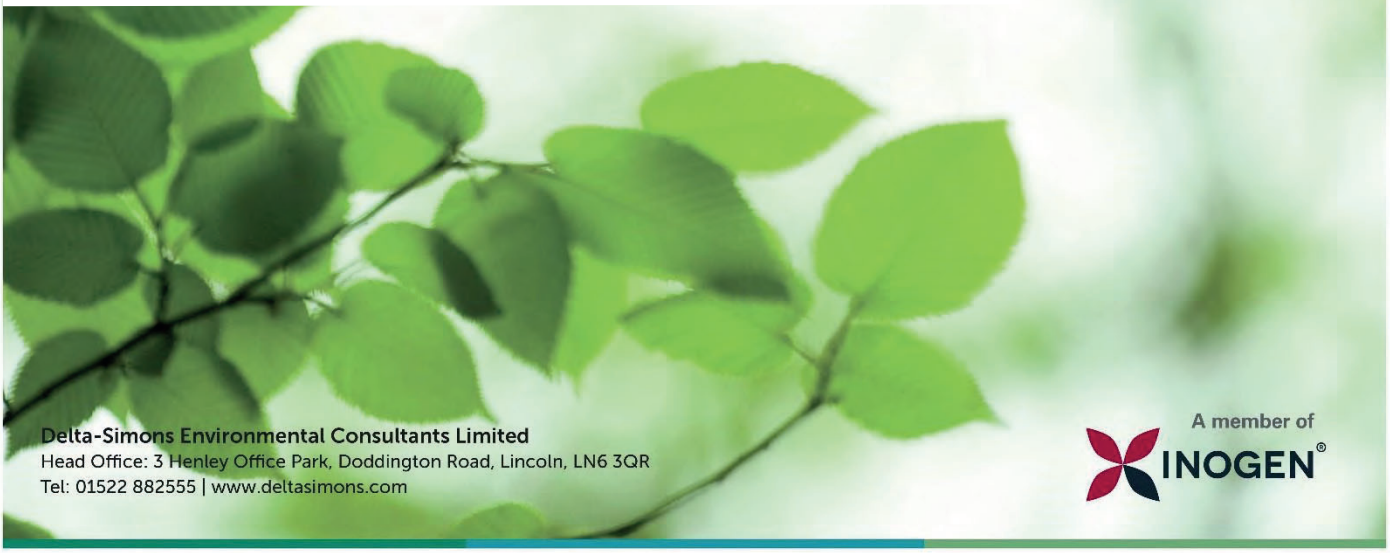
Stone Close, West Drayton

Presented to **St James's Place UK Plc c/o Orchard Street Investment Management LLP**

Issued: June 2020

Delta-Simons Project No. 17-0685.06

deltasimons



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Report Details

Client	St James's Place UK Plc c/o Orchard Street Investment Management LLP
Report Title	Verification Report
Site Address	Stone Close, West Drayton
Project No.	17-0685.06
Delta-Simons Contact	Dan Webb (dan.webb@deltasimons.com)

Quality Assurance

Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
2	Final	2nd June 2020	Reissued with updated planning plan			
				Lara Cosford Graduate	Dan Webb Unit Manager	Dan Webb Unit Manager

About us

Delta-Simons is a trusted, multidisciplinary environmental consultancy, focused on delivering the best possible project outcomes for customers.

Specialising in Environment, Health & Safety and Sustainability, Delta-Simons provide support and advice within the property development, asset management, corporate and industrial markets. Operating from ten locations - Lincoln, Birmingham, Bristol, Dublin, Leeds, London, Manchester, Newcastle, Norwich and Nottingham - we employ over 100 environmental professionals, bringing experience from across the private consultancy and public sector markets.

Delta-Simons is proud to be a founder member of the Inogen® Environmental Alliance, a global corporation providing multinational organisations with consistent, high quality and cost effective environmental, health, safety, energy and sustainability solutions. Inogen assists multinational clients by resolving liabilities from the past, addressing today's requirements and delivering solutions for the future. With more than 200 offices located on every continent, more than 6,430 staff worldwide, and projects completed in more than 120 countries, Inogen provides a single point of contact for diverse markets as Automotive, Chemical, Consumer Products & Retail, Financial, Food & Beverage, Healthcare, Insurance, Manufacturing, Non Profit Organisations, Oil & Gas, Real Estate, Services Firms, Technology and Transportation, among others.

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1.0 Introduction

1.1 Appointment

Delta-Simons Environmental Consultants Limited ("Delta-Simons") was instructed by St James's Place UK Plc c/o Orchard Street Investment Management LLP (the "Client") to undertake the preparation of a Verification Report for the redevelopment of land located at Stone Close, West Drayton (the "Site"). The Site is being redeveloped for commercial use, comprising a new vehicle servicing workshop, MOT test centre with associated parts storage, office and customer reception areas.

1.2 Context & Purpose

The purpose of this document is to provide a formal statement on the remediation and mitigation measures undertaken during the redevelopment in accordance with the recommendations outlined in Delta-Simons Remediation and Verification Strategy (Ref. 17-0685.03), dated October 2018, and to support the discharge of the associated planning conditions.

For information on the Site setting, and full details of intrusive investigations undertaken at the Site prior to redevelopment, this Verification Report should be read in conjunction with Delta-Simons' previous reports as follows:

- Preliminary Geo-Environmental Risk Assessment, Land at Stone Close, West Drayton, UB7 8JU, Ref: 17-0685.01, dated November 2017;
- Geo-Environmental Assessment, Stone Close, West Drayton, Ref: 17-0685.02, dated August 2018;
- Gas Addendum Report, Stone Close, West Drayton, UB7 8JU, Ref: 17-0685.02, dated September 2018;
- Remediation and Verification Strategy, Stone Close, West Drayton, Ref: 17-0685.03, dated October 2018;
- Supplementary Delineation Investigation, Stone Close, West Drayton, Ref:17-0685.04, dated June 2019 (this report is included within the appendices of this report); and
- Demolition and Enabling Works Validation Report, Stone Close, West Drayton, Ref: 17.0685.06, dated November 2019 (this report is also included within the appendices of this report).

1.3 Planning Conditions

The Site is being redeveloped for commercial purposes as a vehicle servicing facility including workshop areas, a MOT test bay, a tyre bay, parts storage, customer reception and office area.

A planning application for the development has been made and approved, (London Borough of Hillingdon Ref: 73585/APP/2018/2484).

Condition 14 – Contamination within the planning application (LPA Application Ref: 73585/APP/2019/1764 submitted on 24th May 2019) includes:

(i) The development hereby permitted shall not commence until a scheme to deal with contamination has been submitted in accordance with the Supplementary Planning Guidance on Land Contamination and approved by the Local Planning Authority (LPA). The scheme shall include all of the following measures unless the LPA dispenses with any such requirement specifically and in writing:

(a) A desk-top study carried out by a competent person to characterise the site and provide information on the history of the site/surrounding area and to identify and evaluate all potential sources of contamination and impacts on land and water and all other identified receptors relevant to the site;

(b) A site investigation, including where relevant soil, soil gas, surface, and groundwater sampling, together with the results of analysis and risk assessment shall be carried out by a suitably qualified and accredited

consultant/contractor. The report should also clearly identify all risks, limitations, and recommendations for remedial measures to make the site suitable for the proposed use.

(c) A written method statement providing details of the remediation scheme and how the completion of the remedial works will be verified shall be agreed in writing with the LPA prior to commencement.

(ii) If during development or works contamination not addressed in the submitted remediation scheme is identified, an addendum to the remediation scheme must be agreed with the LPA prior to implementation; and

(iii) All works which form part of the remediation scheme shall be completed and a verification report submitted to the Council's Environmental Protection Unit before any part of the development is occupied or brought into use unless the LPA dispenses with any such requirement specifically and in writing.

Thereafter the development shall be carried out and maintained in full accordance with the approved details. Parts (i) (a), (b) and (c) of this condition are understood to have been discharged by the Local Planning Authority 1st August 2019. This final Verification Report is required to discharge the remaining items of (ii) and (iii).

1.4 Limitations

Delta-Simons has obtained, reviewed, and evaluated information in preparing this statement from the Client and others. Delta-Simons' conclusions, opinions and recommendations are based upon this information. Delta-Simons does not warrant the accuracy of the information provided to it and will not be responsible for any opinions that Delta-Simons has expressed, or conclusions that it has reached, in reliance upon information which is subsequently proven to be inaccurate.

The standard limitations associated with this assessment are presented in Appendix A.

2.0 Contamination and Remediation Summary

2.1 Site Description and Site Investigation Summary

Historically, the Site remained largely undeveloped until 1965 mapping, where the Site is shown to be developed by an unspecified works, with a main unit in the centre of the Site and a smaller unit encroaching the north. By 1975 mapping, the Site is shown in its contemporary layout, which is denoted as an engineering works, and later as warehousing and works.

The previous Geo-Environmental assessment undertaken by Delta-Simons (Ref:17-0685.02) included the excavation of four trial pits to a maximum depth of 2.70 m bgl, drilling of six dynamic sampler holes (DS101 to DS104, DS106 and DS107) to a maximum depth of 5.45 m bgl and drilling of one Cable Percussive Borehole (CP101) to a maximum depth of 10.00 m bgl. The ground investigation recorded a variable thickness of Made Ground to a maximum depth of 2.8 m bgl, which is in turn underlain by Recent Alluvial Deposits, the Lynch Hill Gravel Member and London Clay. Monitoring of standpipes indicated that groundwater is within the Made Ground and Recent Alluvial Deposits between 1.58 and 2.16 m bgl with a general fall in levels towards the south west of the Site.

Localised soil contamination including concentrations of metals, metalloids, petroleum hydrocarbons and PAHs were identified across the Site generally associated with the Made Ground and perched groundwater. The only exceedance of the GACs (Guidance Acceptance Criteria) in relation to PAHs was identified in DS101 and this was considered likely to be associated with the higher than average tarmacadam constituent observed within the soil matrix at this location and was not considered to be significant. Widespread significant contamination of the soils was not identified at the Site. No significant risk to controlled waters was identified, given the absence of significant potentially mobile contamination sources, however some suspected perched groundwater had been identified which should require further clarification and/ or treatment as part of the demolition/ enabling works. Groundwater recovered from DS106 exhibited a hydrocarbon odour and elevated levels of total petroleum hydrocarbons. This was considered likely to reflect a localised area of contamination confined within a relict sub structure associated with former fuel/ oil storage identified at this location.

Based on the available information, it was considered that the potential risks to human health could be mitigated in the form of a hardstand and cover system for any discrete landscaped areas, to ameliorate any residual contaminant risks. Certified, imported ‘clean’ cover soils were recommended for any landscaped areas. Due to the possibility of ACM present within the Made Ground, it was recommended that groundworkers and sub-surface maintenance workers should be made aware of the possibility of encountering contaminated soils through toolbox talks and in particular the potential presence of asbestos.

Ground gas monitoring results indicated the Site could be classified as CS1 (very low hazard potential) in accordance with BS 8485:2015, specific ground gas protection measures were not considered to be required. No sources of potentially significant volatile contamination were identified at the Site.

Following the issue of the Remediation and Verification Strategy (Ref: 17-0685.03; and discussed further in Section 2.2), Delta-Simons was instructed by the Client to undertake a Supplementary Delineation Investigation (Ref:17-0685.04) in order to assess the contamination status of the soil in the vicinity of location DS106 to establish the status of a relict underground structure. The investigation included the drilling of eight pre-cored window sampler holes (DS201-DS208) to a maximum depth of 5m bgl and collection of soil descriptions and soil samples. Five soil samples were selected for chemical laboratory analysis for speciated Total Petroleum Hydrocarbons Criteria Working Group Method (TPHCWG). No significantly elevated concentrations of potential contaminants of concern were identified in any of the samples. The investigation confirmed that the localised area of contamination previously identified in DS106 is likely to be confined within the relict substructure associated with former fuel/ oil storage identified at this location. It was recommended that this relict underground structure localised in DS106 be removed and disposed of off-Site by a licensed contractor. The Supplementary Delineation Investigation letter report is reproduced as Appendix B for ease of reference.

2.2 Enabling & Construction Phase Mitigation Requirements

Following Delta-Simons' contamination assessments, the following construction phase mitigation measures were considered appropriate, as set out in Delta-Simons' Remediation and Verification Strategy (Ref:17-0685.03):

1. Further exploration following demolition of the above ground structures in the vicinity of location DS106 to establish the status of a relict underground structure in the area surrounding this location. Carry out localised de-watering and removal of any grossly impacted soils where identified;
2. Additional, unidentified localised areas of contamination may exist at the Site and an appropriate 'hotspot' protocol should be in place for groundworkers to act upon should such contamination be identified during the construction process;
3. Groundworkers who are required to perform sub-surface work at the Site should be made aware of the known low-level contaminants in soil and groundwater and the possibility of encountering additional localised low levels of contamination (including Asbestos Containing Materials (ACM)). Therefore, good standards of personal hygiene should be observed and appropriate levels of personal protective equipment (PPE) and respiratory protective equipment (RPE) utilised where necessary;
4. A clean cover of 'suitable for use' topsoil will be required in landscaped areas, minimum 300 mm thickness, subject to approval with the Local Planning Authority (LPA); and
5. Confirmation should be sought from the Local Water Authority as to whether they will require upgraded pipework to be installed for new service installations.

3.0 Demolition & Enabling Works Validation

In addition to the Supplementary Delineation Investigation undertaken prior to let of the Demolition and Enabling works Contract (discussed in Section 2.1 and report reproduced as Appendix B), in order to support the successful completion of items 1 and 2 (mentioned in Section 2.2), Delta-Simons were instructed to undertake a part time watching brief throughout the Demolition & Enabling Works Phase by the contractor R. Collard Ltd. This comprised four routine weekly visits to the Site to provide a watching brief as an assurance monitoring role throughout the demolition and enabling works phase. The visits were timed to occur through the latter stages of demolitions and once the above ground structures had been substantially removed before demolitions would begin to focus on below ground works (removal of foundation and redundant drainage infrastructure). These visits are detailed within the Demolition and Enabling works Validation Report produced by Delta-Simons (Ref:17-0685.06) and reproduced in this report as Appendix C.

Specific attendance was scheduled as part of this commission to observe and record the removal of the previously identified Hotspot in the vicinity of location DS106. Delta-Simons attended the Site on the 2nd of October 2019 to observe hotspot excavation works undertaken by R Collard Ltd. and to take validation samples to confirm the condition of the soils remaining in-situ following the excavation. The excavations revealed a brick structure suspected to have been associated with former drainage infrastructure. Hydrocarbon impacted infill was found to be constrained by the confines of the brick walls to this structure and were duly removed and disposed of to Mepal Soil & Waste Treatment Centre. Validation samples were tested by an accredited laboratory for speciated total petroleum hydrocarbons, including BTE, MTBE and VOCs. Two additional samples were undertaken from the excavated soils on 8th October 2019 for a full Delta-Simons suite analysis (TPH CWG, BTEX, PAHs, Heavy Metals and Asbestos) to assist with subsequent disposal characterisation.

Analytical results for the DS106 validation samples were received and compared to the Geo-Environmental Assessment commercial GAC (Ref:17-0685.02) and indicated all parameters within limits/ no exceedances. The works were therefore considered successful and no further investigation, assessment or remediation works were considered required in relation to the DS106 excavation.

Analytical results for all other validation samples collected during the routine visits to the Site were also compared to the Geo-Environmental Assessment commercial GAC (Ref:17-0685.02). All parameters were within limits/ no exceedances and therefore considered not to represent unexpected/ unrecorded ground conditions/ potential hotspots. It was considered that there was no need for additional specific remedial activities and the ground conditions revealed considered to be consistent with those assessed by the previous ground investigations.

Copies of waste transfer notes and details of waste removed from the Site by R Collard Ltd. are included within the Demolition Health and Safety File (incorporated in Delta-Simons Demolition & Enabling Works Validation Report; Appendix C). Materials and arisings associated with the excavations of DS106 were removed from Site. Materials removed from other areas of the Site included sheering and constructional steel, rebar, wood, ACM and General Builders Rubbish.

Full details of the remediation undertaken are presented within the Demolition & Enabling Works Validation Report presented as Appendix C.

4.0 Construction Phase Works Validation

4.1 Contamination Not Otherwise Addressed

Following completion of the Demolition and Enabling works by R. Collard Ltd (discussed in Section 3) and in conjunction with the watching brief role undertaken by Delta-Simons, residual risks of encountering significant contamination or further unidentified Hotspots of contamination were considered to be reduced and the subsequent contract for the construction phase project was let to MCS Group.

A letter from MSC Group dated 5th May 2020, included as Appendix D, confirmed that no unidentified contamination was found on Site during the construction phase throughout their contracted works between 4th November 2019 and 10th June 2020, which embraced all of the planned below ground works (e.g. foundations, utilities & drainage) where the potential for such contamination may have been present.

4.2 Water Pipes and Below Ground Utilities

Given the presence of observed contamination at the Site, it was recommended to consider the use of barrier pipe materials. However, it was advised that confirmation should be sought from the Water Authority on the requirement for the water supply pipework to the Site.

4.3 Upgraded Pipe Material Requirements

Correspondence between MCS Group and Affinity Water Ltd, dated 31st of March 2020 is included as Appendix D and confirms that the requirements of Affinity Water in respect of the size and materials (32mm Protectaline Barrier pipework with double check valve on each end) required for the water supplies have been laid and installed to Affinity Water design/ requirements. This confirms the statutory water providers' acceptance of the completed pipework and connections.

4.4 Certified Clean Topsoil/ Subsoil Layer

Widespread or significant contamination of the Site was not identified and as part of the proposed development scheme, the Site is to be predominantly covered in hardstanding or buildings. However, it was recommended, as part of Delta-Simons' Verification and Remediation Strategy Report (Ref: 17-0685.03) that a layer of clean topsoil and subsoil be imported into any proposed soft landscaped areas to further mitigate the risk of direct contact exposure and soil ingestion/ inhalation by future Site users. A minimum of 300mm of soil is recommended in landscaped areas. A proposed landscape plan is included as Drawing 1.

4.5 Imported Topsoil

As of May 2020, no topsoil has been imported or installed on-Site. Correspondence between Delta-Simons and MCS Group indicates that a suitable source of topsoil from Springbridge Direct Ltd. has been identified, though this has not yet been confirmed or imported.

Once Delta-Simons has confirmation from the Client that topsoil has been imported onto the Site, topsoil certificate(s) and delivery note(s) will be submitted and topsoil testing in an accredited laboratory and verification can be completed. The in-situ validation of the topsoil in the form of a series of hand dug pits shall also verify the required thickness of imported soils (300mm).

A separate Letter Report confirming the details and satisfaction of the appropriate topsoil verification shall be presented once laid and imported.

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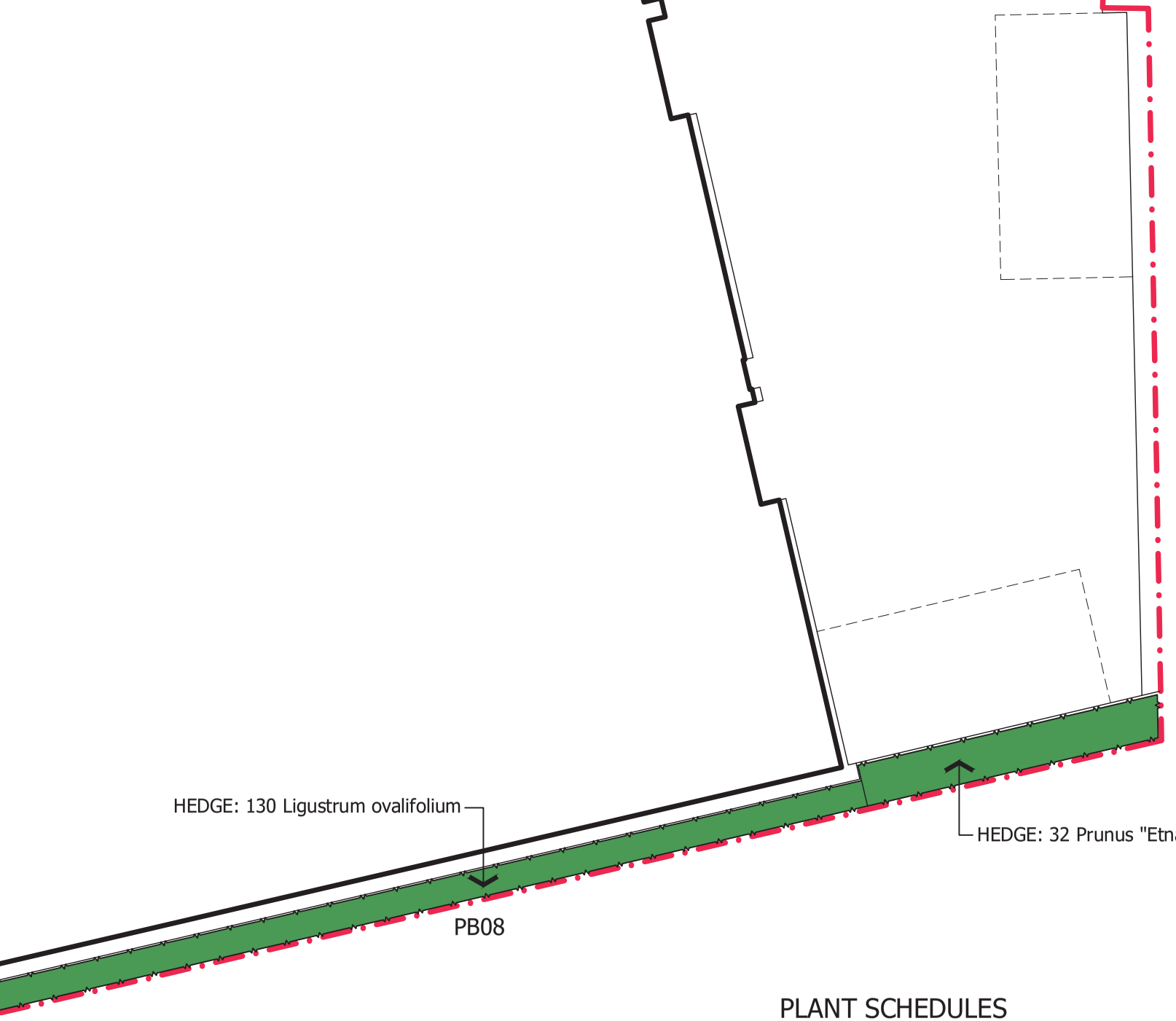
Drawing 1 – Proposed Planting Layout (TALA)



PLANT SCHEDULES

TOTAL	TREES	SIZE (girth)	FORM	SUPPORT
1	Betula utilis "Jacquemontii"	18-20	Clear Stem	Triple
3	Carpinus betulus	16-18	Clear Stem	Triple
5	Liriodendron tulipifera "Variegatum"	20-25	Clear Stem	Triple

Appendix A – Limitations

Limitations

The recommendations contained in this Report represent Delta-Simons professional opinions, based upon the information listed in the Report, exercising the duty of care required of an experienced Environmental Consultant. Delta-Simons does not warrant or guarantee that the Site is free of hazardous or potentially hazardous materials or conditions.

Delta-Simons obtained, reviewed and evaluated information in preparing this Report from the Client and others. Delta-Simons conclusions, opinions and recommendations has been determined using this information. Delta-Simons does not warrant the accuracy of the information provided to it and will not be responsible for any opinions which Delta-Simons has expressed, or conclusions which it has reached in reliance upon information which is subsequently proven to be inaccurate.

This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

Appendix B – Delta-Simons Supplementary Delineation Investigation Report

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Supplementary Delineation Investigation

Stone Close, West Drayton

Presented to St James Place UK Plc c/o Orchard Street Investment Management LLP

Issued: June 2019

Delta-Simons Project No. 17-0685.04

Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
01	Final	21/06/2019	-			
				Elena Francia Senior	Charlotte Foster Consultant	Simon Steele Associate

1.0 Introduction

1.1 Appointment

Delta-Simons Environmental Consultants Limited ("Delta-Simons") was instructed by St James Place UK Plc c/o Orchard Street Investment Management LLP (the "Client") to carry out a supplementary delineation ground investigation for land located at Stone Close, West Drayton (the "Site"). It is understood that the Client is seeking to redevelop the Site for continued commercial use.

The assessment is limited to the issues agreed within the proposal for the works. Notes on limitations associated with this assessment are provided in Appendix A.

1.2 Project Background & Purpose

Delta-Simons have completed a phased ground investigation for the development and the following reports should be read in conjunction with this document:

- Preliminary Geo-Environmental Risk Assessment, Land at Stone Close, West Drayton, UB7 8JU, Ref: 17-0685.01, dated November 2017;
- Geo-Environmental Assessment, Stone Close, West Drayton, Ref: 17-0685.02, dated August 2018;
- Gas Addendum Report, Stone Close, West Drayton, UB7 8JU, Ref: 17-0685.02, dated September 2018; and
- Remediation and Verification Strategy, Stone Close, West Drayton, Ref: 17-0685.03, dated October 2018

Delta-Simons Geo-Environmental Assessment (Ref:17-0685.02) identified elevated total petroleum hydrocarbon contamination within a Made Ground sample taken from location DS106 at 2.3m below ground level (bgl), this was considered likely to reflect a localised area of contamination confined within a relict substructure associated with former fuel/ oil storage identified at this location. DS106 refused at 2.4m bgl on a suspected concrete slab, likely associated with the aforementioned relict infrastructure. Recommendations in the report included suggestions for further investigation of the ground in the vicinity of location DS106 to establish the status of the relict underground substructure.

It is understood that the Site is to be redeveloped for commercial purposes as a vehicle servicing facility including workshop areas, a MOT test bay, a tyre bay, parts storage area; customer reception and office area; and a drive through reception area.

A planning application for the development has been made, (London Borough of Hillingdon Ref: 73585/APP/2018/2484), which is understood to have been approved.

2.0 Scope of Investigation

2.1 Intrusive Investigation

The intrusive investigation completed as part of this phase of works took place on 6th and 7th June 2019 and comprised:

- Geo-environmental Engineer Site supervision;
- Drilling of eight pre-cored window sampler holes (DS201-DS208) to a maximum depth of 5m bgl; and
- Engineer verified soil descriptions and soil sampling.

The investigation locations were surveyed in by an appointed surveying contractor to an accuracy of approximately +/- 0.1m (except for DS201 and DS202 which were internal locations). The locations of the intrusive holes were chosen to target the relict substructure associated with former fuel/ oil storage identified at DS106 location and are shown on Figure 1, attached.

Delta-Simons engineer verified borehole logs are presented as Appendix B in accordance with BS EN ISO 22476-3:2005 (incorporating corrigendum No. 1 2007).

2.2 Chemical Laboratory Analysis

Samples analysed for environmental purposes were placed in chilled cool boxes on Site and transported to the laboratory for analysis on completion of the Site investigation works. Samples were stored in accordance with Delta-Simons' quality procedures to maintain sample integrity and preservation and to minimise the chance of cross contamination. Records of the samples taken as part of the site investigation works, including their depths and location, are included within the exploratory hole records in Appendix B.

On completion of the intrusive investigation, five soil samples were selected for chemical laboratory analysis for speciated Total Petroleum Hydrocarbons Criteria Working Group Method (TPHCWG) including Benzene, Toluene, Ethylbenzene and Xylene (BTEX) and Methyl Tertiary-Butyl Ether (MTBE) to target identified hydrocarbon source. Copies of the laboratory analysis results are included within Appendix C.

3.0 Investigation Findings

3.1 Geology from the Investigation Works

The ground conditions recorded in the dynamic sampler boreholes comprised the following: Made Ground encountered from the surface to a maximum depth of 2m bgl. The Made Ground generally varied between cohesive and granular with varying fractions of anthropogenic material including occasional brick and concrete cobbles, and clinker. The underlying natural soil typically comprised clay with varying fractions of sand and gravel.

A groundwater strike was recorded at DS202 at 2.6 m bgl. Groundwater strikes were not recorded throughout the drilling of the other dynamic sampler locations.

A slight hydrocarbon odour was noted within the Made Ground at 1m bgl in DS206, this is considered to be located downgradient (southwest) of the identified hydrocarbon source (DS106). A slight organic odour, abundant plant remains, and rare shell fragments was noted within the clay (Alluvial Deposits) between 1.7m and 3.0m bgl in DS207.

3.2 Chemical Laboratory Analysis

The presence of hazardous substances in or on a site is generally only of concern if an actual or potential unacceptable risk exists. Legislation and guidance on the assessment of contaminated sites, consistent with UK best practice, acknowledges the need for a tiered risk-based approach. This section represents a Generic Quantitative Risk Assessment (GQRA) being a comparison of site contaminant levels against Generic Assessment Criteria.

The assessment of risks in relation to human health has been undertaken using the Generic Assessment Criteria with the end use scenario adopted as a Commercial / Industrial end use, considered appropriate based on the proposed development.

The primary exposure pathways considered in the risk assessment are as follows:

Direct exposure:

- Ingestion of soil and indoor dust and / or oral background exposure;
- Inhalation of dust (background and indoor); and
- Direct dermal contact.

Indirect exposure:

- Inhalation of vapour (background and indoor).

The laboratory results for contaminants exceeding detection limit compared to their respective GAC are presented in the table below.

Contaminant	No. Samples	Max Conc. (mg/kg)	GAC (mg/kg)	GAC Source	No. Exceed GAC	Volatile	Location of Exceedances	Area of Site of Exceedance
Petroleum Hydrocarbons								
Aliphatic TPH >C12-C16	5	4.6	59,000	LQM	0	N	-	-
Aliphatic TPH >C16-C21	5	16	1,600,000	LQM	0	N	-	-
Aliphatic TPH >C21-C35	5	45	1,600,000	LQM	0	N	-	-
Aliphatic TPH>EC5-EC35	5	62	1,600,000	LQM	0	N		
Aromatic TPH >C10-C12	5	7	16,000	LQM	0	Y	-	-
Aromatic TPH >C12-C16	5	46	36,000	LQM	0	N	-	-
Aromatic TPH >C16-C21	5	140	28,000	LQM	0	N	-	-
Aromatic TPH >C21-C35	5	290	28,000	LQM	0	N	-	-
Aromatic TPH >C5-C35	5	470	28,000	LQM	0	N		

As can be seen in the table above none of the contaminants of concern have been found in concentrations above their respective GAC.

Concentrations of BTEX and MTBE were below laboratory detection in all samples tested. No concentrations of TPHCWG contaminants of concern have been recorded above the relevant screening value. Samples of Made Ground in DS206 exhibiting a slight hydrocarbon odour didn't record elevated concentrations of aliphatic hydrocarbons.

4.0 Summary & Recommendations

This supplementary investigation has been carried out in order to assess the contamination status of the soil in the vicinity of location DS106 to establish the status of a relict underground structure.

The investigation confirms that the localised area of contamination previously identified in DS106 is likely to be confined within the relict substructure associated with former fuel/ oil storage identified at this location.

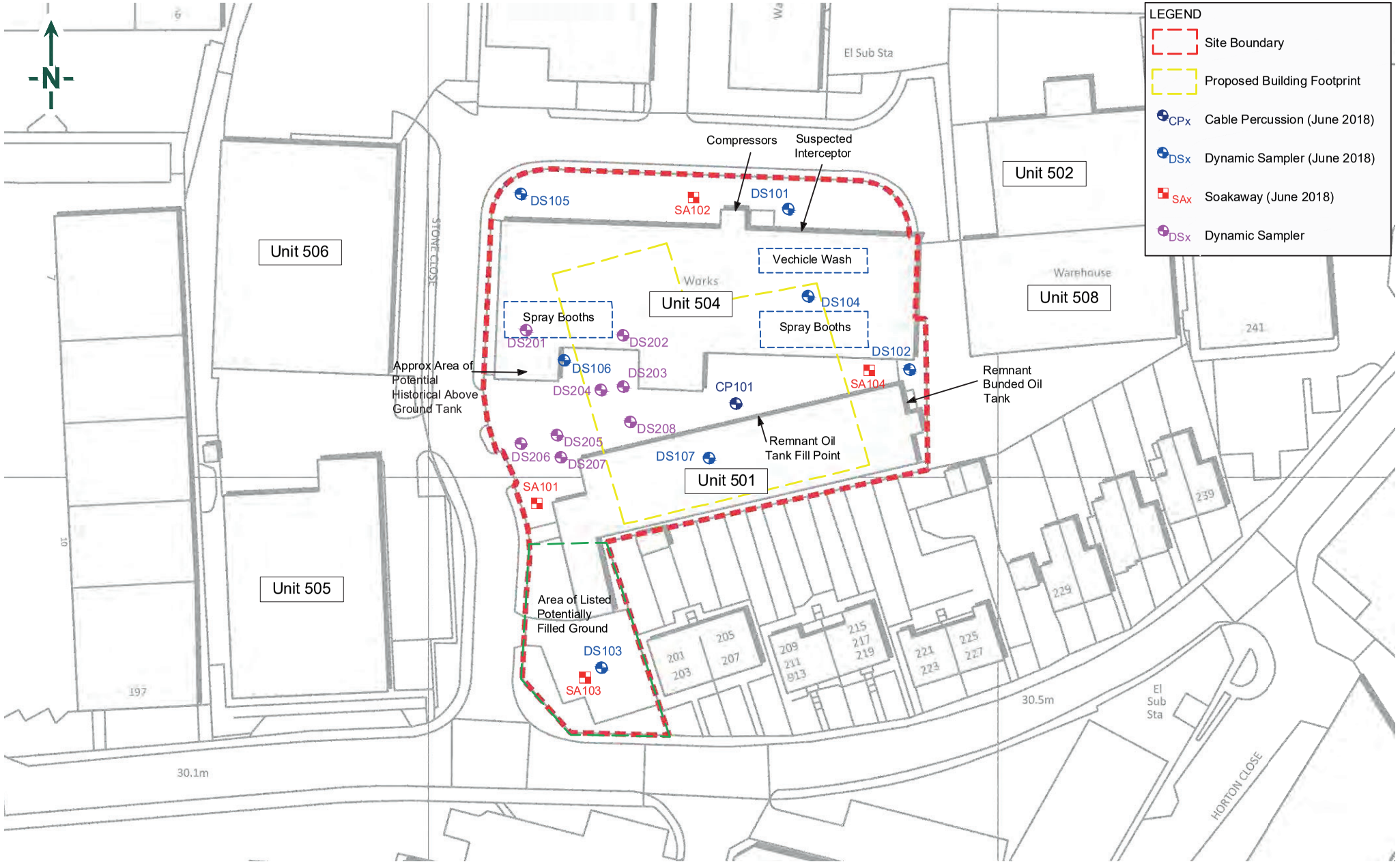
The chemical analysis undertaken on soil samples from the delineation investigation did not identify any significantly elevated concentrations of potential contaminants of concern tested.

As outlined in Remediation and Verification Strategy report, source removal remediation is recommended comprising removal of relict underground structure localised in DS106 for off-Site disposal by a licensed contractor.

Figures

Appendices

Figure 1 – Exploratory Hole Location Plan



Site Plan Provided by Client

deltasimons
Environment - Health & Safety - Sustainability

TITLE:
Exploratory Hole Location Plan
Land at Stone Close
West Drayton

DRAWN BY: EN	SCALE: Not to Scale
CHECKED BY: EF	REVISION: 1
DATE: 20 June 2019	

PROJECT NO: 17-0685.04

FIGURE NO: 1

Appendix A – Limitations

Limitations

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This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

Appendix B – Borehole Logs

deltasimons
Environment - Health & Safety - Sustainability

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Project No: 17-0685.04 | Hole ID: DS201 | Page: 1 of 1

Project: Stone Close, West Drayton

Dynamic Sampler Log

Date: 07/06/2019 | Client: Orchard St Investment LLP

Description of Strata	Legend	Strata Depth (m bgl)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Sample Details: Depth (m)	Sample Details: Type	Sample Details: Ref	Test Details: Depth (m)	Test Details: Results	Backfill
MADE GROUND: Reinforced concrete.		0.35	(0.35)									
MADE GROUND: Soft greyish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded flint, quartz, brick and clinker. Abundant macadam fragments.		1.00	(0.65)				0.50	ES	1	0.50	PID=21.9ppmv	
MADE GROUND: Firm light brown very sandy GRAVEL. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse flint. Occasional clinker.		2.00	(1.00)							1.50	PID=2.9ppmv	
Soft light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular fine to medium flint. (RECENT ALLUVIAL DEPOSITS)		2.15	(0.15)									
Soft reddish brown, grey from 2.3 m bgl, mottled from 3.4m, slightly gravelly sandy CLAY. Frequent rootlets to 3.4m. Gravel of subangular fine to medium flint. Occasional carbonaceous deposits from 3.4m. (RECENT ALLUVIAL DEPOSITS)		5.00	(2.85)							2.60	PID=3.7ppmv	
Borehole complete at 5.00 m bgl.												

Remarks:
1. Logged in general accordance with BS 5930:2015.2. Area cleared for services prior to drilling.3. Unable to obtain GPS coordinates.4. Borehole backfilled with arising, finished at the surface with concrete.

Water Strike			Water Level		Borehole Diameter	
Date	Time	Depth Strike	Duration	Depth Water	Depth Base	Diameter

Coordinates:	Elevation (mAOD):	Drilled By:	Plant Used:	Logged:	Checked:	Approved:	Scale:
		Delta Drilling	Premier 110	AN	EF	SS	1:30

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Project No: 17-0685.04 | Hole ID: DS202 | Page: 1 of 1

Project: Stone Close, West Drayton

Dynamic Sampler Log

Date: 06/06/2019 - 07/06/2019 | Client: Orchard St Investment LLP

Description of Strata	Legend	Strata Depth (m bgl)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Sample Details: Depth (m)	Sample Details: Type	Sample Details: Ref	Test Details: Depth (m)	Test Details: Results	Backfill
MADE GROUND: Reinforced concrete.		0.18	(0.18)									
MADE GROUND: Soft greyish brown slightly gravelly sandy CLAY. Sand is fine to medium and to coarse to 1m . Gravel is subangular to subrounded flint and quartz, brick and clinker to 1.0m.			(1.62)				0.80	ES	1	0.80	PID=0.0ppmv	
Band of brownish black coarse sand between 1.5 and 1.55m							1.50	ES	2	1.50	PID=2.0ppmv	
		1.80										
Soft yellowish brown and red mottled slightly gravelly sandy CLAY. Sand is fine. Gravel is aubangular to subrounded fine to coarse flint. (RECENT ALLUVIAL DEPOSITS)		2.00	(0.20)									
Soft sandy CLAY. Sand is fine. Frequent plant remains. No recovery from 3.0m. (RECENT ALLUVIAL DEPOSITS)			(1.50)				2.50	ES	3	2.50	PID=10.1ppmv	
		3.50										
Firm reddish brown grey mottled slightly gravelly sandy CLAY. Sand is fine. Gravel is subrounded fine to medium flint. Occasional carbonaceous deposits. (RECENT ALLUVIAL DEPOSITS)			(1.50)							3.60	PID=5.7ppmv	
		5.00										
Borehole complete at 5.00 m bgl.												

Remarks:
1. Logged in general accordance with BS 5930:2015.2. Area cleared for services prior to drilling.3. Unable to obtain GPS coordinates.4. Borehole backfilled with arising, finished at the surface with concrete.

Water Strike			Water Level		Borehole Diameter	
Date	Time	Depth Strike	Duration	Depth Water	Depth Base	Diameter

Coordinates:	Elevation (mAOD):	Drilled By:	Plant Used:	Logged:	Checked:	Approved:	Scale:
		Delta Drilling	Premier 110	AN	EF	SS	1:30

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Project No: 17-0685.04 | Hole ID: DS203 | Page: 1 of 1

Project: Stone Close, West Drayton

Dynamic Sampler Log

Date: 06/06/2019 | Client: Orchard St Investment LLP

Description of Strata	Legend	Strata Depth (m bgl)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Sample Details: Depth (m)	Sample Details: Type	Sample Details: Ref	Test Details: Depth (m)	Test Details: Results	Backfill
MADE GROUND: Reinforced concrete.		0.18	(0.18)	30.37								
MADE GROUND: Dark brown very gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse flint, quartz, brick, clinker and sandstone.		0.40	(0.22)	30.15								
MADE GROUND: Soft grey slightly gravelly sandy CLAY. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint, quartz, brick, clinker and sandstone.		1.85	(1.45)	28.70			1.00	ES	1	1.00	PID=0.0ppmv	
Soft greyish brown black mottled sandy, becoming slightly gravelly from 2.7 m bgl, CLAY. Sand is fine to medium. Gravel is subangular fine to medium flint. Occasional plant remains. (RECENT ALLUVIAL DEPOSITS)		3.05	(1.20)	27.50		2.60 ▼				2.50	PID=0.0ppmv	
Orangish brown grey mottled slightly sandy CLAY. Sand is fine. Occasional carbonaceous deposits. (RECENT ALLUVIAL DEPOSITS)		5.00	(1.95)	25.55						3.50	PID=0.0ppmv	
Borehole complete at 5.00 m bgl.												

Remarks:
1. Logged in general accordance with BS 5930:2015.2. Area cleared for services prior to drilling.3. Elevation and location data obtained from GPS survey.4. Borehole backfilled with arising, finished at the surface with concrete.

Water Strike			Water Level		Borehole Diameter	
Date	Time	Depth Strike	Duration	Depth Water	Depth Base	Diameter
		2.60 m				

Coordinates:	Elevation (mAOD):	Drilled By:	Plant Used:	Logged:	Checked:	Approved:	Scale:
E506933.46 N180317.08	30.55	Delta Drilling	Premier 110	AN	EF	SS	1:30

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Project No: 17-0685.04 | Hole ID: DS204 | Page: 1 of 1

Project: Stone Close, West Drayton

Dynamic Sampler Log

Date: 06/06/2019 | Client: Orchard St Investment LLP

Description of Strata	Legend	Strata Depth (m bgl)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Sample Details: Depth (m)	Sample Details: Type	Sample Details: Ref	Test Details: Depth (m)	Test Details: Results	Backfill
MADE GROUND: Reinforced concrete.		0.20	(0.20)	30.24								
MADE GROUND: Dark brown very gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse flint, quartz, brick, clinker and sandstone.		0.35	(0.15)	30.09			0.35	ES	1	0.35	PID=3.2ppmv	
MADE GROUND: Soft orangish brown grey mottled slightly gravelly sandy CLAY. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse slint, quartz and brick.		1.80	(1.45)	28.64			1.50	ES	2	1.50	PID=0.0ppmv	
Soft greyish brown black mottled slightly gravelly slightly sandy CLAY. Sand is fine. Gravel of subangular to subrounded fine flint to 4.0m. Occasional plant remains to 3.6m. Occasional carbonaceous deposits from 4.0m (RECENT ALLUVIAL DEPOSITS)										2.50	PID=0.0ppmv	
Dark brown potential peat comprising organic matter from 2.7 to 2.75m		5.00	(3.20)	25.44						3.50	PID=0.0ppmv	
Borehole complete at 5.00 m bgl.												

Remarks:
1. Logged in general accordance with BS 5930:2015.2. Area cleared for services prior to drilling.3. Elevation and location data obtained from GPS survey.4. Borehole backfilled with arising, finished at the surface with concrete.

Water Strike			Water Level		Borehole Diameter	
Date	Time	Depth Strike	Duration	Depth Water	Depth Base	Diameter

Coordinates:	Elevation (mAOD):	Drilled By:	Plant Used:	Logged:	Checked:	Approved:	Scale:
E506929.55 N180316.52	30.44	Delta Drilling	Premier 110	AN	EF	SS	1:30

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Project No: 17-0685.04 | Hole ID: DS205 | Page: 1 of 1

Project: Stone Close, West Drayton

Dynamic Sampler Log

Date: 06/06/2019 | Client: Orchard St Investment LLP

Description of Strata	Legend	Strata Depth (m bgl)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Sample Details: Depth (m)	Sample Details: Type	Sample Details: Ref	Test Details: Depth (m)	Test Details: Results	Backfill
MADE GROUND: Reinforced concrete.		0.20	(0.20)	30.24								
MADE GROUND: Brown very sandy GRAVEL. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse brick, flint, quartz and concrete. Occasional brick and concrete cobbles.		0.40	(0.20)	30.04			0.45	ES	1	0.50	PID=1.4ppmv	
MADE GROUND: Soft orangish brown grey mottled gravelly sandy CLAY. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint, quartz, clinker and brick. Occasional wood and brick cobbles.		1.85	(1.45)	28.59						1.50	PID=1.1ppmv	
Soft grey and black mottled CLAY. (RECENT ALLUVIAL DEPOSITS)		2.60	(0.75)	27.84			2.60	ES	2	2.50	PID=0.2ppmv	
Soft blackish brown slightly gravelly sandy CLAY. Sand is fine to medium. Gravel is angular fine flint. (RECENT ALLUVIAL DEPOSITS)		3.00	(0.40)	27.44								
Firm, becoming stiff from 4.0 m bgl, grey and brown mottled slightly gravelly slightly sandy CLAY. Sand is fine. Gravel of subangular fine to medium flint. (RECENT ALLUVIAL DEPOSITS)		5.00	(2.00)	25.44						3.50	PID=0.0ppmv	
Borehole complete at 5.00 m bgl.												

Remarks:
1. Logged in general accordance with BS 5930:2015.2. Area cleared for services prior to drilling.3. Elevation and location data obtained from GPS survey.4. Borehole backfilled with arising, finished at the surface with concrete.

Water Strike			Water Level		Borehole Diameter	
Date	Time	Depth Strike	Duration	Depth Water	Depth Base	Diameter

Coordinates:	Elevation (mAOD):	Drilled By:	Plant Used:	Logged:	Checked:	Approved:	Scale:
E506921.83 N180308.57	30.44	Delta Drilling	Premier 110	AN	EF	SS	1:30

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Project No: 17-0685.04 | Hole ID: DS206 | Page: 1 of 1

Project: Stone Close, West Drayton

Dynamic Sampler Log

Date: 06/06/2019 | Client: Orchard St Investment LLP

Description of Strata	Legend	Strata Depth (m bgl)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Sample Details: Depth (m)	Sample Details: Type	Sample Details: Ref	Test Details: Depth (m)	Test Details: Results	Backfill
MADE GROUND: Reinforced concrete.		0.15	(0.15)	30.28								
MADE GROUND: Soft orangish brown becoming black and grey slightly gravelly sandy CLAY. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse concrete, brick, flint, quartz, concrete and clinker. Occasional macadam fragments.										0.40	PID=0.7ppmv	
							0.50	ES	1			
Slight hydrocarbon odour between 0.6 to 1.3m							0.70	ES	2	0.70	PID=15.8ppmv	
			(1.85)									
							1.30	ES	3	1.30	PID=1.1ppmv	
		2.00		28.43								
Firm grey slightly gravelly, sandy from 2.6 m bgl, CLAY. Sand is fine. Gravel is subangular fine flint. Frequent plant remains. (RECENT ALLUVIAL DEPOSITS)			(0.80)							2.50	PID=0.0ppmv	
		2.80		27.63								
Soft grey and brown becoming firm and stiff from 4.4 m bgl slightly gravelly sandy CLAY. Sand is fine. Gravel of subangular fine flint. (RECENT ALLUVIAL DEPOSITS)			(2.20)							3.50	PID=0.0ppmv	
		5.00		25.43								
Borehole complete at 5.00 m bgl.												

Remarks:
1. Logged in general accordance with BS 5930:2015.2. Area cleared for services prior to drilling.3. Elevation and location data obtained from GPS survey.4. Borehole backfilled with arising, finished at the surface with concrete.

Water Strike			Water Level		Borehole Diameter	
Date	Time	Depth Strike	Duration	Depth Water	Depth Base	Diameter

Coordinates:	Elevation (mAOD):	Drilled By:	Plant Used:	Logged:	Checked:	Approved:	Scale:
E506915.49 N180307.09	30.43	Delta Drilling	Premier 110	AN	EF	SS	1:30

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Project No: 17-0685.04 | Hole ID: DS207 | Page: 1 of 1

Project: Stone Close, West Drayton

Dynamic Sampler Log

Date: 06/06/2019 | Client: Orchard St Investment LLP

Description of Strata	Legend	Strata Depth (m bgl)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Sample Details: Depth (m)	Sample Details: Type	Sample Details: Ref	Test Details: Depth (m)	Test Details: Results	Backfill
MADE GROUND: Reinforced concrete.		0.20	(0.20)	30.22								
MADE GROUND: Orangish brown grey mottled gravelly SAND. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse flint, quartz, brick and clinker. Rare metal fragments to 1.0m.		1.70	(1.50)	28.72			0.50	ES	1	0.50	PID=2.9ppmv	
							1.50	ES	2	1.50	PID=0.0ppmv	
Soft, firm from 2.3 m bgl, blackish grey slightly sandy CLAY. Sand is fine. Abundant plant remains. Rare shell fragments. (RECENT ALLUVIAL DEPOSITS)		3.00	(1.30)	27.42						2.50	PID=0.6ppmv	
Slight organic odour between 1.7 to 3m												
Firm orangish brown and grey slightly gravelly to 4.4m slightly sandy CLAY. Sand is fine. Gravel is subangular fine to medium flint. (RECENT ALLUVIAL DEPOSITS)		5.00	(2.00)	25.42						3.50	PID=0.0ppmv	
Borehole complete at 5.00 m bgl.												

Remarks:
1. Logged in general accordance with BS 5930:2015.2. Area cleared for services prior to drilling.3. Elevation and location data obtained from GPS survey.4. Borehole backfilled with arising, finished at the surface with concrete.

Water Strike			Water Level		Borehole Diameter	
Date	Time	Depth Strike	Duration	Depth Water	Depth Base	Diameter

Coordinates:	Elevation (mAOD):	Drilled By:	Plant Used:	Logged:	Checked:	Approved:	Scale:
E506922.55 N180304.67	30.42	Delta Drilling	Premier 110	AN	EF	SS	1:30

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Project No: 17-0685.04 | Hole ID: DS208 | Page: 1 of 1

Project: Stone Close, West Drayton

Dynamic Sampler Log

Date: 06/06/2019 | Client: Orchard St Investment LLP

Description of Strata	Legend	Strata Depth (m bgl)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Sample Details: Depth (m)	Sample Details: Type	Sample Details: Ref	Test Details: Depth (m)	Test Details: Results	Backfill
MADE GROUND: Reinforced concrete.		0.18	(0.18)	30.31								
MADE GROUND: Soft greyish brown very gravelly sandy CLAY. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint, quartz, brick and clinker.		0.60	(0.42)	29.89			0.60	ES	1	0.60	PID=0.0ppmv	
Borehole complete at 0.60 m bgl.												

Remarks:
1. Logged in general accordance with BS 5930:2015.2. Area cleared for services prior to drilling.3. Elevation and location data obtained from GPS survey.4. Location abandoned due to potential service run in inspection pit.5. Borehole backfilled with arising, finished at the surface with concrete.

Water Strike			Water Level		Borehole Diameter	
Date	Time	Depth Strike	Duration	Depth Water	Depth Base	Diameter

Coordinates:	Elevation (mAOD):	Drilled By:	Plant Used:	Logged:	Checked:	Approved:	Scale:
E506934.77 N180310.90	30.49	Delta Drilling	Premier 110	AN	EF	SS	1:30

Appendix C – Soil Chemical Analysis Results

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Analytical Report Number : 19-45176

Project / Site name:	West Drayton	**Samples received on:**	07/06/2019
Your job number:	17-0685.04	**Samples instructed on:**	12/06/2019
Your order number:	DS47424	**Analysis completed by:**	18/06/2019
Report Issue Number:	1	**Report issued on:**	18/06/2019
Samples Analysed:	5 soil samples		

Signed:

Rexona Rahman
Head of Customer Services
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 19-45176

Project / Site name: West Drayton
Your Order No: DS47424

Lab Sample Number				1242887	1242888	1242889	1242890	1242891
Sample Reference				DS203/ES1	DS204/ES2	DS205/ES2	DS206/ES3	DS202/ES3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.60	1.30	2.50
Date Sampled				06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	12	14	16	13	38
Total mass of sample received	kg	0.001	NONE	1.1	1.0	1.1	1.1	0.97
Monoaromatics & Oxygenates								
Benzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p & m-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
o-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	5.6
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	3.7	< 2.0	< 2.0	4.6	3.7
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	16	< 8.0	< 8.0	12	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	23	11	< 8.0	27	45
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	43	11	< 10	44	62
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	7.0	< 1.0	3.7	5.1	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	30	6.3	19	46	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	140	23	44	130	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	290	38	42	170	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	470	67	110	350	< 10

Analytical Report Number : 19-45176

Project / Site name: West Drayton

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1242887	DS203/ES1	None Supplied	1.00	Light brown clay and sand with gravel.
1242888	DS204/ES2	None Supplied	1.50	Light brown clay and sand with gravel.
1242889	DS205/ES2	None Supplied	2.60	Brown clay and sand with gravel and brick.
1242890	DS206/ES3	None Supplied	1.30	Brown clay and sand with gravel.
1242891	DS202/ES3	None Supplied	2.50	Light brown clay.

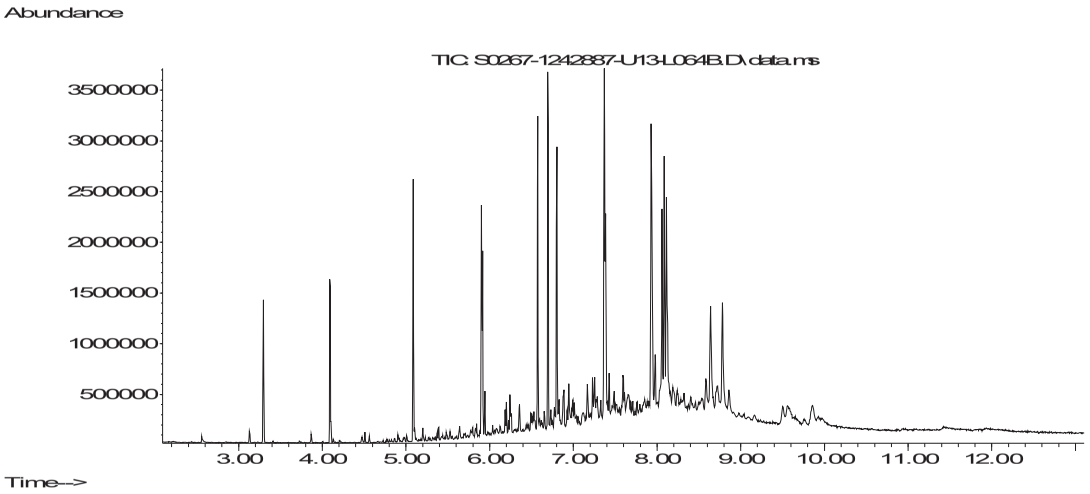
Analytical Report Number : 19-45176

Project / Site name: West Drayton

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS

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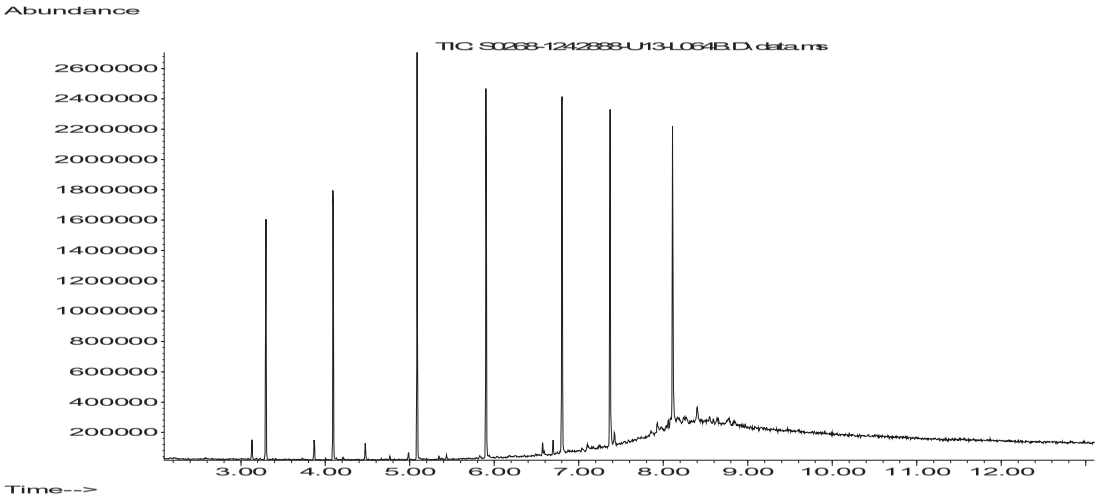
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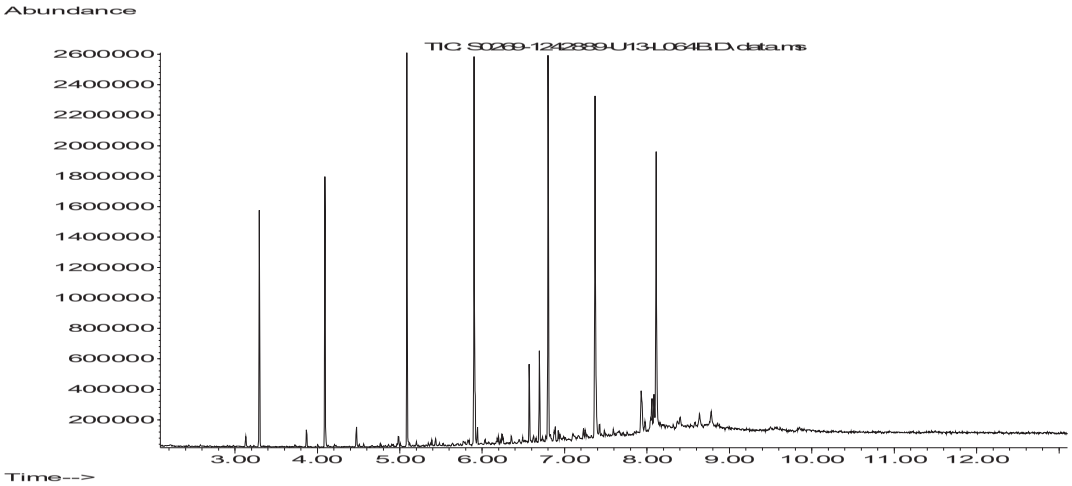
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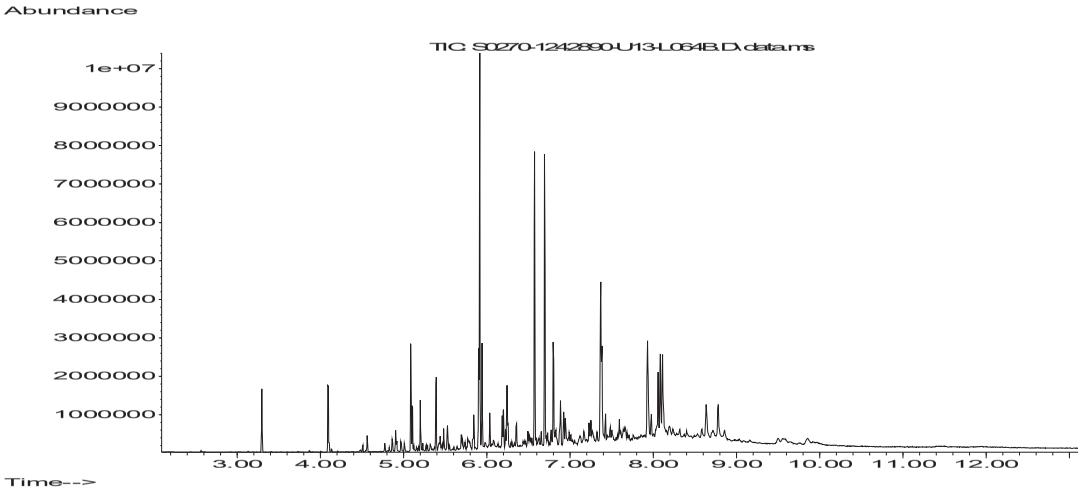
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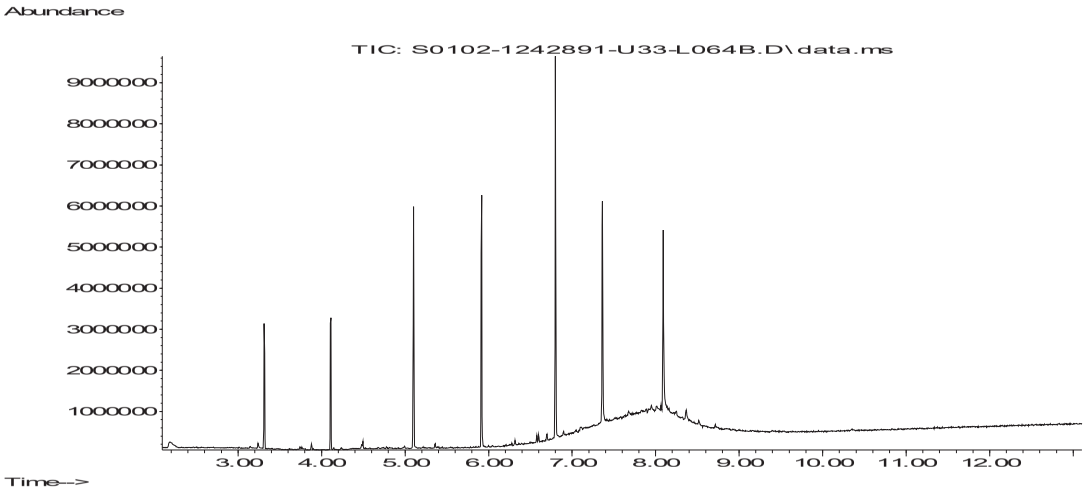
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Appendix C – Delta-Simons Demolition & Enabling Works Validation Report

Delta-Simons Environmental Consultants
3 Henley Office Park, Doddington Road, Lincoln LN6 3QR
www.deltasimons.com

Demolition & Enabling Works Validation Report

Stone Close, West Drayton

Presented to **St James UK Plc c/o Orchard Street Investment Management LLP.**

Issued: November 2019

Delta-Simons Project Number: 17-0685.06

Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
1	Final	14/11/2019				
				Victor Gomez Senior	**Dan Webb Unit Manager**	**Dan Webb Unit Manager**

1.0 Introduction

1.1 Appointment

Delta-Simons Environmental Consultants Limited ("Delta-Simons") was instructed by Jason Singh (Feasibility Ltd), on behalf of St James UK Plc, (the "Client") c/o Orchard Street Investment Management LLP to undertake environmental support services in connection with the development of the property known as Stone Close, West Drayton (the "Site"). Details of the project brief are outlined in Delta-Simon's proposal dated 7th October 2019.

1.2 Context & Purpose

The purpose of this document is to provide a formal statement for the recently undertaken remediation and validation works together with records of a part time watching brief role undertaken during the demolition and enabling phase works undertaken by R Collard Ltd.

For information on the Site setting, and full details of intrusive investigations undertaken at the Site, this report should be read in conjunction with Delta-Simons' previous reports as follows:

- Preliminary Geo-Environmental Risk Assessment (Ref: 17-0685.01 dated November 2017);
- Geo-Environmental Assessment (Ref: 17-0685.02 dated August 2018);
- Gas Addendum Report (Ref: 17-0685.02 dated September 2018);
- Remediation and Verification Strategy (Ref: 17-0685.03 dated October 2018); and
- Supplementary Delineation Investigation (Ref: 17-0685.04 dated June 2019).

The Remediation & Verification Strategy outlined a number of both specific and general items that should need to be actioned, completed and recorded throughout the demolition, enabling and construction phases for the new development, and which, ultimately, should result in a final Verification Report which would collate the various strands of information and evidence; demonstrating the satisfactory completion of the works defined by the agreed Strategy document.

Briefly the main points of reference/ evidence ultimately required include:

1. Treatment and Remediation of a Hotspot of contamination at location DS106;
2. Details of any previously unidentified 'hotspots' of contamination identified;

3. Record of waste disposal tickets for any reduced level dig/ soils disposed off Site & photographic record of the development;

4. Details of upgraded water supply (as/ to the specification/ if required by the Water Authority);

5. Chemical test data for any imported Topsoil/ subsoil and verification of thickness of suitable cover;

6. A Report to compile the above information (i.e. a Verification Report).

The aforementioned items were to rely on information generally provided and co-ordinated by the Contractor(s), and therefore the collation of information is expected to be gathered over time throughout the various development phases as they become relevant for the various Remediation/ Verification action points noted above.

The Client's representative (Feasibility) have requested Delta-Simons provides specific support during the demolitions and enabling works phase of the project, where it is anticipated some (or all) of Items 1, 2 and 3 shall be completed and record made available. Items 3, 4, 5 & 6 would be the responsibility of the main building contractor or their various subcontractors as relevant during the course of the subsequent Construction phases.

This letter report therefore represents an interim verification report in respect of items 1, 2 and 3 to the extent of R Collard Ltd's works in connection with the Demolition and Enabling phases of this development.

2.0 Proposed Development and Planning Requirements

It is understood that the Site is to be redeveloped for commercial purposes as a vehicle servicing facility including workshop areas, a MOT test bay, a tyre bay, parts storage area; customer reception and office area; and a drive through reception area.

A planning application for the development has been made, (London Borough of Hillingdon Ref: 73585/APP/2018/2484).

Condition 14 – Contamination within the planning application (LPA Application Ref: 73585/APP/2019/1764 submitted on 24th May 2019) includes:

(i) The development hereby permitted shall not commence until a scheme to deal with contamination has been submitted in accordance with the Supplementary Planning Guidance on Land Contamination and approved by the Local Planning Authority (LPA). The scheme shall include all of the following measures unless the LPA dispenses with any such requirement specifically and in writing:

(a) A desk-top study carried out by a competent person to characterise the site and provide information on the history of the site/surrounding area and to identify and evaluate all potential sources of contamination and impacts on land and water and all other identified receptors relevant to the site;

(b) A site investigation, including where relevant soil, soil gas, surface and groundwater sampling, together with the results of analysis and risk assessment shall be carried out by a suitably qualified and accredited consultant/contractor. The report should also clearly identify all risks, limitations and recommendations for remedial measures to make the site suitable for the proposed use.

(c) A written method statement providing details of the remediation scheme and how the completion of the remedial works will be verified shall be agreed in writing with the LPA prior to commencement.

(ii) If during development or works contamination not addressed in the submitted remediation scheme is identified, an addendum to the remediation scheme must be agreed with the LPA prior to implementation; and

(iii) All works which form part of the remediation scheme shall be completed and a verification report submitted to the Council's Environmental Protection Unit before any part of the development is occupied or brought into use unless the LPA dispenses with any such requirement specifically and in writing.

Thereafter the development shall be carried out and maintained in full accordance with the approved details.

Parts (i) (a), (b) and (c) of this condition are understood to have been discharged by the Local Planning Authority 1st August 2019. This interim verification report is designed to discuss the outcomes to date in respect of the remediation scheme agreed and the extent of any contamination not otherwise addressed in the submitted scheme (if/ where relevant).

3.0 DS106 Hotspot Excavation Works and Potential Hotspots Identification

3.1 Background & Findings

Delta Simons were requested to attend the Site to observe hotspot excavation works undertaken by R Collard Ltd and to take validation samples to confirm the condition of the soils remaining in-situ following the excavation. Delta Simons attended the Site on the 2nd October 2019 to witness the successful completion of this work. Details of the excavation undertaken together with photographs are included within the Weekly Summary Report 'Week No. 1; dated 2nd October 2019' (reproduced in Appendix A), Discussion of the results of the validation sampling is presented in Section 3.3 (below) In summary, the excavations revealed a brick structure suspected to have been associated with former drainage infrastructure (consistent and resembling the type of feature suspected following the Ground investigation works). Hydrocarbon impacted infill was therefore constrained by the confines of the brick walls to this structure and were duly removed and disposed of by Mick George to Mepal Soil & Waste Treatment Centre in two consignments (total of 35,500kg). The waste consignment notes, haulier and permit information are included within the Demolition Health & Safety File reproduced in Appendix C.

On 3rd October 2019 R Collard contacted Delta Simons about two Potential Areas of Concern (PAoC) they had identified in the eastern part of the Site. Delta Simons As such the locations were left and Delta-Simons inspected the areas highlighted by R Collard during the next weekly visit (Week No. 2; dated 8th October (also reproduced within Appendix A). It was noted the locations were in close proximity to the former ground investigation locations DS107 and DS102 , where measurable hydrocarbon contamination had been previously recorded. Both potential areas of concern were found adjacent to manhole structures that were to be removed as part of the demolitions works. Review of the previous ground investigations logs and soils descriptions revealed similar characteristics to the ground conditions observed at these two PAoCs. Since the previous ground investigations had not highlighted significant contamination associated with the ground conditions recorded, the level of impact did not appear significant during the inspection and neither were ground conditions considered to be in contrast to previously identified ground conditions; samples were collected to check the contamination status prior to confirmation as to whether there may be any need (or not) for additional remedial measures. Discussion of the results of the validation sampling is presented in Section 3.3 (below). In summary, the results did not highlight significant contamination and no further remedial work was considered necessary in relation to these PAoC raised by R Collard.

3.2 Weekly Visits & Observations

In order to provide additional assurance throughout the demolition and enabling works phase, where there was likely to be good opportunity to inspect ground conditions Delta Simons were instructed to undertake routine (weekly) visits timed to occur through the latter stages of demolitions and once the above ground structures had been substantially removed before demolitions would begin to focus on below ground works. Four weekly visits were undertaken through to the completion of R Collard's works. The Weekly Reports are reproduced together with progress photographs as Appendix A.

Summary - First Weekly Visit Report dated 2nd October 2019

DS106 was excavated and sampled. Elsewhere suspected asbestos cement sheeting was identified by R Collards with the casting of former floor slab. R Collard Ltd treated this and disposed as part of their treatment and disposal of other ACMs that was present in the demolitions of the building structures. Owing to the nature of this being in contact with underside of the floor slabs and subsoils, R Collard Ltd undertook visual sweeps of all potentially affected areas and undertook a hand picking exercise to remove any visible ACM fragments prior to then turning subsoils and carrying out scheduled below ground demolitions. Delta-Simons also inspected areas during weekly visits and raise awareness to R Collard Ltd if any visual evidence of ACM is observed in order to provide additional assurances. A Site meeting was carried out on site to discuss and to confirm scope of inspections, lines of communication and, if possible, outline programme for future Site inspections.

Summary - Second Weekly Visit Report dated 8th October 2019

Delta Simons checked the potential areas of concern raised by R Collards Ltd on 3rd October 2019;, they were in close proximity with previous ground investigation locations DS107 and DS102 in the middle of the site and in the eastern side of the site, where measured of hydrocarbons had been previously recorded below the commercial Generic Assessment Criteria (GAC) used in their assessment. Both locations were found associated with manhole structures that were removed, they were potentially connected via drainage to the DS107 and DS102 explaining the visual evidences of contamination as well as the hydrocarbon odour detected when excavating. No odour was identified during Delta Simons inspection. Both potential hotspots were sampled by Delta Simons. Discussion of the results of the validation sampling is presented in Section 3.3 (below).

Summary - Third Weekly Visit Report dated 17th October 2019

During this visit R Collard Ltd were carrying out screening of the won Site material and also involved in the asbestos picking/ removal works. Two samples were undertaken from the stockpiled won site material located in the southern part of the Site and sent to an UKAS accredited Laboratory.

Summary - Fourth Weekly Visit Report dated 25th October 2019

All activities carried out on Site were completed by R Collard. Stockpiled material was to be left in the south west and western part of the Site, understood for utilisation as an engineering aggregate in the subsequent construction phase activities.

A copy of all weekly reports and laboratory results are attached within the Appendix A.

Arisings associated with the excavations of DS106 and removal of ACM were removed from Site.Relevant waste consignment notes are included within the Demolition Health and Safety File included as Appendix C within H&S File. Ltd.

3.3 Validation Samples

3.3.1 Validation Sampling

A total of five samples were collected from the hotspot excavation on 2nd October 2019, with four collected from the sides of the excavation, and one from the base. Samples were tested by an accredited laboratory for speciated total petroleum hydrocarbons, including BTE, MTBE and VOCs. Two additional samples were undertaken from the excavated soils on 8th October 2019 for a full Delta Simons suite analysis (TPH CWG, BTEX, PAHs, Heavy Metals and Asbestos).

One sample from each of the two Potential Areas of Concern (PAoC) was undertaken on 8th October 2019 during Delta Simons inspection.

On 17th October 2019 Delta Simons collected two samples from the stockpiled won site material located in the southern part of the Site and analysed for TPH CWG, BTEX, PAHs, Heavy Metals and Asbestos.

Soils collected for laboratory analysis were placed in a variety of containers appropriate to the anticipated testing suite. Samples were stored in accordance with Delta-Simons' quality procedures to maintain sample integrity and preservation and to minimise the chance of cross contamination.

Samples analysed for environmental purposes were placed in cool boxes on Site and transported to the laboratory for analysis on completion of the validation works.

3.3.2 Validation Results

Based on the proposed use of the Site for commercial / industrial end use, the soil and groundwater chemical data has been compared against commercial and use GAC for 1% soil organic matter (SOM) content.

The laboratory results for contaminants compared to their respective GAC are presented in the table below. A copy of the laboratory results are included within the Appendix B.

Contaminant	Max Conc. (mg/kg)	GAC (mg/kg)	GAC Source	No. Exceed GAC	Location of Exceedances (depth) = Concentration (mg/kg)
BTEX					
Benzene	<0.001	27	LQM	0	-
Toluene	<0.001	5600	LQM	0	-
Ethylbenzene	<0.001	5700	LQM	0	-
o-Xylene	<0.001	6600	LQM	0	-
m/p-Xylene	<0.001	5900	LQM	0	-
Petroleum Hydrocarbons					
Aliphatic TPH >C5-C6	<0.001	3200	LQM	0	-
Aliphatic TPH >C6-C8	<0.001	7800	LQM	0	-
Aliphatic TPH >C8-C10	<0.001	2000	LQM	0	-
Aliphatic TPH >C10-C12	1.0	9700	LQM	0	-
Aliphatic TPH >C12-C16	2.0	59000	LQM	0	-
Aliphatic TPH >C16-C21	8.9	1600000	LQM	0	-
Aliphatic TPH >C21-C35	96				
Aromatic TPH >C5-C7	<0.001	26000	LQM	0	-
Aromatic TPH >C7-C8	<0.001	56000	LQM	0	-
Aromatic TPH >C8-C10	<0.001	3500	LQM	0	-
Aromatic TPH >C10-C12	1.0	16000	LQM	0	-
Aromatic TPH >C12-C16	2.0	28000	LQM	0	-
Aromatic TPH >C16-C21	10	28000	LQM	0	-
Aromatic TPH >C21-C35	10	28000	LQM	0	-
Total Petroleum Hydrocarbons	104.9	5000	DS	0	-
VOCs					
All 56 concentrations are below the GAC.					
Notes: Shaded = Maximum concentration exceeds GAC. LQM = Land Quality Management/CIEH S4Uls for Human Health Risk Assessment, 2014. DS = In-house GAC derived by Delta-Simons.					

4.0 Asbestos Containing Materials (ACMs)

4.1 Background

R Collard Ltd informed Delta Simons on 2nd October 2019 that Asbestos was found on Site, specifically in the eastern part of the Site associated with the casting of former floor slab. R Collard Ltd advised that they would treat it dispose it as part of the building structures.

4.2 Observations

R Collard Ltd undertook visual sweeps of all potentially affected areas and undertook a hand-picking exercise to remove any visible ACM fragments prior to turning subsoils and carrying out scheduled below ground demolitions. Delta Simons inspected areas during weekly visits and raised awareness to R Collard Ltd if any visual evidence of ACM is observed in order to provide additional assurances.

All asbestos pieces were kept in asbestos red bags on Site and subsequently removed by R Collard Ltd's specialist asbestos contractor. A copy of asbestos documentation is detailed in Appendix C within the Demolition Health & Safety File.

5.0 Conclusions and Recommendations

5.1 Conclusions

Analytical results for the DS106 (Validation Sampling) (Rep No. 19-64289) (Lab sample numbers 1322693, 1322694, 1322695, 1322696, 1322697; Refs ES1, ES2, ES3, ES4 & ES5; DS106 02/10/2019) were received and compared to the Geo-Environmental Assessment (Aug 2018) commercial GAC and indicated all parameters within limits/ no exceedances. Based on the visual description/ observations made 2nd October 2019 and confirmatory testing, it is considered the DS106 hotspot excavation has been carried out successfully in accordance with the agreed remediation scheme.

Analytical results for potential hotspots (Analytical Rep No. 19-65025) (Lab sample numbers 136130 & 136131; Ref ES1; Area 1 & Area 2 08/10/2019) were received and compared to the Geo-Environmental Assessment (Aug 2018) commercial GAC indicates all parameters within limits/ no exceedances. Based on the visual description/ observations made 8th October 2019 and confirmatory testing, it is considered these locations did not therefore represent unexpected/ unrecorded ground conditions/ potential hotspots, and there was no need for specific additional remedial activities identified necessary.

Analytical results for the engineering stockpiled material on Site (Rep No. 19-66903) (Lab sample numbers 1335782 & 1335783; Ref ES8 & ES9 17/10/2019) were received and compared to the Geo-Environmental Assessment (Aug 2018) commercial GAC. The results indicated all parameters within limits/ no exceedances. Based on the confirmatory testing, it is considered this material is appropriate for use (from a contamination perspective) as fill within the excavation and/or reuse on Site.

5.2 Recommendations

No further investigation, assessment or remediation works are considered required in relation to the DS106 excavation. Furthermore, no instances of soil/ groundwater contamination not otherwise addressed by the agreed remediation strategy were identified during the works. It is recommended this verification report is included/ updated in due course with appropriate verification/ evidence of the outstanding elements of the agreed Strategy document as relevant construction development phases are completed in order to provide a final Verification Report to discharge the remaining items of condition 14 (ii) and (iii).

Enclosed:

Appendices

Appendix A Delta Simons Weekly Reports

Appendix B Laboratory Analytical Results Certificates

Appendix C Demolition Health and Safety File

Appendix A – Delta Simons Weekly Reports

Stone Close, West Drayton

Week No. 1 dated 2nd October 2019

Week Commencing 30/09/2019

Site Attendance

Date	DS Staff (Other Staff)
02.10.2019	Victor Gomez (John King, Simon King – Rcollard, Jason Singh – Feasibility)

General Overview

- RCollard carried out the excavation of DS106 hotspot.
- Delta Simons carried out validation sampling of the excavation. A total of five (No5) samples have been taken from the excavation, one (No1) from the bottom at 3.6m bgl and four (No4) from the sides at 2.5-2.6m bgl.
- Asbestos has been found in the eastern part of the Site associated with former formwork/ shuttering associated with the casting of former floor slab. RCollard has advised they will be treating this and disposing as part of their treatment and disposal of other ACMs that have been present in the demolitions of the building structures. Owing to the nature of this being in contact with underside of the floor slabs and subsoils, RCollard have confirmed they will be undertaking visual sweeps of all potentially affected areas and undertake a hand picking exercise to remove any visible ACM fragments prior to then turning subsoils and carrying out scheduled below ground demolitions. Delta-Simons to also inspect areas during weekly visits and raise awareness to RCollards if any visual evidence of ACM is observed in order to provide additional assurances.
- A Site meeting has been carried out on site attended by Delta Simons (Victor Gomez and Dan Webb (on his phone)), RCollard (Simon King and John King) and Feasibility (Jason Singh), to discuss and to confirm scope of inspections, lines of communication and, if possible, outline programme for future Site inspections.

Remediation Activities

DS106 excavation was dug out and sampled according to the Remediation Strategy presented by Delta Simons on October 2018 (Ref: 17-0685.03 Remediation and Verification Strategy).

Any potential hotspot found on site will be reported to Delta Simons.

Discussions with Client/ DSM

Scope of inspections, lines of communication and, if possible, outline programme for future Site inspections.

Other Notes

Samples were sent to the laboratory which has confirmed its reception.

Plant on Site

- 2 no. 360 excavators; (active)
- 1no. Shovel

Recommended Actions/ Actions Completed

Action	By	Action Complete
Delta Simons would attend a further Site visit next week	Delta Simons	On going

Name	Signature	Position	Mobile	Email
Victor Gomez		Senior Consultant	07530 653653	Victor.gomez@deltasimons.com
Dan Webb		Unit Manager	07917 753687	Dan.webb@deltasimons.com

Photos

Fig 1. Excavation of DS106

Fig 2. Crushing area to the east of the Site. Asbestos found.

Fig 3. Crushing area to the east of the Site. Asbestos found.

Stone Close, West Drayton

Week No. 2 dated 8th October 2019

Week Commencing 07/10/2019

Site Attendance

Date	DS Staff (Other Staff)
08.10.2019	Victor Gomez (John King - RCollard)

General Overview

- RCollard informed Delta Simons about two new potential hotspots of contamination found on site on 3rd October 2019.
- Delta Simons has checked the new potential hotspots of contamination found on site, they were in close proximity with DS107 (Area 2) and DS102 (Area 1) in the middle of the site and in the eastern side of the site, where high concentrations of contaminants were detected, however these concentrations were below the commercial GAC which was compared against. Both locations (Area 1 and 2) were found due to a existed manhole structures that needed to be removed, they were potentially connected via drainage to the DS107 (Area 2) and DS102 (Area 1) explaining the visual evidences of contamination as well as the hydrocarbon odour detected when excavating. No odour was identified during Delta Simons inspection.
- One (No1) sample from each potential hotspot was undertaken and sent to a UKAS accredited Laboratory for the following analysis: TPH CWG, VOCs, BTEX and MTBE.
- Two (No2) additional samples were undertaken from the DS106 stockpiled soils and sent to an UKAS accredited Laboratory and analysed for Delta Simons Suite which includes TPH CWG, BTEX, PAH and Asbestos.
- Eastern side of the Site has been swept for any potential ACM by asbestos specialists in the form of hand picking. They have divided that area in 4 sub-areas, first area located in the north-eastern side of the Site was revisited by asbestos specialist on 7th October 2019. Second area located in the south of the first area is being undertaken during Delta Simons on 8th October 2019. According to John King both areas will be reviewed again during this week.
- Asbestos pieces are kept in asbestos red bags on Site. Concrete asbestos has been stockpiled in the north-eastern corner of the Site.

Remediation Activities

Potential hotspots (Area 1 and 2) were exposed for Delta Simons inspection. One sample from each excavation was undertaken.

Any potential hotspot found on site will be reported to Delta Simons.

Discussions with Client/ DSM

N/A

Other Notes

Samples have been collected on 9th October 2019 AM time.

Plant on Site

- 2 no. 360 excavators; (active)
- 1no. Shovel

Recommended Actions/ Actions Completed

Action	By	Action Complete
Delta Simons would attend a further Site visit next week	Delta Simons	On going
RCollard to provide Delta-Simons with waste transfer tickets for soils disposed of associated with DS106.	RCollard	Awaiting
Site won material which were to be used to infill the previous excavation at DS106 and reinstate the small voids created by the removal of the two manhole structures mentioned above need to be analyse for re-using.	RCollard	Awaiting

Name	Signature	Position	Mobile	Email
Victor Gomez		Senior Consultant	07530 653653	Victor.gomez@deltasimons.com
Dan Webb		Unit Manager	07917 753687	Dan.webb@deltasimons.com

Photos

Fig 1. Plan of the Site showing current areas of work. Area 1 and 2 are the new potential hotspot. Asbestos concerned area is shown in orange. Divisions of asbestos area are shown in green.

Fig 2. Area 2 where potential contaminated soils were found and reported.

Fig 3. Area 1 where potential contaminated soils were found and reported.

Fig 4. Asbestos area where asbestos specialists were working at the moment that Delta Simons visited the Site.

Fig 5. Asbestos kept in special red asbestos bags on Site.

Stone Close, West Drayton

Week No. 3 dated 17th October 2019

Week Commencing 14/10/2019

Site Attendance

Date	DS Staff (Other Staff)
17.10.2019	Victor Gomez (John King - RCollard)

General Overview

- Delta Simons carried out the third monitoring visit at Stone Close.
- RCollard was carrying out screening of the won site material.
- A total of two (2No) samples were undertaken from the stockpiled won site material located in the southern part of the Site and sent to an UKAS accredited Laboratory for the following analysis: TPH CWG, BTEX, PAHs, Heavy Metals and Asbestos (RCollards have advised this material will be used to reinstate remediation excavation DS106)
- The eastern part of the Site where asbestos was found has been swept for any potential ACM by asbestos specialists in the form of hand picking. This task has been completed during last week.
- Asbestos has been disposed off site by a specialist. Asbestos Specialists certificates are expected to be sent by RCollard to Delta Simons.

Remediation Activities

Any potential hotspot found on site will be reported to Delta Simons. None have arisen or been reported by RCollard this week. It is understood RCollards current programme to complete all demolitions by approximately 25th October 2019.

Discussions with Client/ DSM

N/A

Other Notes

Samples have been collected on 18th October 2019 AM time.

Plant on Site

- 2 no. 360 excavators; (active)
- 1no. Shovel

Recommended Actions/ Actions Completed

Action	By	Action Complete/ Status
Delta Simons would attend a further Site visit next week	Delta Simons	On going
RCollard to provide Delta-Simons with waste transfer tickets for soils disposed of associated with DS106.	RCollard	Awaiting
Analytical results for the DS106 (Validation Sampling) have been returned and attached to this note (Rep No. 19-64289) (Lab sample numbers 1322693, 1322694, 1322695, 1322696,	Note	Complete

1322697; Refs ES1, ES2, ES3, ES4 & ES5; DS106 02/10/2019). Comparison of these results to the Geo-Environmental Assessment (Aug 2018) commercial GAC indicates all parameters within limits/ no exceedances. Based on the visual description/ observations made 2nd October 2019 and confirmatory testing, it is considered the DS106 hotspot excavation has been carried out successfully.		
Analytical results for the DS106 (excavated soils) have been returned and attached to this note (Rep No. 19-65025) (Lab sample numbers 136128 & 136129; Refs ES6 & ES7; DS106 08/10/2019).	Note	Complete
Analytical results for Area 1 & Area 2 potential hotspots have been returned and attached to this note (Rep No. 19-65025) (Lab sample numbers 136130 & 136131; Ref ES1; Area 1 & Area 2 08/10/2019). Comparison of these results to the Geo-Environmental Assessment (Aug 2018) commercial GAC indicates all parameters within limits/ no exceedances. Based on the visual description/ observations made 8th October 2019 and confirmatory testing, it is considered these locations do not therefore represent unexpected ground conditions/ potential hotspots.	Note	Complete
Site won material which were to be used to infill the previous excavation at DS106 and reinstate the small voids created by the removal of the two manhole structures mentioned during week 2 need to be analyse for re-using.	RCollard	Delta Simons has taken 2 samples 17/10/2019 Results anticipated c. 25th October 2019
Asbestos Specialists certificates	RCollard	Awaiting

Name	Signature	Position	Mobile	Email
Victor Gomez		Senior Consultant	07530 653653	Victor.gomez@deltasimons.com
Dan Webb		Unit Manager	07917 753687	Dan.webb@deltasimons.com

Photos

Fig 1. Plan of the Site showing current areas of work. Area 1 and 2 were the potential hotspots reported week 2. Asbestos concerned area is shown in orange. Divisions of asbestos area are shown in green.

Fig 2. Stockpiled won site material, located in the southern part of the Site.

Fig 3. RCollard carrying out screening of the won site material.

Fig 4. Northern part of the Site.

Stone Close, West Drayton

Week No. 4 dated 25th October 2019

Week Commencing 22/10/2019

Site Attendance

Date	DS Staff (Other Staff)
25.10.2019	Victor Gomez (John King - RCollard)

General Overview

- Delta Simons carried out the fourth monitoring visit at Stone Close (last visit).
- All activities carried out on Site have been completed.
- Stockpiled 6F2 material will be left in the south west and western part of the Site.

Remediation Activities

N/A

Discussions with Client/ DSM

N/A

Other Notes

N/A

Plant on Site

N/A

Recommended Actions/ Actions Completed

Action	By	Action Complete/ Status
RCollard to provide Delta-Simons with waste transfer tickets for soils disposed of associated with DS106.	RCollard	Complete (within RCollard H&S File)
Analytical results for the DS106 (Validation Sampling) have been returned and attached to this note (Rep No. 19-64289) (Lab sample numbers 1322693, 1322694, 1322695, 1322696, 1322697; Refs ES1, ES2, ES3, ES4 & ES5; DS106 02/10/2019). Comparison of these results to the Geo-Environmental Assessment (Aug 2018) commercial GAC indicates all parameters within limits/ no exceedances. Based on the visual description/ observations made 2nd October 2019 and confirmatory testing, it is considered the DS106 hotspot excavation has been carried out successfully.	Note	Complete
Analytical results for the DS106 (excavated soils) have been returned and attached to this note (Rep No. 19-65025) (Lab sample numbers 136128 & 136129; Refs ES6 & ES7; DS106 08/10/2019).	Note	Complete

Analytical results for Area 1 & Area 2 potential hotspots have been returned and attached to this note (Rep No. 19-65025) (Lab sample numbers 136130 & 136131; Ref ES1; Area 1 & Area 2 08/10/2019). Comparison of these results to the Geo-Environmental Assessment (Aug 2018) commercial GAC indicates all parameters within limits/ no exceedances. Based on the visual description/ observations made 8th October 2019 and confirmatory testing, it is considered these locations do not therefore represent unexpected ground conditions/ potential hotspots.	Note	Complete
Analytical results for 6F2 material stockpiled on Site have been returned and attached to this note (Rep No. 19-66903) (Lab sample numbers 1335782 & 1335783; Ref ES8 & ES9 17/10/2019). Comparison of these results to the Geo-Environmental Assessment (Aug 2018) commercial GAC indicates all parameters within limits/ no exceedances. Based on the confirmatory testing, it is considered this material is suitable for use as fill within the excavation and/or reuse on site.	Note	Complete
Asbestos Specialists certificates	RCollard	Complete (within RCollard H&S File)

Name	Signature	Position	Mobile	Email
Victor Gomez		Senior Consultant	07530 653653	Victor.gomez@deltasimons.com
Dan Webb		Unit Manager	07917 753687	Dan.webb@deltasimons.com

Photos

Fig 1. Southern view of the Site.

Fig 2. South eastern view of the Site with stockpiled material left on Site.

Fig 3. Eastern view of the Site with stockpiled material left on Site.

Fig 4. Northern view of the Site.

Appendix B – Laboratory Analytical Results Certificates

Victor Gomez
Delta-Simons
20 Little Britain
London
EC1A 7DH

t: 02034781168

e: victor.gomez@deltasimons.com

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

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 19-64289

Project / Site name:	Stone Close	**Samples received on:**	04/10/2019
Your job number:	17-0685.06	**Samples instructed on:**	04/10/2019
Your order number:	DS49992	**Analysis completed by:**	11/10/2019
Report Issue Number:	1	**Report issued on:**	11/10/2019
Samples Analysed:	5 soil samples		

Signed: K. Lewicka

Katarzyna Lewicka
Head of Reporting Section
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 19-64289

Project / Site name: Stone Close
Your Order No: DS49992

Lab Sample Number				1322693	1322694	1322695	1322696	1322697
Sample Reference				ES1	ES2	ES3	ES4	ES5
Sample Number				DS106	DS106	DS106	DS106	DS106
Depth (m)				3.60-3.60	2.50-2.60	2.50-2.60	2.50-2.60	2.50-2.60
Date Sampled				02/10/2019	02/10/2019	02/10/2019	02/10/2019	02/10/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	16	22	21	23	35
Total mass of sample received	kg	0.001	NONE	1.5	1.4	1.4	1.3	1.3
Monoaromatics & Oxygenates								
Benzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p & m-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
o-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	8.9
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	96
TPH-CWG - Aliphatic >EC35 - EC40	mg/kg	10	NONE	< 10	< 10	< 10	< 10	13
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	110
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC35 - EC40	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 19-64289

Project / Site name: Stone Close
Your Order No: DS49992

Lab Sample Number				1322693	1322694	1322695	1322696	1322697
Sample Reference				ES1	ES2	ES3	ES4	ES5
Sample Number				DS106	DS106	DS106	DS106	DS106
Depth (m)				3.60-3.60	2.50-2.60	2.50-2.60	2.50-2.60	2.50-2.60
Date Sampled				02/10/2019	02/10/2019	02/10/2019	02/10/2019	02/10/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Chloroethane	mg/kg	0.001	NONE	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Bromomethane	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Vinyl Chloride	mg/kg	0.001	NONE	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Trichlorofluoromethane	mg/kg	0.001	NONE	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,1-Dichloroethene	mg/kg	0.001	NONE	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,1,2-Trichloro 1,2,2-Trifluoroethane	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Cis-1,2-dichloroethene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,1-Dichloroethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
2,2-Dichloropropane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Trichloromethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,1,1-Trichloroethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,2-Dichloroethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,1-Dichloropropene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Trans-1,2-dichloroethene	mg/kg	0.001	NONE	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Benzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Tetrachloromethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,2-Dichloropropane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Trichloroethene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Dibromomethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Bromodichloromethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Cis-1,3-dichloropropene	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Trans-1,3-dichloropropene	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,1,2-Trichloroethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,3-Dichloropropane	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Dibromochloromethane	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Tetrachloroethene	mg/kg	0.001	NONE	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,2-Dibromoethane	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Chlorobenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,1,1,2-Tetrachloroethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
p & m-Xylene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Styrene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Tribromomethane	mg/kg	0.001	NONE	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
o-Xylene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,1,2,2-Tetrachloroethane	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Isopropylbenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Bromobenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
n-Propylbenzene	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
2-Chlorotoluene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
4-Chlorotoluene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,3,5-Trimethylbenzene	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
tert-Butylbenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,2,4-Trimethylbenzene	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
sec-Butylbenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,3-Dichlorobenzene	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
p-Isopropyltoluene	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,2-Dichlorobenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,4-Dichlorobenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Butylbenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,2-Dibromo-3-chloropropane	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,2,4-Trichlorobenzene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Hexachlorobutadiene	mg/kg	0.001	MCERTS	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
1,2,3-Trichlorobenzene	mg/kg	0.001	ISO 17025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010

Analytical Report Number : 19-64289

Project / Site name: Stone Close

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1322693	ES1	DS106	3.60-3.60	Light brown clay.
1322694	ES2	DS106	2.50-2.60	Brown clay and sand.
1322695	ES3	DS106	2.50-2.60	Light brown clay.
1322696	ES4	DS106	2.50-2.60	Brown clay.
1322697	ES5	DS106	2.50-2.60	Light brown clay.

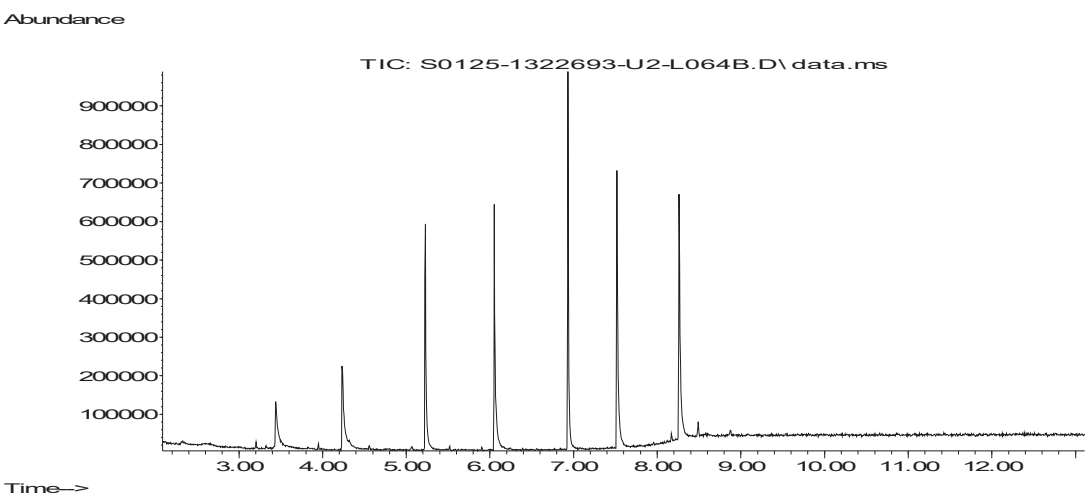
Analytical Report Number : 19-64289

Project / Site name: Stone Close

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.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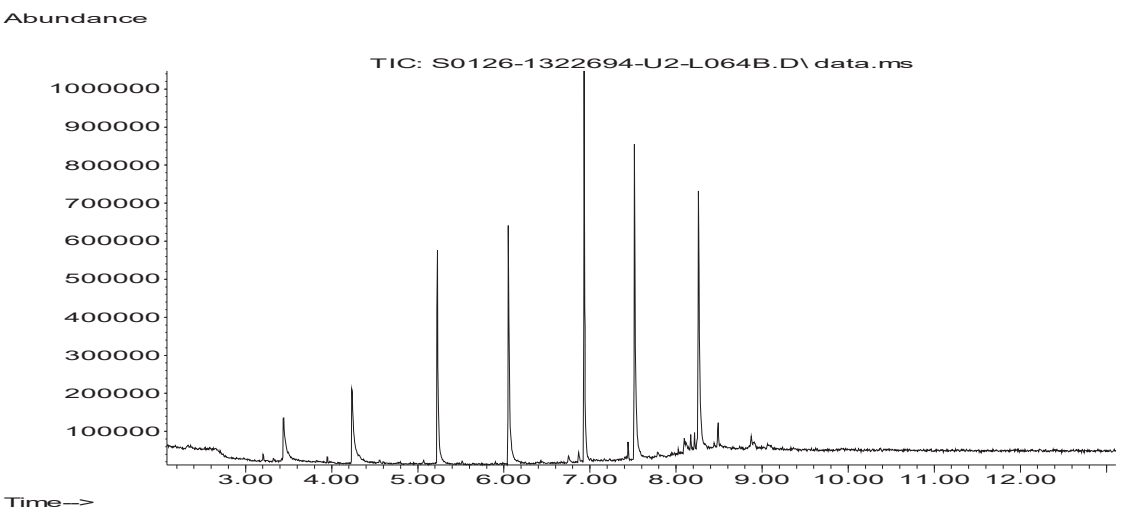
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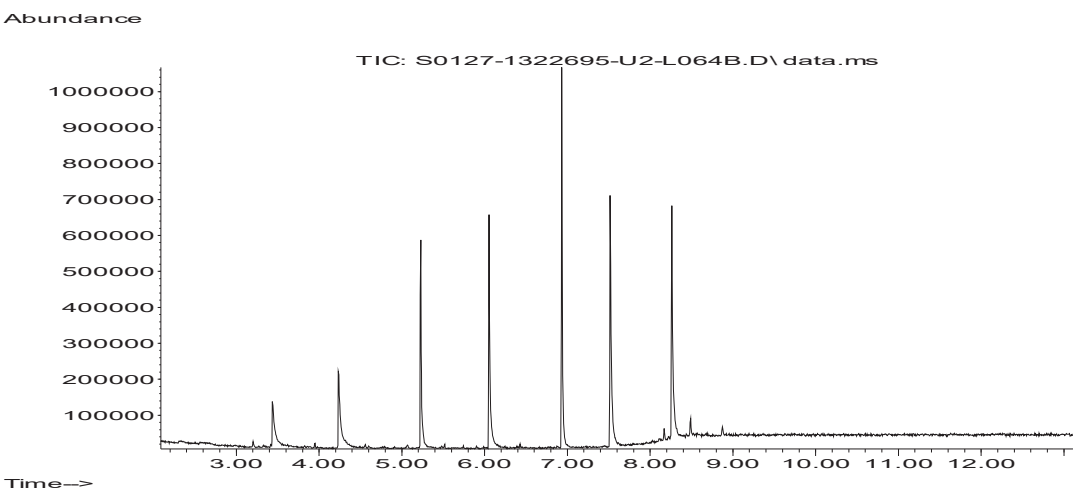
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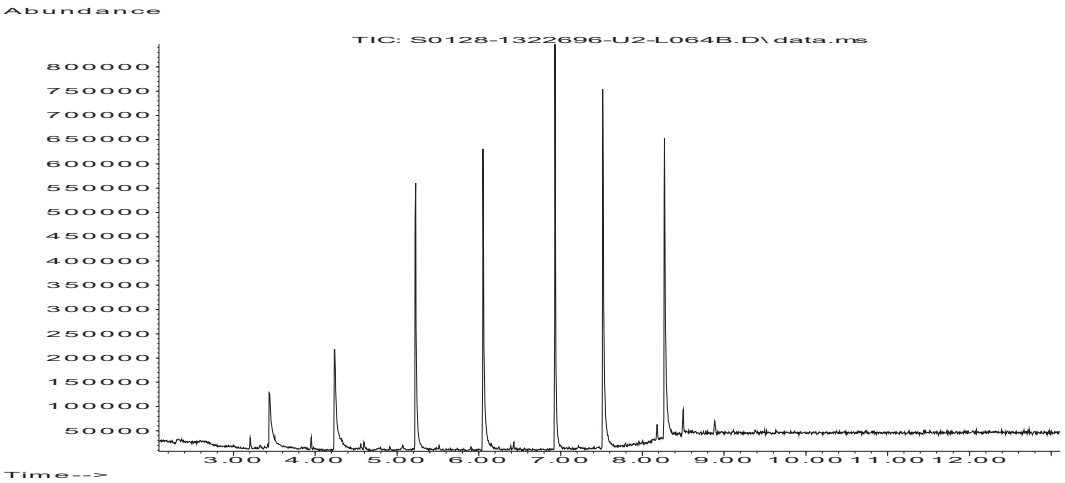
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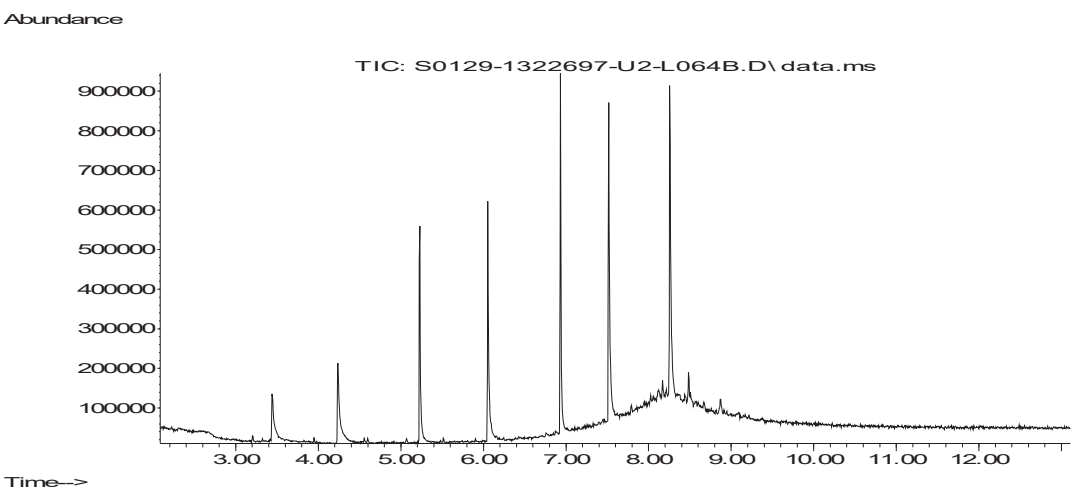
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Analytical Report Number : 19-65025

Project / Site name:	Stone Close	**Samples received on:**	09/10/2019
Your job number:	17-0685.06	**Samples instructed on:**	09/10/2019
Your order number:	DS49992	**Analysis completed by:**	16/10/2019
Report Issue Number:	1	**Report issued on:**	16/10/2019
Samples Analysed:	4 soil samples		

Signed:

Rexona Rahman
Head of Customer Services
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 19-65025

Project / Site name: Stone Close
Your Order No: DS49992

Lab Sample Number				1326128	1326129	1326130	1326131	
Sample Reference				ES6	ES7	ES1	ES1	
Sample Number				DS106	DS106	Area 1	Area 2	
Depth (m)				None Supplied	None Supplied	1.50-1.60	1.50-1.60	
Date Sampled				08/10/2019	08/10/2019	08/10/2019	08/10/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	20	19	32	15	
Total mass of sample received	kg	0.001	NONE	1.3	1.4	1.1	1.2	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	-	-	
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.1	8.0	-	-	
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	97	72	-	-	
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.049	0.036	-	-	
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	48.7	36.1	-	-	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	-	-	
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.6	15	-	-	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	-	-	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	42	36	-	-	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	18	-	-	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	13	12	-	-	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	23	-	-	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	38	44	-	-	

Analytical Report Number: 19-65025

Project / Site name: Stone Close
Your Order No: DS49992

Lab Sample Number				1326128	1326129	1326130	1326131	
Sample Reference				ES6	ES7	ES1	ES1	
Sample Number				DS106	DS106	Area 1	Area 2	
Depth (m)				None Supplied	None Supplied	1.50-1.60	1.50-1.60	
Date Sampled				08/10/2019	08/10/2019	08/10/2019	08/10/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
Toluene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
Ethylbenzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
p & m-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
o-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	1.7	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	11	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	21	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	53	< 8.0	
TPH-CWG - Aliphatic >EC35 - EC40	mg/kg	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	87	< 10	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.8	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	9.8	6.7	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	27	29	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	35	77	
TPH-CWG - Aromatic >EC35 - EC40	mg/kg	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	73	110	

Analytical Report Number: 19-65025

Project / Site name: Stone Close
Your Order No: DS49992

Lab Sample Number				1326128	1326129	1326130	1326131	
Sample Reference				ES6	ES7	ES1	ES1	
Sample Number				DS106	DS106	Area 1	Area 2	
Depth (m)				None Supplied	None Supplied	1.50-1.60	1.50-1.60	
Date Sampled				08/10/2019	08/10/2019	08/10/2019	08/10/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
Chloroethane	mg/kg	0.001	NONE	-	-	< 0.0010	< 0.0010	
Bromomethane	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
Vinyl Chloride	mg/kg	0.001	NONE	-	-	< 0.0010	< 0.0010	
Trichlorofluoromethane	mg/kg	0.001	NONE	-	-	< 0.0010	< 0.0010	
1,1-Dichloroethene	mg/kg	0.001	NONE	-	-	< 0.0010	< 0.0010	
1,1,2-Trichloro 1,2,2-Trifluoroethane	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
Cis-1,2-dichloroethene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,1-Dichloroethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
2,2-Dichloropropane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Trichloromethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,1,1-Trichloroethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,2-Dichloroethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,1-Dichloropropene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Trans-1,2-dichloroethene	mg/kg	0.001	NONE	-	-	< 0.0010	< 0.0010	
Benzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Tetrachloromethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,2-Dichloropropane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Trichloroethene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Dibromomethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Bromodichloromethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Cis-1,3-dichloropropene	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
Trans-1,3-dichloropropene	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
Toluene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,1,2-Trichloroethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,3-Dichloropropane	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
Dibromochloromethane	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
Tetrachloroethene	mg/kg	0.001	NONE	-	-	< 0.0010	< 0.0010	
1,2-Dibromoethane	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
Chlorobenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,1,1,2-Tetrachloroethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Ethylbenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
p & m-Xylene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Styrene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Tribromomethane	mg/kg	0.001	NONE	-	-	< 0.0010	< 0.0010	
o-Xylene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,1,2,2-Tetrachloroethane	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Isopropylbenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Bromobenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
n-Propylbenzene	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
2-Chlorotoluene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
4-Chlorotoluene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,3,5-Trimethylbenzene	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
tert-Butylbenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,2,4-Trimethylbenzene	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
sec-Butylbenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,3-Dichlorobenzene	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
p-Isopropyltoluene	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
1,2-Dichlorobenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,4-Dichlorobenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Butylbenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,2-Dibromo-3-chloropropane	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	
1,2,4-Trichlorobenzene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
Hexachlorobutadiene	mg/kg	0.001	MCERTS	-	-	< 0.0010	< 0.0010	
1,2,3-Trichlorobenzene	mg/kg	0.001	ISO 17025	-	-	< 0.0010	< 0.0010	

Analytical Report Number : 19-65025

Project / Site name: Stone Close

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1326128	ES6	DS106	None Supplied	Light brown clay.
1326129	ES7	DS106	None Supplied	Light brown clay.
1326130	ES1	Area 1	1.50-1.60	Brown clay.
1326131	ES1	Area 2	1.50-1.60	Brown clay with gravel.

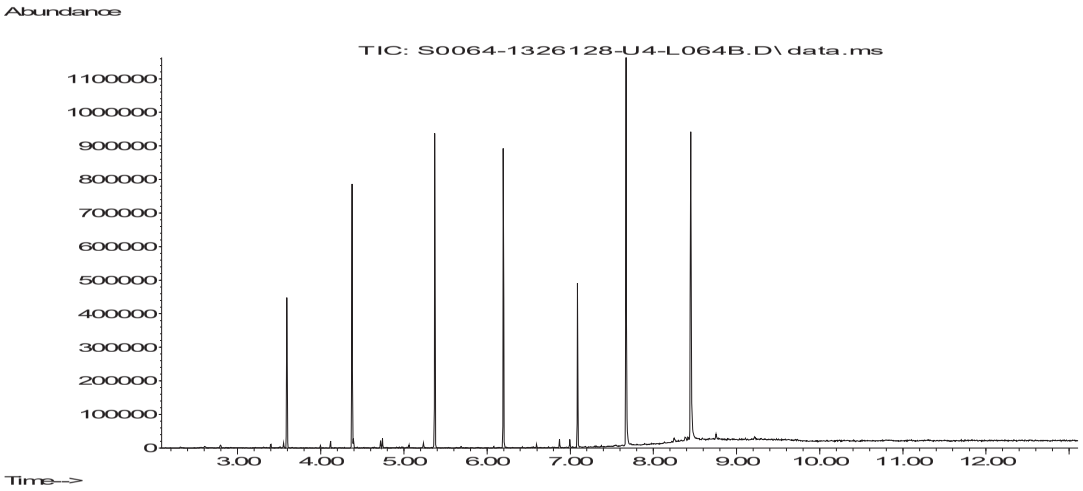
Analytical Report Number : 19-65025

Project / Site name: Stone Close

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.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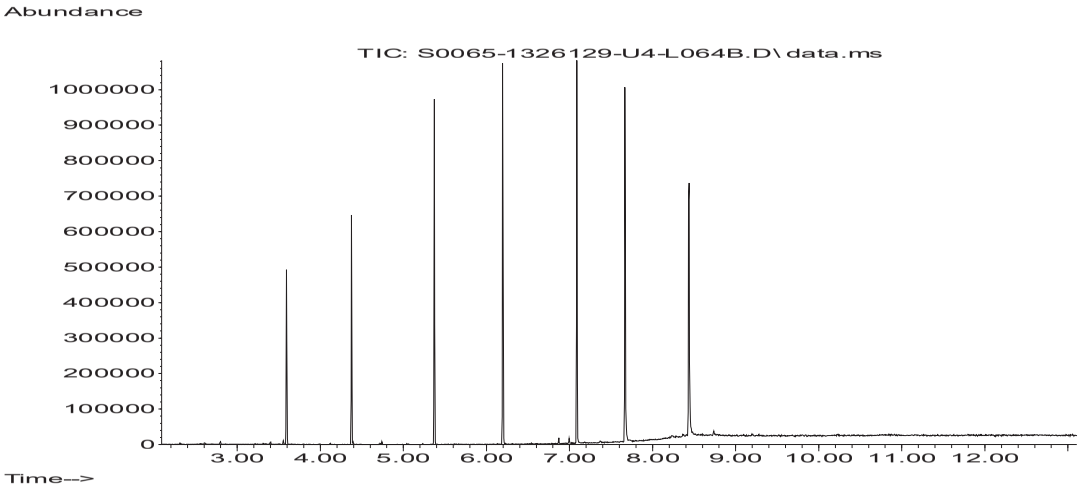
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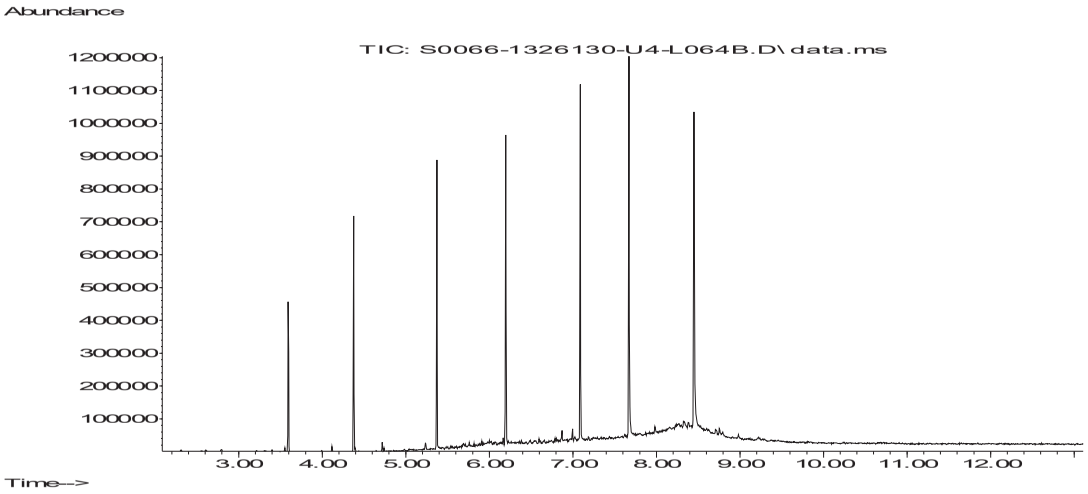
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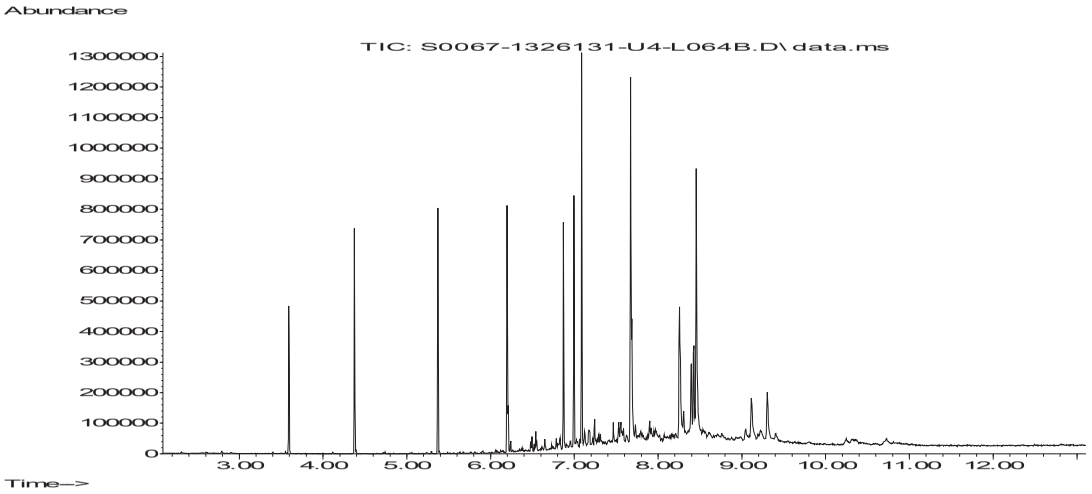
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Analytical Report Number : 19-66903

Project / Site name:	Stone Close	**Samples received on:**	18/10/2019
Your job number:	17-0685.06	**Samples instructed on:**	18/10/2019
Your order number:	DS49992	**Analysis completed by:**	25/10/2019
Report Issue Number:	1	**Report issued on:**	25/10/2019
Samples Analysed:	2 soil samples		

Signed: K. Lewicka

Katarzyna Lewicka
Head of Reporting Section
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 19-66903

Project / Site name: Stone Close
Your Order No: DS49992

Lab Sample Number				1335782	1335783			
Sample Reference				ES8	ES9			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				17/10/2019	17/10/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	5.1	5.9			
Total mass of sample received	kg	0.001	NONE	1.3	1.2			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	11.7	11.7			
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	37	68			
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.018	0.034			
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	18.4	34.2			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	0.27	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	0.29	< 0.05			
Phenanthrene	mg/kg	0.05	MCERTS	3.0	1.8			
Anthracene	mg/kg	0.05	MCERTS	0.65	0.51			
Fluoranthene	mg/kg	0.05	MCERTS	4.5	3.2			
Pyrene	mg/kg	0.05	MCERTS	4.0	2.8			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.6	1.8			
Chrysene	mg/kg	0.05	MCERTS	1.8	1.5			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	2.0	2.1			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2	0.62			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.0	1.7			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.98	0.89			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.30	0.27			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.3	0.98			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	24.8	18.3			
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.9	5.8			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	< 0.2			
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	28	33			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	29	23			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	30	27			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	23			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	63	51			
Monoaromatics & Oxygenates								
Benzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
Toluene	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
Ethylbenzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
p & m-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
o-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			

Analytical Report Number: 19-66903

Project / Site name: Stone Close
Your Order No: DS49992

Lab Sample Number				1335782	1335783			
Sample Reference				ES8	ES9			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				17/10/2019	17/10/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	40	29			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	170	150			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	200	190			
TPH-CWG - Aliphatic >EC35 - EC40	mg/kg	10	NONE	21	18			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	410	370			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	4.7	2.9			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	16	26			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	91	140			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	140	240			
TPH-CWG - Aromatic >EC35 - EC40	mg/kg	10	NONE	32	48			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	250	420			

Analytical Report Number : 19-66903

Project / Site name: Stone Close

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1335782	ES8	None Supplied	None Supplied	Brown sandy loam with gravel.
1335783	ES9	None Supplied	None Supplied	Brown sandy loam with gravel.

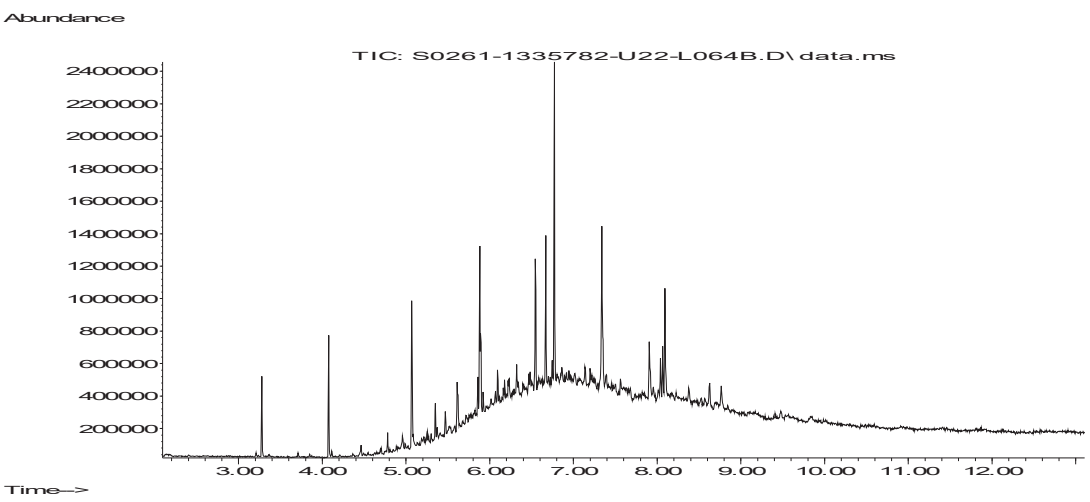
Analytical Report Number : 19-66903

Project / Site name: Stone Close

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In-house method based on BS1377 Part 2, 1990, Classification tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS

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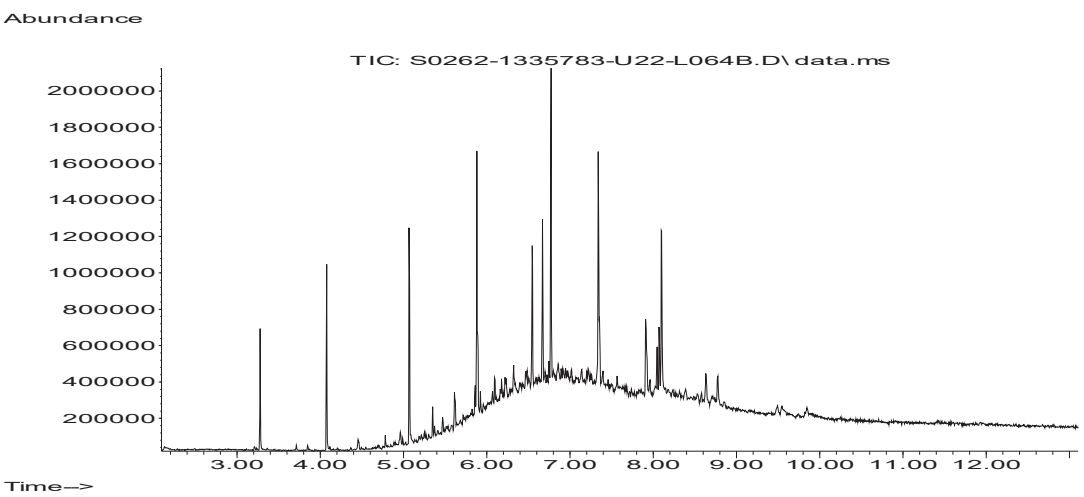
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Appendix C – Demolition Health and Safety File

DEMOLITION HEALTH & SAFETY FILE

UNITS 501 & 504 STONE CLOSE

HORTON ROAD

WEST DRAYTON

UB7 8JU

(Revision A)

INTRODUCTION

This Health & Safety File relates to the demolition works carried out at **Stone Close, Horton Road, West Drayton**, between **August and October 2019**.

The contents of the Health & Safety File are produced solely for the purpose of giving information, which is provided by those who have a duty to ensure the health and safety of any person at work who is carrying out, or will carry out, construction work or cleaning work or may be affected by the work of such a person at work. The Client does not accept any liability for the accuracy of documents provided by others.

The Health & Safety File is required under Regulation 12(5), (6) & (7) and Appendix 4 of the Construction (Design and Management) Regulations 2015.

The Health & Safety File should be retained by the Client and made available for inspection by any person who may require information on any future project involving construction work, or any person carrying out construction work, maintenance or cleaning work on the premises at any time in the future.

When any interest in this property is disposed of either permanently or temporarily, the Health & Safety File should be delivered to the person acquiring that interest. That person should be informed of the nature and purpose of the File.

When construction work is carried out on the premises to which this Health & Safety File applies, this document must be amended, updated and extended to incorporate relevant details of those subsequent works.