Phase II
Groundwater Risk Assessment

55 Vastern Road, Reading, Berkshire, RG1 8BU

Prepared for:
Berkeley Homes (Oxford & Chiltern) Ltd
Mill Lane
Taplow
Maidenhead
SL6 0AG

September 2024

Omnia ref: A10967-8/2.0

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QUALITY ASSURANCE

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Geo-Environmental	**Phase II Geo-Environmental Assessment**				
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Executive Summary	
Site Address	55 Vastern Road, Reading, Berkshire, RG1 8BU
National Grid Reference	471566, 174120
Site Area	Approximately 0.76 ha
Current Site Use	At the time of the site investigation, the site was vacant and comprised of a single two-storey building occupying the southern area. Electricity power distribution infrastructure was located within the central section of the site and along the eastern boundary, however this area was demarcated with Heras fencing and falls outside of the red line boundary for the site. Within the central eastern and northern section of the site the area was utilised for parking associated with the vacant SSE building.
Site History	The site formed part of an open field until mapping dated 1900 when the site was developed into an electrical works with an ice rink built 1912. The site was then redeveloped during the 1970s to its current configuration.
Geology & Hydrogeology	Soils underlying the site are classified as Unproductive Strata, attributed to the clay and silt of the Langley Silt Member. This unit is underlain by the Kempton Park Gravels, classified as a Secondary A Aquifer. The site is further underlain at depth by a Principal Aquifer, the chalk of the Seaford Chalk and Newhaven Chalk Formation. Four (4no.) groundwater abstraction and three(3no.) potable groundwater abstractions are noted within 1km of the site. The closest surface water feature is located 4m to the northeast of the site.
Revised Conceptual Site Model	
Following the completion of the above risk assessment, a series of active pollution pathways have been identified by the RCSM. These relate to elevated metals, PAH, TPH and asbestos concentrations in the near surface and TPH within groundwater samples.	
Recommendations	
In order to mitigate this risk identified in the RCSM remediation works are required, which are likely to include: • Emplacement of soil capping system within all areas of proposed soft landscaping; • Provision of Vapour and Ground Gas Membranes within proposed building footprints; • Hotspot removal of impact in area of WS1002 and TP1007. Mitigation measures have been set out within a standalone Remediation Method Statement (A10967/2.4 April 2023), which it is recommended is agreed with the Regulator ahead of commencement on site. Near surface soils at the site are likely to be classified as Hazardous for disposal purposes due to asbestos content >0.1% in five of 47 samples across the proposed residential portion of the site. If during works any previously unidentified impact is encountered during development works, activities should be halted and contact made with a suitably qualified Environmental Consultant in order to further investigation identified materials. As determined appropriate by the Consultant further investigation and sampling may be required to determine appropriate actions. Upon completion contact should be made with the regulator to achieve sign off of the works.	

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1 INTRODUCTION

1.1 Background

Omnia have been commissioned by Berkeley Homes (Oxford & Chiltern) Ltd (BHOC) to undertake a Groundwater Risk Assessment at the site comprising 55 Vastern Road, Reading, Berkshire, RG1 8BU (Figure 1.0). This work has been commissioned following previous phases of investigation undertaken by Omnia and others.

The site is situated in Reading Town centre, directly adjacent to the River Thames and is understood to have been previously owned and occupied by SSE with an office building located on the southern third of the site and associated parking and infrastructure towards the north. A significant proportion of the wider site, predominantly the eastern third, is utilised by SSE for electricity distribution, with a range of plant and structures in place including below ground oil-cooled cables. This area of the site falls outside of the current site boundary, as detailed within Figure 1.0 in Appendix III.

It is understood that since the previous investigation works, BHOC have submitted an application for the site as detailed under Planning Application ref: 200188.

Following completion of a number of ground investigations, it is understood the client submitted a limited number of reports to the Local Planning Authority and the Environment Agency in respect of Condition 9 (De-Watering And Foundation Details). The EA responded as follows:

Thank you for reconsulting us on this application for discharge of condition 9.
Further to our previous response (letter with reference WA/2023/130859/01-L01, dated 09 January 2024), the following documents have been submitted and reviewed:
Ground Investigation Report (Stantec, May 2023)
Site Piling Proposal (Berkeley, January 2024).

We do not consider that this is sufficient to allow the discharge of condition 9.
Reason Condition 9 requires that no development shall commence on site [excluding demolition and any preparatory works necessary to inform de-watering and foundation details] until such time as a scheme to:
a) secure de-watering of the site
b) specify the form of foundations, has been submitted to, and approved in writing by, the Local Planning Authority.
The scheme shall be implemented in accordance with the approved details.

The additional information provided still does not adequately address part B of the condition. With respect to the form of the foundations, it is now clear the intention is that the piles penetrate the overlying strata and into the Chalk below groundwater level.

The additional documents indicate five boreholes into the Chalk: 1001, 1002C, 1003E, 1004, 1005 but we have been unable to locate these on a legible map.

Further, there are no groundwater quality analyses for the Chalk groundwater. There appear to be no proposals for the monitoring of the Chalk groundwater quality during and following piling as part of the piling proposals. Please reconsult us on any additional information submitted.

Following review of the completed works to date, it is understood the above requirements have

already been addressed within historic reports. The client has requested Omnia compile all the information relating to the above requirements and provide a groundwater risk assessment, which is detailed herein.

1.2 Proposed Development

It is understood that the proposed development consists of the *'Demolition of existing structures and erection of a series of buildings ranging in height from 1 to 11 storeys, including residential dwellings (C3 use class) and retail floorspace (A3 use class), together with a new north-south pedestrian link, connecting Christchurch Bridge to Vastern Road'*

A site location map Is presented as Figure 1.0 with the outline proposed site layout is presented as Figure 2.0 (Appendix III).

1.3 Objectives

The objectives of the Groundwater Risk Assessment are to:

- Undertake a review of previous Phase I and Phase II investigation reports pertaining to the site; and,
- Assess the implications of any potential groundwater contamination which may present a risk to future controlled waters.

1.4 Sources of Information

Background information was sought from the following sources:

- CC Ground Investigation Ltd Factual Report (report ref: 'C5925/01'dated March 2018) – included as Appendix IV;
- PBA Peter Brett Technical Note (report ref: 'Tn002/Rev0' dated March 2018) – included as Appendix V;
- Omnia Phase I-II Geo-Environmental Site Assessment (ref: A10967/1.1 dated April 2018) – included as Appendix VI;
- Omnia Ground Gas Monitoring Assessment (ref: A11220/221115/L1 dated 15th November 2022) – included as Appendix VII;
- Omnia Supplementary Ground Investigation (Ref: A10967/3.3 dated April 2023) – included as Appendix VIII;
- Omnia Remediation Method Statement (ref: A10967/2.4 dated April 2023) – included as Appendix IX;
- Omnia Piling Risk Assessment (Ref: A10967-8/1.0 dated May 2024) – included as Appendix X;
- British Geological Survey Map Sheet 268, Reading, Solid & Drift Edition at a scale of 1:50,000.
- British Standard BS10175:2011+A2:2017 – Investigation of Potentially Contaminated Sites – Code of Practice;
- British Standard BS5930:2015+A1:2020 – *Code of Practice for Ground Investigations;*
- DoE Industry Profile for Power Stations (excluding Nuclear) dated 1995;

- Britain from Above Historical Aerial Image of the Site.

1.5 Limitations

The limitations of this report are presented in Appendix I.

1.6 Confidentiality

Omnia has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from Omnia; a charge may be levied against such approval.

2 SITE SETTING

2.1 Site Details

Table 2-1 Site Details

Site Address	55 Vastern Road, Reading, Berkshire, RG1 8BU
National Grid Reference	471566, 174120
Site Area	Approximately 0.76 ha

All acronyms used within this report are defined in the Glossary presented in Appendix II.

A site location plan is presented as Figure 1.0 (Appendix III).

2.2 Current Site Use

The following site description relates to the site at the time of the most recent ground investigation (September 2022). It is understood from information provided by the client that the site is generally unchanged and is awaiting the commencement of demolition works.

2.2.1 Site Description

The area of investigation is located within Reading town centre, approximately 1km north of Reading train station on a roughly rectangular shaped parcel of land approximately 0.76 hectares in size. The site is located north of Vastern Road with the long axis aligned northeast to southwest. The site was accessed via a security gate located on Lynmouth Road.

The site was bound by a brick wall and wooden fence panels backing onto private gardens and residential housing to the west. Dense vegetation was present in front of the wall. To the north the site was bound by an approximately 2m tall chain link fence and public footpath beyond. The eastern boundary was marked with Heras fencing with the SSE site beyond. The south of the site comprised an office building fronting on to Vastern Road.

At the time of the most recent site investigation (September 2022), the site was vacant and comprised a single two-storey building occupying the southern area. Electricity power distribution infrastructure was located within the central section of the site and along the eastern boundary. However, this area was demarcated with Heras fencing and falls outside of the red line boundary for the site. Within the central, western and northern section of the site the area was utilised for parking associated with the vacant SSE building.

The two-storey building within the southern section of the site was aligned alongside Vastern Road in an approximate east west orientation, with the building fronting onto Vastern Road. The majority of the building was clad with white plastering, although it is assumed that the building is brick built. The building appeared to be in a relatively good state of repair, however internally office supplies had been removed and vandalised.

Within the north-eastern corner of the site a small area of soft landscaping was present, containing a double garage, a smoking area and an electrical substation. The area was in a good state of repair with grass cover across the area, with the substation enclosed by 1.5m wooden fencing.

The site was observed to be generally flat, with a previous topographic survey indicating an elevation of approximately 38.50m AOD.

An annotated site location plan showing observations from the walk-over survey is presented as Figure 3.0 within A10967/1.1 April 2018. Relevant photographs from the site walk-over survey are located in Appendix IV.

2.2.2 Hazardous Materials Storage

No hazardous material storage other than that associated with the substation infrastructure was observed during the site walkover.

2.2.3 Potential Asbestos Containing Material (PACM)

During the site walkover, no visible PACM was observed, however given that the onsite structure was built before the year 2000 there is the potential for asbestos containing material to be present within the building fabric. Given this, an asbestos survey should be undertaken in accordance with the Control of Asbestos Regulations (2012) ahead of any refurbishment or demolition work in line with current legislation.

2.2.4 Waste Storage

No waste storage was noted during the site works.

2.2.5 Tree Species

At the time of the site walkover the site largely comprised asphalt hardstanding, however dense vegetation was present along the western boundary and deciduous trees were noted in the north-western corner of the site.

2.2.6 Potential Invasive Species

During the site walkover no obvious signs of potential invasive species were identified. However, it should be noted that the site walkover was conducted during September/October, and it is recommended that a further inspection is undertaken during the growing season.

2.3 Surrounding Area

The surrounding land uses are summarised in Table 2-2 below:

Table 2-2 Land Use

Direction	Land Use
North	River Thames with Christchurch Playing Fields beyond.
East	Commercial/Industrial.
South	Commercial/Industrial with Railway Station beyond.
West	Residential Properties with private gardens.

3 SITE HISTORY

3.1 On-Site Historical Development

As set out in Omnia Report Ref: A10967/1.1 the northern part of the site was first identified as being an "Electrical works" on mapping dated 1899-1900 with the southern part of the site identified as a "Skating Rink" between1912-1932.

The southern part of the site was subsequently identified as a "Depository" in 1936 with the entire site identified as an "Electricity Depot" from 1969 to the present day.

3.1.1 Reading Power Station

The site was first developed as a power station prior to 1895 with the riverside location facilitating the import of coal by barge along the River Thames with the River Thames providing an adequate supply of cooling water with the site remaining operational until its decommissioning in the 1960s.

A review of information available in the public domain suggests that the power station was coal-fired throughout its operational life. A review of the DoE Industry Profile for Power Stations indicates that all power stations were coal fired until the 1960s and 1970s when oil-fired power stations were constructed following the discovery of Oil beneath the North Sea.

Whilst a few coal-fired power stations were converted to be oil-fired, given that the subject site was decommissioned in the 1960s, this is not considered likely to be the case at Vastern Road.

A review or historical aerial imagery available in the public domain and dated c.1948 shows the site with a large stockpile of what is assumed to be coal located in the central part of the site.

Given that the power station was coal-fired, it is not considered that large volumes of fuel oil would have been stored on the subject site during its operational phase.

3.2 Historical Tank Records

The original Phase I to II report identified six (6no.) historical records of on-site tanks with a further ten (10no.) historical records being identified between 38m and 220m southeast, south and southwest and between 240 and 250m north of the site.

Tanks located north of the site were not considered to be plausible sources due to the presence of the River Thames, located immediately north of the site, which was considered to sever the exposure pathway rendering the pollution linkage inactive.

3.3 Historical Spillages

It is understood that a pollution incident occurred on the immediately adjacent SSE site during July 2017 when an estimated 8,000 litres of cooling oil was released from a ruptured underground High Voltage (HV) cable run. The adjacent site is understood to have undergone two (2no.) previous phases of investigation, an initial investigation undertaken in October 2017 by Adler & Allan Ltd to identify the source of the leakage and facilitate a repair, with a subsequent phase of investigation and monitoring undertaken by Peter Brett Associates (PBA) between January - April 2018.

Whilst final reports have not been made available to Omnia, a preliminary assessment was issued by PBA together with a draft factual site investigation report undertaken by CCL Ground Investigations, which indicated that as a result of historic activities and contemporary land use on site (previous power station use and historic hydrocarbon infrastructure potentially both ASTs and USTs) and due to a rupture of an oil pipe in 2017, that there were environmental risks to both Human and Environmental receptors that would need to be assessed.

4 ENVIRONMENTAL SETTING

The following information has been obtained from the Omnia Report A10967/1.1.

4.1 Geology & Hydrogeology

The British Geological Survey (BGS) map for the site (Reading, Sheet 268, Solid and Drift Edition at a scale of 1:50,000 dated 2000) indicates that the site is underlain by the following geological sequence:

Table 4-1 - Geological Sequence

Geological Unit	Classification	Description	Aquifer Classification
Superficial	Alluvium (Northernmost Area Only)	Clay, Silt, Sand & Gravel	Secondary (A) Aquifer
	Langley Silt Member	Clay and Silt	Unproductive Strata
	Kempton Park Gravel Formation (Underlying Langley Silt)	Sand & Gravel	Secondary (A) Aquifer
Bedrock	Seaford Chalk Formation & Newhaven Chalk Formation	Chalk	Principal Aquifer

Review of the EA Groundwater Source Protection Zone dataset indicates that the the site is not located within a currently defined groundwater Source Protection Zone (SPZ). The closest SPZ comprises a Source Protection Zone 3 (SPZ3), Total Catchment, located approximately 960m northeast of the site and is associated with abstraction points located within a water works located at Playhatch approximately 3.0km northeast of the subject site.

No potable water abstraction licences or public water supplies were identified within 250m of the site.

A review of Environment Agency report Ref: 6441R8, regarding groundwater within the Thames Valley Gravels suggests that groundwater flow within the gravels is influenced by river flow direction and generally flows obliquely away from the river at times of high flow level and obliquely towards the river during times of low flow level. A review of local topography and surface water features suggests that shallow groundwater, if present, is likely to flow in a north-easterly direction towards the River Thames.

4.2 Hydrology

The closest surface watercourse is the River Thames, approximately 5.0m northeast of the site boundary, with the second closest comprising an unnamed culverted watercourse located approximately 85m south of the site.

4.3 Industrial Land Uses

The Omnia report A10967/1.1 identified sixteen (16no.) industrial land uses that were considered to be potentially contaminative, and are summarised below:

- Container and storage depot, located adjacent to the east (SSE Owned & Operated);
- Three (3no.) Electrical Sub Stations, located adjacent to the east;
- Electrical Sub Station, located 47m southeast, 100m southwest, 164m west, 200m northwest,

211m northwest, 212m northwest
- Bus and Coach stations, Depots and Companies, located 210m south
- Electrical Sub Station, located 211m northwest;
- Vehicle repair, testing and servicing, located 218m west, 239m west;
- Container and storage, located 220m west;
- Railway stations, junctions and halts, located 236m southwest;
- General construction supplies, located 244m west; and
- Unspecified works or factories located 248m west.

The Groundsure report did not identify any current or historic petrol filling stations within a 250m radius of the site. The closest is located 428m northeast of the site.

4.4 Sensitive Land Uses

No sensitive land uses were identified within a 250m radius of the site.

4.5 Site Sensitivity Assessment

The site is considered to be located within a high sensitivity setting due to the following reasons:

- Pollution incident on adjacent SSE site involving the leakage of 8,000 litres of cooling oil in July 2017;
- River Thames is located approximately 5m north;
- Site is directly underlain by superficial deposits of the Langley Silt Member (Unproductive Strata);
- Site is subsequently underlain by superficial deposits of the Kempton Park Gravel Formation (Secondary A Aquifer) which is further underlain by Chalk Bedrock classified as a Principal Aquifer;
- Contemporary and historic potentially contaminative land uses on-site; and,
- Surrounding area includes residential dwellings with private gardens.

5 CONSULTATIONS

The following information has been obtained from the Omnia A10967/1.1 report.

5.1 Local Planning Authority Contaminated Land Officer (CLO)

An information request was submitted to Reading Borough Council (RBC) on 12/04/2018 as part of the original ground investigation works enquiring whether RBC held any information associated with the pollution incident that occurred at the site in July 2017. No response to the information request was received.

5.2 Environment Agency

Contact was made with the Environment Agency, as part of the original phase of investigation, on 11/04/2018 regarding the pollution incident involving the leakage of 8,000 litres of cooling oil on site as set out in Section 1.1.

A response was received via email on the 12/04/18 as follows:

"Given the location of the cable oil leak in close proximity of the River Thames, Scottish and Southern Electricity were instructed to investigate and remediate. Subsequently Adler and Allan were met on site with their consultants, who carried out an investigation. They had located the leak and made a repair, but the final report of the site wide monitoring has yet to be seen. They had also been monitoring the surface water in the Thames but had not detected any hydrocarbons."

Omnia made further contact on 12/04/2018 requesting confirmation of the EA's considered principal receptor.

A further response was received on 12/04/2018 as follows:

"Given the proximity of the River Thames, it would be considered the principal receptor. Also, the Langley Silt, dependant on the depth of the cable, might act as a barrier to downward infiltration. The Chalk here is close to an SPZ3 for the University Abstraction. However, they have recently revoked their licence so not aware of any other abstractions. The oils used on high-voltage cables these days tend to be linear Alkyl Benzene with a low environmental impact and which do not contain PCBs. However, there is the possibility for older oil residues to remain within the cables."

The EA were contacted by the LPA as a consultee as part of the planning application (Ref: 200188) with regards to the discharge of Condition 9 of the planning application.

Condition 9 requires that *no development shall commence on site [excluding demolition and any preparatory works necessary to inform de-watering and foundation details] until such time as a scheme to:*

a) *secure de-watering of the site*
b) *specify the form of foundations, has been submitted to, and approved in writing by, the Local Planning Authority. The scheme shall be implemented in accordance with the approved details.*

The EA response (Ref: WA/2023/130859/02-L01) is presented in Appendix X and stated that:

"*The additional information provided still does not adequately address part B of the condition.*

With respect to the form of the foundations, it is now clear the intention is the piles penetrate the overlying strata and into the Chalk below groundwater level.

The additional documents indicate five boreholes into the Chalk: 1001, 1002C, 1003E, 1004, 1005 but we have been unable to locate these on a legible map.

Further, there are no groundwater quality analyses for the Chalk groundwater. There appear to be no proposals for the monitoring of the Chalk groundwater quality during and following piling as part of the piling proposals."

However, it was noted that the EA did not appear to have reviewed the any of the previous Omnia Reports (ref: A10967/1.1, A10967/2.4, A10967/3.3 or A10967-8/1.0) which included a DQRA for groundwater, an RMS and a Piling Risk Assessment (PRA) for the site.

It is understood that these reports have subsequently been submitted to the EA for review.

6 PREVIOUS INVESTIGATIONS

The following documents have been made available to Omnia during the appraisal of the site:

- Omnia Report Ref: A10967-8/1.0 – Omnia – Piling Risk Assessment dated May 2024;
- Omnia Report Ref: A10967/2.4 – Omnia – Remediation Method Statement dated April 2023;
- Omnia Report Ref: A10967/3.3 – Omnia – Supplementary Ground Investigation Report dated April 2023;
- Omnia Report Ref: A10967/1.1 – Omnia – Phase I-III Geo-Environmental Investigation (Including DQRA) dated April 2018;
- Peter Brett Associates (PBA) Technical Note Tn002/Rev0 – Preliminary Summary of Ground Investigation – SSE Site, Vastern Road, Reading, dated 20th March 2018.
- CC Ground Investigations (CCGI) Report C5925/01 – Draft Factual Report – SSE Site, Vastern Road, Reading, dated 12th March 2018.
- Email communication between SSE and their consultant Adler & Allan regarding the findings of the preliminary investigation to identify the location of the leakage – Dated October 2017.

Due to the factual nature of the PBA and CC Ground Investigation reports no conclusions were drawn with regards to the risks posed to Human Health or the Environment except that it was considered that some remediation would likely be required by the Environment Agency to remove free product. The results of the chemical testing completed as part of these works were included within the Omnia Geo-environmental Assessment (A10967/1.1) and so have not been summarised individually.

6.1 Omnia Phase I-II Geo-Environmental Assessment and DQRA ref: A10967/1.1 dated April 2018

Following review of the previous investigations completed on site, further site investigation and Detailed Qualitative Risk Assessment (DQRA) was undertaken. The Tier 1 risk assessment and DQRA identified a number of potential sources of contamination were present across the site that required remedial works. These included:

Human Health:

- Elevated concentration of metals within shallow soils samples across the site;
- Elevated concentrations of Polycyclic Aromatic Hydrocarbons (PAHs) within shallow soil samples across the site;
- Presence of asbestos within shallow soil samples across the site;
- Elevated Naphthalene and TPH (C12-C16) concentrations identified;
- Elevated concentrations of Ground Gas (CH_4 and CO_2) identified;

Groundwater:

- Elevated hotspot concentrations of TPH within WS1002 and TP1007

Elevated concentrations of Aromatic TPH C_{12}-C_{16} and C_{16}-C_{21} were identified within water samples obtained from the Kempton Park Gravel. The Kempton Park Gravel is considered to be in hydraulic continuity with the Chalk bedrock. Following completion of the DQRA, concentrations within both soils and groundwater beneath the site were lower than the calculated site-specific Remedial Target

Values. It was therefore considered the concentrations did not have the potential to present a significant risk to the identified controlled waters receptor (River Thames).

It was recommended the remedial works required were set out within a standalone RMS.

6.2 Omnia Ground Gas Assessment ref: A11220/221115/L1 dated 15th November 2022

A ground gas assessment was undertaken based on thirteen (13no.) monitoring visits undertaken by CC Ground Investigations and Terramech Investigations Ltd.

The findings of a total of thirteen (13no.) rounds of ground gas monitoring detected a maximum CH_4 concentration of 0.1% v/v, a maximum CO_2 concentration of 6.5% v/v, and a maximum ground gas flow rate of 27.4 l/hr. The elevated classification is restricted to just one borehole location, close to the southwestern boundary. The site was classified as below:

- The proposed Block A is classified as CS-3
- The remainder of the site is classified as CS-2

6.3 Omnia Supplementary Ground Investigation ref: A10967/3.3 dated April 2023

A supplementary ground investigation was undertaken to further investigate previous areas of concern identified by the Phase I-II Report (ref: A10967/1.1) as well as to target areas which were inaccessible during the previous phase of investigation.

The report identified further exceedances of heavy metals, PAH, TPH and asbestos and concluded that a series of active pollution pathways had been identified by the Revised CSM. These relate to elevated metals, PAH, TPH and asbestos concentrations in the near surface and TPH within groundwater samples.

6.4 Omnia Remediation Method Statement ref: A10967/2.4 dated April 2023

Following the findings of the Omnia Geo-Environmental Assessment and DQRA (A10967/1.1), Omnia Ground Gas Assessment (A11220/221115/L1) and Omnia Supplementary Ground Investigation (A10967/3.3), the following remedial measures were recommended:

<u>Human Health Risk:</u>

- Implementation of a discovery strategy for previously unidentified contamination;
- Implementation of an Asbestos Watching Brief;
- Implementation of a clean cover system within all areas of proposed soft landscaping
    - Excavation of materials under proposed areas of soft landscaping to remove impacted near surface soils;
    - Placement of a hi-visibility geotextile marker layer;
    - Installation of a 450mm thick, clean cover system, incorporating a 150mm thick engineered no-dig layer within areas of proposed soft landscaping; and,
- Installation of a ground gas and hydrocarbon vapour protection membrane within proposed building footprints.

<u>Controlled Waters Risk:</u>

- Excavation and removal of localised high TPH concentrations in the vicinity of WS1002;

It was recommended following the implementation of the remedial works a validation report should be prepared to confirm that works were undertaken in accordance with the relevant legislation and the RMS.

Since the first issue of this RMS (Ref: A10967/2.0), and following the completion of the supplementary ground investigation, the RMS was updated to incorporate the most recent findings, with the final version of the RMS being issued as report reference A10967/2.4 in April 2023.

Information provided by the client indicates that in addition to the remedial works set out by the RMS that an impermeable barrier is scheduled for installation along the boundary line between the site and the adjacent substation compound to mitigate against the risk of future leakages of cooling oil from the underground HV cables migrating beneath and impacting soils beneath the subject site.

6.5 Omnia Piling Risk Assessment ref: A10967-8/1.0 dated May 2024

A Piling Risk Assessment (PRA) was produced for the site due to the requirement for a piled foundation solution terminating within Chalk bedrock beneath the site.

The piling risk assessment assessed the use of CFA for the proposed building foundation at the Site and concluded that the use of CFA would not result in the creation of preferential pollution pathways into to the underlying Principal Aquifer of the Newhaven and Seaford Chalk Formation.

The PRA considered that risks associated with the downward migration of impacted perched water during piling could be mitigated through the use of casing through Made Ground and it was considered that CFA piles were suitable for use on site and once cased would present a low risk of downward migration of contamination due to impacted soils being brought to surface as arisings.

It was recommended that advice should be sought from the piling contractor on suitable methods to mitigate any vertical movement of perched groundwater.

It was also recommended that contact be made with the Environment Agency to agree the specific groundwater monitoring regime and laboratory testing suite that would be required to discharge Condition 9b of the planning permission.

7 CONTROLLED WATERS DISCUSSION

Following a review of the previous reports summarised within Section 3.0, it can be seen that a considerable amount of ground investigation work and reporting has previously been undertaken at the site to characterise the underlying soil and groundwater conditions.

Following the removal of the SSE substation compound from the land ownership boundary, it is considered that the risks presented by soils at the site are restricted to impacted Made Ground with the majority of potential pollution linkages having the potential to pose a significant risk to human health.

As detailed in Section 6.1 the underlying Langley Silt Member, which is primarily cohesive in nature and classified as Unproductive Strata by the Environment Agency, lies immediately beneath Made Ground and is considered to act as an aquitard retarding the downward migration of contaminants into the underlying Kempton Park Gravel Formation which is considered to be in hydraulic continuity with Chalk Bedrock which underlies the site at depth.

Made Ground beneath the subject site generally ranged from 1.10 – 1.90m in thickness with Made Ground directly underlain by cohesive deposits of the Langley Silt Member which ranged from 0.60 – 3.40m in thickness.

Findings of the intrusive ground investigation works therefore suggests the presence of a laterally pervasive cohesive layer of the Langley Silt Member beneath the subject site which will act as an aquitard and limit the downward migration of contaminants into groundwater.

Previous ground investigation works identified the main controlled waters receptor as the River Thames following engagement with the local EA office (Section 5.2) and as such the UK Freshwater Screening values were adopted for assessment purposes.

Previous groundwater sampling and analysis of groundwater collected from the Kempton Park Gravel Formation identified concentrations of TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21} which exceeded the adopted screening values at three (3no.) borehole locations (BH1005, BH2005 & BH2006) as illustrated by Figure 3.0 (Appendix III).

A DQRA was undertaken and detailed in Report Ref: A10967/1.1. At the time the DQRA was completed, the substation compound was located within the site ownership boundary and as such was modelled as an on-site source of contamination. The DQRA adopted a conservative approach and utilised the highest soil and groundwater concentrations of TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21}.

The DQRA predicted a breakthrough of concentrations at the compliance point which was located approximately 90m east of the site. However, following the completion of a level 3 soil and level 3 groundwater assessment, the RTM model indicated that the maximum TPH concentrations detected within both soils and groundwater beneath the site were lower than the calculated site-specific Remedial Target Values and that the concentrations identified therefore did not have the potential to present a significant risk to the identified controlled waters receptor (River Thames).

The DQRA was subsequently updated as part of OEC Report Ref: A10967/3.3 to take into account additional elevated TPH concentrations identified within the underlying soils which exceeded those previously modelled. The RTM model once again indicated that the maximum concentrations detected were less than the calculated Remedial Target Values and so the site was not considered to have the

potential to pose a significant risk to controlled waters.

Since the completion of the DQRA, the site ownership boundary has changed, and the SSE substation compound is no longer located within the development site area and therefore the TPH source area is now located off-site and therefore the DQRA is considered extremely conservative.

As set out within the RMS (Ref: A10967/2.4) shallow TPH impacted soils in the vicinity of location WS1002 are scheduled for excavation and removal with this localised source removal considered to remove the residual risk to controlled waters posed by soils within the site boundary.

The client is also understood to have adopted a risk averse approach with a sub-surface impermeable barrier scheduled for installation along the length of the boundary between the site and the adjacent SSE Substation Compound to mitigate against any future migration of TPH contamination from the adjacent site in the event of future leaks and spillages of cooling oils.

The PRA considered that risks associated with the downward migration of impacted perched water during piling could be mitigated through the use of casing through Made Ground and it was considered that CFA piles were suitable for use on site and once cased would present a low risk of downward migration of contamination due to impacted soils being brought to surface as arisings.

7.1 Revised Groundwater CSM

Following the completion of a Tier 2 Controlled Waters Assessment (DQRA) active pollution pathways were identified by the RCSM which relate to localised elevated TPH concentrations in near surface soils in the vicinity of location WS1002.

It was recommended that near surface soils in this area were excavated and either removed for treatment or off-site disposal.

Based on the available evidence and following the completion of remedial works comprising localised source removal in the vicinity of location WS1002, it is not considered that the site will have the potential to present an ongoing significant risk to controlled waters within either the River Thames or the underlying Principal Chalk Aquifer.

8 CONCLUSIONS AND RECOMMENDATIONS

Revised Conceptual Site Model
Following the completion of localised remedial works comprising the excavation and removal of near surface soils impacted by elevated concentrations of TPH in the vicinity of location WS1002, as set out by the RMS (Ref: A10967/2.4) it is not considered that the site will have the potential to present an ongoing significant risk to controlled waters within either the River Thames or the underlying Principal Chalk Aquifer.
Recommendations
Remedial works as defined by the standalone Remediation Method Statement (A10967/2.4 April 2023) should be undertaken and the successful completion of works verified through the production of a verification Report which should be submitted to the Local Planning Authority for approval. If during works any previously unidentified impact is encountered during development works, activities should be halted and contact made with a suitably qualified Environmental Consultant in order to further investigation identified materials. As determined appropriate by the Consultant further investigation and sampling may be required to determine appropriate actions. Upon completion contact should be made with the regulator to achieve sign off of the works.

APPENDIX I - LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between Omnia and the Client as indicated in Section 1.2.

2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.

3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination, which are enforced, by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.

4. During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.

5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.

6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.

7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials this is for indicative purposes only and do not constitute or replace full and proper surveys.

8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.

9. Omnia cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by Omnia is owned by them, and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by Omnia in this connection without their explicit written agreement there to by Omnia.

10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.

APPENDIX II – GLOSSARY

AST	Above Ground Storage Tank
BGS	British Geological Survey
BSI	British Standards Institute
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CIEH	Chartered Institute of Environmental Health
CIRIA	Construction Industry Research Association
CLEA	Contaminated Land Exposure Assessment
CSM	Conceptual Site Model
DNAPL	Dense Non-Aqueous Phase Liquid (Chlorinated Solvents, PCB)
DWS	Drinking Water Standard
EA	Environment Agency
EQS	Environmental Quality Standard
GAC	General Assessment Criteria
GL	Ground Level
GSV	Gas Screening Value
HCV	Health Criteria Value
ICSM	Initial Conceptual Site Model
LNAPL	Light Non-Aqueous Phase Liquid (Petrol, Diesel, Kerosene)
ND	Not Detected
LMRL	Lower Method Reporting Limit
NR	Not Recorded
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Poly-Chlorinated Biphenyl
PID	Photo-Ionisation Detector
QA	Quality Assurance
SGV	Soil Guideline Value
SPH	Separate Phase Hydrocarbon
TPH (CWG)	Total Petroleum Hydrocarbon (Criteria Working Group)
SPT	Standard Penetration Test
SVOC	Semi Volatile Organic Compound
UST	Underground Storage Tank
VCCS	Vibro Concrete Columns
VOC	Volatile Organic Compound
WTE	Water Table Elevation

UNITS

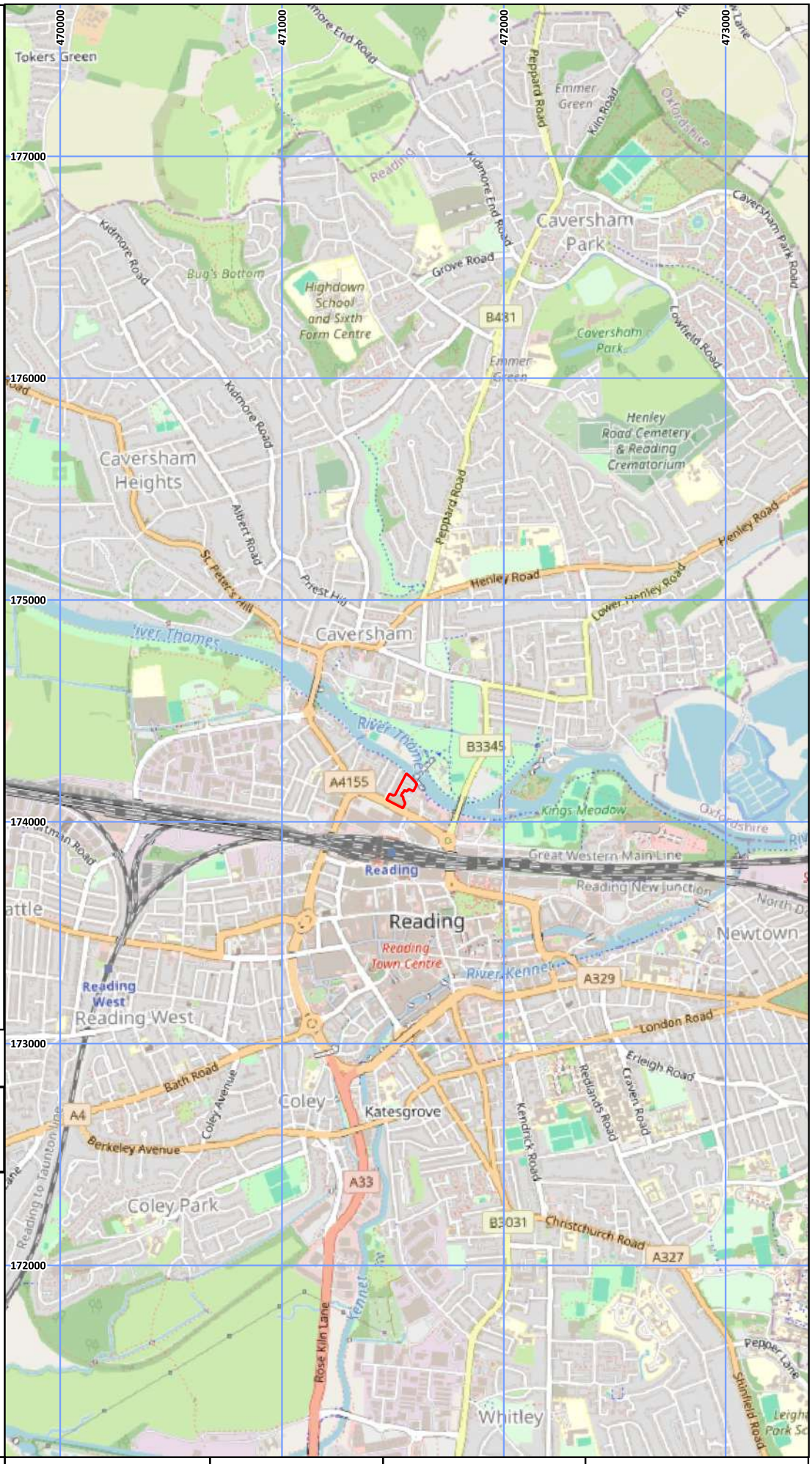
M	Metres
KM	Kilometres
%	Percent
%V/V	Percent Volume in Air
MB	Milli Bars (Atmospheric Pressure)
L/HR	Litres Per Hour
µG/L	Micrograms Per Litre (Parts Per Billion)
PPB	Parts Per Billion
MG/KG	Milligrams Per Kilogram (Parts Per Million)
PPM	Parts Per Million
MG/M^3	Milligram Per Metre Cubed
M BGL	Metres Below Ground Level
M BCL	Metres Below Cover Level

MAOD	Metres Above Ordnance Datum (Sea Level)
KN/M^2	Kilo Newtons Per Metre Squared
µM	Micrometre

APPENDIX III - DRAWINGS

Key

Site Boundary



500 0 500 m

Scale	Paper Size
1:25,000	A4

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OMNIA

Project Number: A10967-8	Client: Berkeley Homes (Oxford & Chiltern) Ltd	Drawn By: A.King	Drawing Title: Figure 1.0 Site Location Map
Job Title: 55 Vastern Road, Reading	Date: 08/08/2024	Authorised By: O. Maxwell	

Key

Site Boundary



10 0 10 20 30 m

Scale	Paper Size
1:950	A4

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OMNIA

Project Number: A10967-8	Client: Berkeley Homes (Oxford & Chiltern) Ltd	Drawn By: A.King	Drawing Title: Figure 2.0 Proposed Site Layout
Job Title: 55 Vastern Road, Reading	Date: 08/08/2024	Authorised By: O. Maxwell	

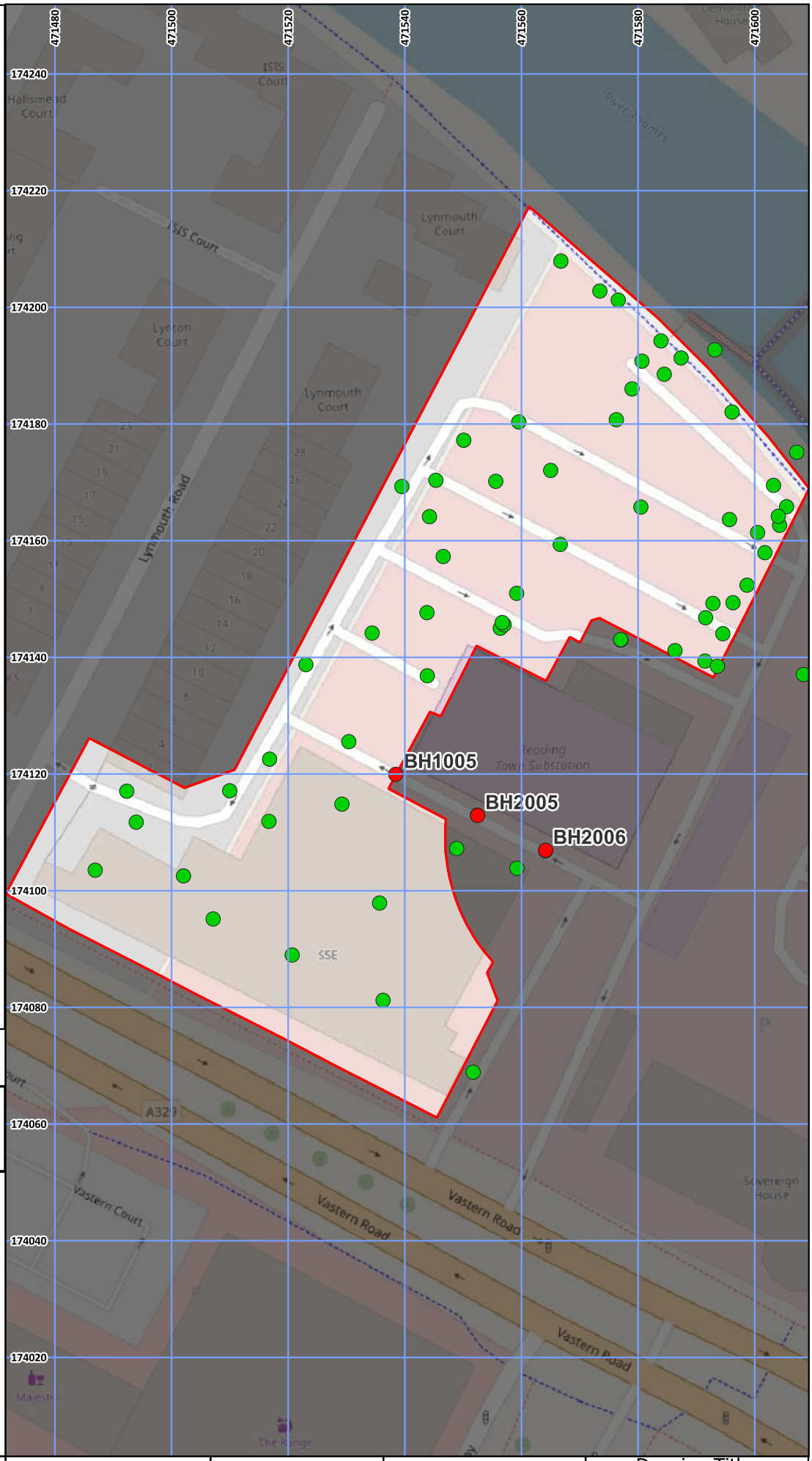
Key

Site Boundary

GI Locations (All Phases)

Groundwater Exceedance

No Groundwater Exceedance



10 0 10 20 30 m

Scale	Paper Size
1:950	A4

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Project Number: A10967-8	Client: Berkeley Homes (Oxford & Chiltern) Ltd	Drawn By: A.King	Drawing Title: Figure 3.0 All GI Locations Showing Groundwater Exceedance Locations
Job Title: 55 Vastern Road, Reading	Date: 08/08/2024	Authorised By: O. Maxwell	

APPENDIX IV – CC GROUND INVESTIGATION FACTUAL REPORT (2018)

CC Ground Investigations Ltd

DRAFT

FACTUAL REPORT

SITE:	SSE Site, Vastern Road, Reading
CLIENT:	SSE PLC
ENGINEER	Peter Brett Associates
ORDER No:	Letter of instruction from the Engineer
DATE:	12 March 2018
REPORT No:	C5925/01

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Appendix A – Exploratory Hole Plan

Appendix B – Exploratory Hole Data

Appendix C – Photographs

Appendix D – Laboratory Test Results

Appendix E – Gas and Groundwater Monitoring

Appendix F – SPT Calibration Data

1. INTRODUCTION

It is proposed to redevelop the SSE site at Vastern Road, Reading. CC Ground Investigations Ltd (CCGI) were instructed by Peter Brett Associates (the Engineer) on behalf of SSE Plc (the Client) to carry out an investigation to establish the ground conditions.

The scope of the ground investigation was defined in the Engineer's specification (Project Ref: 39444/3500, Document Ref: 3944/3500/SP01/rev1, dated November 2017).

This report describes the work carried out by CCGI and presents the findings.

All information, comments and opinions given in this report are based on the ground conditions encountered during the site work, and on the results of laboratory and field tests performed during the investigation. There may however be conditions at or adjacent to the site which have not been taken into account, such as unpredictable soil strata and water conditions between or below exploratory holes. A careful watch should be maintained during any future groundworks and the comments of this report reviewed as necessary.

This report has been prepared for Peter Brett Associates, on behalf of SSE Plc. This report shall not be relied upon or transferred to other parties without the written consent of CCGI. Should any information contained within this report be used by any unauthorised third party it is done so at their own risk and shall not be the responsibility of CCGI.

2. SITE DESCRIPTION AND GEOLOGY

2.1 Site Description

The site situated on the southern bank of the River Thames about 0.6km to the north of Reading town centre, to the north of Vastern Road, and may be located by its approximate National Grid Reference SU 715 741.

2.2 Geology

Geological Records (British Geological Survey (BGS), England and Wales sheet 268 Reading 1:50,000 scale, published 2000) indicate the site is underlain by the White Chalk Subgroup. The solid geology is overlain by the Langley Silt across the site, with a channel of Alluvium present along the River Thames immediately to the north. River Terrace Deposits are shown to the to the south and north. Made Ground is also anticipated above these materials at surface.

3. GROUND INVESTIGATION

3.1 Fieldwork

The fieldwork was carried out during the period 29th January to 14th February 2018, in general accordance with BS5930:2015, and comprised five cable percussion boreholes, six dynamic sampled/rotary cored boreholes, seven windowless sampled boreholes and eight machine excavated trial pits.

The exploratory hole locations were selected by the Engineer and set out by CCGI. An exploratory hole plan is presented in Appendix A.

Boreholes

The boreholes with formed using a Dando 2000/2500 cable percussion rig (BH1001, BH1002C, BH1003E, BH1004 and BH1005), track mounted Terrier drilling rig (WS1002 to WS1004, WS1005A, WS1006, WS1007 and WS019) or track mounted Fraste ML multipurpose rig (BH2001 to BH2006).

Initially, the locations were scanned using Ground Penetrating Radar (GPR) techniques by Subsight Surveys Ltd, Daventry. Surface hardstanding was then broken out using hand tools or cored using rotary drilling techniques. An inspection pit was excavated at each location to a maximum depth of 1.20m to check for buried services. Bulk, small disturbed and environmental samples were taken and retained from the inspection pits.

BH1002A, BH1002B, BH1003 to BH1003D, WS1008, WS1009, WS1013A, WS1017 and WS018 met refusal obstructions within the Made Ground.

Photographs of the inspection pits and samples are presented in Appendix C.

The cable percussion boreholes were then advanced using a clay cutter and bailer with the occasional use of a heavy chisel to assist boring.

Clean drilling techniques were required to protect the underlying aquifer. Initially, 250mm diameter casing was installed in each borehole and a one metre thick bentonite seal placed within the casing. The bentonite was allowed to cure for at least an hour prior to sampling through the bentonite with a 200mm diameter casing string and advancing the borehole.

Disturbed samples were taken and retained in plastic bags and tubs. Undisturbed samples of 100mm nominal diameter were taken in suitable cohesive soils using a thin walled, open drive sampler (UT100) or an open drive sampler (U100). Samples were wax sealed on site to prevent moisture loss.

WS1001 to WS1004, WS1005A, WS1006 to WS1008 and WS019 were advanced using percussive sampling techniques to produce continuous disturbed samples of 83mm diameter.

BH2001 to BH2006 were continued from the base of the inspection pit in WS1008, WS1009, BH1003A, BH1003C, WS1018 and WS1019, where refusal was previously met on obstructions.

Initially, casing was advanced through near surface obstructions in BH2001, BH2002, BH2005 and BH2006.

BH2003 and BH2004 were continued by rotary core drilling techniques utilising a water flush. A double-tube swivel core barrel with a semi-rigid plastic liner was utilised to recover continuous cores of 91mm diameter.

Percussive sampling techniques were then used to produce continuous samples of 112mm and 98mm, reducing as the borehole was advanced.

Samples were temporarily retained in semi-rigid plastic liners, prior to photography and logging by an Engineering Geologist.

All boreholes were monitored for groundwater ingress as they were advanced. Upon encountering water, sampling was temporarily stopped to allow the level to stabilise. Water levels were also recorded at the start and finish of each shifts work/on completion of the borehole and are presented on the relevant log.

Installations

On completion combined gas and water monitoring standpipes were installed in BH1001, BH1002C, BH1003E, BH1004, BH1005, BH1001 to BH2006, WS1003, WS1004, WS1005A, WS1006, WS1007 and WS1019. Each installation consisted of a 50mm ID HDPE slotted tube set in a filter response zone of limestone free gravel. The installation was sealed above (and below in all holes except WS1003, WS1004, WS1006 and WS019) with a bentonite pellet seal and accessed via a valve

assembly. The installations were protected at the surface by a lockable stopcock cover set in concrete. Installation details are given on the relevant borehole log.

The remaining boreholes were backfilled with bentonite pellets and inspection pit arisings, and the surface reinstated with coldlay macadam.

Trial Pits

The trial pits, referenced TP1001 to TP1008, (Appendix B) were excavated by a JCB 3CX mechanical excavator with a 0.60m wide backactor bucket.

The ground surface at TP1002 to TP1008 consisted of hardstanding which required breaking out prior to excavation.

Bulk, small disturbed and environmental samples were taken at a range of depths.

Photographs of the trial pit profile and spoil were taken and are presented in Appendix C.

On completion all trial pits were backfilled with arisings. The ground surface was at was reinstated existing topsoil (TP1001) or hot-lay asphalt (TP1002 to TP1008).

Sample Delivery

Samples for chemical analyses were dispatched from site directly to i2 Analytical Services, Watford, under a Chain of Custody. The remaining samples were brought to CCGI's office for testing and storage.

Surveying

On completion of the fieldwork, the ground level and National Grid co-ordinates were established by John Vincent Surveys Ltd, Neath, and are presented on the relevant log.

3.2 In Situ Testing

Standard penetration tests (SPT's) were carried out in general accordance with BS EN ISO 22476-3:2005. A split barrel or a solid cone was used depending upon the materials encountered and the split barrel samples retained as small disturbed samples. The SPT N value was taken as the number of blows to penetrate the 300mm test drive following a 150mm seating drive. Where low penetration was recorded the seating drive was terminated at 25 blows and the test drive completed after a further 50 blows. SPT results are summarised as uncorrected N values on the borehole logs. SPT hammer calibration data is presented in Appendix E.

Hand vane tests were carried out on suitable material. The results are summarised on the borehole logs (Appendix B).

Samples taken for geoenvironmental testing were screened for volatile Organic Compounds (VOCs) using a MiniRAE 2000 Portable Photo-Ionisation Detector (PID). The readings are presented on the relevant exploratory hole log (Appendix B).

3.3 Logging

Soil samples from the exploratory holes were logged by an Engineering Geologist in general accordance with BS5930:2015.

Prior to logging, photographs of the samples and cores were taken and are presented in Appendix B.

Soil descriptions are presented in the borehole logs together with details of sampling, in situ testing and relevant comments on drilling techniques.

Bulk, small disturbed and environmental samples were taken and retained at a range of depths from the boreholes.

The trial pits were logged from the surface. Detailed descriptions are given in the trial pit log, Appendix B, along with details of sampling and in situ testing, groundwater ingress and relevant comments on stability.

3.4 Laboratory Testing

The following laboratory tests were carried out by Professional Soils Laboratory, Doncaster, in accordance with BS1377:1990, Parts 1 to 8, unless otherwise stated. The results are presented in Appendix C.

Test Type	No. of Tests	Remarks
Natural Moisture Content	4	The results are shown on the summary of soil classification tests.
Liquid and Plastic Limits	8	The results are shown on the plasticity chart and summary of soil classification tests.
Particle Size Distribution (wet sieving method)	10	The fine fractions of four of these tests were further analysed using the pipette method.
One Dimensional Consolidation	4	Prepared from UT100 samples
Saturation Moisture Content	12	
Quick Undrained Triaxial Test	3	Prepared from UT100 samples
BRE SD1 chemical testing suite for soil and water	8	Testing carried out by i2 Analytical Services, Watford, in accordance with BRE Special Digest 1.

A range of chemical tests were carried out on soil and water samples by i2 Analytical Services, Watford. Testing was carried out in accordance with ISO 17025. The results are tabulated and presented in Appendix C.

3.5 Gas and Groundwater Monitoring

At the time of writing the site had been revisited on two occasions to monitor the standpipes in BH1001, BH1002C, BH1003E, BH1004, BH1005, BH1001 to BH2006, WS1003, WS1004, WS1005A, WS1006, WS1007 and WS1019 for ground gases, in general accordance with CIRIA C665 (Wilson et al 2007). Groundwater readings were also taken, and sampling carried out on a single occasion. Four further visits were due to be carried out; the results will be included in the final report.

The installations were monitored for methane, carbon dioxide, oxygen and hydrogen sulphide using a Gas Analyser GA5000 with gas flow measured using an integral meter. A MiniRAE 2000 PID was used to monitor VOC's.

An ATEX approved oil/water interface meter was used to determine the presence of non-aqueous phase liquids (NAPLs).

Prior to groundwater sampling, the standpipes were developed by bailing and then purged until at least three well volumes of water had been removed.

The gas and groundwater results are presented in Appendix D.

The River Thames was sampled at two locations, upstream and downstream of the River Thames, as shown in Appendix A.

CC GROUND INVESTIGATIONS LIMITED

Jonathan Ind BSc (Hons) MSc FGS — **Principal Engineering Geologist**

Rob Clarke. BSc(Hons) MSc (Eng) FGS — **Director**

4. REFERENCES

British Geological Survey (2000): England and Wales Sheet No. 268 Reading, 1:50,000.

British Standards Institution (1990): Methods of tests for soils for civil engineering purposes. BS 1377 Parts 1-9.

British Standards Institution (2012): Geotechnical investigation and testing. Field testing. Standard penetration test. BS EN ISO 22476-3:2005+A1:2011.

British Standards Institution (2015): Code of practice for ground investigations. BS 5930:2015.

Building Research Establishment (2005): Concrete in aggressive ground. BRE Special Digest 1. Third Edition.

Peter Brett Associates (2017): SSE Site, Vastern Road, Reading Tender Document for Ground Investigation Project Ref: 39444/3500, Document Ref: 3944/3500/SP01/rev1, dated November 2017.

Wilson S, Oliver S, Mallett H, Hutchings H & Card G. CIRIA (2007). Assessing risks posed by hazardous ground gases to buildings. CIRIA Report C665 (London).

APPENDIX A

Exploratory Hole Plan



KEY:

- Borehole
- Windowless sample
- Trial Pits

Notes:

Reproduced from base plan provided by Engineer.

Locations indicative only.

CC Ground Investigations Ltd

Exploratory Hole Plan

SSE Site, Vastern Road Reading

SSE Plc

Appendix A

Contract No: C5925

Drawn by:	Scale:
MM	Scale unknown

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Analytical Report Number : 18-78223

Project / Site name:	SSE Site, Vastern Road, Reading	**Samples received on:**	07/03/2018
Your job number:	C5925	**Samples instructed on:**	08/03/2018
Your order number:	C5925	**Analysis completed by:**	16/03/2018
Report Issue Number:	1	**Report issued on:**	16/03/2018
Samples Analysed:	12 water samples		

Signed:

Nicole Fay
Quality Assistant
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.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.3	8.3	7.2	7.5	7.7
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1600	3000	1900	1000	840
Sulphate as SO_4	µg/l	45	ISO 17025	97400	161000	134000	47200	39000
Sulphate as SO_4	mg/l	0.045	ISO 17025	97.4	161	134	47.2	39.0
Chloride	mg/l	0.15	ISO 17025	220	470	370	130	71
Ammonium as NH_4	µg/l	15	ISO 17025	1400	2400	1200	1200	830
Alkalinity	mgCaCO3/l	3	ISO 17025	580	670	500	370	500
Dissolved Oxygen	mg/l	1	NONE	8.4	8.9	< 1.0	2.6	7.2
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	11	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.18	6.41	1.56	2.25	1.79
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.03	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	190	280	230	150	93
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	1.6	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	1.6	< 0.2	< 0.2	0.6
Copper (dissolved)	µg/l	0.5	ISO 17025	9.3	11	3.6	3.0	4.8
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	1.5	0.8	0.2	0.6
Mercury (dissolved)	µg/l	0.05	ISO 17025	0.13	0.08	0.08	0.06	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	3.3	12	3.4	2.9	3.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.6	51	1.5	0.9	3.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	5.0	4.6	3.4	3.2	8.1

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

Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	ND	ND	ND
VOC % Match	%	10	NONE	-	-	-	-	-
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Your Order No: C5925

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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND	ND	ND
SVOC % Match	%	N/A	NONE	0	0	0	0	0
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.5	7.4	7.4	7.7	7.2
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	870	1000	1100	1400	4400
Sulphate as SO_4	µg/l	45	ISO 17025	63100	60200	36900	45900	40100
Sulphate as SO_4	mg/l	0.045	ISO 17025	63.1	60.2	36.9	45.9	40.1
Chloride	mg/l	0.15	ISO 17025	99	130	150	260	1300
Ammonium as NH_4	µg/l	15	ISO 17025	38	1100	1100	250	2900
Alkalinity	mgCaCO3/l	3	ISO 17025	450	480	490	250	620
Dissolved Oxygen	mg/l	1	NONE	3.4	3.5	1.8	4.7	2.4
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.20	3.39	6.41	1.37	0.53
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	150	140	130	150	250
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	< 0.2	< 0.2	0.7	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	3.4	4.4	1.9	4.0	2.4
Lead (dissolved)	µg/l	0.2	ISO 17025	0.5	1.8	< 0.2	0.4	0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.2	1.9	2.5	1.4	2.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.0	0.9	1.4	6.7	5.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.4	3.3	2.4	2.4	1.8

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Chloroethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Bromomethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Vinyl Chloride	µg/l	1	NONE	< 1.0	-	-	-	-
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	-	-	-	-
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Trichloromethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Benzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Trichloroethene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Dibromomethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Toluene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Styrene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Tribromomethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
o-Xylene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Bromobenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Butylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	-	-	-	-
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	-	-

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	-	-	-	-
VOC % Match	%	10	NONE	-	-	-	-	-
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	-	-	-	-
Phenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	-	-	-	-
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	-	-
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	-	-
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	-	-
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	-	-	-	-
2-Methylphenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
Hexachloroethane	µg/l	0.05	NONE	< 0.05	-	-	-	-
Nitrobenzene	µg/l	0.05	NONE	< 0.05	-	-	-	-
4-Methylphenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
Isophorone	µg/l	0.05	NONE	< 0.05	-	-	-	-
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	-	-	-	-
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	-	-
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	-	-	-	-
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	-	-	-	-
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	-	-	-	-
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	-	-	-	-
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	-	-	-	-
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	-	-	-	-
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	-	-	-	-
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	-	-	-	-
Dibenzofuran	µg/l	0.05	NONE	< 0.05	-	-	-	-
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	-	-	-	-
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	-	-	-	-
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	-	-	-	-
Fluorene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Azobenzene	µg/l	0.05	NONE	< 0.05	-	-	-	-
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	-	-	-	-
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	-	-
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Anthracene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Carbazole	µg/l	0.05	NONE	< 0.05	-	-	-	-
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	-	-	-	-
Anthraquinone	µg/l	0.05	NONE	< 0.05	-	-	-	-
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Pyrene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	-	-	-	-
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Chrysene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	-	-	-	-
SVOC % Match	%	N/A	NONE	0	-	-	-	-
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 52	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 101	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 118	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 138	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 153	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 180	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.5	7.3			
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1500	850			
Sulphate as SO_4	µg/l	45	ISO 17025	36400	23300			
Sulphate as SO_4	mg/l	0.045	ISO 17025	36.4	23.3			
Chloride	mg/l	0.15	ISO 17025	190	41			
Ammonium as NH_4	µg/l	15	ISO 17025	520	130			
Alkalinity	mgCaCO3/l	3	ISO 17025	640	640			
Dissolved Oxygen	mg/l	1	NONE	2.1	< 1.0			
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10			
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16			
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.78	1.51			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.03			
Calcium (dissolved)	mg/l	0.012	ISO 17025	140	160			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.4	< 0.2			
Copper (dissolved)	µg/l	0.5	ISO 17025	3.3	1.3			
Lead (dissolved)	µg/l	0.2	ISO 17025	0.4	0.5			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.7	2.5			
Selenium (dissolved)	µg/l	0.6	ISO 17025	6.9	1.4			
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.0	6.1			

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0			
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0			
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND			
VOC % Match	%	10	NONE	-	-			
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05			
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05			
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05			
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05			
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05			
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05			
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05			
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			

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Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	0	0			
SVOC % Match	%	N/A	NONE	0	0			
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02			
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14			

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number : 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

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
Alkalinity in Water	Determination of Alkalinity by discreet analyser (colorimetry). Accredited matrices: SW, PW, GW.	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025

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Analytical Report Number : 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

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
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
TPH Chromatogram	TPH Chromatogram.	In-house method	L070-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

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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Analytical Report Number : 18-78389

Project / Site name:	SSE Site, Vastern Road, Reading	**Samples received on:**	09/03/2018
Your job number:	C5925	**Samples instructed on:**	09/03/2018
Your order number:	C5925	**Analysis completed by:**	19/03/2018
Report Issue Number:	1	**Report issued on:**	19/03/2018
Samples Analysed:	7 water samples		

Signed: CCStone

Dr Claire Stone
Quality Manager
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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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.6	7.6	6.9	7.2	7.3
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	810	660	2500	3000	1400
Sulphate as SO_4	µg/l	45	ISO 17025	18700	18500	39000	73500	61900
Sulphate as SO_4	mg/l	0.045	ISO 17025	18.7	18.5	39.0	73.5	61.9
Chloride	mg/l	0.15	ISO 17025	130	61	580	740	280
Ammonium as NH_4	µg/l	15	ISO 17025	250	250	220	320	26
Alkalinity	mgCaCO3/l	3	ISO 17025	400	390	680	620	410
Dissolved Oxygen	mg/l	1	NONE	9.7	9.8	9.3	9.6	8.7
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.91	2.36	3.55	0.93	0.62
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.06	0.09	0.12	< 0.02	0.03
Calcium (dissolved)	mg/l	0.012	ISO 17025	120	120	320	220	170
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.6	0.6	< 0.2	0.3	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	11	8.3	4.4	0.7	3.5
Lead (dissolved)	µg/l	0.2	ISO 17025	0.5	0.8	0.5	3.6	0.4
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.7	4.7	14	3.4	5.2
Selenium (dissolved)	µg/l	0.6	ISO 17025	2.5	2.3	3.0	2.5	1.5
Zinc (dissolved)	µg/l	0.5	ISO 17025	7.8	12	160	13	4.4

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	730	27	47
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	2700	61	120
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	3400	88	170

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	None Detected	None Detected	None Detected	None Detected	-
VOC % Match	%	10	NONE	0	0	0	0	-

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	-
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	-

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	None Detected	None Detected	Benzene, (1-propylnonyl)-	Benzene, (1-butyloctyl)-	-
SVOC % Match	%	N/A	NONE	0	0	97	97	-
SVOCs TICs Compound Name		N/A	NONE	-	-	1H-Isoindole-1,3(2H)-dione	1R-.alpha.-Pinene	-
SVOC % Match	%	N/A	NONE	-	-	96	96	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-butyloctyl)-	Benzene, (1-propylnonyl)-	-
SVOC % Match	%	N/A	NONE	-	-	96	96	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-ethyldecyl)-	Benzene, (1-butylheptyl)-	-
SVOC % Match	%	N/A	NONE	-	-	96	95	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzenepropanoic acid, .beta.-methyl-, (S)-	Benzene, (1-butylnonyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	95	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-butylhexyl)-	Benzene, (1-propyldecyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	95	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-butylheptyl)-	Benzene, (1-ethylundecyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	95	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-pentylheptyl)-	1H-Isoindole-1,3(2H)-dione	-
SVOC % Match	%	N/A	NONE	-	-	95	94	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-butylnonyl)-	Benzene, (1-ethyloctyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	94	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-propyldecyl)-	Benzene, (1-pentylheptyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	94	-
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	8.1	8.1			
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	680	680			
Sulphate as SO_4	µg/l	45	ISO 17025	54200	54900			
Sulphate as SO_4	mg/l	0.045	ISO 17025	54.2	54.9			
Chloride	mg/l	0.15	ISO 17025	66	64			
Ammonium as NH_4	µg/l	15	ISO 17025	110	270			
Alkalinity	mgCaCO3/l	3	ISO 17025	230	230			
Dissolved Oxygen	mg/l	1	NONE	10	10			
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10			
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16			
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.96	1.27			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.05			
Calcium (dissolved)	mg/l	0.012	ISO 17025	110	100			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.6	0.8			
Copper (dissolved)	µg/l	0.5	ISO 17025	6.1	6.7			
Lead (dissolved)	µg/l	0.2	ISO 17025	0.7	0.8			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.9	2.5			
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.2	1.2			
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.9	4.5			

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0			
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0			
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	None Detected	None Detected			
VOC % Match	%	10	NONE	0	0			

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

Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05			
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05			
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05			
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05			
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05			
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05			
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05			
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			

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Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	None Detected	None Detected			
SVOC % Match	%	N/A	NONE	0	0			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02			
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14			

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number : 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

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
Alkalinity in Water	Determination of Alkalinity by discreet analyser (colorimetry). Accredited matrices: SW, PW, GW.	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE

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Analytical Report Number : 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

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
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

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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Analytical Report Number : 18-81102

Project / Site name:	SSE Site, Vestern Road, Reading	**Samples received on:**	05/04/2018
Your job number:	C5925	**Samples instructed on:**	05/04/2018
Your order number:	C5925-JI	**Analysis completed by:**	11/04/2018
Report Issue Number:	1	**Report issued on:**	11/04/2018
Samples Analysed:	17 water samples		

Signed:

Jordan Hill
Reporting Manager
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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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.0	8.1	7.3	7.6	7.8
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1700	3400	1500	680	1400
Sulphate as SO_4	µg/l	45	ISO 17025	177000	400000	101000	49300	80300
Sulphate as SO_4	mg/l	0.045	ISO 17025	177	400	101	49.3	80.3
Chloride	mg/l	0.15	ISO 17025	310	810	320	62	88
Ammonium as NH_4	µg/l	15	ISO 17025	840	4300	1200	1400	1500
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	9.71	31.7	5.79	4.86	6.48
Alkalinity	mgCaCO3/l	3	ISO 17025	550	620	460	350	500
Dissolved Oxygen	mg/l	1	NONE	4.3	7.4	8.5	4.9	3.9
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.92	8.62	1.51	2.21	9.48
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.02	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	230	82	180	110	41
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.4	1.0	0.3	0.4	1.0
Copper (dissolved)	µg/l	0.5	ISO 17025	1.8	5.9	2.6	2.4	1.6
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	2.0	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.3	9.0	0.9	< 0.5	11
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.2	9.3	0.8	< 0.6	1.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.6	3.7	1.2	2.0	5.2

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	57	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	84	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	140	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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

Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		N/A	NONE	ND	ND	ND	ND	ND
VOC % Match	%	N/A	NONE	-	-	-	-	-

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	5.7	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	Benzene, 1,2-dichloro-3-isocyanato-	ND	ND	ND
SVOC % Match	%	N/A	NONE	-	96	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Phenol, 2,4-bis(1,1-dimethylethyl)-	-	-	-
SVOC % Match	%	N/A	NONE	-	96	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Benzophenone	-	-	-
SVOC % Match	%	N/A	NONE	-	96	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Longifolenaldehyde	-	-	-
SVOC % Match	%	N/A	NONE	-	96	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	1H-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1aR-(1a.alpha.,4a.beta.,7.alpha.,7a.beta.,7b.alpha.)]-	-	-	-
SVOC % Match	%	N/A	NONE	-	95	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	D-Homoandrostane, (5.alpha.,13.alpha.)-	-	-	-
SVOC % Match	%	N/A	NONE	-	95	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	3-Carene	-	-	-
SVOC % Match	%	N/A	NONE	-	94	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	3a,9-Dimethyldodecahydrocyclohepta[d]inden-3-one	-	-	-
SVOC % Match	%	N/A	NONE	-	94	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	.alpha.-Pinene	-	-	-
SVOC % Match	%	N/A	NONE	-	93	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Benzenesulfonamide, N-butyl-	-	-	-
SVOC % Match	%	N/A	NONE	-	93	-	-	-
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936892	936893	936894	936895	936896
Sample Reference				WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.4	7.4	7.7	7.6	7.6
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	860	710	1100	680	690
Sulphate as SO_4	µg/l	45	ISO 17025	48700	66400	21300	18500	17300
Sulphate as SO_4	mg/l	0.045	ISO 17025	48.7	66.4	21.3	18.5	17.3
Chloride	mg/l	0.15	ISO 17025	120	77	260	75	90
Ammonium as NH_4	µg/l	15	ISO 17025	60	540	38	40	24
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	3.47	3.58	2.69	3.01	2.78
Alkalinity	mgCaCO3/l	3	ISO 17025	380	240	230	370	250
Dissolved Oxygen	mg/l	1	NONE	5.7	5.2	9.3	9.4	9.5
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.24	0.33	2.05	2.12	1.80
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.05	< 0.02	< 0.02	0.04	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	110	100	110	97
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	1.2	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.5	0.5	1.2	0.8	0.8
Copper (dissolved)	µg/l	0.5	ISO 17025	6.4	2.6	4.6	5.5	3.8
Lead (dissolved)	µg/l	0.2	ISO 17025	0.3	< 0.2	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.9	2.2	< 0.5	2.4	1.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.8	< 0.6	1.7	2.0	1.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	15	7.0	1.2	7.8	6.9

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936892	936893	936894	936895	936896
Sample Reference				WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	-	-	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	-	-	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	-	-	< 1.0	< 1.0

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936892	936893	936894	936895	936896
Sample Reference				WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		N/A	NONE	ND	-	-	ND	ND
VOC % Match	%	N/A	NONE	-	-	-	-	-

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Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	-	-	< 0.01	< 0.01

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Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	-	-	ND	ND
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	-	-	< 0.14	< 0.14

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.3	7.3	7.4	7.1	6.9
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	620	1400	1000	3200	2300
Sulphate as SO_4	µg/l	45	ISO 17025	16200	21400	47500	79300	33400
Sulphate as SO_4	mg/l	0.045	ISO 17025	16.2	21.4	47.5	79.3	33.4
Chloride	mg/l	0.15	ISO 17025	45	240	180	920	620
Ammonium as NH_4	µg/l	15	ISO 17025	36	180	1000	160	120
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	11.6	14.8	5.13	5.52	26.9
Alkalinity	mgCaCO3/l	3	ISO 17025	430	620	370	650	590
Dissolved Oxygen	mg/l	1	NONE	3.6	6.0	5.6	7.3	6.4
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	3.03	2.18	9.81	3.42	4.96
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	120	130	120	210	250
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.2	0.5	0.2	0.3	0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	1.9	2.5	5.4	1.0	5.1
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.8	3.9	1.5	4.5	14
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.5	3.4	0.6	1.2	1.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.7	4.1	2.5	8.8	260

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	79
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	170
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	250

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Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		N/A	NONE	ND	ND	-	ND	ND
VOC % Match	%	N/A	NONE	-	-	-	-	-

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Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	-	ND	Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-, (.+/-.)-
SVOC % Match	%	N/A	NONE	-	-	-	-	95
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Cyclopropane, 1,1-dimethyl-2-(3-methyl-1,3-butadienyl)-
SVOC % Match	%	N/A	NONE	-	-	-	-	93
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Acetophenone
SVOC % Match	%	N/A	NONE	-	-	-	-	93
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	3-Phenylheptanoic acid
SVOC % Match	%	N/A	NONE	-	-	-	-	93
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Bromacil
SVOC % Match	%	N/A	NONE	-	-	-	-	93
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Benzene, 1-methyl-2-(1-methylethyl)-
SVOC % Match	%	N/A	NONE	-	-	-	-	92
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Benzene, tert-butyl-
SVOC % Match	%	N/A	NONE	-	-	-	-	91
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	-	< 0.14	< 0.14

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.3	7.0			
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1500	3900			
Sulphate as SO_4	µg/l	45	ISO 17025	60100	33600			
Sulphate as SO_4	mg/l	0.045	ISO 17025	60.1	33.6			
Chloride	mg/l	0.15	ISO 17025	340	1400			
Ammonium as NH_4	µg/l	15	ISO 17025	58	2100			
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.18	4.00			
Alkalinity	mgCaCO3/l	3	ISO 17025	410	440			
Dissolved Oxygen	mg/l	1	NONE	8.7	8.1			
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10			
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16			
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.34	0.44			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.04	< 0.02			
Calcium (dissolved)	mg/l	0.012	ISO 17025	180	220			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.3			
Copper (dissolved)	µg/l	0.5	ISO 17025	2.4	8.4			
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.5	2.6			
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.9	1.4			
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.4	2.4			

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	-	-			
Chloroethane	µg/l	1	ISO 17025	-	-			
Bromomethane	µg/l	1	ISO 17025	-	-			
Vinyl Chloride	µg/l	1	NONE	-	-			
Trichlorofluoromethane	µg/l	1	NONE	-	-			
1,1-Dichloroethene	µg/l	1	ISO 17025	-	-			
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	-	-			
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	-	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	-	-			
1,1-Dichloroethane	µg/l	1	ISO 17025	-	-			
2,2-Dichloropropane	µg/l	1	ISO 17025	-	-			
Trichloromethane	µg/l	1	ISO 17025	-	-			
1,1,1-Trichloroethane	µg/l	1	ISO 17025	-	-			
1,2-Dichloroethane	µg/l	1	ISO 17025	-	-			
1,1-Dichloropropene	µg/l	1	ISO 17025	-	-			
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	-	-			
Benzene	µg/l	1	ISO 17025	-	-			
Tetrachloromethane	µg/l	1	ISO 17025	-	-			
1,2-Dichloropropane	µg/l	1	ISO 17025	-	-			
Trichloroethene	µg/l	1	ISO 17025	-	-			
Dibromomethane	µg/l	1	ISO 17025	-	-			
Bromodichloromethane	µg/l	1	ISO 17025	-	-			
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	-	-			
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	-	-			
Toluene	µg/l	1	ISO 17025	-	-			
1,1,2-Trichloroethane	µg/l	1	ISO 17025	-	-			
1,3-Dichloropropane	µg/l	1	ISO 17025	-	-			
Dibromochloromethane	µg/l	1	ISO 17025	-	-			
Tetrachloroethene	µg/l	1	ISO 17025	-	-			
1,2-Dibromoethane	µg/l	1	ISO 17025	-	-			
Chlorobenzene	µg/l	1	ISO 17025	-	-			
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	-	-			
Ethylbenzene	µg/l	1	ISO 17025	-	-			
p & m-Xylene	µg/l	1	ISO 17025	-	-			
Styrene	µg/l	1	ISO 17025	-	-			
Tribromomethane	µg/l	1	ISO 17025	-	-			
o-Xylene	µg/l	1	ISO 17025	-	-			
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	-	-			
Isopropylbenzene	µg/l	1	ISO 17025	-	-			
Bromobenzene	µg/l	1	ISO 17025	-	-			
n-Propylbenzene	µg/l	1	ISO 17025	-	-			
2-Chlorotoluene	µg/l	1	ISO 17025	-	-			
4-Chlorotoluene	µg/l	1	ISO 17025	-	-			
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	-	-			
tert-Butylbenzene	µg/l	1	ISO 17025	-	-			
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	-	-			
sec-Butylbenzene	µg/l	1	ISO 17025	-	-			
1,3-Dichlorobenzene	µg/l	1	ISO 17025	-	-			
p-Isopropyltoluene	µg/l	1	ISO 17025	-	-			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	-	-			
1,4-Dichlorobenzene	µg/l	1	ISO 17025	-	-			
Butylbenzene	µg/l	1	ISO 17025	-	-			
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	-	-			
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	-	-			
Hexachlorobutadiene	µg/l	1	ISO 17025	-	-			
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	-	-			

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		N/A	NONE	-	-			
VOC % Match	%	N/A	NONE	-	-			

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	-	-			
Phenol	µg/l	0.05	NONE	-	-			
2-Chlorophenol	µg/l	0.05	NONE	-	-			
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	-	-			
1,3-Dichlorobenzene	µg/l	0.05	NONE	-	-			
1,2-Dichlorobenzene	µg/l	0.05	NONE	-	-			
1,4-Dichlorobenzene	µg/l	0.05	NONE	-	-			
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	-	-			
2-Methylphenol	µg/l	0.05	NONE	-	-			
Hexachloroethane	µg/l	0.05	NONE	-	-			
Nitrobenzene	µg/l	0.05	NONE	-	-			
4-Methylphenol	µg/l	0.05	NONE	-	-			
Isophorone	µg/l	0.05	NONE	-	-			
2-Nitrophenol	µg/l	0.05	NONE	-	-			
2,4-Dimethylphenol	µg/l	0.05	NONE	-	-			
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	-	-			
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	-	-			
Naphthalene	µg/l	0.01	ISO 17025	-	-			
2,4-Dichlorophenol	µg/l	0.05	NONE	-	-			
4-Chloroaniline	µg/l	0.05	NONE	-	-			
Hexachlorobutadiene	µg/l	0.05	NONE	-	-			
4-Chloro-3-methylphenol	µg/l	0.05	NONE	-	-			
2,4,6-Trichlorophenol	µg/l	0.05	NONE	-	-			
2,4,5-Trichlorophenol	µg/l	0.05	NONE	-	-			
2-Methylnaphthalene	µg/l	0.05	NONE	-	-			
2-Chloronaphthalene	µg/l	0.05	NONE	-	-			
Dimethylphthalate	µg/l	0.05	NONE	-	-			
2,6-Dinitrotoluene	µg/l	0.05	NONE	-	-			
Acenaphthylene	µg/l	0.01	ISO 17025	-	-			
Acenaphthene	µg/l	0.01	ISO 17025	-	-			
2,4-Dinitrotoluene	µg/l	0.05	NONE	-	-			
Dibenzofuran	µg/l	0.05	NONE	-	-			
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	-	-			
Diethyl phthalate	µg/l	0.05	NONE	-	-			
4-Nitroaniline	µg/l	0.05	NONE	-	-			
Fluorene	µg/l	0.01	ISO 17025	-	-			
Azobenzene	µg/l	0.05	NONE	-	-			
Bromophenyl phenyl ether	µg/l	0.05	NONE	-	-			
Hexachlorobenzene	µg/l	0.05	NONE	-	-			
Phenanthrene	µg/l	0.01	ISO 17025	-	-			
Anthracene	µg/l	0.01	ISO 17025	-	-			
Carbazole	µg/l	0.05	NONE	-	-			
Dibutyl phthalate	µg/l	0.05	NONE	-	-			
Anthraquinone	µg/l	0.05	NONE	-	-			
Fluoranthene	µg/l	0.01	ISO 17025	-	-			
Pyrene	µg/l	0.01	ISO 17025	-	-			
Butyl benzyl phthalate	µg/l	0.05	NONE	-	-			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	-	-			
Chrysene	µg/l	0.01	ISO 17025	-	-			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	-	-			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	-	-			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	-	-			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	-	-			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	-	-			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	-	-			

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Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	-	-			
PCB Congener 52	µg/l	0.02	NONE	-	-			
PCB Congener 101	µg/l	0.02	NONE	-	-			
PCB Congener 118	µg/l	0.02	NONE	-	-			
PCB Congener 138	µg/l	0.02	NONE	-	-			
PCB Congener 153	µg/l	0.02	NONE	-	-			
PCB Congener 180	µg/l	0.02	NONE	-	-			
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	-	-			

U/S = Unsuitable Sample I/S = Insufficient Sample

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

Analytical Report Number : 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

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
Alkalinity in Water	Determination of Alkalinity by discreet analyser (colorimetry). Accredited matrices: SW, PW, GW.	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025

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Analytical Report Number : 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

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
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

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

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

APPENDIX B

Exploratory Hole Data

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BOREHOLE LOG

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Borehole No. **BH1001**

Sheet 1 of 2

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471576 N 174181	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.39mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 29/01/2018 End: 31/01/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B	0.20 - 0.40				MADE GROUND: Grey ASPHALT.	0.10	38.29	
		ES	0.20				MADE GROUND: Dark grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and brick with low cobble content.	0.40	37.99	
		B	0.40 - 0.60					0.60	37.79	
		ES	0.50				MADE GROUND: Brown sandy silty angular fine to coarse GRAVEL of siliceous material and brick with medium cobble content of brick.	0.70	37.69	
1		B	0.70 - 1.20				MADE GROUND: Grey CONCRETE.	(0.80)		1
		ES	1.20	S 4			MADE GROUND: Soft dark greyish brown slightly gravelly sandy CLAY. Gravel is angular fine to coarse of siliceous material, concrete and brick.	1.50	36.89	
	2	SPT	1.20 - 1.65				Soft becoming very soft green slightly sandy CLAY with a moderate organic odour. (ALLUVIUM)			
2		D	2.00							2
		ES	2.00 - 2.45							
		UT100								
		D	2.50					(2.50)		
3		D	3.00	S<1						3
	1	SPT	3.00 - 3.45							
	1						Loose grey silty very sandy angular to subangular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.00	34.39	
4		B	4.00 - 4.45	S 5						4
		D	4.00					(1.00)		
		SPT C	4.00 - 4.45							
5		B	5.00 - 5.45	C 25			Medium dense grey sandy silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	5.00	33.39	5
		D	5.00							
		SPT C	5.00 - 5.45					(1.50)		
6		D	6.00							6
		SPT C	6.50 - 6.95	C 27			Medium dense light brown sandy becoming very sandy silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	6.50	31.89	
7		D	7.00							7
	2							(2.50)		
8										8

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Cable percussion drilled using 250mm diameter clay cutter and bailer 1.20-1.70m and 200mm diameter clay cutter and bailer 1.70-12.00m.
CASING: 250mm diameter to 1.70m. 200mm diameter to 10.50m.
GROUNDWATER: Encountered at 4.00m, and rose to 3.40m after 20 minutes; and at 8.00m and rose to 1.70m after 20 minutes.
INSTALLATION: Borehole was sealed with bentonite pellets: 7.00-12.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 7.00-1.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 1.00-0.20m. Flush 150mm steel cover set in concrete: Flush cover set in concrete: 0.20-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Borehole was installed on 31/1/18. Clean drilling techniques; bentonite seal from 1.50-2.00m. PID readings taken on all environmental samples. Results: 0.20m - 0.10ppm; 0.50m -0.20ppm; 1.20m - 0.20.ppm; 2.00m - 0.40ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
30/01/18	4.00	4.00	3.40
30/01/18	8.00	7.60	1.70

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
29/01/2018 17:00	0.05		
30/01/2018 08:00	0.05		

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BOREHOLE LOG

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Borehole No. **BH1001**

Sheet 2 of 2

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471576 N 174181	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.39mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 29/01/2018 End: 31/01/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		D SPT	8.00 8.00 - 8.45	S 10			Medium dense light brown sandy becoming very sandy silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) *(continued from previous sheet)* 8.00m: Firm grey gravelly sandy clay. Gravel angular to sub-rounded fine to medium.			
9		D	9.00				CHALK recovered as: light brown and off white slightly sandy slightly silty angular to sub-angular fine to coarse GRAVEL and COBBLES of weak low to medium density chalk. (WHITE CHALK SUBGROUP)	9.00	29.39	9
		SPT	9.50 - 9.95	S 6						
10		D	10.00					(3.00)		10
11		D SPT	11.00 11.00 - 11.45	S 12						11
12		D	12.00				Borehole completed at 12.00m	12.00	26.39	12
13										13
14										14
15										15
16										16
17										17

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
30/01/2018 17:00	12.00	10.50	3.60
31/01/2018 08:00	12.00	10.50	

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INSPECTION PIT LOG

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Pit No **BH1002**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471596 N 174164 Level: 38.30mAOD	Date 29/01/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 0.50m x 0.50m Depth 0.80m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Grey ASPHALT.	(0.10)		
		B	0.10 - 0.15		MADE GROUND: Dark grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and brick.	0.10	38.20	
		ES	0.15		MADE GROUND: Grey CONCRETE.	0.15	38.15	
						(0.65)		
					Inspection pit completed at 0.80m	0.80	37.50	
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.80m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1002A. PID readings taken on all environmental samples. Results: 0.15m - 0.20ppm.

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INSPECTION PIT LOG

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Pit No **BH1002A**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471600 N 174161 Level: 38.28mAOD	Date 30/01/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 0.50m x 0.50m Depth 0.80m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Grey ASPHALT.	(0.10)		
					MADE GROUND: Grey to brown sandy slightly silty angular fine to coarse GRAVEL of siliceous material and brick with low cobble content and rare possible asbestos containing material.	0.10	38.18	
		ES	0.50			(0.70)		
					0.80m: Concrete across base of pit.	0.80	37.48	
					Inspection pit completed at 0.80m			
1								
2								

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.80m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1002B. PID readings taken on all environmental samples. Results: 0.50m - 0.00ppm.

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INSPECTION PIT LOG

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Pit No **BH1002B**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471592 N 174149 Level: 38.37mAOD	Date 30/01/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 0.50m Depth 0.45m 0.50m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Grey ASPHALT.	(0.10)		
					MADE GROUND: Red brick MASONRY.	0.10	38.27	
						(0.25)		
					MADE GROUND: Grey CONCRETE.	0.35	38.02	
						(0.10)		
					0.450m: 1no. metal pipe approximately 50mm diameter, broken with surround of light grey to brown sandy slightly silty angular fine gravel of siliceous material.	0.45	37.92	
					Inspection pit completed at 0.45m			
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.45m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Metal pipe in base of pit. Relocated as BH1002C.

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BOREHOLE LOG

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Borehole No. **BH1002C**

Sheet 1 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471591 N 174147	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.40mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 31/01/2018 End: 02/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B ES	0.10 - 0.50 0.20				MADE GROUND: Grey ASPHALT.	0.10	38.30	
							MADE GROUND: Brown tending to grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and red brick with medium cobble content. Cobbles are angular of brick.	0.30	38.10	
		ES B	0.60 0.65 - 1.10				MADE GROUND: Red brick MASONRY.	0.50	37.90	
							MADE GROUND: Light brown locally grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and red brick.	0.65 (0.45)	37.75	
1		ES D	1.00 1.20				MADE GROUND: Dark greyish brown slightly gravelly sandy CLAY. Gravel is angular fine to coarse of siliceous material, concrete and red brick.	1.10	37.30	1
	2	ES SPT	1.50 1.50 - 1.65	S 6			Very soft dark grey slightly sandy CLAY with occasional partially decomposed organic material (<5mm). (ALLUVIUM)	(1.20)		
2								2.30	36.10	2
		ES UT100	2.50 2.50 - 2.95				Soft to firm greenish grey slightly sandy CLAY. (ALLUVIUM)			
3		D	3.00					(1.50)		3
	1	SPT	3.50 - 3.95	S 31						
	1	B	3.80 - 4.30				Dense grey sandy silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.80	34.60	
4								(1.30)		4
		B SPT C	4.50 - 5.00 4.50 - 4.95	C 34						
5								5.10	33.30	5
							Medium dense locally dense light brown sandy tending to very sandy slightly silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)			
		B SPT C	5.50 - 6.00 5.50 - 5.95	C 27						
6										6
7		B SPT C	7.00 - 7.50 7.00 - 7.45	C 30				(5.00)		7
8	2									8

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Cable percussion drilled using 200mm diameter clay cutter and bailer 1.20-10.50m and 150mm diameter clay cutter and bailer 10.50-35.00m.
CASING: 250mm diameter to 1.70m, 200mm diameter to 10.50m, 150mm diameter to 24.90m.
GROUNDWATER: Encountered at 4.00m, and rose to 3.40m after 20 minutes; and at 8.00m and rose to 1.70m after 20 minutes.
INSTALLATION: Borehole was backfilled with bentonite pellets: 35.00-7.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 7.00-2.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 2.00-0.20m. Flush 150mm steel cover set in concrete: Flush cover set in concrete: 0.20-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Clean drilling techniques; bentonite seal from 1.50-2.00m. PID readings taken on all environmental samples. Results: 0.20m - 0.00ppm; 0.60m -1.50ppm; 1.00m - 0.00.ppm; 1.50m - 4.50ppm; 2.50m - 0.30ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
31/01/18	4.00	4.00	3.40
01/02/18	8.00	8.00	1.70

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
31/01/2018 17:00	7.00	6.90	3.20
01/02/2018 08:00	7.00	6.90	

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BOREHOLE LOG

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Borehole No. **BH1002C**

Sheet 2 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471591 N 174147	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.40mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 31/01/2018 End: 02/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B SPT C	8.50 - 9.00 8.50 - 8.95	C 21			Medium dense locally dense light brown sandy tending to very sandy slightly silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) *(continued from previous sheet)*			
9										9
10		B SPT C	10.00 - 10.50 10.00 - 10.45	C 8			CHALK recovered as light brown and off white slightly sandy silty angular to sub-angular fine to coarse GRAVEL with rare flints. Clasts are very weak low to medium dense. (Dc) (WHITE CHALK SUBGROUP)	10.10	28.30	10
11		U100	11.50 - 11.95					(1.90)		11
12		D	12.00				CHALK recovered as off white sandy silty angular to sub-angular fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP)	12.00	26.40	12
13		SPT	13.00 - 13.45	S 8						13
14		D	14.00							14
		U100	14.50 - 14.95							
15		D	15.00							15
16		SPT	16.00 - 16.45	S 33						16
17		D	17.00							17
		U100	17.50 - 17.95							

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)

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BOREHOLE LOG

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Borehole No. **BH1002C**

Sheet 3 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471591 N 174147	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.40mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 31/01/2018 End: 02/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
18		D	18.00				CHALK recovered as off white sandy silty angular to sub-angular fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP) *(continued from previous sheet)*			
19		SPT	19.00 - 19.45	S 46						
20		U100	20.50 - 20.95							
21		D	21.00							
22		SPT	22.00 - 22.45	S*55						
23		B	23.50 - 24.00					(23.00)		
24										
25		SPT	25.00 - 25.45	S*188						
26		SPT	26.50 - 26.95	S*81						
27										

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
01/02/2018 17:00	25.00	24.90	3.80
02/02/2018 08:00	25.00	24.90	3.60

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BOREHOLE LOG

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Borehole No. **BH1002C**

Sheet 4 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471591 N 174147	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.40mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 31/01/2018 End: 02/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
28		SPT	28.00 - 28.45	S*176			CHALK recovered as off white sandy silty angular to sub-angular fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP) *(continued from previous sheet)*			
29		SPT	29.50 - 29.95	S*107						
30										
31		SPT	31.00 - 31.45	S*103						
32		SPT	32.50 - 32.95	S*120						
33										
34		SPT	34.00 - 34.45	S*83						
35		D	35.00				Borehole completed at 35.00m	35.00	3.40	
36										
37										

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
02/02/2018 17:00	35.00	34.90	3.60

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INSPECTION PIT LOG

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Pit No **BH1003**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471556 N 174145 Level: 38.57mAOD	Date 01/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 0.50m Depth 0.80m 0.50m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Grey ASPHALT.	(0.10)		
		B	0.10 - 0.25		MADE GROUND: Brown to grey slightly gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.10	38.47	
		D ES	0.20			(0.15)		
					MADE GROUND: Red brick MASONRY.	0.25	38.32	
						(0.20)		
					MADE GROUND: Brown to grey gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.45	38.12	
					MADE GROUND: Grey CONCRETE.	(0.10)		
						0.55	38.02	
		B	0.65 - 0.80		MADE GROUND: Brown to grey gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	(0.10)		
						0.65	37.92	
		D ES	0.80		0.80m: Clay pipe in north face of inspection pit. Intact (approximately 100mm). Inspection pit completed at 0.80m	(0.15)		
						0.80	37.77	
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.80m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Borehole terminated due to clay pipe at 0.80m. Relocated as BH1003A. PID readings taken on all environmental samples. Results: 0.20m - 0.30ppm; 0.80m -0.20ppm.

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Pit No **BH1003A**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471557 N 174145 Level: 38.56mAOD	Date 02/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: m Depth 1.50m m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Grey ASPHALT.	(0.10)		
					MADE GROUND: Brownish grey slightly gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.10 (0.10)	38.46	
					MADE GROUND: Red brick MASONRY.	0.20 (0.20)	38.36	
					MADE GROUND: Brownish grey gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.40 (0.30)	38.16	
					MADE GROUND: Grey CONCRETE.	0.70 (0.20)	37.86	
		B	0.90 - 1.20		MADE GROUND: Loose brownish grey gravelly slightly silty (ashy) SAND with low cobble content. Gravel is angular fine to coarse of siliceous material and brick. Cobbles are angular of brick.	0.90	37.66	
1		D ES	1.00					1
		SPT	1.20 - 1.65		1.20-1.50m: Concrete footing in north face of the pit.	(0.60)		
					Inspection pit completed at 1.50m	1.50	37.06	
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.15m. Cable percussion drilled using 200mm diameter clay cutter and bailer 1.20-1.50m

CASING: None used.

GROUNDWATER: Groundwater seepage encountered at 0.50m. No rise is record.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1003B. PID readings taken on all environmental samples. Results: 1.00m - 0.30ppm.

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INSPECTION PIT LOG

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Pit No **BH1003B**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471544 N 174148 Level: 38.71mAOD	Date 02/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 0.50m, Depth 0.70m, 0.60m	Scale 1 : 12.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
		C	0.05 - 0.70		MADE GROUND: Black ASPHALT.			
					MADE GROUND: Dark grey CONCRETE.	0.08	38.63	
						(0.32)		
					MADE GROUND: Light grey CONCRETE.	0.40	38.31	
						(0.30)		
					Inspection pit completed at 0.70m	0.70	38.01	
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels: 0.00-0.05m. Borehole advanced using 300mm diameter coring barrel: 0.05-0.70m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with arisings and ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1003C.

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INSPECTION PIT LOG

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Pit No **BH1003C**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471544 N 174137 Level: 38.76mAOD	Date 05/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 0.50m Depth 0.50m (0.50m)	Scale 1 : 12.5
Client: SSE Plc			Logged By TH/MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
		C	0.00 - 0.20		MADE GROUND: Dark grey ASPHALT.	(0.10)		
		B	0.10		MADE GROUND: Brown very sandy slightly clayey angular to sub-rounded fine to coarse GRAVEL mixed lithologies including concrete, red brick, chalk and siliceous material.	0.10	38.66	
		D ES	0.20					
		B	0.30 - 0.45			(0.40)		
					0.40-0.47m: Clayey.			
		D ES	0.45					
					0.50m: Concrete across base of pit.	0.50	38.26	
					Inspection pit completed at 0.50m			
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels: 0.00-0.05m. Borehole advanced using 300mm diameter coring barrel utilizing water flush: 0.05-0.20m.

Hand dug inspection pit: 0.20-050m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: None used.

REMARKS: Unable to advance hole through concrete at 0.50. Relocated as BH1003D. Inspection pit covered and fenced off to be continued using rotary drilling techniques: See BH2004. PID readings taken on all environmental samples. Results: 0.20m -0.20ppm; 0.45m -0.40ppm.

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INSPECTION PIT LOG

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Pit No **BH1003D**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471535 N 174144 Level: 38.72mAOD	Date 05/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 0.60m, Depth 0.05m, 0.50m	Scale 1 : 12.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Dark grey ASPHALT. 0.05m: Concrete across base of inspection pit. Inspection pit completed at 0.05m	0.05	38.67	

DRAFT

EQUIPMENT: Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels: 0.00-0.05m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1003E.

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BOREHOLE LOG

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Borehole No. **BH1003E**

Sheet 1 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471544 N 174164	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.71mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 05/02/2018 End: 08/02/2018	Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
							MADE GROUND: Black ASPHALT.	0.08	38.63	
		B ES	0.30 - 0.40 0.30				MADE GROUND: Grey sandy angular fine to coarse GRAVEL of igneous material.	0.15 (0.40)	38.56	
		B ES	0.60 - 0.70 0.60				MADE GROUND: Reddish brown very sandy silty angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material.	0.55	38.16	
1		B ES	1.00 - 1.10 1.00				0.40-0.50m: 2no. clay pipes. Broken and infilled with sediment. Orientation approximately East to West.	0.90	37.81	1
		B ES SPT	1.30 - 1.40 1.30 1.50 - 1.95	S 2			MADE GROUND: Light brown very sandy clayey angular to sub-rounded fine to coarse GRAVEL of mixed lithologies including chalk, red brick, and siliceous material.	1.20 (0.70)	37.51	
2		D ES	2.00				MADE GROUND: Off white and light brown sandy very clayey angular to sub-rounded COBBLES of chalk with some very silty angular to sub-angular fine to coarse gravel of chalk and siliceous material.	1.90	36.81	2
		UT100	2.50 - 2.95				MADE GROUND: Light brown sandy very clayey angular to sub-rounded fine to coarse GRAVEL of red brick, chalk and siliceous material locally tending to slightly sandy gravelly clay with rare bone and clay pot fragments (<100mm). 1.50-1.90m: Very loose.	(0.80) 2.70	36.01	
3							Very soft bluish grey mottled greenish grey silty CLAY with rare shell fragments (<5mm), rare pockets (<30mm) of dark grey peat and a moderate organic odour. (ALLUVIUM)	(0.60) 3.30	35.41	3
		B SPT C	3.50 - 4.00 3.50 - 3.95	C 7			Very soft greyish brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse siliceous material. (ALLUVIUM) 3.00-3.30m: Tending to sandy, very clayey gravel.	(1.20)		
4		D	4.00				Loose greyish brown very sandy slightly silty angular to sub-rounded, fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)			4
		B SPT C	4.50 - 5.00 4.50 - 4.95	C 30			Dense grey very sandy silty angular to sub-angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.50	34.21	
5		D	5.00							5
		B SPT C	5.50 - 6.00 5.50 - 5.95	C 30						
6		D	6.00					(4.00)		6
7		B D SPT C	7.00 - 7.45 7.00 7.00 - 7.45	C 32			7.00-7.45m: Locally tending to very gravelly silty SAND with low cobble content. Cobbles are sub-rounded siliceous material.			7
8										8

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.50m. Cable percussion drilled using 200mm diameter clay cutter and bailer 1.50-10.50m and 150mm diameter clay cutter and bailer 10.50-35.00m..
CASING: 250mm diameter to 1.70m, 200mm diameter to 12.80m, 150mm diameter to 26.50m.
GROUNDWATER: Encountered at 4.00m, and rose to 3.40m after 20 minutes; and at 8.00m and rose to 1.70m after 20 minutes.
INSTALLATION: Borehole was backfilled with bentonite pellets: 35.00-6.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 6.00-1.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 1.00-0.40m. Flush 150mm steel cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Clean drilling techniques; bentonite seal from 1.50-2.40m. PID readings taken on all environmental samples. Results: 0.30m - 1.10ppm; 0.60m -1.60ppm; 1.00m - 1.10.ppm; 1.30m - 0.30ppm; 2.00m - 0.00ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
05/02/2018 17:00	1.50		
06/02/2018 08:00	1.50		
08/02/2018 08:00			

CC BH LOG C5925.GPJ CCGI GINT STD AGS 4_0.GDT 9/3/18

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BOREHOLE LOG

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Borehole No. **BH1003E**

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471544 N 174164	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.71mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 05/02/2018 End: 08/02/2018	Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		D	8.00				Dense grey very sandy silty angular to sub-angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) *(continued from previous sheet)*			
		B	8.50 - 8.95	C 22			8.00-8.10m: Light brown slight sandy gravelly silty CLAY. Gravel is angular to sub-rounded fine to coarse chalk.	8.50	30.21	
		SPT C					Medium dense light brown very sandy silty angular to rounded fine to coarse GRAVEL of siliceous material and chalk. (KEMPTON PARK GRAVEL)			
9		D	9.00							9
								(2.60)		
10		D	10.00	C 30						10
		SPT C	10.00 - 10.45							
11		D	11.00							11
							Soft light brown locally light greyish brown slightly sandy gravelly silty CLAY. Gravel is angular to rounded fine to coarse siliceous material and chalk. (KEMPTON PARK GRAVEL)	11.10	27.61	
		SPT	11.50 - 11.95	S 9				(0.75)		
12		D	12.00				Medium dense slightly sandy very silty angular to sub-rounded fine to coarse GRAVEL of siliceous material and chalk. (KEMPTON PARK GRAVEL)	11.85	26.86	12
								(0.65)		
		B	12.50 - 12.80				CHALK recovered as off white slightly sandy very silty sub-angular to sub-rounded fine to coarse Gravel with rare rinded flints. Clasts are very weak medium and high density. (WHITE CHALK SUBGROUP)	12.50	26.21	
13		B	13.00 - 13.41							13
		D	13.00							
14		D	14.00							14
		SPT	14.50 - 14.95	S 17						
15		D	15.00							15
16		D	16.00							16
		U100	16.00 - 16.45							
17		D	17.00							17
		SPT	17.50 - 17.95	S 19			17.50-17.95m: Occasional flints.			

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 17:00	11.50	11.50	3.50
07/02/2018 08:00	11.50	11.50	3.00

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BOREHOLE LOG

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Borehole No. **BH1003E**

Sheet 3 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471544 N 174164	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.71mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 05/02/2018 End: 08/02/2018	Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
18		D	18.00				CHALK recovered as off white slightly sandy very silty sub-angular to sub-rounded fine to coarse Gravel with rare rinded flints. Clasts are very weak medium and high density. (WHITE CHALK SUBGROUP) *(continued from previous sheet)*	(11.50)		
19		D U100	19.00 19.00 - 19.45							
20		D	20.00				20.00-20.45m: Locally speckled black.			
		SPT	20.50 - 20.95	S 28						
21		D	21.00							
22		B D U100	22.00 - 22.45 22.00 22.00 - 22.45							
23		D	23.00							
		SPT	23.50 - 23.95	S*167						
24		D	24.00				CHALK recovered as off white slightly sandy very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP)	24.00	14.71	
25		D SPT	25.00 25.00 - 25.45	S*88						
26		D	26.00							
		SPT	26.50 - 26.95	S*185						
27		D	27.00							

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
07/02/2018 17:00	26.50	26.50	5.90

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BOREHOLE LOG

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Borehole No. **BH1003E**

Sheet 4 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471544 N 174164	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.71mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 05/02/2018 End: 08/02/2018	Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
28		D SPT	28.00 28.00 - 28.45	S*130			CHALK recovered as off white slightly sandy very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP) *(continued from previous sheet)*			
29		D	29.00							
		SPT	29.50 - 29.95	S*200				(11.00)		
30		D	30.00							
31		D SPT	31.00 31.00 - 31.45	S*115			31.00-34.00m: Occasional rinded flints			
32		D	32.00							
		SPT	32.50 - 32.95	S*88						
33		D	33.00							
34		D SPT	34.00 34.00 - 34.45	S*97						
35		D	35.00				Borehole completed at 35.00m	35.00	3.71	
36										
37										

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)

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BOREHOLE LOG

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Borehole No. **BH1004**

Sheet 1 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471494 N 174112	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.31mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 05/02/2018 End: 08/02/2018	Logged By MM/TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
							Black ASPHALT.	0.10	38.21	
		ES	0.30				MADE GROUND: Dark grey mottled black gravelly silty SAND. Gravel is sub-angular, fine to coarse siliceous material and clinker.	0.40	37.91	
		ES	0.60				MADE GROUND: Brown and greyish brown gravelly silty SAND with low cobble content and occasional fragments of wood and ceramics. Gravel is angular fine to coarse of red brick and concrete. Cobbles are angular of red brick.	(0.80)		
1		ES	1.00							1
		ES	1.20				MADE GROUND: Soft black gravelly CLAY. Gravel is angular, fine to medium red brick.	1.20	37.11	
		B	1.30 - 1.70					(0.50)		
		SPT	1.50 - 1.95	S 1				1.70	36.61	
		ES	1.70				Very soft bluish grey and brownish grey silty CLAY with frequent pockets (<30mm) of partially decomposed organic material and a moderate organic odour. (ALLUVIUM)			
2		B	2.00 - 2.40					(0.70)		2
		ES	2.00							
		B	2.50 - 3.00	C 24			Medium dense light brown very sandy silty angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	2.40	35.91	
		SPT C	2.50 - 2.95				2.40-8.10m: Partial loss of fines.			
3										3
		B	3.50 - 4.00	C 21						
		SPT C	3.50 - 3.95							
4										4
		B	4.50 - 5.00	C 22						
		SPT C	4.50 - 4.95							
5								(5.70)		5
		B	5.50 - 6.00	C 29						
		SPT C	5.50 - 5.95							
6										6
7		B	7.00 - 7.50	C 25						7
		SPT C	7.00 - 7.45							
8										8

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Cable percussion drilled using 250mm diameter clay cutter and bailer 1.20-2.00m and 200mm diameter clay cutter and bailer 1.20-9.00m, and 150mm diameter clay cutter and bailer 9.00-35.00m.
CASING: 250mm diameter to 2.00m, 200mm diameter to 9.00m, 150mm diameter to 35.00m.
GROUNDWATER: None recorded, however was added to assist drilling.
INSTALLATION: Borehole was backfilled with bentonite pellets: 35.00-7.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 7.00-1.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 1.00-0.40m. Flush 150mm steel cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Clean drilling techniques; bentonite seal from 1.50-2.40m. PID readings taken on all environmental samples. Results: 0.30m - 0.30ppm; 0.60m -0.20ppm; 1.00m - 0.40ppm; 1.20m - 2.30ppm; 1.70m - 0.20ppm; 2.00m - 1.00ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
05/02/2018 17:00	2.50	2.00	
06/02/2018 08:00	2.50	2.00	

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BOREHOLE LOG

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Borehole No. **BH1004**

Sheet 2 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471494 N 174112	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.31mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 05/02/2018 End: 08/02/2018	Logged By MM/TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B	8.20 - 8.50				CHALK off white locally speckled black recovered as very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are very weak and weak medium density. (Dc) (WHITE CHALK SUBGROUP)	8.10	30.21	
		B	8.50 - 9.00	S 7						
		SPT	8.50 - 8.95							
9										9
10		U100	10.00 - 10.45							10
		D	10.50							
11										11
		SPT	11.50 - 11.95	S 8						
12										12
		D	12.50							
13		U100	13.00 - 13.45							13
		D	13.50							
14								(12.40)		14
		SPT	14.50 - 14.95	S 19						
15										15
		D	15.50							
16		U100	16.00 - 16.45							16
		D	16.50							
17										17
		SPT	17.50 - 17.95	S 34						

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)

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Borehole No. **BH1004**

Sheet 3 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471494 N 174112	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.31mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 05/02/2018 End: 08/02/2018	Logged By MM/TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
18							CHALK off white locally speckled black recovered as very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are very weak and weak medium density. (Dc) (WHITE CHALK SUBGROUP) *(continued from previous sheet)*			
		D	18.50							
19		B	19.00 - 19.50							
20										
		SPT	20.50 - 20.95	S*158			CHALK recovered as off white very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are weak medium and high density. (Dc) (WHITE CHALK SUBGROUP)	20.50	17.81	
21		D	21.00							
22		SPT	22.00 - 22.45	S*75						
23		D	23.00							
		SPT	23.50 - 23.95	S*97						
24										
		D	24.50							
25		SPT	25.00 - 25.45	S*94						
26		D	26.00							
		SPT	26.50 - 26.95	S*107						
27										

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 17:00	20.50	20.40	4.80
07/02/2018 08:00	20.50	20.40	

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Borehole No. **BH1004**

Sheet 4 of 4

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471494 N 174112	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.31mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 05/02/2018 End: 08/02/2018	Logged By MM/TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
28		D SPT	28.00 28.00 - 28.45	S*136			CHALK recovered as off white very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are weak medium and high density. (Dc) (WHITE CHALK SUBGROUP) *(continued from previous sheet)*	(14.50)		
29		D	29.00							
		SPT	29.50 - 29.95	S*150						
30		D	30.50							
31		SPT	31.00 - 31.45	S*120			31.00-35.00m: Occasional rinded flints. 32.5m: Rinded flint cobbles.			
32		D	32.00							
		SPT	32.50 - 32.95	S**						
33		B	33.50 - 34.00							
34		SPT	34.00 - 34.45	S*103						
35		D	35.00				Borehole completed at 35.00m	35.00	3.31	
36										
37										

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
07/02/2018 17:00	28.00	28.00	3.10
08/02/2018 08:00	28.00	28.00	
08/02/2018 17:00	35.00	35.00	3.10

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BOREHOLE LOG

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Borehole No. **BH1005**

Sheet 1 of 2

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471538 N 174120	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.69mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 31/01/2018 End: 01/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
							MADE GROUND: Grey ASPHALT.	0.10	38.59	
		B ES	0.20 - 0.40 0.30				MADE GROUND: Dark grey slightly silty angular fine to coarse GRAVEL of siliceous material and brick.	0.20 (0.40)	38.49	
		B ES	0.60 - 0.90 0.70				MADE GROUND: Reddish brown and grey sandy slightly silty (ashy) angular fine to coarse GRAVEL of siliceous material and brick with medium cobble content. Cobbles are angular of brick.	0.60	38.09	
1		B ES SPT	0.90 - 1.20 1.00 1.20 - 1.65	S 1			MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material, sandstone and brick with low cobble content. Cobbles are angular of brick.	0.90	37.79	1
							MADE GROUND: Very soft dark greyish brown slightly gravelly sandy CLAY. Gravel is angular fine to coarse of siliceous material, concrete and brick.	(1.00)		
2		D ES UT100 D	2.00 2.00 - 2.45 2.50				Very soft greenish grey slightly sandy silty CLAY. (ALLUVIUM)	1.90 (0.90)	36.79	2
		D	2.80				Very soft grey mottled brown slightly gravelly sandy CLAY. Gravel is sub-angular fine to medium of siliceous material. (ALLUVIUM)	2.80 3.00	35.89 35.69	
3		B SPT C	3.00 - 3.50 3.00 - 3.45	S 11			Medium dense light brown to grey very sandy slightly silty angular to sub-rounded GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)			3
4		B SPT C	4.00 - 4.50 4.00 - 4.45	S 25						4
5		B SPT C	5.00 - 5.50 5.00 - 5.45	S 30						5
6								(6.70)		6
		B SPT C	6.50 - 7.00 6.50 - 6.95	S 33			6.50-6.95m: Very dense.			
7										7
8										8

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Cable percussion drilled using 250mm diameter clay cutter and bailer 1.20-2.00m and 200mm diameter clay cutter and bailer 1.20-9.00m, and 150mm diameter clay cutter and bailer 9.00-35.00m.
CASING: 250mm diameter to 2.00m, 200mm diameter to 9.00m, 150mm diameter to 35.00m.
GROUNDWATER: None recorded, however was added to assist drilling.
INSTALLATION: Borehole was backfilled with bentonite pellets: 12.00-7.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 7.00-2.80m. 50mm ID HDPE plain pipe with bentonite pellet seal: 2.80-0.20m. Flush 150mm steel cover set in concrete: 0.20-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Clean drilling techniques; bentonite seal from 1.50-2.00m. PID readings taken on all environmental samples. Results: 0.30m - 0.00ppm; 0.70m -0.20ppm; 1.00m - 0.50ppm; 2.00m - 0.20ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
31/01/2018 17:00	5.50	4.00	
01/02/2018 08:00	5.50	6.10	

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BOREHOLE LOG

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Borehole No. **BH1005**

Sheet 2 of 2

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471538 N 174120	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU		Level: 38.69mAOD	Scale 1 : 50.00
Client: SSE Plc		Dates: Start: 31/01/2018 End: 01/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B SPT C	8.00 - 8.45	S 20			Medium dense light brown to grey very sandy slightly silty angular to sub-rounded GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) *(continued from previous sheet)*			
							8.50-9.70m: Very sandy.			
9		SPT	9.50 - 9.95	S 7						
		D	9.70				CHALK recovered as off white locally speckled black very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are very weak and weak medium density. (Dc) (WHITE CHALK SUBGROUP)	9.70	28.99	
10								(2.30)		
11		B U100	11.00 - 11.45							
		SPT	11.50 - 11.95	S 36						
12							Borehole completed at 12.00m	12.00	26.69	
13										
14										
15										
16										
17										

DRAFT

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)

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ROTARY BOREHOLE LOG

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Borehole No. **BH2001**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471586 N 174141	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU		Level: 38.42mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 13/02/2018 End: 13/02/2018	Logged By TH

(m)	Water Levels	Core Run, Samples & Testing: No/Type	Depth (m)	Result	Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAD)	Legend
								MADE GROUND: Dark grey ASPHALT.	0.08	38.34	
								MADE GROUND: Light brown very sandy angular fine to coarse GRAVEL of siliceous material and brick.	0.30	38.12	
								MADE GROUND: Dark grey sandy silty (ashy) GRAVEL with low cobble content. Cobbles are angular of red brick.	0.55	37.87	
		C	0.60 - 1.20		C	100% 33% 33%		MADE GROUND: CONCRETE.	0.80	37.62	
		ES	0.80					MADE GROUND: Dark grey very sandy very clayey angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material.	0.90	37.52	
1		D	0.90						(0.40)		1
		ES	1.00					MADE GROUND: Very soft light greyish brown locally mottled orangish brown slightly gravelly slightly sandy CLAY. Gravel is sub-angular to sub-rounded fine to coarse of red brick and siliceous material.	1.30	37.12	
		D	1.40					Very soft dark bluish green locally mottled light grey CLAY with rare partially decomposed organic material (<5mm) and occasional comminuted shell fragments (<3mm). (ALLUVIUM)	(1.10)		
2		D	2.00						2.40	36.02	2
								Very soft bluish green mottled brown slightly gravelly slightly sandy CLAY with rare partially decomposed organic material (5mm) and a moderate organic odour. Gravel is sub-rounded to rounded fine to coarse siliceous material. (ALLUVIUM)	(1.20)		
3		D	3.00						3.60	34.82	3
								Light brown very sandy slightly silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) 3.60-3.80m: Very clayey.	(1.40)		
4		B	4.00 - 5.00						5.00	33.42	4
								Borehole completed at 5.00m			
5											5
6											6

DRAFT

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.
METHOD: Hand dug inspection pit: See WS1008. Waterflush rotary coring (150mm): 0.60-1.20m. Dynamic sampling using 128mm and 113mm sample barrels: 1.20-5.00m.
CASING: 140mm diameter to 4.00m.
GROUNDWATER: None encountered prior to using water flush.
INSTALLATION: Bentonite seal 5.00-4.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 4.00-3.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 3.00-2.80m, bentonite pellet seal: 2.80-0.60m and gravel 0.60-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Drilled at location of WS1008. PID readings taken on all environmental samples. Results: 0.80m - 3.60ppm; 1.00m - 4.70ppm; 1.50m - 4.80ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
13/02/2018 10:30	5.00	4.00	

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ROTARY BOREHOLE LOG

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Borehole No. **BH2002**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471577 N 174143	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU		Level: 38.37mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 12/02/2018 End: 12/02/2018	Logged By TH

(m)	Water Levels	Core Run, Samples & Testing: No/Type	Depth (m)	Result	Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAD)	Legend
								MADE GROUND: Dark grey ASPHALT.	0.10	38.27	
		C	0.25 - 1.20		C	89% 13% 13%		MADE GROUND: Grey and brown very sandy silty angular fine to coarse GRAVEL of siliceous material and red brick.	0.25	38.12	
								MADE GROUND: CONCRETE. 0.37-1.00m: recovered as very sandy silty angular fine to coarse gravel of concrete.	(0.75)		
1		ES	1.00					MADE GROUND: Off white and dark grey slightly sandy very silty angular GRAVEL of chalk. 1.10m: 1no. bone fragment (<30mm).	1.00	37.37	1
									(0.45)		
		ES	1.50					Very soft dark bluish green CLAY with rare partially decomposed organic material (<5mm) and occasional comminuted shell fragments (<3mm). (ALLUVIUM)	1.45	36.92	
		D	1.60					1.45-1.60m: Light brown. Occasional partially decomposed organic material (<5mm).	(0.65)		
2		ES	2.20					Very soft bluish green mottled light grey slightly sandy silty calcareous CLAY with frequent lenses (<1mm) of light grey silt. (ALLUVIUM)	2.10	36.27	2
		D	2.30						(0.80)		
3		D	3.00					Very soft dark bluish green slightly gravelly slightly sandy CLAY with rare partially decomposed organic material (<5mm) and a slight organic odour. Gravel is sub-rounded fine to coarse siliceous material. (ALLUVIUM)	2.90	35.47	3
									(0.70)		
								Light brown very sandy slightly slightly silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) 3.60-3.80m: Very clayey.	3.60	34.77	
4		B	4.00 - 5.00						(1.40)		4
5								Borehole completed at 5.00m	5.00	33.37	5
6											6

DRAFT

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.
METHOD: Hand dug inspection pit: See WS1009. Waterflush rotary coring (150mm): 0.25-1.20m. Dynamic sampling using 128mm and 113mm sample barrels: 1.20-5.00.
CASING: 140mm diameter to 4.00m.
GROUNDWATER: None encountered prior to using water flush.
INSTALLATION: Bentonite seal 5.00-4.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 4.00-3.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 3.00-2.80m, bentonite pellet seal: 2.80-0.60m and gravel 0.60-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Drilled at location of WS1009. PID readings taken on all environmental samples. Results: 1.00m - 4.00ppm; 1.50m - 3.50ppm; 2.20m - 4.80ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
12/02/2018 17:00	5.00	4.00	

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ROTARY BOREHOLE LOG

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Borehole No. **BH2003**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471557 N 174145	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU		Level: 38.56mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 12/02/2018 End: 12/02/2018	Logged By TH

(m)	Water Levels	Core Run, Samples & Testing: No/Type	Depth (m)	Result	Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAD)	Legend
								MADE GROUND: Grey ASPHALT.	0.10	38.46	
								MADE GROUND: Brownish grey slightly gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.20	38.36	
								MADE GROUND: Red brick MASONRY.	0.40	38.16	
								MADE GROUND: Brownish grey gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	(0.30) 0.70	37.86	
1								MADE GROUND: Grey CONCRETE.	0.90	37.66	1
								MADE GROUND: Loose brownish grey gravelly slightly silty (ashy) SAND with low cobble content. Gravel is angular fine to coarse of siliceous material and brick. Cobbles are angular of brick.	(0.60) 1.50	37.06	
		C	1.50 - 2.00		C	60% 0% 0%		MADE GROUND: CONCRETE recovered as dark grey, grey and reddish brown angular coarse gravel of red brick, siliceous material and concrete with 1no. cobble of angular concrete.	(0.50) 2.00	36.56	
2								MADE GROUND: Brownish grey very sandy silty angular to sub-rounded fine to coarse GRAVEL of mixed lithologies including red brick, concrete and siliceous material.	2.20	36.36	2
		D ES	2.30 2.40					Very soft greenish grey CLAY with a moderate hydrocarbon odour, occasional partially decomposed organic material (<5mm) and rare comminuted shell fragments (<5mm). (ALLUVIUM)	(0.80)		
3								2.90-3.00m: Slightly gravelly slightly sandy clay. Gravel is angular to sub-angular fine to coarse siliceous material.	3.00	35.56	3
		ES	3.50					Light brown very sandy very clayey angular to sub-rounded fine to coarse GRAVEL of siliceous material with a moderate hydrocarbon odour and free product (black). (KEMPTON PARK GRAVEL) 3.50-3.80m: Dark grey with a strong hydrocarbon odour.	(0.80)		
		B	3.80 - 4.50					Light brown very sandy silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.80	34.76	
4		ES	4.20						(0.70)		4
								Borehole completed at 4.50m	4.50	34.06	
5											5
6											6

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.
METHOD: Hand dug inspection pit and geology to 1.50m: See BH1003A. Waterflush rotary coring (146mm) : 1.50-2.00m. Dynamic sampling using 128mm and 113mm sample barrels: 2.00-4.50m.
CASING: 140mm diameter to 4.50m.
GROUNDWATER: None encountered prior to using water flush.
INSTALLATION: Bentonite seal 4.50-4.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 4.00-3.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 3.00-2.80m, bentonite pellet seal: 2.80-0.60m and gravel 0.60-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Drilled at location of BH1003A. PID readings taken on all environmental samples. Results: 2.40m - 5.70ppm; 3.50m - 5.80ppm; 4.20m - 6.90ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
12/02/2018 17:00	4.50	4.50	

CC ROTARY LOG C5925.GPJ CCGI GINT STD AGS 4_0.GDT 9/3/18

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ROTARY BOREHOLE LOG

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Borehole No. **BH2004**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471544 N 174137	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU		Level: 38.76mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 13/02/2018 End: 13/02/2018	Logged By TH

(m)	Water Levels	Core Run, Samples & Testing: No/Type	Depth (m)	Result	Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAD)	Legend
								MADE GROUND: Dark grey ASPHALT.	0.10	38.66	
								MADE GROUND: Brown very sandy slightly clayey angular to sub-rounded fine to coarse GRAVEL mixed lithologies including concrete, red brick, chalk and siliceous material.	(0.40)		
		C	0.50 - 1.80		C	100% 21% 0%		MADE GROUND: CONCRETE recovered as light brown very sandy silty angular to sub-angular cobbles of concrete, red brick and siliceous material.	0.50	38.26	
								MADE GROUND: CONCRETE recovered as angular to sub-angular cobbles of concrete with little very sandy angular fine to coarse gravel of red brick, siliceous material and concrete.	(0.40)		
1								1.40-1.60m: Red brick masonry recovered as reddish brown very sandy silty angular to sub-angular fine to coarse gravel of red brick.	0.90	37.86	1
		C	1.80 - 2.90		C	100% 100% 100%		MADE GROUND: Light grey matrix supported CONCRETE. Aggregate is angular to rounded fine to coarse of red brick and siliceous material. 1.80-3.40m: Drill induced discontinuities are horizontal closely to medium spaced undulating and stepped rough.	(0.90)		
2									1.80	36.96	2
									(1.70)		
3		C	2.90 - 3.50		C	100% 83% 83%					3
		B	3.50 - 5.00					3.40-3.50m: Recovered non intact as angular fine to carse gravel of red brick and concrete. Light brown very sandy slightly silty angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.50	35.26	
4		ES	4.00						(1.50)		4
5								Borehole completed at 5.00m	5.00	33.76	5
6											6

DRAFT

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.
METHOD: Hand dug inspection pit: See BH1003C. Dry drill rotary coring using 150mm coring barrel: 0.50-1.80m. Waterflush rotary coring using T6-116 coring barrel: 1.80-3.50m. Dynamic sampling using 98mm sample barrels: 3.50-5.00m.
CASING: 140mm diameter to 1.80m.
GROUNDWATER: None encountered prior to using water flush.
INSTALLATION: 50mm ID HDPE slotted pipe with washed gravel response zone: 3.80-3.30m. Plain 50mm ID HDPE pipe with washed gravel response zone: 3.30-3.10m, bentonite pellet seal: 3.10-0.60m and gravel 0.60-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Drilled at location of BH1003C. On completion, hole collapsed to 3.80m as unable to advance casing. PID readings taken on all environmental samples. Results: 4.00m - 0.00ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
13/02/2018 17:00	5.00	1.80	

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ROTARY BOREHOLE LOG

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Borehole No. **BH2005**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471552 N 174113	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU		Level: 38.65mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 13/02/2018 End: 13/02/2018	Logged By TH

(m)	Water Levels	Core Run, Samples & Testing: No/Type	Depth (m)	Result	Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAD)	Legend
								MADE GROUND: Dark grey ASPHALT.			
								MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of concrete and siliceous material with high cobble content. Cobbles are angular of concrete.	0.15 (0.35)	38.50	
		C	0.50 - 1.20		C	100%		MADE GROUND: Concrete and red brick cobbles recovered as greyish brown and reddish brown very sandy silty angular to sub-angular fine to coarse GRAVEL of concrete, red brick, siliceous material and asphalt with 2no. angular cobbles of red brick and concrete.	0.50 (0.45)	38.15	
		ES	0.60			0%					
		B	0.70 - 0.95			0%					
1		ES	0.95						0.95	37.70	1
		D	1.05					MADE GROUND: Very soft slightly gravelly slightly sandy CLAY. Gravel is angular to rounded fine to coarse chalk, siliceous material and red brick.	(0.90)		
		ES	1.75								
		ES	1.90					MADE GROUND: Dark grey very sandy clayey angular to sub-angular fine to coarse GRAVEL of red brick and siliceous material with visible hydrocarbons.	1.85 (0.30)	36.80	
2									2.15	36.50	2
		D	2.30					Very soft dark green locally dark grey slightly gravelly slightly sandy CLAY with rare partially decomposed organic material (<5mm). Gravel is sub-rounded fine to medium of siliceous material. (ALLUVIUM)			
		ES	2.40					2.50-3.30m: Limited recovery: slightly sandy gravelly clay. Gravel is angular to sub-rounded fine to coarse siliceous material.	(1.15)		
3											3
		D	3.20						3.30	35.35	
		B	3.30 - 5.00					Light brown very sandy slightly silty angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)			
4									(1.70)		4
5								Borehole completed at 5.00m	5.00	33.65	5
6											6

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.
METHOD: Hand dug inspection pit: See WS1018. Dry drill rotary coring using 150mm coring barrel: 0.50-1.20m. Dynamic sampling using 128mm and 113mm sample barrels: 1.20-5.00m.
CASING: 150mm diameter casing to 1.20m and 140mm diameter casing to 4.00m.
GROUNDWATER: None encountered prior to using water flush.
INSTALLATION: Bentonite seal 3.00-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 4.00-1.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 1.00-0.95m and bentonite pellet seal: 0.95-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Drilled at location of WS1018. PID readings taken on all environmental samples. Results: 0.60m - 2.80ppm; 0.95m -4.00ppm; 1.75m - 4.00ppm; 1.90m - 3.40ppm; 2.40m - 2.40ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
14/02/2018 17:00	5.00		

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ROTARY BOREHOLE LOG

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Borehole No. **BH2006**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471564 N 174107	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU		Level: 38.49mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 14/02/2018 End: 14/02/2018	Logged By TH

(m)	Water Levels	Core Run, Samples & Testing: No/Type	Depth (m)	Result	Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAD)	Legend
		C	0.00 - 1.20			100% 0% 0%		MADE GROUND: Light grey CONCRETE.	0.12	38.37	
								MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of concrete and siliceous material with high cobble content. Cobbles are angular of concrete.	(0.38)		
		ES	0.60		C				0.50	37.99	
		B	0.70 - 0.90					MADE GROUND: Concrete and red brick cobbles recovered as greyish brown and reddish brown very sandy silty angular to sub-angular fine to coarse GRAVEL of concrete, red brick, siliceous material and asphalt with 3no. angular cobbles of concrete.	(0.40)		
1		B	0.90 - 1.20						0.90	37.59	1
		ES	1.00					MADE GROUND: Dark grey and off white very sandy very silty angular to sub-angular fine to coarse GRAVEL of chalk, siliceous material, concrete and red brick.	(0.30)		
		ES	1.40					MADE GROUND: Very soft slightly gravelly slightly sandy CLAY. Gravel is angular to rounded fine to coarse chalk, siliceous material and red brick.	1.20	37.29	
		D	1.50						(0.50)		
		ES	1.80					MADE GROUND: Dark grey very sandy clayey angular to sub-angular fine to coarse GRAVEL of red brick and siliceous material with visible hydrocarbons.	1.70	36.79	
2		ES	2.00					Very soft dark green locally dark grey slightly gravelly slightly sandy CLAY with rare partially decomposed organic material (<5mm). Gravel is sub-rounded fine to medium of siliceous material. (ALLUVIUM)	1.95	36.54	2
		D	2.20					2.50-3.00m: Limited recovery: slightly sandy gravelly clay. Gravel is angular to sub-rounded fine to coarse of siliceous material.	(1.05)		
		ES	2.40								
3		B	3.30 - 5.00					Light brown very sandy silty angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) 3.00-3.20m: Very clayey. 3.20-3.30m: Clayey. 3.30-3.40m: Slightly clayey.	3.00	35.49	3
4									(2.00)		4
5								Borehole completed at 5.00m	5.00	33.49	5
6											6

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.
METHOD: Hand dug inspection pit: See WS1019. Dry drill rotary coring using 150mm coring barrel: 0.50-1.20m. Dynamic sampling using 128mm and 113mm sample barrels: 1.20-5.00m.
CASING: 140mm diameter casing to 4.00m.
GROUNDWATER: None encountered prior to using water flush.
INSTALLATION: Bentonite seal 2.00-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 2.00-1.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 1.00-0.95m and bentonite pellet seal: 0.95-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.
REMARKS: Drilled at location of WS1017. PID readings taken on all environmental samples. Results: 0.60m - 1.80ppm; 1.00m -1.60ppm; 1.40m - 2.30.ppm; 1.80m - 3.10ppm; 2.00m - 3.20ppm; 2.40m - 2.30ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
14/02/2018 17:00	5.00	4.00	

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WINDOWLESS SAMPLE LOG

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Borehole No. **WS1002**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471584 N 174194	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU		Level: 38.26mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 06/02/2018 End: 06/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B	0.10 - 0.20				MADE GROUND: Black ASPHALT.	0.10	38.16	
		ES	0.20				MADE GROUND: Reddish brown and grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and concrete.	0.20	38.06	
		B	0.30 - 0.50					(0.30)		
		D	0.50				MADE GROUND: Greyish brown very sandy clayey angular fine to coarse GRAVEL of brick and concrete. Cobbles are angular of concrete.	0.50	37.76	
		ES								
		B	0.80 - 1.00				MADE GROUND: Brown to grey slightly sandy gravelly CLAY. Gravel is angular to sub-angular fine to medium of brick, siliceous material and concrete.			
1		D	1.00							1
		ES						(1.20)		
		SPT	1.20 - 1.65	S 5						
		ES	1.70				1.70m: Slow groundwater seepage.	1.70	36.56	
							Borehole completed at 1.70m			
2										2
3										3
4										4
5										5
6										6

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EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-1.70m.
CASING: None used.
GROUNDWATER: Seepage encountered at 1.70m. No rise after 20 minutes.
BACKFILL: On completion, hole backfilled with arisings and the surface reinstated.
REMARKS: Obstruction encountered at 1.70m. PID readings taken on all environmental samples. Results: 0.20m -0.10ppm; 0.50m -0.60ppm; 1.00m -0.70ppm; 1.70m -1.50ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
06/02/18	1.70		1.70

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 00:00	1.70	1.70	

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Borehole No. **WS1003**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471596 N 174182	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU		Level: 38.21mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 06/02/2018 End: 06/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B D ES	0.10 - 0.30 0.20				MADE GROUND: Dark grey ASPHALT.	0.10	38.11	
							MADE GROUND: Reddish brown slightly sandy angular fine to coarse GRAVEL of brick.	0.12	38.09	
		B D ES	0.40 - 0.60 0.50				MADE GROUND: Dark grey very sandy slightly silty (ashy) angular fine to coarse GRAVEL of siliceous material and brick.	(0.98)		
1		B	0.80 - 1.00							1
		D ES D ES SPT	1.00 1.10 1.20 1.20 - 1.65	S<1			MADE GROUND: Light brown to grey sandy angular slightly silty fine to coarse GRAVEL of siliceous material and brick.	1.10 (0.30)	37.11	
							Very soft brown slightly sandy CLAY. (ALLUVIUM)	1.40 (0.35)	36.81	
		D ES	1.70				Very soft greenish grey silty CLAY with moderate organic odour. (ALLUVIUM)	1.75	36.46	
2		SPT	2.00 - 2.45	S<1						2
								(2.05)		
3	1	SPT	3.00 - 3.45	S<1						3
	1	D	3.80				Very soft dark grey organic sandy CLAY. (ALLUVIUM)	3.80 (0.30)	34.41	
4		B SPT	4.00 - 5.00 4.00 - 4.45	S 10			Medium dense becoming dense grey to brown sandy sub-angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.10	34.11	4
								(1.35)		
5		SPT	5.00 - 5.45	S 44						5
							Borehole completed at 5.45m	5.45	32.76	
6										6

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.
CASING: 113mm diameter to 5.00m.
GROUNDWATER: Encountered at 3.89m and rose to 2.99m after a 20 minute monitoring period.
INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.00-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 3.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.
REMARKS: PID readings taken on all environmental samples. Results: 0.20m -0.10ppm; 0.50m -0.60ppm; 1.00m -0.70ppm; 1.70m -0.10ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
06/02/18	3.89	4.00	2.99

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 17:00	5.45	5.00	2.42

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WINDOWLESS SAMPLE LOG

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Borehole No. **WS1004**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471603 N 174169	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU		Level: 38.37mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 06/02/2018 End: 06/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
							MADE GROUND: Grey ASPHALT.	0.10	38.27	
		B	0.20 - 0.40				MADE GROUND: Grey very sandy angular fine to coarse GRAVEL of siliceous material and brick.	(0.40)		
		D	0.20					0.50	37.87	
		ES					MADE GROUND: Grey very sandy slightly silty (ashy) angular fine to coarse GRAVEL of siliceous material and brick.	0.70	37.67	
		B	0.50 - 0.70				MADE GROUND: Very soft brown slightly sandy gravelly CLAY. Gravel is angular to sub-angular of siliceous material and brick.			
		D	0.60							
		ES								
		B	0.80 - 1.00							
1		D	1.00					(0.80)		1
		ES								
		SPT	1.20 - 1.65	S 2						
							Very soft brown mottled grey slightly sandy CLAY. (ALLUVIUM)	1.50	36.87	
								(0.50)		
		D	1.80							
2		ES	2.00	S 3			Very soft greenish grey mottled brown slightly sandy CLAY with moderate organic odour. (ALLUVIUM)	2.00	36.37	2
		SPT	2.00 - 2.45							
	▽1									
								(1.70)		
3		D	3.00	S<1						3
		SPT	3.00 - 3.45							
	▼1									
		D	3.70				Grey very sandy slightly silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.70	34.67	
								3.90	34.47	
4		B	4.00 - 5.00	S 25			Medium dense grey to brown sandy sub-angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)			4
		D	4.00							
		SPT	4.00 - 4.45							
								(1.55)		
5		SPT	5.00 - 5.45	S 38						5
							Borehole completed at 5.45m	5.45	32.92	
6										6

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.
CASING: 113mm diameter to 5.00m.
GROUNDWATER: Encountered at 3.71m and rose to 2.67m after a 20 minute monitoring period.
INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.45-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 3.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.
REMARKS: PID readings taken on all environmental samples. Results: 0.20m -0.10ppm; 0.60m -0.70ppm; 1.00m -0.90ppm; 2.00m -0.20ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
06/02/18	3.71	4.00	2.67

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 17:00	5.45	5.00	2.43

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WINDOWLESS SAMPLE LOG

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Borehole No. **WS1005A**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471614 N 174146	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU		Level: 38.17mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 09/02/2018 End: 09/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
							MADE GROUND: Dark grey ASPHALT.			
		B	0.25 - 0.45					0.25	37.92	
		ES	0.30				MADE GROUND: Reddish brown sandy slightly silty angular fine to coarse GRAVEL of siliceous material.	0.45	37.72	
		B	0.45 - 0.60				MADE GROUND: Reddish brown and grey sandy clayey fine to coarse GRAVEL of siliceous material and brick.	0.60	37.57	
		ES	0.50				Very loose greyish brown slightly sandy clayey angular to sub-rounded fine to coarse GRAVEL of siliceous material. (ALLUVIUM)			
		B	0.80 - 1.20							
1		ES	1.00					(1.00)		1
		SPT	1.20 - 1.65	S 4						
		ES	1.50				Very soft bluish grey mottled brown slightly sandy CLAY with occasional shell fragments (<5mm). (ALLUVIUM)	1.60	36.57	
		D	1.90							
2	▽1	SPT	2.00 - 2.45	S 3						2
	▼1							(2.40)		
3		D	2.90							3
		SPT	3.00 - 3.45	S<1						
		D	3.90							
4		SPT	4.00 - 4.45	S 37			Dense brown sandy clayey angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.00	34.17	4
		B	4.30 - 4.65					(0.65)		
		B	4.65 - 5.00				Dense light brown sandy angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.65	33.52	
5		SPT	5.00 - 5.45	S 41				(0.80)		5
							Borehole completed at 5.45m	5.45	32.72	
6										6

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.
CASING: 113mm diameter to 5.00m.
GROUNDWATER: Encountered at 2.76m and rose to and levelled out at 2.22m after a 15 minute monitoring period.
INSTALLATION: Bentonite seal 5.45-2.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 2.00-1.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 1.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.
REMARKS: PID readings taken on all environmental samples. Results: 0.20m -0.40ppm; 0.50m -0.80ppm; 1.00m -1.40ppm; 1.50m -0.40ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
09/02/18	2.76	3.00	2.22

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
08/02/2018 17:00	5.45	5.00	2.29

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WINDOWLESS SAMPLE LOG

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Borehole No. **WS1006**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471608 N 174137	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU		Level: 38.19mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 08/02/2018 End: 08/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
							MADE GROUND: Dark grey ASPHALT.			
		B D ES	0.20 - 0.40 0.30 0.40 - 0.60				MADE GROUND: Grey and reddish brown sandy angular fine to coarse GRAVEL of siliceous material.	0.20 (0.40)	37.99	
		B D ES B	0.50 0.60 - 0.90				MADE GROUND: Brown and greyish brown sandy angular to sub-angular fine to coarse GRAVEL of siliceous material, brick and concrete with rare geotextile membrane fragments (<80mm).	0.60	37.59	
1		D ES SPT	1.00 1.20 - 1.65	S 3				(1.00)		1
							Very soft bluish grey mottled brown slightly sandy CLAY. (ALLUVIUM)	1.60	36.59	
2		D ES SPT	1.90 2.00 - 2.45	S<1				(1.40)		2
		D	2.40							
3	▽ 1	B SPT	3.00 - 3.75 3.00 - 3.45	S 18			Medium dense brown and greyish brown sandy sub-angular to sub-rounded fine to medium GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.00 (0.75)	35.19	3
	▽ 1						Dense light brown sandy slightly silty sub-angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.75	34.44	
4		SPT	4.00 - 4.45	S 41						4
		B	4.40 - 5.00					(1.70)		
5		SPT	5.00 - 5.45	S 30						5
							Borehole completed at 5.45m	5.45	32.74	
6										6

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.
CASING: 113mm diameter to 5.00m.
GROUNDWATER: Encountered at 3.36m and rose to 2.94 after 20 minutes.
INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.00-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 3.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.
REMARKS: PID readings taken on all environmental samples. Results: 0.30m -0.10ppm; 0.50m -0.30ppm; 1.00m -0.20ppm; 1.90m -0.10ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
07/02/18	3.36		2.94

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
07/02/2018 17:00	3.45	3.00	3.36
08/02/2018 08:00	3.45	3.00	2.28
08/02/2018 17:00	5.45	5.00	2.32

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WINDOWLESS SAMPLE LOG

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Borehole No. **WS1007**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471593 N 174138	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU		Level: 38.38mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 05/02/2018 End: 05/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B D ES	0.10 - 0.20 0.15 0.20 - 0.50				MADE GROUND: ASPHALT.	0.10	38.28	
		B D ES	0.45				MADE GROUND: Brown sandy silty angular to sub-rounded fine to medium GRAVEL of siliceous material.	0.20 (0.30)	38.18	
							MADE GROUND: Grey sandy slightly silty angular fine to coarse of GRAVEL of brick, concrete and siliceous material.	0.50	37.88	
							MADE GROUND: Brown sandy clayey GRAVEL of siliceous material and chalk.			
1	1	B D ES SPT	1.00 - 1.20 1.00 1.20 - 1.65	S 1				(1.20)		1
							Grey mottled orangish brown gravelly CLAY. (ALLUVIUM)	1.70	36.68	
2		D ES SPT	2.00 2.00 - 2.45	S 4				(0.60)		2
							Orangish brown and grey sandy clayey GRAVEL. (KEMPTON PARK GRAVEL)	2.30	36.08	
								(1.00)		
3		D SPT	3.00 3.00 - 3.45	S 11			3.00m: Medium dense.			3
		B	3.30 - 3.70				Dense brown sandy GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.30	35.08	
4		B SPT	4.00 - 5.00 4.00 - 4.45	S 30				(2.15)		4
5		SPT	5.00 - 5.45	S 34						5
							Borehole completed at 5.45m	5.45	32.93	
6										6

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.
CASING: 113mm diameter to 5.00m.
GROUNDWATER: Encountered at 1.10m. No rise is recorded.
INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.00-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 3.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.
REMARKS: PID readings taken on all environmental samples. Results: 0.15m -0.20ppm; 0.45m -0.40ppm; 1.00m -0.30ppm; 2.00m -0.10ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
05/02/18	1.10		

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
05/02/2018 17:00	5.45	5.00	2.48

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INSPECTION PIT LOG

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Pit No **WS1008**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471586 N 174141 Level: 38.42mAOD	Date 05/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: m Depth 0.55m m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
		C	0.00 - 0.10		MADE GROUND: Dark grey ASPHALT.	0.08	38.34	
		B	0.10 - 0.25		MADE GROUND: Light brown very sandy angular fine to coarse GRAVEL of siliceous material and brick.	(0.22)		
		D ES	0.20			0.30	38.12	
		B	0.30 - 0.50		MADE GROUND: Dark grey sandy silty (ashy) GRAVEL with low cobble content. Cobbles are angular of red brick.	(0.25)		
		D ES	0.45		0.50m: Concrete across base of pit.	0.55	37.87	
					Inspection pit completed at 0.55m			
1								1
2								2

DRAFT

EQUIPMENT: Hand digging tools. Terrier 2002 track mounted rig.

METHOD: Borehole advanced using 300mm diameter coring barrel utilizing water flush: 0.00-0.10m. Hand dug inspection pit: 0.10-0.55m.
GROUNDWATER: None encountered.
BACKFILL: On completion, hole backfilled with bentonite pellets: 0.55-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.
REMARKS: Unable to advance hole through concrete. Position continued with rotary coring and renamed BH2001. See separate sheet. PID readings taken on all environmental samples. Results: 0.20m -0.10ppm; 0.45m -0.10ppm.

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INSPECTION PIT LOG

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Pit No **WS1009**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471577 N 174143 Level: 38.37mAOD	Date 05/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: m Depth 0.25m m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
		C	0.00 - 0.10		MADE GROUND: Dark grey ASPHALT.	(0.10)		
		B	0.10 - 0.25		MADE GROUND: Grey and brown very sandy silty angular fine to coarse GRAVEL of siliceous material and red brick.	0.10	38.27	
		D ES	0.20			(0.15)		
					0.25m: Concrete across base of pit. Inspection pit completed at 0.25m	0.25	38.12	
1								1
2								2

DRAFT

EQUIPMENT: Hand digging tools. Terrier 2002 track mounted rig.

METHOD: Borehole advanced using 300mm diameter coring barrel utilizing water flush: 0.00-0.10m. Hand dug inspection pit: 0.10-0.25m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.25-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete. Position continued with rotary coring and renamed BH2002. See separate sheet. PID readings taken on all environmental samples. Results: 0.20m -0.20ppm.

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INSPECTION PIT LOG

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Pit No **WS1013**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471560 N 174180 Level: 38.54mAOD	Date 08/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: m Depth 0.80m m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: ASPHALT.	(0.10)		
						0.10	38.44	
		B	0.15 - 0.40		MADE GROUND: Grey angular COBBLES of concrete with some slightly sandy angular fine to coarse gravel of concrete and brick.			
		ES	0.20					
		B	0.40 - 0.70			(0.70)		
		ES	0.60					
					Inspection pit completed at 0.80m	0.80	37.74	
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.80m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.80-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete cobbles and boulders. PID readings taken on all environmental samples. Results: 0.20m -0.20ppm; 0.60m -0.30ppm.

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INSPECTION PIT LOG

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Pit No **WS1013A**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471560 N 174180 Level: 38.54mAOD	Date 09/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: m Depth 0.55m m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: ASPHALT.	(0.10)		
					MADE GROUND: Grey angular COBBLES of concrete with some slightly sandy angular fine to coarse gravel of concrete and brick.	0.10	38.44	
						(0.45)		
					Inspection pit completed at 0.55m	0.55	37.99	
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.55m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.55-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete cobbles and boulders.

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INSPECTION PIT LOG

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Pit No **WS1017**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471564 N 174107 Level: 38.49mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: m Depth 0.50m m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
		B	0.00 - 0.12		MADE GROUND: Light grey CONCRETE.	(0.12)		
		B	0.12 - 0.40		MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of concrete and siliceous material with high cobble content. Cobbles are angular of concrete.	0.12	38.37	
		D ES	0.40			(0.38)		
					Inspection pit completed at 0.50m	0.50	37.99	
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.50m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.50-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete. Position continued with rotary coring and renamed BH2006. See separate sheet. PID readings taken on all environmental samples. Results: 0.20m -0.10ppm.

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INSPECTION PIT LOG

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Pit No **WS1018**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471552 N 174113 Level: 38.65mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: m Depth 0.50m m	Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
		B	0.07 - 0.20		MADE GROUND: Dark grey ASPHALT.	(0.15)		
		D ES B	0.15 0.20 - 0.45		MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of concrete and siliceous material with high cobble content. Cobbles are angular of concrete.	0.15 (0.35)	38.50	
		D ES	0.40		Inspection pit completed at 0.50m	0.50	38.15	
1								1
2								2

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.50m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.50-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete. Position continued with rotary coring and renamed BH2005. See separate sheet. PID readings taken on all environmental samples. Results: 0.15m -0.20ppm; 0.40m -0.10ppm.

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WINDOWLESS SAMPLE LOG

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Borehole No. **WS1019**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471552 N 174069	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU		Level: 38.32mAOD	Scale 1 : 37.50
Client: SSE Plc		Dates: Start: 07/02/2018 End: 07/02/2018	Logged By MM

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		B ES B	0.10 - 0.25 0.20 0.25 - 0.50				MADE GROUND: Dark grey ASPHALT.	0.10	38.22	
							MADE GROUND: Grey and reddish brown sandy slightly silty angular fine to coarse GRAVEL of siliceous material.	0.25	38.07	
		ES	0.50				MADE GROUND: Brown and greyish brown very sandy slightly clayey angular to sub-angular fine to coarse GRAVEL of siliceous material, brick and concrete with low cobble content. Cobbles are angular brick.	(0.75)		
1		B D ES SPT	1.00 - 1.20 1.10 1.20 - 1.65	S<1			MADE GROUND: Very soft brown gravelly sandy CLAY. Gravel is angular to sub-angular fine to coarse of siliceous material, brick and concrete.	1.00	37.32	1
								(0.70)		
		D ES	1.80				Very soft firm greenish grey slightly gravelly slightly sandy CLAY. Gravel is sub-angular fine to medium of siliceous material. (ALLUVIUM)	1.70	36.62	
2		SPT	2.00 - 2.45	S<1				(0.78)		2
	1	D	2.40				Medium dense light brown very sandy slightly silty sub-angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	2.48	35.84	
3		SPT	3.00 - 3.45	S 11						3
4		D SPT	4.00 4.00 - 4.45	S 15				(2.97)		4
5		SPT	5.00 - 5.45	S 25						5
							Borehole completed at 5.45m	5.45	32.87	
6										6

DRAFT

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.
METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.
CASING: 113mm diameter to 5.00m.
GROUNDWATER: Encountered at 2.48m and rose to and leveling out at 2.36m after 15 minutes.
INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.00-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 2.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.
REMARKS: PID readings taken on all environmental samples. Results: 0.20m -0.20ppm; 0.50m -0.30ppm; 1.10m -0.10ppm; 1.80m - 0.10ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
07/02/18	2.48	3.00	2.36

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
07/02/2018 17:00	5.45	5.00	2.44

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TRIAL PIT LOG

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Pit No **TP1001**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471567 N 174208 Level: 38.13mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 3.10m Depth 1.20m 0.60m	Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
		B D ES	0.20		MADE GROUND: Dark brown slightly gravelly sandy silty CLAY with frequent roots and rootlets (<20mm) and rare fragments (<60mm) of pottery. Gravel is angular to sub-angular fine to coarse of siliceous material, concrete and red brick.	(0.40)		
		B ES	0.50		MADE GROUND: Dark greyish brown, grey and reddish brown COBBLES of concrete, red brick and slag with low boulder content and much very gravelly slightly clayey sand. Gravel is angular to sub-angular fine to coarse of mixed lithologies including red brick, concrete and siliceous material. Boulders are angular of concrete and intact red brick masonry (<400mm).	0.40 (0.40)	37.73	
1		B D ES	1.00		MADE GROUND: Firm light brown mottled greyish brown slightly gravelly slightly sandy CLAY with rare roots and rootlets (<5mm). Gravel is angular to sub-rounded fine to coarse of red brick, concrete and siliceous material. 0.80m: Light grey concrete slab with red brick masonry across large are of pit. 1.20m: 1no. black cable (Intact) approximately 50mm diameter orientated approximately Southwest - Northeast. 1.20m: Dry. Trial pit completed at 1.20m	0.80 (0.40) 1.20	37.33 36.93	
2								
3								
4								
5								
6								

DRAFT

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -1.90ppm; 1.50m -2.00ppm; 1.00m - 2.60ppm. Trial pit terminated at 1.20m due to buried service at 1.20m.

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TRIAL PIT LOG

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Pit No **TP1002**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471604 N 174164 Level: 38.36mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 3.70m, Depth 4.00m, 2.00m	Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Dark grey ASPHALT.	0.05	38.31	
					MADE GROUND: CONCRETE.	0.15	38.21	
		B ES	0.30		MADE GROUND: Brown very sandy very silty angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material with medium cobble content and rare fragments (<50mm) of metal. Cobbles are angular to sub-angular of red brick and concrete.	0.35	38.01	
						0.50	37.86	
					MADE GROUND: CONCRETE.	(0.60)		
1		B ES	0.80		MADE GROUND: Brown, grey and reddish brown COBBLES of red brick and concrete with much very sandy very silty angular to rounded fine to coarse gravel of red brick, siliceous material and concrete. 0.50-1.10m: Intact red brick masonry in Northern pit wall.	1.10	37.26	1
		B ES	1.40		MADE GROUND: Brown very sandy very clayey angular to sub-rounded fine to coarse GRAVEL of siliceous material, red brick and chalk. 1.40-1.60m: Tending to slightly sandy gravelly clay.	(0.50)		
		B D ES	1.70		Very soft dark green slightly sandy silty CLAY with moderate organic odour and rare comminuted shell fragments (<5mm). (ALLUVIUM)	1.60	36.76	
2						(0.80)		2
		B D	2.50		Very soft bluish green mottled light grey silty calcareous CLAY with rare partially decomposed organic material (<5mm), occasional comminuted shell fragments (<5mm) and a moderate organic odour. (ALLUVIUM)	2.40	35.96	
3						(1.60)		3
		B D	3.50					
4	1.1	D	3.90		3.90-4.00m: 1no. lens of light grey and off white very clayey sand with frequent comminuted shell fragments (<5mm). 4.00m: Slow groundwater seepage. Trial pit completed at 4.00m	4.00	34.36	4
5								5
6								6

DRAFT

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: Slow groundwater seepage encountered at 4.00m.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.30m -2.50ppm; 0.80m -3.40ppm; 1.40m - 4.10ppm; 1.70m -3.50ppm. Surface reinstated on 13/02/2018.

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TRIAL PIT LOG

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Pit No **TP1003**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471596 N 174149 Level: 38.35mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 3.60m, Depth 0.35m, 1.80m	Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Dark grey ASPHALT.	0.05	38.30	
					MADE GROUND: CONCRETE.	0.10	38.25	
		B ES	0.30		MADE GROUND: Reddish brown very sandy silty angular to sub-rounded fine to coarse GRAVEL of mixed lithologies including concrete, red brick and siliceous material with high cobble content. Cobbles are angular to sub-angular of red brick and concrete. 0.30m: Historic concrete foundations with rolled steel joists (~200mm). 0.30-0.35m: Attempt to break through concrete obstruction. Concrete extending bellow extent of JCB pecker. 0.35m: 1no steel plate (exposed 1.40mx0.80m) - Possible earthing plate. 0.35m: Dry.	0.35	38.00	
					Trial pit completed at 0.35m			
1								
2								
3								
4								
5								
6								

DRAFT

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -1.80ppm. Trial pit terminated at 0.35m due to historic reinforced concrete foundations. Surface reinstated on 13/02/2018.

CC GROUND INVESTIGATIONS LTD

TRIAL PIT LOG

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Pit No **TP1004**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471580 N 174166 Level: 38.29mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 3.60m, Depth 4.20m, 2.10m	Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Dark grey ASPHALT.	0.05	38.24	
					MADE GROUND: CONCRETE.	(0.30)		
						0.35	37.94	
		B ES	0.40		MADE GROUND: Brown very sandy slightly clayey angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material with a medium cobble content. Cobbles are angular of red brick.	0.50	37.79	
		B ES	0.60		MADE GROUND: Off white and brown sandy very clayey angular to sub-rounded fine to coarse GRAVEL of chalk, red brick and siliceous material.	0.75	37.54	
1		B D ES	1.00		MADE GROUND: Very soft dark green and bluish grey slightly gravelly slightly sandy silty calcareous CLAY with a slight organic odour. Gravel is angular to sub-angular fine to coarse of red brick.	(0.55)		1
		B D ES	1.50		Very soft dark green and dark brownish grey silty calcareous CLAY with rare shell fragments (<5mm) and a strong organic odour. (ALLUVIUM)	1.30	36.99	
						(0.70)		
2					Very soft bluish green mottled light grey silty calcareous CLAY with a strong organic odour and rare partially decomposed organic material (<5mm). (ALLUVIUM)	2.00	36.29	2
		B D	2.50			(1.10)		
3	1				Very soft greenish grey mottled greenish brown and light grey slightly sandy silty calcareous CLAY with occasional comminuted shell fragments (<5mm). (ALLUVIUM)	3.10	35.19	3
		B D	3.50			(1.10)		
4	1				Trial pit completed at 4.20m	4.20	34.09	4
5								5
6								6

DRAFT

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: Groundwater encountered at 3.90m rising to 3.40m after a 10 minute monitoring period.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.40m -0.70ppm; 0.60m -1.30ppm; 1.00m - 1.50ppm; 1.50m - 4.20ppm. Surface reinstated on 13/02/2018.

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TRIAL PIT LOG

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Pit No **TP1005**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471567 N 174159 Level: 38.41mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 2.60m, Depth 1.10m, 2.20m	Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Dark grey ASPHALT.	0.05	38.36	
					MADE GROUND: CONCRETE.	0.15	38.26	
		B ES	0.30		MADE GROUND: Brown and reddish brown COBBLES of angular red brick and concrete with much very sandy very silty angular to sub-angular fine to coarse gravel of red brick, concrete, slag and siliceous material.	(0.95)		
		B ES	0.70		0.80m: 1no. broken black metal pipe (~80mm diameter) orientated approximately East to West.			
					Trial pit completed at 1.10m	1.10	37.31	

DRAFT

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.30m -0.40ppm; 0.70m -2.00ppm. Trial pit terminated at 1.10m due to buried service at 1.20m. Trial pit terminated at 0.35m due to historic reinforced concrete foundations. Surface reinstated on 13/02/2018.

CC GROUND INVESTIGATIONS LTD

TRIAL PIT LOG

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Pit No **TP1006**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471565 N 174172 Level: 38.44mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 3.60m, Depth 2.40m, 2.00m	Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing: No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Dark grey ASPHALT.	0.05	38.39	
					MADE GROUND: CONCRETE.	0.15	38.29	
		B ES	0.30		MADE GROUND: Brown very sandy slightly clayey angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material with a medium cobble content. Cobbles are angular of red brick.	(0.30) 0.45	37.99	
		B ES	0.50		MADE GROUND: Light brown very sandy silty angular to sub-rounded fine to coarse GRAVEL of siliceous material, red and yellow brick.	0.60	37.84	
		B ES	0.70		MADE GROUND: Off white and light brown slightly sandy very silty angular to sub-rounded fine to coarse GRAVEL of chalk and siliceous material with high cobble content. Cobbles are sub-angular to sub-rounded of chalk and siliceous material. 0.90-1.10m: Light brown and reddish brown very sandy clayey angular to sub-angular gravel of siliceous material, red brick and concrete with a high cobble content. Cobbles are angular to sub-angular of red brick. 1.10-1.90m: Low cobble content.	(1.30)		
1		B ES	1.50					1
2	1				Very soft dark green and dark grey CLAY with strong organic odour. (ALLUVIUM)	1.90 (0.50)	36.54	2
	1	B D ES	2.20		Trial pit completed at 2.40m	2.40	36.04	
3								3
4								4
5								5
6								6

DRAFT

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: Groundwater encountered at 2.40m rising to 2.30m after a ten minute monitoring period. Slow groundwater seepage encountered at 1.90m.

STABILITY: Trial pit collapsing from 1.10-1.90m.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.30m -1.20ppm; 0.50m -1.20ppm; 0.70m - 1.40ppm; 1.50m - 0.70ppm; 2.20m - 1.70ppm. Trial pit terminated at 2.40m due to undermining of surface hardstanding. Surface reinstated on 13/02/2018.

CC GROUND INVESTIGATIONS LTD

TRIAL PIT LOG

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Pit No **TP1007**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471545 N 174170 Level: 38.70mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 2.80m Depth 0.70m 2.20m	Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Dark grey ASPHALT.	0.05	38.65	
					MADE GROUND: CONCRETE.	0.10	38.60	
		B ES	0.20		MADE GROUND: Brown very sandy very silty angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material with medium cobble content and rare fragments (<50mm) of metal. Cobbles are angular to sub-angular of red brick and concrete.	(0.40)		
		B ES	0.50		0.30m: Historic concrete foundations.	0.50	38.20	
					MADE GROUND: Firm light brown slightly gravelly sandy silty CLAY with a moderate hydrocarbon odour. Gravel is angular to sub-angular fine to coarse of red brick, siliceous material, chalk and concrete.	0.70	38.00	
					Trial pit completed at 0.70m			

DRAFT

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pits excavated using 0.60m backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -3.20ppm; 0.70m -5.20ppm. Trial pit terminated at 0.70m due to historic reinforced concrete foundations. Surface reinstated on 13/02/2018.

CC GROUND INVESTIGATIONS LTD

TRIAL PIT LOG

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Pit No **TP1008**

Sheet 1 of 1

Project Name: SSE Site, Vastern Road, Reading	Project No: **C5925**	Co-ords: E 471546 N 174157 Level: 38.69mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU		Dimensions: 3.10m Depth 1.70m 1.50m	Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing No/Type	Depth (m)	Result	Description	Depth (m)	Level (mAD)	Legend
					MADE GROUND: Dark grey ASPHALT.	0.05	38.64	
					MADE GROUND: CONCRETE.	(0.30)		
						0.35	38.34	
		B ES	0.40		MADE GROUND: Gray and light brown and reddish brown very sandy silty angular to sub-angular fine to coarse GRAVEL of mixed lithologies including concrete, red brick and siliceous material with high cobble content. Cobbles are angular to sub-angular of concrete and red brick.	(0.35)		
						0.70	37.99	
1		B ES	0.80		MADE GROUND: Firm light brown slightly gravelly sandy silty CLAY. Gravel is angular to sub-angular fine to coarse of chalk, siliceous material, red brick and clinker. 0.75-1.10m: 1no. pocket of dark grey and grey ash. 1.00-1.70m: With pockets (<0.5m) of off white slightly sandy very silty angular to sub-angular fine to coarse gravel of chalk and siliceous material.	(1.00)		
		B D ES	1.50					
					1.70m: Dry. Trial pit completed at 1.70m	1.70	36.99	
2								
3								
4								
5								
6								

DRAFT

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally unstable and collapse from 1.20-1.70m.

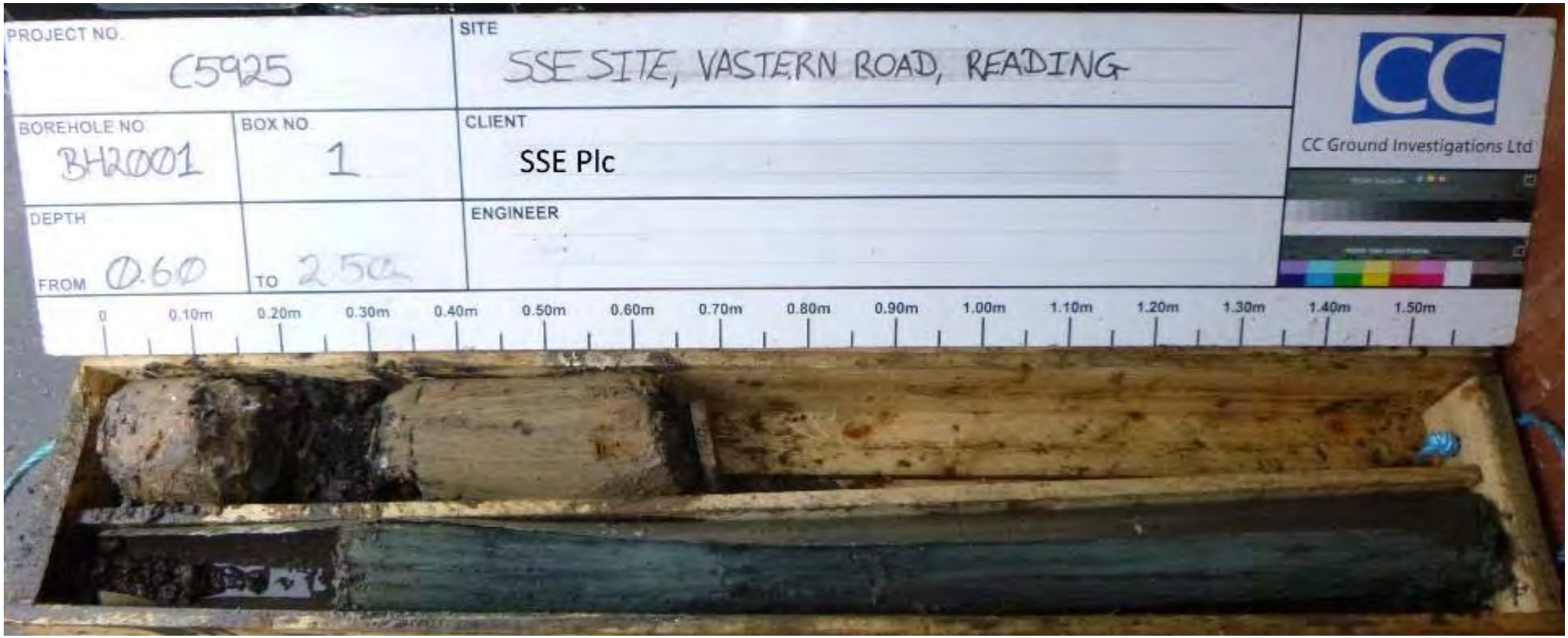
BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.40m -1.70ppm; 0.80m -0.60ppm; 1.50m - 1.40ppm. Trial pit terminated at 1.20m due to buried service at 1.20m. Trial pit terminated at 1.70m due to undermining surface hardstanding. Surface reinstated on 13/02/2018.

APPENDIX C

Photographs

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2001
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	1
	Client:	SSE Plc	**Depth:**	0.60-2.50m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2001
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	2
	Client:	SSE Plc	**Depth:**	2.50-5.00m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2002
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	1
	Client:	SSE Plc	**Depth:**	0.25-2.50m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2002
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	2
	Client:	SSE Plc	**Depth:**	2.50-5.00m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2003
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	1
	Client:	SSE Plc	**Depth:**	1.50-4.50m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2004
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	1
	Client:	SSE Plc	**Depth:**	0.50-2.90m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2004
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	2
	Client:	SSE Plc	**Depth:**	2.90-5.00m

Core Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Borehole ID:**	BH2005
Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	1
Client:	SSE Plc	**Depth:**	0.50-2.50m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2005
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	2
	Client:	SSE Plc	**Depth:**	2.50-5.00m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:**	BH2006
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:**	1
	Client:	SSE Plc	**Depth:**	0.50-2.50m

Core Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Borehole ID:** BH2006
	Contract Name:	SSE Site, Vastern Road, Reading	**Box No:** 2
	Client:	SSE Plc	**Depth:** 2.50-5.00m

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1001
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd

Contract ID:	C5925	**Hole ID:**	WS1001
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Hole ID:**	WS1001
	Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
	Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd

Contract ID:	C5925	**Hole ID:**	WS1001
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-1.45m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1002
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd

Contract ID:	C5925	**Hole ID:**	WS1002
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1002
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-1.70m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1003
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



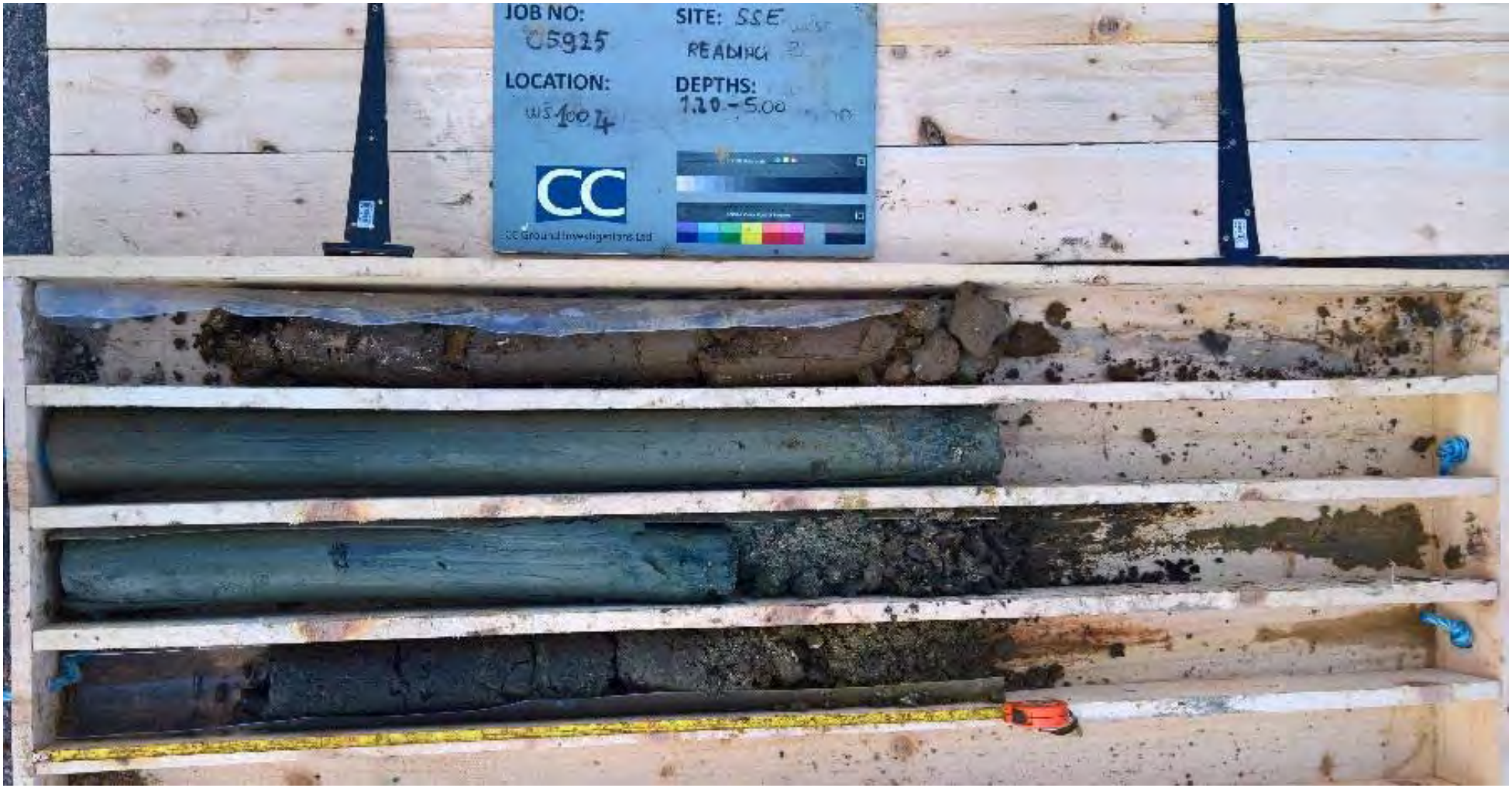
CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1003
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-5.00m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1004
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Hole ID:**	WS1004
	Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-5.00m
	Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1005
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-5.00m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd

Contract ID:	C5925	**Hole ID:**	WS1005
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-5.00m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1005
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-5.00m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Hole ID:**	WS1006
	Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
	Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd

Contract ID:	C5925	**Hole ID:**	WS1006
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1006
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-5.00m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1007
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd

Contract ID:	C5925	**Hole ID:**	WS1007
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1007
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-5.00m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1008
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-0.55m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1013
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-0.80m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1013
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-0.80m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1017
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-0.50m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd

Contract ID:	C5925	**Hole ID:**	WS1017
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-0.50m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd	**Contract ID:**	C5925	**Hole ID:**	WS1019
	Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
	Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd

Contract ID:	C5925	**Hole ID:**	WS1019
Contract Name:	SSE Vastern Road, Reading	**Depth:**	0.00-1.20m
Client:	SSE Plc		

Window Sample Photograph



CC Ground Investigations Ltd			
Contract ID:	C5925	**Hole ID:**	WS1019
Contract Name:	SSE Vastern Road, Reading	**Depth:**	1.20-5.00m
Client:	SSE Plc		

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1001

Trial Pit Photograph



CC Ground Investigations Ltd	
Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1001

Trial Pit Photograph



CC Ground Investigations Ltd	
Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1001

Trial Pit Photograph



Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1002

CC Ground Investigations Ltd

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1002

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1002

Trial Pit Photograph



Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1003

CC Ground Investigations Ltd

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1003

Trial Pit Photograph



CC Ground Investigations Ltd	**Contract Name:**	SSE Vastern Road, Reading
	Contract ID:	C5925
	Client:	SSE Plc
	Hole ID:	TP1003

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1004

Trial Pit Photograph



CC Ground Investigations Ltd	
Contract Name:	SSE Vastern Road, Reading
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Hole ID:	TP1004

Trial Pit Photograph



CC Ground Investigations Ltd	
Contract Name:	SSE Vastern Road, Reading
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Hole ID:	TP1004

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
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Hole ID:	TP1005

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
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Hole ID:	TP1005

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1005

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1006

Trial Pit Photograph



CC Ground Investigations Ltd	
Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1006

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1006

Trial Pit Photograph



Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1007

CC Ground Investigations Ltd

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1007

Trial Pit Photograph



CC Ground Investigations Ltd	**Contract Name:**	SSE Vastern Road, Reading
	Contract ID:	C5925
	Client:	SSE Plc
	Hole ID:	TP1007

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1008

Trial Pit Photograph



CC Ground Investigations Ltd

Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1008

Trial Pit Photograph



CC Ground Investigations Ltd	
Contract Name:	SSE Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Hole ID:	TP1008

APPENDIX D

Laboratory Test Results

LABORATORY REPORT

4043

Contract Number: PSL18/0791

Report Date: 07 March 2018

Client's Reference: C5925

Client Name: CC Ground Investigations Ltd
Unit A2 Innsworth Technology Park.
Innsworth Lane
Gloucester
GL3 1DL

For the attention of: Jon Ind

Contract Title: SSE Site, Vastern Road, Reading

Date Received: 16/2/2018
Date Commenced: 16/2/2018
Date Completed: 7/3/2018

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson (Director)
A Watkins (Director)
R Berriman (Quality Manager)

L Knight (Senior Technician)
S Eyre (Senior Technician)
A Fry (Senior Technician)

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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH1001		UT100	2.00	2.45	Soft brown mottled dark grey slightly gravelly organic CLAY.
BH1001		D	4.00		Brown mottled grey very sandy slightly clayey silty GRAVEL.
BH1001		D	12.00		White slightly sandy slightly silty GRAVEL with cobbles.
BH1002C		UT100	2.50		Soft brown mottled dark grey slightly gravelly organic CLAY.
BH1002C		B	5.50	6.00	Brown sandy GRAVEL with cobbles.
BH1002C		UT100	14.50	14.95	White CHALK.
BH1002C		UT100	20.50	20.95	White CHALK.
BH1002C		B	23.50	24.00	White CHALK.
BH1003E		D	2.00		Brown mottled grey slightly gravelly sandy organic CLAY.
BH1003E		UT100	2.50	2.95	Brown slightly gravelly slightly sandy CLAY.
BH1003E		B	3.50	4.00	Brown & grey very sandy slightly clayey GRAVEL.
BH1003E		B	13.00	13.41	White CHALK.
BH1003E		UT100	16.00	16.45	White CHALK.
BH1003E		UT100	19.00	19.45	White CHALK.
BH1004		B	8.50	9.00	White CHALK.
BH1004		UT100	10.00	10.45	White CHALK.
BH1004		UT100	13.00	13.45	White CHALK.
BH1004		UT100	16.00	16.45	White CHALK.
BH1004		B	19.00	19.50	White CHALK.

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH1004		B	33.50	34.00	White CHALK.
BH1005		UT100	2.00	2.45	Very soft brown slightly gravelly organic CLAY.
BH1005		D	2.50		Brown mottled dark grey sandy organic CLAY.
BH1005		B	6.50	7.00	Brown very sandy slightly silty GRAVEL with cobbles.

UKAS TESTING
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Professional Soils Laboratory

SSE Site, Vastern Road, Reading

Contract No:
PSL18/0791
Client Ref:
C5925

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
BH1001		UT100	2.00	2.45	52			87	38	49	97	Very high plasticity CV.
BH1001		D	4.00		16				NP			
BH1001		D	12.00		8.8				NP			
BH1002C		UT100	2.50		48			89	38	51	98	Very high plasticity CV.
BH1003E		D	2.00		71			144	55	89	90	Extremely high plasticity CE.
BH1003E		UT100	2.50	2.95	33			65	27	38	96	High plasticity CH.
BH1005		UT100	2.00	2.45	68			84	36	48	99	Very high plasticity CV.
BH1005		D	2.50		57			97	37	60	90	Extremely high plasticity CE.

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

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SSE Site, Vastern Road, Reading

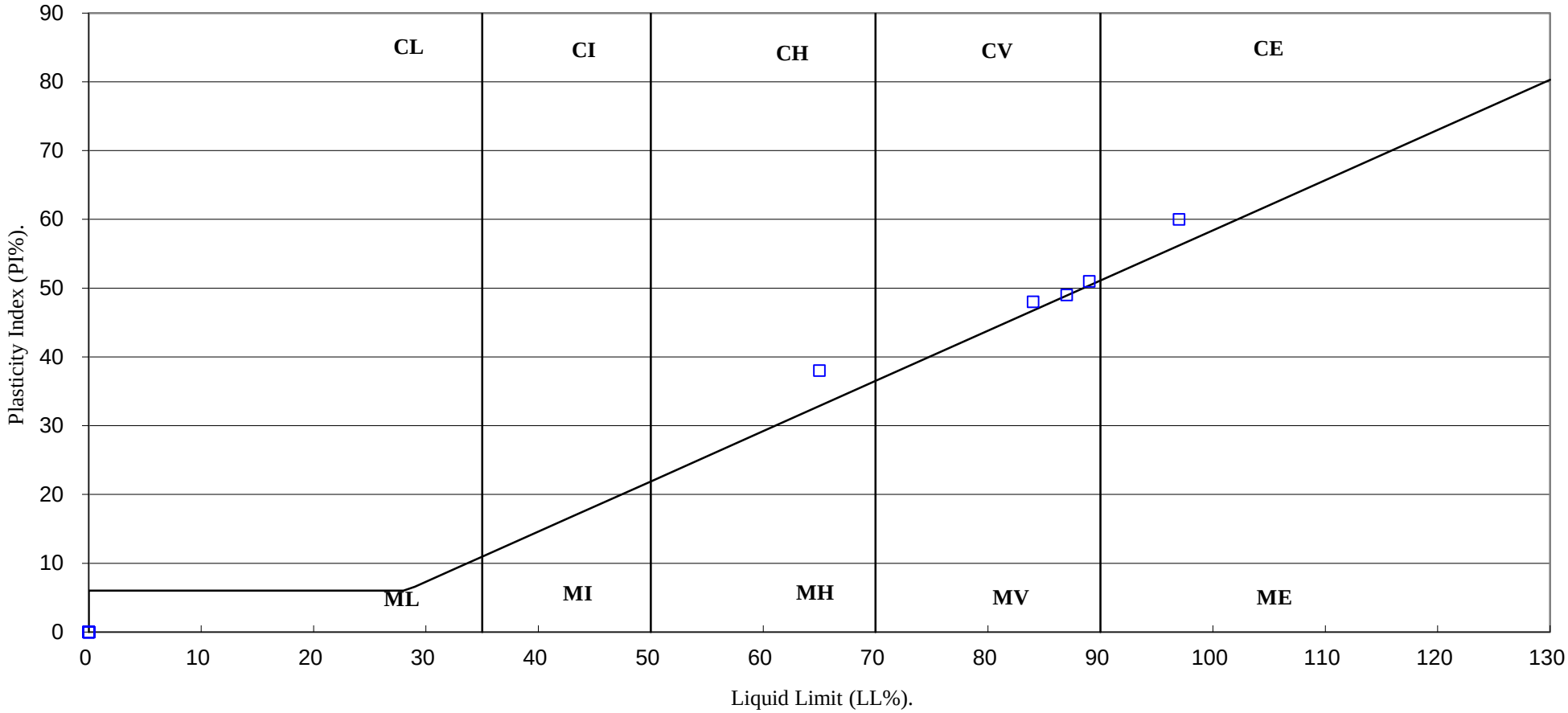
Contract No:

PSL18/0791

Client Ref:

C5925

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043	PSL Professional Soils Laboratory	SSE Site, Vastern Road, Reading	Contract No: PSL18/0791
			Client Ref: C5925

PARTICLE SIZE DISTRIBUTION TEST

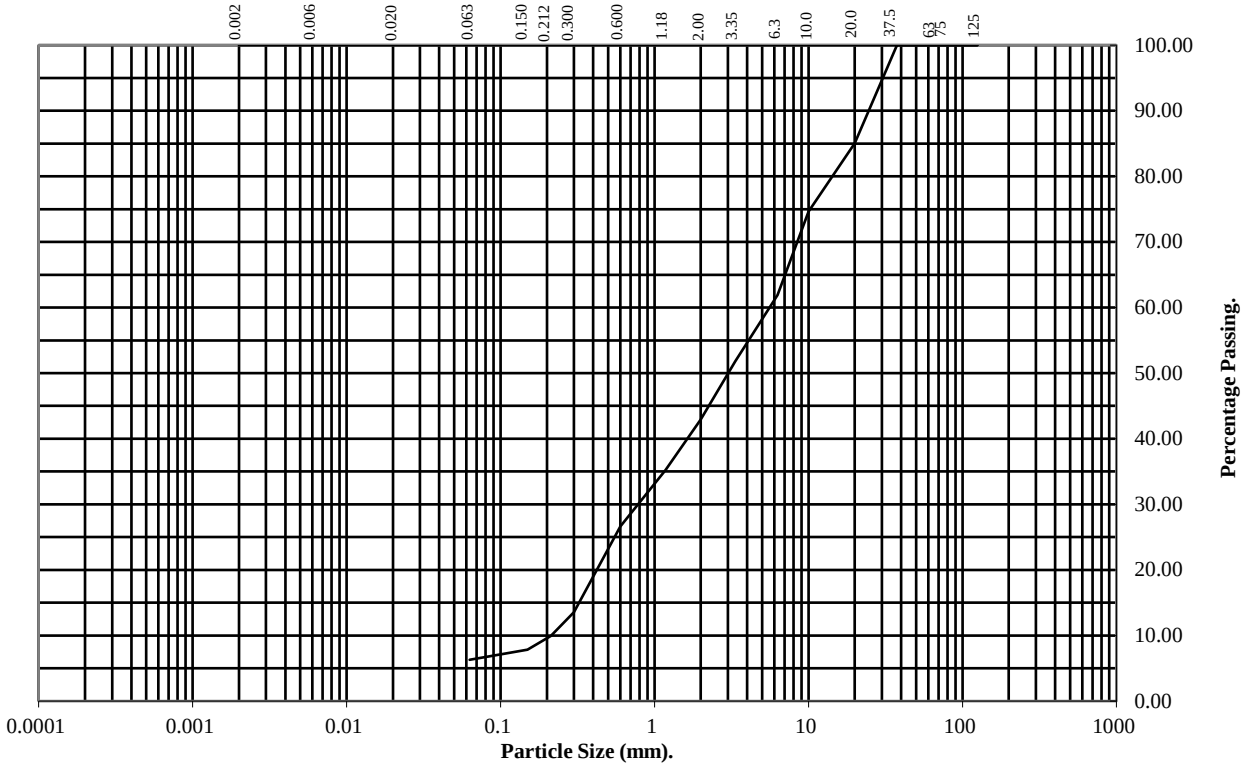
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH1001** **Top Depth (m):** **4.00**

Sample Number: **Base Depth(m):**

Sample Type: **D**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	85
10	75
6.3	62
3.35	52
2	43
1.18	35
0.6	27
0.3	14
0.212	10
0.15	8
0.063	6

Soil Fraction	Total Percentage
Cobbles	0
Gravel	57
Sand	37
Silt/Clay	6

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No:** **PSL18/0791** **Client Ref:** **C5925**

PARTICLE SIZE DISTRIBUTION TEST

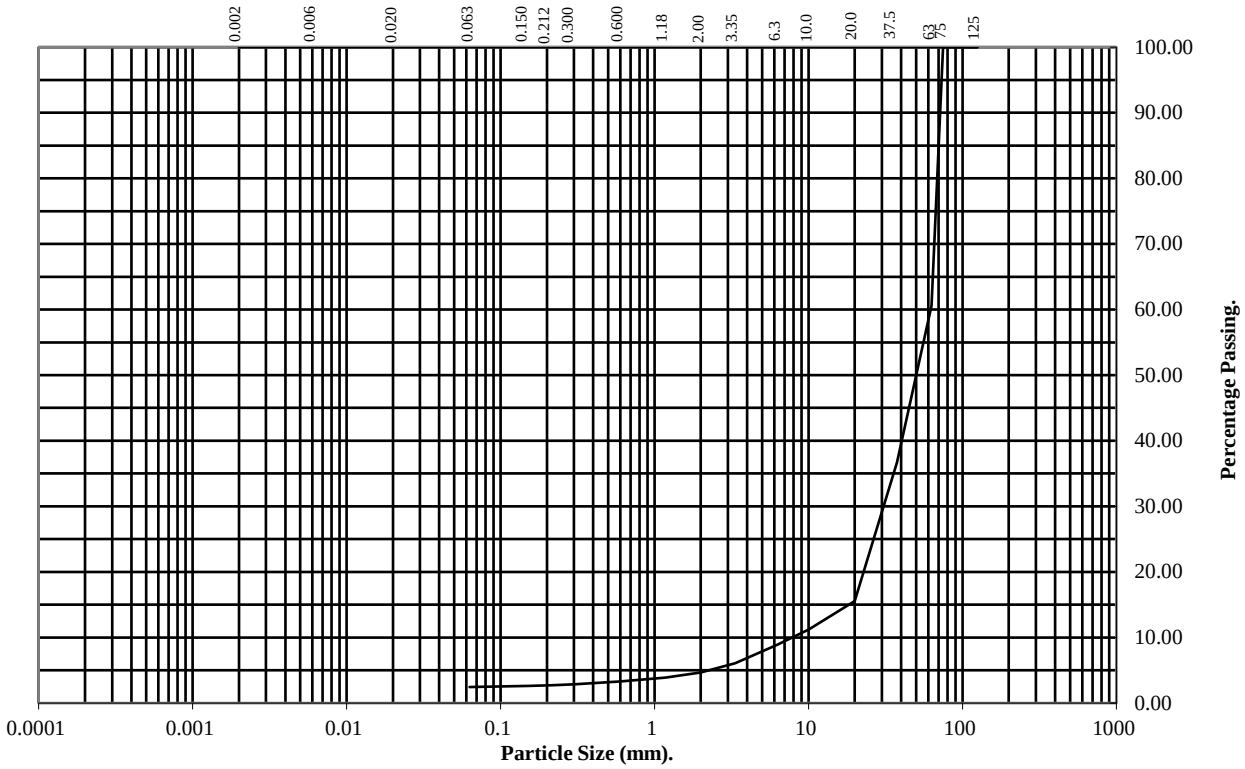
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH1001** **Top Depth (m):** **12.00**

Sample Number: **Base Depth(m):**

Sample Type: **D**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	61
37.5	37
20	16
10	11
6.3	9
3.35	6
2	5
1.18	4
0.6	3
0.3	3
0.212	3
0.15	3
0.063	2

Soil Fraction	Total Percentage
Cobbles	39
Gravel	56
Sand	3
Silt/Clay	2

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

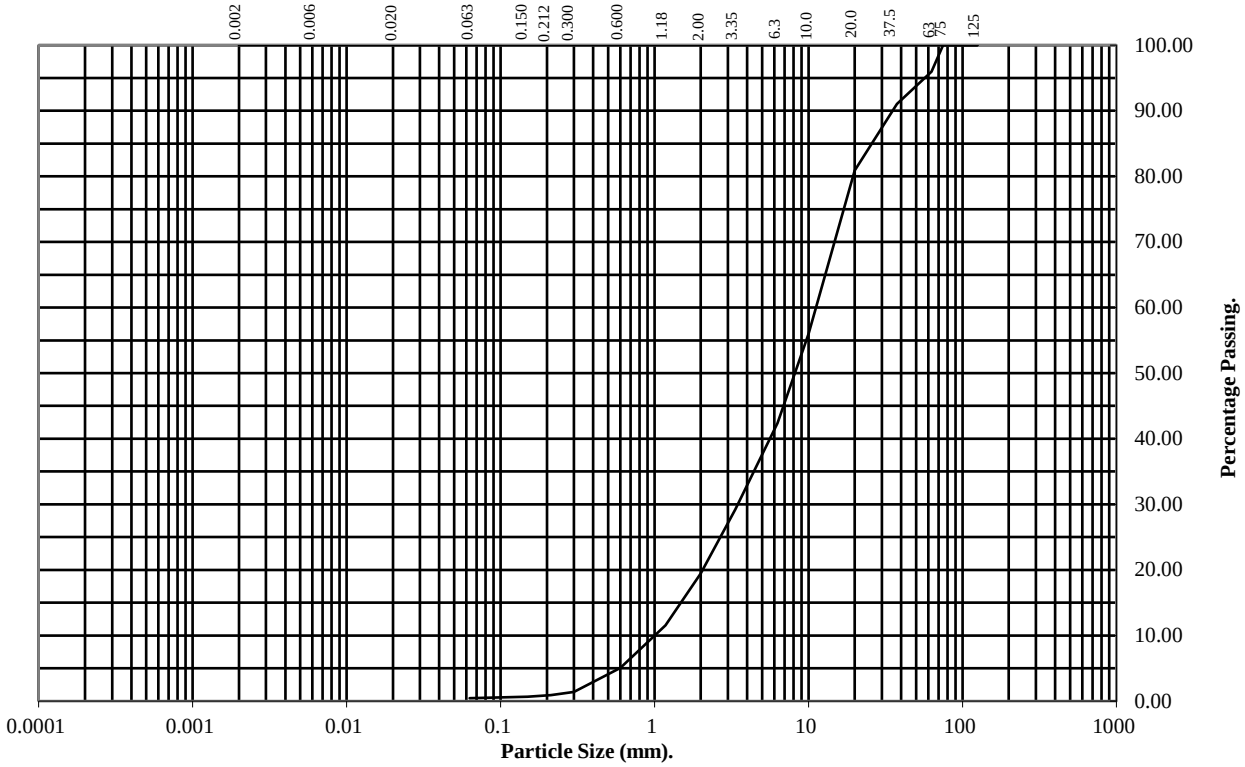
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH1002C** **Top Depth (m):** **5.50**

Sample Number: **Base Depth(m):** **6.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	96
37.5	91
20	81
10	56
6.3	42
3.35	29
2	19
1.18	12
0.6	5
0.3	1
0.212	1
0.15	1
0.063	0

Soil Fraction	Total Percentage
Cobbles	4
Gravel	77
Sand	19
Silt/Clay	0

Remarks:

See Summary of Soil Descriptions

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PARTICLE SIZE DISTRIBUTION TEST

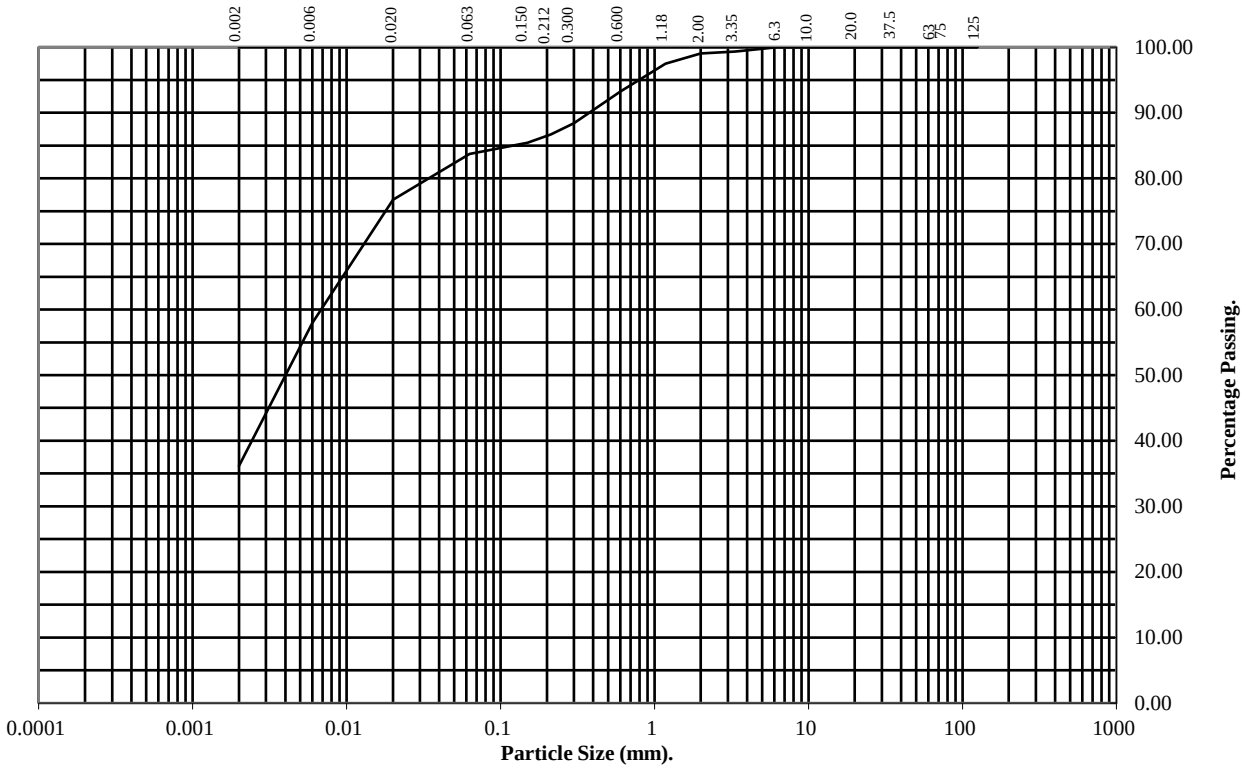
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **BH1003E** **Top Depth (m):** **2.00**

Sample Number: **Base Depth(m):**

Sample Type: **D**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	99
1.18	97
0.6	93
0.3	88
0.212	87
0.15	85
0.063	84

Particle Diameter	Percentage Passing
0.02	77
0.006	58
0.002	36

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	15
Silt	48
Clay	36

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

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PARTICLE SIZE DISTRIBUTION TEST

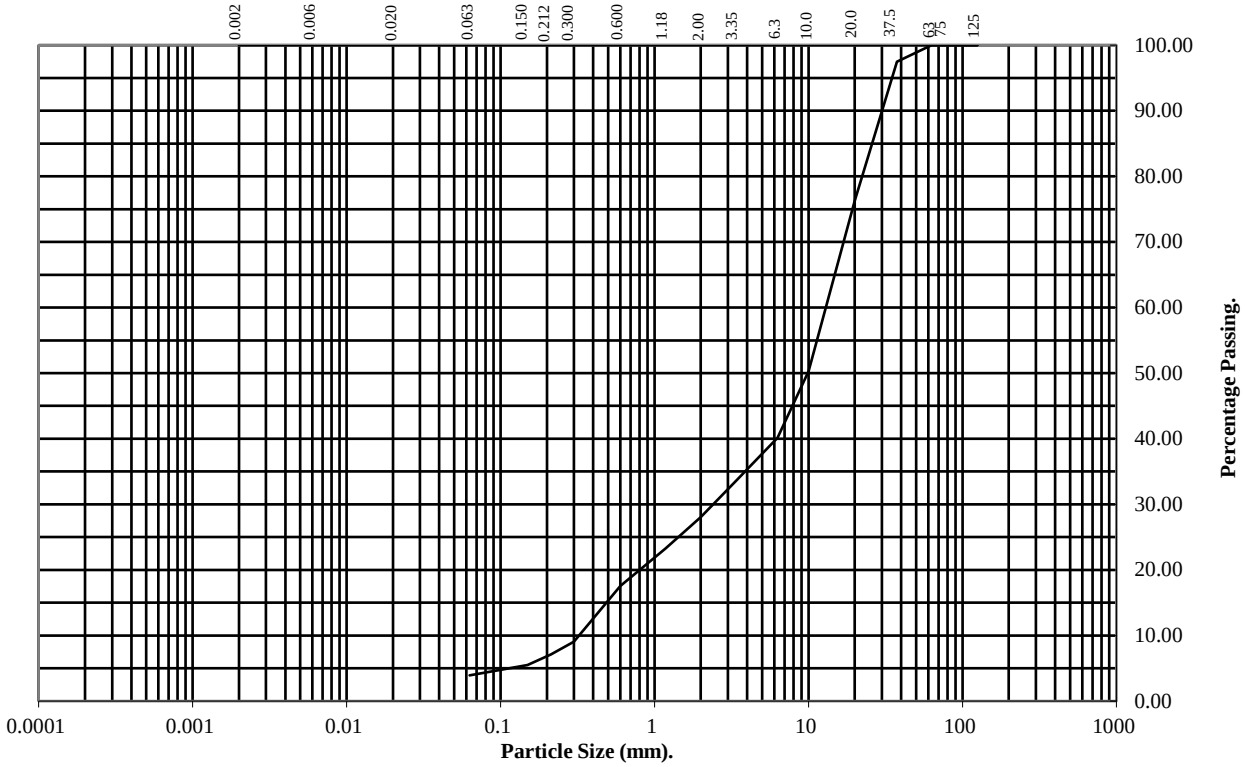
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH1003E** **Top Depth (m):** **3.50**

Sample Number: **Base Depth(m):** **4.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	97
20	76
10	50
6.3	40
3.35	33
2	28
1.18	23
0.6	18
0.3	9
0.212	7
0.15	5
0.063	4

Soil Fraction	Total Percentage
Cobbles	0
Gravel	72
Sand	24
Silt/Clay	4

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No:** **PSL18/0791** **Client Ref:** **C5925**

PARTICLE SIZE DISTRIBUTION TEST

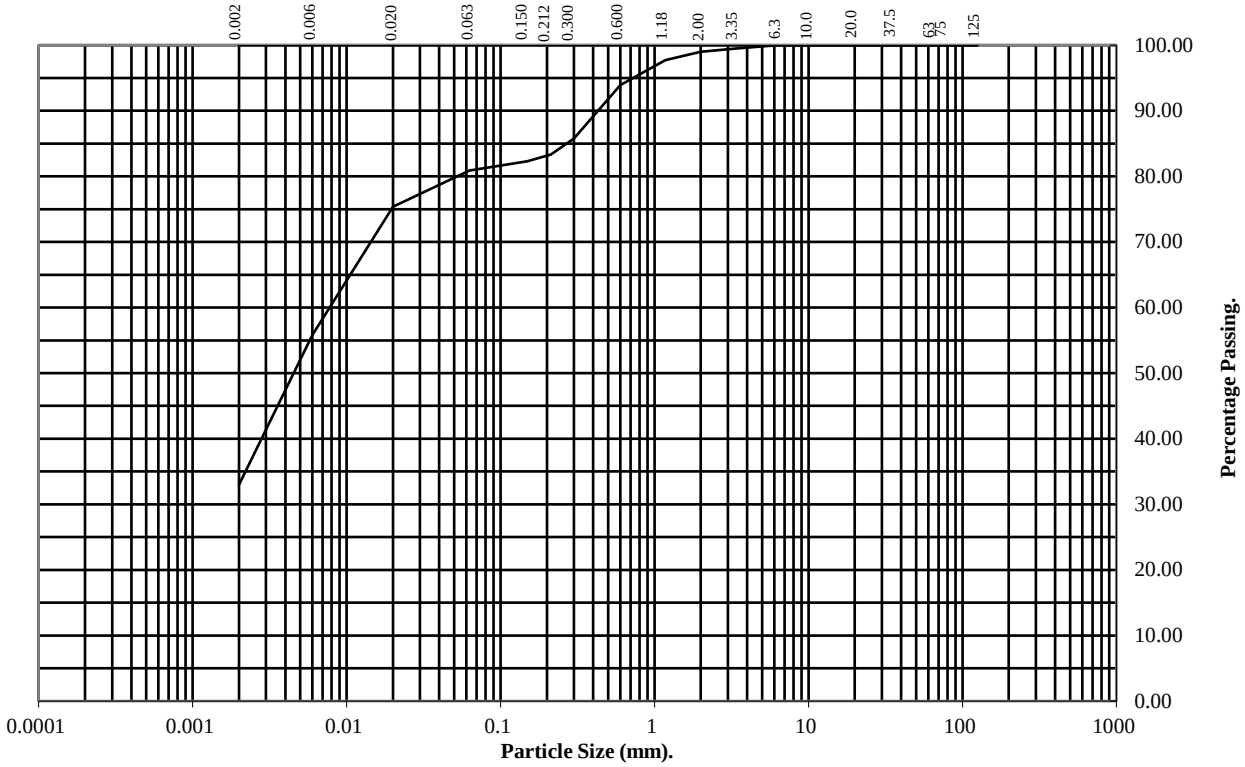
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **BH1005** **Top Depth (m):** **2.50**

Sample Number: **Base Depth(m):**

Sample Type: **D**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	99
1.18	98
0.6	94
0.3	86
0.212	83
0.15	82
0.063	81

Particle Diameter	Percentage Passing
0.02	75
0.006	56
0.002	33

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	18
Silt	48
Clay	33

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

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PARTICLE SIZE DISTRIBUTION TEST

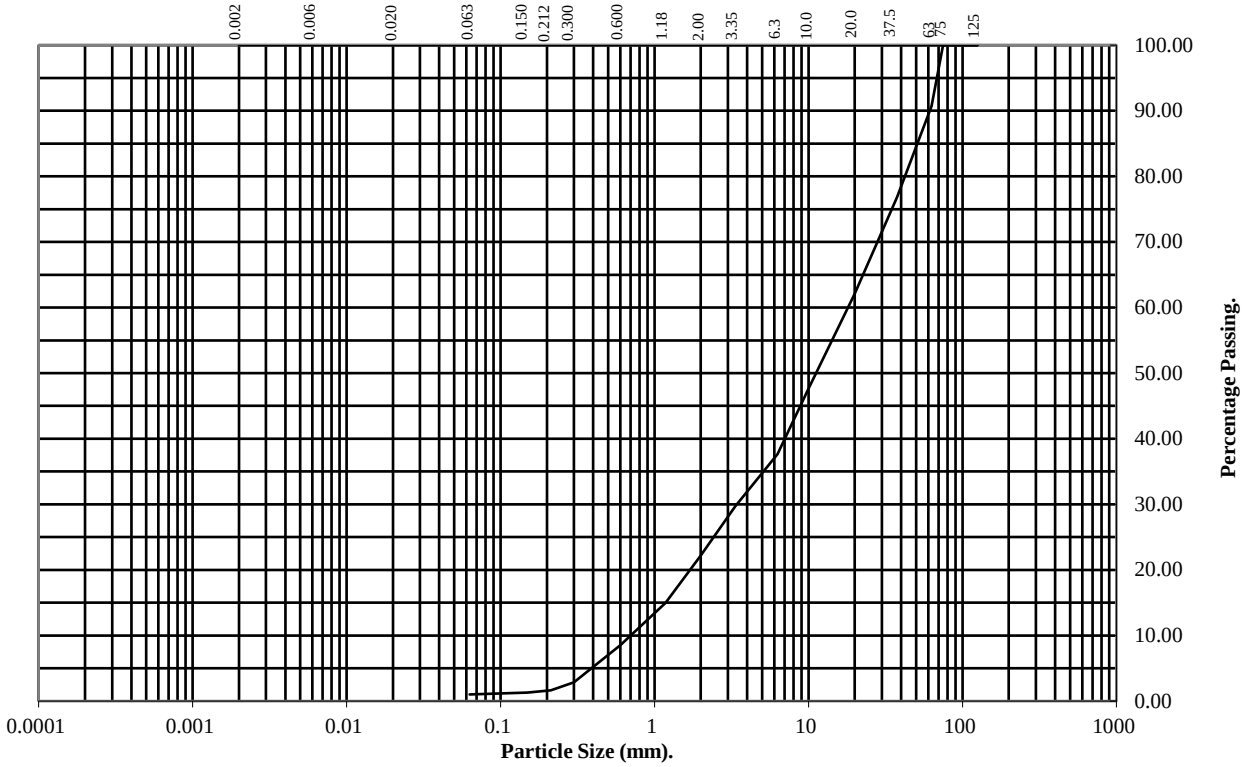
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH1005** **Top Depth (m):** **6.50**

Sample Number: **Base Depth(m):** **7.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	91
37.5	77
20	62
10	48
6.3	38
3.35	30
2	22
1.18	15
0.6	9
0.3	3
0.212	2
0.15	1
0.063	1

Soil Fraction	Total Percentage
Cobbles	9
Gravel	69
Sand	21
Silt/Clay	1

Remarks:

See Summary of Soil Descriptions

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PARTICLE SIZE DISTRIBUTION TEST

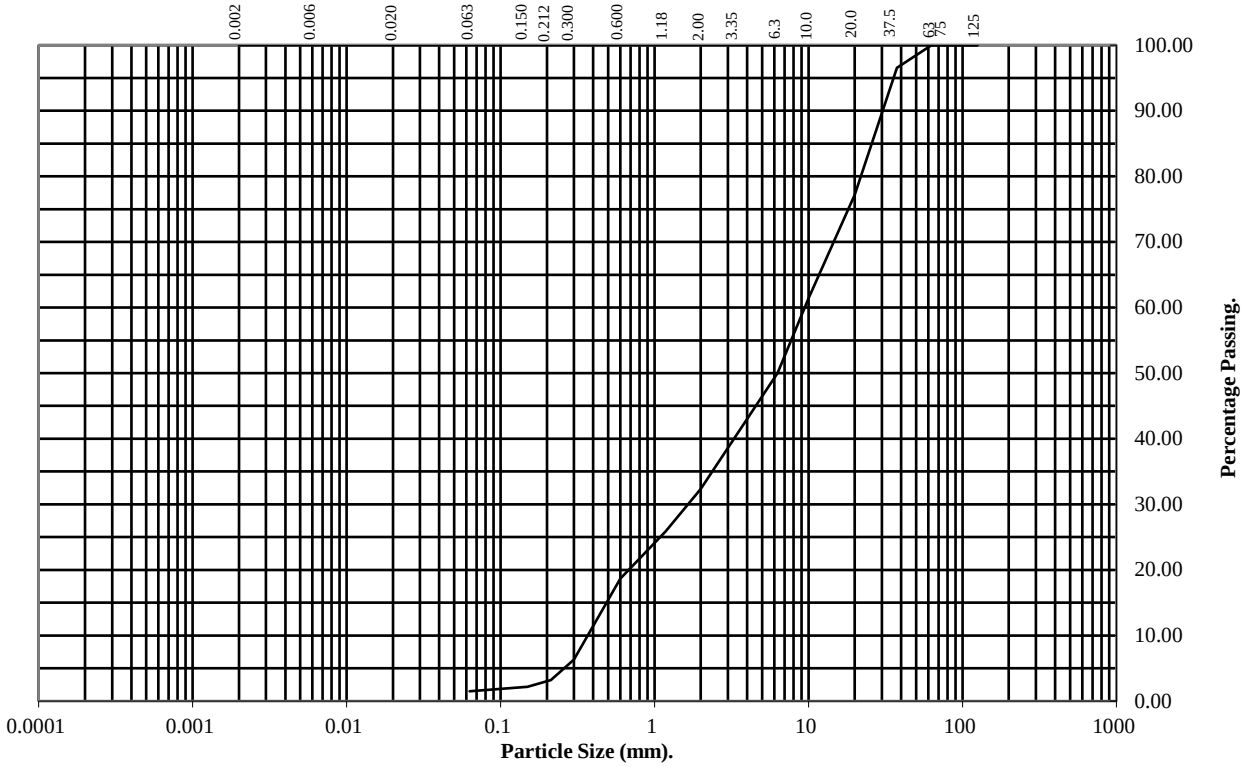
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH2002** **Top Depth (m):** **4.00**

Sample Number: **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	97
20	77
10	61
6.3	50
3.35	40
2	32
1.18	26
0.6	19
0.3	6
0.212	3
0.15	2
0.063	1

Soil Fraction	Total Percentage
Cobbles	0
Gravel	68
Sand	31
Silt/Clay	1

Remarks:

See Summary of Soil Descriptions

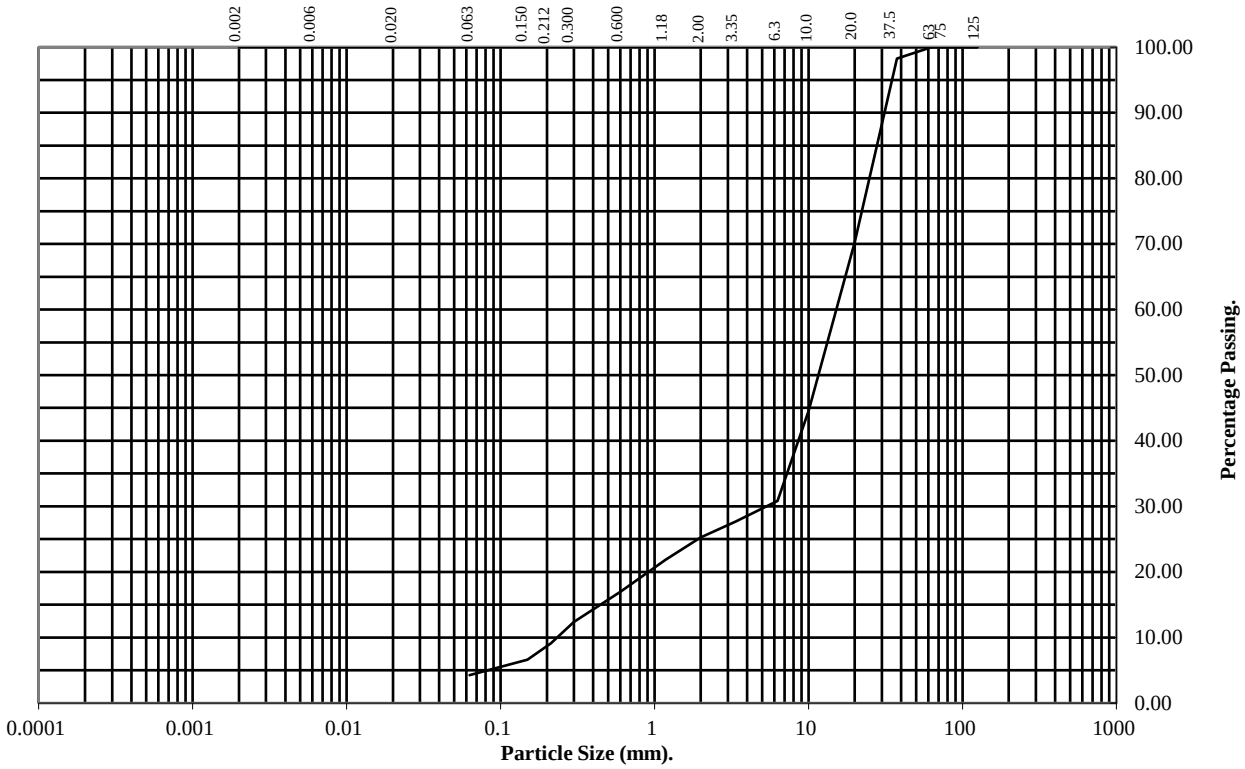
UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No:** **PSL18/0791** **Client Ref:** **C5925**

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number:	**BH2004**	**Top Depth (m):**	**3.50**
Sample Number:		**Base Depth(m):**	**5.00**
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	98
20	70
10	45
6.3	31
3.35	28
2	25
1.18	22
0.6	17
0.3	12
0.212	9
0.15	7
0.063	4

Soil Fraction	Total Percentage
Cobbles	0
Gravel	75
Sand	21
Silt/Clay	4

Remarks:

See Summary of Soil Descriptions

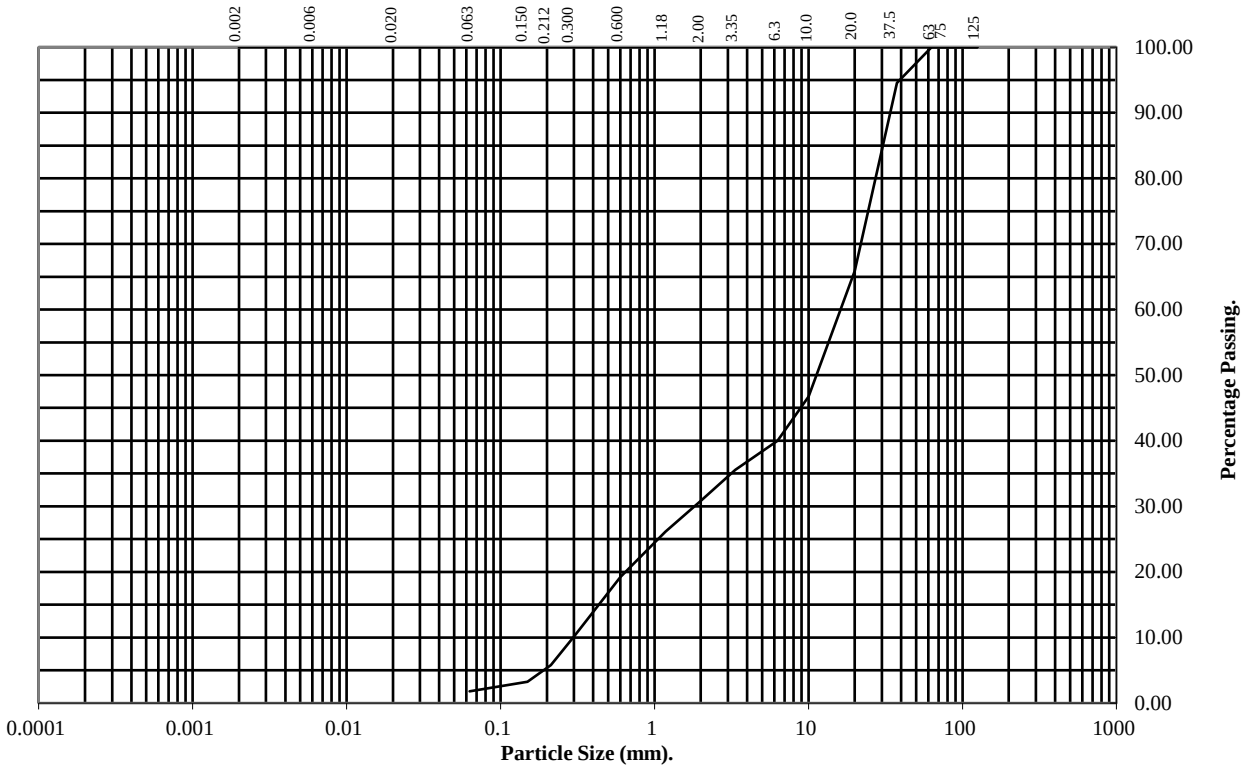
UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No:** PSL18/0791 **Client Ref:** C5925

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number:	**BH2005**	**Top Depth (m):**	**3.30**
Sample Number:		**Base Depth(m):**	**5.00**
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	95
20	66
10	47
6.3	40
3.35	36
2	31
1.18	26
0.6	19
0.3	10
0.212	6
0.15	3
0.063	2

Soil Fraction	Total Percentage
Cobbles	0
Gravel	69
Sand	29
Silt/Clay	2

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No: PSL18/0791** **Client Ref: C5925**

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

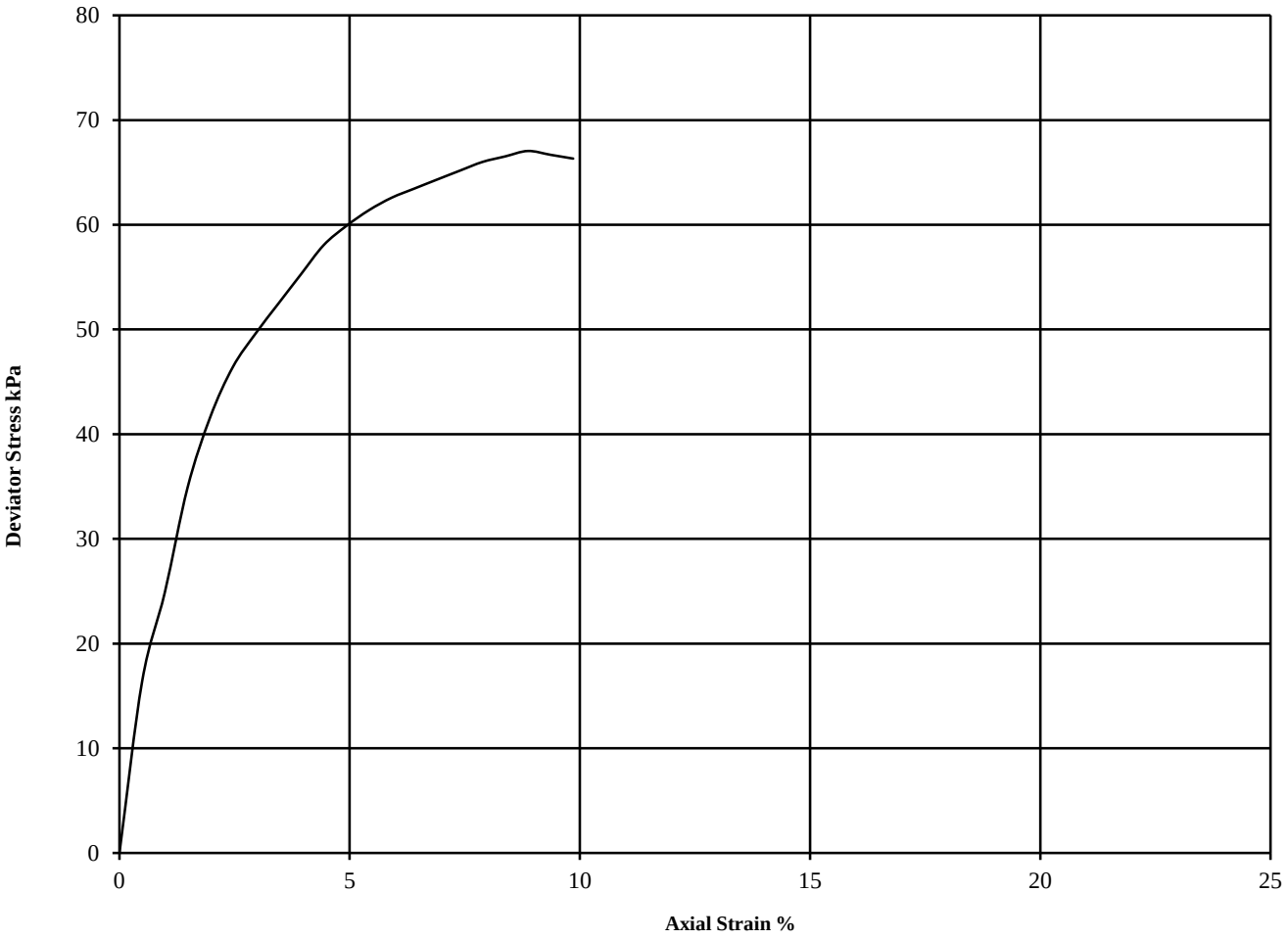
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: **BH1001** **Top Depth (m):** **2.00**

Sample Number: **Base Depth (m):** **2.45**

Sample Type **UT100**



Diameter (mm):		102.0	Height (mm):		207.0	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.36
1	52	1.72	1.13	40	67	34	8.9	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

SSE Site, Vastern Road, Reading

Contract No: **PSL18/0791**

Client Ref: **C5925**

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

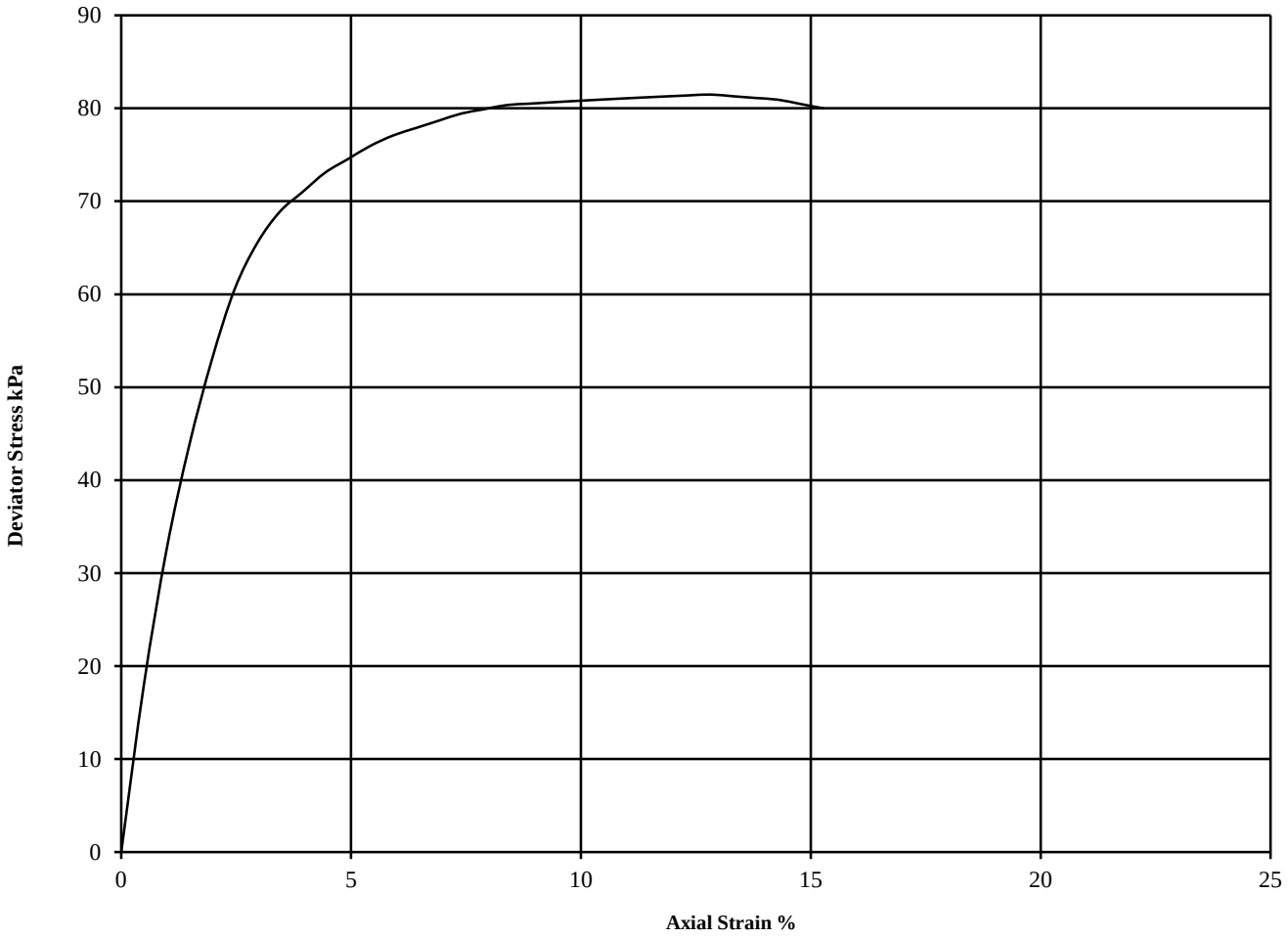
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: **BH1002C** **Top Depth (m):** **2.50**

Sample Number: **Base Depth (m):** **2.95**

Sample Type **UT100**



Diameter (mm):		102.0	Height (mm):		207.0	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.35
1	48	1.69	1.14	40	81	41	12.8	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

SSE Site, Vastern Road, Reading

Contract No: **PSL18/0791**

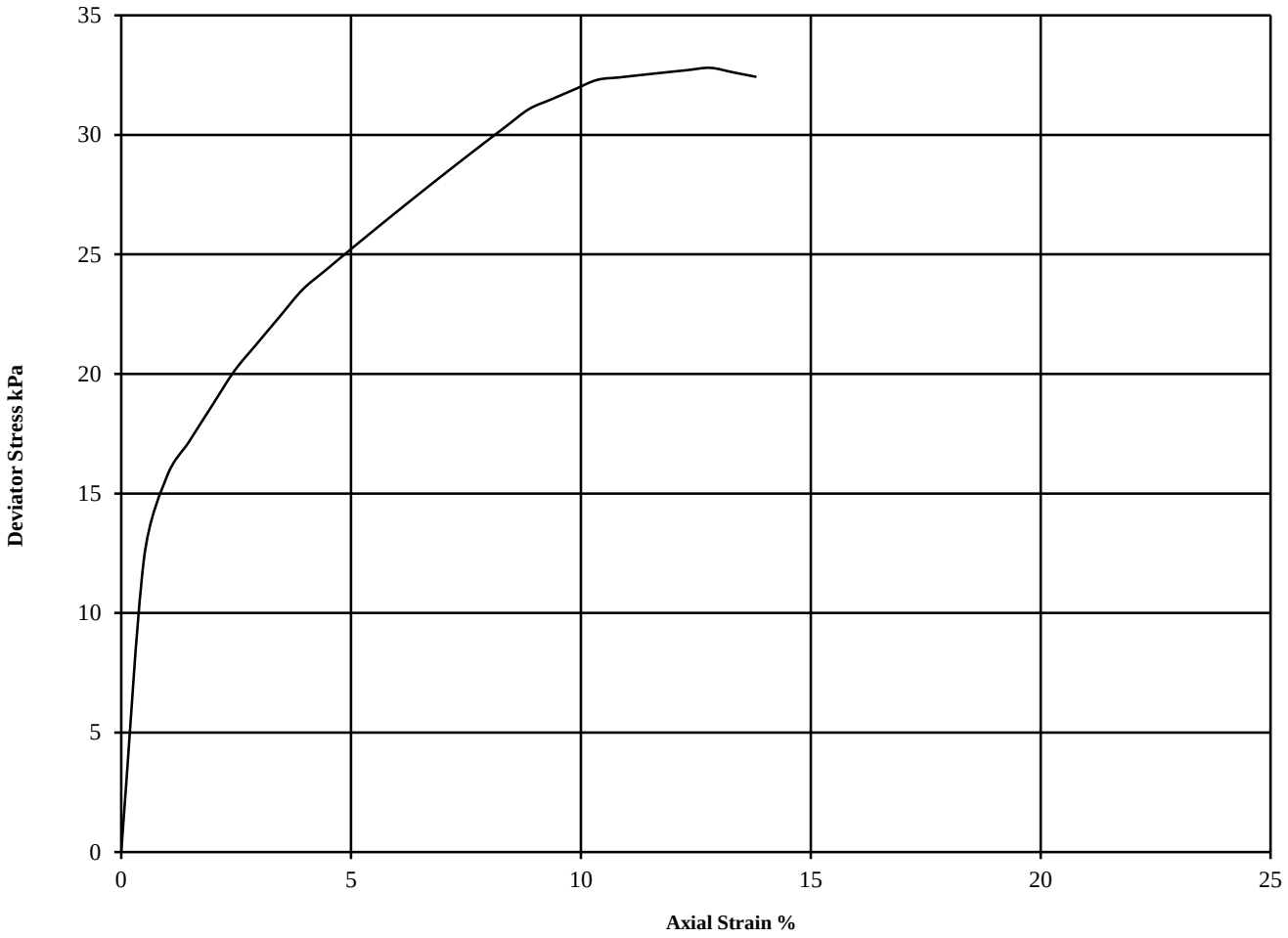
Client Ref: **C5925**

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number:	**BH1005**	**Top Depth (m):**	**2.00**
Sample Number:		**Base Depth (m):**	**2.45**
Sample Type	**UT100**		



Diameter (mm):		102.0	Height (mm):		207.0	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.35
1	68	1.60	0.95	40	33	16	12.8	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL Professional Soils Laboratory

SSE Site, Vastern Road, Reading

Contract No:
PSL18/0791
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ONE DIMENSIONAL CONSOLIDATION TEST

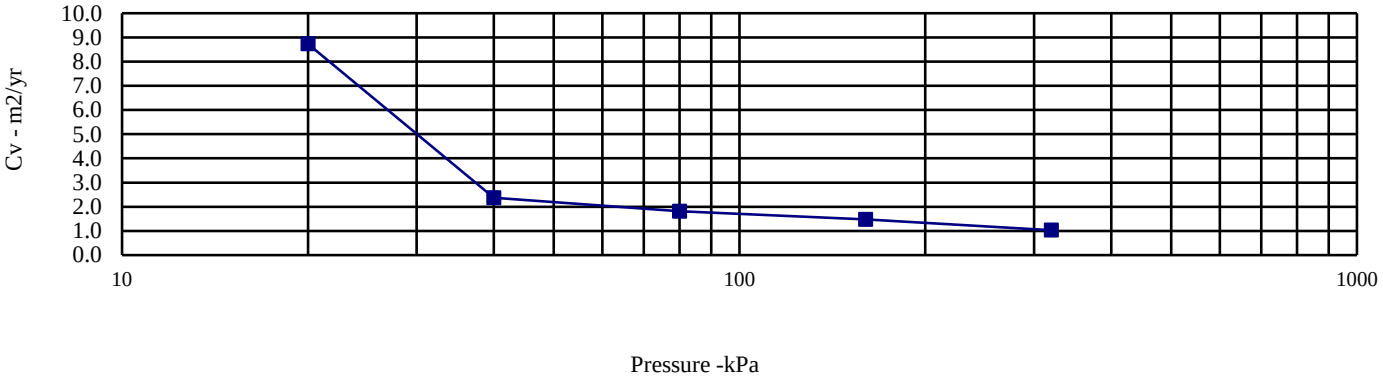
BS 1377: Part 5: 1990: Clause 3

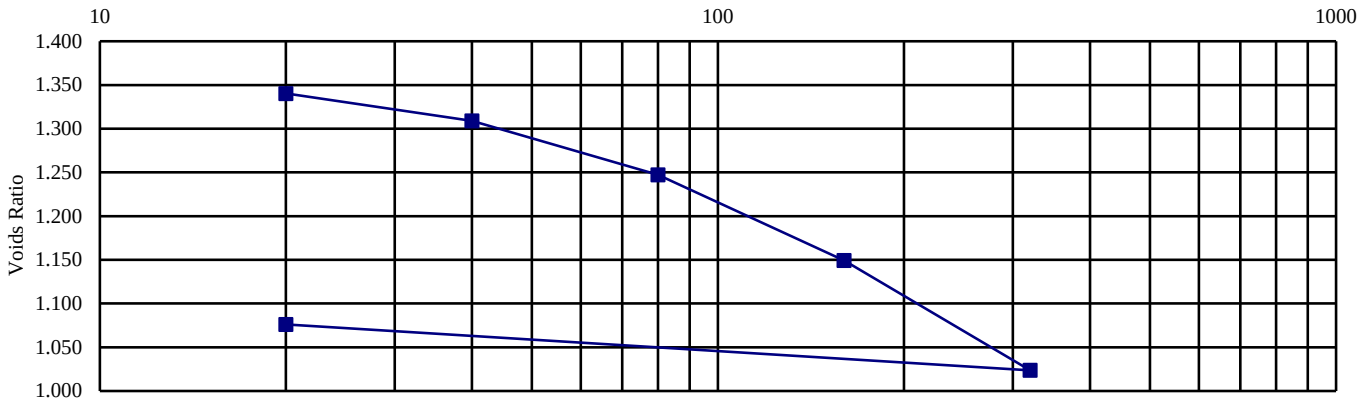
Hole Number: **BH1001** **Top Depth (m):** **2.00**

Sample Number: **Base Depth (m) :** **2.45**

Sample Type: **UT100**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	52						
Bulk Density (Mg/m3):	1.68	0	20	1.047	8.734	Method used to	
Dry Density (Mg/m3):	1.11	20	40	0.667	2.371	determine CV:	T90
Voids Ratio:	1.390	40	80	0.669	1.813	Nominal temperature	
Degree of saturation:	98.5	80	160	0.545	1.478	during test ' C:	20
Height (mm):	19.918	160	320	0.366	1.030	Remarks:	
Diameter (mm)	75.138	320	20	0.087	-	See summary of soil descriptions	
Particle Density (Mg/m3): Assumed	2.65						





UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No: PSL18/0791** **Client Ref: C5925**

ONE DIMENSIONAL CONSOLIDATION TEST

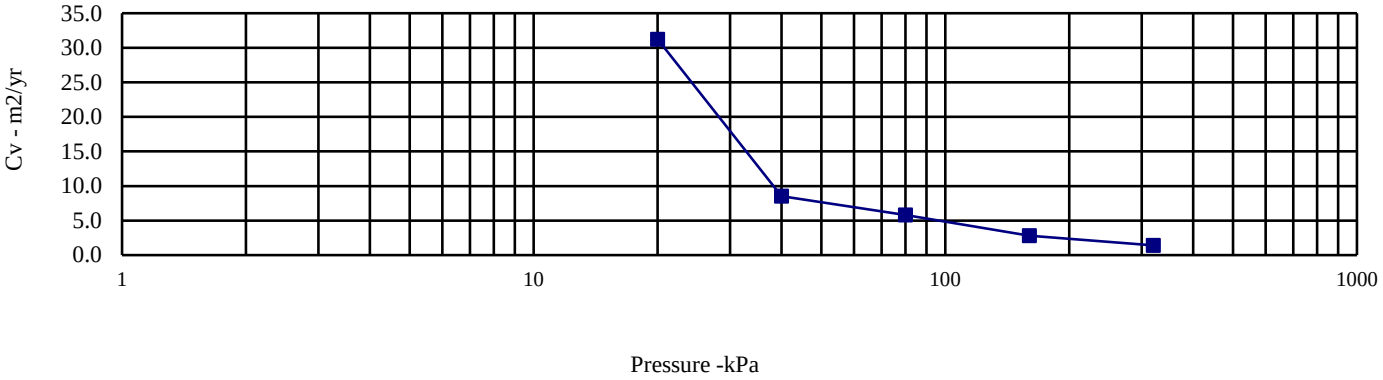
BS 1377: Part 5: 1990: Clause 3

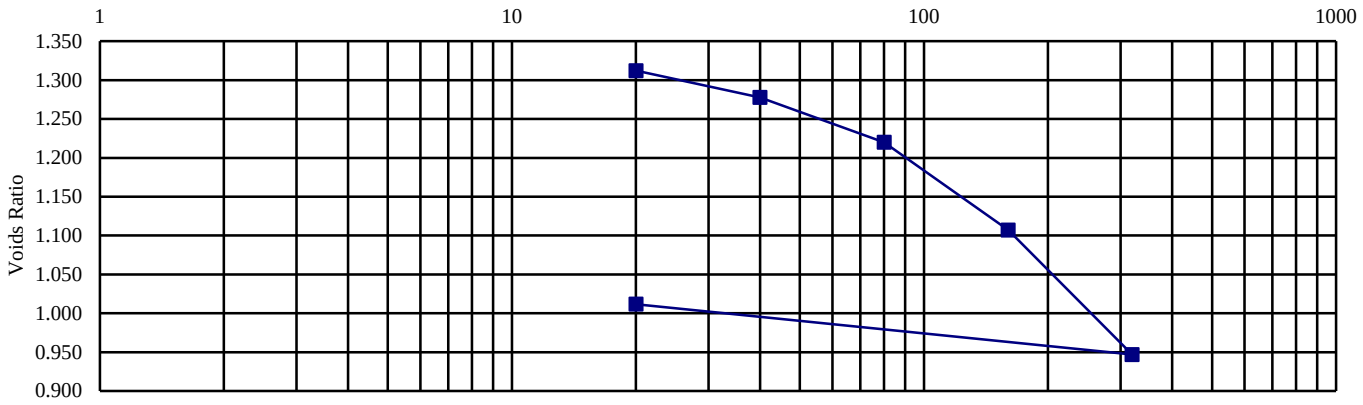
Hole Number: **BH1002C** **Top Depth (m):** **2.50**

Sample Number: **Base Depth (m) :** **2.95**

Sample Type: **UT100**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	48						
Bulk Density (Mg/m3):	1.66	0	20	0.990	31.242	Method used to	
Dry Density (Mg/m3):	1.12	20	40	0.746	8.534	determine CV:	T90
Voids Ratio:	1.359	40	80	0.634	5.798	Nominal temperature	
Degree of saturation:	93.3	80	160	0.636	2.786	during test ' C:	20
Height (mm):	20.042	160	320	0.475	1.411	Remarks:	
Diameter (mm)	75.01	320	20	0.111	-	See summary of soil descriptions	
Particle Density (Mg/m3): Assumed	2.65						





UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No:** **PSL18/0791** **Client Ref:** **C5925**

ONE DIMENSIONAL CONSOLIDATION TEST

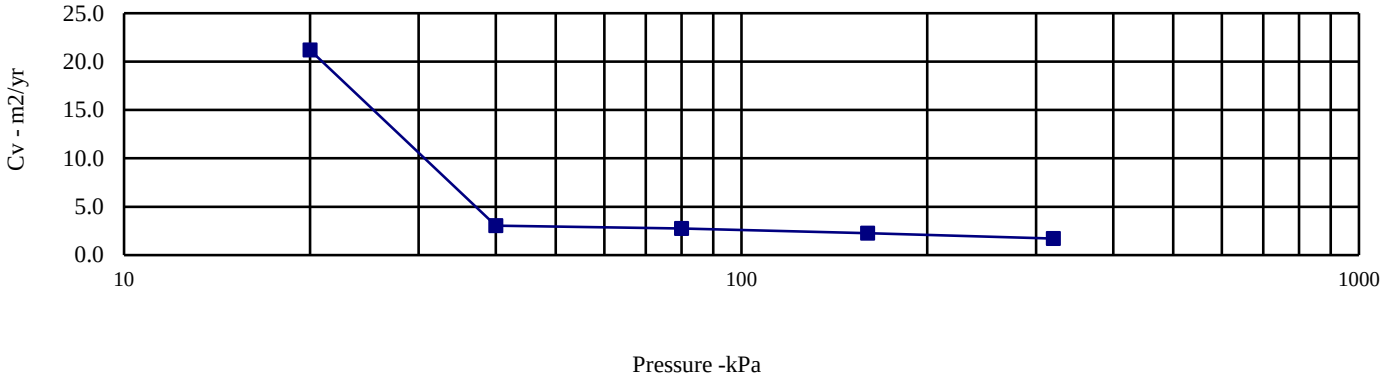
BS 1377: Part 5: 1990: Clause 3

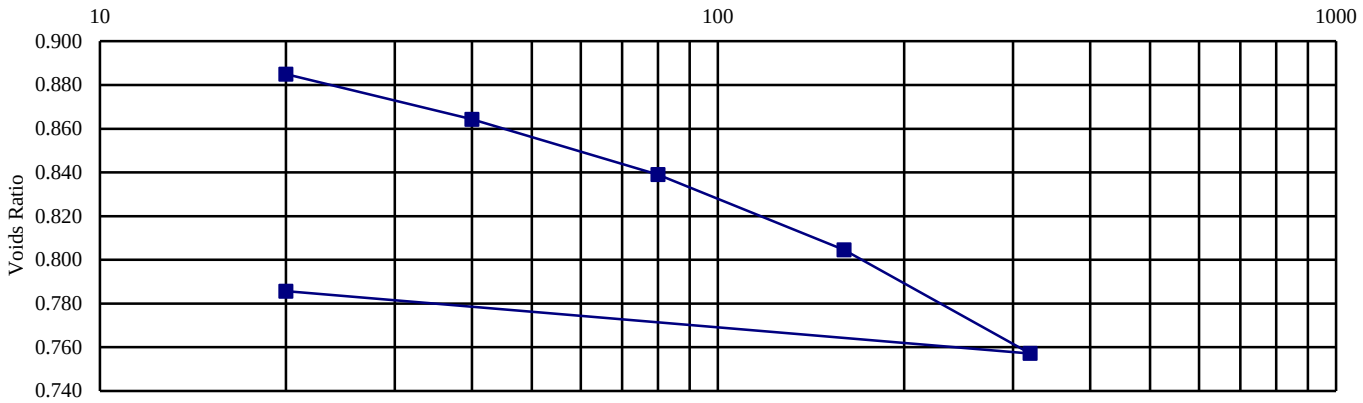
Hole Number: **BH1003E** **Top Depth (m):** **2.50**

Sample Number: **Base Depth (m) :** **2.95**

Sample Type: **UT100**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	33						
Bulk Density (Mg/m3):	1.85	0	20	0.615	21.205	Method used to	
Dry Density (Mg/m3):	1.39	20	40	0.549	3.028	determine CV:	T90
Voids Ratio:	0.908	40	80	0.338	2.758	Nominal temperature	
Degree of saturation:	96.7	80	160	0.234	2.252	during test ' C:	20
Height (mm):	19.912	160	320	0.164	1.711	Remarks:	
Diameter (mm)	75.108	320	20	0.054	-	See summary of soil descriptions	
Particle Density (Mg/m3): Assumed	2.65						





UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No:** **PSL18/0791** **Client Ref:** **C5925**

ONE DIMENSIONAL CONSOLIDATION TEST

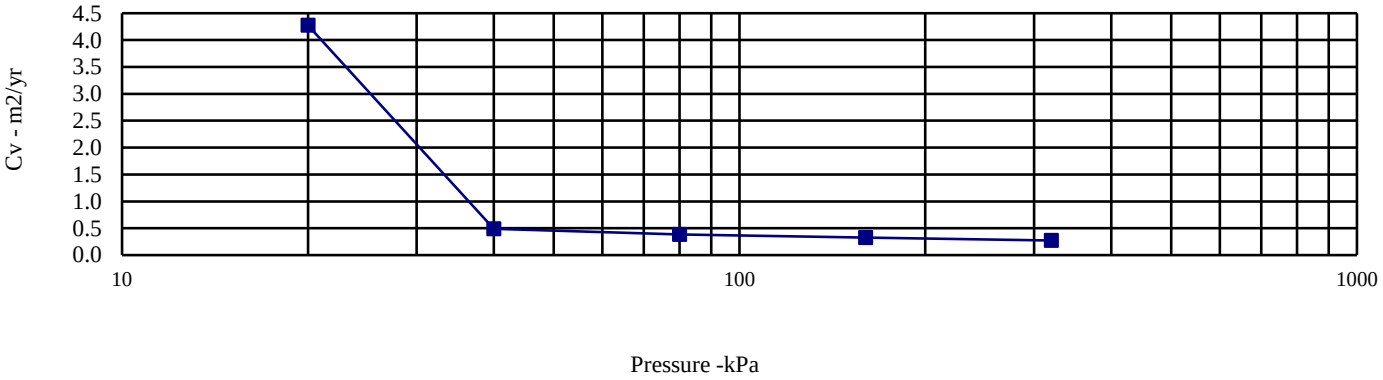
BS 1377: Part 5: 1990: Clause 3

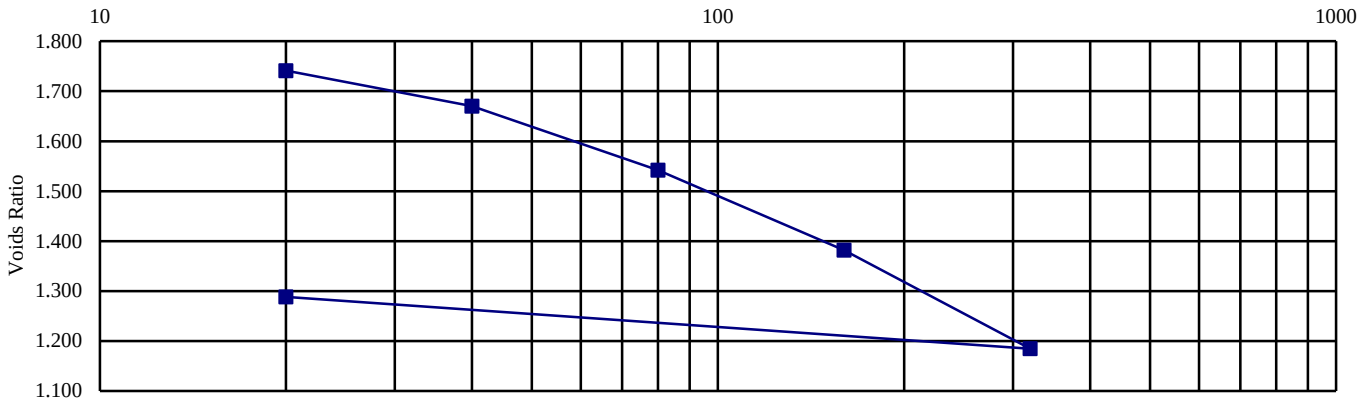
Hole Number: **BH1005** **Top Depth (m):** **2.00**

Sample Number: **Base Depth (m) :** **2.45**

Sample Type: **UT100**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top
Moisture Content (%):	68						
Bulk Density (Mg/m3):	1.58	0	20	1.327	4.276	Method used to	
Dry Density (Mg/m3):	0.94	20	40	1.293	0.488	determine CV:	T90
Voids Ratio:	1.816	40	80	1.200	0.383	Nominal temperature	
Degree of saturation:	99.0	80	160	0.788	0.324	during test ' C:	20
Height (mm):	19.898	160	320	0.517	0.272	Remarks:	
Diameter (mm)	75.118	320	20	0.158	-	See summary of soil descriptions	
Particle Density (Mg/m3): Assumed	2.65						





UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No: PSL18/0791** **Client Ref: C5925**

SUMMARY OF CHALK TESTS

(BS1377 : PART 2 & 4 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content %	Saturated MC %	Dry Density Mg/m^3	Passing 10mm Sieve %	Chalk Crushing Value CCV	Remarks
BH1002C		UT100	14.50	14.95	22	23	1.67			
BH1002C		UT100	20.50	20.95	23	25	1.60			
BH1002C		B	23.50	24.00	25	28	1.53			
BH1003E		B	13.00	13.41	25	28	1.54			
BH1003E		UT100	16.00	16.45	26	26	1.59			
BH1003E		UT100	19.00	19.45	23	25	1.60			
BH1004		B	8.50	9.00	26	29	1.51			
BH1004		UT100	10.00	10.45	24	27	1.55			
BH1004		UT100	13.00	13.45	25	28	1.54			
BH1004		UT100	16.00	16.45	28	29	1.51			
BH1004		B	19.00	19.50	23	25	1.60			
BH1004		B	33.50	34.00	21	22	1.68			

* Chalk Crushing Value is out of our UKAS Scope

UKAS TESTING 4043	PSL Professional Soils Laboratory	**SSE Site, Vastern Road, Reading**	**Contract No:** PSL18/0791 **Client Ref:** C5925

Certificate of Analysis

Certificate Number 18-04338

27-Feb-18

Client Professional Soils Laboratory Ltd
5/7 Hexthorpe Road
Hexthorpe
DN4 0AR

Our Reference 18-04338

Client Reference PSL18/0791

Order No (not supplied)

Contract Title SSE Site, Vastern Road, Reading

Description 8 Soil samples.

Date Received 22-Feb-18

Date Started 22-Feb-18

Date Completed 27-Feb-18

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

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

Approved By

Adam Fenwick
Contracts Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Soil Samples

Our Ref 18-04338
Client Ref PSL18/0791
Contract Title SSE Site, Vastern Road, Reading

				Lab No	1301877	1301878	1301879	1301880	1301881	1301882	1301883	1301884
				Sample ID	BH1001	BH1002C	BH1002C	BH1002C	BH1003E	BH1004	BH1004	BH1005
				Depth	4.00-4.45	0.65-1.10	7.00-7.50	23.50-24.00	1.30-1.40	2.00-2.40	8.50-9.00	5.00-5.50
				Other ID								
				Sample Type	B	B	B	B	B	B	B	B
				Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**									
Metals												
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10	< 10	< 10	< 10	16	14	< 10	< 10
Inorganics												
pH	DETSC 2008#			7.9	8.1	8.4	8.5	8.6	7.4	8.5	8.6
Chloride Aqueous Extract	DETSC 2055	1	mg/l	10	300	5.4	17	110	160	8.8	7.7
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	< 1.0	3.0	< 1.0	< 1.0	3.1	< 1.0	< 1.0	< 1.0
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	34	31	36	25	22	80	25	11
Sulphur as S, Total	DETSC 2320	0.01	%	0.11	0.03	0.01	0.01	0.02	0.08	0.01	< 0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.08	0.06	0.04	0.05	0.05	0.13	0.05	0.02

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 18-04338
Client Ref PSL18/0791
Contract SSE Site, Vastern Road, Reading

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1301877	BH1001 4.00-4.45 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301878	BH1002C 0.65-1.10 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301879	BH1002C 7.00-7.50 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301880	BH1002C 23.50-24.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301881	BH1003E 1.30-1.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301882	BH1004 2.00-2.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301883	BH1004 8.50-9.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301884	BH1005 5.00-5.50 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	

Key: P-Plastic T-Tub

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

Information in Support of the Analytical Results

Our Ref 18-04338
Client Ref PSL18/0791
Contract SSE Site, Vastern Road, Reading

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Jon Ind
CC Ground Investigation Ltd
Unit A2
Innsworth Tech Park
Innsworth Lane
Gloucester
GL3 1DL

t: 01452 739 165
f: 01452 739 220
e: jon@ccground.co.uk

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

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

Combined Report : SSE Site, Vastern Road - Soil

Project / Site name:	SSE Site, Vastern Road, Reading	**Samples received on:**	01/02/2018
Your job number:	C5925	**Samples instructed on:**	02/02/2018
Your order number:	C5925	**Analysis completed by:**	13/02/2018
Report Issue Number:	1	**Report issued on:**	07/03/2018
Samples Analysed:	59 soil samples		

Signed:

Jordan Hill
Reporting Manager
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.

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

Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
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	9.8	22	12	30
Total mass of sample received	kg	0.001	NONE	1.0	1.3	0.96	0.99	0.80
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile & Crocidolite & Amosite	Chrysotile & Crocidolite	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.199	0.009	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.199	0.009	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.4	9.4	8.2	9.1	7.8
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	480	1900	85	73	84
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.24	0.96	0.042	0.037	0.042
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	241	955	42.4	36.6	41.8
Organic Matter	%	0.1	MCERTS	2.8	4.7	2.7	6.4	1.9
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.22	0.49	0.23	0.31	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.91	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.38	0.21	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.83	0.21	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	1.9	0.94	11	1.9	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.58	0.18	3.0	0.54	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	3.6	1.5	14	2.7	< 0.05
Pyrene	mg/kg	0.05	MCERTS	3.0	1.2	11	2.4	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.0	1.2	5.9	1.9	< 0.05
Chrysene	mg/kg	0.05	MCERTS	1.8	0.96	5.1	1.6	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	2.8	1.8	8.1	2.9	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2	0.67	2.6	1.8	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.0	1.3	5.5	2.4	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.3	0.72	3.3	1.8	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.66	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.1	0.75	2.7	1.6	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	21.4	11.6	74.4	22.3	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	23	19	16	27
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	17	17	20	16	38
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	18	17	21	17	39
Copper (aqua regia extractable)	mg/kg	1	MCERTS	38	53	37	37	6.7
Lead (aqua regia extractable)	mg/kg	1	MCERTS	140	44	140	94	16
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.0	5.2	0.5	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	24	25	24	28
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	1.3	1.3	< 1.0	1.4
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	75	140	300	61	49
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	85000	56000	-	-

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

Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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	1.4	1.2	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	3.4	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	37	97	32	71	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	42	110	45	74	< 10
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	2.4	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	2.2	3.4	9.4	5.9	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	13	16	45	30	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	82	320	51	160	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	98	340	110	190	< 10

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
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	31	< 0.1	< 0.1	18	< 0.1
Moisture Content	%	N/A	NONE	9.6	30	12	23	26
Total mass of sample received	kg	0.001	NONE	1.7	1.3	2.0	0.35	1.1
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	-	-	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	1.311	-	-	< 0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	1.31	-	-	< 0.001	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.1	7.8	8.7	8.3	8.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	330	73	37	230	55
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.17	0.037	0.018	0.12	0.028
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	167	36.7	18.3	116	27.6
Organic Matter	%	0.1	MCERTS	1.5	1.5	0.6	5.2	1.6
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	1.3	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.65	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.56	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	6.2	< 0.05	0.49	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	1.3	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	7.9	< 0.05	0.89	0.49	< 0.05
Pyrene	mg/kg	0.05	MCERTS	6.9	< 0.05	0.84	0.46	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	4.1	< 0.05	0.36	0.48	< 0.05
Chrysene	mg/kg	0.05	MCERTS	4.2	< 0.05	0.54	0.63	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	5.4	< 0.05	0.47	1.2	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	2.6	< 0.05	0.30	0.49	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.8	< 0.05	0.52	0.72	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.4	< 0.05	< 0.05	0.59	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	2.7	< 0.05	< 0.05	0.76	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	51.0	< 0.80	4.41	5.83	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.7	16	19	200	16
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	14	27	20	54	32
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	15	27	21	55	32
Copper (aqua regia extractable)	mg/kg	1	MCERTS	41	16	58	540	14
Lead (aqua regia extractable)	mg/kg	1	MCERTS	440	15	100	510	36
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.4	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	24	25	280	22
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	42	81	330	59
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	16	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	16	< 10	< 10	10	< 10

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	6.9	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	6.5	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	29	< 10	11	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	88	< 10	14	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	130	< 10	28	16	< 10

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
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	9.2	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	9.4	12	10	11	2.9
Total mass of sample received	kg	0.001	NONE	1.6	1.3	1.5	2.0	1.1
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	Chrysotile	Chrysotile & Amosite	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	0.009	0.033	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	0.009	0.033	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.3	10.4	9.4	10.3	9.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	450	820	160	650	190
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.22	0.41	0.078	0.33	0.095
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	224	409	77.7	326	95.2
Organic Matter	%	0.1	MCERTS	0.6	7.4	3.4	2.3	10
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	2.9	< 0.05	0.69	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.59
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	1.4	< 0.05	0.90	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	1.2	< 0.05	1.0	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	6.3	3.4	7.2	1.1
Anthracene	mg/kg	0.05	MCERTS	< 0.05	1.2	0.80	2.0	0.55
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	5.6	4.8	13	4.5
Pyrene	mg/kg	0.05	MCERTS	< 0.05	4.6	3.9	12	4.5
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	3.3	2.7	9.1	4.7
Chrysene	mg/kg	0.05	MCERTS	< 0.05	2.4	1.9	5.7	3.6
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	3.3	2.7	11	7.5
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.9	1.4	4.8	3.2
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	2.6	1.8	8.0	5.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.7	1.6	5.9	3.6
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.4	0.88
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	1.3	1.1	4.3	4.5
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	39.6	26.0	86.7	44.4
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	37	11	21	48	5.0
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.0	< 0.2	< 0.2	1.9	0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	10	17	14	18	4.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	10	17	14	18	4.5
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12	34	100	41	13
Lead (aqua regia extractable)	mg/kg	1	MCERTS	66	41	380	150	14
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	16	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	11	32	23	22	6.9
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	210	110	110	550	49
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	6.3	< 1.0	1.8	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	14	140	< 2.0	110	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	49	390	16	300	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	68	350	100	200	180
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	130	890	120	610	190

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	1.8	7.3	< 1.0	1.6	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	20	51	9.2	65	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	51	150	46	220	19
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	80	210	180	260	750
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	150	420	240	540	770

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Chloroethane	µg/kg	1	NONE	-	-	< 1.0	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	< 1.0	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	-	-
Benzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Styrene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Tribromomethane	µg/kg	1	NONE	-	-	< 1.0	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	0.4	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	3.4	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	0.80	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	0.6	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	0.8	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	4.8	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	3.9	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	2.7	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	1.9	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	2.7	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	1.4	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	1.8	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	1.6	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	1.1	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
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	16	< 0.1	< 0.1	19	42
Moisture Content	%	N/A	NONE	7.5	13	16	6.5	4.5
Total mass of sample received	kg	0.001	NONE	1.3	1.5	0.92	1.4	1.6
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile & Amosite & Crocidolite	Chrysotile	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.440	< 0.001	0.002
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.440	< 0.001	0.002
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.2	8.7	8.5	11.3	10.4
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	330	54	170	200	240
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.17	0.027	0.085	0.10	0.12
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	167	26.9	84.6	101	119
Organic Matter	%	0.1	MCERTS	1.0	0.5	6.5	4.1	1.0
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.40	0.44	0.29
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.44	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.21	0.27	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.20	0.33	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.46	< 0.05	3.1	4.5	1.8
Anthracene	mg/kg	0.05	MCERTS	0.18	< 0.05	0.59	1.2	0.40
Fluoranthene	mg/kg	0.05	MCERTS	1.4	< 0.05	4.7	11	2.8
Pyrene	mg/kg	0.05	MCERTS	1.5	< 0.05	6.3	9.2	2.6
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.5	< 0.05	3.8	8.2	1.8
Chrysene	mg/kg	0.05	MCERTS	1.4	< 0.05	2.6	5.7	0.97
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.6	< 0.05	3.6	11	1.9
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2	< 0.05	1.7	5.0	0.80
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.2	< 0.05	2.9	7.7	1.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.6	< 0.05	1.6	6.1	0.82
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.51	< 0.05	0.48	1.6	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.2	< 0.05	1.4	3.8	0.74
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	16.8	< 0.80	33.5	77.3	16.3
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.8	9.7	47	12	10
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	1.3	0.3	0.5
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	20	8.2	41	17	7.6
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	8.3	41	17	7.6
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17	15	250	180	25
Lead (aqua regia extractable)	mg/kg	1	MCERTS	33	44	500	96	310
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.9	11	98	29	7.8
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	42	36	470	130	140
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	8.9	3.4	2.1
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	12	< 8.0	120	46	20
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	33	< 8.0	240	94	49
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	45	< 10	370	140	73

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	13	8.0	5.7
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	19	< 10	210	61	25
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	110	< 10	440	180	100
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	130	< 10	660	250	130

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	0.46	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	0.18	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	1.4	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	1.5	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.5	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	1.4	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.6	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.2	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.6	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.51	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.2	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	< 0.007	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
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	22	38	13	41
Total mass of sample received	kg	0.001	NONE	2.0	1.1	2.0	1.7	0.93
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite & Crocidolite	Chrysotile	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.156	< 0.001	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.156	< 0.001	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.6	8.4	7.7	10.4	7.9
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	450	110	170	270	410
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.23	0.053	0.084	0.13	0.20
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	227	53.2	83.9	133	203
Organic Matter	%	0.1	MCERTS	1.2	6.3	4.7	2.9	5.7
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.47	0.31	0.41	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.42	0.63	0.83	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.37	0.12	0.71	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.42	0.23	1.7	0.19	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	4.1	3.2	12	3.3	0.96
Anthracene	mg/kg	0.05	MCERTS	1.0	0.73	2.4	1.2	0.24
Fluoranthene	mg/kg	0.05	MCERTS	6.3	7.5	12	12	1.0
Pyrene	mg/kg	0.05	MCERTS	5.6	6.3	8.7	10	0.92
Benzo(a)anthracene	mg/kg	0.05	MCERTS	4.6	5.0	5.8	8.0	0.55
Chrysene	mg/kg	0.05	MCERTS	2.4	3.0	3.2	5.1	0.38
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	5.7	6.3	5.5	9.8	0.61
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.8	2.4	2.1	4.7	0.16
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.2	4.3	3.9	7.1	0.37
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.8	3.0	1.9	5.0	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.60	0.78	0.54	1.2	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.9	2.4	1.6	3.6	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	42.3	46.1	62.1	72.1	5.20
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	27	16	21	17
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	21	21	43	22	47
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	21	21	43	23	47
Copper (aqua regia extractable)	mg/kg	1	MCERTS	37	340	20	96	36
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1100	1800	95	470	80
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.9	14	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	34	27	25	30
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	480	330	79	170	85
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	1.4	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	5.8	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	24	< 8.0	< 8.0	8.4	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	90	22	< 8.0	35	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	120	23	< 10	44	< 10

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	1.9	3.6	2.1	< 1.0	1.5
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	12	11	18	5.1	6.2
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	50	64	120	67	15
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	180	120	190	170	40
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	240	200	330	250	62

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Chloroethane	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
Bromomethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Trichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
Benzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Dibromomethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Styrene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Tribromomethane	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
o-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Bromobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	< 0.1	< 0.1	-
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	< 0.2	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05	< 0.05	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	< 0.2	-
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	0.41	< 0.05	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	< 0.1	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	< 0.1	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	0.5	< 0.1	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	0.63	0.83	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	0.71	< 0.05	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	1.0	< 0.2	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3	< 0.3	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Fluorene	mg/kg	0.05	MCERTS	-	-	1.7	0.19	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	12	3.3	-
Anthracene	mg/kg	0.05	MCERTS	-	-	2.4	1.2	-
Carbazole	mg/kg	0.3	MCERTS	-	-	1.3	< 0.3	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	1.7	< 0.3	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	12	12	-
Pyrene	mg/kg	0.05	MCERTS	-	-	8.7	10	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3	< 0.3	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	5.8	8.0	-
Chrysene	mg/kg	0.05	MCERTS	-	-	3.2	5.1	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	5.5	9.8	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	2.1	4.7	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	3.9	7.1	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	1.9	5.0	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	0.54	1.2	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	1.6	3.6	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	< 0.007	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
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	23	44	30	< 0.1
Moisture Content	%	N/A	NONE	22	12	2.0	4.5	31
Total mass of sample received	kg	0.001	NONE	2.0	0.88	2.0	1.6	1.9
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile & Crocidolite	-	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.667	-	0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.667	-	0.001	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.4	10.9	9.1	9.2	7.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	55	570	82	91	830
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.028	0.28	0.041	0.046	0.42
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	27.5	283	40.9	45.7	417
Organic Matter	%	0.1	MCERTS	1.4	3.1	0.4	1.0	5.4
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.20	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.54	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.20	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	1.3	< 0.05	2.4	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.39	< 0.05	0.67	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	3.5	< 0.05	4.6	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	4.2	< 0.05	3.9	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	2.7	< 0.05	2.7	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	1.7	< 0.05	1.8	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	2.9	< 0.05	3.0	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.2	< 0.05	1.3	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	2.3	< 0.05	2.3	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.4	< 0.05	1.4	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	1.1	< 0.05	1.1	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	23.2	< 0.80	25.5	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.7	33	6.4	9.8	17
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	1.4	0.8	0.8	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	23	28	4.4	9.1	32
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	29	4.4	9.2	33
Copper (aqua regia extractable)	mg/kg	1	MCERTS	10	71	14	31	25
Lead (aqua regia extractable)	mg/kg	1	MCERTS	37	380	25	100	120
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	36	4.6	10	24
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	56	750	130	170	66
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	1.7	< 1.0	3.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	2.3	< 2.0	4.6	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	9.0	< 8.0	69	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	65	< 8.0	110	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	78	< 10	180	< 10

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	1.6	< 1.0	1.2	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	8.8	< 2.0	9.8	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	38	< 10	52	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	170	< 10	120	16
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	220	< 10	190	20

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
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	63	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	4.3	11	13	7.6	27
Total mass of sample received	kg	0.001	NONE	1.7	2.0	2.0	2.0	1.9
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile & Amosite	-	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	< 0.001	-	< 0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	< 0.001	-	< 0.001	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	11.3	9.6	8.8	8.6	7.9
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	290	140	28	1200	370
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.14	0.072	0.014	0.58	0.18
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	143	72.2	14.2	582	184
Organic Matter	%	0.1	MCERTS	1.7	2.6	0.7	2.7	4.4
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.33	5.5	< 0.05	0.29	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	1.0	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.42	3.6	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.37	4.1	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	5.8	28	< 0.05	0.50	< 0.05
Anthracene	mg/kg	0.05	MCERTS	1.5	11	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	11	36	< 0.05	0.74	< 0.05
Pyrene	mg/kg	0.05	MCERTS	9.0	33	< 0.05	0.69	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	6.3	43	< 0.05	0.41	< 0.05
Chrysene	mg/kg	0.05	MCERTS	4.4	23	< 0.05	0.49	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	8.6	67	< 0.05	0.67	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	2.4	14	< 0.05	0.31	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	6.0	44	< 0.05	0.57	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3.5	29	< 0.05	0.32	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.1	7.9	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	2.7	20	< 0.05	0.47	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	63.1	370	< 0.80	5.46	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	8.7	17	14	12
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.3	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	21	12	24	15	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	21	12	24	15	31
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	49	30	29	20
Lead (aqua regia extractable)	mg/kg	1	MCERTS	23	130	180	64	43
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	2.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	14	26	23	23
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	120	200	77	160	65
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	6.7	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	21	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	9.6	110	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	120	290	< 8.0	57	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	130	420	< 10	65	< 10

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	4.1	6.7	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	17	44	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	89	410	< 10	11	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	480	1200	< 10	87	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	590	1600	< 10	100	< 10

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	0.33	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	0.5	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	0.42	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	0.9	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	0.37	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	5.8	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	1.5	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	1.5	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	11	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	9.0	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	6.3	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	4.4	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	8.6	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	2.4	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	6.0	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3.5	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.1	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	2.7	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	< 0.007	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
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	11	22	28	12	14
Total mass of sample received	kg	0.001	NONE	1.9	0.97	1.2	1.8	1.3
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	Chrysotile	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.013	< 0.001	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	0.013	< 0.001	-	-	< 0.001
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.2	7.0	7.8	11.2	8.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	480	760	580	250	38
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.24	0.38	0.29	0.12	0.019
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	241	381	288	124	18.9
Organic Matter	%	0.1	MCERTS	1.2	13	2.4	0.8	5.1
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	1.2	3.0	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.36	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.97	14	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.98	10	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	11	140	0.45	< 0.05	1.4
Anthracene	mg/kg	0.05	MCERTS	2.5	37	< 0.05	< 0.05	0.27
Fluoranthene	mg/kg	0.05	MCERTS	15	160	0.60	0.33	2.6
Pyrene	mg/kg	0.05	MCERTS	13	150	0.55	0.31	2.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	8.3	88	0.24	< 0.05	1.3
Chrysene	mg/kg	0.05	MCERTS	6.9	71	0.28	< 0.05	1.5
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	7.6	74	0.39	< 0.05	1.7
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	5.1	40	0.50	< 0.05	0.65
Benzo(a)pyrene	mg/kg	0.05	MCERTS	8.2	81	0.26	< 0.05	1.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	4.8	33	0.14	< 0.05	0.82
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.3	8.2	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	5.6	44	0.18	< 0.05	1.1
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	92.3	962	3.59	< 0.80	15.2
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.1	28	11	12	34
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.0	< 0.2	< 0.2	< 0.2	4.0
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	14	17	23	11	28
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	15	17	23	11	29
Copper (aqua regia extractable)	mg/kg	1	MCERTS	170	94	17	54	140
Lead (aqua regia extractable)	mg/kg	1	MCERTS	330	180	24	240	240
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	7.6	< 0.3	< 0.3	< 0.3	17
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	12	37	20	15	97
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.1	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	180	130	58	38	1200
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	1.1	46	< 1.0	1.8	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	28	89	< 2.0	7.2	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	120	1000	< 8.0	36	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	360	11000	< 8.0	150	9.2
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	500	12000	< 10	200	< 10

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	8.6	28	1.1	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	34	280	4.7	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	210	1900	14	< 10	13
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	560	8200	110	62	27
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	810	10000	130	71	41

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	1.2	3.0	< 0.05	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	0.5	6.5	< 0.1	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.36	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	0.97	14	< 0.05	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	0.6	7.5	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	0.98	10	< 0.05	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	11	140	0.45	-	-
Anthracene	mg/kg	0.05	MCERTS	2.5	37	< 0.05	-	-
Carbazole	mg/kg	0.3	MCERTS	1.1	4.1	< 0.3	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	11	< 0.3	-	-
Fluoranthene	mg/kg	0.05	MCERTS	15	160	0.60	-	-
Pyrene	mg/kg	0.05	MCERTS	13	150	0.55	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	8.3	88	0.24	-	-
Chrysene	mg/kg	0.05	MCERTS	6.9	71	0.28	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	7.6	74	0.39	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	5.1	40	0.50	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	8.2	81	0.26	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	4.8	33	0.14	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.3	8.2	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	5.6	44	0.18	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	< 0.007	< 0.007	< 0.007	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
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	43	< 0.1
Moisture Content	%	N/A	NONE	17	8.5	32	6.5	3.5
Total mass of sample received	kg	0.001	NONE	1.4	1.8	2.0	2.0	2.0
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile & Amosite & Crocidolite	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.001	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.001	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.3	10.1	8.3	8.0	7.6
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	65	660	110	130	19
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.032	0.33	0.053	0.064	0.0096
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	32.3	329	53.2	63.8	9.6
Organic Matter	%	0.1	MCERTS	2.5	3.5	2.2	1.0	0.3
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.75	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.56	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.31	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	4.1	1.6	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.88	0.36	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	3.8	2.3	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	3.3	2.1	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.6	1.0	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	1.7	1.2	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.4	1.4	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.92	0.55	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.6	1.3	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.66	0.66	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.93	0.89	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	22.4	13.4	< 0.80	< 0.80	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	20	18	30	38
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.5	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	22	20	33	32	26
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	22	21	33	32	26
Copper (aqua regia extractable)	mg/kg	1	MCERTS	61	59	8.9	5.0	3.5
Lead (aqua regia extractable)	mg/kg	1	MCERTS	90	400	15	14	16
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	29	25	41	34
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	83	390	63	56	45
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	2.4	2.3	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	100	140	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	370	960	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	15	71	32	60	11
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	18	75	510	1200	15

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	1.3	< 1.0	4.1	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	7.5	2.2	450	790	5.4
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	26	18	370	730	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	38	77	19	41	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	73	97	850	1600	13

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Chloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
Benzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Toluene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Styrene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Tribromomethane	µg/kg	1	NONE	-	-	-	< 1.0	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	< 0.1	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	< 0.2	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	< 0.2	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	< 0.1	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	< 0.3	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	< 0.3	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	< 0.007	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
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	53	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	26	35	3.5	10	12
Total mass of sample received	kg	0.001	NONE	2.0	1.9	2.0	2.0	1.0
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	< 0.001
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.4	8.0	8.8	9.3	8.5
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	34	260	41	210	120
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.017	0.13	0.021	0.11	0.062
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	16.9	132	20.6	106	62.4
Organic Matter	%	0.1	MCERTS	1.6	3.3	0.2	1.0	1.7
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.48	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.53	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	4.7	0.47
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.3	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	5.1	0.75
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	4.3	0.67
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.4	0.34
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.3	0.37
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.4	0.47
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.2	0.21
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.4	0.37
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1	0.24
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.27	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.2	0.26
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	29.5	4.15
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	14	15	26	24
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	26	35	17	20	21
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	26	35	17	20	21
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12	20	19	34	29
Lead (aqua regia extractable)	mg/kg	1	MCERTS	24	38	12	190	75
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	25	21	24	26
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	50	63	23	100	700
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	19	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	21	< 10	< 10

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	24	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	55	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	82	< 10

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Benzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Styrene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	< 0.2	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	< 0.3	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.47
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.75
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.67
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	< 0.3	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.34
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.37
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.47
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.21
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.37
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.24
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.26

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 118	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 138	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 153	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 180	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	< 0.007	< 0.007	-	< 0.007

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
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	20	34	29	29	23
Total mass of sample received	kg	0.001	NONE	1.9	2.0	1.6	1.7	1.8
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.9	8.2	8.0	7.9	7.8
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	130	70	170	160	110
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.065	0.035	0.084	0.081	0.057
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	64.9	34.8	83.6	81.1	56.6
Organic Matter	%	0.1	MCERTS	0.3	1.6	2.3	2.9	5.5
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.27	< 0.05	< 0.05	0.45	0.29
Pyrene	mg/kg	0.05	MCERTS	0.29	< 0.05	< 0.05	0.45	0.27
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.33	0.17
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.41	0.26
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.66	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.22	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.50	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.30	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.33	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	3.65	0.99
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.6	17	11	17	21
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	0.3
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	3.2	26	32	27	14
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	3.6	26	32	27	14
Copper (aqua regia extractable)	mg/kg	1	MCERTS	50	11	15	47	190
Lead (aqua regia extractable)	mg/kg	1	MCERTS	43	16	16	140	730
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	21	24	29	37
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	36	54	55	78	200
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	4.0	< 1.0	< 1.0	16
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	10	60	< 2.0	< 2.0	860
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	14	66	< 8.0	< 8.0	2200
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	9.9	8.3	< 8.0	< 8.0	97
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	34	140	< 10	< 10	3200

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	5.4	< 1.0	< 1.0	47
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	31	< 2.0	53	3600
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	52	< 10	110	3900
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	13	< 10	< 10	91
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	100	< 10	160	7600

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	0.27	-	-	-	0.29
Pyrene	mg/kg	0.05	MCERTS	0.29	-	-	-	0.27
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	0.17
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	0.26
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

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	< 0.007	-	-	-	< 0.007

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
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	40	40	28	35	
Total mass of sample received	kg	0.001	NONE	1.8	1.4	2.0	1.8	
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.9	7.7	8.0	7.7	
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	610	190	130	350	
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.30	0.097	0.066	0.18	
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	305	96.9	65.6	176	
Organic Matter	%	0.1	MCERTS	3.4	1.8	4.7	3.2	
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.89	< 0.05	
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.73	< 0.05	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.94	< 0.05	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.90	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.40	< 0.05	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.35	< 0.05	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.29	< 0.05	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	4.50	< 0.80	
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	31	34	17	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	
Chromium (III)	mg/kg	1	NONE	63	30	50	38	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	63	30	51	38	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	11	130	10	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	40	41	560	31	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	1.6	100	< 0.3	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	39	37	53	30	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	96	92	220	64	
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	

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	1.9	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	2.5	37	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	88	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	35	< 8.0	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	17	160	< 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	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	30	20	180	8.7	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	42	24	160	11	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	16	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	74	48	360	28	

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Chloroethane	µg/kg	1	NONE	-	-	< 1.0	-	
Bromomethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	-	
Trichlorofluoromethane	µg/kg	1	NONE	-	-	< 1.0	-	
1,1-Dichloroethene	µg/kg	1	NONE	-	-	< 1.0	-	
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	-	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Trichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	-	
Benzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Dibromomethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Bromodichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	-	
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Chlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Ethylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
p & m-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Styrene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Tribromomethane	µg/kg	1	NONE	-	-	< 1.0	-	
o-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Isopropylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Bromobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	-	
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	< 0.1	-	
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	-	
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	-	
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	-	
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	-	
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	< 0.1	-	
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3	-	
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Phenanthrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Carbazole	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Anthraquinone	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Fluoranthene	mg/kg	0.05	MCERTS	-	-	0.89	-	
Pyrene	mg/kg	0.05	MCERTS	-	-	0.73	-	
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3	-	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	0.94	-	
Chrysene	mg/kg	0.05	MCERTS	-	-	0.90	-	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	0.40	-	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	0.35	-	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	0.29	-	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	-	

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	-	

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Combined Report SSE Site, Vastern Road - Soil
Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
901082	BH1003	0.80	164	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
901097	BH1002A	0.50	142	Loose Fibrous Debris & Rope & Loose Fibres & Hard/Cement Type Material	**Chrysotile & Crocidolite & Amosite**	0.199	**0.199**
901098	BH1002C	1.00	130	Loose Fibres	**Chrysotile & Crocidolite**	0.009	**0.009**
901281	BH1001	0.50	152	Loose Fibrous Debris	**Chrysotile & Amosite**	1.311	**1.31**
906429	WS1003	1.00	112	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
906563	WS1009	0.20	149	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
906568	BH1003C	0.45	147	Loose Fibres & Loose Fibrous Debris	**Chrysotile**	0.009	**0.009**
906569	TP1003	0.30	173	Loose Fibrous Debris & Loose Fibres	**Chrysotile & Amosite**	0.033	**0.033**
906573	WS1002	0.50	130	Loose Fibrous Debris	**Chrysotile & Amosite & Crocidolite**	0.440	**0.440**
906574	WS017	0.20	147	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
906578	WS1006	0.50	145	Loose Fibres	**Chrysotile**	0.002	**0.002**
906579	TP1005	0.70	140	Loose Fibres & Loose Fibrous Debris	**Chrysotile & Amosite & Crocidolite**	0.156	**0.156**
906580	BH1004	0.60	122	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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

Combined Report	**SSE Site, Vastern Road - Soil**
Project / Site name:	**SSE Site, Vastern Road, Reading**
Your Order No:	**C5925**

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
906590	WS1004	0.20	139	Hard/Cement Type Material & Bitumen & Loose Fibrous Debris & Loose Fibres	**Chrysotile & Crocidolite**	0.667	**0.667**
906592	WS1005	0.50	157	Loose Fibrous Debris	**Chrysotile**	0.001	**0.001**
906626	WS013	0.60	170	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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

Combined Report	**SSE Site, Vastern Road - Soil**
Project / Site name:	**SSE Site, Vastern Road, Reading**
Your Order No:	**C5925**

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
906627	TP1007	0.20	151	Loose Fibres	**Chrysotile & Amosite**	< 0.001	**< 0.001**
908408	TP1005	0.30	157	Loose Fibres & Hard/Cement Type Material	**Chrysotile & Amosite**	0.013	**0.013**
908409	WS1002	1.70	110	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
908443	W1001	0.20	142	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
908444	W1001	1.00	123	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
908667	W1004	1.00	163	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading

* 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 *
901082	BH1003	None Supplied	0.80	Brown gravelly sand with rubble.
901097	BH1002A	None Supplied	0.50	Grey gravelly sand with rubble.
901098	BH1002C	None Supplied	1.00	Brown clay and sand with rubble and gravel
901150	BH1005	None Supplied	0.70	Brown sand with gravel and rubble.
901151	BH1005	None Supplied	2.00	Light brown clay and sand.
901281	BH1001	None Supplied	0.50	Brown gravelly sand with rubble and stones.
901282	BH1001	None Supplied	2.00	Grey clay with gravel.
906407	BH1003E	None Supplied	1.30	Brown clay and sand with rubble and gravel
906429	WS1003	None Supplied	1.00	Brown gravelly sand with stones.
906430	WS1003	None Supplied	1.70	Brown clay.
906563	WS1009	None Supplied	0.20	Light brown sandy gravel with brick.
906567	WS1008	None Supplied	0.45	Black gravelly sand with stones.
906568	BH1003C	None Supplied	0.45	Brown gravelly sand.
906569	TP1003	None Supplied	0.30	Brown gravelly loam with brick.
906570	WS1018	None Supplied	0.15	Black gravelly sand with clinker.
906571	WS1007	None Supplied	0.15	Light brown gravelly loam with stones.
906572	WS1007	None Supplied	1.00	Brown clay with chalk and gravel
906573	WS1002	None Supplied	0.50	Black sandy loam with gravel.
906574	WS017	None Supplied	0.20	Grey sand with gravel and stones.
906578	WS1006	None Supplied	0.50	Brown gravelly clay with stones.
906579	TP1005	None Supplied	0.70	Brown gravelly sand with brick.
906580	BH1004	None Supplied	0.60	Black gravelly clay.
906581	BH1004	None Supplied	2.00	Grey clay and sand.
906587	WS1019	None Supplied	0.50	Brown gravelly clay with brick.
906588	WS1019	None Supplied	1.80	Grey clay and sand.
906589	TP1001	None Supplied	1.00	Brown loam and clay with gravel.
906590	WS1004	None Supplied	0.20	Brown gravelly loam with stones.
906591	WS1005	None Supplied	0.30	Brown gravel with stones.
906592	WS1005	None Supplied	0.50	Brown gravel with stones.
906623	TP1004	None Supplied	1.50	Grey sandy clay with gravel.
906626	WS013	None Supplied	0.60	Grey gravelly sand with stones and rubble.
906627	TP1007	None Supplied	0.20	Brown sand with gravel.
906634	TP1008	None Supplied	1.50	Brown clay and gravel.
908320	TP1002	None Supplied	0.80	Brown clay and sand with rubble and tar.
908321	TP1002	None Supplied	1.70	Brown clay and sand.
908408	TP1005	None Supplied	0.30	Brown sand with brick and rubble.
908409	WS1002	None Supplied	1.70	Grey clay and sand with gravel.
908422	WS1006	None Supplied	1.90	Light brown clay and sand.
908442	TP1008	None Supplied	0.40	Light brown clay and sand with chalk and rubble.
908443	W1001	None Supplied	0.20	Brown loam and clay with rubble and vegetation.
908444	W1001	None Supplied	1.00	Brown clay and sand with gravel.
908445	TP1001	None Supplied	0.50	Brown loam and sand with brick and rubble.
908458	BH2003	None Supplied	2.40	Grey clay.
908459	BH2003	None Supplied	3.50	Light brown clay and sand with stones and gravel.
908460	BH2003	None Supplied	4.20	Light brown gravelly sand.
908464	BH2001	None Supplied	1.00	Brown clay.
908465	BH2001	None Supplied	1.50	Grey clay and sand.
908508	BH2004	None Supplied	4.00	Light brown sandy gravel with stones.
908650	BH1003E	None Supplied	0.60	Light brown clay and sand with rubble and brick.
908667	W1004	None Supplied	1.00	Light brown clay and sand with gravel and rubble.
908686	BH2002	None Supplied	1.00	White chalk with gravel. **
908687	BH2002	None Supplied	1.50	Light brown clay and sand.
908688	BH2002	None Supplied	2.20	Light brown clay and sand.
909146	BH2005	None Supplied	1.75	Light brown clay and sand.
909147	BH2005	None Supplied	1.90	Grey clay and sand with gravel and chalk.
909148	BH2005	None Supplied	2.40	Brown clay.
909199	BH2006	None Supplied	1.40	Brown clay.
909200	BH2006	None Supplied	1.80	Brown clay and sand with gravel.
909201	BH2006	None Supplied	2.40	Grey clay.

**Non MCERTS matrix.

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading

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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-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
Cations in soil by ICP-OES	Determination of cations 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	ISO 17025
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
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
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
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
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-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

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

Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading

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
TPH Chromatogram	TPH Chromatogram.	In-house method	L064-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	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

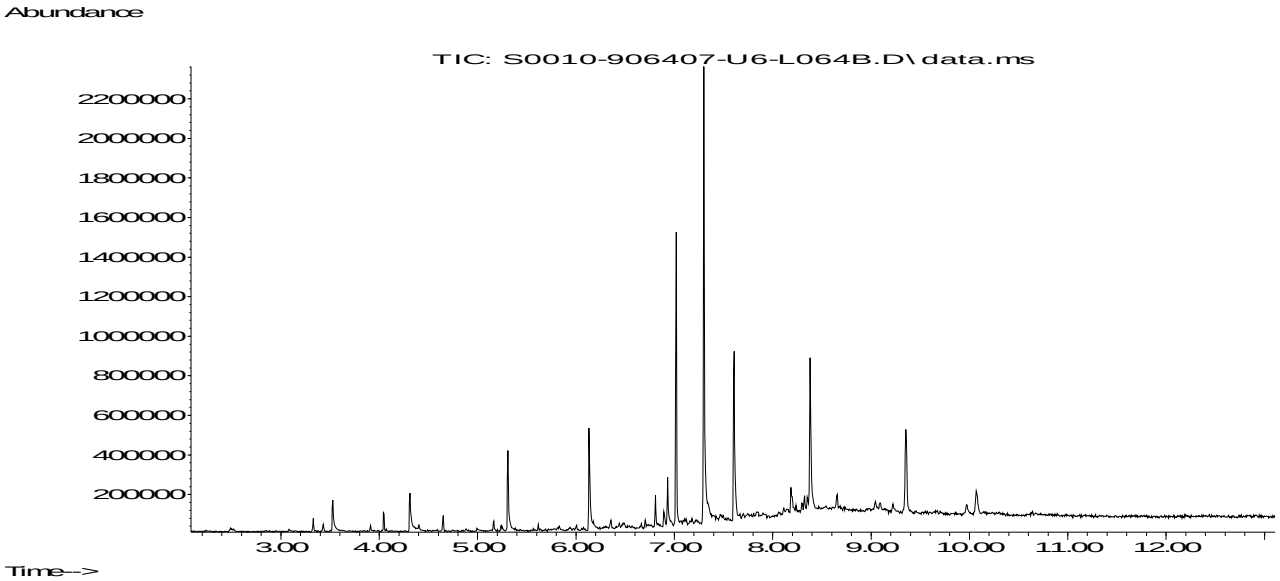
For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received 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.

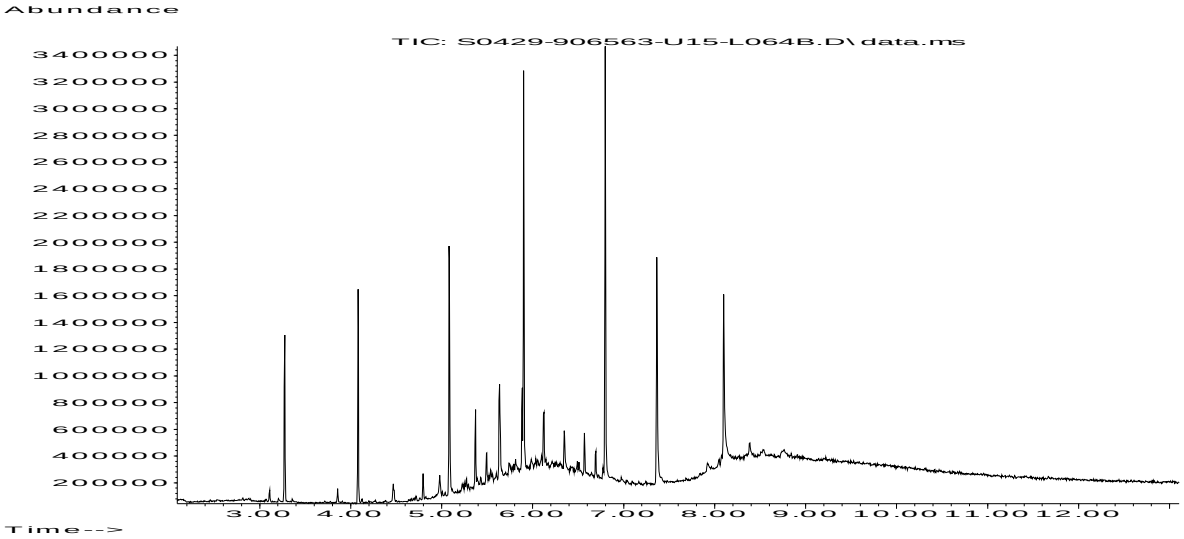
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The results included within the report are representative of the samples submitted for analysis.

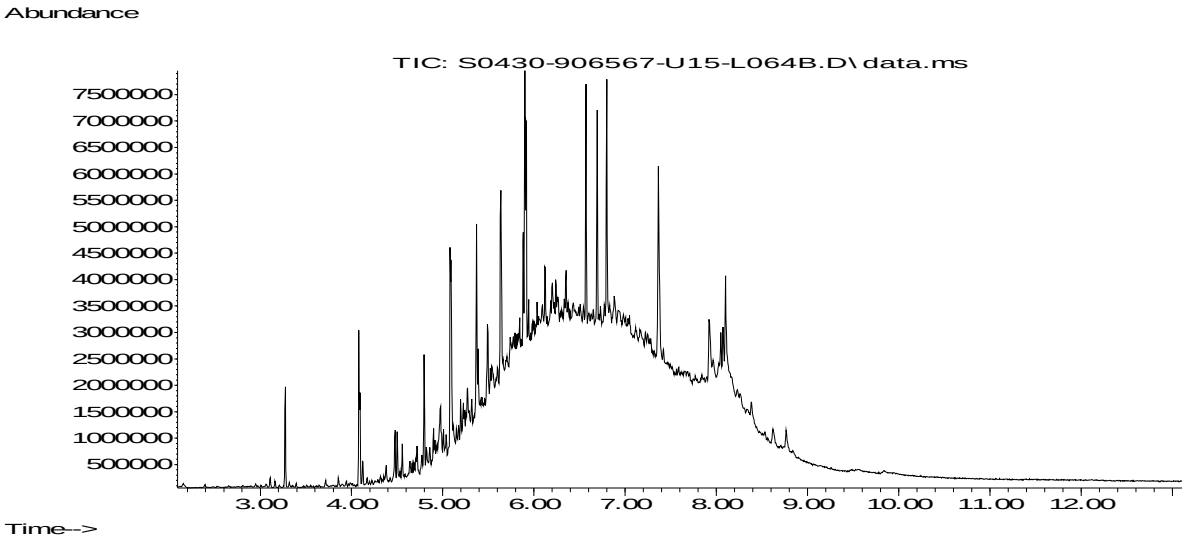
Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
WS1018		S	18-75799	906570	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
WS1018		S	18-75799	906570	b	Monohydric phenols in soil	L080-PL	b
WS1018		S	18-75799	906570	b	Speciated EPA-16 PAHs in soil	L064-PL	b
WS1018		S	18-75799	906570	b	TPH Chromatogram	L064-PL	b
WS1018		S	18-75799	906570	b	TPHCWG (Soil)	L088/76-PL	b

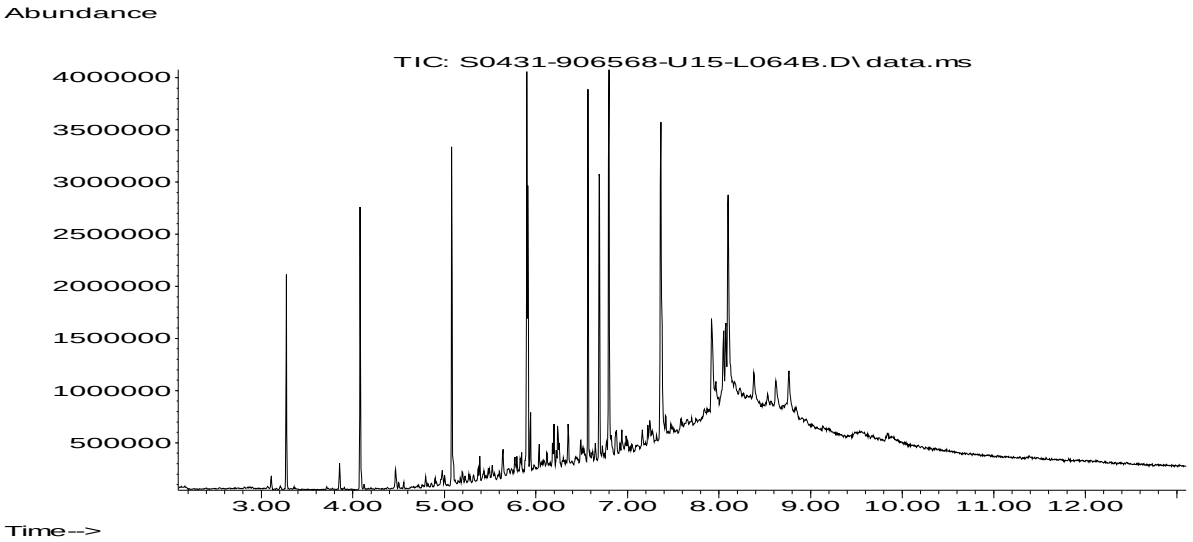
Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature

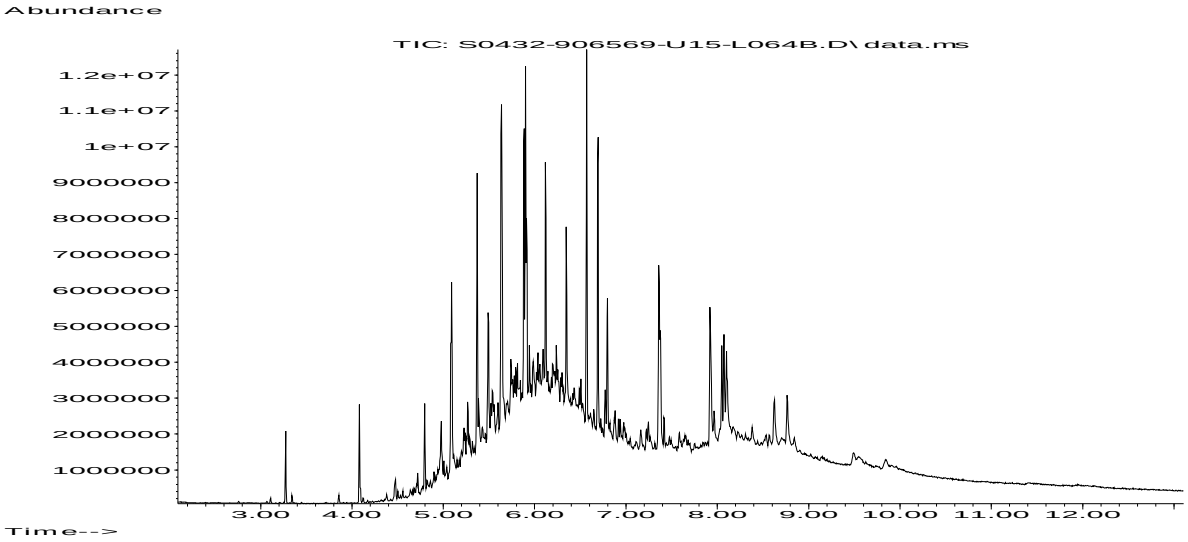
Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH2001		S	18-76104	908464	c	Hexavalent chromium in soil (Lower Level)	L080-PL	c
BH2001		S	18-76104	908464	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH2001		S	18-76104	908464	c	Cr (III) in soil	L080-PL	c
BH2001		S	18-76104	908464	c	Monohydric phenols in soil	L080-PL	c
BH2001		S	18-76104	908464	c	Organic matter (Automated) in soil	L009-PL	c
BH2001		S	18-76104	908464	c	Speciated EPA-16 PAHs in soil	L064-PL	c
BH2001		S	18-76104	908464	c	TPH Chromatogram	L064-PL	c
BH2001		S	18-76104	908464	c	TPHCWG (Soil)	L088/76-PL	c
BH2001		S	18-76104	908464	c	pH in soil (automated)	L099-PL	c
BH2001		S	18-76104	908465	c	Hexavalent chromium in soil (Lower Level)	L080-PL	c
BH2001		S	18-76104	908465	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH2001		S	18-76104	908465	c	Cr (III) in soil	L080-PL	c
BH2001		S	18-76104	908465	c	Monohydric phenols in soil	L080-PL	c
BH2001		S	18-76104	908465	c	Organic matter (Automated) in soil	L009-PL	c
BH2001		S	18-76104	908465	c	PCB's By GC-MS in soil	L027-PL	c
BH2001		S	18-76104	908465	c	Semi-volatile organic compounds in soil	L064-PL	c
BH2001		S	18-76104	908465	c	Speciated EPA-16 PAHs in soil	L064-PL	c
BH2001		S	18-76104	908465	c	TPH Chromatogram	L064-PL	c
BH2001		S	18-76104	908465	c	TPHCWG (Soil)	L088/76-PL	c
BH2001		S	18-76104	908465	c	Volatile organic compounds in soil	L073B-PL	c
BH2001		S	18-76104	908465	c	pH in soil (automated)	L099-PL	c

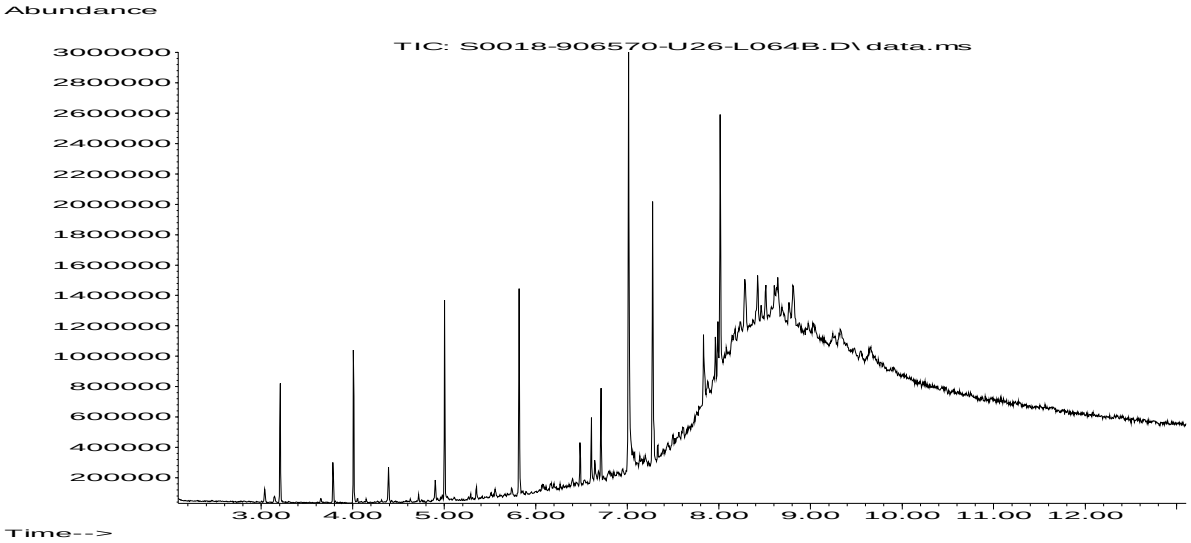

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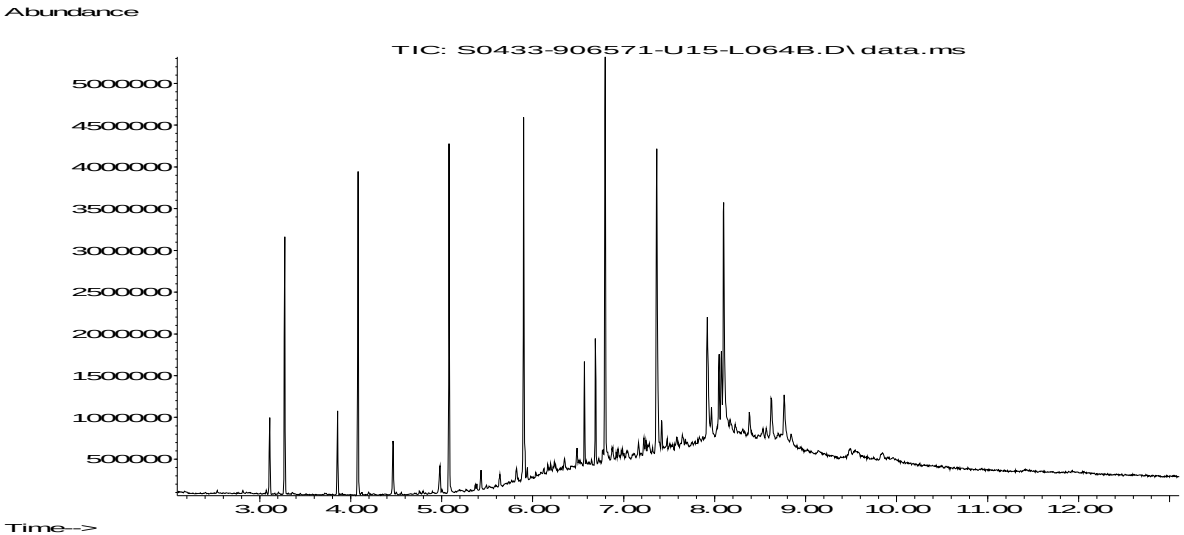

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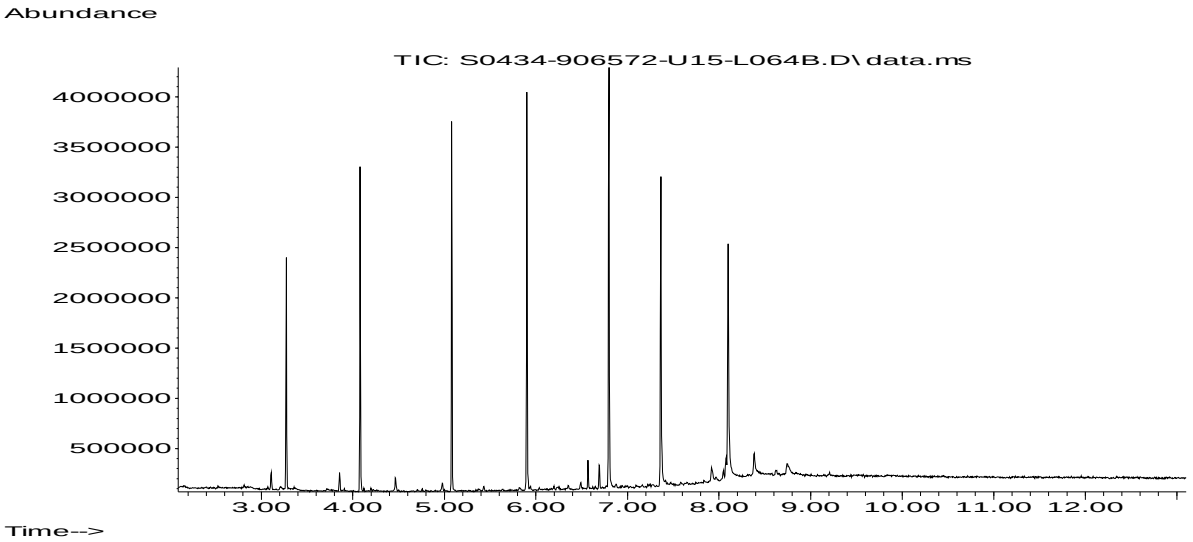

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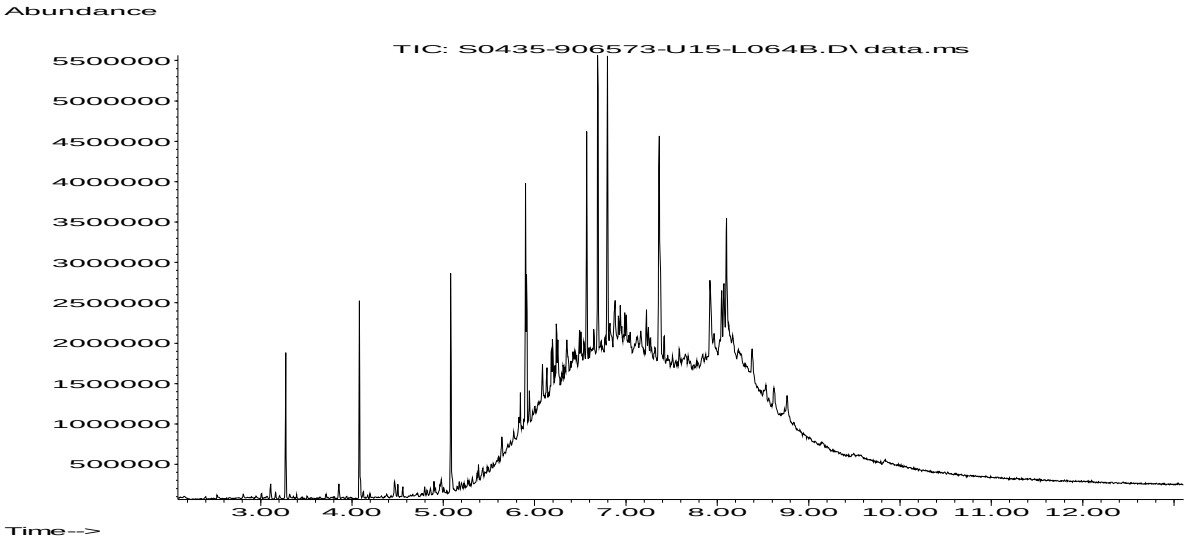

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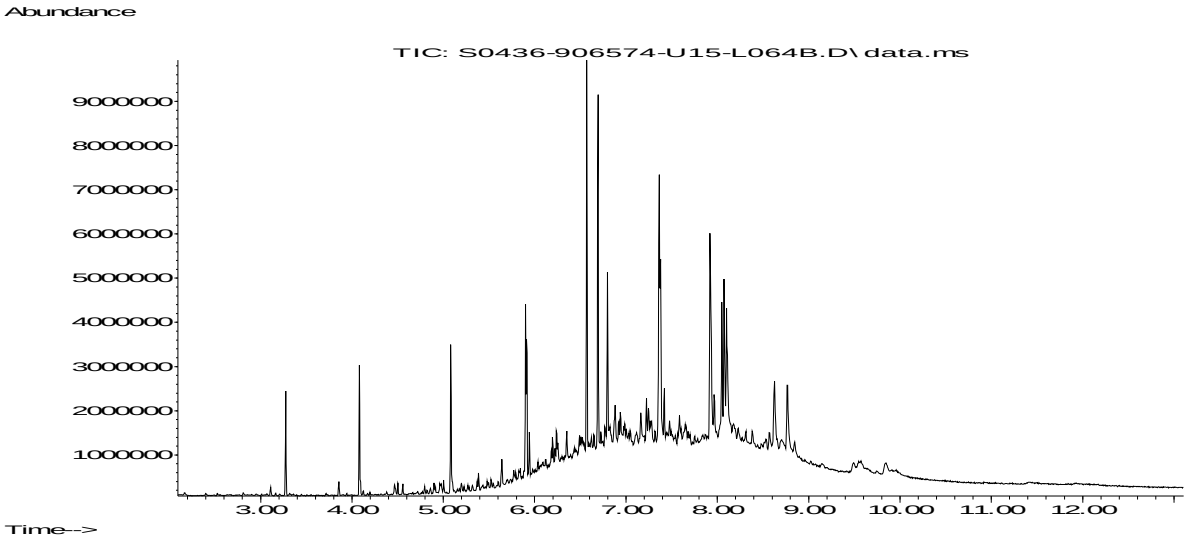

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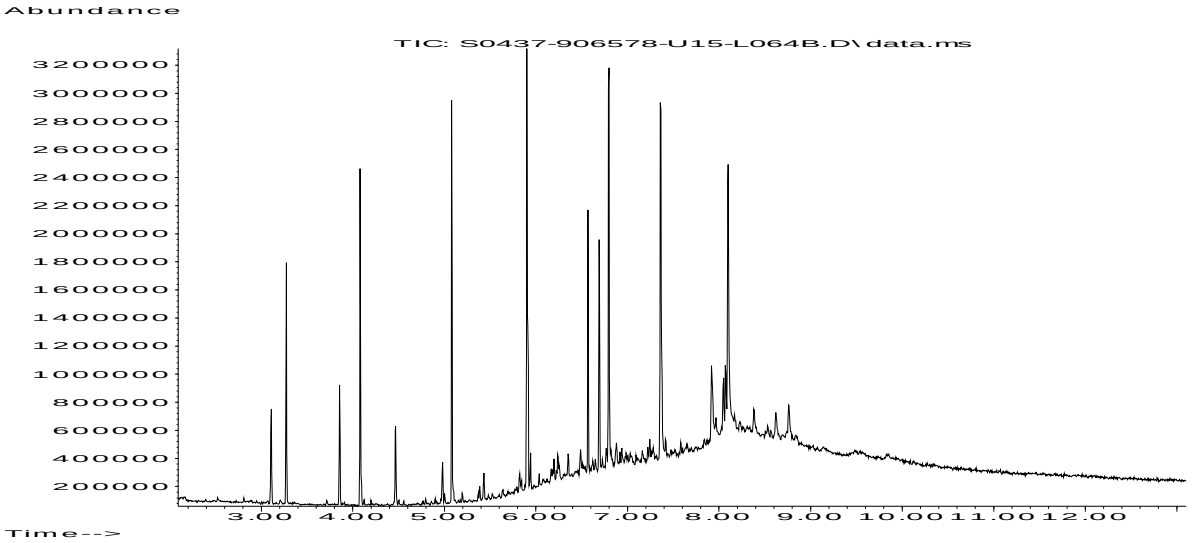

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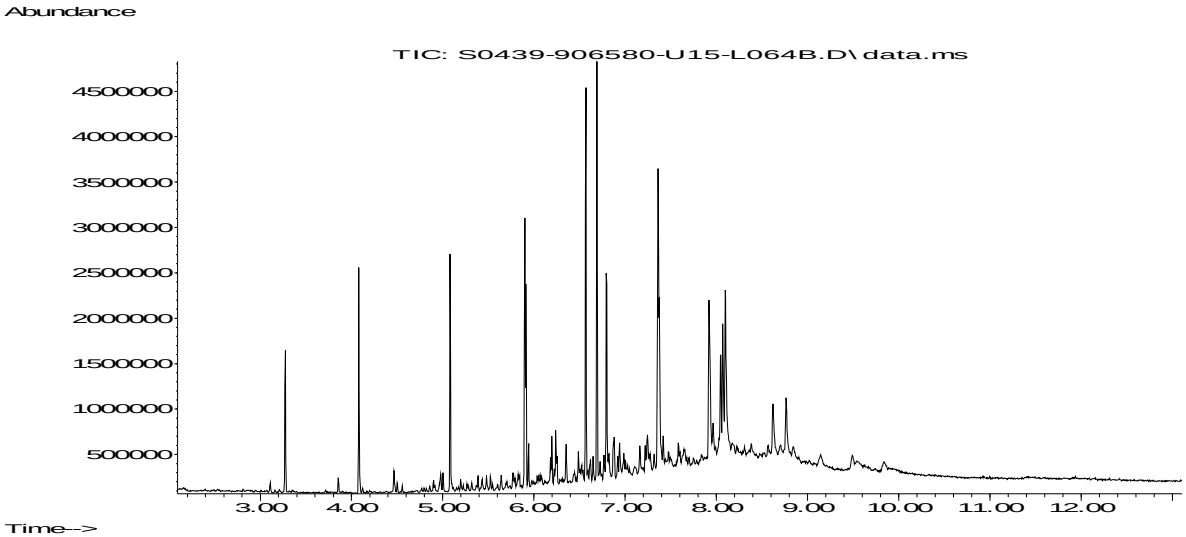

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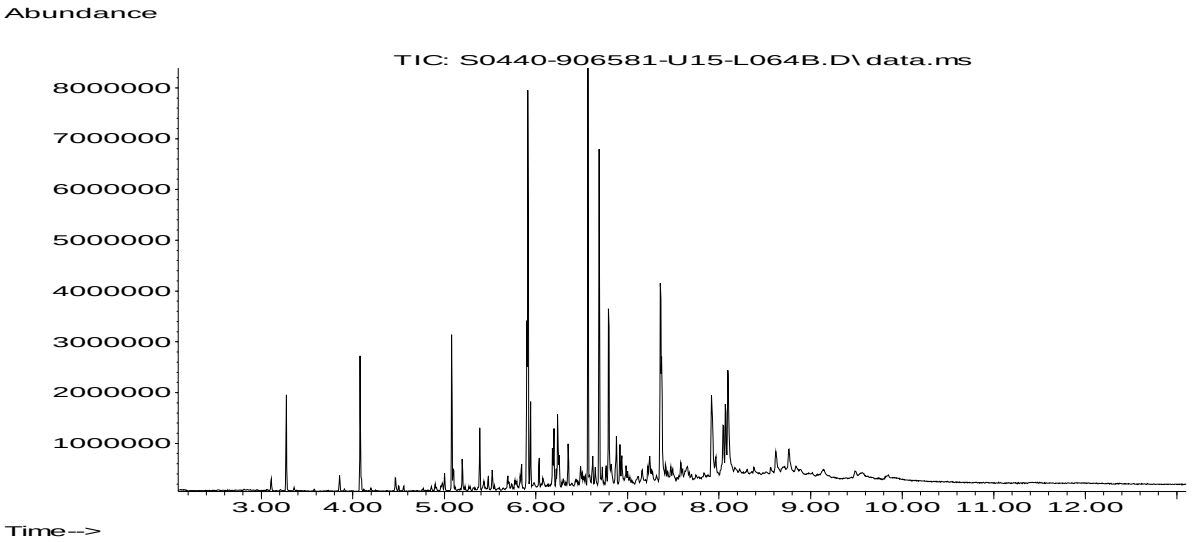

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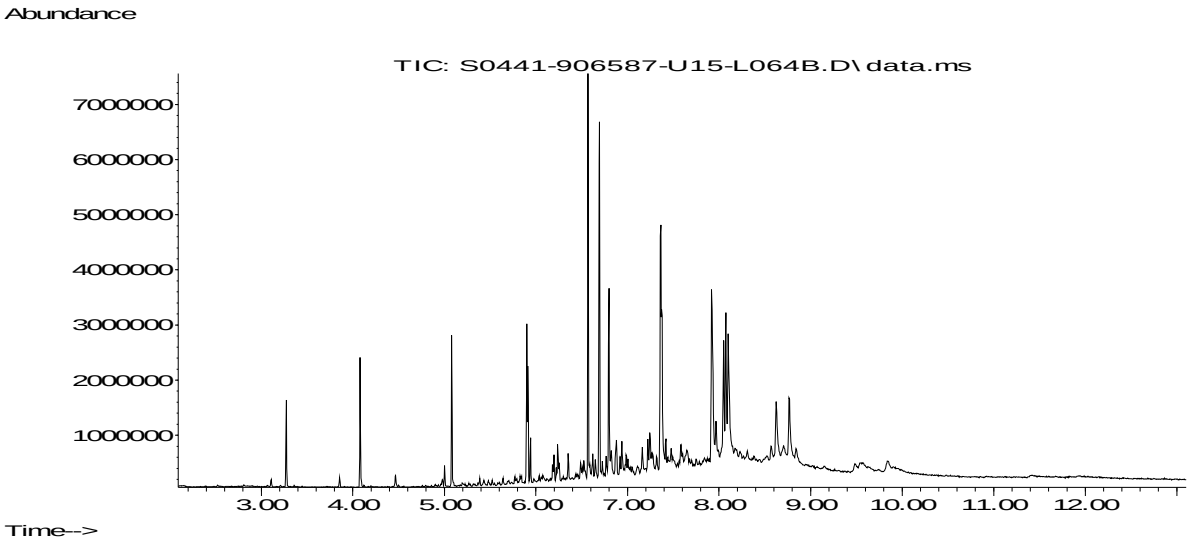

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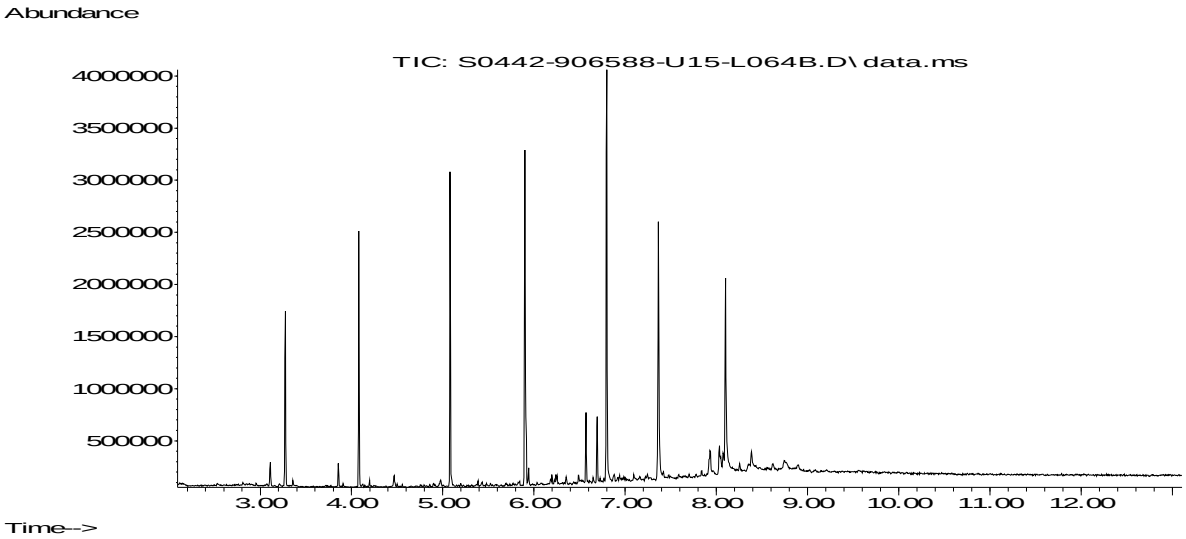

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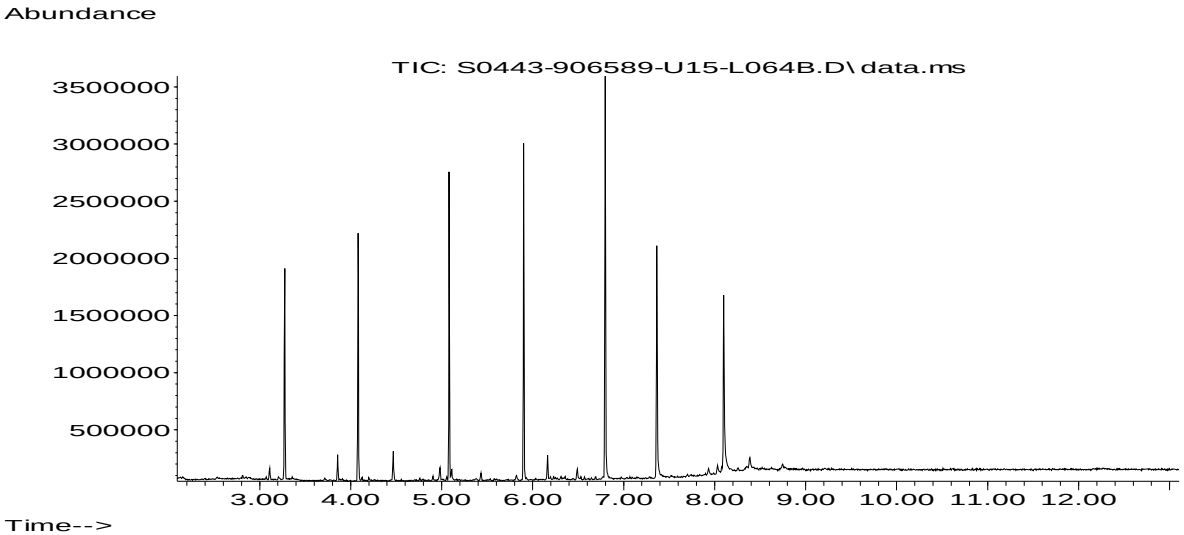

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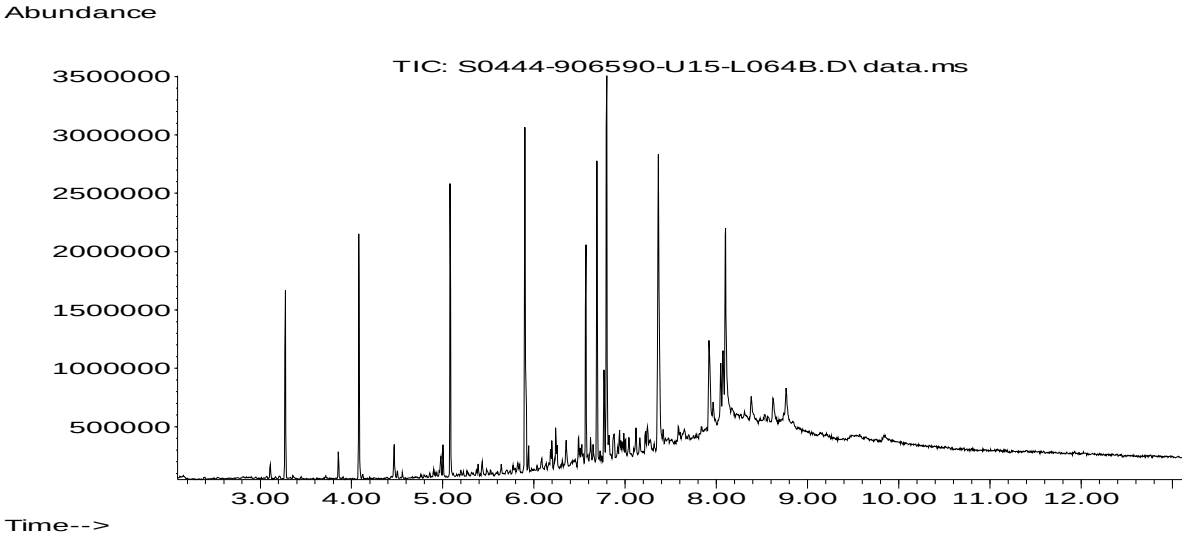

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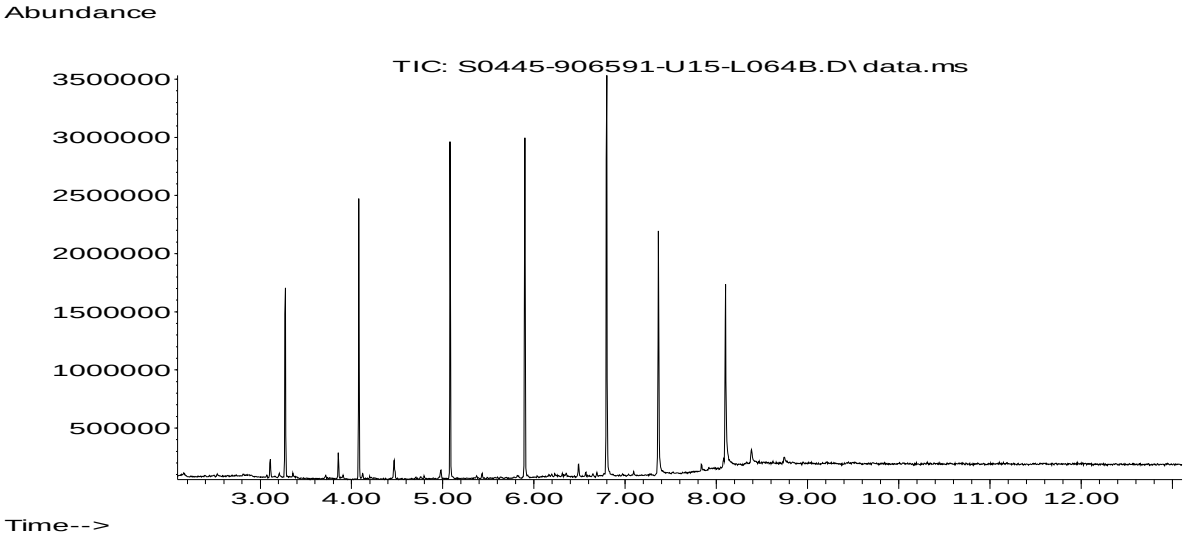

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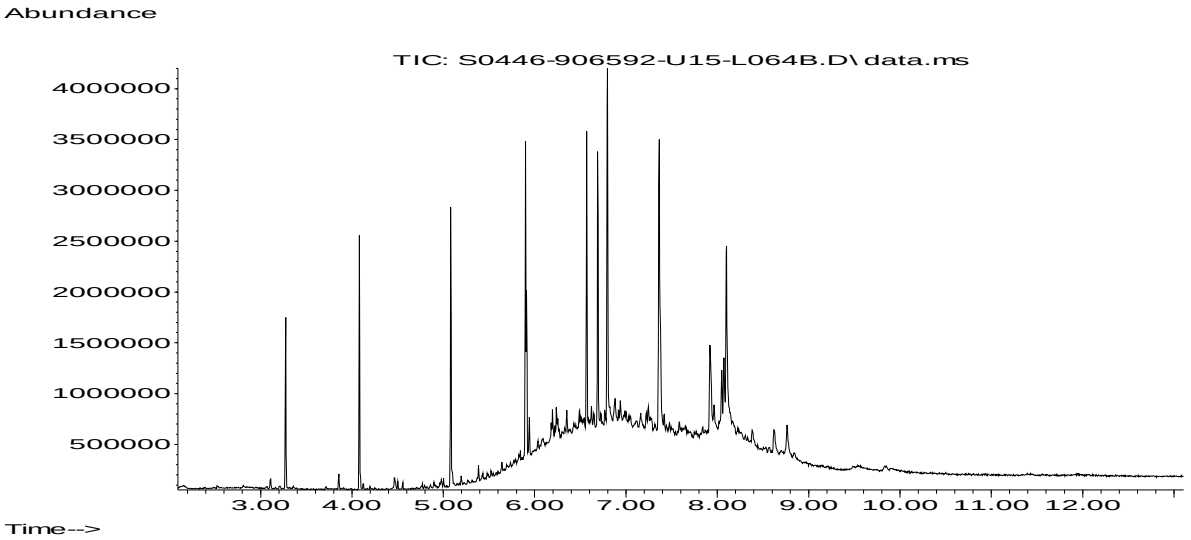

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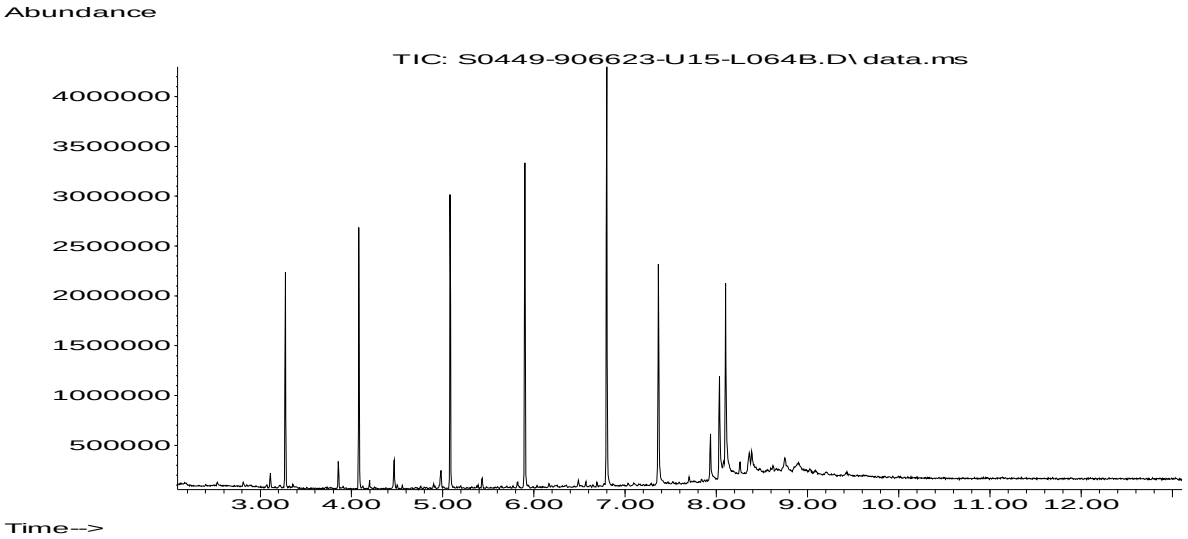

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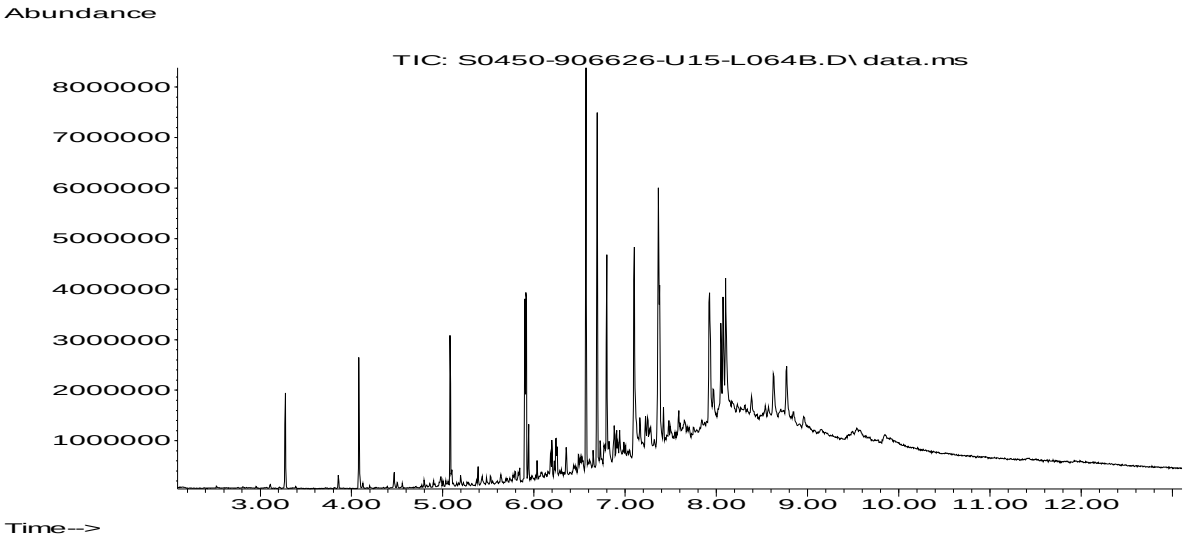

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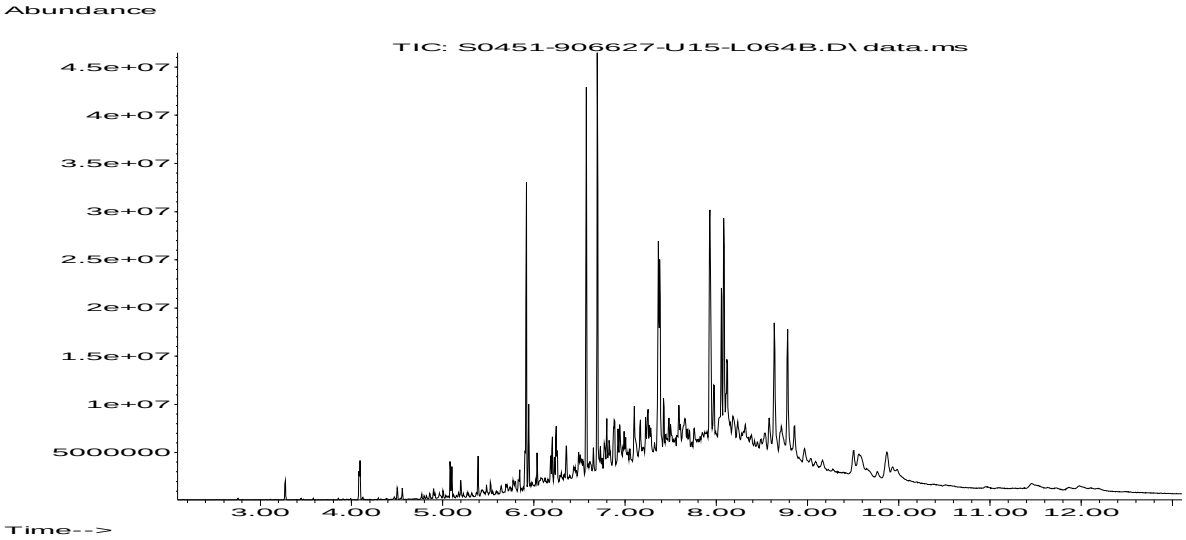

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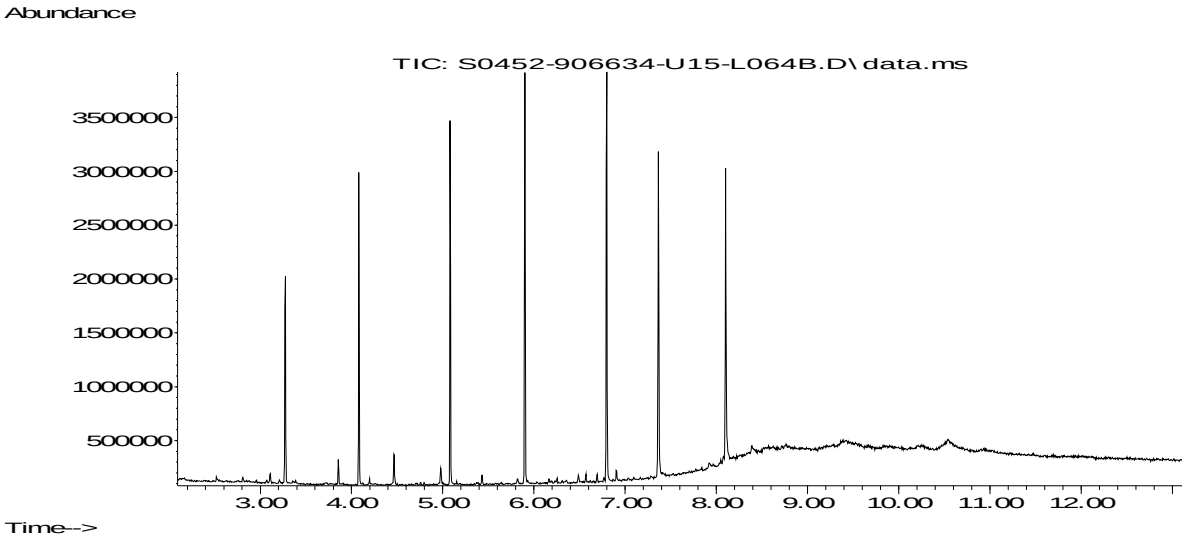

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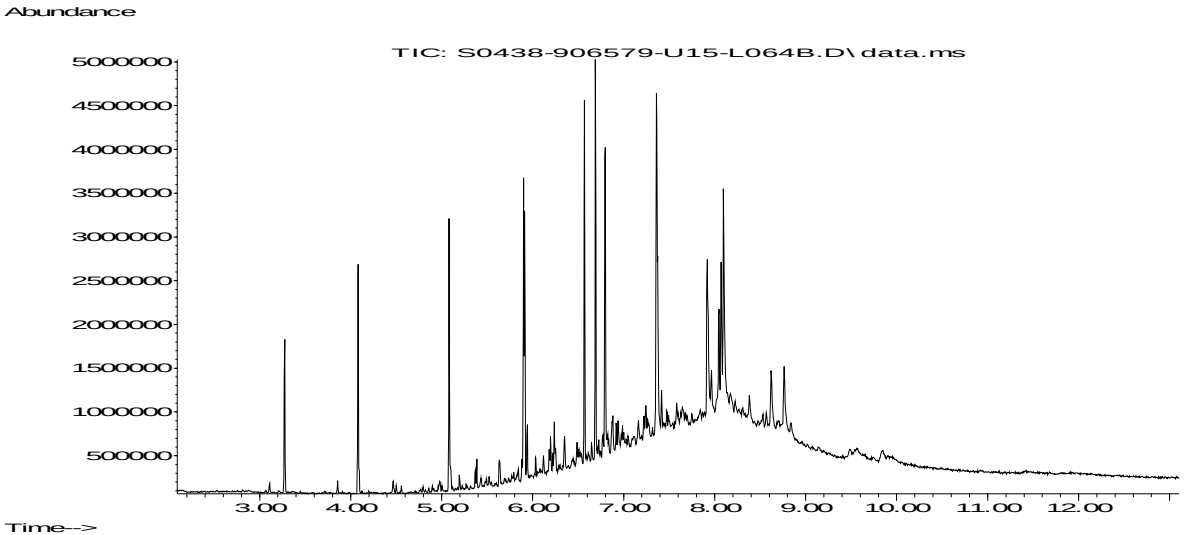

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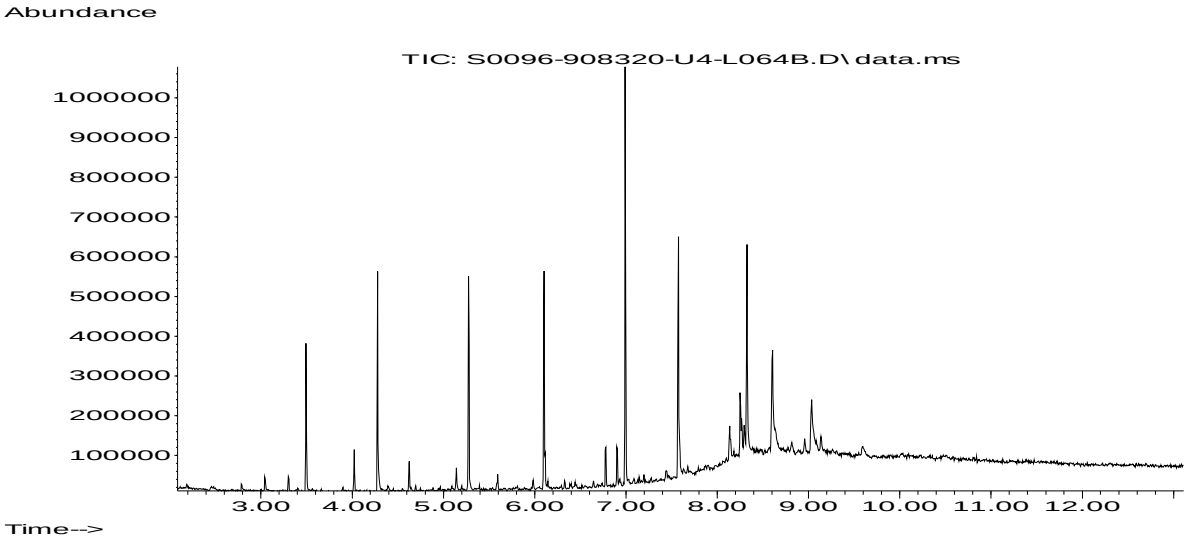

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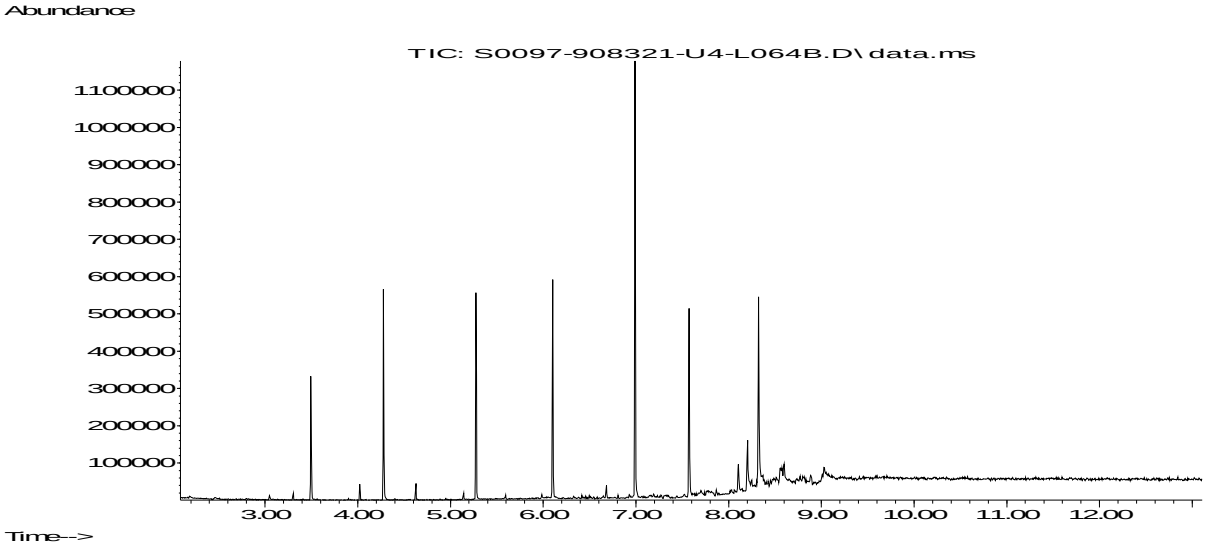

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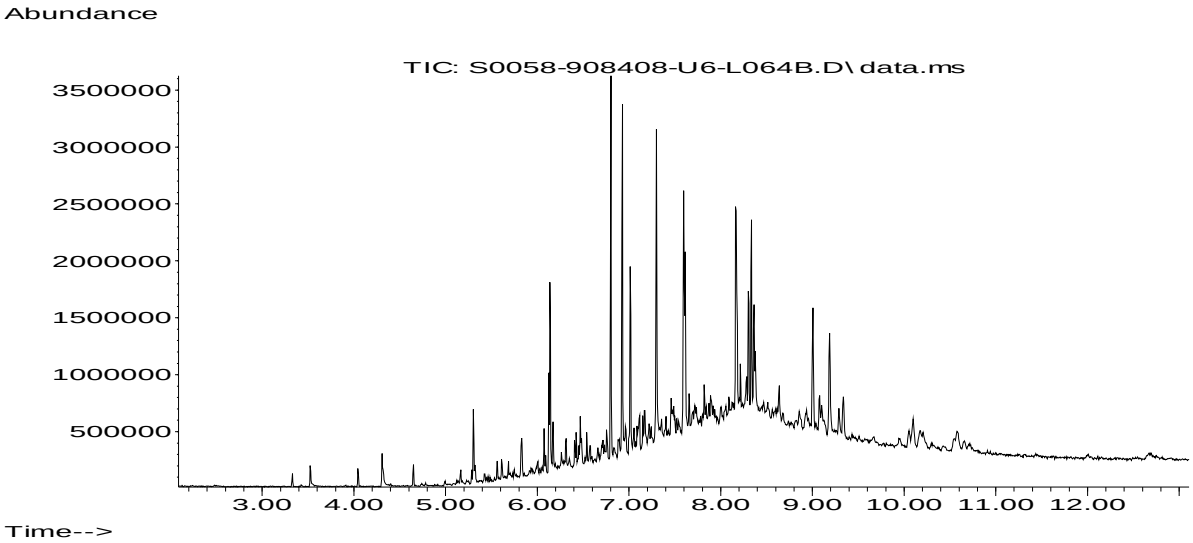

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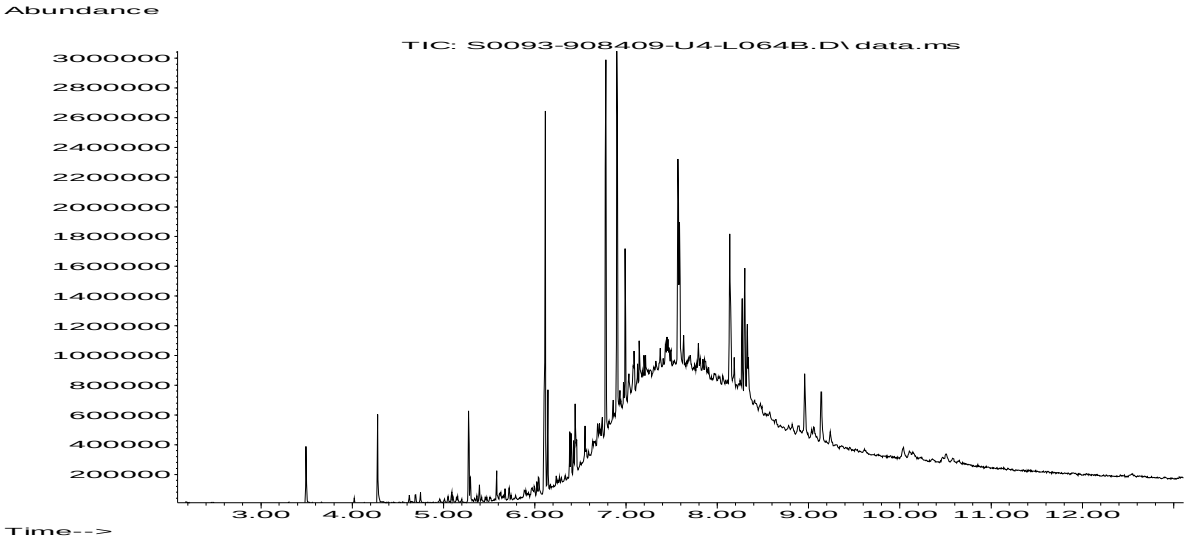

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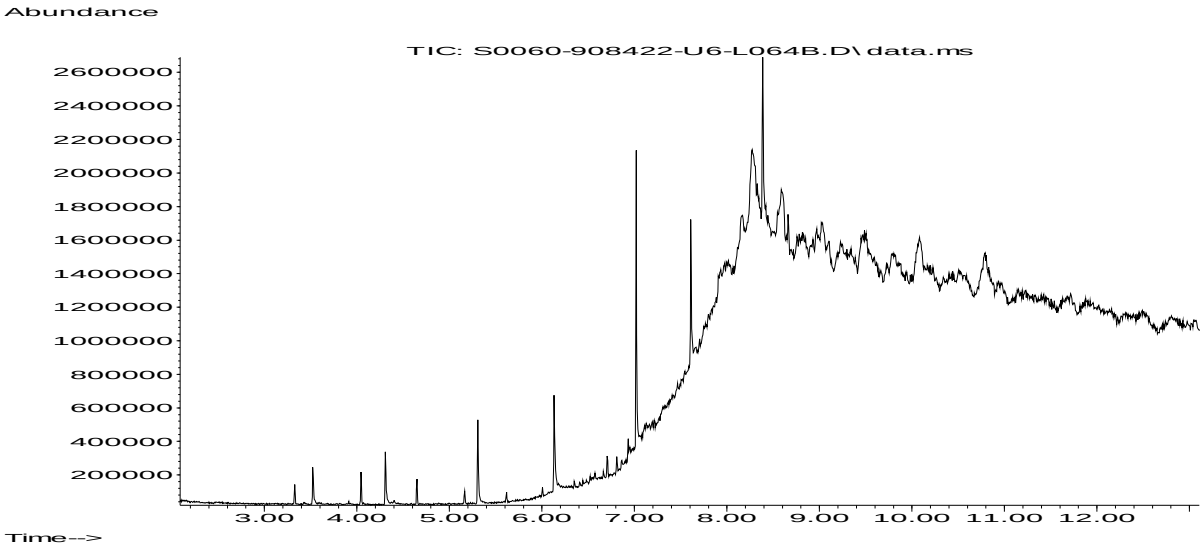

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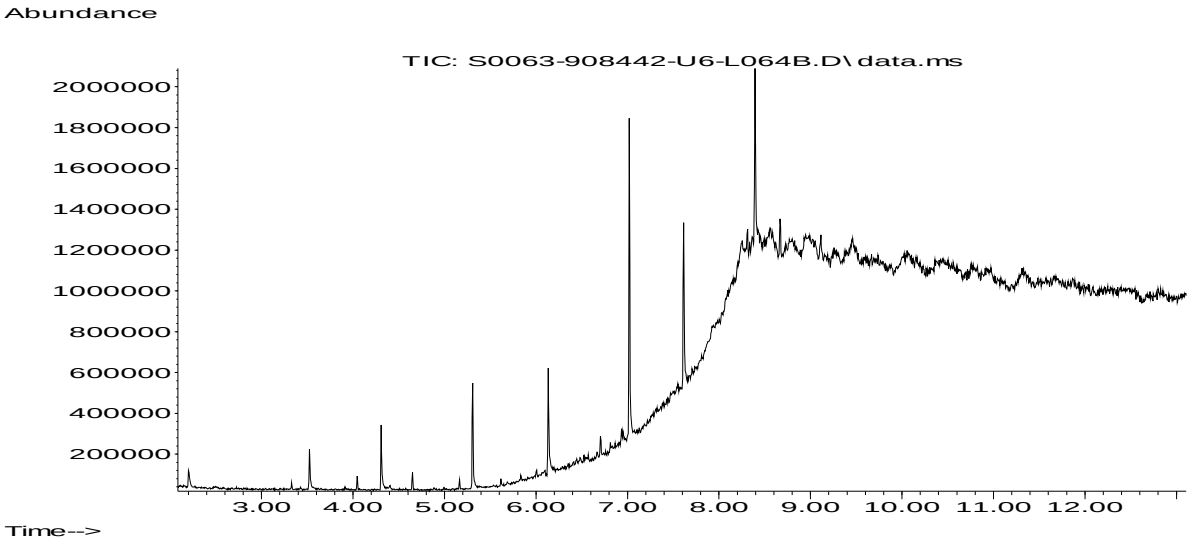

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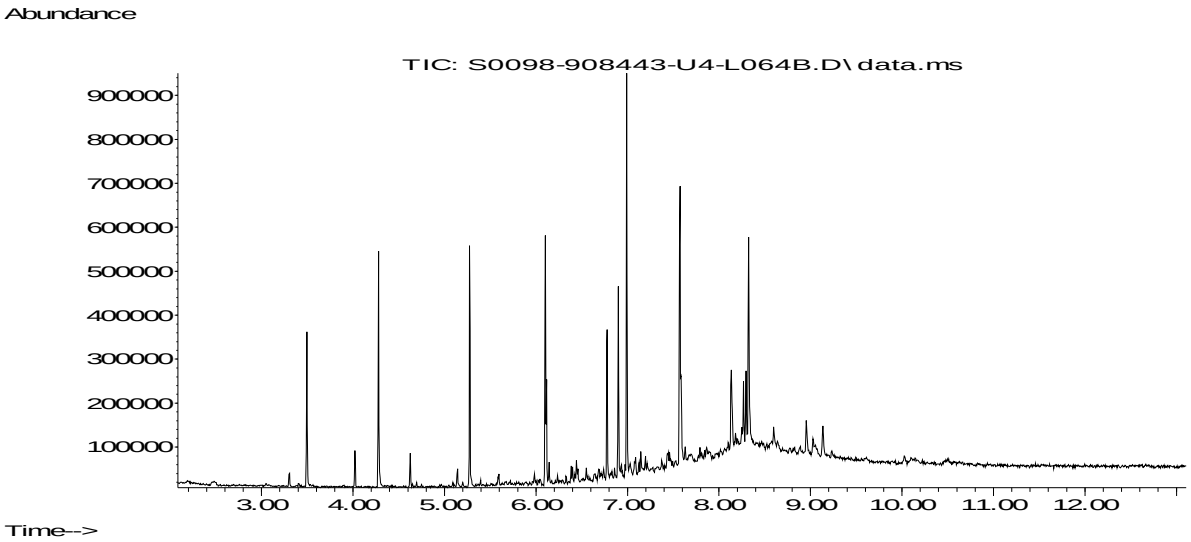

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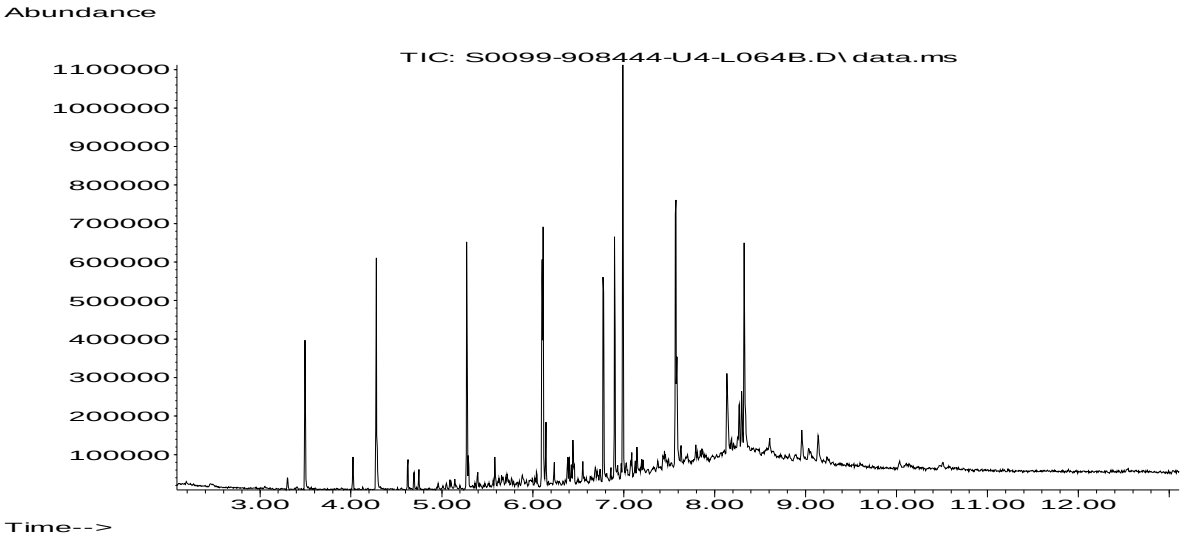

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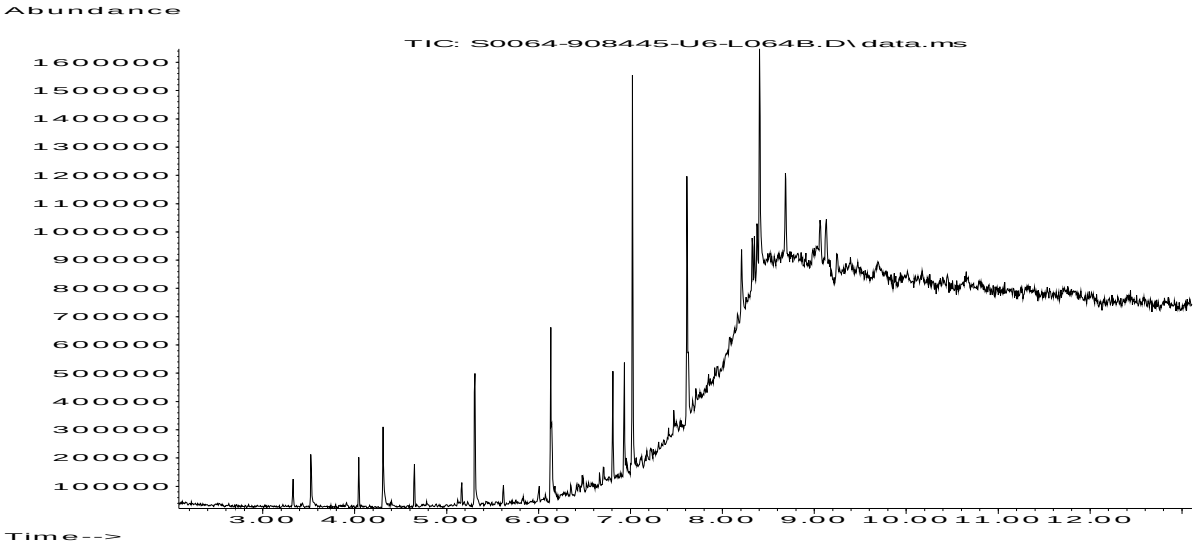

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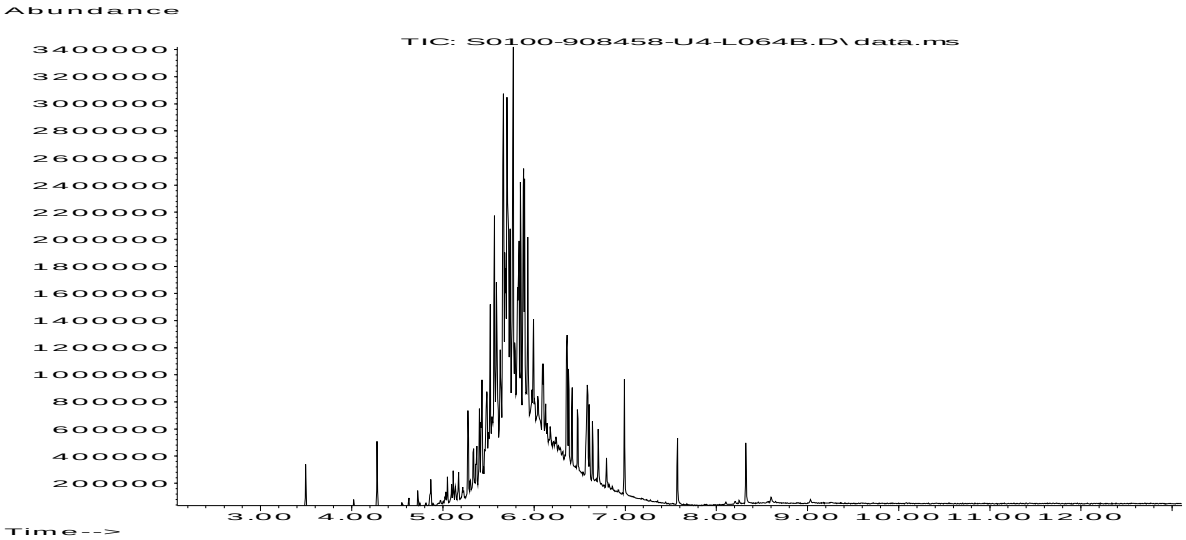

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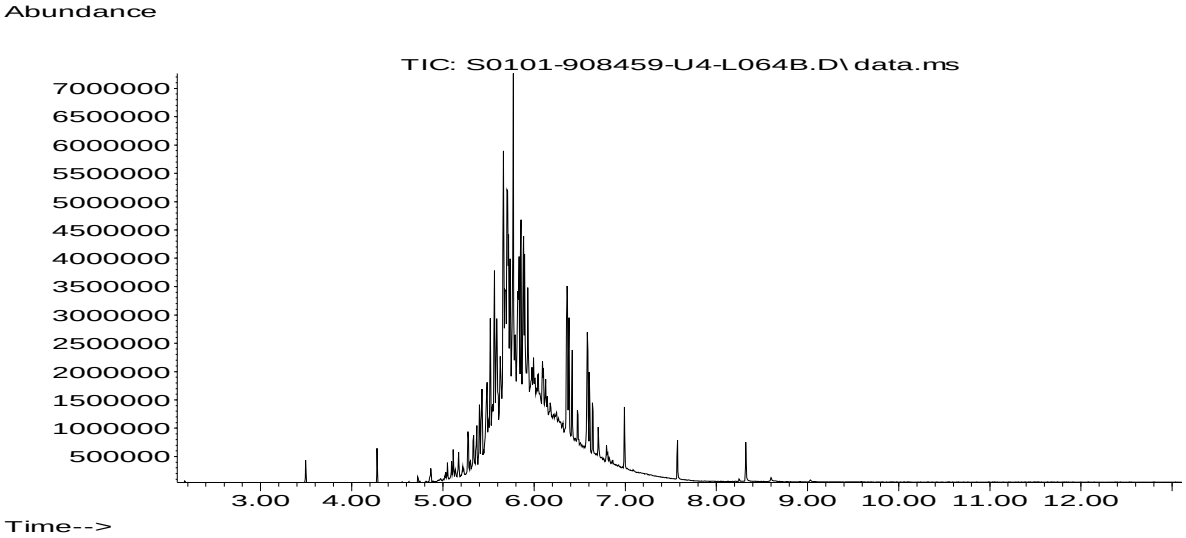

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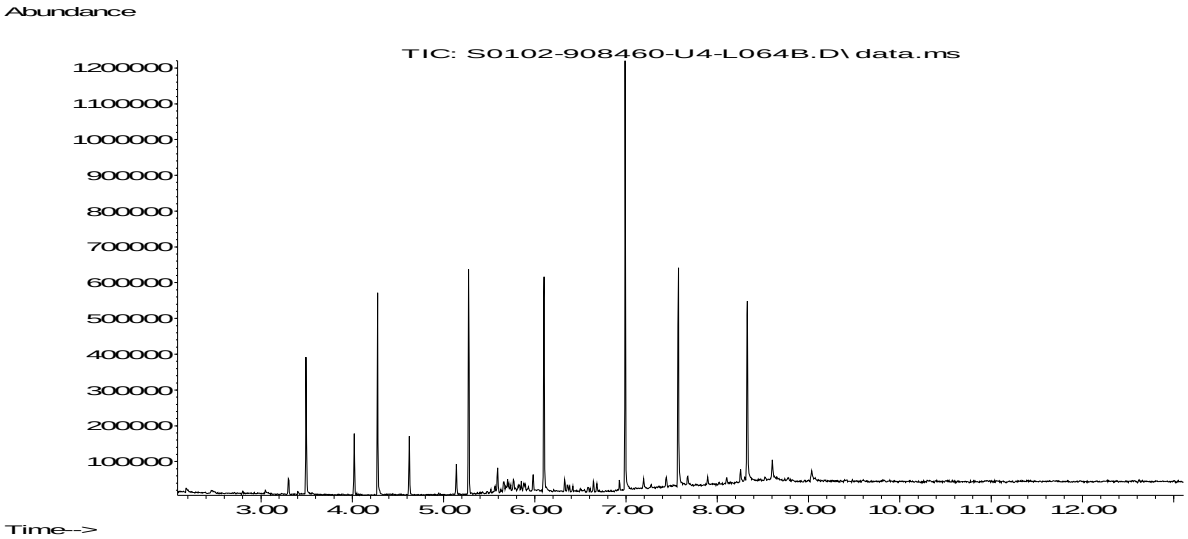

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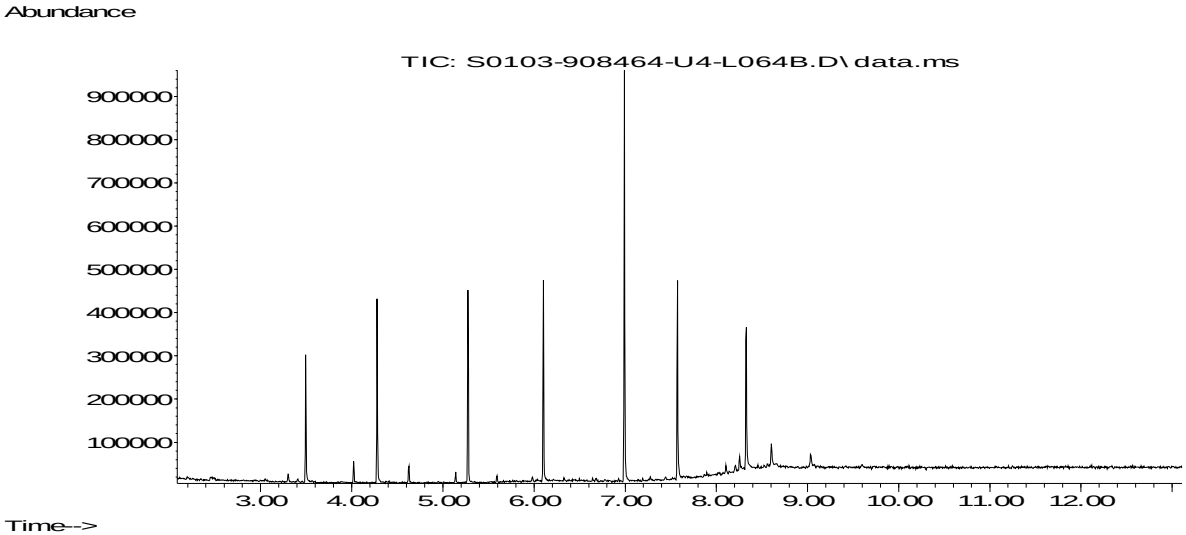

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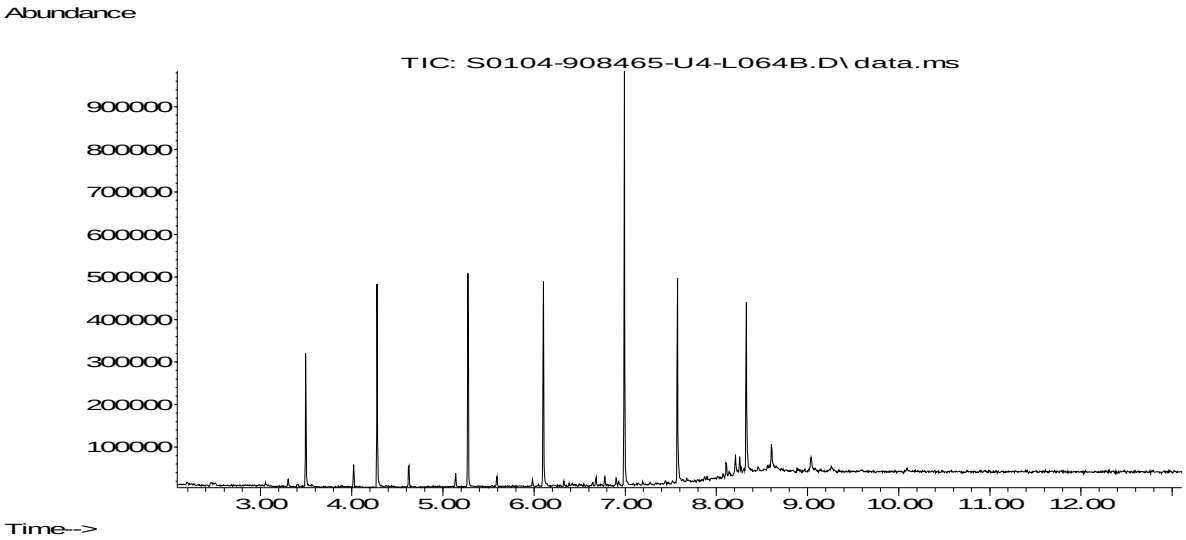

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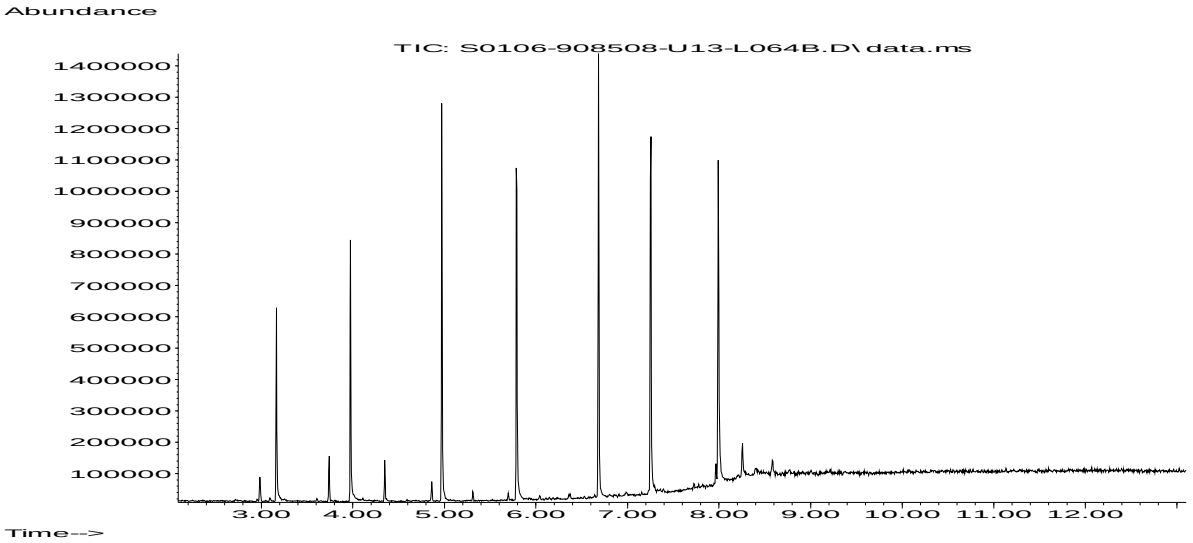

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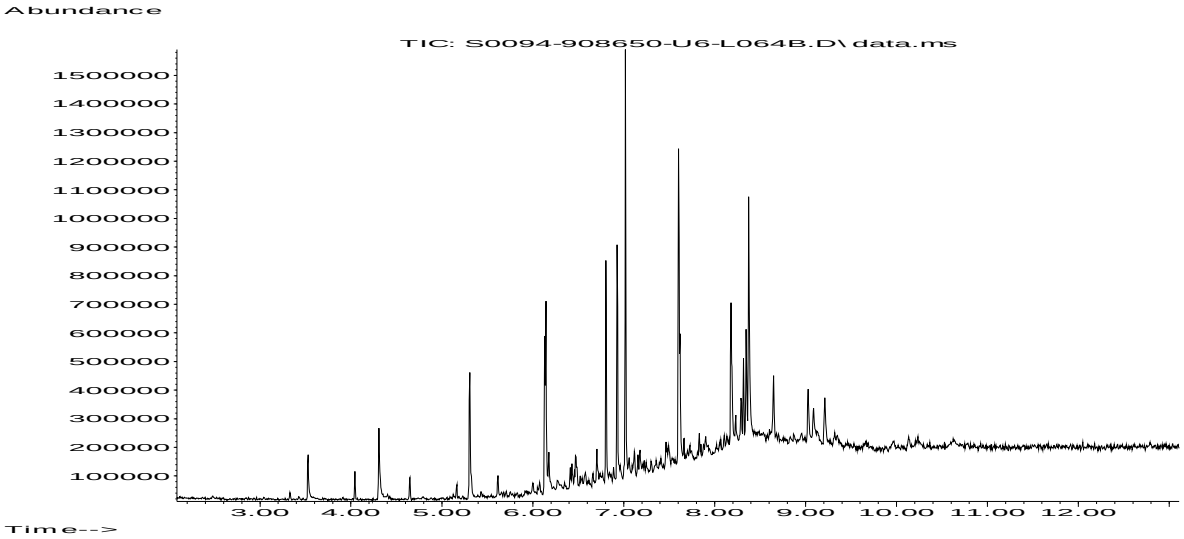

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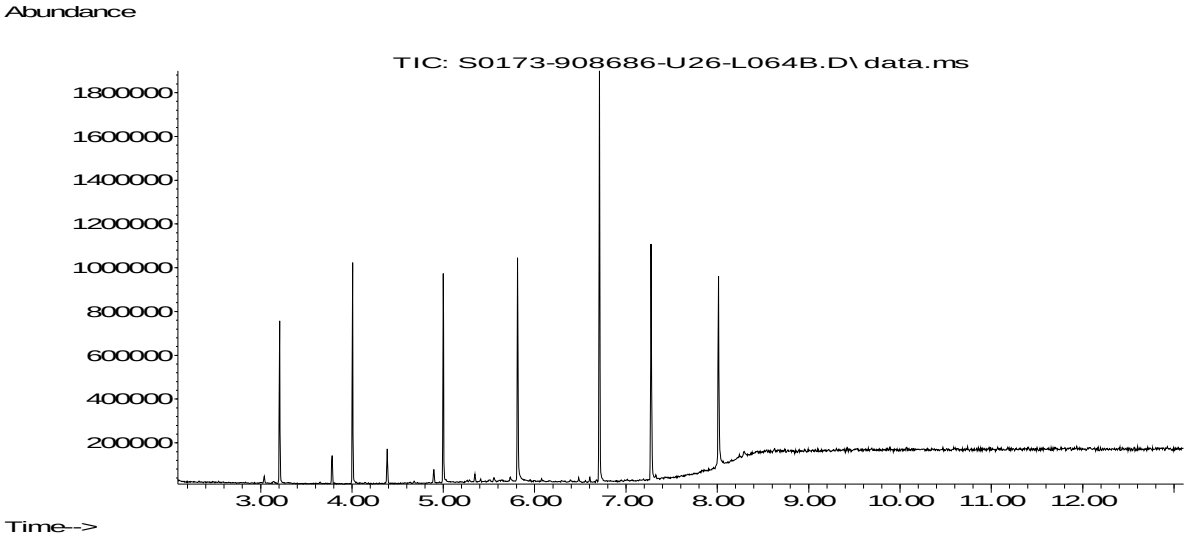

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Time-->

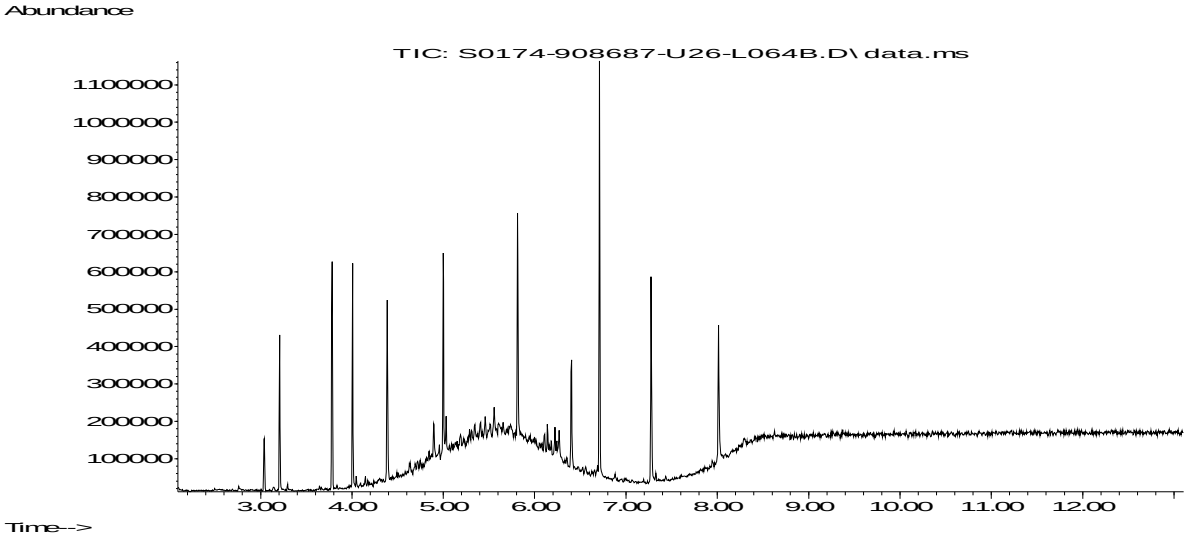

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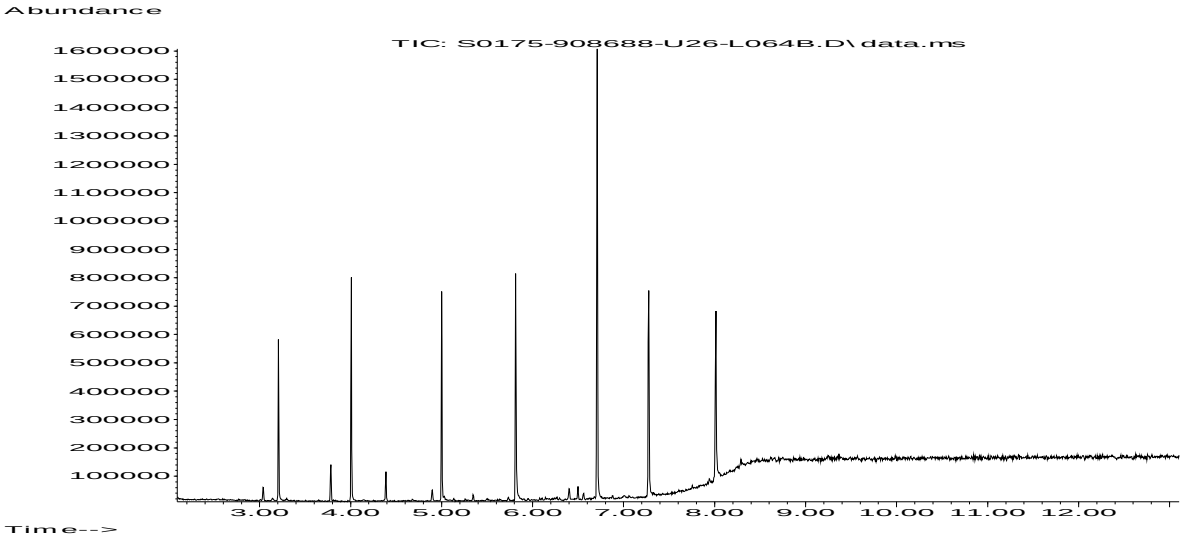

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Time-->

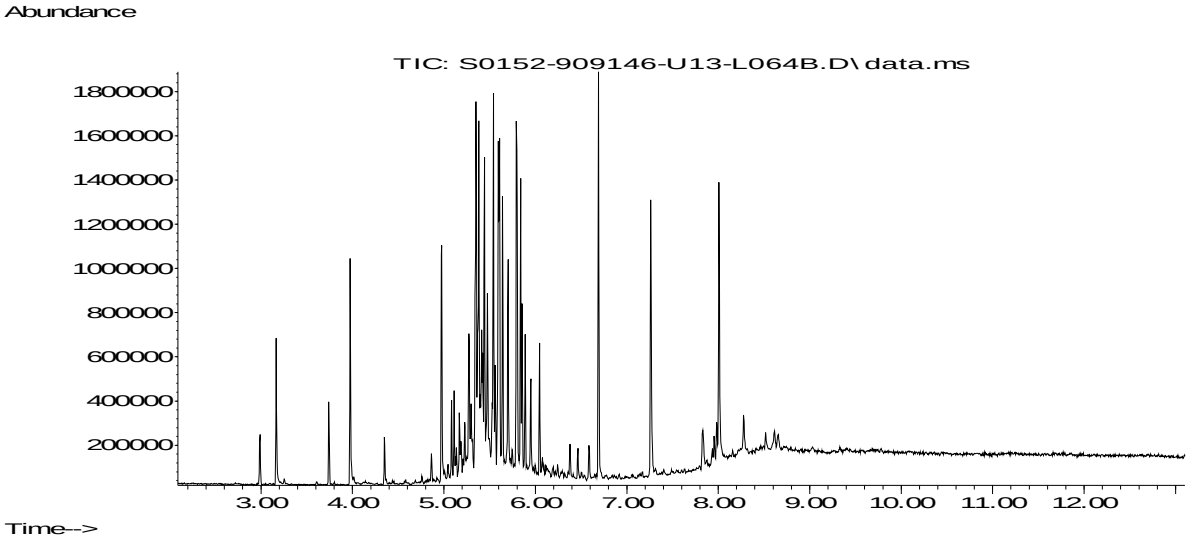

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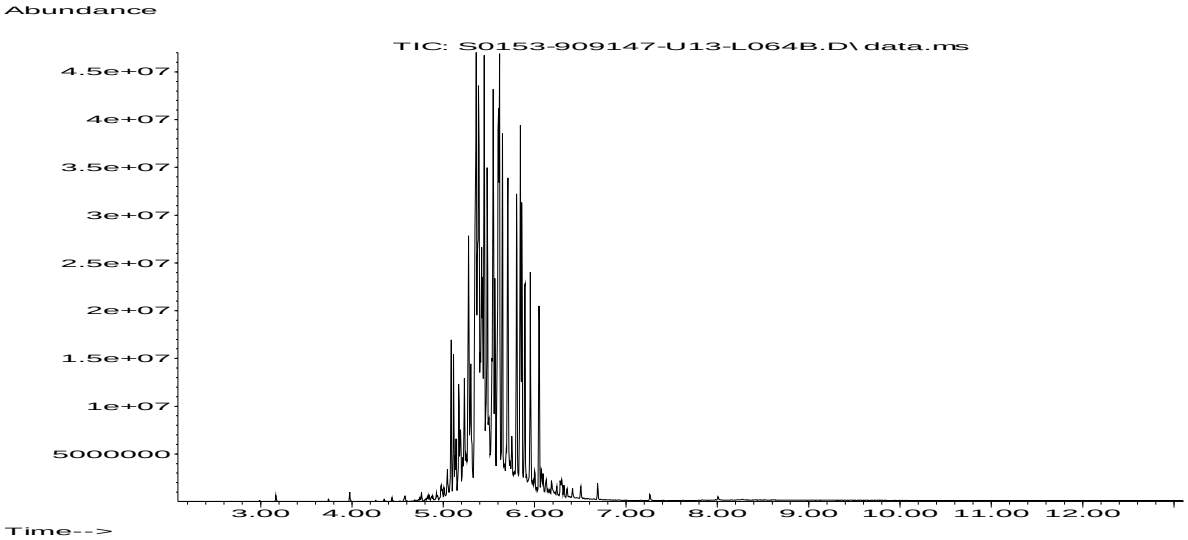

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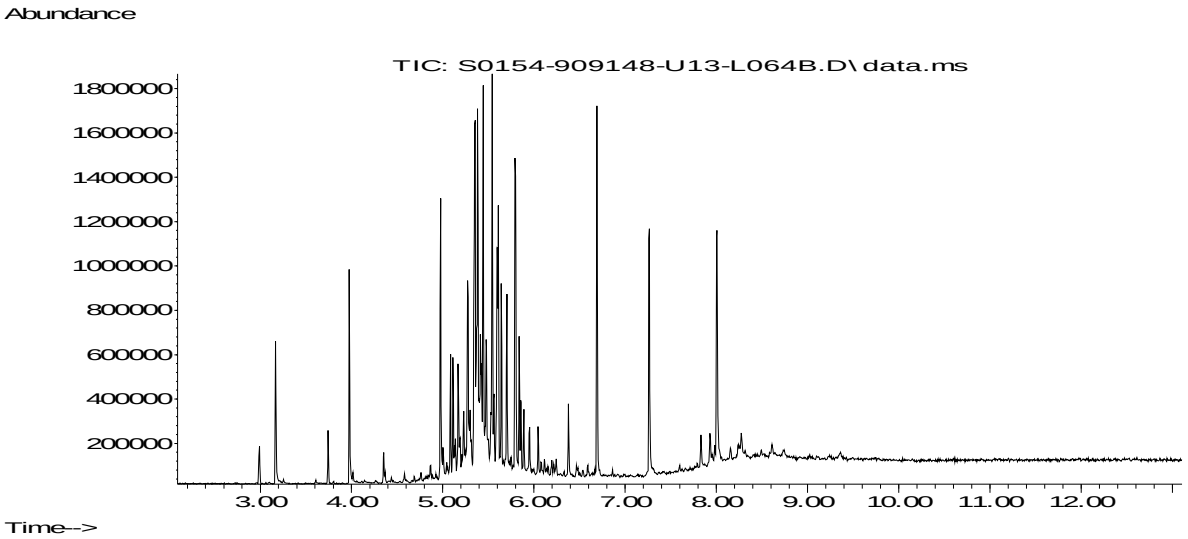

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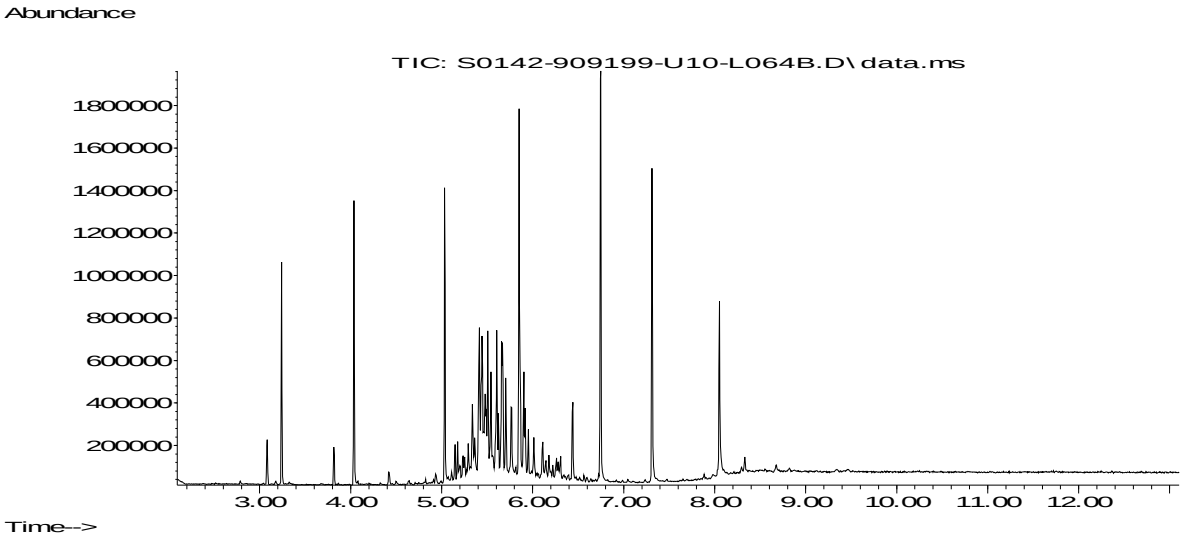

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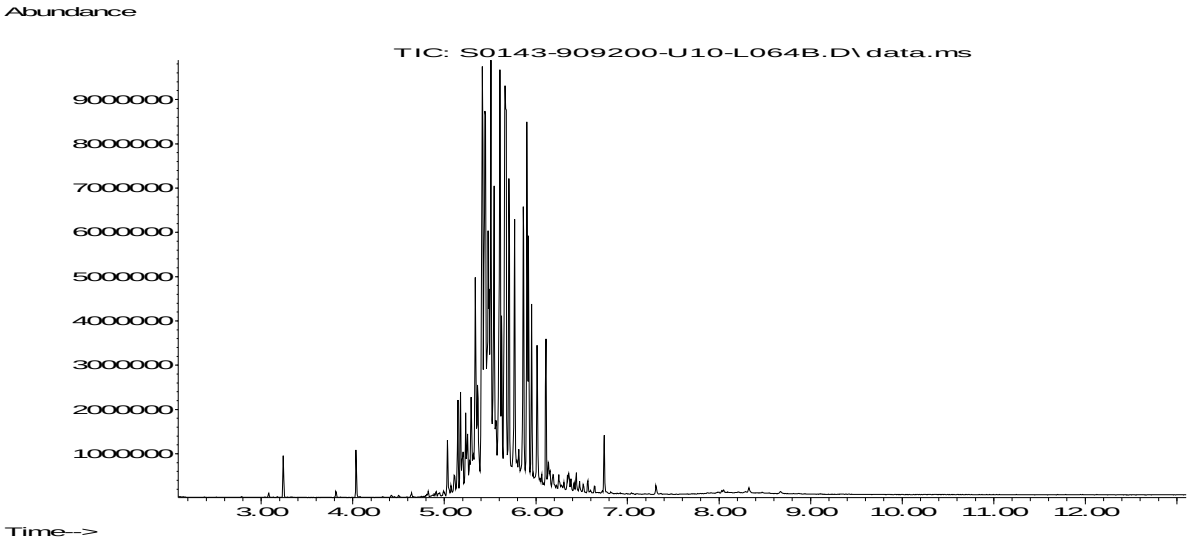

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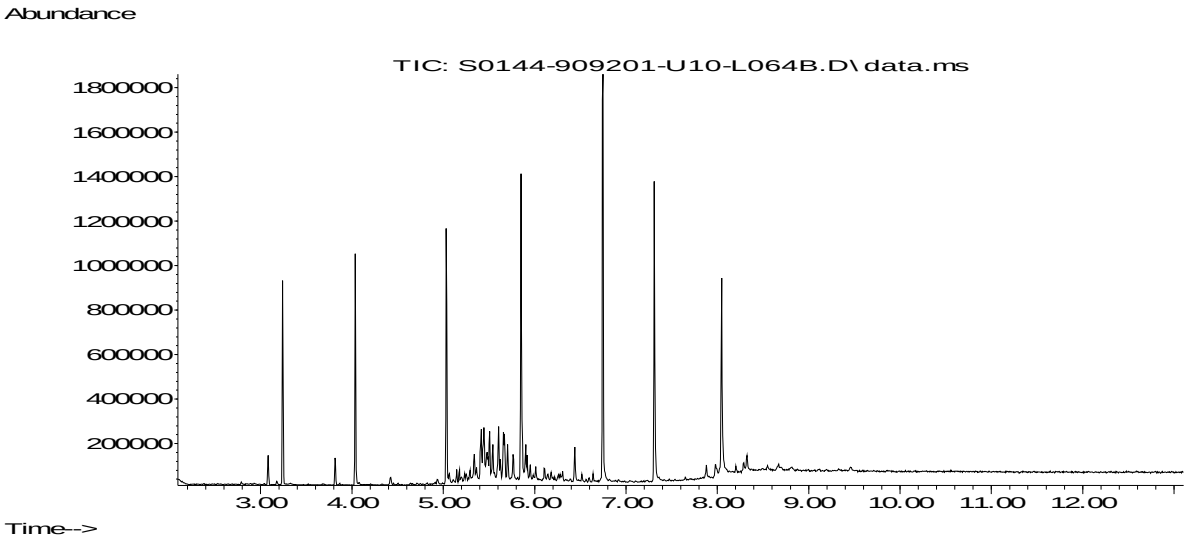

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Abundance
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Time-->

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Innsworth Tech Park
Innsworth Lane
Gloucester
GL3 1DL

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f: 01452 739 220
e: jon@ccground.co.uk

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Watford,
Herts,
WD18 8YS

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Combined Report : SSE Site, Vastern Road - WAC

Project / Site name:	SSE Site, Vastern Road, Reading	**Samples received on:**	05/02/2018
Your job number:	C5925	**Samples instructed on:**	14/02/2018
Your order number:	C5925	**Analysis completed by:**	23/02/2018
Report Issue Number:	1	**Report issued on:**	07/03/2018
Samples Analysed:	10 10:1 WAC 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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This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

i2 Analytical
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Croxley Green Business Park
Watford, WD18 8YS

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Fax: 01923 237404
email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results

Report No:	**Combined Report SSE Site Vastern Road - WAC**						
					Client:	**CCGROUND**	
Location	**SSE Site, Vastern Road, Reading**						
Lab Reference (Sample Number)	908247 / 908248				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	05/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH1003C						
Depth (m)	0.45						
Solid Waste Analysis							
TOC (%)**	2.1				3%	5%	6%
Loss on Ignition (%) **	4.6				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	150				500	--	--
Total PAH (WAC-17) (mg/kg)	32				100	--	--
pH (units)**	8.8				--	>6	--
Acid Neutralisation Capacity (mol / kg)	20				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
	mg/l			mg/kg			
Arsenic *	0.0110			0.0769	0.5	2	25
Barium *	0.0179			0.125	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0085			0.059	0.5	10	70
Copper *	0.011			0.078	2	50	100
Mercury *	0.0054			0.0379	0.01	0.2	2
Molybdenum *	0.0022			0.0153	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.017			0.12	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0084			0.058	4	50	200
Chloride *	72			500	800	4000	25000
Fluoride	0.19			1.3	10	150	500
Sulphate *	9.0			63	1000	20000	50000
TDS	190			1300	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	3.52			24.6	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.5						
Dry Matter (%)	90						
Moisture (%)	10						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

*= UKAS accredited (liquid eluate analysis only)
** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

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Fax: 01923 237404
email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results

Report No:	**Combined Report SSE Site Vastern Road - WAC**						
					Client:	**CCGROUND**	
Location	**SSE Site, Vastern Road, Reading**						
Lab Reference (Sample Number)	908280 / 908281				**Landfill Waste Acceptance Criteria**		
					Limits		
Sampling Date	05/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH1004						
Depth (m)	2.00						
Solid Waste Analysis							
TOC (%)**	2.5				3%	5%	6%
Loss on Ignition (%) **	6.7				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	16				100	--	--
pH (units)**	7.7				--	>6	--
Acid Neutralisation Capacity (mol / kg)	4.1				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0074			0.0472	0.5	2	25
Barium *	0.0656			0.416	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0007			0.0046	0.5	10	70
Copper *	0.0054			0.034	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0071			0.0452	0.5	10	30
Nickel *	0.0037			0.023	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0022			0.014	4	50	200
Chloride *	36			230	800	4000	25000
Fluoride	0.53			3.3	10	150	500
Sulphate *	9.7			62	1000	20000	50000
TDS	240			1500	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	12.7			80.6	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	62						
Moisture (%)	38						

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Waste Acceptance Criteria Analytical Results

Report No:	**Combined Report SSE Site Vastern Road - WAC**						
					Client:	**CCGROUND**	
Location	**SSE Site, Vastern Road, Reading**						
Lab Reference (Sample Number)	908329 / 908330				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	08/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS013						
Depth (m)	0.60						
Solid Waste Analysis							
TOC (%)**	0.9				3%	5%	6%
Loss on Ignition (%) **	2.8				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	200				500	--	--
Total PAH (WAC-17) (mg/kg)	99				100	--	--
pH (units)**	10.6				--	>6	--
Acid Neutralisation Capacity (mol / kg)	40				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0939			0.784	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0043			0.036	0.5	10	70
Copper *	0.0052			0.043	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0028			0.0235	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.0080			0.067	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.012			0.10	4	50	200
Chloride *	26			220	800	4000	25000
Fluoride	0.14			1.2	10	150	500
Sulphate *	20			170	1000	20000	50000
TDS	170			1400	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.61			38.5	500	800	1000
Leach Test Information							
Stone Content (%)	63						
Sample Mass (kg)	1.7						
Dry Matter (%)	96						
Moisture (%)	4.3						

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Waste Acceptance Criteria Analytical Results

Report No:	**Combined Report SSE Site Vastern Road - WAC**						
					Client:	**CCGROUND**	
Location	**SSE Vastern Road, Reading**						
Lab Reference (Sample Number)	908417 / 908418				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	07/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS1002						
Depth (m)	1.70						
Solid Waste Analysis							
TOC (%)**	7.3				3%	5%	6%
Loss on Ignition (%) **	13.9				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	12000				500	--	--
Total PAH (WAC-17) (mg/kg)	940				100	--	--
pH (units)**	8.1				--	>6	--
Acid Neutralisation Capacity (mol / kg)	11				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0092			0.0658	0.5	2	25
Barium *	0.0334			0.240	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	< 0.0004			< 0.0040	0.5	10	70
Copper *	0.0078			0.056	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.134			0.961	0.5	10	30
Nickel *	0.0040			0.029	0.4	10	40
Lead *	0.0021			0.015	0.5	10	50
Antimony *	0.034			0.24	0.06	0.7	5
Selenium *	0.0069			0.050	0.1	0.5	7
Zinc *	0.0024			0.017	4	50	200
Chloride *	8.1			58	800	4000	25000
Fluoride	0.36			2.6	10	150	500
Sulphate *	49			350	1000	20000	50000
TDS	150			1100	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	9.19			66.0	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.97						
Dry Matter (%)	78						
Moisture (%)	22						

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Waste Acceptance Criteria Analytical Results

Report No:	**Combined Report SSE Site Vastern Road - WAC**						
					Client:	**CCGROUND**	
Location	**SSE Site, Vastern Road, Reading**						
Lab Reference (Sample Number)	908420 / 908421				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	09/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP1005						
Depth (m)	0.30						
Solid Waste Analysis							
TOC (%)**	0.7				3%	5%	6%
Loss on Ignition (%) **	2.0				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	780				500	--	--
Total PAH (WAC-17) (mg/kg)	88				100	--	--
pH (units)**	9.4				--	>6	--
Acid Neutralisation Capacity (mol / kg)	25				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0089			0.0685	0.5	2	25
Barium *	0.0523			0.404	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.021			0.16	0.5	10	70
Copper *	0.0074			0.057	2	50	100
Mercury *	0.0034			0.0266	0.01	0.2	2
Molybdenum *	0.0023			0.0176	0.5	10	30
Nickel *	0.0010			0.0076	0.4	10	40
Lead *	0.089			0.69	0.5	10	50
Antimony *	0.0089			0.069	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.044			0.34	4	50	200
Chloride *	65			500	800	4000	25000
Fluoride	0.23			1.8	10	150	500
Sulphate *	14			110	1000	20000	50000
TDS	230			1800	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	3.65			28.2	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.9						
Dry Matter (%)	89						
Moisture (%)	11						

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Waste Acceptance Criteria Analytical Results

Report No:	**Combined Report SSE Site Vastern Road - WAC**						
					Client:	**CCGROUND**	
Location	**SSE Site, Vastern Road, Reading**						
Lab Reference (Sample Number)	908423 / 908424				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	08/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS1006						
Depth (m)	1.90						
Solid Waste Analysis							
TOC (%)**	1.2				3%	5%	6%
Loss on Ignition (%) **	3.3				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	3.0				100	--	--
pH (units)**	8.0				--	>6	--
Acid Neutralisation Capacity (mol / kg)	17				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0047			0.0293	0.5	2	25
Barium *	0.0212			0.131	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0005			< 0.0040	0.5	10	70
Copper *	0.0052			0.032	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0072			0.0442	0.5	10	30
Nickel *	0.0013			0.0078	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0013			0.0078	4	50	200
Chloride *	4.1			26	800	4000	25000
Fluoride	0.29			1.8	10	150	500
Sulphate *	36			220	1000	20000	50000
TDS	170			1000	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	8.15			50.4	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.2						
Dry Matter (%)	72						
Moisture (%)	28						

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Waste Acceptance Criteria Analytical Results

Report No:	Combined Report SSE Site Vastern Road - WAC						
					Client: CCGROUND		
Location	SSE Site, Vastern Road, Reading						
Lab Reference (Sample Number)	908461 / 908462				Landfill Waste Acceptance Criteria Limits		
Sampling Date	13/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH2003						
Depth (m)	3.50						
Solid Waste Analysis							
TOC (%)**	0.3				3%	5%	6%
Loss on Ignition (%) **	1.4				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	700				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.9				100	--	--
pH (units)**	8.1				--	>6	--
Acid Neutralisation Capacity (mol / kg)	5.3				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
	mg/l			mg/kg			
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0054			0.0428	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0005			0.0041	0.5	10	70
Copper *	0.0014			0.011	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0102			0.0815	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0012			0.0092	4	50	200
Chloride *	1.6			13	800	4000	25000
Fluoride	0.12			0.97	10	150	500
Sulphate *	12			92	1000	20000	50000
TDS	44			360	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	3.09			24.7	500	800	1000
Leach Test Information							
Stone Content (%)	43						
Sample Mass (kg)	2.0						
Dry Matter (%)	94						
Moisture (%)	6.5						

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Waste Acceptance Criteria Analytical Results

Report No:	Combined Report SSE Site Vastern Road - WAC						
					Client: CCGROUND		
Location	SSE Site, Vastern Road, Reading						
Lab Reference (Sample Number)	908677 / 908678				Landfill Waste Acceptance Criteria Limits		
Sampling Date	06/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS1004						
Depth (m)	1.00						
Solid Waste Analysis							
TOC (%)**	1.1				3%	5%	6%
Loss on Ignition (%) **	3.0				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	2.1				100	--	--
pH (units)**	8.8				--	>6	--
Acid Neutralisation Capacity (mol / kg)	16				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0167			0.129	0.5	2	25
Barium *	0.0061			0.0472	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0016			0.012	0.5	10	70
Copper *	0.0055			0.043	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0070			0.0544	0.5	10	30
Nickel *	0.0012			0.0093	0.4	10	40
Lead *	0.0028			0.022	0.5	10	50
Antimony *	0.0094			0.073	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.021			0.16	4	50	200
Chloride *	30			230	800	4000	25000
Fluoride	0.37			2.9	10	150	500
Sulphate *	5.6			43	1000	20000	50000
TDS	120			930	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	2.54			19.7	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.0						
Dry Matter (%)	88						
Moisture (%)	12						

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Waste Acceptance Criteria Analytical Results

Report No:	**Combined Report SSE Site Vastern Road - WAC**						
					Client:	**CCGROUND**	
Location	**SSE Site, Vastern Road, Reading**						
Lab Reference (Sample Number)	909157 / 909158				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	14/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH2005						
Depth (m)	1.90						
Solid Waste Analysis							
TOC (%)**	3.5				3%	5%	6%
Loss on Ignition (%) **	8.0				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	1300				500	--	--
Total PAH (WAC-17) (mg/kg)	2.1				100	--	--
pH (units)**	7.7				--	>6	--
Acid Neutralisation Capacity (mol / kg)	11				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0015			< 0.0110	0.5	2	25
Barium *	0.0355			0.256	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	< 0.0004			< 0.0040	0.5	10	70
Copper *	0.0090			0.065	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0045			0.0323	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.0097			0.070	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.010			0.072	4	50	200
Chloride *	91			660	800	4000	25000
Fluoride	0.44			3.2	10	150	500
Sulphate *	10			74	1000	20000	50000
TDS	250			1800	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	18.7			134	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.8						
Dry Matter (%)	77						
Moisture (%)	23						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
Stated limits are for guidance only and i2 cannot be held responsible for any discrepencies with current legislation
** = MCERTS accrediited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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

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Waste Acceptance Criteria Analytical Results

Report No:	**Combined Report SSE Site Vastern Road - WAC**						
					Client:	**CCGROUND**	
Location	**SSE Site, Vastern Road, Reading**						
Lab Reference (Sample Number)	909209 / 909210				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	14/02/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH2006						
Depth (m)	1.80						
Solid Waste Analysis							
TOC (%)**	3.2				3%	5%	6%
Loss on Ignition (%) **	11.4				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	200				500	--	--
Total PAH (WAC-17) (mg/kg)	4.1				100	--	--
pH (units)**	8.2				--	>6	--
Acid Neutralisation Capacity (mol / kg)	19				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0024			0.0160	0.5	2	25
Barium *	0.0549			0.370	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0044			0.030	0.5	10	70
Copper *	0.0062			0.042	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0104			0.0698	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.0070			0.047	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0094			0.064	4	50	200
Chloride *	34			230	800	4000	25000
Fluoride	0.56			3.8	10	150	500
Sulphate *	13			89	1000	20000	50000
TDS	150			1000	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.32			29.1	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	72						
Moisture (%)	28						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
Stated limits are for guidance only and i2 cannot be held responsible for any discrepencies with current legislation
** = MCERTS accrediited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Combined Report : SSE Site, Vastern Road - WAC

Project / Site name: SSE Site, Vastern Road, Reading

* 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 *
908247	BH1003C	None Supplied	0.45	Brown gravelly sand.
908280	BH1004	None Supplied	2.00	Grey clay and sand.
908329	WS013	None Supplied	0.60	Grey gravelly sand with stones and rubble.
908417	WS1002	None Supplied	1.70	Grey clay and sand with gravel.
908420	TP1005	None Supplied	0.30	Brown sand with brick and gravel
908423	WS1006	None Supplied	1.90	Light brown clay and sand.
908461	BH2003	None Supplied	3.50	Light brown clay and sand with stones and gravel.
908463	TP1004	None Supplied	1.00	Brown clay and sand with gravel and brick.
908677	WS1004	None Supplied	1.00	Light brown clay and sand with gravel and rubble.
909157	BH2005	None Supplied	1.90	Grey clay and sand with gravel and chalk.
909209	BH2006	None Supplied	1.80	Brown clay and sand with gravel.

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Combined Report : SSE Site, Vastern Road - WAC

Project / Site name: SSE Site, Vastern Road, Reading

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
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-UK	W	NONE
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
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
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
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	in-house method	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS

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Combined Report : SSE Site, Vastern Road - WAC

Project / Site name: SSE Site, Vastern Road, Reading

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
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
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 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
TPH Chromatogram	TPH Chromatogram.	In-house method	L064-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	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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APPENDIX E

Gas and Groundwater Monitoring

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1001	22/02/18	1021	0.0	0.4	17.6	4	0	+0.0/+0.0	2.35	0.2	Standpipe developed by bailing. NAPLs not detected
BH1001	07/03/18	991	0.0	0.5	18.4	1	0	-0.1/+0.0	2.30	0.3	NAPLs detected (film only)

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1002C	22/02/18	1021	1.6	0.3	9.0	0	0	+0.0/+0.2	2.44	0.3	Standpipe developed by bailing. NAPLs not detected
BH1002C	07/03/18	992	0.0	0.2	12.4	0	0	-0.1/-0.0	2.38	0.5	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1003E	22/02/18	1022	0.0	0.2	18.9	5	0	+0.0/+0.0	2.67	0.5	Standpipe developed by bailing. NAPLs not detected
BH1003E	07/03/18	992	0.0	0.3	19.3	4	0	-0.1/+0.0	2.62	0.1	NAPLs detected (film only)

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1004	22/02/18	1020	2.2	4.0	9.3	12	0	-0.3/+0.1	2.22	0.0	Standpipe developed by bailing. NAPLs not detected
BH1004	07/03/18	992	0.2	3.4	14.1	3	0	#+0.0/+0.1	2.17	0.1	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1005	22/02/18	1020	0.0	0.3	18.7	4	0	+0.0/+0.0	2.61	0.0	Standpipe developed by bailing. NAPLs not detected
BH1005	08/03/18	991	0.0	0.8	19.0	0	0	-0.5/-0.2	2.56	0.0	Interface meter faulty

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2001	22/02/18	1022	0.0	0.0	19.8	1	0	+0.2/+0.5	2.43	0.8	Standpipe developed by bailing. NAPLs not detected
BH2001	07/03/18	992	0.0	0.5	19.7	5	0	-3.7/-1.2	2.39	0.5	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2002	22/02/18	1022	0.0	0.0	19.6	4	0	+0.0/+0.0	2.39	2.7	Standpipe developed by bailing. NAPLs not detected
BH2002	07/03/18	991	0.0	0.6	19.6	3	0	-0.1/+0.0	2.35	0.5	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2003	22/02/18	1022	0.0	0.0	19.7	1	0	+0.0/+0.0	2.55	1.9	Standpipe developed by bailing. NAPLs not detected
BH2003	08/03/18	991	0.0	0.2	19.8	4	0	-0.5/-0.3	2.43	0.2	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2004	22/02/18	1021	0.0	0.0	19.7	1	0	+0.0/+0.0	2.54	0.5	Standpipe developed by bailing. NAPLs not detected
BH2004	08/03/18	990	0.0	0.3	19.6	4	0	-0.1/-0.0	2.52	0.5	NAPLs detected (film only)

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2005	22/02/18	1021	0.0	2.9	11.9	8	0	+0.1/+0.6	2.37	0.6	Standpipe developed by bailing. NAPLs not detected
BH2005	08/03/18	990	0.0	5.4	12.6	4	0	-0.0/+0.0	2.50	1.1	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2006	22/02/18	1021	0.0	0.1	13.1	78	0	+0.0/+0.1	1.63	0.5	Standpipe developed by bailing. NAPLs not detected
BH2006	08/03/18	990	0.0	0.6	12.5	9	0	+0.0	1.60	0.4	NAPLs detected 1.60-2.00m

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS1003	22/02/18	1021	0.0	0.6	19.2	0	0	+0.0/+0.1	2.18	0.3	Standpipe developed by bailing. NAPLs not detected
WS1003	07/03/18	990	0.0	0.3	19.8	0	0	+0.0/+0.1	2.13	0.7	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS1004	22/02/18	1021	0.0	0.8	19.2	0	0	+0.0/+0.1	2.36	0.6	Standpipe developed by bailing. NAPLs not detected
WS1004	07/03/18	991	0.0	0.6	19.6	0	0	-0.1/-0.0	2.30	1.2	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS10005A	22/02/18	1021	0.0	0.0	19.6	1	0	+0.0/+0.1	0.97	0.3	Standpipe developed by bailing. NAPLs not detected
WS10005A	07/03/18	990	0.9	0.0	10.3	0	0	-0.0/+0.0	1.69	0.0	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS1006	22/02/18	1021	0.0	0.6	19.1	4	0	+0.0/+0.0	2.22	0.1	Standpipe developed by bailing. NAPLs not detected
WS1006	07/03/18	990	0.0	0.3	19.2	0	0	-0.0/+0.0	2.16	0.1	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS1007	22/02/18	1021	0.0	0.3	19.5	5	0	-0.3/-0.1	1.06	0.7	Standpipe developed by bailing. NAPLs not detected
WS1007	07/03/18	990	0.0	0.1	19.6	1	0	-0.3/-0.1	1.02	0.3	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS10019	22/02/18	1021	0.0	0.9	18.5	1	0	+0.0/+0.0	2.32	0.7	Standpipe developed by bailing. NAPLs not detected
WS10019	07/03/18	991	0.0	1.5	17.8	1	0	-0.1/-0.0	2.27	0.4	NAPLs not detected

CC Ground Investigations Ltd

Contract Name:	SSE Site, Vastern Road, Reading
Contract ID:	C5925
Client:	SSE Plc
Instrument used:	GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.

APPENDIX F

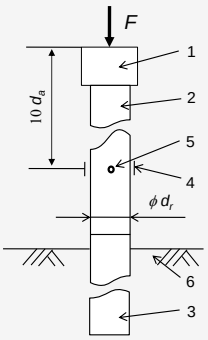
SPT Calibration Data

SPT Calibration Report

www.equipegroup.com

Hammer Energy Measurement Report

Type of Hammer		DANDO TERRIER
Client		CC GROUND INVESTIGATIONS LTD
Test No		EQU1994
Test Depth (m)		10.20
Mass of hammer	m =	63.5kg
Falling height	h =	0.76m
E_{theor} =	$m \times g \times h$ =	473J



Key

1 Anvil
2 Part of instrumented rod
3 Drive Rod
4 Strain Gauge
5 Accelerometer
6 Ground

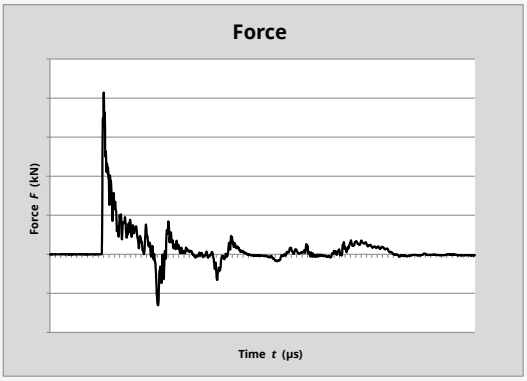
F Force
d_r Diameter of rod

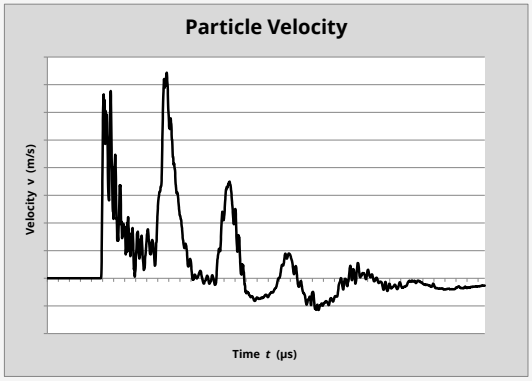
Fig. B.1 and B.2
BS EN ISO 22476-3 : 2005 + A1 : 2011

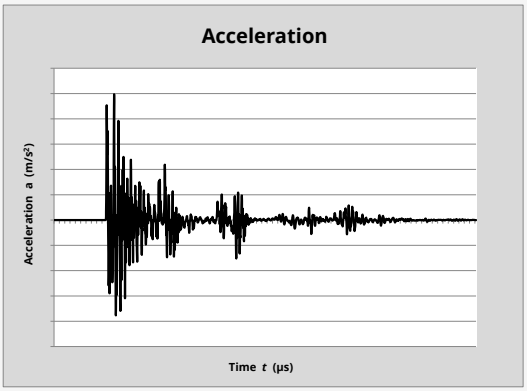
Characteristics of the instrumented rod

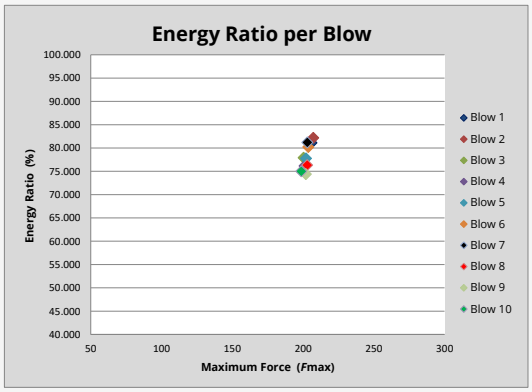
Diameter	d_r =	0.052 m
Length of instrumented rod		0.558 m
Area	A =	11.61 cm²
Modulus	E_a =	206843 MPa

DATE OF TEST	VALID UNTIL	HAMMER ID
02/01/2018	02/01/2019	T06









Observations:
1.

E_{meas} =	**0.369**	kN-m
E_{theor} =	**0.473**	kN-m

Energy Ratio = $\frac{E_{meas}}{E_{theor}}$ (E_r) **77.94%**

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Equipe SPT Analyzer Operators: AF

Prepared by: **Checked by:** **Date:** 05/01/2018

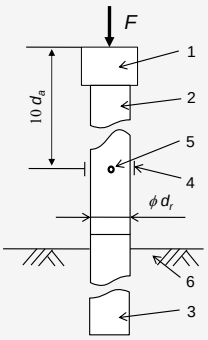
© Copyright 2018 **Equipe Group**, The Paddocks, Home Farm Offices, The Upton Estate, Banbury, Oxfordshire, OX15 6HU
Tel: +44 (0)1295 670990 Fax: +44 (0)1295 678232 Email: info@equipegroup.com

SPT Calibration Report

www.equipegroup.com

Hammer Energy Measurement Report

Type of Hammer		SPT HAMMER
Client		CC GROUND INVESTIGATIONS LTD
Test No		EQU2006
Test Depth (m)		10.20
Mass of hammer	m =	63.5kg
Falling height	h =	0.76m
E_{theor} =	$m \times g \times h$ =	473J



Key

1 Anvil
2 Part of instrumented rod
3 Drive Rod
4 Strain Gauge
5 Accelerometer
6 Ground

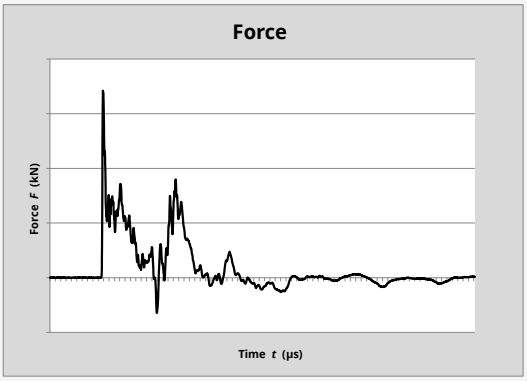
F Force
d_r Diameter of rod

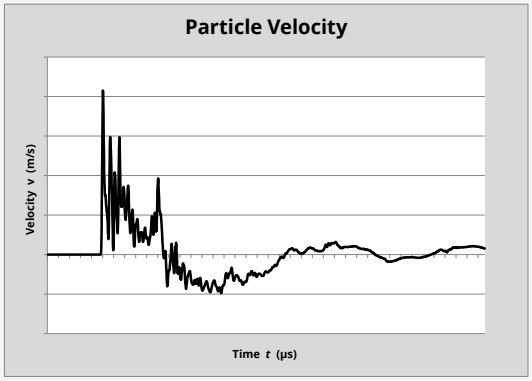
Fig. B.1 and B.2
BS EN ISO 22476-3 : 2005 + A1 : 2011

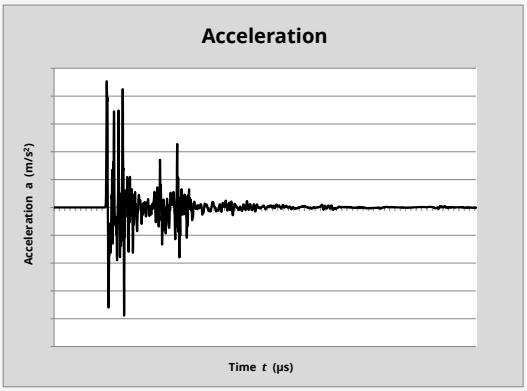
Characteristics of the instrumented rod

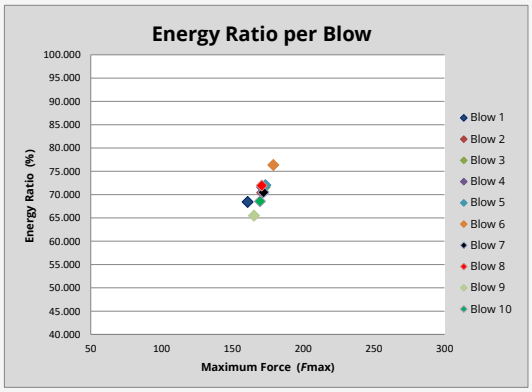
Diameter	d_r =	0.052 m
Length of instrumented rod		0.558 m
Area	A =	11.61 cm²
Modulus	E_a =	206843 MPa

DATE OF TEST	VALID UNTIL	HAMMER ID
02/01/2018	02/01/2019	CC07









Observations:
1.

E_{meas} =	**0.332**	kN-m
E_{theor} =	**0.473**	kN-m

Energy Ratio = $\frac{E_{meas}}{E_{theor}}$ (E_r) **70.19%**

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Equipe SPT Analyzer Operators: AF

Prepared by: **Checked by:** **Date:** 05/01/2018

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Tel: +44 (0)1295 670990 Fax: +44 (0)1295 678232 Email: info@equipegroup.com

Southern Testing
Environmental & Geotechnical

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Southern Testing Laboratories Ltd
Unit 11
Charlwoods Road
East Grinstead
West Sussex
RH19 2HU

SPT Hammer Ref:	SEDS4
Test Date:	29/04/2017
Report Date:	29/04/2017
File Name:	SEDS4.spt
Test Operator:	NPB

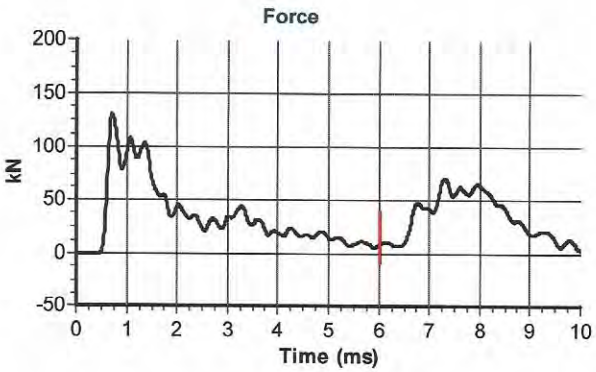
Instrumented Rod Data

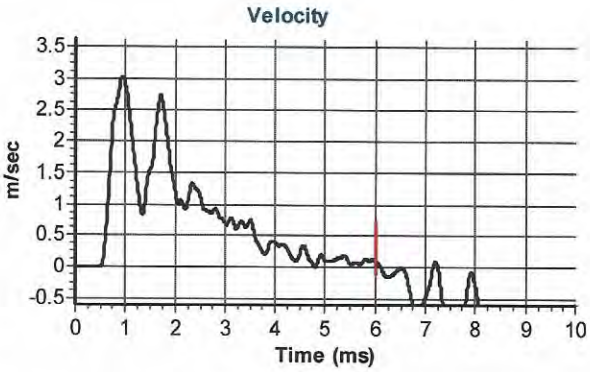
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	6458
Accelerometer No.2:	9607

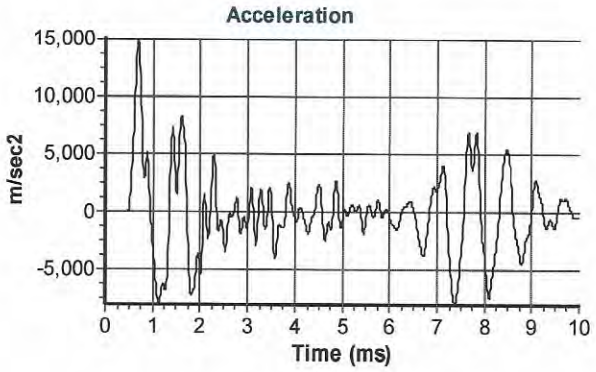
SPT Hammer Information

Hammer Mass m (kg):	63.5
Falling Height h (mm):	750
SPT String Length L (m):	14.5

Comments / Location









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	304

Energy Ratio E_r (%): **64**

Signed: N P Burrows
Title: Field Operations Manager

The recommended calibration interval is 12 months

Southern Testing
Environmental & Geotechnical

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Southern Testing Laboratories Ltd
Unit 11
Charlwoods Road
East Grinstead
West Sussex
RH19 2HU

SPT Hammer Ref:	SEDS8.
Test Date:	29/04/2017
Report Date:	29/04/2017
File Name:	SEDS8..spt
Test Operator:	NPB

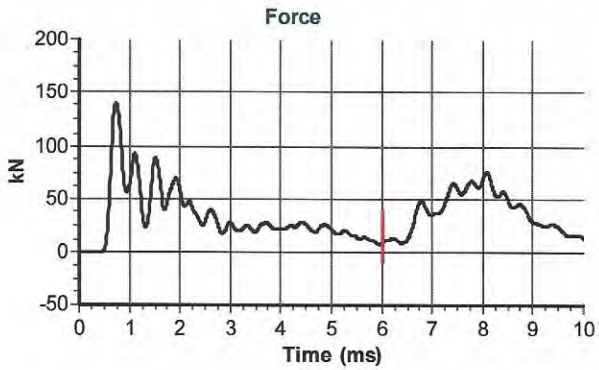
Instrumented Rod Data

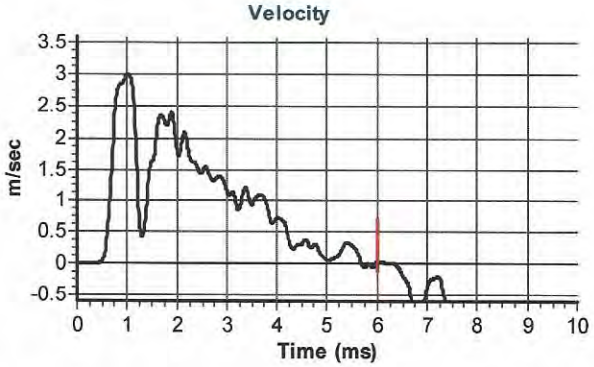
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	6458
Accelerometer No.2:	9607

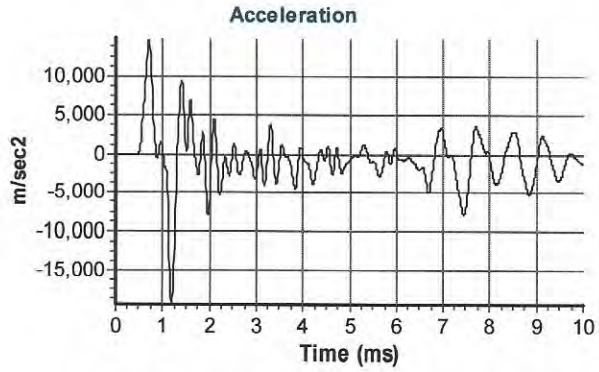
SPT Hammer Information

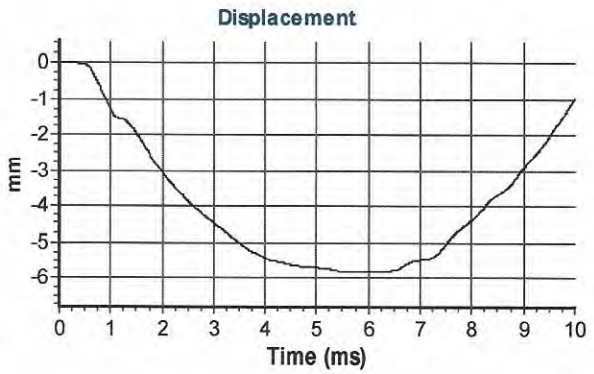
Hammer Mass m (kg):	63.5
Falling Height h (mm):	750
SPT String Length L (m):	14.5

Comments / Location









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	278

Energy Ratio E_r (%): **59**

N P Burrows

Signed: N P Burrows
Title: Field Operations Manager

The recommended calibration interval is 12 months

APPENDIX V- PBA TECHNICAL NOTE (2018)

TECHNICAL NOTE

Project Title:	SSE Site, Vastern Road, Reading
Project No:	39444/3501
Note No:	Tn002/Rev0
Date:	20 March 2018
Subject	Preliminary Summary of Ground Investigation
Prepared By:	Arie Zamler

1.0 Introduction

This technical note presents a summary of the finding of the ground investigation available to date together with comments on potential hazards and constraints in relation to the redevelopment of the Site.

2.0 Site Location

The Site is situated on the southern bank of the River Thames about 0.6 km to the north of Reading town centre. The Site is occupied by offices, electrical infrastructure and car parking. The Site is surrounded principally by residential premises, retail outlets, and offices.

The site was raised in the past by about 1.0 m above the original ground levels and is surrounded by retaining walls along its western, northern and eastern site boundaries. The River Thames is located to the north of the footpath adjacent the northern site boundary and flows south-east.

3.0 Site History

The Site remained undeveloped until the late 1890s when a coal fired power station was constructed on the Site. Offices were constructed in the southern part of the Site fronting Vastern Road. By the 1960s the power station was demolished and the site was used as offices, electrical infrastructure and car parking.

In July 2017 a leak of cable cooling oil was identified from a failed joint within the 132 kV circuit resulting in oil spillage in the 132 kV substation compound at the centre of the Site. It is estimated that about 8800 litres of oil escaped from the faulty joint. It is understood that about 160 litres were recovered during the repair works.

4.0 Ground Investigation

An intrusive ground investigation was carried out to provide information on the ground conditions, including the concentrations of potential contaminants, present on the Site. The fieldwork was carried out by CC Ground Investigations Ltd acting under the technical direction of Peter Brett Associates. The geochemical analyses were scheduled by PBA and carried out by i2 Ltd, acting on behalf of CC Ground Investigations Limited.

The fieldwork for the ground investigation was carried out between 29 January and 14 February 2018. To date, 2 of the 6 scheduled groundwater and gas monitoring visits have been completed.

Five boreholes were advanced using cable percussion techniques to 12.0 and 35.0 m below ground level. Eleven window sample boreholes were sunk to between 1.6 and 5.5 m below ground level. Eight trial pits were excavated using a backhoe wheeled excavator to between 0.3 and 4.0 m below ground level.

During the investigation a number of exploratory holes could not be completed owing to the presence of a large number of obstructions in the ground associated with the former power station. Six boreholes were drilled to 5 m bgl using combined drive sampling and rotary coring in the vicinity of the 132 kV substation where the original locations could not be completed owing to the presence of obstructions in the ground.

A monitoring well was installed in each borehole location completed. 4 wells were installed in the Made Ground where perched water or free product were detected (WS1005A, WS1007, BH2005 and BH2006) with the rest installed in the River Terrace Deposits.

The boreholes scheduled to be sunk to the east of the 132/111 kV substation could not be completed owing the presence of 33/132 kV oil cooled cables and the concrete surface in this area.

A Site Layout Plan showing the location of the exploratory hole locations is enclosed to this note.

5.0 Ground Conditions

The ground conditions at the Site comprise of Made Ground overlying Alluvium, Kempton Park Gravel, and the White Chalk Subgroup at depth. Based on the information from the ground investigation, the ground conditions encountered are summarised in the following table.

Strata	Depth to Strata, m bgl(1)	Typical Thickness, m	Typical Description
Made Ground	Ground level	1.0 and 2.0 locally 3.5	Surface layers of concrete and/or asphalt over sandy CLAY or GRAVEL of flint, rare chalk, brick, concrete, slag and other man-made materials. Rare pockets of ash. Various concrete slabs, foundations and masonry.
Alluvium	1.0 and 2.0 locally 3.5	1.0 to 3.0 locally 0.5 to 3.5	Soft and very soft grey green and blue silty CLAY locally with little sand and gravel. Occasionally with partially decomposed organic matter and organic odour.
Kempton Park Gravel	2.3 and 5.0	3.3 and 6.7 locally 9.2	Medium dense and dense grey and brown silty sandy and very sandy fine to coarse angular to rounded GRAVEL of flint. Locally with a bed of firm grey gravelly sandy clay.
White Chalk Subgroup	7.3 to 12.5	>26.9	Weak or medium strong, low to high density white CHALK with occasional fine to coarse gravel size and cobble size rounded flints.

6.0 Groundwater

The White Chalk is classified by the Environment Agency as a Principal Aquifer. Principal Aquifers are defined as formations that may be highly productive and able to support large abstractions for public supply and other purposes. The River Terrace Deposits and the Alluvium are classified as Secondary A Aquifer. This is a formation of variable permeability that, although seldom producing large quantities of water for abstraction, may be important for local supplies and in supplying base flow to rivers.

Groundwater levels in the River Terrace Deposits were measured to be typically between 2.1 and 2.6 m bgl with a flow direction to the south-east parallel to the River Thames. Perched water bodies are present locally in the Made Ground recorded between 0.97 and 2.5 m below ground level.

The water levels in the River Thames were recorded to be about 0.6 m above the groundwater levels in the River Terrace Deposits indicating that groundwater in the River Terrace Deposits are not in hydraulic continuity with the River Thames immediately to the north of the Site. The groundwater monitoring data indicate that groundwater in the River Terrace Deposits is flowing to the south east, approximately parallel to the River Thames. It is likely that groundwater in the River Terrace Deposits discharges to the River Thames downstream of the weir located approximately 400 m east of the site.

7.0 Geoenvironmental Conditions

Olfactory and visual signs of contamination. Unusual solids and liquids were generally not noted during the investigation with the exception of three locations.

- Hydrocarbon and black staining were noted in BH2003 between 2.2 and 3.8 m depth in the Alluvium and River Terrace Deposits. These are likely to be associated with historical localised fuel spill as part of the former power station.
- Clear odourless fluid/oil was noted in BH2005 and BH2006 at the base of the Made Ground between 1.7 and 2.15 m depth. These visual signs of contamination are likely to be associated with migration of the recent cooling fluid spill.

Groundwater monitoring. During the monitoring visits completed to date, in general, signs of contamination were not noted with the exception of the detection of free product in monitoring well BH2006 where 400 mm thickness free product was recorded between 2.0 and 1.6 m below ground level. This is likely to be free product migrating from the recent cooling oil spill.

Geoenvironmental Testing (Soils) The majority of the measured concentrations of soil contaminants are below the adopted screening criteria with the exception of isolated samples recording elevated concentrations of metals (arsenic, lead, mercury, and nickel) and individual Polycyclic Aromatic Hydrocarbons (PAHs). It is expected that the source of the elevated concentrations of metals and the individual PAHs in soils is related to man-made materials (such as ash and clinker) in the Made Ground. Elevated concentrations of individual Total Petroleum Hydrocarbons (TPH) were identified locally (WS1002 and BH2003) that are likely to be associated with historical localised fuel spills in these areas. Elevated concentrations of TPH were identified in BH2005 in the Made Ground that is likely to be associated with the recent cooling fluid spill. Elevated concentrations of Volatile Organic Compounds (VOCs) were not recorded.

Asbestos was identified in 22 of the 59 soil samples screened with asbestos quantification of between <0.001% to 1.13% by weight.

Ground Gas An assessment of the measured concentrations of ground gases completed to date indicates the Site should be classified as Characteristic Situation 1 in accordance with the criteria given in BS 8485 (2015). For Characteristic Situation 1, BS 8485 (2015) advise that gas protection measures are not required.

8.0 Geoenvironmental Assessment

Based on the information available to date it is considered that the cooling oil fluid was not identified in any of the locations investigated with the exception of two boreholes (BH2005 and BH2006) situated to the south of the 132 kV substation. The Alluvium acts as an aquiclude (a low permeability barrier) that restricts the vertical migration of free product downwards to the River Terrace Deposits and the Chalk Aquifer.

The cooling fluid oil was detected only in two locations investigated (BH2005 and BH2006) to the south of the original leak. The fluid was detected in the Made Ground above the Alluvium and was found to be restricted in the perched water. To date, traces of the cooling fluid oil were not identified within the River Terrace Deposits or the Chalk soils or groundwater. The area immediately to the east of the substation could not be investigated owing to the presence of underground services. It is possible that some of the fluid has migrated to the east, however, any migration to the east if present is likely to be restricted to the Made Ground and not affecting the aquifer at depth.

The groundwater monitoring data indicates that the groundwater in the River Terrace Deposits does not flow directly to the River Thames to the north. Therefore, even in the unlikely event that the cooling oil fluid has migrated from the perched water above the Alluvium into the River Terrace Deposits it is highly unlikely that the fluid will have a significant adverse impact on the River Thames as result of degradation, absorption to soil particles and dilution in the groundwater.

Notwithstanding the above, it is considered that some form of remediation will be required by the Environment Agency for the removal of free product from the Made Ground for the protection of the groundwater in the River Terrace Deposits and the Chalk Aquifer at depth.

9.0 Geoenvironmental Considerations

Based on the findings of the ground investigation to date it is considered that remediation associated with the oil leak will be required for the protection of the River Terrace Deposits and the Chalk Aquifer.

In addition, the future built development will require several embedded mitigation measures for the protection of future site users from 'generic' elevated concentrations of a number of contaminants and asbestos in the Made Ground. A piling risk assessment will also likely be required to ensure that piling does not cause an unacceptable risk to controlled water receptors.

Cooling Fluid Spill Based on the information available it is advised that some form of remediation will be required to remove free product present in the Made Ground to the south of the 132 kV substation. At this stage it is considered that the remediation will comprise one or a combination of the following techniques:

- The installation of a number of large dimeter wells to the south of the 132 kV substation with an oil skimmer system to remove free product from the wells.
- The excavation of a trench to the south of the 132 kV substation with a skimming system installed within the trench. This may be a more effective method for the removal of free product from the Made Ground. However, this method will require a relatively large area that will have restricted access.
- The excavation of a trench to the south of the 132 kV substation, backfill of the trench with clean gravel with the installation of a number of wells installed in the trench with a skimming system installed in the wells to recover free product from the trench. This method is likely to be less restrictive to site users and might prove to be more effective in recovering free product compared with the installation of large diameter wells directly into the Made Ground.

Some form of trial will be required to establish the most effective method for the removal of free product form the Made Ground. The duration of remediation required will be determined following a trial and actual recovery rates achieved. At this stage it is expected that the remediation will take up to about 1 to 2 years.

Any remediation will require the approval of the Environment Agency and the Local Planning Authority. It is recommended that an early engagement is established. It is recommended that remediation is carried out at an early stage to minimise the potential migration and impact from the leaked cooling fluid.

It is possible that the cooling fluid migrated to areas that were not accessible at the time of the investigation. Further investigation and potential remediation will be required following demolition of the office extension to the south of the 132 kV substation.

It should be noted that at the time of the investigation intrusive investigation could not be carried out to the east of the 132 kV compound owing to the presence of high voltage oil cooled cables and the presence of hard surfaces including concrete slabs in this area. That resulted in gaps in the data available. It would be highly beneficial to be able to investigate this area should a safe method of drilling can be agreed with SSEN.

Localised Historical Fuel Contamination Elevated concentrations of contamination were recorded in WS1002 situated along the northern boundary of the site. This is considered to be a localised 'hot spot' associated with the spillage of fuels from fuel tanks as part of the former power station recorded in this area. It is recommended that further localised investigation is carried out in the vicinity of this location to determine the extent of the elevated concentrations of hydrocarbons. It is likely that some form of source removal with the excavation of the most severely impacted soils to an off-site licensed facility or on site remediation should large volume of soil would be found to be severely impacted.

Mitigation Measures as part of Future Redevelopment some measures will be required to mitigate the risks to site workers and future users associated with ingestion, inhalation or prolonged skin contact of contaminated material during the construction works, for future users of the Site, for the installations of piles and for protection of the proposed structures.

The mitigation measures are summarised briefly below:

- Mitigation of the risk to site workers associated with ingestion, inhalation or prolonged skin contact of contaminated material including asbestos during the construction works is provided by (i) informing the site workers of the potential risk through site induction and 'tool box talks'; (ii) the provision of appropriate protective clothing and equipment to be worn by site workers; and (iii) the adoption of good standards of hygiene to prevent prolonged skin contact, inhalation and ingestion of soils during construction. In addition, appropriate methods of working will be selected to limit disturbance to the contaminated materials and the potential for air-borne dust to arise associated with the excavation and disturbance of the soils present on the site.
- Mitigation of the risks to site workers associated with inhalation of hazardous ground gases. Confined space entry controls including gas monitoring will be adopted for workers entering and confined spaces.
- Hard cover provided as part of the form of the development itself, or, the installation of a clean cover system over in landscaped areas will provide the mitigation required in respect of risks to site users associated with ingestion, inhalation or prolonged skin contact of contaminated materials.
- Approved piling methods will be adopted to mitigate any risk to the aquifers below from contamination in the Made Ground migrating downwards.
- The appropriate design of concrete and in ground materials will be sufficient to mitigate the risks of chemical attack on buried concrete and permeation of water supply pipes during the lifetime of the completed development.

It is considered that these actions and mitigation measures are typical for similar brownfield redevelopments and should not be considered particularly onerous or unexpected.

Management of Unidentified Contamination There is a possibility that other sources of contamination may be encountered during site clearance or ground works that have not been previously identified. It is recommended that a watching brief is maintained throughout any excavation works by a suitably experience Geoenvironmental Engineer.

10.0 Closure

It is understood the preferred option is for SSE to sell the site with all the liabilities that are related to the ground conditions and contamination passed on to a potential purchaser. Given the size of the development, the basic land value and the potential for discounted value as a result of the liabilities associated with the cooling fluid leak in the vicinity of the 132 kV substation, we would recommend that SSE consider carrying out the initial remediation prior to the sale. This might prove to provide a significant added value for the vending of the site.

We would be please to discuss the above in detail over the phone or arrange a meeting, if required.

Regards,
Arie

DRAFT



KEY

- CABLE PERCUSSION BOREHOLE LOCATION
- ROTARY CORED BOREHOLE LOCATION
- WINDOW SAMPLE LOCATION
- TRIAL PIT LOCATION
- INSPECTION PIT LOCATION
- SURFACE WATER SAMPLING LOCATION
- HISTORICAL BOREHOLE LOCATION (GEL, 2014)
- SITE BOUNDARY

SSE, VASTERN ROAD, READING

EXPLORATORY HOLE LOCATION PLAN

Client: CUSHMAN & WAKEFIELD

Date of 1st Issue: 23.02.2018	Drawn by: davco
A2 Scale: 1:500	Checked by: AZ

Figure Number: FIGURE 2

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READING
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user name: david cotton

File Location: \\pba.int\cbh\projects\39444 sse - vastern road\3500 - geotechnical\03 figures & dwgs\dwgs\39444 - figure 2 expl hole plan as built.dwg

APPENDIX VI – OMNIA PHASE I-II SITE ASSESSMENT (2018)

Phase I-II Geo-Environmental Site Assessment & DQRA

55 Vastern Road
Reading
Berkshire
RG1 8BU

Prepared for

SSE Services PLC
Southern Electric Power Distribution PLC
and
Berkeley Homes (Western) Ltd
200 Longwater Avenue
Green Park
Reading
Berkshire
RG2 6GB

Omnia ref: A10967/1.1 Final
April 2018

Quality Assurance

Remarks	Draft	Final
Date	April 2018	April 2018
Phase I-II Report Prepared by	K. Duggan	K. Duggan
Signature		
DQRA Prepared By	A.King	A.King
Signature		
Checked by	T.Mitchell	T.Mitchell
Signature		
Authorised by	L.McDonald	L.McDonald
Signature		
Project number	A10967/1.0	A10967/1.1

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Omnia Environmental Consulting
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PO15 5TH

Executive Summary	
Site Address	55 Vastern Road, Reading, Berkshire, RG1 8BU
National Grid Reference	471566, 174120
Site Area	1.19ha
Current Site Use	The site is located within Reading Town centre, approximately 1km north of Reading Train Station. The site comprises a single two storey building within the southern section, electricity power distribution infrastructure within the central section and parking within the northern section of the site.
Site History	The site forms part of an open field until mapping dated 1900 when the site is developed to an electrical works with an ice rink built 1912. The site was then redeveloped during the 1970s to its current configuration.
Geology, Hydrology & Hydrogeology	Soils underlying the site are classified as Unproductive Strata, attributed to the clay and silt of the Langley Silt Member. This unit is underlain by a Principal Aquifer, the chalk of the Seaford Chalk and Newhaven Chalk Formation. Four (4no.) groundwater abstraction and three(3no.) potable groundwater abstractions are noted within 1km of the site. The closest surface water feature is located 4m to the north east of the site. The ground investigations encountered the following sequence: Made Ground (MG) was found to be predominantly granular in nature and generally ranged from 1.10m to 1.90m in thickness with thicker Made Ground ranging from 1.95 – 3.50m, as encountered in the central part of the site around the main transformer compound. Immediately underlying MG was a sequence of cohesive deposits comprising clayey and sandy SILT attributed to the Langley Silt Member (LSM). The top of the LSM was encountered at depths ranging from 0.60 – 3.50m bgl (37.57 – 35.26mAOD). Immediately underlying the LSM were sands and gravels attributed to the Kempton Park Gravel Formation (KPG), which ranged from loose to dense grey variably silty and sandy GRAVEL. The KPG ranged from 5.00 – 9.20m in thickness with an average thickness of 6.58m. Chalk bedrock was encountered immediately beneath the KPG at depths ranging from 8.10 – 12.50m bgl (30.21 - 26.21mAOD) and was proven to a maximum depth of 35.00m bgl. the Chalk was recovered as a variably sandy and silty angular to subangular GRAVEL (Grade Dc) suggesting an absence of “Putty Chalk” (Grade Dm).
Landfill Sites & Ground Gases	The Groundsure Report identified one (1no.) Environment Agency historic landfill site within 1km of the site, 587m to the north west. No further landfills or waste treatment site are recoded within 250m of the site.
Radon	With reference to the HPA Radon Atlas for England and Wales, less than 1% of properties are above the action level. At this level BRE publication BR211 indicates that no radon protective measures are required in the construction of new extensions or dwellings.
Revised Conceptual Site Model (RCSM)	
Following the completion of the risk assessment, including Tier 1 Human Health assessment and Tier 2 Controlled Waters Assessment (DQRA) a series of active pollution pathways have been identified by the RCSM. These relate to elevated metals, PAH, TPH and asbestos concentrations in the near surface and TPH within groundwater samples.	

Recommendations

In order to mitigate this risk identified in the RCSM remediation works are required, which are likely to include:

- Emplacement of soil capping system within areas of proposed soft landscaping;
- Provision of Vapour and Ground Gas Membranes within buildings;
- Removal of free phase hydrocarbon product (TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21}) from the area set out on Figure 4, predominantly limited to the area of the substation.
- Hotspot removal of impact in area of WS1002 and TP1007.

Mitigation measures should be set out within a standalone Remediation Method Statement and agreed with the Regulator ahead of commencement on site.

Near surface soils at the site are likely to be classified as Hazardous for disposal purposes due to asbestos content >0.1% in five of 47 samples across the proposed residential portion of the site.

If during works any previously unidentified impact is encountered during development works, activities should be halted and contact made with a suitably qualified Environmental Consultant in order to further investigation identified materials. As determined appropriate by the Consultant further investigation and sampling may be required to determine appropriate actions. Upon completion contact should be made with the regulator to achieve sign off of the works.

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1.0 INTRODUCTION

1.1 Background

Omnia Environmental Consulting (OEC) have been commissioned by Berkeley Homes (Western) Ltd (BHW) to undertake an Environmental Site Assessment, including Detailed Quantitative Risk Assessment (DQRA) at the site comprising 55 Vastern Road, Reading, Berkshire, RG1 8BU (Figure 1.0). This work has been commissioned as part of the due diligence phase prior to the purchase and redevelopment of the site.

The site is situated in Reading Town centre, directly adjacent to the River Thames and is understood to be currently owned and occupied by SSE with an office building located on the southern third of the site and associated parking and infrastructure towards the north. A significant proportion of the site, predominantly the eastern third, is utilised by SSE for electricity distribution, with a range of plant and structures in place including below ground oil-filled pipes.

It is understood that BHW intend to acquire the site in full but redevelop only an approximate 70% of the site, with SSE retaining the area it currently utilises for electricity distribution. The development itself is to comprise the construction of up to 5 new residential apartment blocks along with associated infrastructure and communal green space as indicated on the provided plans.

It is understood that a pollution incident occurred at the site during July 2017 when an estimated 8,000 litres of cooling oil was released from a ruptured underground High Voltage (HV) cable run. The site is understood to have undergone two (2no.) previous phases of investigation, an initial investigation undertaken in October 2017 by Adler & Allan Ltd to identify the source of the leakage and facilitate a repair, with a subsequent phase of investigation and monitoring undertaken by Peter Brett Associates (PBA) between January - April 2018.

Whilst final reports have not yet been made available to BHW, a preliminary assessment has been issued by PBA together with a draft factual site investigation report undertaken by CCL Ground Investigations, which indicates that as a result of historic activities and contemporary land use on site (previous power station use and historic hydrocarbon infrastructure potentially both ASTs USTs) and due to a rupture of an oil pipe in 2017, that there are environmental risks to both Human and Environmental receptors that will need to be dealt with as part of the development process.

This report assesses the factual information provided by PBA and Adler & Allan and as a result, this DQRA should be read in conjunction with the previously stated reports.

1.2 Proposed Development

It is understood that the proposed development consists of the construction of five (5no.) new residential apartment blocks along with associated infrastructure and communal green space on approximately 70% of the site with the central and eastern part of the site, which contains SSE Electrical Distribution Infrastructure, being retained by SSE.

A site location map is presented as Figure 1.0, and the proposed layout is as detailed on Figure 2.0. Figures are presented within Appendix III.

1.3 Objectives

The objectives of the Geo-Environmental Site Assessment are to:

- Undertake a site walkover and inspection including interviews with key site representatives if available;
- Review historical plans, geology, hydrogeology, site sensitivity, flood-plain issues, mining records and any local authority information available in order to complete a Desk Study in line with Environment Agency (EA) document Model Procedures for the Management of Contaminated Land (Contaminated Land Report 11 (CLR11));
- Assess the implications of any potential environmental risks, liabilities and development constraints associated with the site in relation to the future use and in relation to off-site receptors;
- Undertake a limited assessment of the near surface through restricted intrusive site investigation;
- Provide a factual and interpretative report relating to the site and provide recommendations on any potential development issues with particular consideration of Residential, Construction Worker and Environmental receptors; and,
- Undertake a DQRA through the development of a P20 Remedial Targets Methodology (RTM) model to determine whether the site presents a significant risk to identified receptors

1.4 Sources of Information

Background information was sought from the following sources:

- Groundsure Environmental Database Search (GS-4876555);
- Historical Ordnance Survey Mapping (1859 – 2014);
- CC Ground Investigation Ltd Factual Report (report ref: 'C5925/01'dated March 2018);
- PBA Peter Brett Technical Note (report ref: 'Tn002/Rev0' dated March 2018);
- Environment Agency Groundwater Quality Review: Thames Valley Gravels, Thames Region. Report Ref: 6441R8, February 2005;
- Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 3, Selection of Representative TPH Fractions Based on Fate & Transport Considerations, July 1997;
- Environment Agency, The Effects of Contaminant Concentration on the Potential for Natural Attenuation; R&D Technical Report P2-228/TR, 2002;
- and,
- British Geological Survey Map Sheet 268, Reading, Solid & Drift Edition at a scale of 1:50,000.

1.5 Limitations

The limitations of this report are presented in Appendix I.

1.6 Confidentiality

OEC has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from OEC; a charge may be levied against such approval.

2.0 SITE SETTING

2.1 Site Details

Site Address	55 Vastern Road, Reading, Berkshire, RG1 8BU
National Grid Reference	471566, 174120

All acronyms used within this report are defined in the Glossary presented in Appendix II.

2.2 Current Site Use

Site Description

The area of investigation is located within Reading town centre, approximately 1km north of Reading train station on a roughly rectangular shaped parcel of land approximately 1.0 hectares in size. The site is located north of Vastern Road with the long axis aligned north east to south west. The site was accessed via a security gate located just north of Vastern Road.

At the time of the walkover, the site was vacant and comprised of a single two-storey building occupying the southern area. Electricity power distribution infrastructure was located within the central section of the site and along the eastern boundary. Within the central eastern and northern section of the site the area was utilised for parking associated with the vacant SSE building. However it is understood that SSE employees still have site access and at the time of the walkover noted to park their vehicles on site.

The two-storey building within the southern section of the site was aligned alongside Vastern Road in an approximate east west orientation, with the building fronting onto Vastern Road. The majority of the building was clad with white plastering, although it is assumed that the building is brick built. The building appeared to be in a relatively good state of repair, with the building utilised for the storage of office furniture.

Approximately 1/3 of the site area contained electrical distribution plant including electricity substations and transformers with a number of oil cooled high voltage underground power lines understood to run approximately north-northwest to south-southeast in the eastern part of the site. The infrastructure appeared to be in a good state of repair with a gravel cover present across the area and enclosed by a 2m tall security fence.

Within the north eastern corner of the site a small area of soft landscaping was present, containing a double garage, a smoking area and an electrical substation. The area was a good state of repair was grass cover across the area, with the substation enclosed by 1.5m wooden fencing.

The site was observed to be generally flat, with a previous topographic survey indicating an elevation of approximately 38.50m AOD.

Hazardous Materials Storage

No hazardous material storage other than that associated with the substation infrastructure was observed during the site walkover.

Waste Storage

Waste storage was noted during the walkover, in the form of one (1no.) large skip, which was located at the rear of the building, on the western site boundary.

Potential Asbestos Containing Material (PACM)

During the site walkover, no visible PACM was observed, however given that the on site structure was built before the year 2000 there is the potential for asbestos containing material to be present within the building fabric. Given this, an asbestos survey should be undertaken ahead of any refurbishment or demolition works in line with best practice.

2.3 Surrounding Area

The surrounding land uses are summarised below:

Direction	Land Use
North	River Thames with Christchurch Playing Fields beyond.
East	Commercial/Industrial.
South	Commercial/Industrial with Railway Station beyond.
West	Residential Properties with private gardens.

3.0 SITE HISTORY

3.1 On-Site Historical Development

A review of historical maps pertinent to the site and within a 250m radius is summarised in Table 3.1 below. Historical maps are included within the Groundsure report presented within Appendix IV.

Table 3.1 Summary of Potentially Contaminative Historical Land Uses.

Map Edition	Historical Land Use	
	On Site	**Off Site**
1877 (1:2,500) Partial map coverage	The site area comprises open land with a tree line running along the northern edge.	Surrounding area comprises of open land with a body of water adjacent to the northern boundary running north west to south east.
1881 (1:2,500)	No significant change.	Great Western Rail Works ~ 75m south, south west of the site Goods train station situated ~200m south, south west of the site.
1889-1900 (1:2,500)	Building situated within the northern section of the site identified as electrical works.	Body of water running adjacent identified as the River Thames. Significant housing development adjacent to the western boundary. Thamesbank ironworks ~100m east Coal depot ~100m west, south west Saw mill situated ~150m north west Boat houses ~175m and ~250m east, south east and ~250m north west.
1912-1913 (1:2,500)	Building situated within the southern section of the site identified as a Skating Rink.	Ice factory and cold stores adjacent to western boundary. Iron foundry ~30m east, south east. Thamesbank ironworks ~ 100 west now identified as ironworks Timber yard ~175m north west of site Boat houses ~70m north and ~175m north west. Foundry (iron and brass) ~250m east.
1931-1932 (1:2,500)	No significant change. The buildings on site are now unidentified.	Ironworks ~ 100m east replaced by paint works ~50m east and Timber yard ~100m east Christchurch playing fields situated ~65m north east of site including tennis courts and a paddling pond.
1936 (1:2,500) Partial map coverage	Southern building now identified as a depository.	Iron foundry ~20m east of site. Overhead crane associated with saw mill ~120m west.

Map Edition	Historical Land Use	
	On Site	Off Site
1956-1957 (1:2,500)	Electrical works building within the northern section of the site is no longer present. Depository no longer identified.	Garage ~50m east. Well situated on the southern edge of fry's island ~60m north. Engineering works ~70m north west. Electrical substation situated ~120m north west. Great Western Railway works now defined as works situated ~130m south west. Boat house situated ~130m north of the site Two tennis courts and a bowling green situated on Fray's island ~180m north, north west of site. Warehouse situated ~190m south east. Unidentified works building ~250m east.
1959-1961 (1:2,500)	No significant change.	Ice factory and cold stores ~ adjacent western boundary identified as factory. Timber yard situated ~175m north west now defined as depot. Engineering works ~70m north west now identified as works. Saw mill ~150m north west now identified as mill.
1957-1962 (1:1,250)	No significant change.	No significant change
1969-1972 (1:1,250)	Building within the southern section of the site is now identified as an electricity depot. Electricity distribution infrastructure identified within the central section of the site. Three (3no.) electrical substations identified. One within the north western point, and two (2no.) along the north western section of the electricity depot.	Factory ~ adjacent to western boundary now identified as Ice factory and cold stores. Engineering works ~10m east. Engineering works situated ~50m north west. Tank ~60m east. Tank ~ 70m east Great Western Rail works (Works) ~ 100m south now identified as Railway Works. River conservancy depot ~125m east. Club situated ~130m north west. Electricity substation situated ~175m north west. Boat house ~175m north west now identified as store. Coal yard ~180m south east.
1979- 1982 (1:1,250) Partial map coverage	Poor mapping coverage.	Two warehouses ~135m north west of the site.
1984-1988 (1:1,250) Partial map coverage	Poor mapping coverage.	Northernmost warehouse ~ 135m west identified as offices.

Map Edition	Historical Land Use	
	On Site	Off Site
1984-1989 (1:1,250)	Building with the northern section of the site.	No significant change.
1988-1993 (1:1,250)	Electrical substation within the south eastern section of the site.	Engineering works ~10m east now identified as works
1994 (1:10,000)	No significant change apparent from mapping.	Car park situated ~70m south east.
2002 (1:10,000)	No significant change apparent from mapping.	No significant change.
2010 (1:10,000)	No significant change apparent from mapping.	No significant change.
2014 (1:10,000)	No significant change apparent from mapping.	No significant change.

3.2 Historical Tank Database

The Groundsure Report identified twenty-three (23no.) historical tanks within a 250m radius of the subject site based on analysis of historical ordnance survey mapping. A total of six (6no.) were identified as being located on site, with dates ranging between 1913 to 1932. Entries within a 250m radius of the site have been summarised below:

- 38m south east, Unspecified Tank, dating 1972-1989 (2 entries);
- 66m south east, Unspecified Tank, dating 1972-1989 (2 entries);
- 161m south, Unspecified Tank, dated 1879;
- 173m south west, Tank or Trough, dated 1879;
- 181m south west, Tank or Trough, dated1879;
- 188m south west, Tank or Trough, dated 1879 (2 entries);
- 216m south east, Unspecified Tank, dated 1956-1962 (4 entries);
- 220m south east, Unspecified Tank, dated 1912-1931 (2 entries);
- 240m north, Unspecified Tank, dated 1972; and,
- 250m north, Unspecified Tank, dated 1972.

3.3 Planning History

OEC has undertaken a review of on-line planning records held by Reading Council. Seven (7no.) applications were identified relating to the site. Of these the following record was considered to be environmentally pertinent:

Application Ref: 050335: Change of use from ground floor warehouse with first floor extension to form additional B1 (office) floor space (Dated January 2005).

4.0 ENVIRONMENTAL SETTING

4.1 Geology & Hydrogeology

The British Geological Survey (BGS) map for the site (Reading, Sheet 268, Solid and Drift Edition at a scale of 1:50,000) indicates that the site is underlain by the following geological sequence:

Geological Unit	Classification	Description	Aquifer Classification
Superficial	Alluvium (Northernmost Area Only)	Clay, Silt, Sand & Gravel	Secondary (A) Aquifer
	Langley Silt Member	Clay and Silt	Unproductive Strata
	Kempton Park Gravels (Underlying Langley Silt)	Sand & Gravel	Secondary (A) Aquifer
Bedrock	Seaford Chalk Formation & Newhaven Chalk Formation	Chalk	Principal Aquifer

Review of the Groundsure environmental database indicates that the site is not located within a groundwater Source Protection Zone (SPZ). A Source Protection Zone 3 (SPZ3), Total Catchment, was identified approximately 28m southeast of the site and from communication with the EA is understood to be associated with a groundwater abstraction at Reading University. No potable water abstraction licences or public water supplies were identified within 250m of the site. The closest groundwater abstraction licence is located 371m northeast and is designated for Laundry Use.

A review of Environment Agency report Ref: 6441R8, regarding groundwater within the Thames Valley Gravels suggests that groundwater flow within the gravels is influenced by river flow direction and generally flows obliquely away the river at times of high flow level and obliquely towards the river during times of low flow level. A review of local topography and surface water features suggests that shallow groundwater, if present, is likely to flow in a north-easterly direction towards the River Thames.

Groundwater vulnerability data indicates the site is underlain by soils classified as a Major Aquifer with a high leaching potential, which is considered to be attributed to the Superficial geology.

4.2 Hydrology

There are six (6no.) surface water abstractions within 1km of the site. The closest entry is located 264m north west and relates to an abstraction from the River Thames, for 'Transfer between sources', attributed to Reading Borough Council.

Data obtained via the Groundsure report identified sixty (60no.) records of surface watercourses within a 250m radius of the subject site. These records have been attributed to the River Thames (closest entry is 5m north east) and an unnamed culverted watercourse located approximately 85m south.

The Groundsure Report identified eight (8no.) surface water features within influencing distance of the site. The closest of which is located approximately 4m to the north east.

The site is partially classified as both a Zone 2 and a Zone 3 floodplain with a Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating of High. The Zone 3 entry is attributed to the north eastern

and north western boundary of the site, closest to the Thames.

The site is located on a British Geological Survey groundwater flooding susceptibility area, which is associated with clearwater flooding from superficial deposits at surface.

4.3 Geotechnical Data

Geotechnical Data presented within the Groundsure report identifies the following ground conditions:

Hazard	Designation
Shrink-Swell Clay	Very Low
Landslides	Very Low
Ground Dissolution	Very Low
Compressible Ground	Moderate
Collapsible Deposits	Very Low
Running Sand	Low

4.4 Mining & Ground Workings

The site is not located within an area that is affected by coal mining and therefore no Coal Authority coal mining report was obtained for the purposes of this report. The Groundsure report also indicated that the site is not affected by any other mining activities.

4.5 Radon Risk Potential

The Groundsure report indicates that the site is not located within a Radon Affected Area, as less than 1% of properties are above the action level. At this level BRE publication BR211 indicates that no radon protective measures are required in the construction of new extensions or dwellings.

4.6 Industrial Land Uses

The Groundsure Report identified twenty-three (23no.) industrial land uses within a 250m radius of the subject site. Out of these sixteen (16no.) were considered to be potentially contaminative, and are summarised below:

- Container and storage depot, located onsite;
- Three (3no.) Electrical Sub Stations, located onsite;
- Electrical Sub Station, located 47m southeast, 100m southwest, 164m west, 200m northwest, 211m north west, 212m northwest
- Bus and Coach stations, Depots and Companies, located 210m south
- Electrical Sub Station, located 211m northwest;
- Vehicle repair, testing and servicing, located 218m west, 239m west;
- Container and storage, located 220m west;
- Railway stations, junctions and halts, located 236m southwest;
- General construction supplies, located 244m west; and
- Unspecified works or factories, located 248m west.

The Groundsure report did not identify any current or historic petrol filling stations within a 250m radius of the site. The closest is located 428m north east of the site.

4.7 Sensitive Land Uses

The site is located within an area identified as being classified as a Nitrate Vulnerable Zone (NVZ). No other sensitive land uses were identified within a 250m radius of the site.

4.8 Site Sensitivity Assessment

The site is considered to be located within a High sensitivity setting due to the following reasons:

- On-site pollution incident involving the leakage of 8,000 litres of cooling oil in July 2017;
- River Thames is located approximately 5m north;
- Site is underlain by Chalk Bedrock classified as a Principal Aquifer;
- Contemporary and historic potentially contaminative land uses on-site;
- Superficial deposits classified as unproductive strata;
- The site is located within a NVZ; and,
- Surrounding area includes residential dwellings with private gardens.

5.0 CONSULTATIONS

5.1 Contaminated Land Officer

An information request was submitted to Reading Borough Council (RBC) on 12/04/2018 enquiring whether RBC held any information associated with the pollution incident that occurred at the site in July 2017. To date, no response to the information request has been received. Once a response has been received, and if environmentally pertinent an addendum to this report will be produced.

5.2 Environment Agency

Contact was made with the Environment Agency on the 11/04/2018 regarding the pollution incident set out in Section 1.1 involving the leakage of 8,000 litres of cooling oil on site. A response was received via email on the 12/04/18 as follows:

"Given the location of the cable oil leak in close proximity of the River Thames, Scottish and Southern Electricity were instructed to investigate and remediate. Subsequently Adler and Allan were met on site with their consultants, who carried out an investigation. They had located the leak and made a repair but the final report of the site wide monitoring has yet to be seen. They had also been monitoring the surface water in the Thames but had not detected any hydrocarbons."

OEC made further contact on 12/04/2018 requesting confirmation of the EA's considered principal receptor. A further response was received on 12/04/2018 as follows:

"Given the proximity of the River Thames, it would be considered the principal receptor. Also, the Langley Silt, dependant on the depth of the cable, might act as a barrier to downward infiltration. The Chalk here is close to an SPZ3 for the University Abstraction. However, they have recently revoked their licence so not aware of any other abstractions. The oils used on high-voltage cables these days tend to be linear Alkyl Benzene with a low environmental impact and which do not contain PCBs. However, there is the possibility for older oil residues to remain within the cables."

5.3 Landfill & Waste Treatment Sites

The Groundsure Report identified one (1no.) Environment Agency historic landfill sites within 1km radius of the subject site.

- 587m north west, Richfield Avenue, Reading, Berkshire - Site Ref: RDG11, TP0122, Waste Type: Commercial, Household and liquid sludge;

The Groundsure Report did not identify any historic local authority landfill entries within influencing distance of the site. Furthermore no further landfills or waste treatment site entries are recorded within 250m of the site.

5.4 Potentially Infilled Land Sites

The Groundsure Report identified eight (8no.) potentially infilled land sites within a 500m radius of the subject site. There are five (5no.) records of potentially infilled land up to 250m from the site, all of which relate to a single pond, the details of which are summarised below:

- 100m north east, Pond, dated 1994, 1971, 1989, 1962 and 1967.

5.5 Regulatory Database

The following information has been obtained from a commercially available environmental database. The summary table only includes records not otherwise detailed in the report.

Table 5.1 Summary of Groundsure Data

	0-249m	250-500m	Details
Contaminated Land Register Entries and Notices	0	0	N/A
Authorised industrial processes (IPC/IPPC/LAPPC).	0	1	406m north east -Shell (UK) Limited, Thames Valley Service Station, George Street, Caversham, Reading, RG4 8DH Process: Unloading of petrol into storage at service stations. Permit type: Part B
Fuel Stations Entries	0	1	406m north east - Shell (UK) Limited, Thames Valley Service Station, George Street, Caversham, Reading, RG4 8DH
Licensed radioactive substances	0	0	N/A
Enforcements, prohibitions or prosecutions	0	0	N/A
Discharge Consents	5	5	54m north west – Effluent Type: Miscellaneous Discharges- Surface Water Receiving Water: River Thames 158m south east, Effluent Type: Trade Discharges Unspecified (Two (2no.) entries) Permit Number: CAWM.0103 Receiving Water: To the Vastern Ditch 199m south east, Effluent Type: Trade Discharges, Process Effluent, Water Company - Receiving Water: Thames (Two (2no.) entries) 258m east, Effluent type: Miscellaneous Discharges – Surface water Receiving Water – River Thames 392m east, Effluent type: Sewage Discharges, final/treated effluent – not water company 414m north west, effluent type: miscellaneous Discharges: Surface Water 432m north west – Effluent type: Miscellaneous Discharges: Surface water
Pollution Incidents	5	6	151m west – dated 17/09/2002 – Oils and fuels – no impact (Two (2no.) entries) 168m south west – dated 12/09/2001 – General biodegradable materials and waste – no impact 200m south west – dated 14/05/2003 – oils and fuel – Minor land impact.

	0-249m	250-500m	Details
			235m south east – dated 19/11/2001 – Oils and fuel – Minor water impact 258m south west – dated 26/04/2002 – Oils and fuel – Minor land impact 269m north west – dated 22/08/2001 – General biodegradable materials and waste – No impact 357m south east – dated 24/01/2002 – general biodegradable materials and waste - Minor water impact 365m south east – dated 22/04/2006 – pollutant not identified – major water impact 368m south east – dated 15/04/2002 – oils and fuel – minor water impact 406m south east – dated 12/03/2003 – oils and fuel – minor water impact
Consents issued under the Planning (Hazardous Substances) Act 1990	0	0	N/A
Control of Major Accident Hazard (COMAH) sites	0	0	N/A

6.0 PREVIOUS INVESTIGATION

The following documents have been made available to OEC during the appraisal of the site:

- Peter Brett Associates (PBA) Technical Note Tn002/Rev0 – Preliminary Summary of Ground Investigation – SSE Site, Vastern Road, Reading, dated 20th March 2018.
- CC Ground Investigations (CCGI) Report C5925/01 – Draft Factual Report – SSE Site, Vastern Road, Reading, dated 12th March 2018.
- Email communication between SSE and their consultant Adler & Allan regarding the findings of the preliminary investigation to identify the location of the leakage – Dated October 2017.

Due to the factual nature of the reports provided no conclusions were drawn with regards to the risks posed to Human Health or the Environment except that it was considered that some remediation would likely be required by the Environment Agency to remove free product.

7.0 CONCEPTUAL SITE MODEL (CSM)

7.1 Initial CSM

In accordance with Environment Agency, CLR 11 (2004) and BSI 10175 (Code of Practice for Investigation of Potentially Contaminated Land), Omnia Environmental Consulting have developed an initial CSM to identify potential contamination sources, migration pathways and receptors within the study area. A residential end use has been adopted, given the proposed site development.

Contaminant Sources

On-site Potential Sources

Contemporary

- Pollution Incident (July 2017) involving the leakage of cooling oil from subsurface oil-cooled high voltage infrastructure;
- Made Ground associated with development of the site;
- Current land use as electricity distribution centre;
- Presence of underground oil cooled electrical cables and;
- Presence of electrical substations and transformers on site.

Historic

- Historic land use as a Power Station (Electrical Works);
- Historic Tanks; and,
- Historic land use as a skating rink.

Off-site Potential Sources

Contemporary

- Garage situated ~50m east;
- Electrical Substation 99m south west, 137m north west, 170m, 176m and 179m west, and 191m north west;
- Warehouse situated ~190m south east; and,
- Electricity substation situated ~175m north west of site and ~190m north west.

Historic

- Historic ice factory and cold stores adjacent to western boundary;
- Historic engineering works ~10m east of the site, ~50m north west of site and ~70m north west;
- Historic Iron foundry situated ~20-30m east;
- Historic Tanks, 38m, 66m, 216m, 220m, south east, 161m south, 173m, 181m and 188m south west, 240m and 250m north;
- Historic Paint works situated ~50m east;
- Great Western Rail Works ~ 75m south, south west;
- Historic Coal depot ~100m west, south west;
- Historic Thamesbank ironworks ~100m east
- Historic saw mill situated ~150m north west;
- Historic timber yard situated ~100m east and ~175m north west;
- Historic coal yard situated ~180m south east;
- Foundry (iron and brass) ~250m east, south east;

Potential Pathways

- Ingestion of impacted soils & vegetables;
- Dermal contact with impacted soil;
- Vertical and lateral migration;
- Inhalation of vapours;
- Inhalation of fibres; and,
- Migration of ground gas into confined spaces.

Potential Receptors

- Future Site Users; and,
- Controlled Waters.

Construction workers are not considered to be a plausible receptor due to management of their exposure through the use of suitable PPE and hygienic working practices as required under HSE/CDM regulations. Furthermore, the length of any exposure is considered to be very short in comparison to the criteria for which the adopted end use has been derived.

An Initial Conceptual Site Model has been prepared for the site and is presented overleaf within Table 7.1.

Table 7.1 Initial Conceptual Site Model

Source	Contaminant	Potential migration pathway	Potential Receptors	Likelihood of Occurrence	Magnitude of Occurrence	Overall Risk Rating	Active/Inactive
On Site							
July 2017 Pollution Incident – Leakage of cooling oil	Total Petroleum Hydrocarbons (TPH) PRO/DRO inc Linear Alkyl Benzene	Ingestion Dermal Contact Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	**Potentially Active –** Further investigation required.
		Vertical and Lateral Migration	Controlled Waters	Moderate	Moderate	Moderate	
	Volatile Organic Compounds (VOCs)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low/Moderate	
	PCBs	Ingestion Dermal Contact Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Moderate	Moderate	
Made Ground associated with development of the site.	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	**Potentially Active –** Further investigation required.
		Vertical and Lateral Migration	Controlled Waters	Low	Minor	Low	
	Polycyclic Aromatic Hydrocarbons (PAH)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Low	Minor	Low	
	Total Petroleum Hydrocarbons (TPH)	Ingestion Dermal Contact Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Moderate	Moderate	
	Asbestos Fibres	Inhalation of fibres	Future Site Users	Moderate	Moderate	Moderate	

Source	Contaminant	Potential migration pathway	Potential Receptors	Likelihood of Occurrence	Magnitude of Occurrence	Overall Risk Rating	Active/Inactive
	Ground Gas (CO_2 and CH_4)	Vertical and Lateral Migration	Future Sites Users	Moderate	Severe	High	
Current and Historic Land Use as Power Station (Electrical Works)	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	**Potentially Active –** Further investigation required.
		Vertical and Lateral Migration	Controlled Waters	Low	Minor	Low	
	Polycyclic Aromatic Hydrocarbons (PAH)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Low	Minor	Low	
	Total Petroleum Hydrocarbons (TPH)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low	
	Volatile Organic Compounds (VOC)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical & Lateral Migration	Controlled Waters	Moderate	Minor	Low/Moderate	
	Asbestos Fibres	Inhalation of fibres	Future Site Users	Moderate	Moderate	Moderate	
	Polychlorinated Biphenyls (PCB)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low/Moderate	
Presence of underground oil cooled electrical cables	Total Petroleum Hydrocarbons (TPH) PRO/DRO inc Linear Alkyl Benzene	Ingestion Dermal Contact Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	**Potentially Active –** Further investigation required.
		Vertical and Lateral Migration	Controlled Waters	Moderate	Moderate	Moderate	
	Volatile Organic Compounds (VOCs)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	

Source	Contaminant	Potential migration pathway	Potential Receptors	Likelihood of Occurrence	Magnitude of Occurrence	Overall Risk Rating	Active/Inactive
		Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low/Moderate	
	PCBs	Ingestion Dermal Contact Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Moderate	Moderate	
Electrical substations, transformers and associated infrastructure	Polychlorinated Biphenyls (PCB)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	**Potentially Active –** Further investigation required.
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low/Moderate	
	TPH	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low/Moderate	
Historical Tanks	Total Petroleum Hydrocarbons (TPH)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	**Potentially Active –** Further investigation required.
		Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low	
Historic Skating Southern section of the site.	Polycyclic Aromatic Hydrocarbons (PAH)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	**Potentially Active –** Further investigation required.
		Vertical and Lateral Migration	Controlled Waters	Low	Minor	Low	
	Total Petroleum Hydrocarbons (TPH)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low/Moderate	

Source	Contaminant	Potential migration pathway	Potential Receptors	Likelihood of Occurrence	Magnitude of Occurrence	Overall Risk Rating	Active/Inactive
	Volatile Organic Compounds (VOC)	Ingestion Dermal Contact	Future Site Users	Moderate	Moderate	Moderate	
		Inhalation of Vapours	Future Site Users	Moderate	Moderate	Moderate	
		Vertical and Lateral Migration	Controlled Waters	Moderate	Minor	Low/Moderate	
Off Site							
Historic Ice Factory and Cold Storage adjacent to western boundary	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Moderate	Moderate	Moderate	**Potentially Active –** Further investigation required.
	Total Petroleum Hydrocarbons (TPH)	Lateral Migration	Future Site Users	Moderate	Moderate	Moderate	
	Volatile Organic Compounds (VOC)	Lateral Migration	Future Site Users	Moderate	Moderate	Moderate	
Historic engineering works ~ 10m east	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Lateral Migration	Future Site Users	Low	Moderate	Low/Moderate	**Potentially Active –** Further investigation required.
	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Low	Moderate	Low/Moderate	
	Total Petroleum Hydrocarbons (TPH)	Lateral Migration	Future Site Users	Moderate	Moderate	Moderate	
Historic Iron Foundry ~ 20 and 30m east	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Lateral Migration	Future Site Users	Low	Moderate	Low/Moderate	**Inactive-** Given the anticipated shallow groundwater flow direction towards the east, it is considered unlikely that this source has the potential to impact the site.
	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Low	Moderate	Low/Moderate	
Tanks ~38m and 66m south east	Total Petroleum Hydrocarbons (TPH)	Lateral Migration	Future Site Users	Low	Moderate	Low	**Inactive-** Given the anticipated shallow groundwater flow direction towards the east, it is considered unlikely that this source has the potential to impact the site.

Source	Contaminant	Potential migration pathway	Potential Receptors	Likelihood of Occurrence	Magnitude of Occurrence	Overall Risk Rating	Active/Inactive
Garage ~50m east	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the anticipated shallow groundwater flow direction towards the east, it is considered unlikely that this source has the potential to impact the site.
	Total Petroleum Hydrocarbons (TPH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	
Historic Paint Works ~ 50m east	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the anticipated shallow groundwater flow direction towards the east, it is considered unlikely that this source has the potential to impact the site.
	Volatile Organic Compounds (VOC)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	
	Semi-volatile Organic Compounds (SVOC)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	
Historic Rail Works ~ 75m south	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the anticipated shallow groundwater flow direction towards the east, it is considered unlikely that this source has the potential to impact the site.
	Total Petroleum Hydrocarbons (TPH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	
Electrical substation 99m south west, 137m north west, 170m, 176m and 179m west and 191m north west	Polychlorinated Biphenyls (PCB)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive –**Due to the very limited mobility of PCB's and the distance between sources and the subject site It is considered unlikely that this source has the potential to impact the subject site.
Historic Coal Depot ~ 100m west	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the limited solubility and mobility of PAHs together with the distance from the site it is considered unlikely that this source has the potential to impact the subject site.
Historic Thamesbank Ironworks ~ 100m	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the limited solubility and mobility of metals and PAHs

Source	Contaminant	Potential migration pathway	Potential Receptors	Likelihood of Occurrence	Magnitude of Occurrence	Overall Risk Rating	Active/Inactive
east	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	together with the distance from the site it is considered unlikely that this source has the potential to impact the subject site.
Historic Timber Yard ~ 100m east and 175m north west	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the limited solubility and mobility of metals and PAHs together with the distance from the site it is considered unlikely that this source has the potential to impact the subject site
	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	
Historic Saw Mill ~ 150m north west	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the limited solubility and mobility of metals and PAHs together with the distance from the site it is considered unlikely that this source has the potential to impact the subject site.
	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	
Historic Coal Yard ~ 180m south east	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the limited solubility and mobility of PAHs together with the distance from the site it is considered unlikely that this source has the potential to impact the subject site.
Warehouse ~ 190m south east	Total Petroleum Hydrocarbons (TPH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the distance from site and the anticipated shallow groundwater flow direction, it is considered unlikely that this source has the potential to impact the subject site.
Foundry ~ 250m east	Metals (As, Cd, Cr, Pb, Hg, Se, Ni)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	**Inactive-** Given the limited solubility and mobility of PAHs together with the distance from the site it is considered unlikely that this source has the potential to impact the subject site.
	Polycyclic Aromatic Hydrocarbons (PAH)	Lateral Migration	Future Site Users	Very Low	Moderate	Low	

8.0 SITE INVESTIGATION

8.1 General

A ground investigation was designed based on the findings of the Phase I Desk Top Study, the Phase II Ground Investigations conducted by CC Ground Investigation Ltd on behalf of PBA and the proposed development as shown in Figure 2.0 (Appendix III).

Exploratory fieldwork was conducted over the course of four (4no.) days from 13th to 18th April 2018 and comprised the following:

Table 8.1 Summary of Fieldwork

Potential Source/Rationale	Location Hole	Type	Maximum Depth (m bgl)
General spread within the southern building footprint to investigate for potential contamination*. Installation of ground gas and ground water monitoring wells.	WS101-WS106	Window Sample	2.40
Targeting contamination previously identified within WS1002, set out in PBA Tech note ref 'Tn002/Rev0'. Installation of ground gas and ground water monitoring wells.	WS107-WS108	Window Sample	2.50
General spread across the site for assessment of potential contamination.	WS109	Window Sample	1.00

*A suspended floor was present within the southern building on site, limiting locations to outside of this area, however still within the building footprint.

The exploratory hole locations are illustrated on Figure 3.0 (Appendix III).

8.2 Laboratory Analysis

Selected soil and water samples were submitted for a range of chemical analysis including, asbestos fibres in soil, CLEA Metals, Polycyclic Aromatic Hydrocarbons (PAHs), Speciated Total Petroleum Hydrocarbons (TPH CWG), pH, Phenol, Total Cyanide, Total Organic Carbon, Water-Soluble Sulphate (2:1 extract), Volatile Organic Compounds (VOCs) and Polychlorinated biphenyls (PCB)

Exova Jones Environmental Laboratory of Deeside undertook the analytical work in accordance with UKAS accreditation where applicable with all test certificates included in Appendix V and discussed in Section 10.0.

9.0 GROUND AND GROUNDWATER CONDITIONS

9.1 Ground Conditions

9.1.1 Summary of Ground Conditions

The summary below is based on all available data from the sources of information made available to OEC for review. The ground conditions encountered are indicated on the exploratory hole logs, which are provided in Appendix VI.

Review of all available exploratory hole logs for the site indicates that the underlying geological succession consists of Made Ground up to 3.50m thick overlying cohesive strata of the Langley Silt Member, overlying granular strata of the Kempton Park Gravel Formation which immediately overlies bedrock of the Upper Chalk at depth.

Made Ground (MG) was found to be predominantly granular in nature, to contain variable amounts of anthropogenic material and generally ranged from 1.10m to 1.90m in thickness with thicker MG ranging from 1.95 – 3.50m encountered in the central part of the site in the vicinity of the main transformer compound.

Immediately underlying MG was a sequence of cohesive deposits comprising clayey and sandy SILT attributed to the Langley Silt Member (LSM). The top of the LSM was encountered at depths ranging from 0.60 – 3.50m bgl (37.57 – 35.26mAOD). The unit ranged from 0.60 – 3.40m in thickness with an average thickness of 1.68m. The base of the LSM was encountered at depths ranging from 2.30 – 4.10m bgl (36.08 – 34.11m AOD).

Immediately underlying the LSM were sands and gravels attributed to the Kempton Park Gravel Formation (KPG), which ranged from loose to dense grey variably silty and sandy GRAVEL. The KPG ranged from 5.00 – 9.20m in thickness with an average thickness of 6.58m. The base of the KPG was encountered at depths ranging from 8.10 to 12.50m bgl (30.21 – 26.21mAOD).

Chalk bedrock was encountered immediately beneath the KPG at depths ranging from 8.10 – 12.50m bgl (30.21 - 26.21mAOD) and was proven to a maximum depth of 35.00m bgl at locations BH1002C (3.40m AOD), BH1003E (3.71m AOD) and BH1004 (3.31mAOD) although the base of the Upper Chalk was not proven within any of the intrusive locations. A review of the geological logs indicated that the Chalk was recovered as a variably sandy and silty angular to subangular GRAVEL (Grade Dc) suggesting an absence of “Putty Chalk” (Grade Dm) from beneath the site.

9.2 In-Situ Testing

9.2.1 On-Site VOC Screening

On-site screening for VOCs was undertaken using a Photoionisation Detector (PID) during intrusive site works, with samples screened via headspace monitoring. Where PID readings were recorded at concentrations above the equipment Limit of Detection (LOD) of 0.1ppm, values are summarised in Table 9.1. Reference should also be made to the PID results from the previous investigation, as set out on the exploratory logs within CC Ground Investigation Ltd Factual Report, Ref C5925/01.

Table 9.1 Summary of PID readings within soils.

Location	Strata	Depth (m bgl)	PID Reading (ppm)	Proposed Development Area
WS101	MG	0.40	3.5	Commercial
	MG	0.45	3.7	Commercial
	MG	0.80	4.2	
	MG	1.00	9.5	
	MG	1.30	8.9	
	LSM	1.50	8.1	
	LSM	1.70	5.5	
WS102	MG	0.40	4.1	Residential
	MG	0.60	4.3	
	MG	0.95	7.3	
	LSM	1.50	9.1	
	LSM	2.00	10.0	
WS103	MG	0.40	4.8	Residential
	MG	1.20	3.5	
	LSM	1.60	5.6	
	LSM	1.70	3.1	
WS104	MG	0.3	3.2	Residential
	MG	0.70	13.2	
	MG	1.55	1933.0	
	LSM	1.75	367.8	
WS105	MG	0.60	4.0	Residential
	MG	0.90	3.6	
	MG	1.70	8.5	
	LSM	2.00	2.9	
WS107	MG	1.20	0.8	Residential
WS108	MG	0.10	0.3	Residential
	MG	1.20	3.3	
	LSM	1.50	5.6	
WS109	MG	0.10	6.1	Residential
	MG	0.30	1.9	

9.3 Groundwater Conditions

The depths to groundwater strikes and resting water level encountered during the previous investigations are summarised in Table 9.2 below.

Table 9.2 Summary of Groundwater Strikes encountered during drilling.

Location	Ground Level (mAOD)	Borehole Response Zone (m bgl)	Drilling Phase			
			Water Strike 1 (m bgl)	Strata	Water Strike 2 (m bgl)	Strata
BH1001	38.39	1.00 - 7.00	4.00	LSM/KPG	8.00	KPG
BH1002C	38.40	2.00 - 7.00	4.00	KPG	8.00	KPG
BH1003E	38.71	1.00 - 6.00	4.00	KPG	8.00	KPG
BH1005	38.69	3.00 - 7.00	None Recorded – Water Added to Aid Drilling			
BH2001	38.42	3.00 - 4.00	None Recorded Prior to Adding Water Flush			

Location	Ground Level (mAOD)	Borehole Response Zone (m bgl)	Drilling Phase			
			Water Strike 1 (m bgl)	Strata	Water Strike 2 (m bgl)	Strata
BH2002	38.37	3.00 - 4.00	None Recorded Prior to Adding Water Flush			
BH2003	38.56	3.00 - 4.00	None Recorded Prior to Adding Water Flush			
BH2004	38.76	3.30 - 3.80	None Recorded Prior to Adding Water Flush			
BH2005	38.65	1.00 - 3.00	None Recorded Prior to Adding Water Flush			
BH2006	38.49	1.00 - 2.00	None Recorded Prior to Adding Water Flush			
WS105	-	1.30-2.30	2.00	LSM	N/A	-
WS1002	38.26	N/A	1.70	MG	N/A	-
WS1003	38.21	3.00 - 5.00	3.89	LSM/KPG	N/A	-
WS1004	38.37	3.00 - 5.00	3.71	KPG	N/A	-
WS1005A	38.17	1.00 - 2.00	2.76	LSM	N/A	-
WS1006	38.19	3.00 - 5.00	3.36	KPG	N/A	-
WS1007	36.38	1.00 - 2.00	1.10	MG	N/A	-
WS1019	38.32	2.00 - 5.00	2.48	KPG	N/A	-
TP1002	38.36	N/A	4.00	LSM/KPG	N/A	-
TP1004	38.29	N/A	3.90	LSM	N/A	-
TP1006	38.44	N/A	2.40	LSM	N/A	-

Table 9.3 Summary of Average Groundwater Levels Recorded During Monitoring (22/02/2018 – 19/04/2018).

Location	Ground Level (mAOD)	Borehole Response Zone (m bgl)	22/02/2018 – 19/04/2018	
			Average Groundwater Level (m bgl)	Average Groundwater Level (mAOD)
BH1001	38.39	1.00 - 7.00	2.27	36.13
BH1002C	38.40	2.00 - 7.00	2.35	36.06
BH1003E	38.71	1.00 - 6.00	2.58	36.13
BH1005	38.69	3.00 - 7.00	2.53	36.17
BH2001	38.42	3.00 - 4.00	2.35	36.08
BH2002	38.37	3.00 - 4.00	2.31	36.07
BH2003	38.56	3.00 - 4.00	2.41	36.15
BH2004	38.76	3.30 - 3.80	2.47	36.29
BH2005	38.65	1.00 - 3.00	2.30	36.35
BH2006	38.49	1.00 - 2.00	1.59	36.90
WS1003	38.21	3.00 - 5.00	2.10	36.11
WS1004	38.37	3.00 - 5.00	2.27	36.10
WS1005A	38.17	1.00 - 2.00	1.44	36.73
WS1006	38.19	3.00 - 5.00	1.88	36.32
WS1007	36.38	1.00 - 2.00	1.04	35.34
WS1019	38.32	2.00 - 5.00	2.24	36.09
BH1004	38.31	1.00 - 7.00	2.13	36.18

Location	Ground Level (mAOD)	Borehole Response Zone (m bgl)	22/02/2018 – 19/04/2018	
			Average Groundwater Level (m bgl)	Average Groundwater Level (mAOD)
WS1002	38.26	N/A	N/A	N/A

Detailed commentary of the groundwater conditions below the site including presentation of continuous groundwater monitoring is presented within the Conceptual Hydrogeological Model, set out in Section 12.0.

9.3.1 Ground Gas & Groundwater Monitoring

The maximum concentrations recorded during ground gas monitoring undertaken by others over 5 monitoring visits have been summarised in Table 9.4 overleaf. Reference should be made to the full set of data available in report ref C5925/01, which is reproduced in Appendix VII.

Table 9.4 Summary of Ground Gas and Groundwater Monitoring Results

Well	CH_4 Peak %v/v	CH_4 Steady %v/v	CH_4 GSV l/hr	CO_2 Peak %v/v	CO_2 Steady %v/v	CO_2 GSV l/hr	O_2 %v/v	PID (ppm)	Flow (l/hr)
BH1001	0.2	0.2	0.0002	1.0	1.0	0.0010	17.6	2.9	<0.1
BH1002C	1.6	1.6	0.0032	0.4	0.4	0.0008	9.0	4.1	0.2
BH1003E	0.2	0.2	0.0002	0.6	0.6	0.0006	18.9	2.6	0.1
BH1004	3.0	3.0	0.009	4.0	4.0	0.012	6.5	4.5	0.3
BH1005	0.2	0.2	0.0228	1.3	1.3	0.1482	19.9	2.6	11.4
BH2001	0.1	0.1	0.0011	1.0	1.0	0.112	19.7	3.2	11.2
BH2002	0.3	0.3	0.0003	0.6	0.6	0.0006	19.6	4.2	0.1
BH2003	0.3	0.3	0.0339	0.6	0.6	0.0678	19.7	3.9	11.3
BH2004	0.3	0.3	0.0003	0.6	0.6	0.0006	20.6	2.4	0.1
BH2005	0.2	0.2	0.0012	6.8	6.8	0.0048	6.5	6.4	0.6
BH2006	0.1	0.1	0.0001	1.9	1.9	0.0019	0.1	5.6	0.1
WS1003	0.2	0.2	0.0002	1.0	1.0	0.0010	19.2	4.6	0.1
WS1004	0.2	0.2	0.0002	1.8	1.8	0.0018	19.2	5.3	0.1
WS1005A	0.2	0.2	0.0016	0.3	0.3	0.0024	9.6	3.3	0.8
WS1006	0.2	0.2	0.0002	0.6	0.6	0.0006	19.1	3.3	0.1
WS1007	0.3	0.3	0.0105	0.6	0.6	0.0210	19.5	10.3	3.5
WS1019	0.2	0.2	0.0002	2.0	2.0	0.0020	17.8	4.6	0.1

10.0 TIER 1 QUALITATIVE CONTAMINATED LAND RISK ASSESSMENT - SOILS

OEC has undertaken a Tier 1 qualitative risk assessment to determine if any potential contaminants within the underlying soils pose an unacceptable level of risk to the identified receptors.

10.1 Human Health Risk Assessment

At a Tier 1 stage the long term (chronic) human health toxicity of the soil has been assessed by comparing the on-site concentrations of organic and inorganic compounds with reference values published by the EA (Contaminated Land Exposure Assessment (CLEA) Soil Guideline Values (SGV)) and where absent, Generic Assessment Criteria (GACs) published by LQM/CIEH Suitable for Use Levels (S4UL) 2015.

As set out in Section 1.2, the proposed use of the site is split between a residential end use (without Homegrown Produce) and a continued commercial end use across the area to be retained by SSE. Given this a separate Tier 1 risk assessment has been undertaken for each end use, as detailed in Table 10.1 and Table 10.2.

The origin of the GAC values are presented within Appendix VIII.

Table 10.1 Summary of Inorganic and Hydrocarbon Toxicity Assessment for a Residential End Use without Home Grown Produce

Determinant	Units	GAC	n	MC	Loc. of Ex	Pathway	Assessment
Inorganic							
Arsenic	mg/kg	40	46	200	TP1003 (0.30m bgl) WS1002 (0.50m bgl) WS1003 (1.00m bgl)	1	**Further Assessment**
Cadmium	mg/kg	85	46	4	N/A	1	No Further Action
Chromium (III)	mg/kg	910	46	54	N/A	1	No Further Action
Chromium (VI)	mg/kg	6	46	<1.2	N/A	1	No Further Action
Copper	mg/kg	7100	46	540	N/A	1	No Further Action
Lead	mg/kg	310	46	2,019	BH1001 (0.50m bgl) BH1003C (0.45m bgl) BH1004 (0.60m bgl) TP1001 (0.50m bgl) TP1005 (0.30m bgl) TP1005 (0.70m bgl) WS103 (0.40-0.70m bgl) WS1002 (0.50m bgl) WS1003 (1.00m bgl) WS1004 (0.20m bgl)	1	**Further Assessment**
Mercury	mg/kg	56	46	17	N/A	2	No Further Action
Nickel	mg/kg	180	46	280	WS1003 (1.00m bgl)	1	**Further Assessment**
Selenium	mg/kg	430	46	1.3	N/A	1	No Further Action

Determinant	Units	GAC	n	MC	Loc. of Ex	Pathway	Assessment
Zinc	mg/kg	40000	46	1200	N/A	1	No Further Action
Asbestos	-	N.D[iv]	46	D	BH1001 (0.50m bgl) BH1002A (0.50m bgl) BH1002C (1.00m bgl) BH1003C (0.45m bgl) BH1003 (0.80m bgl) BH1004 (0.60m bgl) TP1001 (0.50m bgl) TP1002 (0.80m bgl) TP1003 (0.30m bgl) TP1005 (0.30m bgl) TP1005 (0.70m bgl) TP1007 (0.20m bgl) WS103 (0.40-0.70m bgl) WS105 (0.60-0.90m bgl) WS1001 (0.20m bgl) WS1001 (1.00m bgl) WS1002 (0.50m bgl) WS1002 (1.70m bgl) WS1003 (1.00m bgl) WS1004 (0.20m bgl) WS1004 (1.00m bgl) WS1006 (0.50m bgl) WS1009 (0.20m bgl) WS1013 (0.60m bgl)	2	**Further Assessment**
PAH							
Naphthalene	mg/kg	2.3	46	5.5	TP1007 (0.2m bgl) WS1002 (1.70m bgl) WS1008 (0.45m bgl)	2	**Further Assessment**
Acenaphthylene	mg/kg	2900[sol]	46	1.0	N/A	3	No Further Action
Acenaphthene	mg/kg	3000[sol]	46	14	N/A	1	No Further Action
Fluorene	mg/kg	2800[sol]	46	10	N/A	1	No Further Action
Phenanthrene	mg/kg	1300[sol]	46	140	N/A	3	No Further Action
Anthracene	mg/kg	31000[vap]	46	37	N/A	3	No Further Action
Fluoranthene	mg/kg	1500	46	160	N/A	3	No Further Action
Pyrene	mg/kg	3700	46	150	N/A	3	No Further Action
Benzo(a)Anthracene	mg/kg	11	46	88	WS1002 (1.70m bgl) TP1007 (0.20m bgl)	3	**Further Assessment**
Chrysene	mg/kg	30	46	71	WS1002 (1.70m bgl)	3	**Further Assessment**

Determinant	Units	GAC	n	MC	Loc. of Ex	Pathway	Assessment
Benzo(b)Fluoranthene[i]	mg/kg	3.9	46	74	BH1002C (1.00m bgl) BH1001 (0.50m bgl) BH1004 (0.60m bgl) BH1004 (2.00m bgl) TP1003 (0.30m bgl) TP1005 (0.70m bgl) TP1005 (0.30m bgl) TP1007 (0.20m bgl) WS1013 (0.60m bgl) WS1002 (1.70m bgl) WS103 (0.40-0.70m bgl)	3	**Further Assessment**
Benzo(k)Fluoranthene[i]	mg/kg	110	46	40	N/A	3	No Further Action
Benzo(a)Pyrene	mg/kg	3.2	46	81	BH1001 (0.50m bgl) BH1002C (1.00m bgl) BH1004 (0.60m bgl) BH1004 (2.00m bgl) WS103 (0.40-0.70m bgl) WS1002 (1.70m bgl) WS1013 (0.60m bgl) TP1003 (0.30m bgl) TP1005 (0.30m bgl) TP1007 (0.20m bgl)	3	**Further Assessment**
Indeno(123-cd)Pyrene	mg/kg	45	46	33	N/A	3	No Further Action
Dibenzo(a,h)Anthracene	mg/kg	0.31	46	8.2	BH1004 (0.60m bgl) BH1004 (2.00m bgl) BH1002C (1.00m bgl) WS1002 (0.50m bgl) WS1007 (0.15m bgl) WS103 (0.40-0.70m bgl) WS1002 (1.70m bgl) WS1013 (0.60m bgl) TP1003 (0.30m bgl) TP1005 (0.30m bgl) TP1005 (0.70m bgl) TP1007 (0.20m bgl)	3	**Further Assessment**
Benzo(ghi)Perylene	mg/kg	360	46	44	N/A	3	No Further Action
BTEX							
Benzene	mg/kg	0.38	53	<0.005	N/A	2	No Further Action
Toluene	mg/kg	869	53	<0.001	N/A	2	No Further Action
Ethylbenzene	mg/kg	83	53	0.012	N/A	2	No Further Action
Xylenes	mg/kg	79	53	0.055	N/A	2	No Further Action
TPH Aliphatic							
TPH C_5-C_6	mg/kg	42	53	<0.1	N/A	2	No Further Action
TPH C_6-C_8	mg/kg	100	53	0.3	N/A	2	No Further Action
TPH C_8-C_{10}	mg/kg	27	53	2.9	N/A	2	No Further Action

Determinant	Units	GAC	n	MC	Loc. of Ex	Pathway	Assessment
TPH C_{10}-C_{12}	mg/kg	130(vap)	53	101	N/A	2	No Further Action
TPH C_{12}-C_{16}	mg/kg	1,100(sol)	53	1,113	WS104 (1.55-1.75m bgl)	2	**Further Assessment**
TPH C_{16}-C_{21}	mg/kg	65,000(sol)	53	2,336	N/A	1,4	No Further Action
TPH C_{21}-C_{35}	mg/kg	65,000(sol)	53	11,000	N/A	1,4	No Further Action
TPH Aromatic							
TPH C_5-C_6	mg/kg	370	53	<0.1	N/A	2	No Further Action
TPH C_6-C_8	mg/kg	860	53	<0.1	N/A	2	No Further Action
TPH C_8-C_{10}	mg/kg	47	53	<0.1	N/A	2	No Further Action
TPH C_{10}-C_{12}	mg/kg	250	53	28	N/A	2	No Further Action
TPH C_{12}-C_{16}	mg/kg	1,800	53	790	N/A	1,4	No Further Action
TPH C_{16}-C_{21}	mg/kg	1,900	53	1,900	N/A	1,4	No Further Action
TPH C_{21}-C_{35}	mg/kg	1,900	53	8,200	WS1002 (1.70m bgl)	1,4	**Further Assessment**
PCBs	mg/kg	0.23	13	<0.005	N/A	1	No Further Action

Notes
Main Exposure Pathways: 1 = Soil Ingestion, 2 = Vapour Inhalation (indoor), 3 = Dermal Contact & Ingestion, 4 = Dust Inhalation.
Abbreviations: GAC = General Assessment Criteria, n = number of samples, MC = Maximum Concentration; Loc of Ex = Location of Exceedance.
* The Tier 1 GAC for the hydrocarbon fraction is derived from the CIEH/S4UL assessment for petroleum hydrocarbons Criteria Working Group (CWG) for both aliphatic and aromatic compounds.

Table 10.2 Summary of Inorganic and Hydrocarbon Toxicity Assessment for a Commercial End Use

Determinant	Units	GAC	n	MC	Loc. of Ex	Pathway	Assessment
Inorganic							
Arsenic	mg/kg	640	14	34	N/A	1	No Further Action
Cadmium	mg/kg	190	14	0.8	N/A	1	No Further Action
Chromium (III)	mg/kg	8600	14	63	N/A	1	No Further Action
Chromium (VI)	mg/kg	33	14	<1.2	N/A	1	No Further Action
Copper	mg/kg	2300	14	190	N/A	1	No Further Action
Lead	mg/kg	1100	14	730	N/A	1	No Further Action
Mercury	mg/kg	980	14	100	N/A	2	No Further Action

Determinant	Units	GAC	n	MC	Loc. of Ex	Pathway	Assessment
Nickel	mg/kg	12000	14	53	N/A	1	No Further Action
Selenium	mg/kg	68000	14	1.4	N/A	1	No Further Action
Zinc	mg/kg	730000	14	220	N/A	1	No Further Action
Asbestos	-	N.D[iv]	14	D	WS1006 (0.50m bgl) WS1005 (0.50m bgl) WS101 (0.45-0.80m bgl)	2	**Further Assessment**
PAH							
Naphthalene	mg/kg	190[Sol]	14	0.31	N/A	2	No Further Action
Acenaphthylene	mg/kg	83,000[Sol]	14	0.83	N/A	3	No Further Action
Acenaphthene	mg/kg	84,000[Sol]	14	0.21	N/A	1	No Further Action
Fluorene	mg/kg	63,000[Sol]	14	0.21	N/A	1	No Further Action
Phenanthrene	mg/kg	22,000	14	3.3	N/A	3	No Further Action
Anthracene	mg/kg	520,000	14	1.2	N/A	3	No Further Action
Fluoranthene	mg/kg	23,000	14	12	N/A	3	No Further Action
Pyrene	mg/kg	54,000	14	10	N/A	3	No Further Action
Benzo(a)Anthracene	mg/kg	170	14	8	N/A	3	No Further Action
Chrysene	mg/kg	350	14	5.1	N/A	3	No Further Action
Benzo(b)Fluoranthene[i]	mg/kg	44	14	9.8	N/A	3	No Further Action
Benzo(k)Fluoranthene[i]	mg/kg	1,200	14	4.7	N/A	3	No Further Action
Benzo(a)Pyrene	mg/kg	35	14	7.1	N/A	3	No Further Action
Indeno(123-cd)Pyrene	mg/kg	500	14	5.0	N/A	3	No Further Action
Dibenzo(a,h)Anthracene	mg/kg	3.5	14	1.2	N/A	3	No Further Action
Benzo(ghi)Perylene	mg/kg	3,900	14	4.5	N/A	3	No Further Action
BTEX							
Benzene	mg/kg	27	21	<0.005	N/A	2	No Further Action
Toluene	mg/kg	56,000[Vap]	21	<0.005	N/A	2	No Further Action
Ethylbenzene	mg/kg	5,700[Vap]	21	<0.005	N/A	2	No Further Action
Xylenes	mg/kg	5,900[Sol]	21	<0.005	N/A	2	No Further Action
TPH Aliphatic							
TPH C_5-C_6	mg/kg	3200	21	<0.1	N/A	2	No Further Action
TPH C_6-C_8	mg/kg	7800	21	<0.1	N/A	2	No Further Action

Determinant	Units	GAC	n	MC	Loc. of Ex	Pathway	Assessment
TPH C_8-C_{10}	mg/kg	2000	21	<0.1	N/A	2	No Further Action
TPH C_{10}-C_{12}	mg/kg	9700	21	16	N/A	1	No Further Action
TPH C_{12}-C_{16}	mg/kg	36000	21	1603	N/A	1	No Further Action
TPH C_{16}-C_{21}	mg/kg	1600000	21	12528	N/A	1,4	No Further Action
TPH C_{21}-C_{35}	mg/kg	1600000	21	180	N/A	1,4	No Further Action
TPH Aromatic							
TPH C_5-C_7	mg/kg	26,000(Sol)	21	<0.1	N/A	2	No Further Action
TPH C_7-C_8	mg/kg	56,000(Vap)	21	<0.1	N/A	2	No Further Action
TPH C_8-C_{10}	mg/kg	3,500(Vap)	21	<0.1	N/A	2	No Further Action
TPH C_{10}-C_{12}	mg/kg	16,000(Sol)	21	47	N/A	2	No Further Action
TPH C_{12}-C_{16}	mg/kg	36,000(Sol)	21	3600	N/A	2	No Further Action
TPH C_{16}-C_{21}	mg/kg	28,000	21	3900	N/A	1.4	No Further Action
TPH C_{21}-C_{35}	mg/kg	28,000	21	750	N/A	1.4	No Further Action

Notes
Main Exposure Pathways: 1 = Soil Ingestion, 2 = Vapour Inhalation (indoor), 3 = Dermal Contact & Ingestion, 4 = Dust Inhalation.
Abbreviations: GAC = General Assessment Criteria, n = number of samples, MC = Maximum Concentration; Loc of Ex = Location of Exceedance.

10.1.1 Discussion

10.1.1.2 Residential End Use

Referring to Table 10.1 the results of this direct comparison indicates that the Tier I screening criteria has been exceeded for a number of determinants, predominantly within near surface soils. Elevated determinants comprise:

- Arsenic
- Lead
- Nickel
- Naphthalene
- Benzo(a)Anthracene
- Benzo(b)Fluoranthene
- Benzo(a)pyrene
- Dibenzo(a,h)Anthracene

- Aliphatic C_{12}-C_{16}
- Aromatic C_{21}-C_{40}

- Asbestos:

Metals and PAHs:

Elevated metals and PAH concentrations were within near surface across the residential portion of the site. Review of the potential pollution linkage for the identified concentrations identifies that soil ingestion and dermal contact are the predominant pathways for metals and PAHs. This is with the exception of Naphthalene, which is predominantly associated with a vapour risk. Given this it is considered that the identified concentrations have the potential to present a significant risk to human health within areas of proposed soft landscaping, and in the case of the locations where Naphthalene was encountered, (TP1007 and WS1008) a risk to human health below building footprints.

Hydrocarbons:

Elevated Aliphatic C_{12}-C_{16} and Aromatic C_{21}-C_{40} concentrations were present on site that exceeded the adopted Tier 1 screening values were identified within WS104, 1.5m bgl and WS1002, 1.7m bgl. The main exposure pathway for both of Aliphatic C_{12}-C_{16} and Aromatic C_{21}-C_{40} is via soil ingestion. This pollution linkage would be limited between ground level and 0.6m bgl, and therefore given the depth at which these concentrations are present would not present a significant risk to human health. However, should site levels vary in the future the concentrations could potentially present a significant risk should the values be within 0.6m of the near surface. Given that final site levels are at this stage unknown a risk averse approach has been adopted and for risk assessment purposes the concentrations considered to have the potential to present a significant risk to human health.

Asbestos:

Asbestos fibres were detected within twenty-four (24no.) from the forty-six (46no.) scheduled for asbestos analysis.

The main exposure pathway for asbestos is via dust inhalation, and therefore the identified concentrations will have the potential to present a significant risk to future site users within areas of proposed soft landscaping. The presence of asbestos will also pose a risk to construction workers, therefore the presence of asbestos should be conveyed to all parties involved in development works across the site, such that appropriate mitigation measures can be put in place in line with guidance set out in line with current asbestos legislation (Control of Asbestos Regulations, 2012).

Consideration should also be given to the quantified result in view of disposal of any soil arisings as may be required in remedial works, and future construction works. A soil with a result greater than 0.1% asbestos content is considered a hazardous waste. Review of the soil results identified hazardous asbestos content within the following locations:

Location	Result
BH1001	1.3%
WS1002	0.44%
BH1002A	0.199%
TP1005	0.156%
WS1004	0.667%

WS1002C	0.09%*

* Marginal result

10.1.2 Commercial End Use

Referring to Table 10.2 the results of this direct comparison indicates that the Tier I screening criteria for the commercial end use has been exceeded for one determinant.

- Asbestos

Asbestos fibres were detected within three (3no.) from the fourteen (14no.) samples scheduled for asbestos analysis.

The pollution linkage for asbestos, as set out above relates to the inhalation of fibres. With reference to this it is understood that the area of the site is being retained in its current configuration with soils all below areas of hard landscaping. The presence of hardstanding will therefore act to sever the exposure pathway rendering the risk from asbestos to future site users inactive.

Notwithstanding this the asbestos content has the potential to pose a significant risk to construction works. Therefore a full assessment should be undertaken in line with current asbestos legislation (Control of Asbestos Regulations, 2012) ahead of commencement of any works, in order to assess the risk of exposure to asbestos for construction workers.

10.2 Ground Gas Assessment

The potential impact on the development from ground gases has been assessed with reference to standards and guidelines published in CIRIA Report C665 (*Assessing risks posed by hazardous ground gases to buildings*, 2007). However, it is recommended that the full ground gas assessment and any recommended protection measures are agreed with the local authority prior to adoption on site. Furthermore, the installation of any gas protection measures should be validated by a suitably qualified engineer.

The results of the ground gas monitoring and calculated Gas Screening Values (GSVs) are presented in Table 9.4.

Five (5no.) groundwater and ground gas monitoring visits have been undertaken at locations BH1001, BH1002C, BH1003E, BH1004, BH1005, BH2001, BH2002, BH2003, BH2004, BH2005, BH2006, WS1003, WS1004, WS1005A, WS1006, WS1007 and WS1019 with concentrations of methane (CH_4) recorded at a maximum of 3.0%v/v recorded within intrusive location BH1004 and Carbon Dioxide (CO_2) concentrations recorded to a maximum of 6.8% v/v within intrusive location BH2005.

Ground gas flow was measured with a maximum flow rate of 11.4(l/hr), recorded within intrusive location BH1005.

In accordance with the methodology outlined within the CIRIA publication C665, OEC have utilised the results of the ground gas monitoring surveys to calculate a worst case tentative Gas Screening Value (GSV), providing a GSV calculated for **methane of 0.342l/hr** and a GSV for **carbon dioxide of 0.7752l/hr**.

The calculated GSVs have been compared to the criteria outlined within CIRIA C665 to determine the level of risk posed to the proposed development and to ensure that the appropriate remedial options are incorporated into any future building design. Review of the proposed building type indicates a proposal for five (5no.) apartment blocks new residential apartment blocks along with associated infrastructure and communal green space. OEC have therefore classified the proposed development as a **Type B** building under BS 8485:2015 Table 3.

In accordance with the methodology outlined within BS8485:2015, OEC have utilised the results of the ground gas monitoring survey to calculate a tentative Gas Screening Value (GSV). The maximum GSV calculated for methane was 0.342l /hr whilst the maximum GSV for carbon dioxide was 0.7752l /hr which is considered a worst case approach. In accordance with best practice, where a GSV results greater than <0.7l/hr is recorded it is necessary to upgrade the gas classification to Characteristic Situation **(CS-3).**

As set out within BS8485:2015 Table 4, **Type B** buildings with a classification of **CS-3** would require a minimum gas protection score of **4.0** in order to mitigate the risk from ground gas. Further information on mitigation measures are provided in Table 3 & 4 of BS8485:2015.

11.0 TIER 1 QUALITATIVE TIER 1 CONTROLLED WATERS RISK ASSESSMENT

A initial Tier I risk assessment was undertaken with concentrations of determinants compared with the relevant Tier I screening values. OEC have utilised the analytical results of all groundwater samples collected by CC Ground Investigation Ltd under direction of PBA together with supplemental samples collected by OEC.

Laboratory test certificates for groundwater are presented in Appendix V.

For the purposes of the Tier 1 assessment all laboratory test data has been compared directly to the current UK Freshwater EQS (FW EQS), due the presence of the River Thames approximately 5m northeast of the northernmost site boundary, which is considered as the principal receptor. At the time of writing, there are no FW EQS values for Total Petroleum Hydrocarbons (TPH) and therefore the WHO Guideline Values for petroleum products in drinking water have been adopted in the absence of current UK specific water quality standards for TPH. However, in the case of aromatic TPH bandings of C_6-C_7, C_7-C_8 and C_8-C_{10} the more conservative UK specific DWS value for benzene (1µg/l) and freshwater EQS values for toluene (50µg/l) and ethylbenzene (20µg/l) have been selected as the Tier 1 screening criteria respectively.

In the absence of WHO Guideline Values for the TPH Aliphatic C_{16}-C_{21} and C_{21}-C_{35} bands, the guideline value for TPH Aliphatic C_8-C_{10} through to C_{12}-C_{16} of 300µg/l has been applied. This is considered to be a conservative approach due to the increased stability and lower volatility of the longer chain length aliphatic hydrocarbons. In order to adopt a conservative approach, OEC has also adopted this value for TPH Aliphatic C_5-C_6 and C_6-C_8, which have very high WHO guideline values of 15,000µg/l (15mg/l).

In order to simplify terminology, the screening levels adopted for the purposes of the DQRA are referred to as “EQS Values”, even though they may be ultimately derived from UK DWS or WHO DWS values.

The results of the direct comparison of groundwater laboratory results to the adopted EQS values are summarised in Table 11.1 overleaf.

Table 11.1: Comparison of Groundwater Analysis with Tier 1 EQS Screening Levels

Determinand	Units	UK Drinking Water Threshold	WHO DWS	FW EQS	n	MC	No of Ex	Loc of Ex	Assessment
Metals									
Arsenic	mg/l	-	-	0.05	36	0.00981	-	-	No Further Assessment
Cadmium	mg/l	-	-	0.00025	36	0.00012	-	-	No Further Assessment
Chromium	mg/l	0.05	0.05	-	36	0.0016	-	-	No Further Assessment
Copper	mg/l	-	-	0.028	36	0.011	-	-	No Further Assessment
Lead	mg/l	-	-	0.0072	36	0.0036	-	-	No Further Assessment
Mercury	mg/l	-	-	0.0005**	36	0.00013	-	-	No Further Assessment
Nickel	mg/l	-	-	0.02	36	0.014	-	-	No Further Assessment
Selenium	mg/l	0.01	0.04	-	36	0.051	1	**WS1005**	**Further Assessment**
Zinc	mg/l	-	-	0.125	36	0.26 0.16	2	**BH2005**	**Further Assessment**
PAH									
Benzo(a)Pyrene	mg/l	-	-	0.000005**	36	<0.00001	36	**Due to LoD**	**Further Assessment**
Benzo(b)Fluoranthene	mg/l	-	-	0.00005**	36	<0.00001	-	-	No Further Assessment
Benzo(k)Fluoranthene	mg/l	-	-	0.00005**	36	<0.00001	-	-	No Further Assessment
Benzo(ghi)Perylene	mg/l	-	-	0.00005**	36	<0.00001	-	-	No Further Assessment
Indeno(123-cd)Pyrene	mg/l	-	-	0.00005**	36	<0.00001	-	-	No Further Assessment
BTEX									
Benzene	mg/l	0.001	-	-	43	<0.001	-	-	No Further Assessment
Toluene	mg/l	-	-	0.05	43	<0.001	-	-	No Further Assessment
Ethylbenzene	mg/l	-	-	0.02	43	<0.001	-	-	No Further Assessment
Xylenes	mg/l	-	-	0.03	43	<0.001	-	-	No Further Assessment
TPH Aliphatic									
Aliphatic C5-C6	mg/l	-	(0.30)*	-	43	<0.001	-	-	No Further Assessment
Aliphatic C6-C8	mg/l	-	(0.30)*	-	43	<0.001	-	-	No Further Assessment
Aliphatic C8-C10[(5)]	mg/l	-	0.30	-	43	<0.001	-	-	No Further Assessment
Aliphatic C10-C12	mg/l	-	0.30	-	43	<0.01	-		No Further Assessment

Aliphatic C12-C16	mg/l	-	0.30	-	43	<0.01	-	-	No Further Assessment
Aliphatic C16-C21	mg/l	-	(0.30)*	-	43	0.09	-	-	No Further Assessment
Aliphatic C21-C35	mg/l	-	(0.30)*	-	43	0.09	-	-	No Further Assessment
TPH Aromatic									
Aromatic C6-C7[5]	mg/l	0.001 (Benzene)	0.01 (Benzene)	-	43	<0.01	-	-	No Further Assessment
Aromatic C7-C8	mg/l	0.05 (Toluene)	0.70 (Toluene)	0.05	43	<0.01	-	-	No Further Assessment
Aromatic C8-C10[5]	mg/l	0.02 (Ethylbenzene)	0.30 (Ethylbenzene)	0.02	43	<0.01	-	- -	No Further Assessment
AromaticC10-C12[5]	mg/l	-	0.09	-	43	<0.01	-	- -	
Aromatic C12-C16[5]	mg/l	-	0.09	-	43	0.73	1	**BH2005**	**Further Assessment**
Aromatic C16-C21	mg/l	-	0.09	-	43	0.12 0.17 2.70	3	**BH1005 BH2005 (04/04) (08/03)**	**Further Assessment**
Aromatic C21-C35	mg/l	-	0.09	-	43	<0.01	-	-	-

* In a conservative approach, OEC have adopted the lower WHO guideline value for aliphatic fractions inclusive of C_8-C_{16} (300µg/l).

For the purposes of the Tier 1 assessment OEC have compared the laboratory test data directly to the relevant Tier 1 threshold values for the protection of controlled waters. The results of this direct comparison indicates that the data exceeds the screening values for the following determinands:

- Selenium;
- Zinc;
- Benzo(a)Pyrene;
- TPH Aromatic C_{12}-C_{16}; and,
- TPH Aromatic C_{16}-C_{21}

Metals

In the case of selenium and zinc, OEC consider the fact that only one (1no.) marginal exceedance was detected in the case of selenium and only two (2no.) relatively minor exceedances in the case of selenium were detected out of a total of thirty-six (36no.) samples analysed suggest that metal concentrations do not present a significant risk to controlled waters.

PAHs

In the case of benzo(a)pyrene, all exceedances are the result of the laboratory LOD (0.00001mg/l) exceeding the Tier I screening value (0.000005mg/l). Given that no concentrations of PAHs greater than the laboratory LOD of 0.00001mg/l were recorded, OEC do not consider that PAHs and benzo(a)pyrene in particular at the site pose a significant risk to controlled waters.

TPH

The Tier I controlled waters risk assessment indicates that concentrations of TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21} were detected at concentrations exceeding the adopted EQS values at locations BH1005 and BH2005. A review of laboratory data indicates that aliphatic and aromatic fractions of TPH C_5 – C_{12} were detected at concentrations of less than the LOD.

In the case of TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21}, concentrations of greater than the LOD (>0.01mg/l) were recorded in only four (4no.) of a total of forty-three (43no.) samples analysed with the adopted EQS value exceeded in only three (3no.) samples.

Laboratory interpretation of the TPH results obtained from samples collected by OEC indicated that the TPH concentrations identified at locations BH1005, BH2005 and BH2006 are attributed to linear alkylbenzenes, which is consistent with the product lost during the documented leakage that occurred from the leaking oil filled service run set out in Section 1.1.

Given the documented pollution incident which occurred at the site together with the concentrations recorded within soils and the presence of concentrations exceeding the adopted EQS in groundwater, which are consistent with the product lost during the pollution incident, it was considered that a Tier 2 Risk Assessment (DQRA) was required to fully assess the risks posed to the identified receptor by the identified TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21} concentrations.

In order to adopt a conservative approach, OEC have utilised all available laboratory data for soils and groundwater to determine the maximum detected concentrations for the purposes of the DQRA, as set out in Section 13.0 of this document.

In order to formulate a suitable Tier 2 Site Specific Risk Assessment OEC have prepared a Conceptual Hydrogeological Model ahead of undertaking RTM modelling, as required by the Environment Agency, and is set out in the subsequent sections of this report.

12.0 CONCEPTUAL HYDROGEOLOGICAL MODEL

Selected information from Section 9.0 has been reproduced below to allow a comprehensive overview of the site settings, as necessary for input into the DQRA in Section 13.0.

12.1 Geological Profile

Review of all available exploratory hole logs for the site indicates that the geological succession beneath the site comprises of Made Ground up to 3.50m thick overlying cohesive strata of the Langley Silt Member, overlying granular strata of the Kempton Park Gravel Formation which immediately overlies bedrock of the Upper Chalk at depth.

Made Ground (MG) was found to be predominantly granular in nature and generally ranged from 1.10m to 1.90m in thickness with thicker Made Ground ranging from 1.95 – 3.50m encountered in the central part of the site around the main transformer compound.

Immediately underlying MG was a sequence of cohesive deposits comprising clayey and sandy SILT attributed to the Langley Silt Member (LSM). The top of the LSM was encountered at depths ranging from 0.60 – 3.50m bgl (37.57 – 35.26mAOD). The unit ranged from 0.60 – 3.40m in thickness with an average thickness of 1.68m. The base of the LSM was encountered at depths ranging from 2.30 – 4.10m bgl (36.08 – 34.11m AOD).

Immediately underlying the LSM were sands and gravels attributed to the Kempton Park Gravel Formation (KPG), which ranged from loose to dense grey variably silty and sandy GRAVEL. The KPG ranged from 5.00 – 9.20m in thickness with an average thickness of 6.58m. The base of the KPG was encountered at depths ranging from 8.10 to 12.50m bgl (30.21 – 26.21mAOD).

Chalk bedrock was encountered immediately beneath the KPG at depths ranging from 8.10 – 12.50m bgl (30.21 - 26.21mAOD) and was proven to a maximum depth of 35.00m bgl at locations BH1002C (3.40m AOD), BH1003E (3.71m AOD) and BH1004 (3.31mAOD) although the base of the Upper Chalk was not proven within any of the intrusive locations. A review of the geological logs indicated that the Chalk was recovered as a variably sandy and silty angular to subangular GRAVEL (Grade Dc) suggesting an absence of “Putty Chalk” (Grade Dm).

12.2 Groundwater Strikes

A review of Table 9.2 and Table 9.3 indicates that groundwater strikes were generally recorded at the base of the LSM, close to the boundary with the underlying KPG or at the top of the KPG at depths ranging from 2.40 – 4.00m bgl (34.40 – 36.04m AOD). Only two water strikes were recorded within MG and are considered to represent locally perched water at locations WS1002 (1.70m bgl) and WS1007 (1.00m bgl). With the exception of groundwater at the very base of the LSM, groundwater was not generally recorded within the LSM supporting the interpretation of the LSM as an aquitard.

During return groundwater and ground gas monitoring, the average depth to groundwater, excluding perched water within Made Ground, was 2.20m bgl (36.24mAOD). The observed difference between the depth of groundwater strikes and standing water is considered to indicate that groundwater within the KPG is slightly confined by the overlying LSM causing water level to rise slightly under pressure once the confining LSM is breached.

12.3 Continuous Groundwater Monitoring

To assist with establishing an accurate depth to groundwater and determining groundwater flow direction, high-resolution continuous groundwater monitoring was undertaken at three (3no.) monitoring locations across the site (WS1003, WS1006 and BH2003) using X, Y & Z co-ordinates presented on geological logs from the CC Ground Investigations report prepared for PBA. Boreholes were selected for continuous groundwater ensuring that all had a similar response zone with similar resting water level to ensure that the groundwater level monitored was consistent between locations.

Three Solinst Leveloggers and a Solinst Barologger were deployed to continuously record groundwater level at hourly intervals and atmospheric pressure at fifteen minute intervals over the course of five (5no.) consecutive days between 20th and 25th April 2018.

The average groundwater elevation data is summarised in Table 12.1 below.

Table 12.1 Comparison of Continuous Groundwater Monitoring Levels to Resting Water Level Recorded During Groundwater & Ground Gas Monitoring.

Location	Ground Level (mAOD)	Borehole Response Zone (mAOD)	Continuous Monitoring	Groundwater Monitoring					Strata
			Average Resting Water Level (mAOD)	Resting Water Level (mAOD) 22/02/18	Resting Water Level (mAOD) 07/03/18	Resting Water Level (mAOD) 22/03/18	Resting Water Level (mAOD) 04/04/18	Resting Water Level (mAOD) 19/04/18	
WS1003	38.21	35.21 - 33.21	35.941	36.03	36.08	36.04	***36.30***	36.10	KPG
WS1006	38.19	35.19 – 33.19	35.999	35.97	36.03	***36.99***	36.27	36.03	KPG
BH2003	38.56	35.56 – 34.56	36.085	36.01	36.13	36.10	***36.35***	***34.03****	KPG

Notes:
Bold Italicised text indicates groundwater levels which vary significantly from other recorded values.
*Groundwater level recorded at a level 0.54m below the base of the monitoring installation and is considered to be incorrect.

Continuous groundwater monitoring data were subsequently corrected to mAOD to facilitate the construction of a groundwater equipotential plan. A review of Table 9.3 indicates that there is a good correlation between groundwater level monitored during five (5no.) rounds of groundwater and ground gas monitoring undertaken by others and the average groundwater level recorded during continuous monitoring undertaken between 20th and 25th April 2018.

12.4 Permeability of Kempton Park Gravel Formation

A review of soil descriptions for the KPG deposits underlying the site indicate that soils attributed to the KPG comprise a variably silty and sandy GRAVEL with variable clay content towards the top of the sequence. Given the variable nature of the KPG, OEC have adopted a conservative approach and have assumed that the soils of the KPG typically comprise a SAND & GRAVEL.

Literature values for the hydraulic conductivity of a SAND & GRAVEL range from 5.80 x 10^{-6}m/s (5.00m/day) to 1.16 x 10^{-3}m/s (100m/day) (BGS Guide to Permeability Indices, 2006). Based on field descriptions of the KPG which describe the unit as a variable sandy and silty GRAVEL OEC have adopted a value of 5.00m/day which is consistent with the upper range of a silty sand (Freeze and Cherry,

1979). OEC have therefore adopted the following hydraulic conductivity values for the strata encountered beneath the site:

Strata	Hydraulic Conductivity (m/s)	Hydraulic Conductivity (m/d)	Source
Kempton Park Gravel Formation	5.79×10^{-5}	5.00	Upper range literature value for a silty sand (Freeze and Cherry 1979)

12.5 Discussion of Hydrogeological Regime

A review of geological mapping for the site (BGS Sheet 268, Reading, 1:50,000, Solid & Drift Edition) indicates that granular KPG deposits are overlain by the cohesive strata attributed to the LSM and directly underlain by the Upper Chalk Subgroup. A review of geological logs for the site from the various phases of intrusive works confirm the published geological data.

For the purpose of the DQRA, it is considered that the LSM will act as a low-permeability aquitard and confining layer to the underlying KPG deposits, retarding or preventing downward migration of determinant concentrations.

As detailed above, the site investigation has identified groundwater bearing strata at elevations ranging from 2.30 – 4.10m bgl (36.08 - 34.11m AOD) within granular Kempton Park Gravel deposits, which rises slightly under pressure once the overlying LSM is breached.

A review of literature published by the EA regarding the Thames Valley Gravels suggests that the gravels are typically of a high permeability with groundwater flow direction being influenced by the river flow direction. The report also suggested that at times of high water groundwater flow would be away from the river, with groundwater flow towards the river at times of low water level.

A groundwater equipotential plan was constructed by OEC, and has been used to determine the groundwater flow direction and to calculate the hydraulic gradient (i) for the site. The hydraulic gradient, reported as a ratio, was calculated as 0.002677 and suggests that groundwater is generally flowing in a northeasterly direction towards the River Thames. However, information provided in the PBA Technical Note (Tn002/Rev0) indicates a flow direction towards the southeast. Given that a statement was made in the PBA report indicating a flow to the south east, together with information from the EA Thames Valley Gravels Report, and that the flow direction is noted to vary seasonally, OEC have assumed a net flow direction towards the east.

Groundwater monitoring data suggest that with the exception of locally perched water within Made Ground that groundwater is confined beneath the LSM within the KPG with the whole of the KPG saturated. It is assumed that groundwater within the KPG is in hydraulic continuity with the River Thames and the underlying Upper Chalk.

In order to assess the potential migration of contaminants of concern through the basic hydrogeological regime identified, it is necessary to model the migration behaviour of the identified contaminants.

13.0 TIER 2 DETAILED QUANTITATIVE RISK ASSESSMENT (DQRA)

13.1 Discussion

As detailed in Section 11.0 laboratory analyses were undertaken on a number of groundwater samples, with elevated concentrations of TPH recorded that exceeded the adopted EQS screening values.

Groundwater sampling was undertaken by CC Ground Investigations on 4th April 2018. OEC are not aware of the sampling methodology employed and given the presence of bailers within each environmental monitoring point observed at the time of inspection, OEC have assumed that samples were collected using bailers. Groundwater samples were collected from selected monitoring locations by OEC on 13th and 16th April 2018.

In order to ensure a comprehensive approach and assess the potential remediation requirements for a worst-case scenario, OEC has undertaken a Detailed Quantitative Risk Assessment (DQRA) of those compounds, which were found to exceed the adopted EQS in groundwater samples TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21}.

To ensure a comprehensive approach to the DQRA it is necessary to determine the considered source of the elevated concentrations detected within groundwater. A review of the laboratory groundwater data indicates that concentrations of Contaminants of Potential Concern (CoPC) exceeding the EQS were recorded in groundwater samples from locations BH1005, BH2005 & BH2006. Laboratory interpretation of TPH-CWG analyses indicated the presence of Linear Alkylbenzenes, which is consistent with information provided by PBA with regards to the nature of the product spilled.

In order to allow a comprehensive review the source of impact on site, reference is made to available historic data, set out in detail in Section 3.0 and summarised as follows:

The northwestern area of the site formed one of two power stations operational in Reading and was identified as an “Electric Works” on historical mapping dated between c.1899 and c.1913, after which the building footprint remained but was no longer identified. The building facing Vastern Road was first indicated on mapping dated c.1912-1913 and identified as a “Skating Rink” before being identified as a “Depository” on mapping dated c.1936. The building footprint remains to the present day and has most recently been utilised as SSE Offices.

In addition a number of historic “Tanks” were identified within the northwestern corner of the site between c.1912 and c.1932 with a single tank identified on mapping dated c.1936. The Power Station were absent on mapping dated c.1956-1957 with the site shown in the current configuration from c.1969.

The previous site investigations have identified elevated concentrations of determinants consistent with the historic use of the site. The highest TPH concentrations were recorded at locations WS1002 (1.70m bgl), BH2003 (3.50m bgl), BH2005 (1.90m bgl) and TP1007 (0.50m bgl) where TPH concentrations ranging from 1,600 to 12,000mg/kg were recorded. High TPH concentrations were also recorded at locations BH1002A, BH1003C, BH1004, BH2003, BH2006, WS1002, WS1004, WS1008, WS1017, WS1018, WS1019, TP1003, TP1005 and TP1007 where TPH concentrations ranged from 200 – 890mg/kg.

A review of TPH-CWG data indicates that the highest TPH concentrations are associated with TPH C_{12}-C_{16}, C_{16}-C_{21} and C_{21}-C_{35} in both aliphatic and aromatic fractions, which is considered consistent with historic use of diesel fuel and mineral oils on site.

As stated in Section 1.1, it is understood that in July 2017 a leak of cable cooling oil was identified from a failed joint within the 132 kV circuit resulting in oil spillage in the 132 kV substation compound at the centre of the Site, where it was estimated that approximately 8,800 litres of oil escaped from the faulty joint with approximately 160 litres recovered during the repair works.

Source Area Selection

A review of laboratory data indicates that the highest concentrations of TPH within soils were generally detected within locations in and immediately around the transformer compound where the leakage was detected in July 2017. Consideration should also be given to location WS1002 in the northwestern corner where high concentrations of TPH and PAH were also recorded. Further consideration is given in point a) below.

The above overview of historical settings and the distribution of identified concentrations suggests the presence of three potential areas of concern.

a) In the northwest of the site at location WS1002 elevated concentrations of TPH C_{12}-C_{16}, C_{16}-C_{21} and C_{21}-C_{35} were detected.

This area in the vicinity of WS1002 has been considered as representing a historical incident associated with the presence of tanks during the operation of the power station, and therefore a localised hotspot of concentrations. It is therefore recommended that further investigation and likely remedial works will be required within this area with an aspect of source removal.

b) Adjacent to the western boundary of the site at location TP1007, a third area of elevated concentrations of TPH C_{16}-C_{21} and C_{21}-C_{35} were detected.

In the case of TP1007, although elevated concentrations of TPH C_{16}-C_{21} and C_{21}-C_{35} were identified in association with high concentrations of PAH, soil descriptions noted a moderate hydrocarbon odour from underlying strata. A low PID reading of 3.2ppm was recorded from soils at a depth of 0.20m bgl, which is consistent with TPH being primarily composed of longer chain lengths. Given this the risk associated with this impact warrants further assessment, and it is likely that remedial works will be required within this area with an aspect of source removal.

c) A large central area impacted by the cooling oil spillage where elevated concentrations of TPH C_{12}-C_{16} and C_{16}-C_{21} (Aromatic) have been detected within groundwater samples.

The central area impacted by the coolant spillage is considered a significant impact, and to represent a significant risk to controlled waters, as set out within the Tier 1 Controlled Waters Risk Assessment (Section 11.0). Laboratory interpretation of the hydrocarbon type recorded during the Adler and Allan investigation and return groundwater monitoring by OEC, attributed the elevated results to Linear Alkylbenzene, which is consistent with electrical cooling or insulating oil. Given this the large central area in the vicinity of the 2017 leakage has been set as the DQRA source area. This area measures ~52.0m (l) x ~40.0m (w) and covering approximately 2,080m^2.

Input Parameters

Various input parameters to the DQRA model are set out below:

As discussed in detail in Section 11.0, in the absence of Freshwater EQS values for TPH, OEC have adopted values reported in the WHO Petroleum Hydrocarbons in Drinking Water in a conservative approach.

For the purpose the DQRA, OEC have adopted the following geological model for the site and have assumed that the model is consistent across the site and extends away in all directions.

- Made Ground – Granular (Source) – Average Thickness 1.70m;
- Langley Silt Member – Cohesive (Aquitard) – Average Thickness 1.68m;
- Kempton Park Gravels – Granular (Aquifer) – Average Thickness 6.58m.

The River Thames is the closest surface watercourse with the southern extent of the river located approximately 5.00m north-northeast from the northern site boundary, which is 90 degrees to the anticipated groundwater flow direction. The River Thames has been adopted as the primary controlled waters receptor following consultation with the Environment Agency. There are no potable groundwater abstraction licences or public water supplies located within 500m of the site.

From evidence presented on the borehole logs, it has been assumed that groundwater is absent from Made Ground and the LSM, which acts to confine groundwater within the KPG. Following a review of information provided within published data from the EA regarding the Thames Valley Gravels, it is assumed that the KPG are in hydraulic continuity with the River Thames and that groundwater flows obliquely away from the river during times of high river levels and obliquely towards the river during times of low river levels. This assumes an approximately northeasterly flow direction during the summer months and a southeasterly flow direction during the winter months. Continuous groundwater monitoring has suggested a groundwater flow direction towards the northeast with information provided in the PBA Technical Note (Tn002/Rev0) indicating a flow direction towards the southeast. Given that two differing flow directions have been shown, together with information from the EA Thames Valley Gravels Report, OEC have therefore assumed a net flow direction towards the east.

Given the superficial cover of Made Ground and Langley Silt Member, OEC have assumed that the Kempton Park Gravels will be in hydraulic continuity with the River Thames near to the centre of the channel where the channel is deepest and have therefore adopted a compliance point located down gradient, approximately 90m east of the eastern limit of the modelled source area.

Hydrocarbons are hazardous substances as defined by the Groundwater Daughter Directive (enacted under EPR 2010) and their entry into groundwater should be prevented. Where existing groundwater contamination is present, the priority is to minimise further entry of hazardous substances into groundwater and take necessary and reasonable measures to limit any future expansion of a contaminant plume. As discussed above, OEC consider that the hydrocarbon concentrations with the defined source area are associated with the cooling oil leakage from a ruptured oil cooled HV service run.

For the sake of simplicity, and in order to develop the most conservative model, the highest detected soil and groundwater concentrations recorded across the site, within the modelled source area have been adopted for the purposes of groundwater modelling.

13.2 RTM Sensitivity Test

The basic RTM model parameters has been populated with characteristics derived from both site measurements and conservative estimates from relevant published sources (Appendix IX). The RTM model has therefore been subjected to a sensitivity analysis, whereby the effects of parameter variability is calculated. The sensitivity analysis pays particular focus on variables estimated from literature sources, rather than site derived values.

Parameters which have been identified to affect the assessment most significantly include:

- **Distance to compliance point (x) –** OEC have adopted a 90m compliance point from the eastern limit of the source area to the centre of the River Thames, where it is assumed that the River Thames is in hydraulic continuity with the KPG. This 90m compliance point equates to a distance approximately 85m from the eastern site boundary. The distance to the compliance point was changed as part of the sensitivity analysis and it was noted that changing the distance affected both the remedial target values. It was found that decreasing the distance to 50m from source resulted in an increase in modelled concentrations but did not change the number of predicted EQS exceedances. Decreasing the distance to 5m resulted in further increases in the modelled concentrations at the compliance point. Increasing the distance to the compliance point decreased the modelled concentrations, but did not result in a decrease in the number of EQS exceedances until the distance was increased to 276m, at which point the predicted groundwater concentration for Aromatic C_{12}-C_{16} becomes less than the EQS. The predicted groundwater concentrations for Aromatic C_{16}-C_{21} did not decrease to concentrations less than the EQS until a compliance point of 555m was input into the model. Therefore, whilst the model is sensitive to this parameter, OEC consider that the model is not sufficiently sensitive to the selected distance of 90m to present a significant issue.
- **Area of contaminant source (A), Length of Contaminant Source (L) and Width of Contaminant Source (w)**. The contamination source area has been estimated from the lateral distribution sampling locations which contain significantly elevated concentrations of Aromatic C_{12}-C_{16} and C_{16}-C_{21}. The source has been estimated to cover an area of approximately 52m (l) x 40m (w) with a source area of 2,080m^2. Taking groundwater flow into account, the maximum length of the contaminant source (L) has been estimated at 55m (E-W) and the maximum width (w) 43m (N-S). OEC consider that the most polluting concentrations will be limited to the soils immediately surrounding the leaking oil cooled HV pipe. It is considered that with continuing natural attenuation, that the lateral extent of impacted soils will gradually decrease. It was found that varying the dimensions and area of the source area did not result in any change to predicted concentrations at the compliance point. The source area was doubled to 5096m^2 and halved to 1004m^2, neither of which changed the predicted concentrations at the compliance point.
- **Hydraulic gradient (*i*)** has been calculated from site-specific measurements with groundwater triangulation indicating a groundwater level fall of 0.12m over a horizontal distance of 44.82m yielding a hydraulic gradient (*i*) of 2.68 x 10^{-4} (0.000268). The hydraulic gradient was changed as part of the sensitivity analysis and proved to be a sensitive parameter. Increasing *i* by one order of magnitude (2.68 x 10^{-3}) increased the predicted concentrations at the compliance point. Decreasing *i* by one order of magnitude (2.68 x 10^{-5}) resulted in a decrease in the modelled concentrations. A two magnitude decrease (2.68 x 10^{-6}) resulted in in modelled concentrations for both Aromatic C_{12} - C_{16} and C_{16} – C_{21} at the compliance point decreasing to concentrations of less than the adopted EQS. However, given that the value for *i* has been

derived from site-specific measurements obtained from groundwater dataloggers, it is considered that the adopted value of 2.68 x 10^{-4} provides a robust representation of the hydraulic gradient beneath the site.

- **Saturated aquifer thickness (*da*)** was taken to be the average thickness of the KPG (6.58m) which was determined by on-site observations, as discussed in Section 6.1. The saturated aquifer thickness (*da*) of 6.58m was reduced by 50% to 3.29m and by 75% to 1.65m and increased by 100% to 13.16m. Reducing the saturated aquifer thickness by 50% and 75% decreased the predicted groundwater concentrations at the compliance point, but did not decrease concentrations to levels below the adopted EQS. Increasing the saturated aquifer resulted in marginally increased predicted concentrations at the compliance point. However, given that the saturated aquifer thickness has been determined from on-site measurements, it is considered that the selected value satisfactorily represents the conditions present on site.
- The **fraction of organic carbon (*foc*)** was increased and decreased by two orders of magnitude from the adopted values of 1.82x10^{-2} (MG) and 2.90x10^{-3} (KPG) and proved not to be sensitive for modelled groundwater concentrations, but was a sensitive parameter for predicted soil concentrations. Increasing and decreasing *foc* by one order of magnitude within both MG and KPG did not result in changes in either of the predicted groundwater concentrations at the compliance point.
- The **hydraulic conductivity (*K*)** was increased to 100m/d (1.16x10^{-3}m/s) and decreased to 25m/d (2.89 x 10^{-4}m/s), 5m/d (5.79 x 10^{-5}) and 0.50m/d (5.79x10^{-6}m/s) from the selected value of 50m/d (5.79x10^{-4}m/s) and was found to be a sensitive parameter. It was observed that decreasing *K* by an order of magnitude resulted in a decrease in the predicted groundwater concentrations at the compliance point, but did not decrease concentrations to levels below the adopted EQS. Decreasing *K* to 0.50m/d (three orders of magnitude) did however result in no modelled concentrations exceeding the adopted EQS values. Given field descriptions and the results of PSD analyses from KPG deposits, OEC consider that the selected value for *K* of 50m/d (5.79x10^{-4}m/s) represents a mid-range value for the encountered soil type and is suitable for the site.

OEC considers that the RTM model has used conservative values to ensure that the parameters reflect the site at as close to site specific parameters as possible to ensure that remediation is not overlooked or miscalculated.

The results of the Remedial Targets Methodology (RTM) modelling used the R&D P20 worksheets developed for the Environment Agency (EA) is shown in Table 13.1 overleaf.

The model output sheets are included in Appendix X.

Table 13.1 **Summary of RTM Modelling for Level 3 Soil and Groundwater Migration**

Source	EQS Threshold	Maximum Detected Soil Concentration	Maximum Detected Groundwater Concentration	Predicted Soil Concentration at Compliance Point (90m from source area)	Predicted Groundwater Concentration at Compliance Point (90m from source area)	Predicted Exceedance of EQS at Compliance Point	
	mg/l	mg/kg	mg/l	mg/l	mg/l	L3 Soil (90m)	L3 Groundwater (90m)
Aromatic C_{12}-C_{16}	9.00E-02	3.60E+03	7.30E-01	1.54E+01	4.95E-01	Y	Y
Aromatic C_{16}-C_{21}	9.00E-02	3.90E+03	2.70E+00	5.52E+00	2.00E+00	Y	Y

No account of the potential for sorption between hydrocarbon compounds and clay particles has been utilised in the P20 model, further demonstrating the conservative nature of the risk assessment.

Referring to Table 13.1, the model shows that given the maximum concentrations of CoPC detected across site and assuming leaching from the soils, that there would be a breakthrough of concentrations exceeding the EQS threshold at the receptor located 90m from the site boundary for the modelled determinands summarised in Table 13.2 below:

Table 13.2 Summary of Modelled EQS Exceedances

Determinant	EQS Exceedance	
	Soil	Groundwater
Aromatic C_{12}-C_{16}	Y	Y
Aromatic C_{16}-C_{21}	Y	Y

13.3 Remedial Target Concentrations

Table 13.3 shows the remedial target values for the soil and groundwater for impact to controlled waters at 90m from the site boundary as derived from the P20 calculation.

Table 13.3 Remedial Target Concentrations

Determinant	Level 3 Soil Target Concentrations to be protective of the identified receptors. (mg/l)	Level 3 Controlled Waters Target Concentrations To be protective of the Underlying Aquifer (mg/l)
Aromatic C_{12}-C_{16}	2.31E-01	1.39E-01
Aromatic C_{16}-C_{21}	2.21E-01	1.22E-01

OEC have adopted the lower remedial target value for each carbon range from either L3 soil or L3 water in order to allow a conservative assessment.

A comparison of the detected maximum groundwater concentrations and groundwater remedial target values is shown in Table 13.4. This comparison has been undertaken based on the maximum groundwater concentration from the monitoring well installed within the KPG, BH1005, where the response zone was solely in the KPG (3.0-7.0m bgl). Whilst higher concentrations are present on site, and these form the basis of the P20 model, the result from BH1005 has been utilised to represent current conditions. It should be noted that this assessment for the KPG is based on data provided to OEC which is considered to be limited. Values originate from three rounds of groundwater monitoring on a single monitoring point installed within the KPG.

Table 13.4 Summary of Maximum Groundwater Concentration and Remedial Target Values.

Determinant	Groundwater		Exceedance of Remedial Target Values
	Maximum Concentration (mg/l)	Remedial Target Value (mg/l)	Groundwater (Y/N)
Aromatic C_{12}-C_{16}	4.70E-02	1.39E-01	N
Aromatic C_{16}-C_{21}	1.20E-01	1.22E-01	N

Referring to Table 13.4 it can be seen that water samples from below the LSM pass the remediation target values for groundwater. Given this it is considered that elevated concentrations are currently restricted by the presence of the LSM. It is considered that given the inherent variability of the LSM, with local gravel horizons, and significantly reduced thickness in part, that concentrations have the potential to present a significant risk to controlled waters over time. In order to mitigate this risk it is recommended that remedial works are undertaken on the impact area, which should involve removal of free product. This should be set out within a standalone Remediation Method Statement.

14.0 REVISED CONCEPTUAL SITE MODEL

Following the completion of the risk assessment an active pollution pathways have been identified as detailed in the Table 14.1 below:

Table 14.1 Revised Conceptual Site Model

Source	Exposure Pathway	Potential Receptor	Probability of Exposure	Discussion of Pollutant Linkage
Soils				
Elevated concentration of metals and PAHS within shallow soil samples across the proposed residential development.	Ingestion within areas of soft landscaping	Future Site Users	Likely	It is considered that the presence of elevated concentration of metals and PAH within shallow soil samples across the site have the potential to pose a significant risk to future site users. An RMS should be produced to set out mitigation measures which will likely involve a soil capping system.
Presence of Asbestos within shallow soils samples	Dust inhalation	Future Site Users and Construction workers	Likely	It is considered that the present of asbestos within shallow soil have to potential to present a significant to both future site users and construction workers. An Remedial Method Statement (RMS) should be produced to set out mitigation measures which will likely involve a soil capping system.
Elevated Naphthalene and TPH (C12-C16) Concentrations in the area of the proposed residential development.	Ingestion within areas of soft landscaping Vapour Inhalation	Future Site Users	Likely	It is considered that the presence of Naphthalene and TPH within shallow soil samples across the site have the potential to pose a significant risk to future site users both in areas of soft landscaping and inside of buildings. An RMS should be produced to set out mitigation measures, which will likely involve a soil capping system and vapour membranes inside of buildings.
Ground Gas (CH_4 and CO_2)	Migration into Confined Spaces	Future Site Users	Likely	Concentrations of CH_4 up to 3.0%v/v have been detected with GSV results of 0.1482(l/hr) have been calculates for the site. It is considered that the site has been classified as a CS-3 in line with the methodology outlined within

				BS8485:2015
Groundwater				
TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21}	Vertical and lateral migration	Controlled Waters	Likely	Remedial works should be set out within an RMS, and should involve removal of product from the area set out on Figure 4, which is predominantly limited to the area of the substation.
Hotspot of concentrations in area of WS1002 and TP1007	Vertical and lateral migration	Controlled Waters	Likely	Remedial works should be set out within an RMS and will likely involve source removal.

15.0 CONCLUSIONS & RECOMMENDATIONS

Revised Conceptual Site Model (RCSM)
Following the completion of the risk assessment, including Tier 1 Human Health assessment and Tier 2 Controlled Waters Assessment (DQRA) a series of active pollution pathways have been identified by the RCSM. These relate to elevated metals, PAH, TPH and asbestos concentrations in the near surface and TPH within groundwater samples.
Recommendations
In order to mitigate this risk identified in the RCSM remediation works are required, which are likely to include: • Emplacement of soil capping system within areas of proposed soft landscaping; • Provision of Vapour and Ground Gas Membranes within buildings; • Removal of free phase hydrocarbon product (TPH Aromatic C_{12}-C_{16} and C_{16}-C_{21}) from the area set out on Figure 4, predominantly limited to the area of the substation. • Hotspot removal of impact in area of WS1002 and TP1007. Mitigation measures should be set out within a standalone Remediation Method Statement and agreed with the Regulator ahead of commencement on site. Near surface soils at the site are likely to be classified as Hazardous for disposal purposes due to asbestos content >0.1% in five of 47 samples across the proposed residential portion of the site. If during works any previously unidentified impact is encountered during development works, activities should be halted and contact made with a suitably qualified Environmental Consultant in order to further investigation identified materials. As determined appropriate by the Consultant further investigation and sampling may be required to determine appropriate actions. Upon completion contact should be made with the regulator to achieve sign off of the works.

APPENDIX I

LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between OE Ltd and the Client as indicated in Section 1.2.

2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.

3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination, which are enforced, by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.

4. During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.

5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.

6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.

7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials this is for indicative purposes only and do not constitute or replace full and proper surveys.

8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.

9. OE cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by OE is owned by them and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by OE in this connection without their explicit written agreement there to by OE.

10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.

APPENDIX II

GLOSSARY

AST	ABOVE GROUND STORAGE TANK
BGS	BRITISH GEOLOGICAL SURVEY
BSI	BRITISH STANDARDS INSTITUTE
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, XYLENES
CIEH	CHARTERED INSTITUTE OF ENVIRONMENTAL HEALTH
CIRIA	CONSTRUCTION INDUSTRY RESEARCH ASSOCIATION
CLEA	CONTAMINATED LAND EXPOSURE ASSESSMENT
CSM	CONCEPTUAL SITE MODEL
DNAPL	DENSE NON-AQUEOUS PHASE LIQUID (CHLORINATED SOLVENTS, PCB)
DWS	DRINKING WATER STANDARD
EA	ENVIRONMENT AGENCY
EQS	ENVIRONMENTAL QUALITY STANDARD
GAC	GENERAL ASSESSMENT CRITERIA
GL	GROUND LEVEL
GSV	GAS SCREENING VALUE
HCV	HEALTH CRITERIA VALUE
ICSM	INITIAL CONCEPTUAL SITE MODEL
LNAPL	LIGHT NON-AQUEOUS PHASE LIQUID (PETROL, DIESEL, KEROSENE)
ND	NOT DETECTED
LMRL	LOWER METHOD REPORTING LIMIT
NR	NOT RECORDED
PAH	POLY AROMATIC HYDROCARBON
PCB	POLY-CHLORINATED BIPHENYL
PID	PHOTO IONISATION DETECTOR
QA	QUALITY ASSURANCE
SGV	SOIL GUIDELINE VALUE
SPH	SEPARATE PHASE HYDROCARBON
SP.TPH (CWG)	TOTAL PETROLEUM HYDROCARBON (CRITERIA WORKING GROUP)
SPT	STANDARD PENETRATION TEST
SVOC	SEMI VOLATILE ORGANIC COMPOUND
UST	UNDERGROUND STORAGE TANK
VCCS	VIBRO CONCRETE COLUMNS
VOC	VOLATILE ORGANIC COMPOUND
WTE	WATER TABLE ELEVATION

UNITS

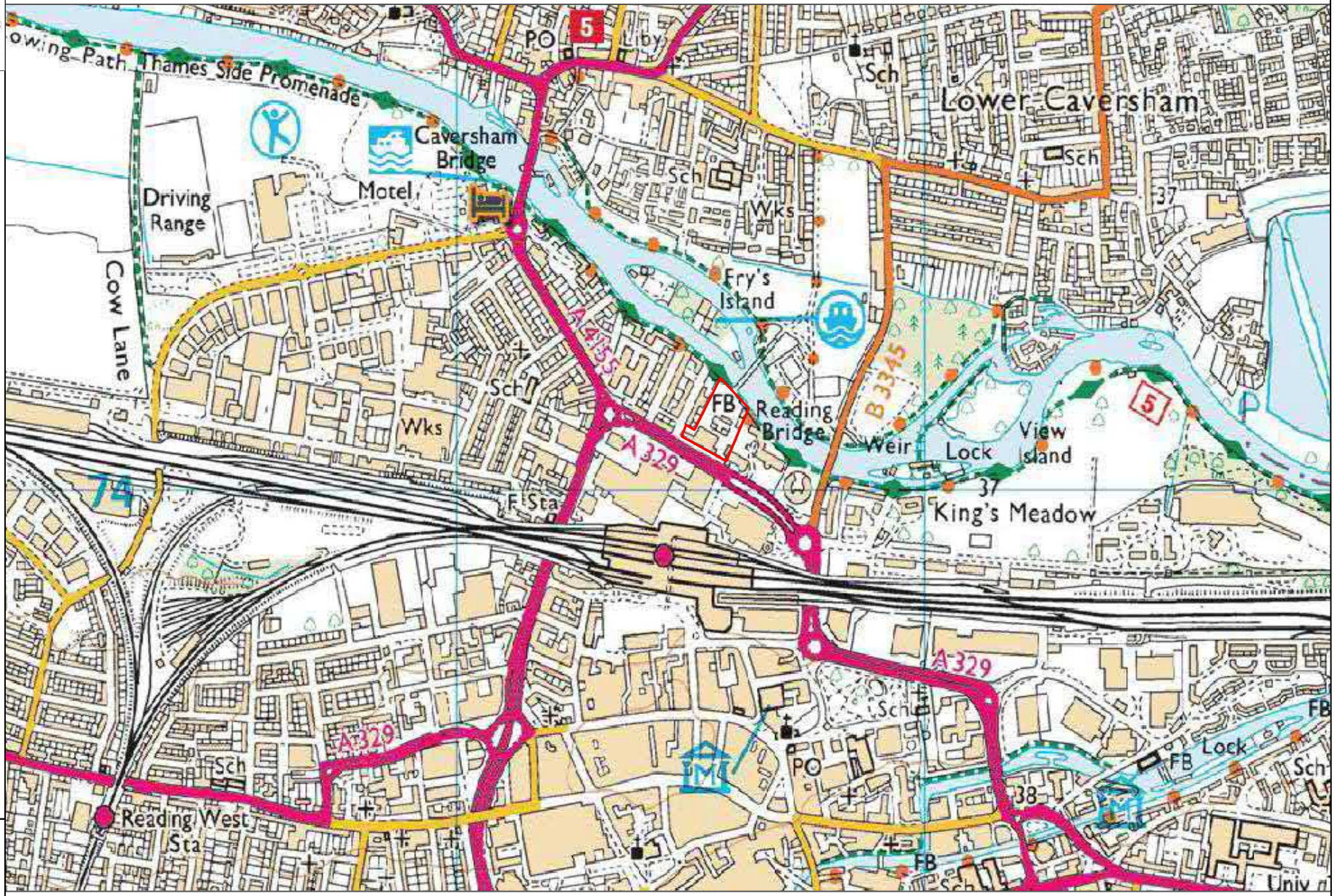
M	METRES
KM	KILOMETRES
%	PERCENT
%V/V	PERCENT VOLUME IN AIR
MB	MILLI BARS (ATMOSPHERIC PRESSURE)
L/HR	LITRES PER HOUR
µG/L	MICROGRAMS PER LITRE (PARTS PER BILLION)
PPB	PARTS PER BILLION
MG/KG	MILLIGRAMS PER KILOGRAM (PARTS PER MILLION)
PPM	PARTS PER MILLION
MG/M^3	MILLIGRAM PER METRE CUBED
M BGL	METRES BELOW GROUND LEVEL

M BCL	METRE BELOW COVER LEVEL
MAOD	METRES ABOVE ORDNANCE DATUM (SEA LEVEL)
KN/M^2	KILO NEWTONS PER METRE SQUARED
µM	MICRO METRE

APPENDIX III

FIGURES

Key



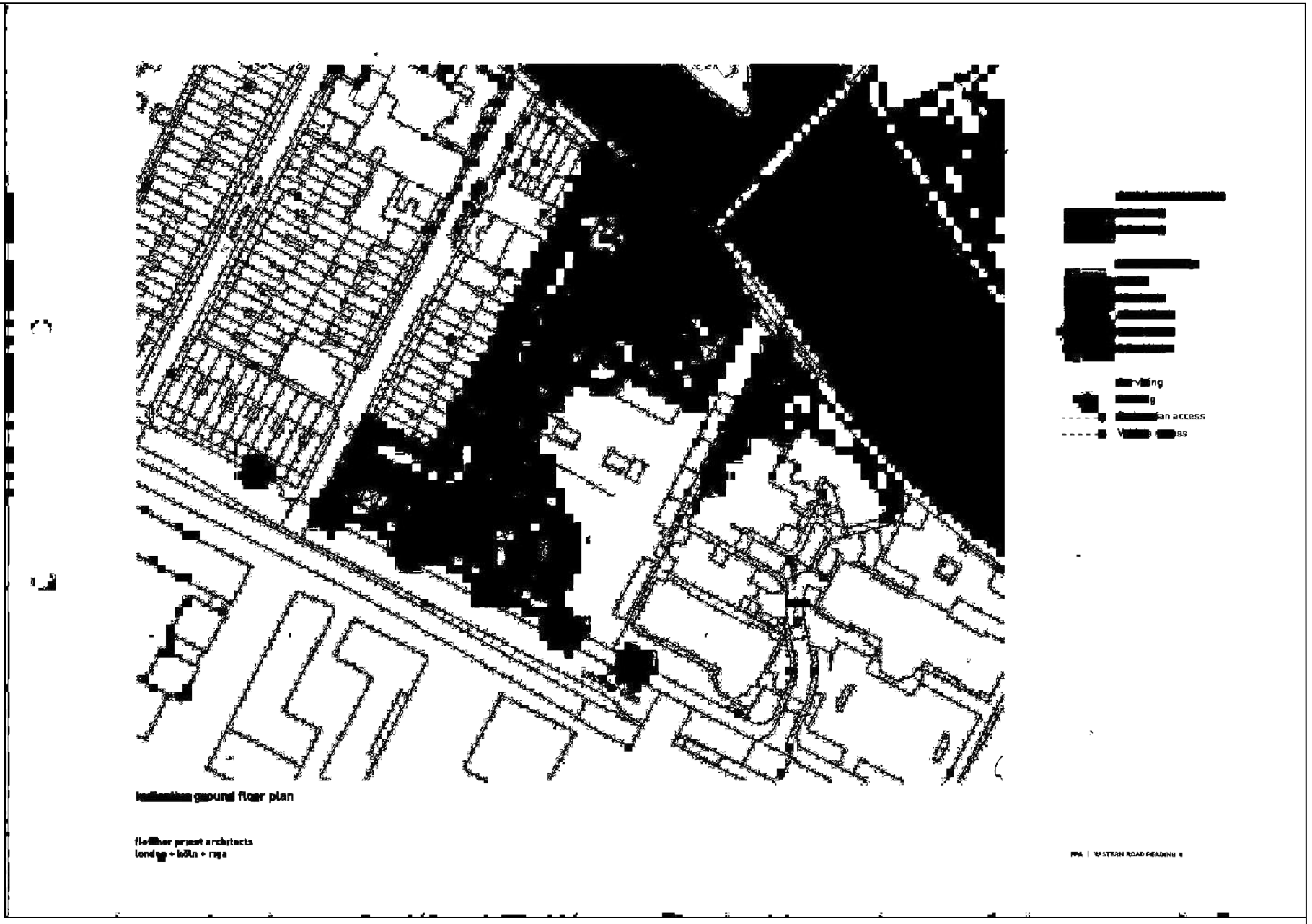
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OMNIA
ENVIRONMENTAL CONSULTING

Job Title:	Client:	Project No:	Date:	Drawing Title:
55 Vastern Road, Reading	Berkeley (Western) Homes	A10967	25/04/2018	Figure 1.0 - Site Location Plan
		Drawn By: K.Duggan	Authorised By: T.Mitchell	
		Scale:	Notes:	

Key



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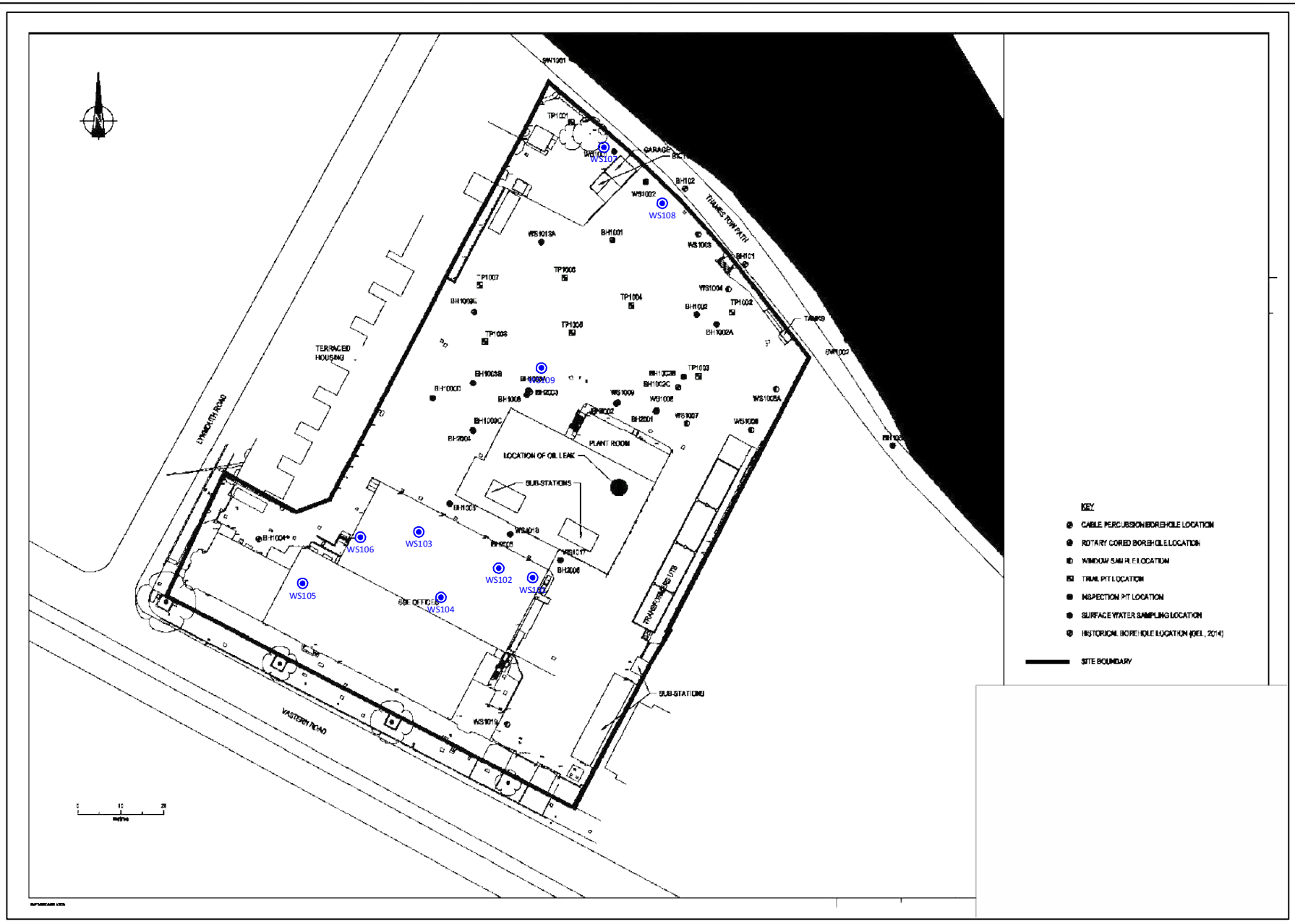
OMNIA
ENVIRONMENTAL CONSULTING

Job Title: 55 Vastern Road, Reading	Client: Berkeley (Western) Homes	Project No: A10967	Date: 25/04/2018
		Drawn By: K.Duggan	Authorised By: T.Mitchell
		Scale:	Notes:

Drawing Title: Figure 2.0 - Proposed Development

Key

Approximate Window Sample
WS101 Probehole Location



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Job Title:	Client:	Project No:	Date:	Drawing Title:
55 Vastern Road, Reading	Berkeley (Western) Homes	A10967	25/04/2018	Figure 3.1 All Intrusive Locations
		Drawn By: K.Duggan	Authorised By: T.Mitchell	
		Scale:	Notes:	

Key

WS101 — Approximate Window Sample Probehole Location

Approximate Source Area



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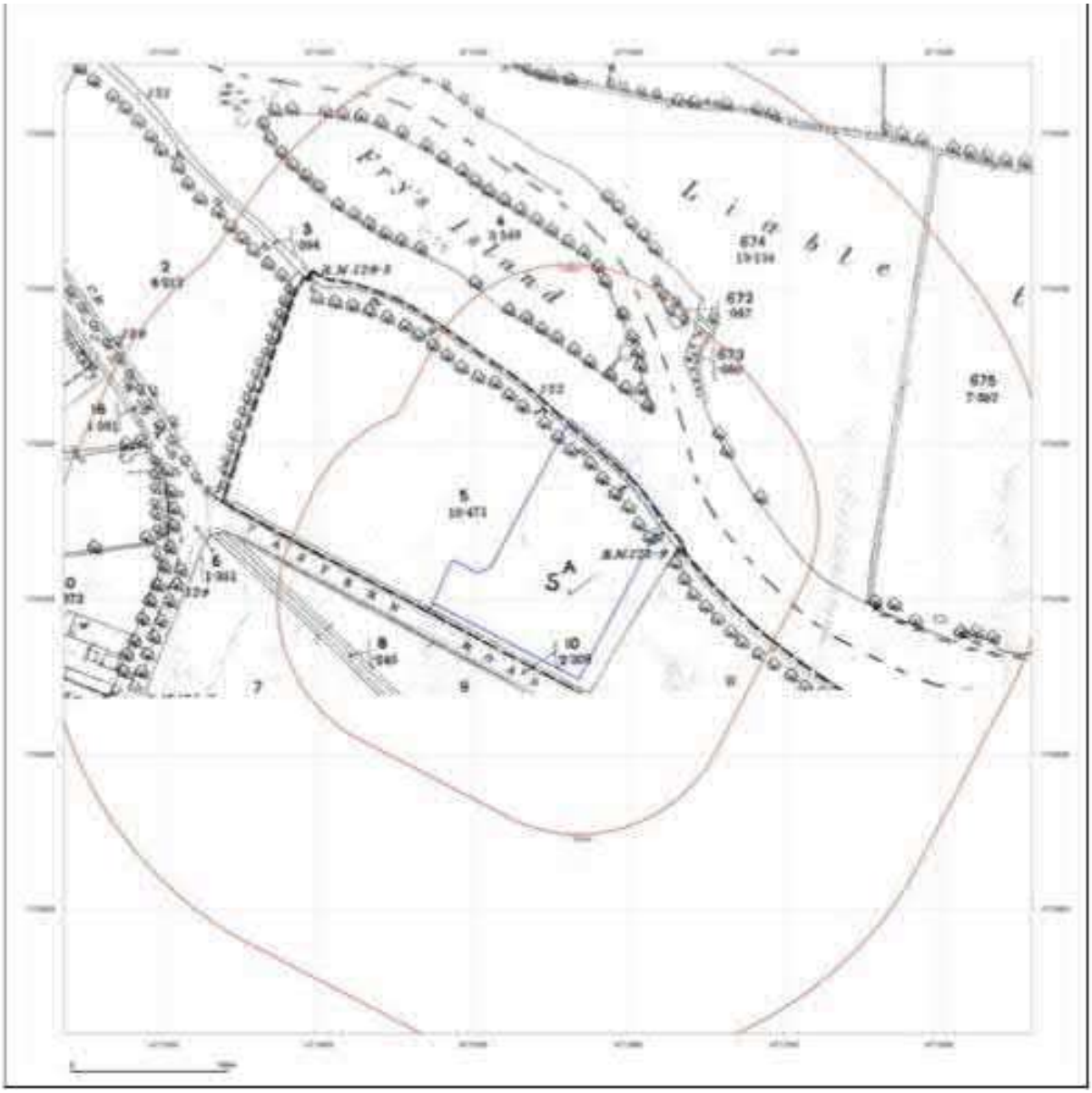
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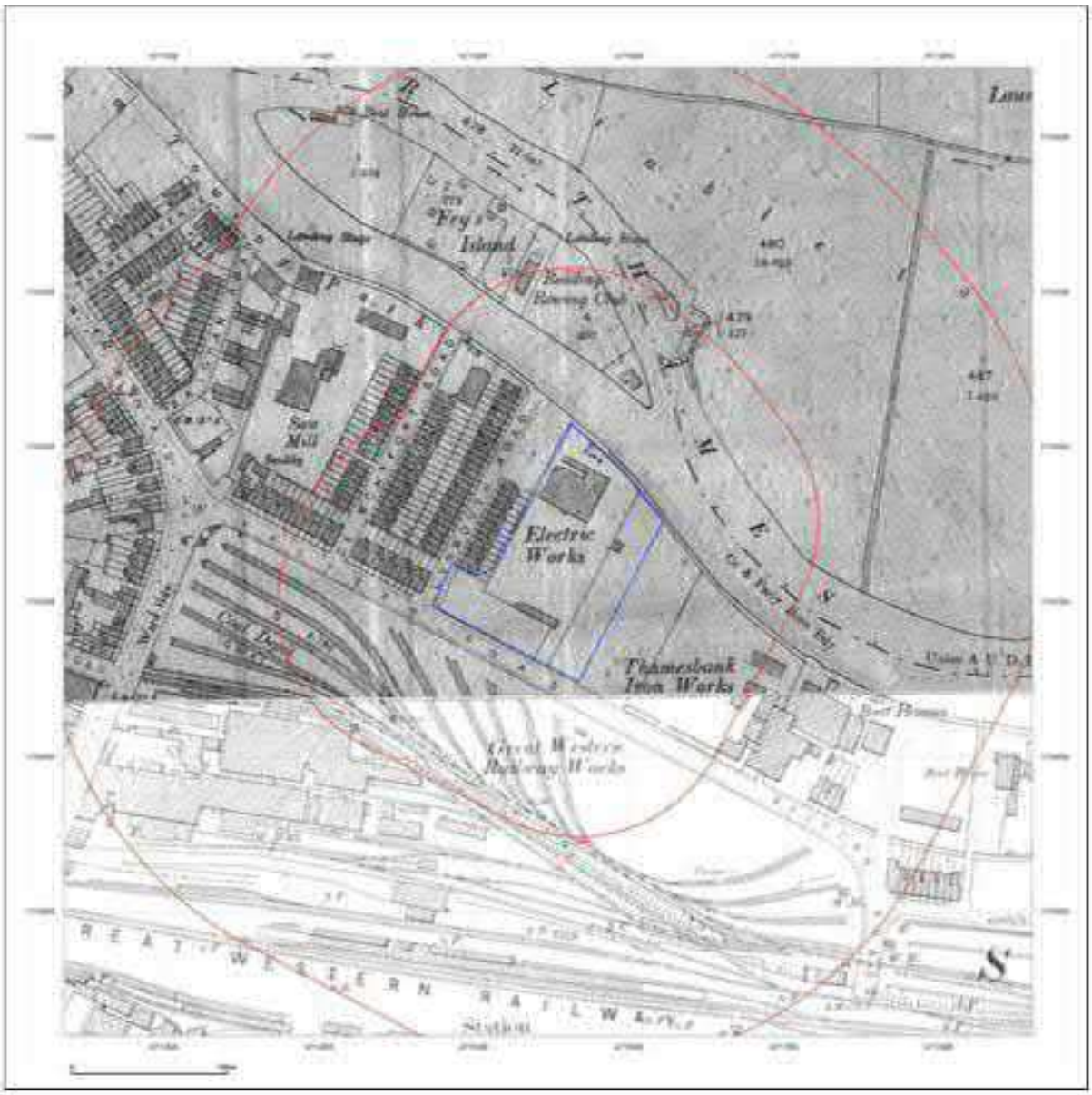
Job Title:	Client:	Project No:	Date:	Drawing Title:
55 Vastern Road, Reading	Berkeley (Western) Homes	A10967	25/04/2018	Figure 4.0 - Modelled Source Area
		Drawn By: K.Duggan	Authorised By: T.Mitchell	
		Scale:	Notes:	

APPENDIX IV

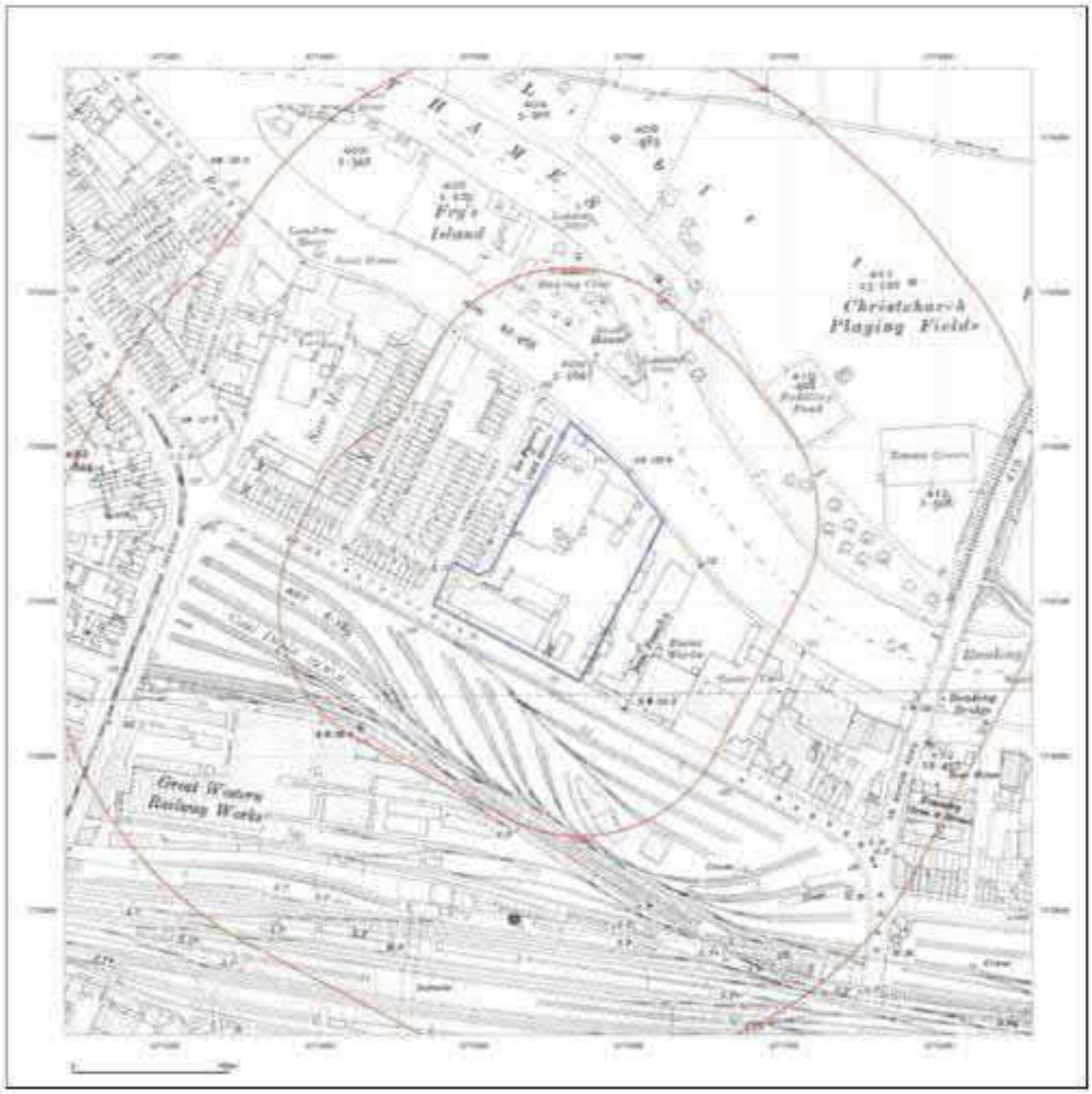
HISTORICAL MAPS



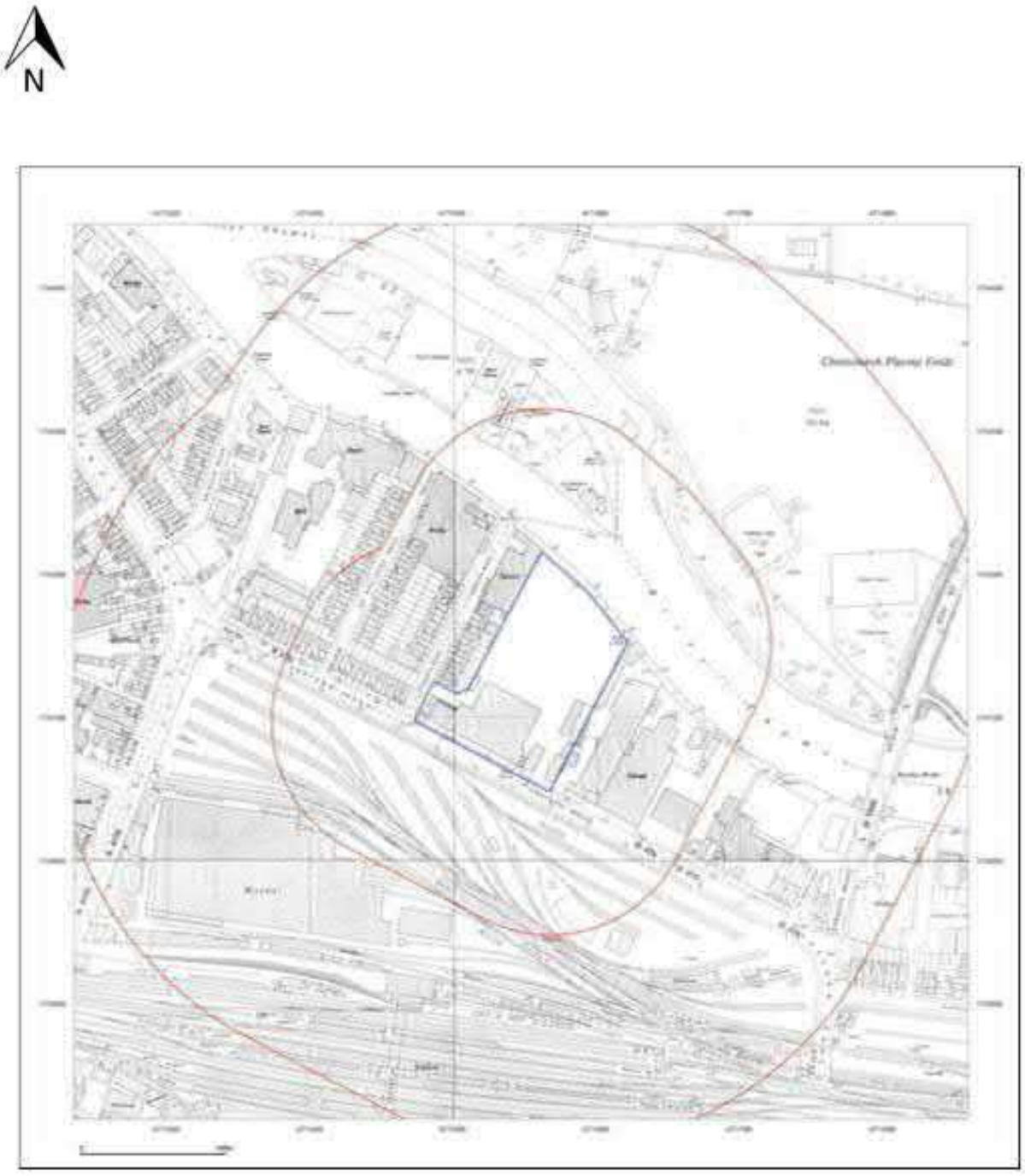
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Scale: 1:2,500
Grid Ref: 471548, 174132



55 Vastern Road
Date: 1899-1900
Scale: 1:2,500
Grid Ref: 471548, 174132



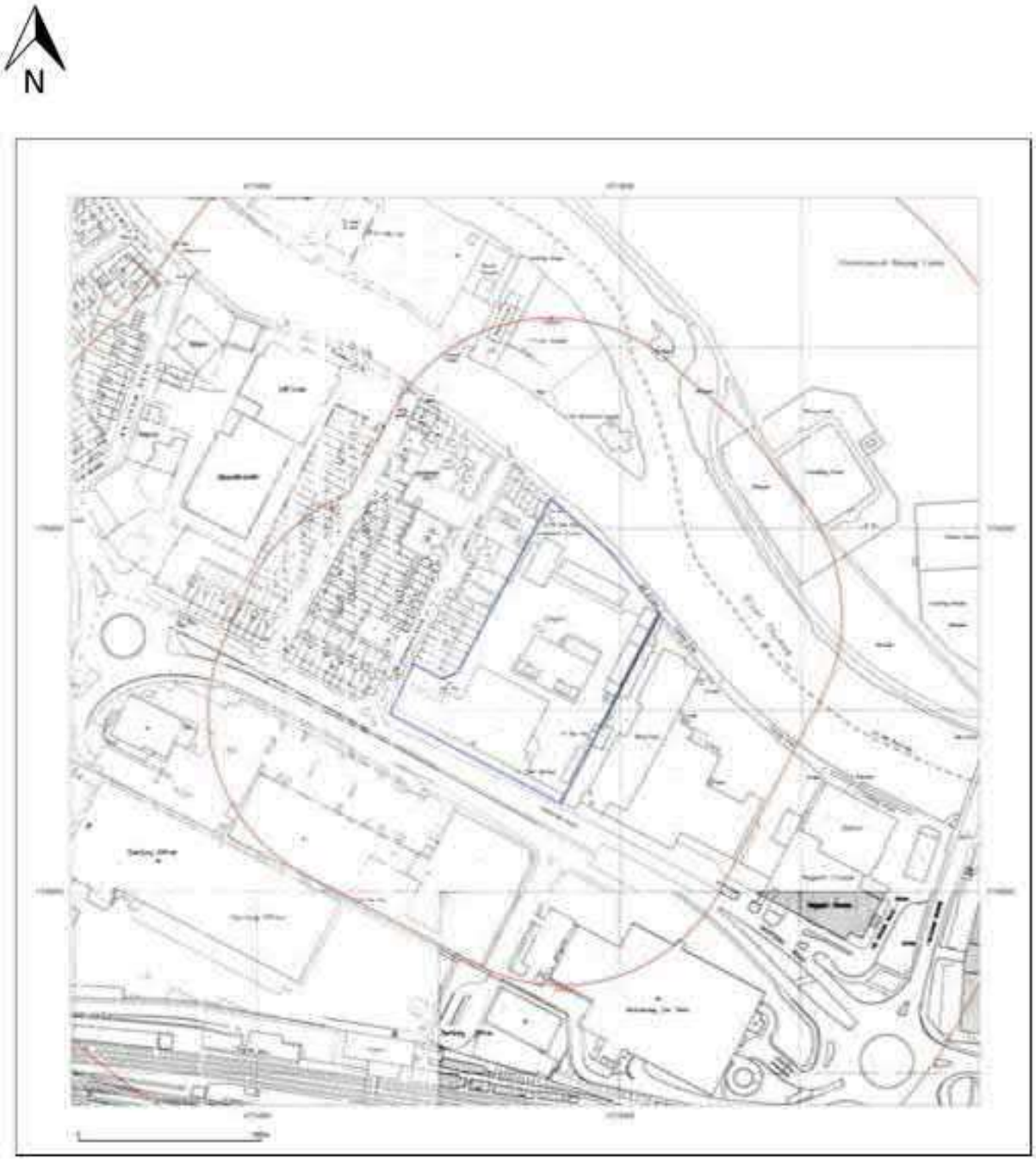
55 Vastern Road
Date: 1931-1932
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Grid Ref: 471548, 174132



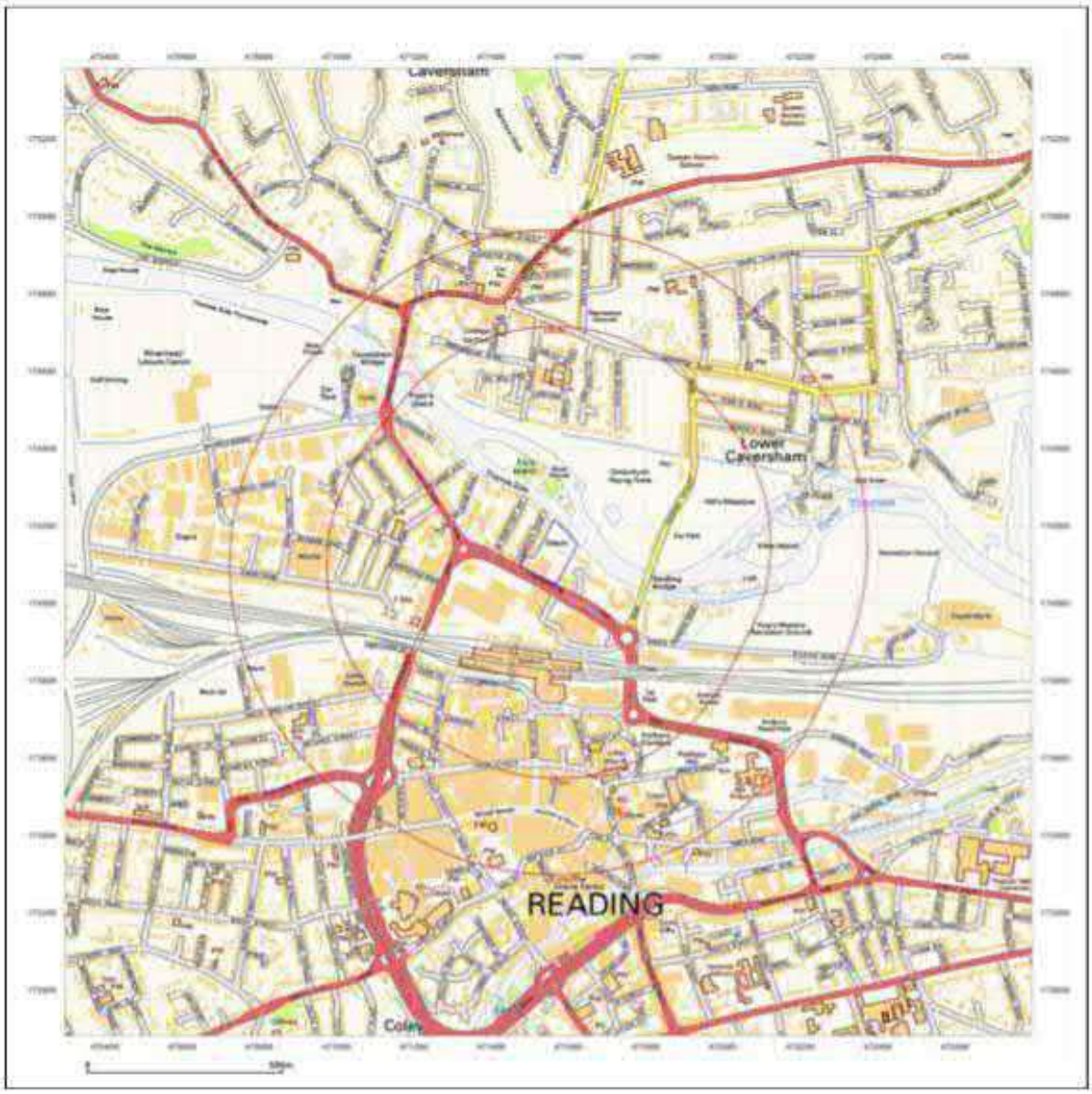
55 Vastern Road
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Grid Ref: 471548, 174132



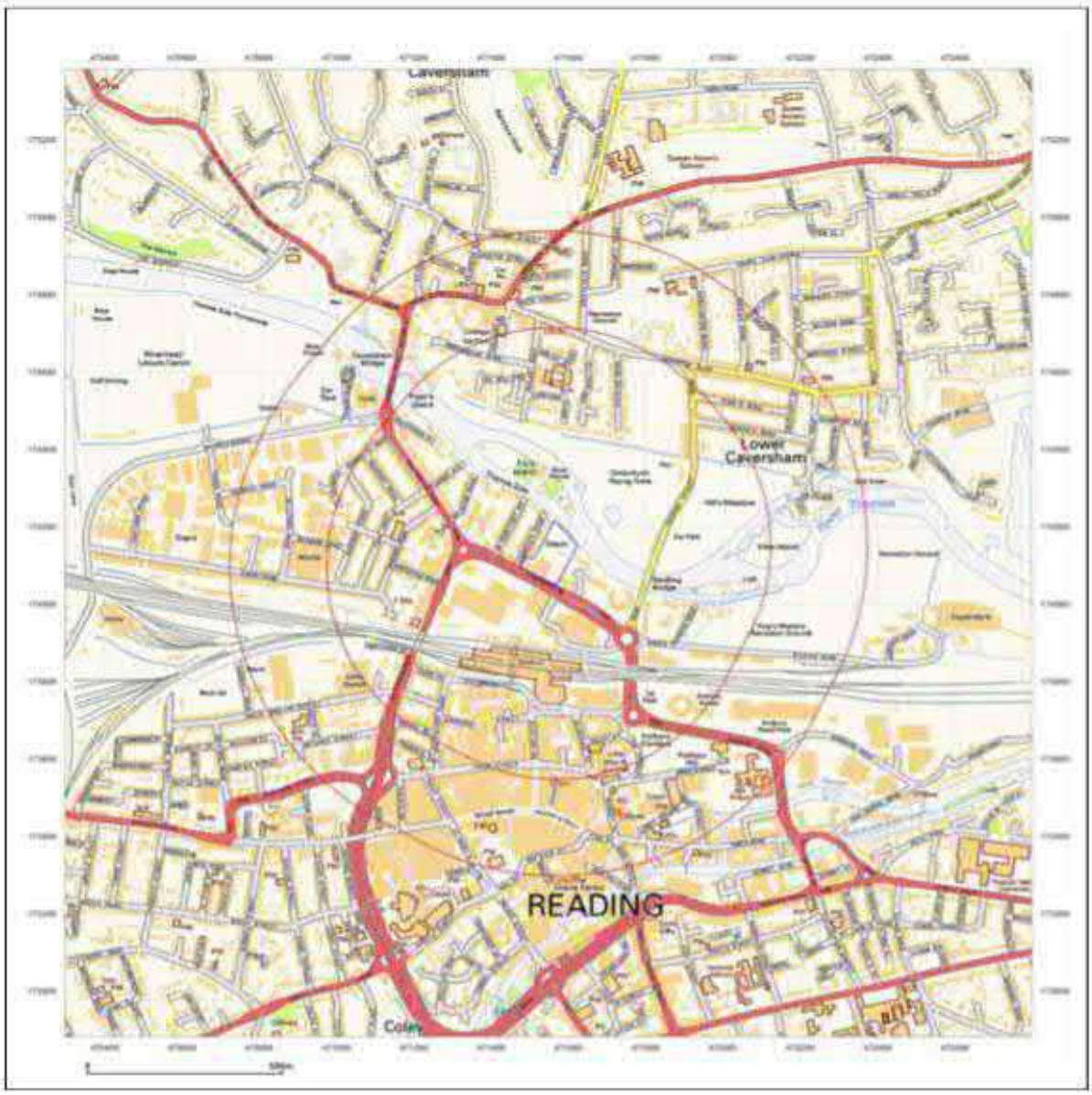
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Grid Ref: 471548, 174132



55 Vastern Road
Date: 1989-1993
Scale: 1:2,500
Grid Ref: 471548, 174132



55 Vastern Road
Date: 2010
Scale: 1:10,000
Grid Ref: 471548, 174132



55 Vastern Road
Date: 2014
Scale: 1:10,000
Grid Ref: 471548, 174132

APPENDIX V

CHEMICAL LABORATORY RESULTS

Certificate of Analysis

Certificate Number 18-04338

27-Feb-18

Client Professional Soils Laboratory Ltd
5/7 Hexthorpe Road
Hexthorpe
DN4 0AR

Our Reference 18-04338

Client Reference PSL18/0791

Order No (not supplied)

Contract Title SSE Site, Vastern Road, Reading

Description 8 Soil samples.

Date Received 22-Feb-18

Date Started 22-Feb-18

Date Completed 27-Feb-18

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

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

Approved By

Adam Fenwick
Contracts Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Soil Samples

Our Ref 18-04338
Client Ref PSL18/0791
Contract Title SSE Site, Vastern Road, Reading

				Lab No	1301877	1301878	1301879	1301880	1301881	1301882	1301883	1301884
				Sample ID	BH1001	BH1002C	BH1002C	BH1002C	BH1003E	BH1004	BH1004	BH1005
				Depth	4.00-4.45	0.65-1.10	7.00-7.50	23.50-24.00	1.30-1.40	2.00-2.40	8.50-9.00	5.00-5.50
				Other ID								
				Sample Type	B	B	B	B	B	B	B	B
				Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**									
Metals												
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10	< 10	< 10	< 10	16	14	< 10	< 10
Inorganics												
pH	DETSC 2008#			7.9	8.1	8.4	8.5	8.6	7.4	8.5	8.6
Chloride Aqueous Extract	DETSC 2055	1	mg/l	10	300	5.4	17	110	160	8.8	7.7
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	< 1.0	3.0	< 1.0	< 1.0	3.1	< 1.0	< 1.0	< 1.0
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	34	31	36	25	22	80	25	11
Sulphur as S, Total	DETSC 2320	0.01	%	0.11	0.03	0.01	0.01	0.02	0.08	0.01	< 0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.08	0.06	0.04	0.05	0.05	0.13	0.05	0.02

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 18-04338
Client Ref PSL18/0791
Contract SSE Site, Vastern Road, Reading

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1301877	BH1001 4.00-4.45 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301878	BH1002C 0.65-1.10 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301879	BH1002C 7.00-7.50 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301880	BH1002C 23.50-24.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301881	BH1003E 1.30-1.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301882	BH1004 2.00-2.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301883	BH1004 8.50-9.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1301884	BH1005 5.00-5.50 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	

Key: P-Plastic T-Tub

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

Information in Support of the Analytical Results

Our Ref 18-04338
Client Ref PSL18/0791
Contract SSE Site, Vastern Road, Reading

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Jon Ind
CC Ground Investigation Ltd
Unit A2
Innsworth Tech Park
Innsworth Lane
Gloucester
GL3 1DL

t: 01452 739 165
f: 01452 739 220
e: jon@ccground.co.uk

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

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

Combined Report : SSE Site, Vastern Road - Soil

Project / Site name:	SSE Site, Vastern Road, Reading	**Samples received on:**	01/02/2018
Your job number:	C5925	**Samples instructed on:**	02/02/2018
Your order number:	C5925	**Analysis completed by:**	13/02/2018
Report Issue Number:	1	**Report issued on:**	07/03/2018
Samples Analysed:	59 soil samples		

Signed:

Jordan Hill
Reporting Manager
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.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
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	9.8	22	12	30
Total mass of sample received	kg	0.001	NONE	1.0	1.3	0.96	0.99	0.80
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile & Crocidolite & Amosite	Chrysotile & Crocidolite	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.199	0.009	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.199	0.009	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.4	9.4	8.2	9.1	7.8
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	480	1900	85	73	84
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.24	0.96	0.042	0.037	0.042
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	241	955	42.4	36.6	41.8
Organic Matter	%	0.1	MCERTS	2.8	4.7	2.7	6.4	1.9
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.22	0.49	0.23	0.31	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.91	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.38	0.21	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.83	0.21	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	1.9	0.94	11	1.9	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.58	0.18	3.0	0.54	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	3.6	1.5	14	2.7	< 0.05
Pyrene	mg/kg	0.05	MCERTS	3.0	1.2	11	2.4	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.0	1.2	5.9	1.9	< 0.05
Chrysene	mg/kg	0.05	MCERTS	1.8	0.96	5.1	1.6	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	2.8	1.8	8.1	2.9	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2	0.67	2.6	1.8	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.0	1.3	5.5	2.4	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.3	0.72	3.3	1.8	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.66	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.1	0.75	2.7	1.6	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	21.4	11.6	74.4	22.3	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	23	19	16	27
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	17	17	20	16	38
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	18	17	21	17	39
Copper (aqua regia extractable)	mg/kg	1	MCERTS	38	53	37	37	6.7
Lead (aqua regia extractable)	mg/kg	1	MCERTS	140	44	140	94	16
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.0	5.2	0.5	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	24	25	24	28
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	1.3	1.3	< 1.0	1.4
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	75	140	300	61	49
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	85000	56000	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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	1.4	1.2	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	3.4	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	37	97	32	71	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	42	110	45	74	< 10
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	2.4	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	2.2	3.4	9.4	5.9	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	13	16	45	30	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	82	320	51	160	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	98	340	110	190	< 10

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901082	901097	901098	901150	901151
Sample Reference				BH1003	BH1002A	BH1002C	BH1005	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.50	1.00	0.70	2.00
Date Sampled				01/02/2018	30/01/2018	30/01/2018	30/01/2018	31/01/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
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	31	< 0.1	< 0.1	18	< 0.1
Moisture Content	%	N/A	NONE	9.6	30	12	23	26
Total mass of sample received	kg	0.001	NONE	1.7	1.3	2.0	0.35	1.1
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	-	-	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	1.311	-	-	< 0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	1.31	-	-	< 0.001	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.1	7.8	8.7	8.3	8.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	330	73	37	230	55
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.17	0.037	0.018	0.12	0.028
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	167	36.7	18.3	116	27.6
Organic Matter	%	0.1	MCERTS	1.5	1.5	0.6	5.2	1.6
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	1.3	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.65	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.56	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	6.2	< 0.05	0.49	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	1.3	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	7.9	< 0.05	0.89	0.49	< 0.05
Pyrene	mg/kg	0.05	MCERTS	6.9	< 0.05	0.84	0.46	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	4.1	< 0.05	0.36	0.48	< 0.05
Chrysene	mg/kg	0.05	MCERTS	4.2	< 0.05	0.54	0.63	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	5.4	< 0.05	0.47	1.2	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	2.6	< 0.05	0.30	0.49	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.8	< 0.05	0.52	0.72	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.4	< 0.05	< 0.05	0.59	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	2.7	< 0.05	< 0.05	0.76	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	51.0	< 0.80	4.41	5.83	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.7	16	19	200	16
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	14	27	20	54	32
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	15	27	21	55	32
Copper (aqua regia extractable)	mg/kg	1	MCERTS	41	16	58	540	14
Lead (aqua regia extractable)	mg/kg	1	MCERTS	440	15	100	510	36
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.4	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	24	25	280	22
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	42	81	330	59
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	16	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	16	< 10	< 10	10	< 10

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	6.9	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	6.5	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	29	< 10	11	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	88	< 10	14	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	130	< 10	28	16	< 10

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				901281	901282	906407	906429	906430
Sample Reference				BH1001	BH1001	BH1003E	WS1003	WS1003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.30	1.00	1.70
Date Sampled				30/01/2018	30/01/2018	05/02/2018	06/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
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	9.2	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	9.4	12	10	11	2.9
Total mass of sample received	kg	0.001	NONE	1.6	1.3	1.5	2.0	1.1
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	Chrysotile	Chrysotile & Amosite	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	0.009	0.033	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	0.009	0.033	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.3	10.4	9.4	10.3	9.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	450	820	160	650	190
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.22	0.41	0.078	0.33	0.095
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	224	409	77.7	326	95.2
Organic Matter	%	0.1	MCERTS	0.6	7.4	3.4	2.3	10
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	2.9	< 0.05	0.69	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.59
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	1.4	< 0.05	0.90	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	1.2	< 0.05	1.0	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	6.3	3.4	7.2	1.1
Anthracene	mg/kg	0.05	MCERTS	< 0.05	1.2	0.80	2.0	0.55
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	5.6	4.8	13	4.5
Pyrene	mg/kg	0.05	MCERTS	< 0.05	4.6	3.9	12	4.5
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	3.3	2.7	9.1	4.7
Chrysene	mg/kg	0.05	MCERTS	< 0.05	2.4	1.9	5.7	3.6
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	3.3	2.7	11	7.5
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.9	1.4	4.8	3.2
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	2.6	1.8	8.0	5.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.7	1.6	5.9	3.6
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.4	0.88
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	1.3	1.1	4.3	4.5
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	39.6	26.0	86.7	44.4
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	37	11	21	48	5.0
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.0	< 0.2	< 0.2	1.9	0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	10	17	14	18	4.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	10	17	14	18	4.5
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12	34	100	41	13
Lead (aqua regia extractable)	mg/kg	1	MCERTS	66	41	380	150	14
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	16	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	11	32	23	22	6.9
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	210	110	110	550	49
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	6.3	< 1.0	1.8	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	14	140	< 2.0	110	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	49	390	16	300	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	68	350	100	200	180
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	130	890	120	610	190

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	1.8	7.3	< 1.0	1.6	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	20	51	9.2	65	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	51	150	46	220	19
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	80	210	180	260	750
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	150	420	240	540	770

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Chloroethane	µg/kg	1	NONE	-	-	< 1.0	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	< 1.0	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	-	-
Benzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Styrene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Tribromomethane	µg/kg	1	NONE	-	-	< 1.0	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	0.4	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	3.4	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	0.80	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	0.6	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	0.8	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	4.8	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	3.9	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	2.7	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	1.9	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	2.7	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	1.4	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	1.8	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	1.6	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	1.1	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906563	906567	906568	906569	906570
Sample Reference				WS1009	WS1008	BH1003C	TP1003	WS1018
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.45	0.45	0.30	0.15
Date Sampled				05/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	-	-

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
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	16	< 0.1	< 0.1	19	42
Moisture Content	%	N/A	NONE	7.5	13	16	6.5	4.5
Total mass of sample received	kg	0.001	NONE	1.3	1.5	0.92	1.4	1.6
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile & Amosite & Crocidolite	Chrysotile	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.440	< 0.001	0.002
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.440	< 0.001	0.002
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.2	8.7	8.5	11.3	10.4
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	330	54	170	200	240
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.17	0.027	0.085	0.10	0.12
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	167	26.9	84.6	101	119
Organic Matter	%	0.1	MCERTS	1.0	0.5	6.5	4.1	1.0
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.40	0.44	0.29
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.44	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.21	0.27	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.20	0.33	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.46	< 0.05	3.1	4.5	1.8
Anthracene	mg/kg	0.05	MCERTS	0.18	< 0.05	0.59	1.2	0.40
Fluoranthene	mg/kg	0.05	MCERTS	1.4	< 0.05	4.7	11	2.8
Pyrene	mg/kg	0.05	MCERTS	1.5	< 0.05	6.3	9.2	2.6
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.5	< 0.05	3.8	8.2	1.8
Chrysene	mg/kg	0.05	MCERTS	1.4	< 0.05	2.6	5.7	0.97
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.6	< 0.05	3.6	11	1.9
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2	< 0.05	1.7	5.0	0.80
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.2	< 0.05	2.9	7.7	1.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.6	< 0.05	1.6	6.1	0.82
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.51	< 0.05	0.48	1.6	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.2	< 0.05	1.4	3.8	0.74
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	16.8	< 0.80	33.5	77.3	16.3
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.8	9.7	47	12	10
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	1.3	0.3	0.5
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	20	8.2	41	17	7.6
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	8.3	41	17	7.6
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17	15	250	180	25
Lead (aqua regia extractable)	mg/kg	1	MCERTS	33	44	500	96	310
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.9	11	98	29	7.8
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	42	36	470	130	140
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	8.9	3.4	2.1
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	12	< 8.0	120	46	20
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	33	< 8.0	240	94	49
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	45	< 10	370	140	73

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	13	8.0	5.7
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	19	< 10	210	61	25
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	110	< 10	440	180	100
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	130	< 10	660	250	130

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	0.46	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	0.18	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	1.4	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	1.5	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.5	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	1.4	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.6	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.2	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.6	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.51	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.2	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906571	906572	906573	906574	906578
Sample Reference				WS1007	WS1007	WS1002	WS017	WS1006
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.00	0.50	0.20	0.50
Date Sampled				05/02/2018	05/02/2018	07/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	< 0.007	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
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	22	38	13	41
Total mass of sample received	kg	0.001	NONE	2.0	1.1	2.0	1.7	0.93
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite & Crocidolite	Chrysotile	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.156	< 0.001	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.156	< 0.001	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.6	8.4	7.7	10.4	7.9
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	450	110	170	270	410
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.23	0.053	0.084	0.13	0.20
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	227	53.2	83.9	133	203
Organic Matter	%	0.1	MCERTS	1.2	6.3	4.7	2.9	5.7
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.47	0.31	0.41	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.42	0.63	0.83	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.37	0.12	0.71	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.42	0.23	1.7	0.19	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	4.1	3.2	12	3.3	0.96
Anthracene	mg/kg	0.05	MCERTS	1.0	0.73	2.4	1.2	0.24
Fluoranthene	mg/kg	0.05	MCERTS	6.3	7.5	12	12	1.0
Pyrene	mg/kg	0.05	MCERTS	5.6	6.3	8.7	10	0.92
Benzo(a)anthracene	mg/kg	0.05	MCERTS	4.6	5.0	5.8	8.0	0.55
Chrysene	mg/kg	0.05	MCERTS	2.4	3.0	3.2	5.1	0.38
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	5.7	6.3	5.5	9.8	0.61
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.8	2.4	2.1	4.7	0.16
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.2	4.3	3.9	7.1	0.37
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.8	3.0	1.9	5.0	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.60	0.78	0.54	1.2	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.9	2.4	1.6	3.6	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	42.3	46.1	62.1	72.1	5.20
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	27	16	21	17
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	21	21	43	22	47
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	21	21	43	23	47
Copper (aqua regia extractable)	mg/kg	1	MCERTS	37	340	20	96	36
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1100	1800	95	470	80
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.9	14	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	34	27	25	30
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	480	330	79	170	85
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	1.4	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	5.8	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	24	< 8.0	< 8.0	8.4	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	90	22	< 8.0	35	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	120	23	< 10	44	< 10

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	1.9	3.6	2.1	< 1.0	1.5
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	12	11	18	5.1	6.2
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	50	64	120	67	15
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	180	120	190	170	40
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	240	200	330	250	62

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Chloroethane	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
Bromomethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Trichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
Benzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Dibromomethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Styrene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Tribromomethane	µg/kg	1	NONE	-	-	< 1.0	< 1.0	-
o-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Bromobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	< 1.0	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	< 0.1	< 0.1	-
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	< 0.2	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05	< 0.05	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	< 0.2	-
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	0.41	< 0.05	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	< 0.1	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	< 0.1	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	0.5	< 0.1	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1	< 0.1	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	0.63	0.83	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	0.71	< 0.05	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	1.0	< 0.2	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3	< 0.3	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Fluorene	mg/kg	0.05	MCERTS	-	-	1.7	0.19	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	12	3.3	-
Anthracene	mg/kg	0.05	MCERTS	-	-	2.4	1.2	-
Carbazole	mg/kg	0.3	MCERTS	-	-	1.3	< 0.3	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	1.7	< 0.3	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	12	12	-
Pyrene	mg/kg	0.05	MCERTS	-	-	8.7	10	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3	< 0.3	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	5.8	8.0	-
Chrysene	mg/kg	0.05	MCERTS	-	-	3.2	5.1	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	5.5	9.8	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	2.1	4.7	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	3.9	7.1	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	1.9	5.0	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	0.54	1.2	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	1.6	3.6	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906579	906580	906581	906587	906588
Sample Reference				TP1005	BH1004	BH1004	WS1019	WS1019
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.70	0.60	2.00	0.50	1.80
Date Sampled				09/02/2018	05/02/2018	05/02/2018	07/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	< 0.007	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
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	23	44	30	< 0.1
Moisture Content	%	N/A	NONE	22	12	2.0	4.5	31
Total mass of sample received	kg	0.001	NONE	2.0	0.88	2.0	1.6	1.9
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile & Crocidolite	-	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.667	-	0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.667	-	0.001	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.4	10.9	9.1	9.2	7.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	55	570	82	91	830
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.028	0.28	0.041	0.046	0.42
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	27.5	283	40.9	45.7	417
Organic Matter	%	0.1	MCERTS	1.4	3.1	0.4	1.0	5.4
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.20	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.54	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.20	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	1.3	< 0.05	2.4	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.39	< 0.05	0.67	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	3.5	< 0.05	4.6	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	4.2	< 0.05	3.9	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	2.7	< 0.05	2.7	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	1.7	< 0.05	1.8	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	2.9	< 0.05	3.0	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.2	< 0.05	1.3	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	2.3	< 0.05	2.3	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.4	< 0.05	1.4	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	1.1	< 0.05	1.1	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	23.2	< 0.80	25.5	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.7	33	6.4	9.8	17
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	1.4	0.8	0.8	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	23	28	4.4	9.1	32
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	29	4.4	9.2	33
Copper (aqua regia extractable)	mg/kg	1	MCERTS	10	71	14	31	25
Lead (aqua regia extractable)	mg/kg	1	MCERTS	37	380	25	100	120
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	36	4.6	10	24
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	56	750	130	170	66
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	1.7	< 1.0	3.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	2.3	< 2.0	4.6	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	9.0	< 8.0	69	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	65	< 8.0	110	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	78	< 10	180	< 10

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	1.6	< 1.0	1.2	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	8.8	< 2.0	9.8	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	38	< 10	52	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	170	< 10	120	16
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	220	< 10	190	20

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906589	906590	906591	906592	906623
Sample Reference				TP1001	WS1004	WS1005	WS1005	TP1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.20	0.30	0.50	1.50
Date Sampled				05/02/2018	06/02/2018	08/02/2018	08/02/2018	07/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
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	63	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	4.3	11	13	7.6	27
Total mass of sample received	kg	0.001	NONE	1.7	2.0	2.0	2.0	1.9
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile & Amosite	-	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	< 0.001	-	< 0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	< 0.001	-	< 0.001	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	11.3	9.6	8.8	8.6	7.9
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	290	140	28	1200	370
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.14	0.072	0.014	0.58	0.18
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	143	72.2	14.2	582	184
Organic Matter	%	0.1	MCERTS	1.7	2.6	0.7	2.7	4.4
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.33	5.5	< 0.05	0.29	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	1.0	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.42	3.6	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.37	4.1	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	5.8	28	< 0.05	0.50	< 0.05
Anthracene	mg/kg	0.05	MCERTS	1.5	11	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	11	36	< 0.05	0.74	< 0.05
Pyrene	mg/kg	0.05	MCERTS	9.0	33	< 0.05	0.69	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	6.3	43	< 0.05	0.41	< 0.05
Chrysene	mg/kg	0.05	MCERTS	4.4	23	< 0.05	0.49	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	8.6	67	< 0.05	0.67	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	2.4	14	< 0.05	0.31	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	6.0	44	< 0.05	0.57	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3.5	29	< 0.05	0.32	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.1	7.9	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	2.7	20	< 0.05	0.47	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	63.1	370	< 0.80	5.46	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	8.7	17	14	12
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.3	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	21	12	24	15	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	21	12	24	15	31
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	49	30	29	20
Lead (aqua regia extractable)	mg/kg	1	MCERTS	23	130	180	64	43
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	2.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	14	26	23	23
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	120	200	77	160	65
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	6.7	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	21	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	9.6	110	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	120	290	< 8.0	57	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	130	420	< 10	65	< 10

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	4.1	6.7	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	17	44	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	89	410	< 10	11	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	480	1200	< 10	87	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	590	1600	< 10	100	< 10

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	0.33	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	0.5	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	0.42	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	0.9	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	0.37	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	5.8	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	1.5	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	1.5	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	11	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	9.0	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	6.3	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	4.4	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	8.6	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	2.4	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	6.0	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3.5	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.1	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	2.7	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				906626	906627	906634	908320	908321
Sample Reference				WS013	TP1007	TP1008	TP1002	TP1002
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.20	1.50	0.80	1.70
Date Sampled				08/02/2018	09/02/2018	09/02/2018	12/02/2018	12/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	< 0.007	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
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	11	22	28	12	14
Total mass of sample received	kg	0.001	NONE	1.9	0.97	1.2	1.8	1.3
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	Chrysotile	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.013	< 0.001	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	0.013	< 0.001	-	-	< 0.001
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.2	7.0	7.8	11.2	8.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	480	760	580	250	38
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.24	0.38	0.29	0.12	0.019
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	241	381	288	124	18.9
Organic Matter	%	0.1	MCERTS	1.2	13	2.4	0.8	5.1
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	1.2	3.0	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.36	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.97	14	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.98	10	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	11	140	0.45	< 0.05	1.4
Anthracene	mg/kg	0.05	MCERTS	2.5	37	< 0.05	< 0.05	0.27
Fluoranthene	mg/kg	0.05	MCERTS	15	160	0.60	0.33	2.6
Pyrene	mg/kg	0.05	MCERTS	13	150	0.55	0.31	2.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	8.3	88	0.24	< 0.05	1.3
Chrysene	mg/kg	0.05	MCERTS	6.9	71	0.28	< 0.05	1.5
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	7.6	74	0.39	< 0.05	1.7
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	5.1	40	0.50	< 0.05	0.65
Benzo(a)pyrene	mg/kg	0.05	MCERTS	8.2	81	0.26	< 0.05	1.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	4.8	33	0.14	< 0.05	0.82
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.3	8.2	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	5.6	44	0.18	< 0.05	1.1
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	92.3	962	3.59	< 0.80	15.2
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.1	28	11	12	34
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.0	< 0.2	< 0.2	< 0.2	4.0
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	14	17	23	11	28
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	15	17	23	11	29
Copper (aqua regia extractable)	mg/kg	1	MCERTS	170	94	17	54	140
Lead (aqua regia extractable)	mg/kg	1	MCERTS	330	180	24	240	240
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	7.6	< 0.3	< 0.3	< 0.3	17
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	12	37	20	15	97
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.1	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	180	130	58	38	1200
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	1.1	46	< 1.0	1.8	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	28	89	< 2.0	7.2	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	120	1000	< 8.0	36	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	360	11000	< 8.0	150	9.2
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	500	12000	< 10	200	< 10

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	8.6	28	1.1	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	34	280	4.7	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	210	1900	14	< 10	13
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	560	8200	110	62	27
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	810	10000	130	71	41

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	1.2	3.0	< 0.05	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	0.5	6.5	< 0.1	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.36	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	0.97	14	< 0.05	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	0.6	7.5	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	0.98	10	< 0.05	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	11	140	0.45	-	-
Anthracene	mg/kg	0.05	MCERTS	2.5	37	< 0.05	-	-
Carbazole	mg/kg	0.3	MCERTS	1.1	4.1	< 0.3	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	11	< 0.3	-	-
Fluoranthene	mg/kg	0.05	MCERTS	15	160	0.60	-	-
Pyrene	mg/kg	0.05	MCERTS	13	150	0.55	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	8.3	88	0.24	-	-
Chrysene	mg/kg	0.05	MCERTS	6.9	71	0.28	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	7.6	74	0.39	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	5.1	40	0.50	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	8.2	81	0.26	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	4.8	33	0.14	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.3	8.2	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	5.6	44	0.18	-	-

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908408	908409	908422	908442	908443
Sample Reference				TP1005	WS1002	WS1006	TP1008	W1001
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.70	1.90	0.40	0.20
Date Sampled				09/02/2018	07/02/2018	08/02/2018	09/02/2018	08/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	< 0.007	< 0.007	< 0.007	-	-

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Combined Report : SSE Site, Vastern Road - Soil

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Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
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	43	< 0.1
Moisture Content	%	N/A	NONE	17	8.5	32	6.5	3.5
Total mass of sample received	kg	0.001	NONE	1.4	1.8	2.0	2.0	2.0
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile & Amosite & Crocidolite	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.001	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.001	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.3	10.1	8.3	8.0	7.6
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	65	660	110	130	19
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.032	0.33	0.053	0.064	0.0096
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	32.3	329	53.2	63.8	9.6
Organic Matter	%	0.1	MCERTS	2.5	3.5	2.2	1.0	0.3
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.75	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.56	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.31	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	4.1	1.6	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.88	0.36	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	3.8	2.3	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	3.3	2.1	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.6	1.0	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	1.7	1.2	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.4	1.4	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.92	0.55	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.6	1.3	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.66	0.66	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.93	0.89	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	22.4	13.4	< 0.80	< 0.80	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	20	18	30	38
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.5	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	22	20	33	32	26
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	22	21	33	32	26
Copper (aqua regia extractable)	mg/kg	1	MCERTS	61	59	8.9	5.0	3.5
Lead (aqua regia extractable)	mg/kg	1	MCERTS	90	400	15	14	16
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	29	25	41	34
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	83	390	63	56	45
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	2.4	2.3	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	100	140	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	370	960	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	15	71	32	60	11
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	18	75	510	1200	15

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	1.3	< 1.0	4.1	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	7.5	2.2	450	790	5.4
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	26	18	370	730	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	38	77	19	41	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	73	97	850	1600	13

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Chloroethane	µg/kg	1	NONE	-	-	-	< 1.0	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
Benzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Toluene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	< 1.0	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Styrene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Tribromomethane	µg/kg	1	NONE	-	-	-	< 1.0	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	< 1.0	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	< 0.1	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	< 0.2	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	< 0.2	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	< 0.1	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	< 0.1	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	< 0.1	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	< 0.3	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	< 0.2	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	< 0.3	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	< 0.3	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908444	908445	908458	908459	908460
Sample Reference				W1001	TP1001	BH2003	BH2003	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	0.50	2.40	3.50	4.20
Date Sampled				08/02/2018	07/02/2018	13/02/2018	13/02/2018	13/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	< 0.001	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	< 0.007	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
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	53	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	26	35	3.5	10	12
Total mass of sample received	kg	0.001	NONE	2.0	1.9	2.0	2.0	1.0
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	< 0.001
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.4	8.0	8.8	9.3	8.5
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	34	260	41	210	120
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.017	0.13	0.021	0.11	0.062
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	16.9	132	20.6	106	62.4
Organic Matter	%	0.1	MCERTS	1.6	3.3	0.2	1.0	1.7
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.48	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.53	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	4.7	0.47
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.3	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	5.1	0.75
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	4.3	0.67
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.4	0.34
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.3	0.37
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.4	0.47
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.2	0.21
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.4	0.37
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1	0.24
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.27	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.2	0.26
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	29.5	4.15
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	14	15	26	24
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	26	35	17	20	21
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	26	35	17	20	21
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12	20	19	34	29
Lead (aqua regia extractable)	mg/kg	1	MCERTS	24	38	12	190	75
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	25	21	24	26
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	50	63	23	100	700
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	19	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	21	< 10	< 10

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	24	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	55	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	82	< 10

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
Benzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Styrene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	< 1.0

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	< 0.2	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	< 0.3	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.47
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.75
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.67
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	< 0.3	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.34
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.37
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.47
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.21
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.37
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.24
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	0.26

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908464	908465	908508	908650	908667
Sample Reference				BH2001	BH2001	BH2004	BH1003E	W1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	4.00	0.60	1.00
Date Sampled				13/02/2017	13/02/2017	13/02/2018	05/02/2018	06/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 118	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 138	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 153	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
PCB Congener 180	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	< 0.001
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	< 0.007	< 0.007	-	< 0.007

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
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	20	34	29	29	23
Total mass of sample received	kg	0.001	NONE	1.9	2.0	1.6	1.7	1.8
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.9	8.2	8.0	7.9	7.8
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	130	70	170	160	110
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.065	0.035	0.084	0.081	0.057
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	64.9	34.8	83.6	81.1	56.6
Organic Matter	%	0.1	MCERTS	0.3	1.6	2.3	2.9	5.5
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.27	< 0.05	< 0.05	0.45	0.29
Pyrene	mg/kg	0.05	MCERTS	0.29	< 0.05	< 0.05	0.45	0.27
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.33	0.17
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.41	0.26
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.66	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.22	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.50	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.30	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.33	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	3.65	0.99
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.6	17	11	17	21
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	0.3
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	3.2	26	32	27	14
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	3.6	26	32	27	14
Copper (aqua regia extractable)	mg/kg	1	MCERTS	50	11	15	47	190
Lead (aqua regia extractable)	mg/kg	1	MCERTS	43	16	16	140	730
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	21	24	29	37
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	36	54	55	78	200
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	-

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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	4.0	< 1.0	< 1.0	16
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	10	60	< 2.0	< 2.0	860
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	14	66	< 8.0	< 8.0	2200
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	9.9	8.3	< 8.0	< 8.0	97
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	34	140	< 10	< 10	3200

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	5.4	< 1.0	< 1.0	47
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	31	< 2.0	53	3600
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	52	< 10	110	3900
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	13	< 10	< 10	91
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	100	< 10	160	7600

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Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	0.27	-	-	-	0.29
Pyrene	mg/kg	0.05	MCERTS	0.29	-	-	-	0.27
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	0.17
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	0.26
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

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				908686	908687	908688	909146	909147
Sample Reference				BH2002	BH2002	BH2002	BH2005	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.50	2.20	1.75	1.90
Date Sampled				12/02/2018	12/02/2018	12/02/2018	14/02/2018	14/02/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	< 0.007	-	-	-	< 0.007

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
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	40	40	28	35	
Total mass of sample received	kg	0.001	NONE	1.8	1.4	2.0	1.8	
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.9	7.7	8.0	7.7	
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	610	190	130	350	
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.30	0.097	0.066	0.18	
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	305	96.9	65.6	176	
Organic Matter	%	0.1	MCERTS	3.4	1.8	4.7	3.2	
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.89	< 0.05	
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.73	< 0.05	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.94	< 0.05	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.90	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.40	< 0.05	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.35	< 0.05	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.29	< 0.05	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	4.50	< 0.80	
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	31	34	17	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	
Chromium (III)	mg/kg	1	NONE	63	30	50	38	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	63	30	51	38	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	11	130	10	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	40	41	560	31	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	1.6	100	< 0.3	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	39	37	53	30	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	96	92	220	64	
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	-	-	-	-	

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	

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	1.9	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	2.5	37	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	88	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	35	< 8.0	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	17	160	< 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	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	30	20	180	8.7	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	42	24	160	11	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	16	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	74	48	360	28	

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Chloroethane	µg/kg	1	NONE	-	-	< 1.0	-	
Bromomethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	-	
Trichlorofluoromethane	µg/kg	1	NONE	-	-	< 1.0	-	
1,1-Dichloroethene	µg/kg	1	NONE	-	-	< 1.0	-	
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	-	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Trichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	-	
Benzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Dibromomethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Bromodichloromethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	-	
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
Chlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Ethylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
p & m-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Styrene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Tribromomethane	µg/kg	1	NONE	-	-	< 1.0	-	
o-Xylene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	-	
Isopropylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Bromobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	-	
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	< 1.0	-	
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Butylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	< 1.0	-	
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	< 1.0	-	
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	< 1.0	-	
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	< 1.0	-	

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	< 0.1	-	
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	-	
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	-	
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	-	
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	-	
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	< 0.1	-	
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3	-	
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Phenanthrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Carbazole	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	
Anthraquinone	mg/kg	0.3	MCERTS	-	-	< 0.3	-	
Fluoranthene	mg/kg	0.05	MCERTS	-	-	0.89	-	
Pyrene	mg/kg	0.05	MCERTS	-	-	0.73	-	
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3	-	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	0.94	-	
Chrysene	mg/kg	0.05	MCERTS	-	-	0.90	-	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	0.40	-	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	0.35	-	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	0.29	-	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Lab Sample Number				909148	909199	909200	909201	
Sample Reference				BH2005	BH2006	BH2006	BH2006	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.40	1.40	1.80	2.40	
Date Sampled				14/02/2018	14/02/2018	14/02/2018	14/02/2018	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	-	
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	-	

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	-	

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Combined Report SSE Site, Vastern Road - Soil
Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
901082	BH1003	0.80	164	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
901097	BH1002A	0.50	142	Loose Fibrous Debris & Rope & Loose Fibres & Hard/Cement Type Material	**Chrysotile & Crocidolite & Amosite**	0.199	**0.199**
901098	BH1002C	1.00	130	Loose Fibres	**Chrysotile & Crocidolite**	0.009	**0.009**
901281	BH1001	0.50	152	Loose Fibrous Debris	**Chrysotile & Amosite**	1.311	**1.31**
906429	WS1003	1.00	112	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
906563	WS1009	0.20	149	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
906568	BH1003C	0.45	147	Loose Fibres & Loose Fibrous Debris	**Chrysotile**	0.009	**0.009**
906569	TP1003	0.30	173	Loose Fibrous Debris & Loose Fibres	**Chrysotile & Amosite**	0.033	**0.033**
906573	WS1002	0.50	130	Loose Fibrous Debris	**Chrysotile & Amosite & Crocidolite**	0.440	**0.440**
906574	WS017	0.20	147	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
906578	WS1006	0.50	145	Loose Fibres	**Chrysotile**	0.002	**0.002**
906579	TP1005	0.70	140	Loose Fibres & Loose Fibrous Debris	**Chrysotile & Amosite & Crocidolite**	0.156	**0.156**
906580	BH1004	0.60	122	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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Combined Report SSE Site, Vastern Road - Soil
Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
906590	WS1004	0.20	139	Hard/Cement Type Material & Bitumen & Loose Fibrous Debris & Loose Fibres	**Chrysotile & Crocidolite**	0.667	**0.667**
906592	WS1005	0.50	157	Loose Fibrous Debris	**Chrysotile**	0.001	**0.001**
906626	WS013	0.60	170	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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

Combined Report SSE Site, Vastern Road - Soil
Project / Site name: SSE Site, Vastern Road, Reading
Your Order No: C5925

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
906627	TP1007	0.20	151	Loose Fibres	**Chrysotile & Amosite**	< 0.001	**< 0.001**
908408	TP1005	0.30	157	Loose Fibres & Hard/Cement Type Material	**Chrysotile & Amosite**	0.013	**0.013**
908409	WS1002	1.70	110	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
908443	W1001	0.20	142	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
908444	W1001	1.00	123	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
908667	W1004	1.00	163	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading

* 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 *
901082	BH1003	None Supplied	0.80	Brown gravelly sand with rubble.
901097	BH1002A	None Supplied	0.50	Grey gravelly sand with rubble.
901098	BH1002C	None Supplied	1.00	Brown clay and sand with rubble and gravel
901150	BH1005	None Supplied	0.70	Brown sand with gravel and rubble.
901151	BH1005	None Supplied	2.00	Light brown clay and sand.
901281	BH1001	None Supplied	0.50	Brown gravelly sand with rubble and stones.
901282	BH1001	None Supplied	2.00	Grey clay with gravel.
906407	BH1003E	None Supplied	1.30	Brown clay and sand with rubble and gravel
906429	WS1003	None Supplied	1.00	Brown gravelly sand with stones.
906430	WS1003	None Supplied	1.70	Brown clay.
906563	WS1009	None Supplied	0.20	Light brown sandy gravel with brick.
906567	WS1008	None Supplied	0.45	Black gravelly sand with stones.
906568	BH1003C	None Supplied	0.45	Brown gravelly sand.
906569	TP1003	None Supplied	0.30	Brown gravelly loam with brick.
906570	WS1018	None Supplied	0.15	Black gravelly sand with clinker.
906571	WS1007	None Supplied	0.15	Light brown gravelly loam with stones.
906572	WS1007	None Supplied	1.00	Brown clay with chalk and gravel
906573	WS1002	None Supplied	0.50	Black sandy loam with gravel.
906574	WS017	None Supplied	0.20	Grey sand with gravel and stones.
906578	WS1006	None Supplied	0.50	Brown gravelly clay with stones.
906579	TP1005	None Supplied	0.70	Brown gravelly sand with brick.
906580	BH1004	None Supplied	0.60	Black gravelly clay.
906581	BH1004	None Supplied	2.00	Grey clay and sand.
906587	WS1019	None Supplied	0.50	Brown gravelly clay with brick.
906588	WS1019	None Supplied	1.80	Grey clay and sand.
906589	TP1001	None Supplied	1.00	Brown loam and clay with gravel.
906590	WS1004	None Supplied	0.20	Brown gravelly loam with stones.
906591	WS1005	None Supplied	0.30	Brown gravel with stones.
906592	WS1005	None Supplied	0.50	Brown gravel with stones.
906623	TP1004	None Supplied	1.50	Grey sandy clay with gravel.
906626	WS013	None Supplied	0.60	Grey gravelly sand with stones and rubble.
906627	TP1007	None Supplied	0.20	Brown sand with gravel.
906634	TP1008	None Supplied	1.50	Brown clay and gravel.
908320	TP1002	None Supplied	0.80	Brown clay and sand with rubble and tar.
908321	TP1002	None Supplied	1.70	Brown clay and sand.
908408	TP1005	None Supplied	0.30	Brown sand with brick and rubble.
908409	WS1002	None Supplied	1.70	Grey clay and sand with gravel.
908422	WS1006	None Supplied	1.90	Light brown clay and sand.
908442	TP1008	None Supplied	0.40	Light brown clay and sand with chalk and rubble.
908443	W1001	None Supplied	0.20	Brown loam and clay with rubble and vegetation.
908444	W1001	None Supplied	1.00	Brown clay and sand with gravel.
908445	TP1001	None Supplied	0.50	Brown loam and sand with brick and rubble.
908458	BH2003	None Supplied	2.40	Grey clay.
908459	BH2003	None Supplied	3.50	Light brown clay and sand with stones and gravel.
908460	BH2003	None Supplied	4.20	Light brown gravelly sand.
908464	BH2001	None Supplied	1.00	Brown clay.
908465	BH2001	None Supplied	1.50	Grey clay and sand.
908508	BH2004	None Supplied	4.00	Light brown sandy gravel with stones.
908650	BH1003E	None Supplied	0.60	Light brown clay and sand with rubble and brick.
908667	W1004	None Supplied	1.00	Light brown clay and sand with gravel and rubble.
908686	BH2002	None Supplied	1.00	White chalk with gravel. **
908687	BH2002	None Supplied	1.50	Light brown clay and sand.
908688	BH2002	None Supplied	2.20	Light brown clay and sand.
909146	BH2005	None Supplied	1.75	Light brown clay and sand.
909147	BH2005	None Supplied	1.90	Grey clay and sand with gravel and chalk.
909148	BH2005	None Supplied	2.40	Brown clay.
909199	BH2006	None Supplied	1.40	Brown clay.
909200	BH2006	None Supplied	1.80	Brown clay and sand with gravel.
909201	BH2006	None Supplied	2.40	Grey clay.

**Non MCERTS matrix.

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading

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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-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
Cations in soil by ICP-OES	Determination of cations 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	ISO 17025
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
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
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
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
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-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

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Combined Report : SSE Site, Vastern Road - Soil

Project / Site name: SSE Site, Vastern Road, Reading

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
TPH Chromatogram	TPH Chromatogram.	In-house method	L064-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	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

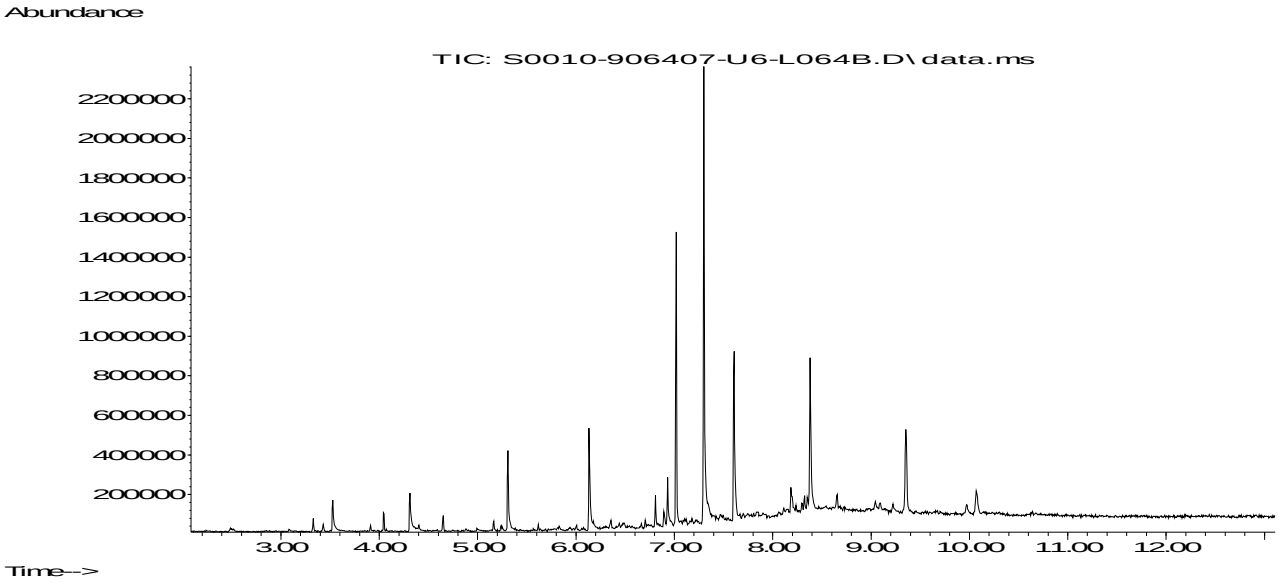
For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received 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.

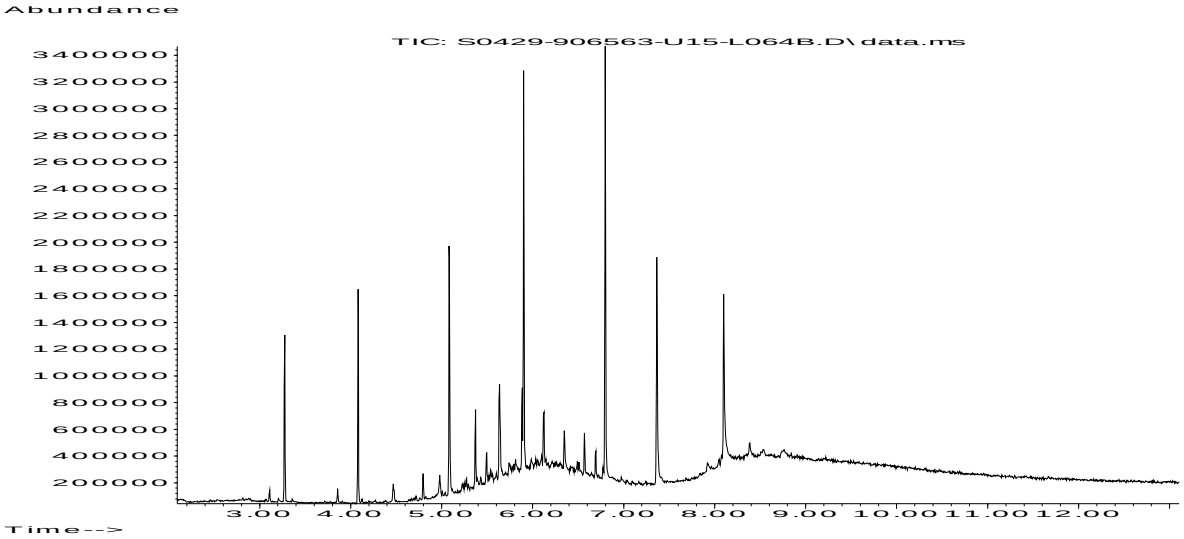
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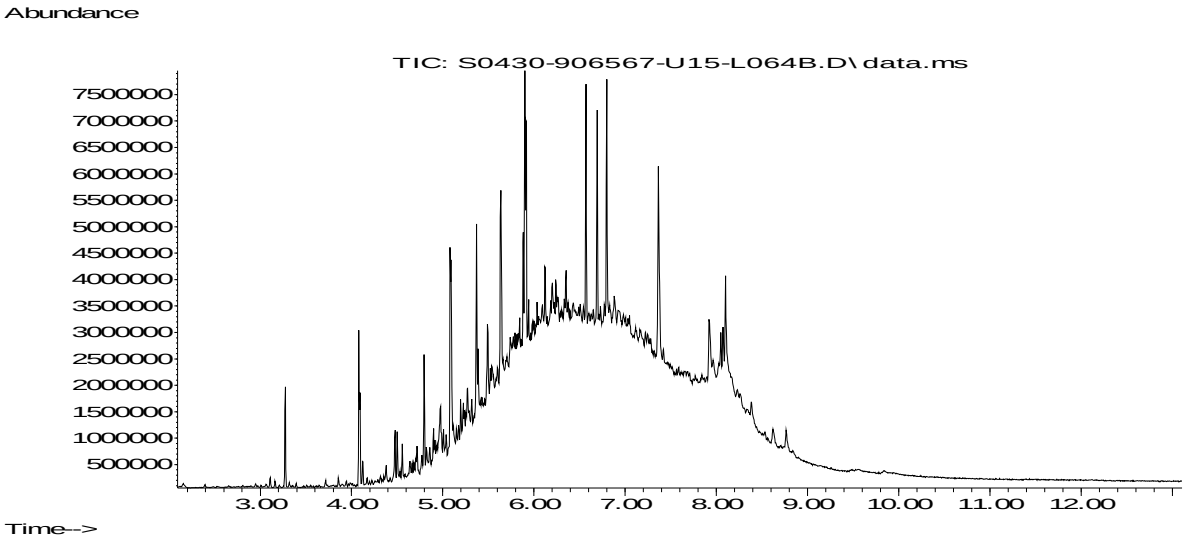
Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
WS1018		S	18-75799	906570	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
WS1018		S	18-75799	906570	b	Monohydric phenols in soil	L080-PL	b
WS1018		S	18-75799	906570	b	Speciated EPA-16 PAHs in soil	L064-PL	b
WS1018		S	18-75799	906570	b	TPH Chromatogram	L064-PL	b
WS1018		S	18-75799	906570	b	TPHCWG (Soil)	L088/76-PL	b

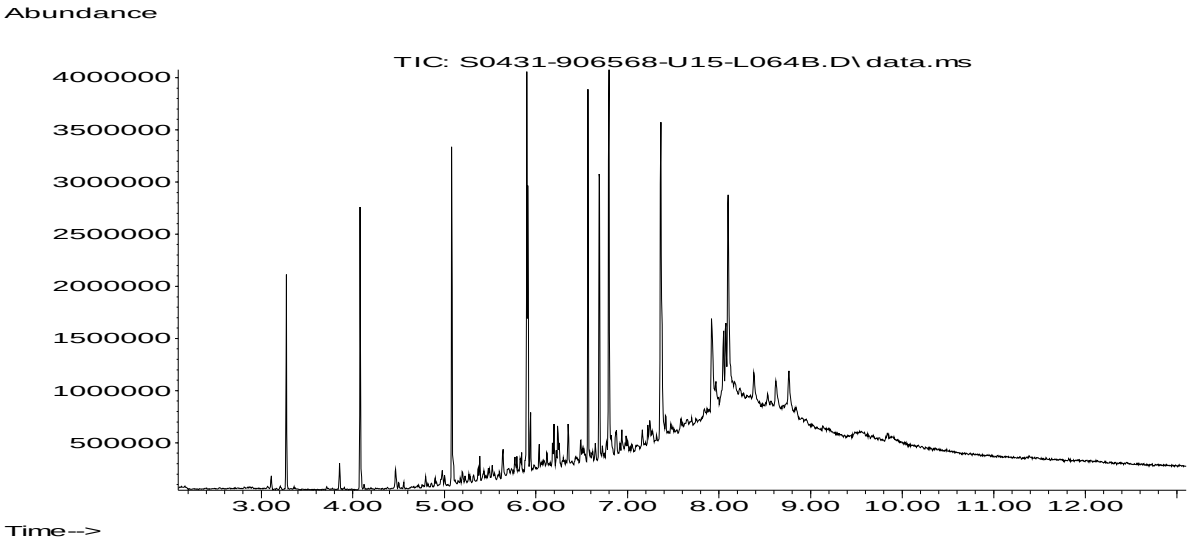
Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature

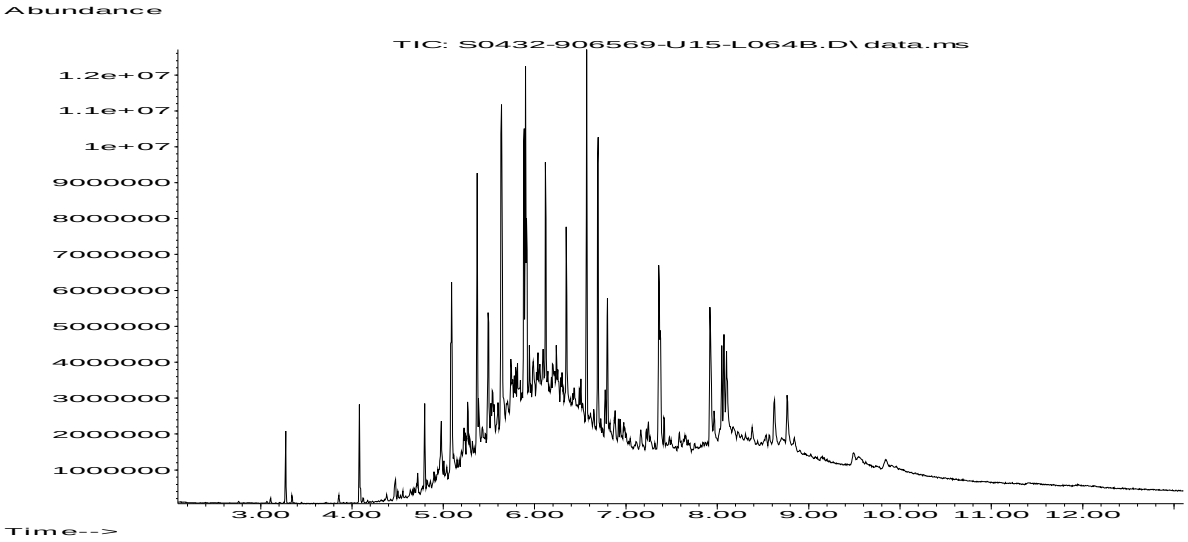
Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH2001		S	18-76104	908464	c	Hexavalent chromium in soil (Lower Level)	L080-PL	c
BH2001		S	18-76104	908464	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH2001		S	18-76104	908464	c	Cr (III) in soil	L080-PL	c
BH2001		S	18-76104	908464	c	Monohydric phenols in soil	L080-PL	c
BH2001		S	18-76104	908464	c	Organic matter (Automated) in soil	L009-PL	c
BH2001		S	18-76104	908464	c	Speciated EPA-16 PAHs in soil	L064-PL	c
BH2001		S	18-76104	908464	c	TPH Chromatogram	L064-PL	c
BH2001		S	18-76104	908464	c	TPHCWG (Soil)	L088/76-PL	c
BH2001		S	18-76104	908464	c	pH in soil (automated)	L099-PL	c
BH2001		S	18-76104	908465	c	Hexavalent chromium in soil (Lower Level)	L080-PL	c
BH2001		S	18-76104	908465	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH2001		S	18-76104	908465	c	Cr (III) in soil	L080-PL	c
BH2001		S	18-76104	908465	c	Monohydric phenols in soil	L080-PL	c
BH2001		S	18-76104	908465	c	Organic matter (Automated) in soil	L009-PL	c
BH2001		S	18-76104	908465	c	PCB's By GC-MS in soil	L027-PL	c
BH2001		S	18-76104	908465	c	Semi-volatile organic compounds in soil	L064-PL	c
BH2001		S	18-76104	908465	c	Speciated EPA-16 PAHs in soil	L064-PL	c
BH2001		S	18-76104	908465	c	TPH Chromatogram	L064-PL	c
BH2001		S	18-76104	908465	c	TPHCWG (Soil)	L088/76-PL	c
BH2001		S	18-76104	908465	c	Volatile organic compounds in soil	L073B-PL	c
BH2001		S	18-76104	908465	c	pH in soil (automated)	L099-PL	c

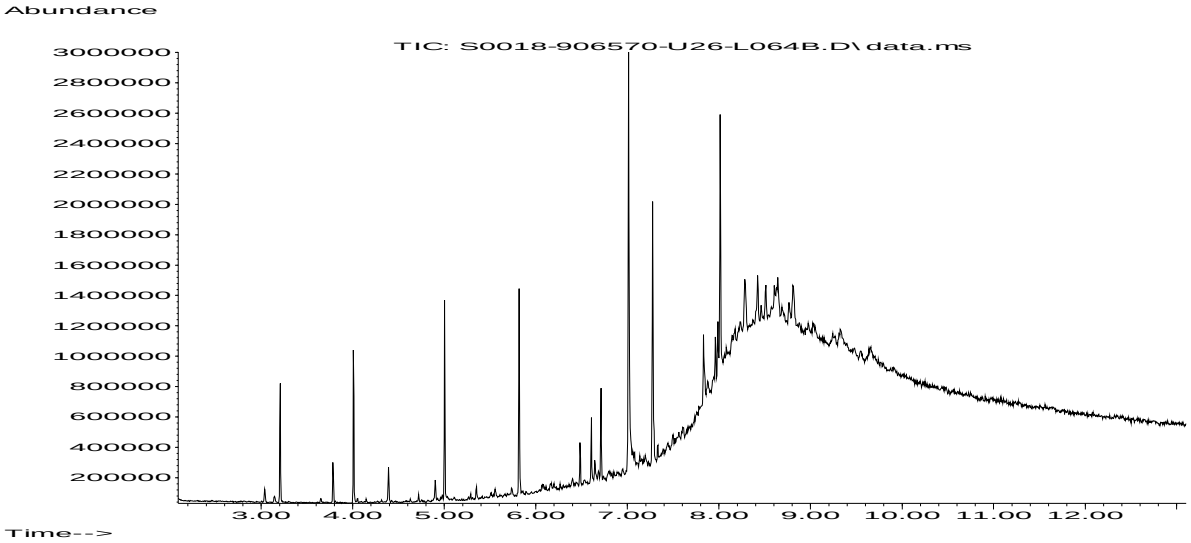

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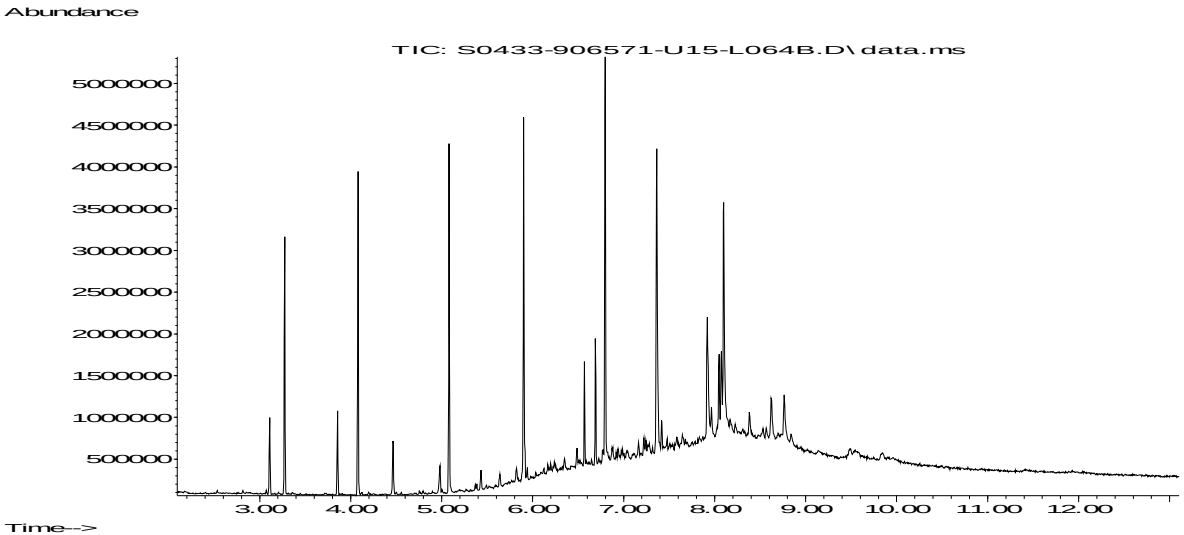

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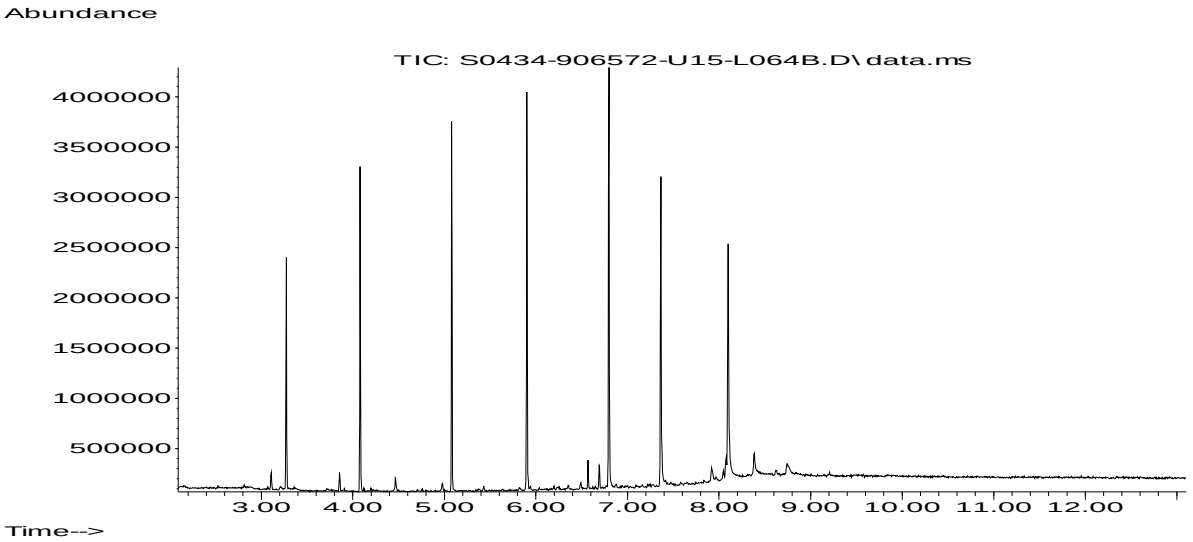

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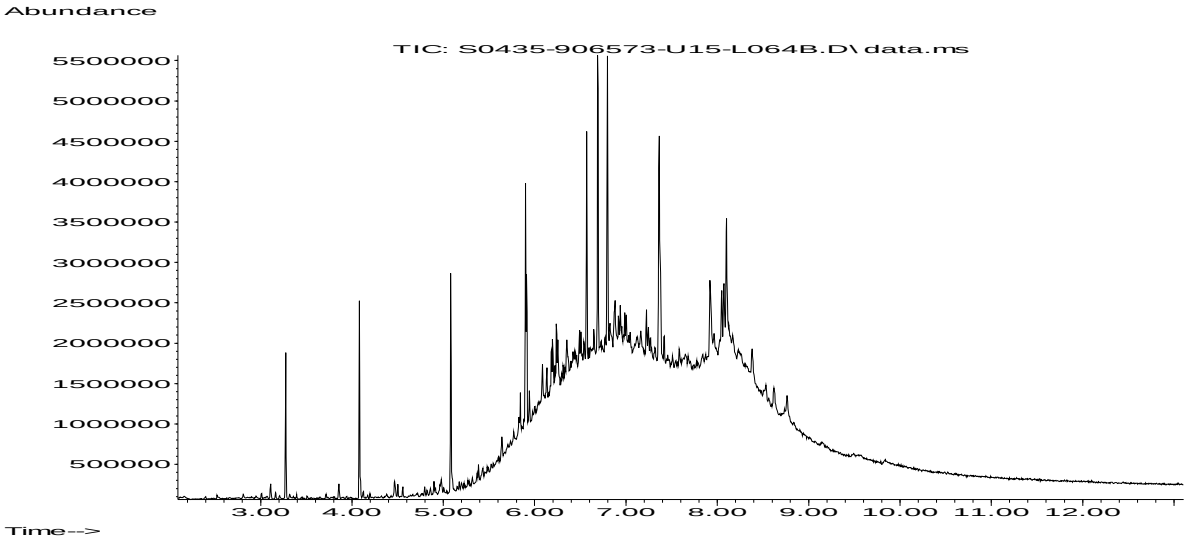

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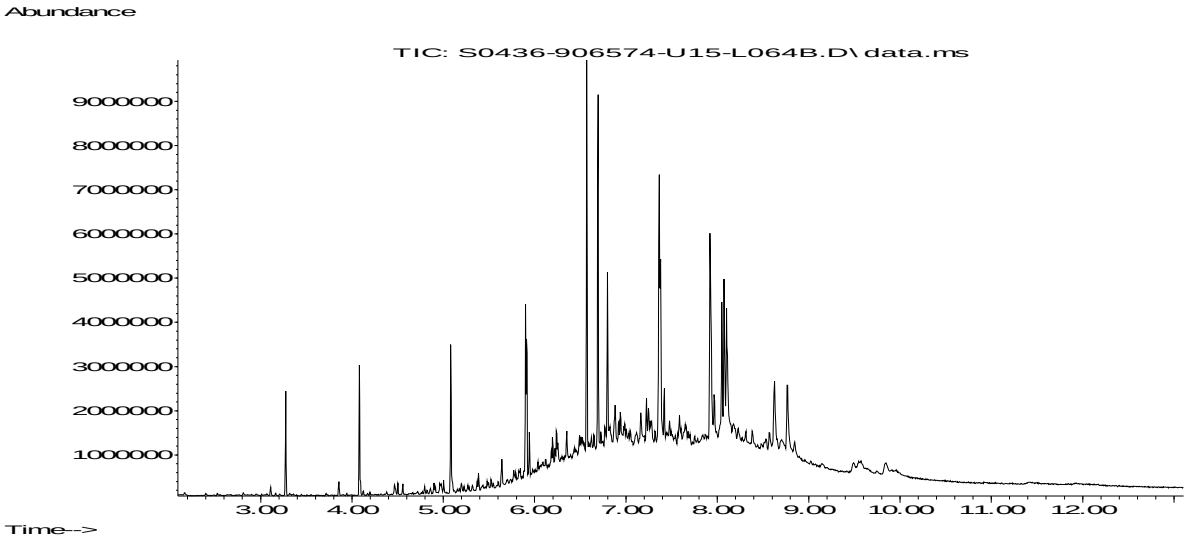

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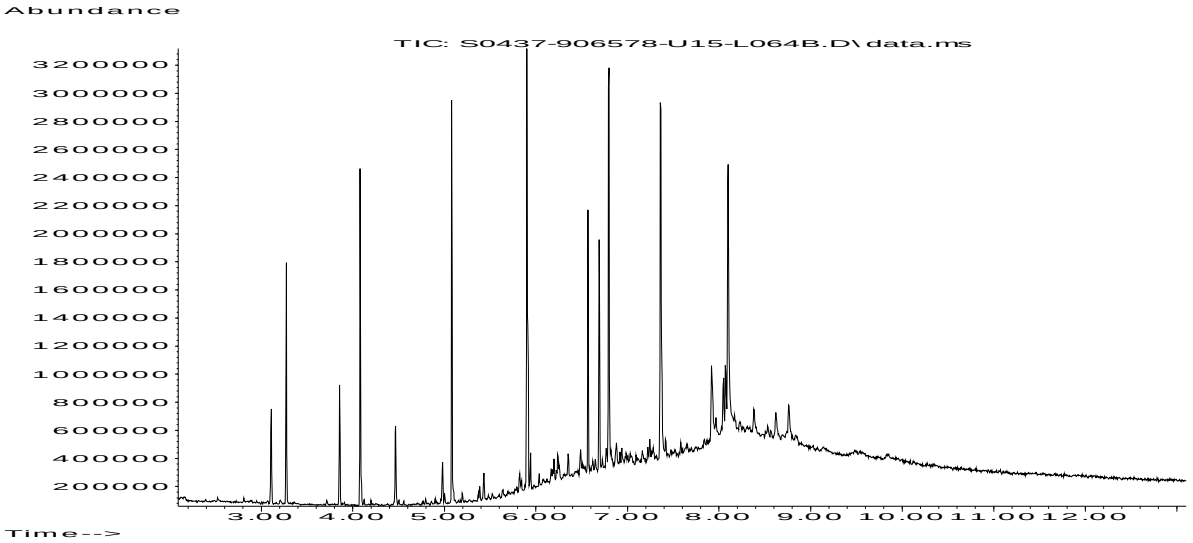

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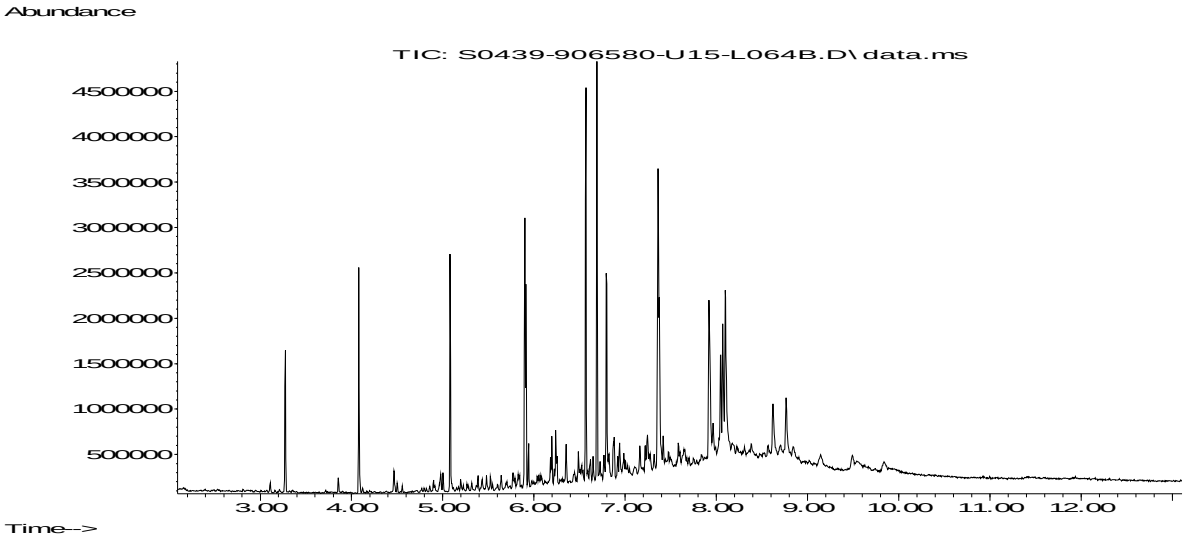

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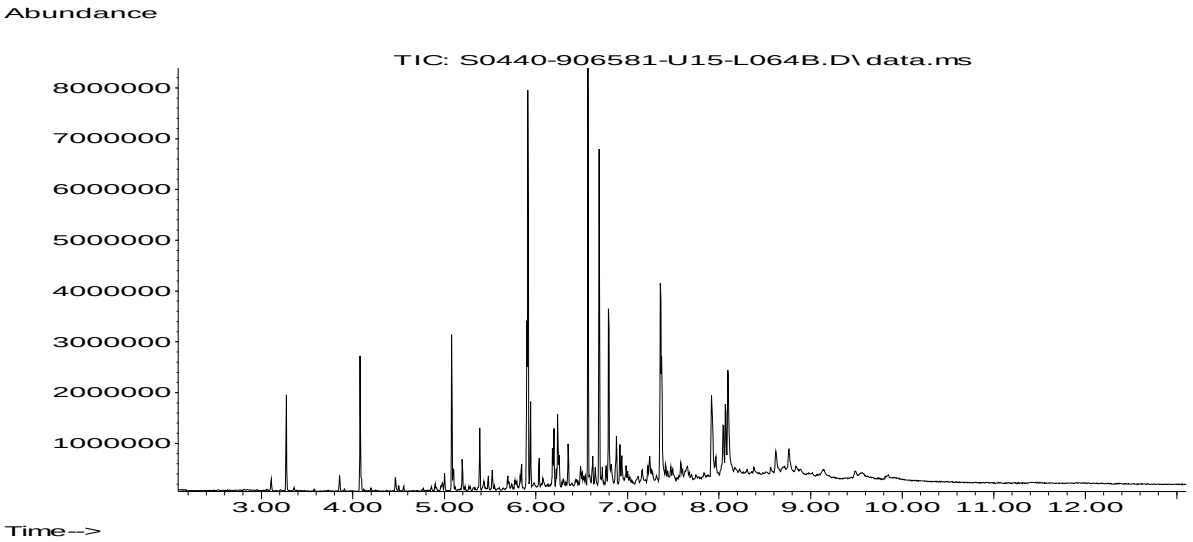

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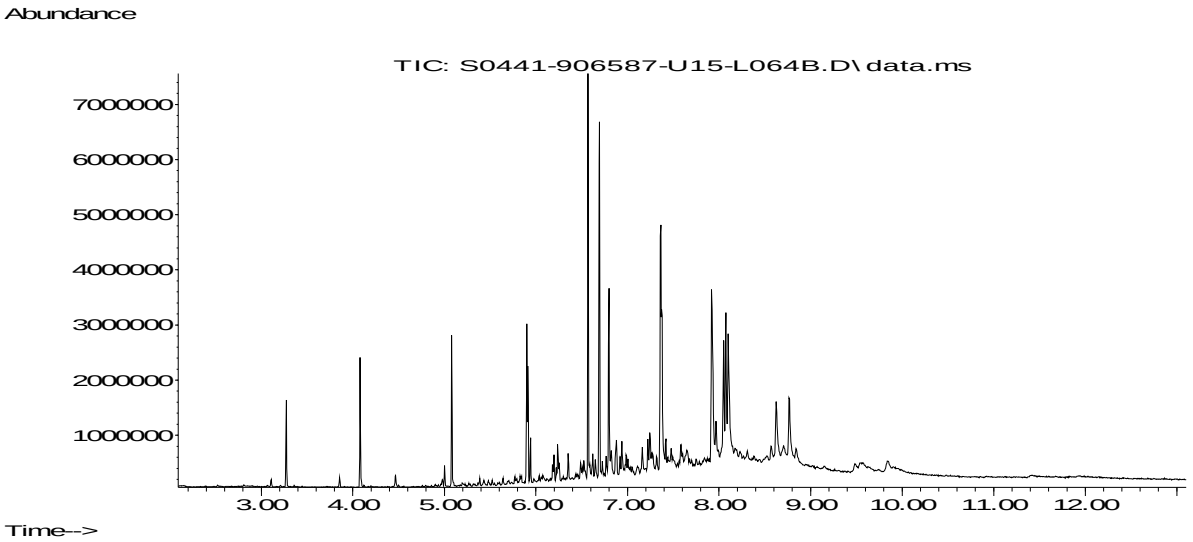

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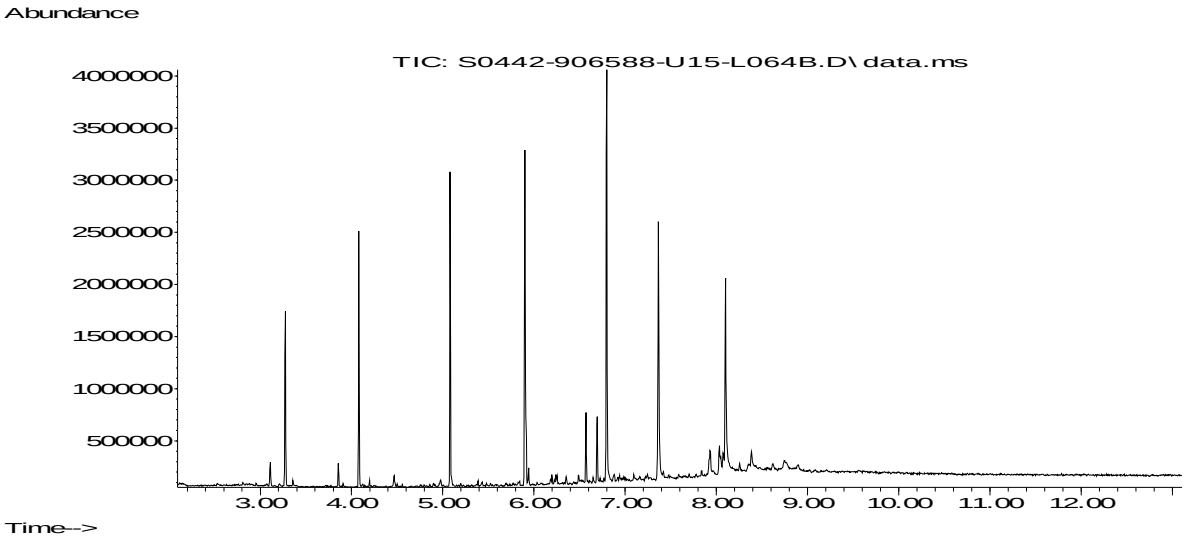

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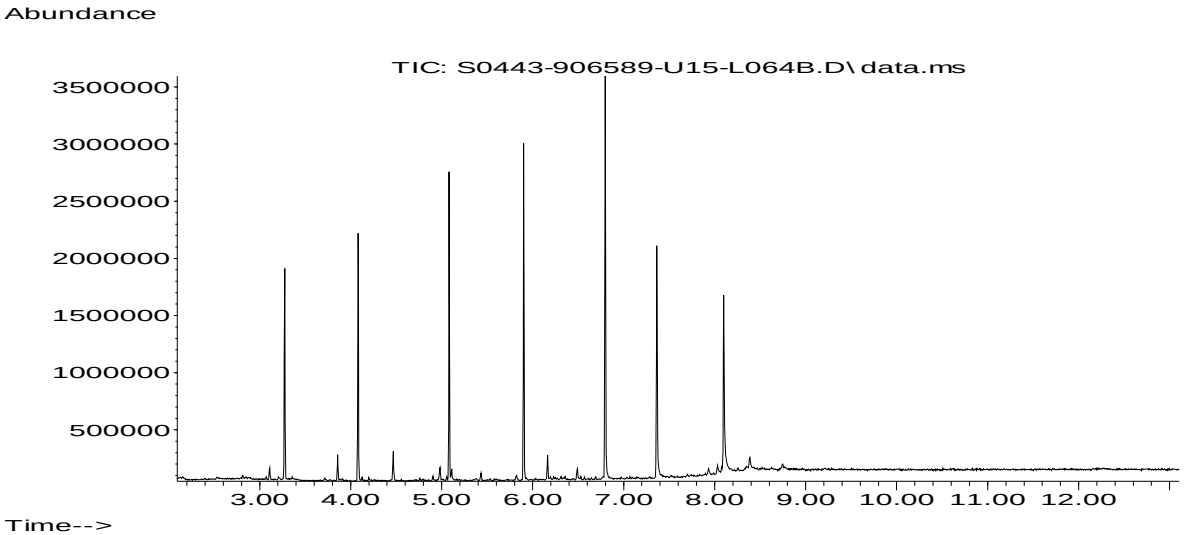

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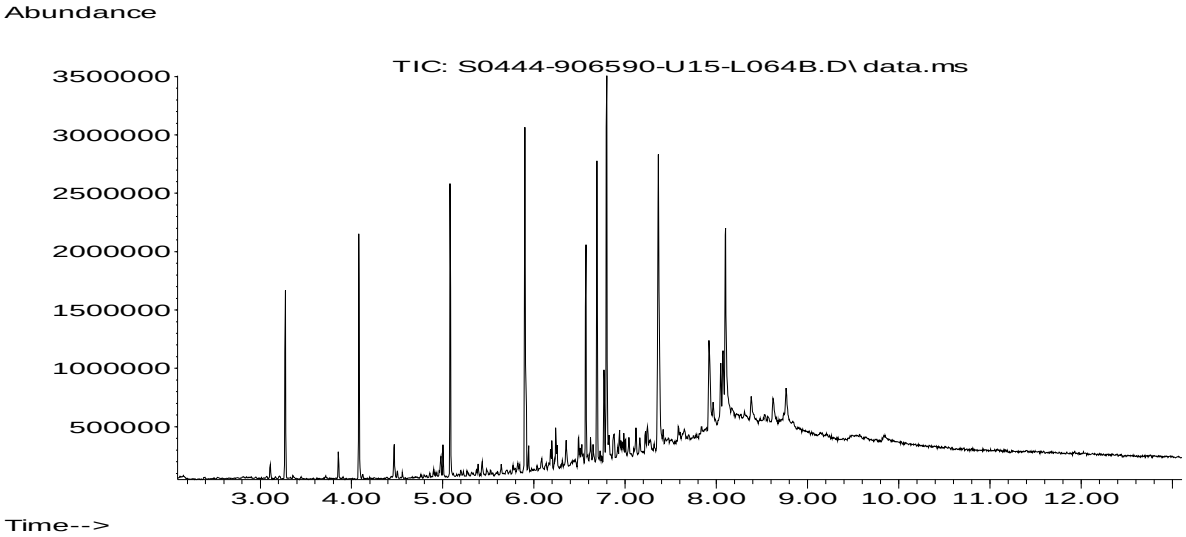

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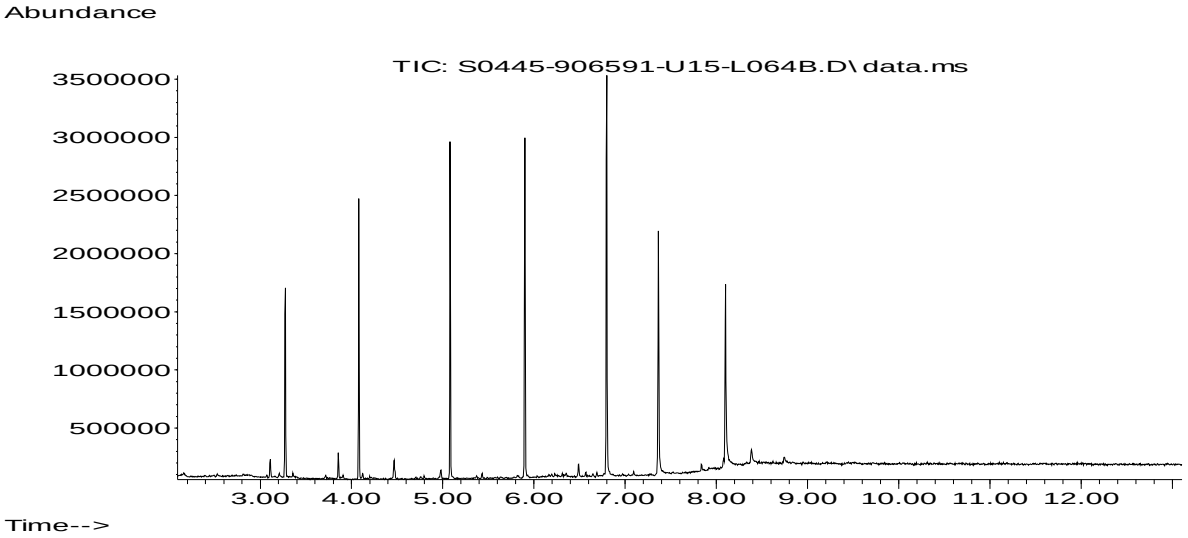

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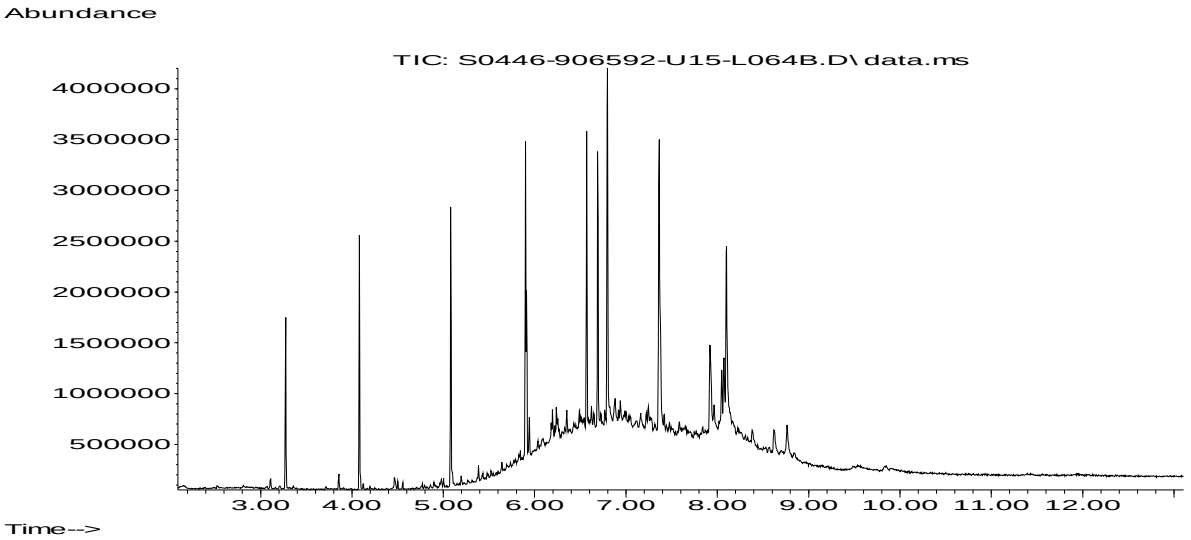

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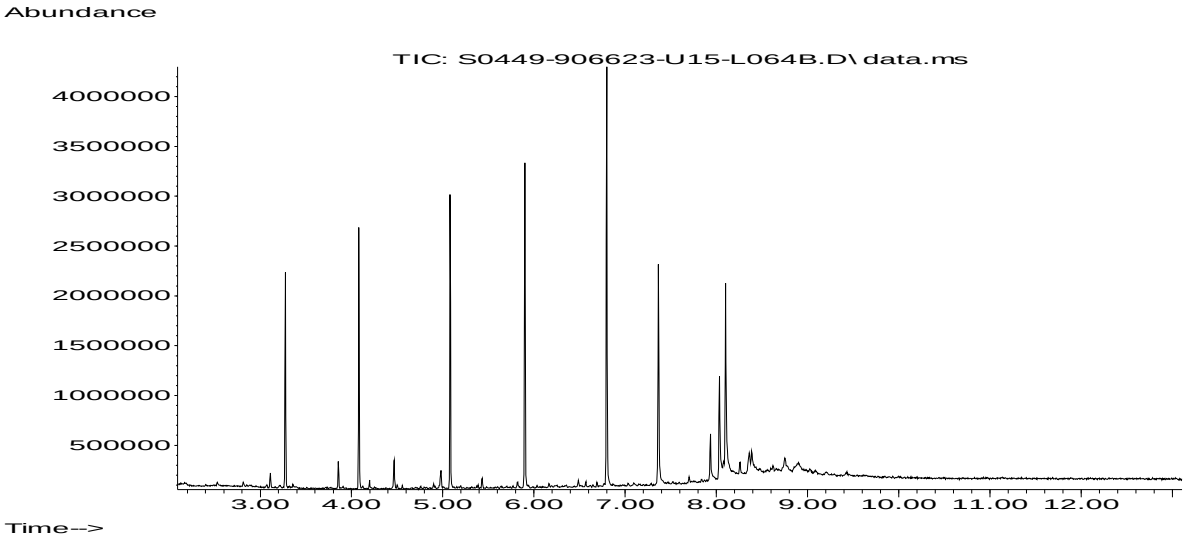

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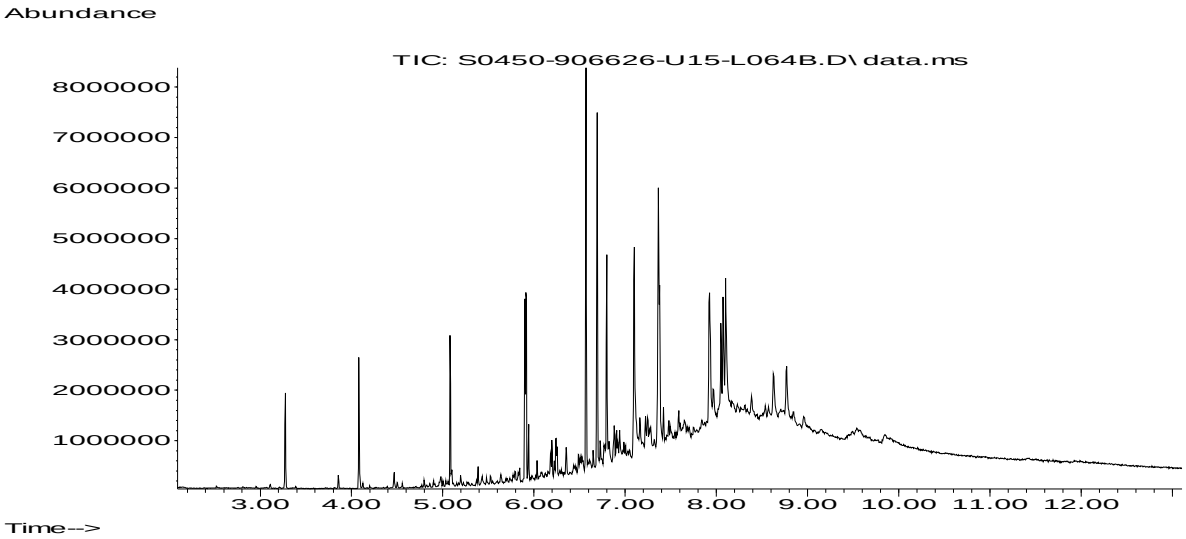

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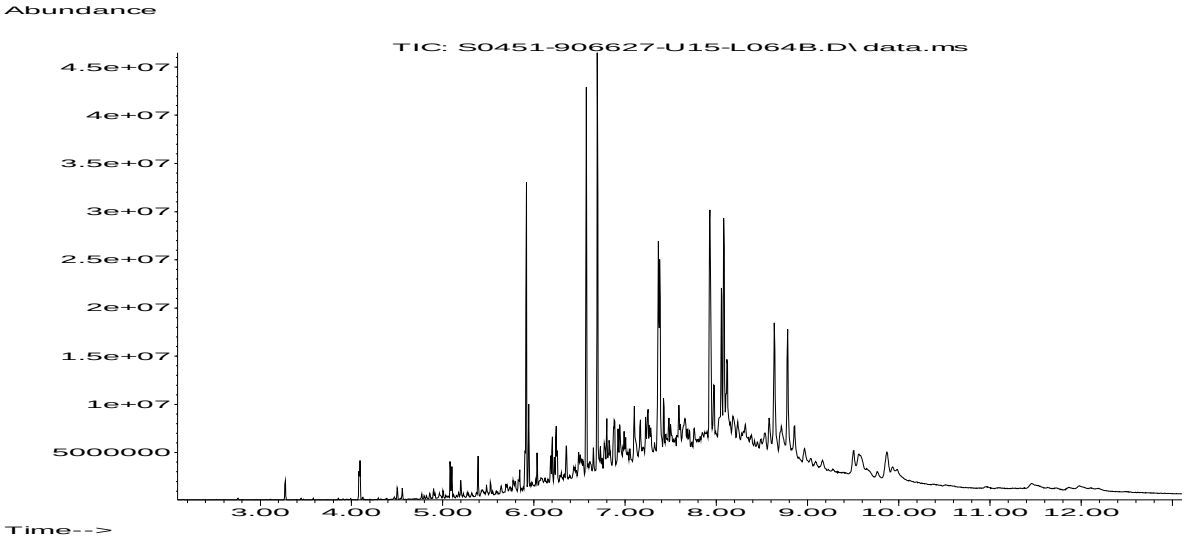

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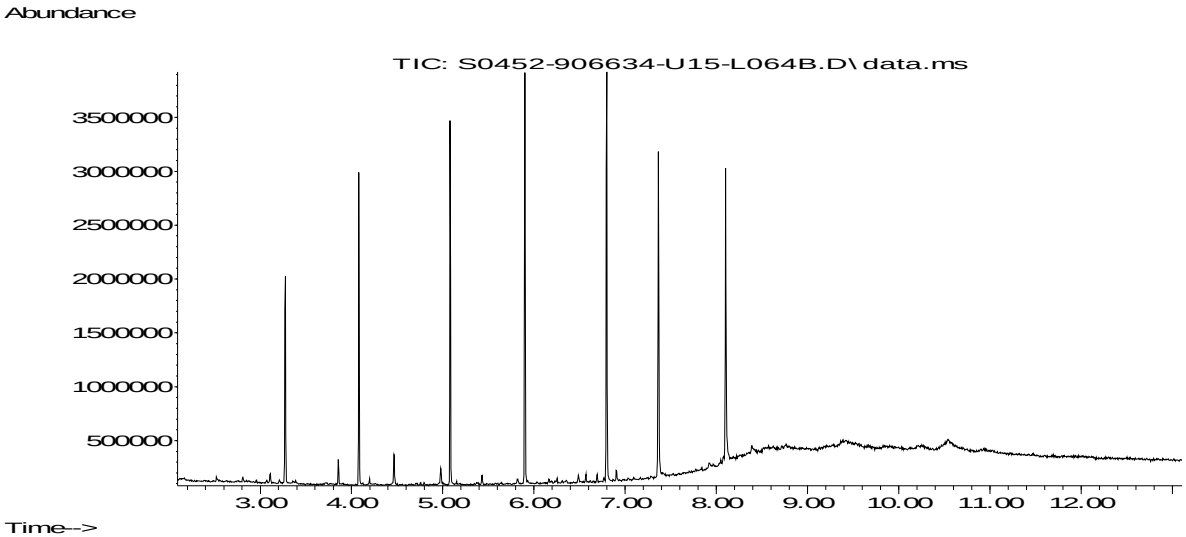

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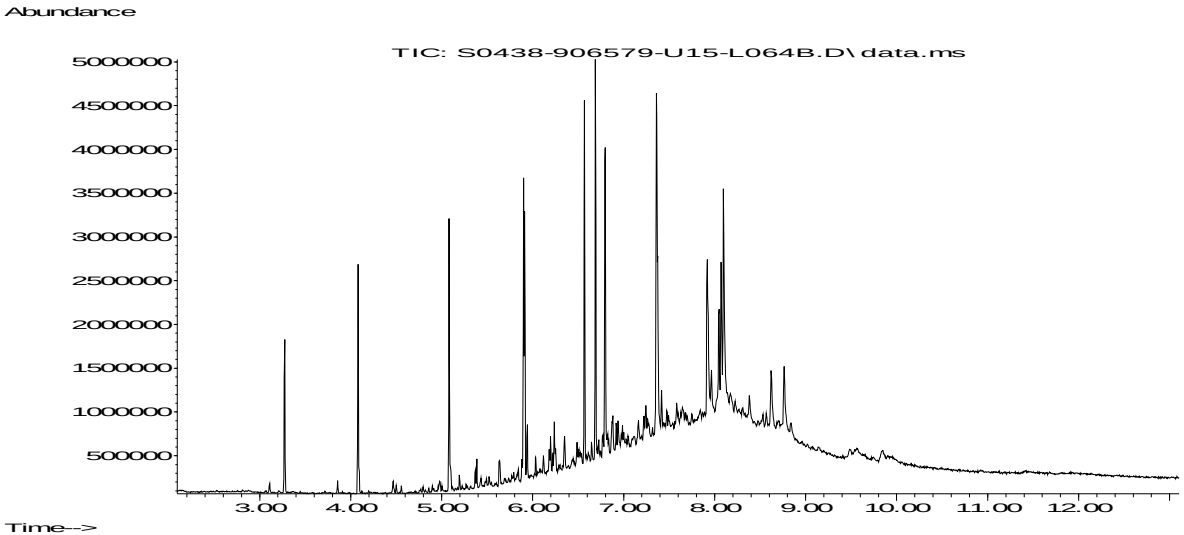

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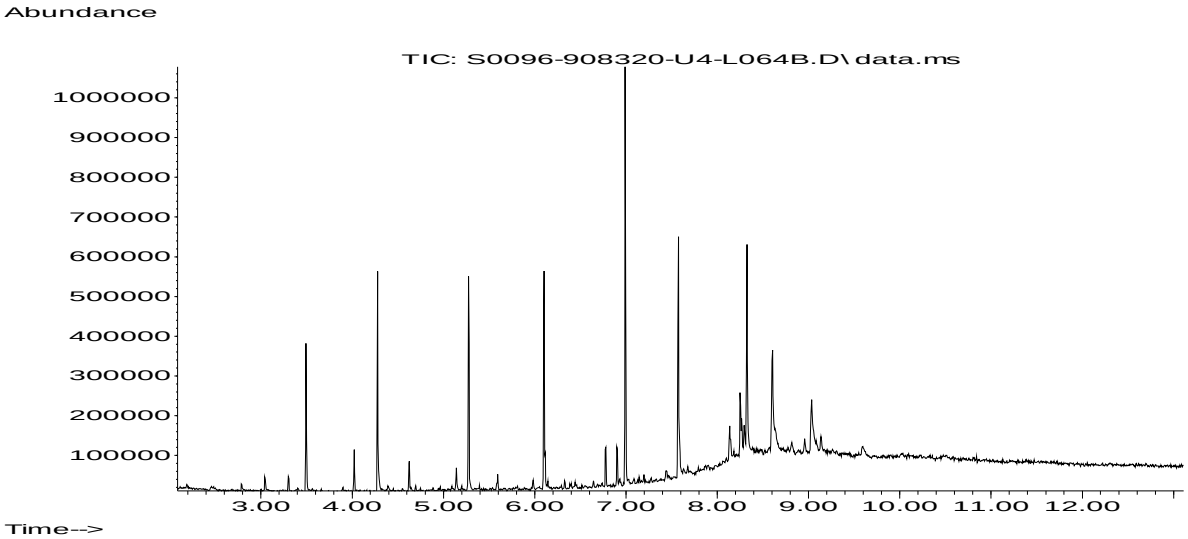

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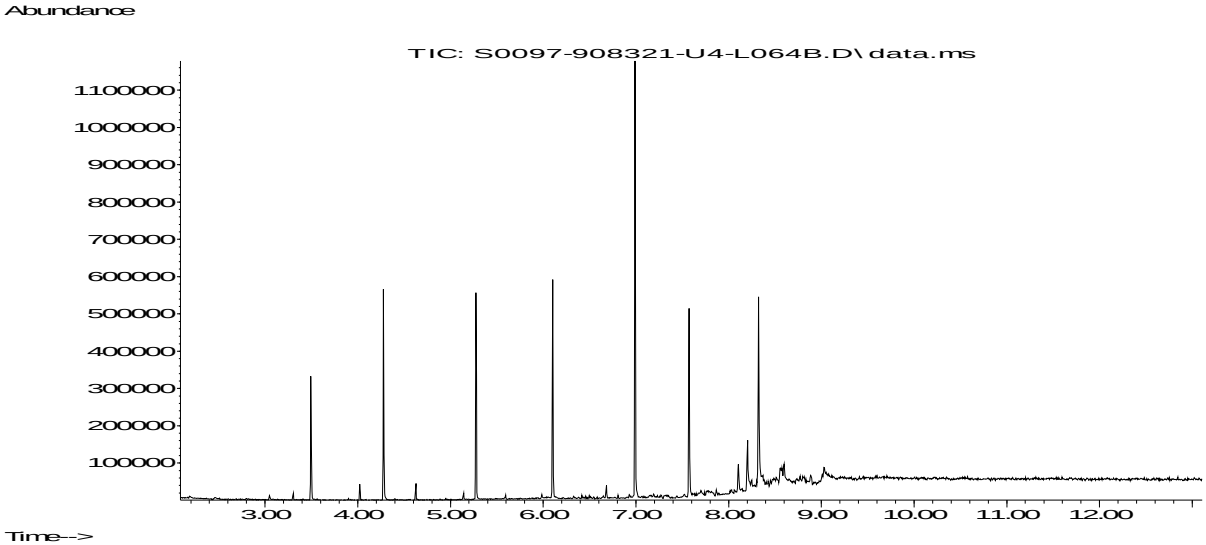

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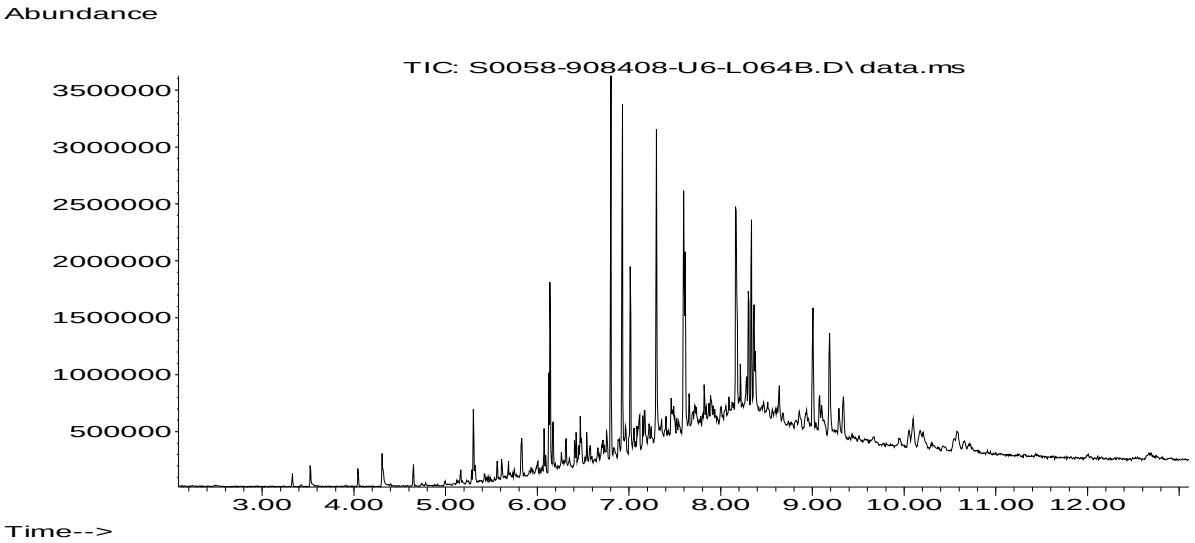

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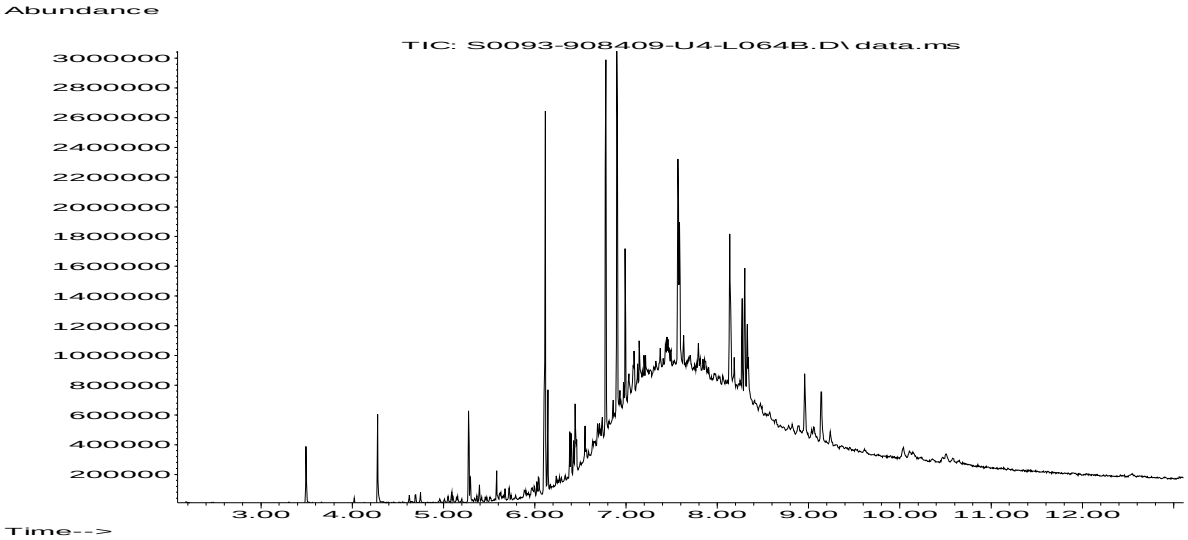

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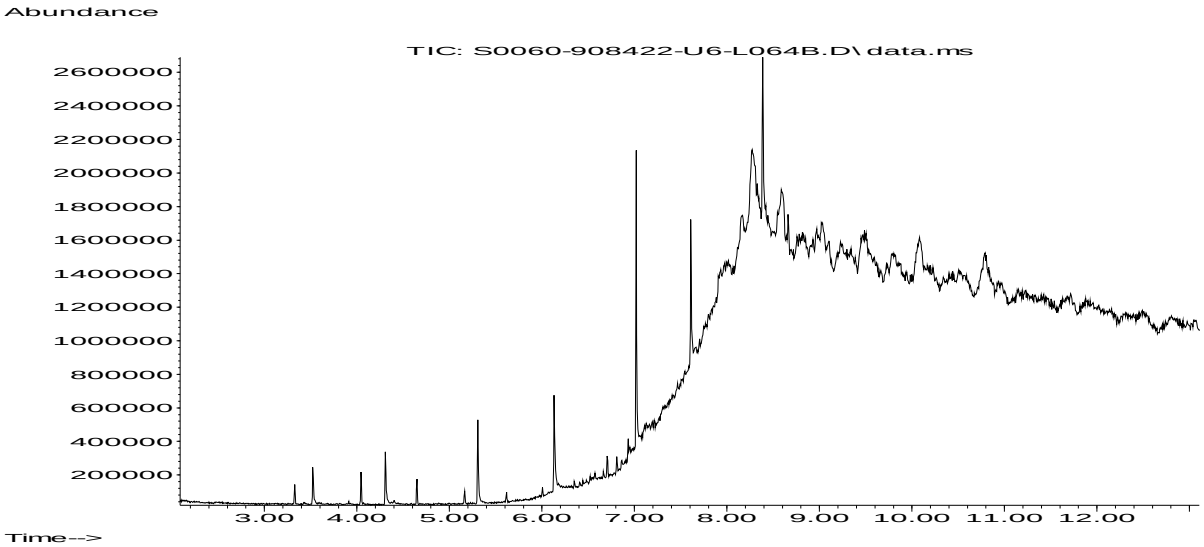

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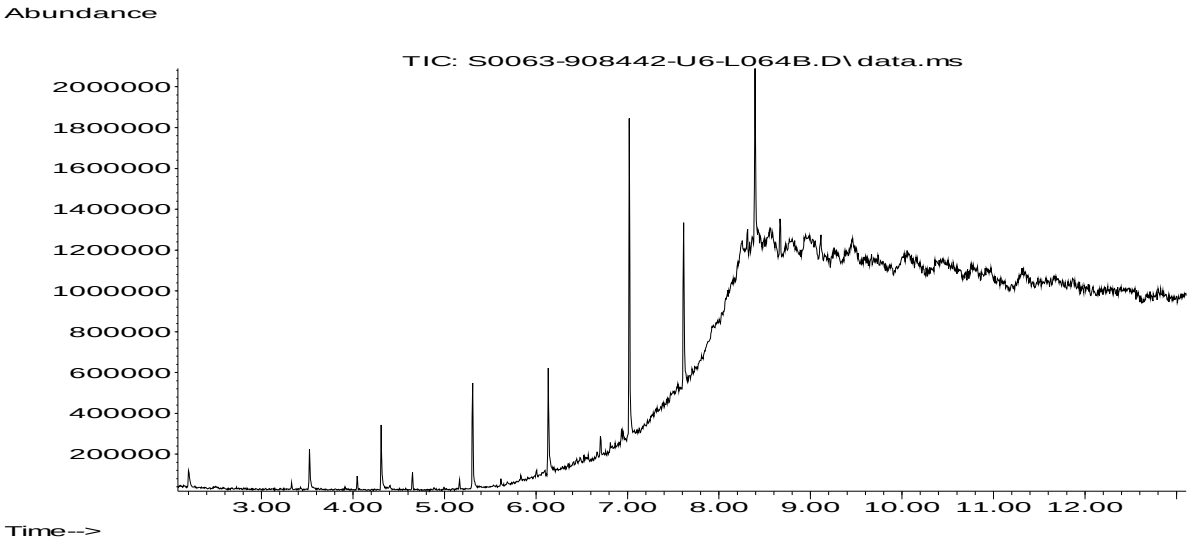

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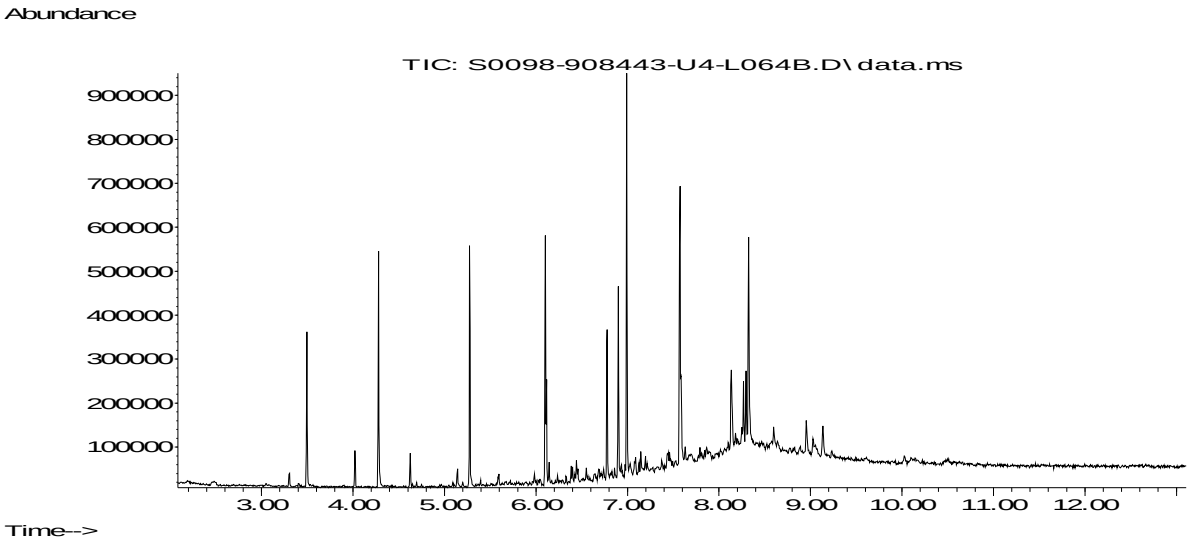

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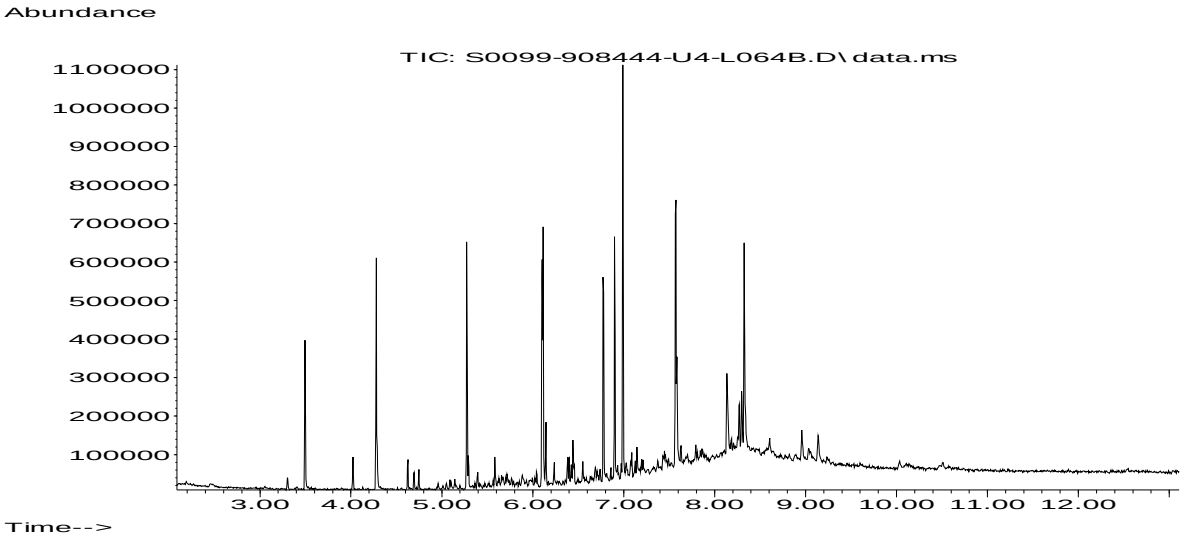

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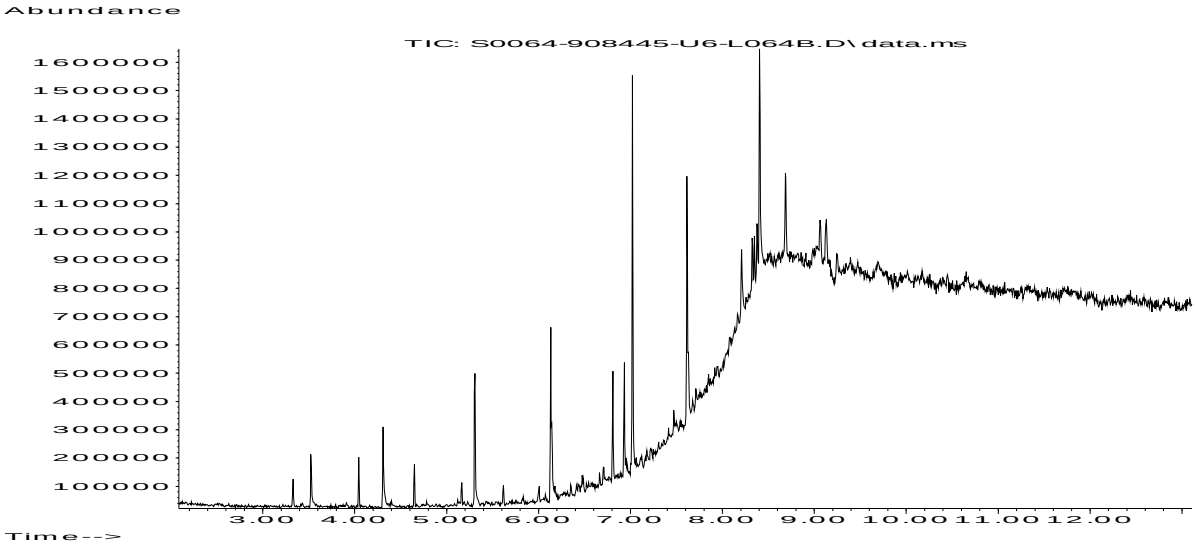

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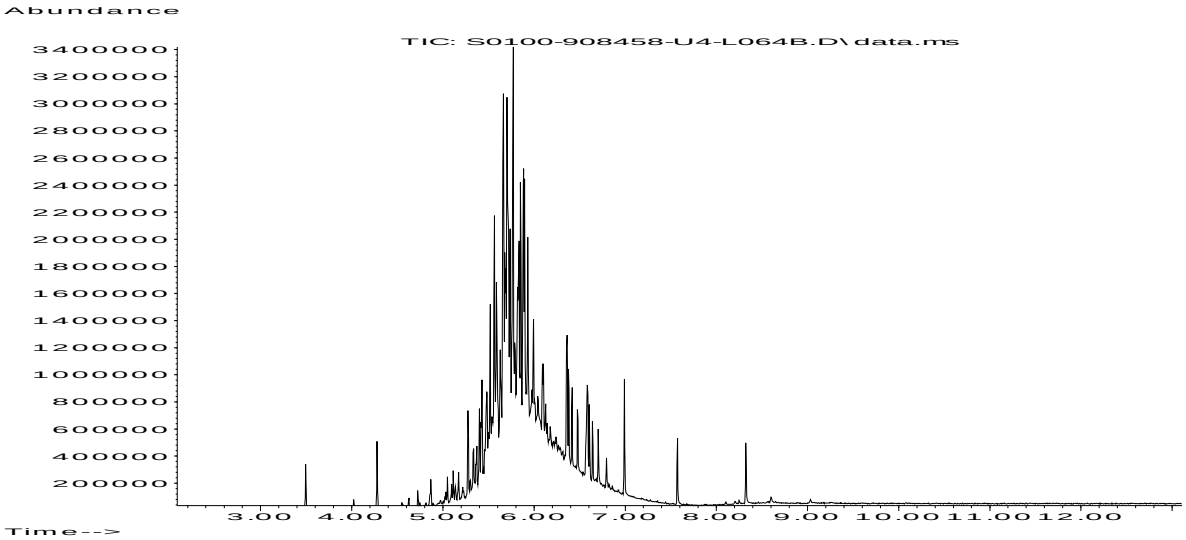

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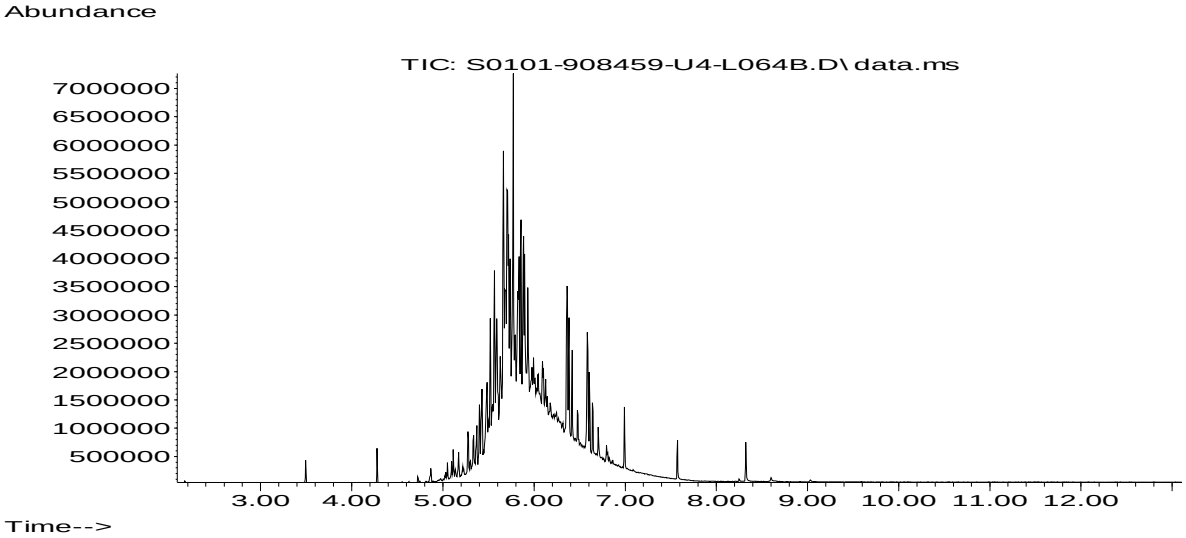

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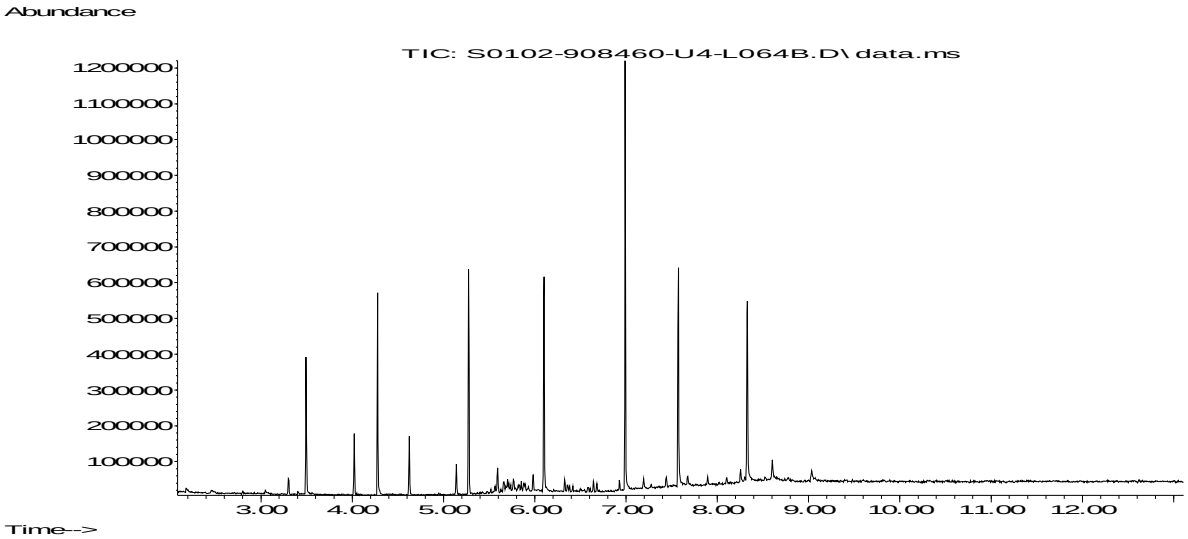

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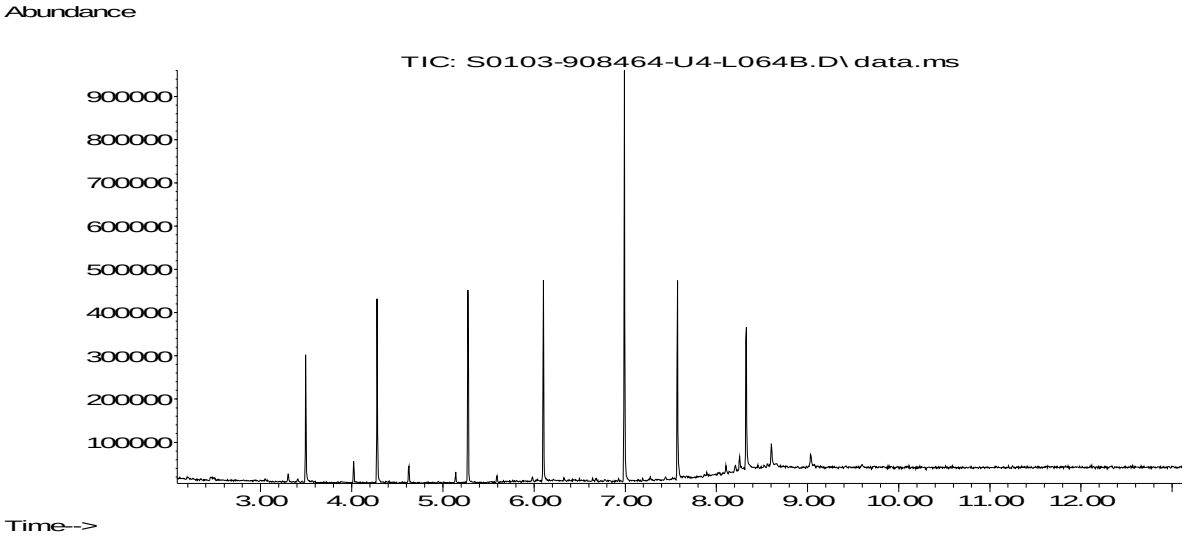

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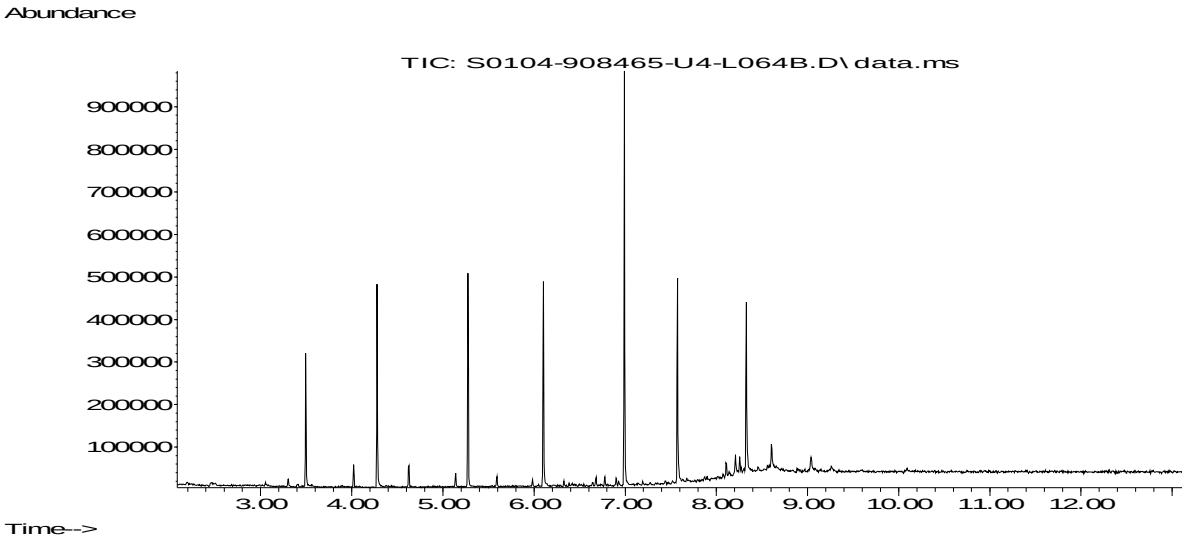

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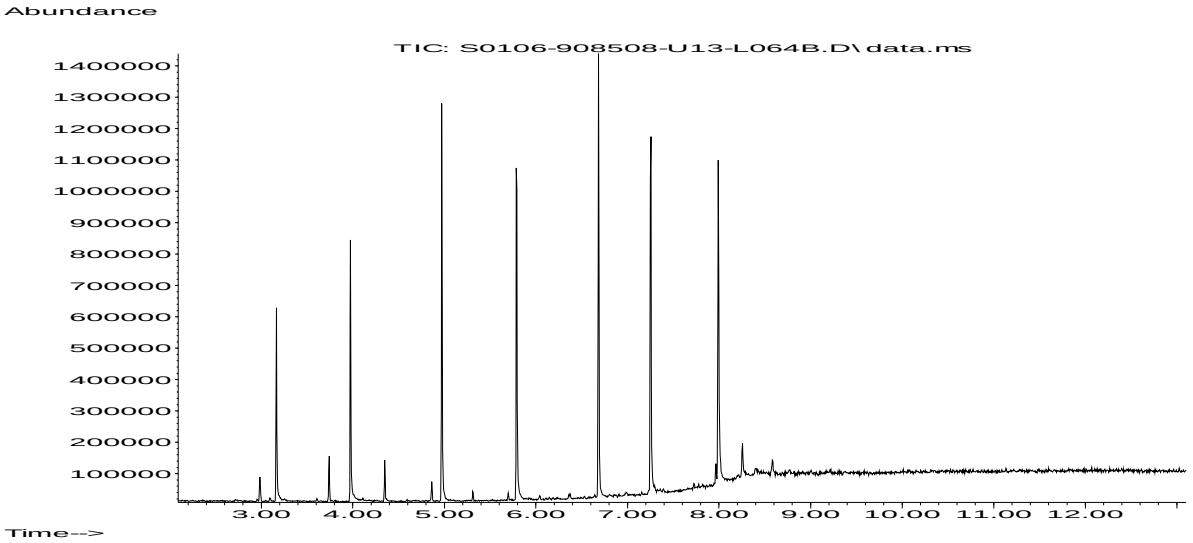

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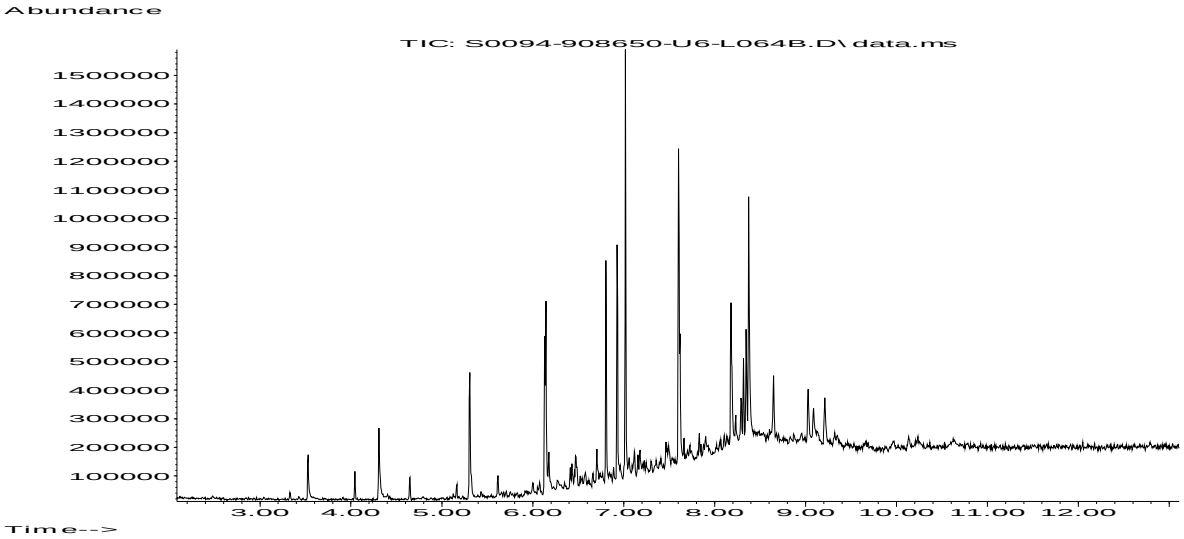

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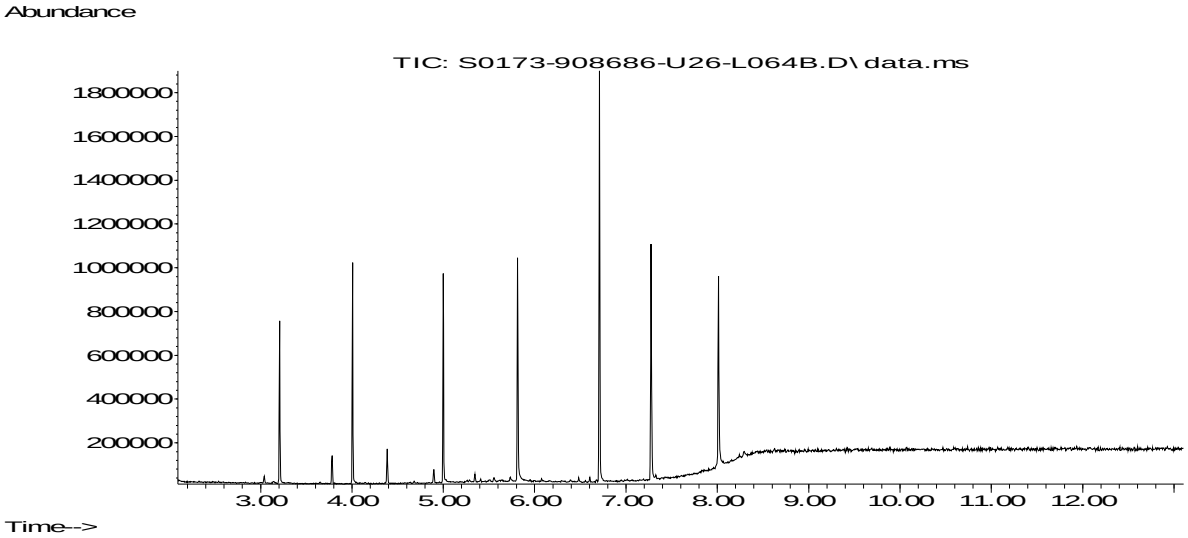

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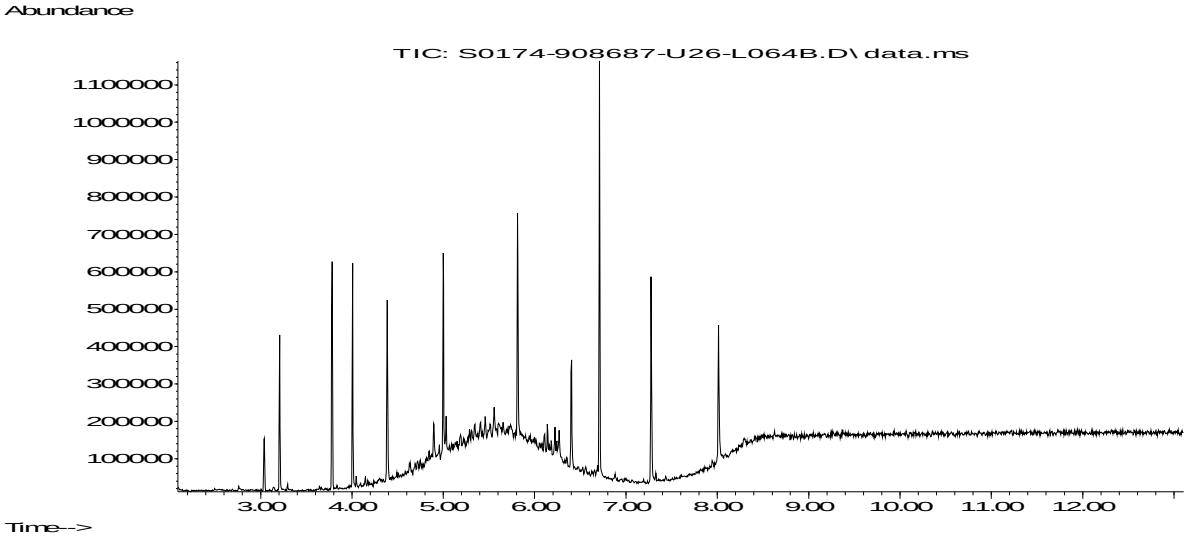

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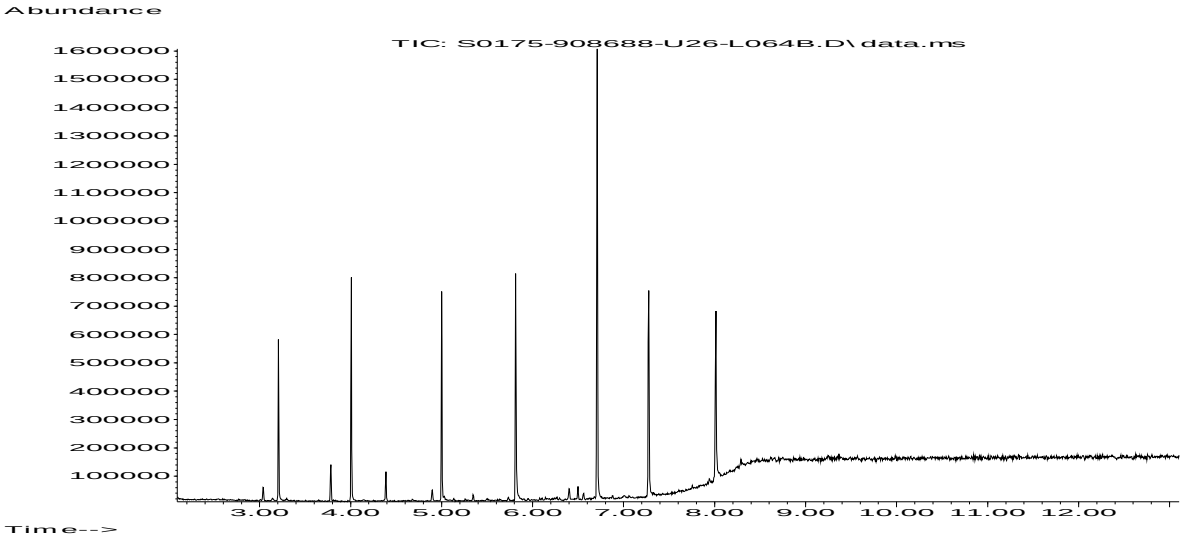

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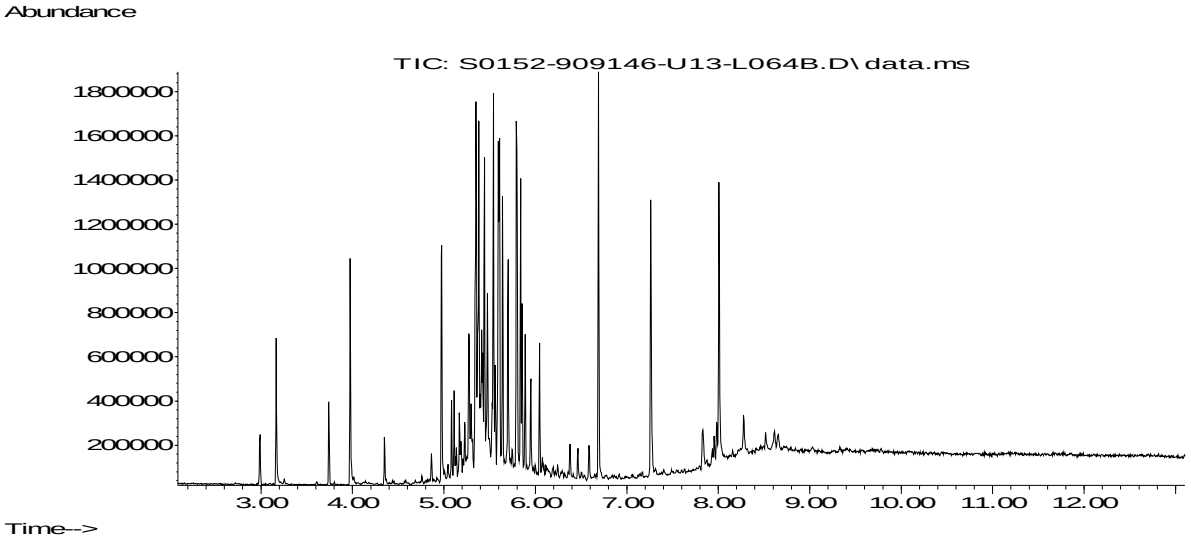

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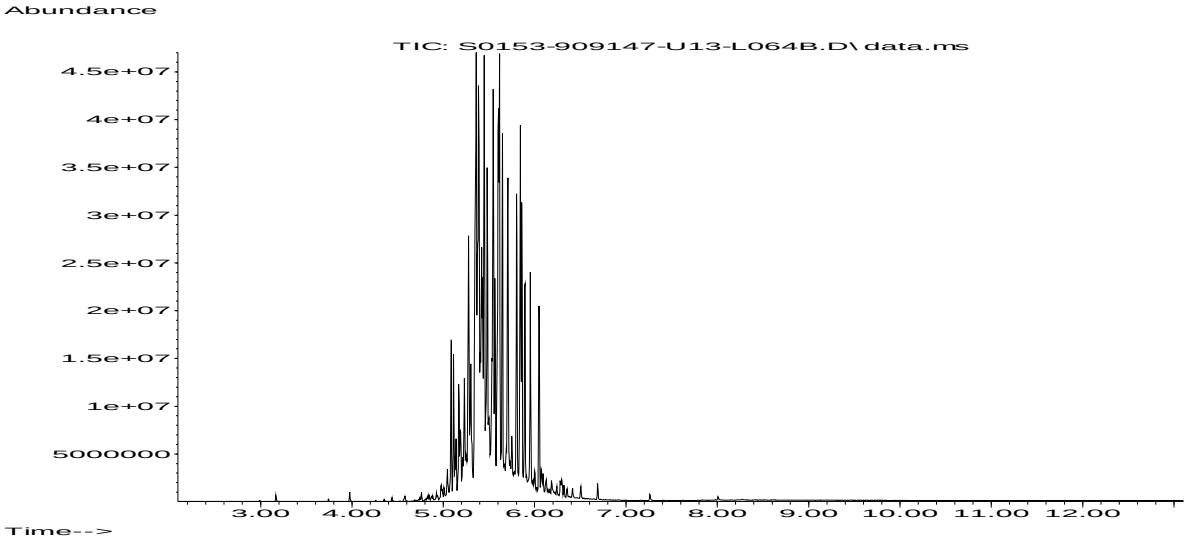

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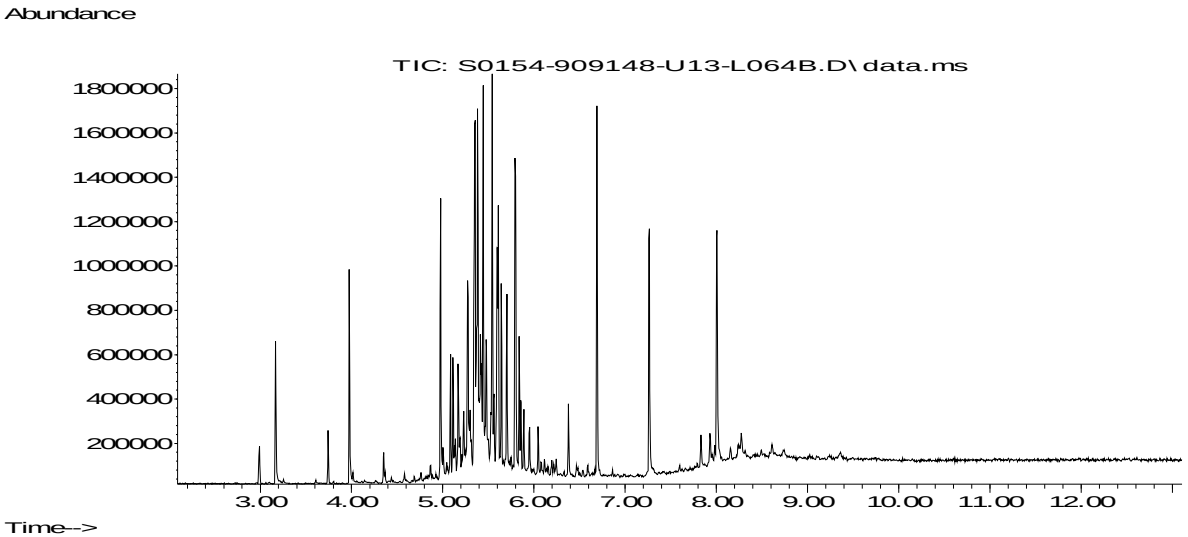

Abundance
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1600000
1400000
1200000
1000000
800000
600000
400000
200000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->

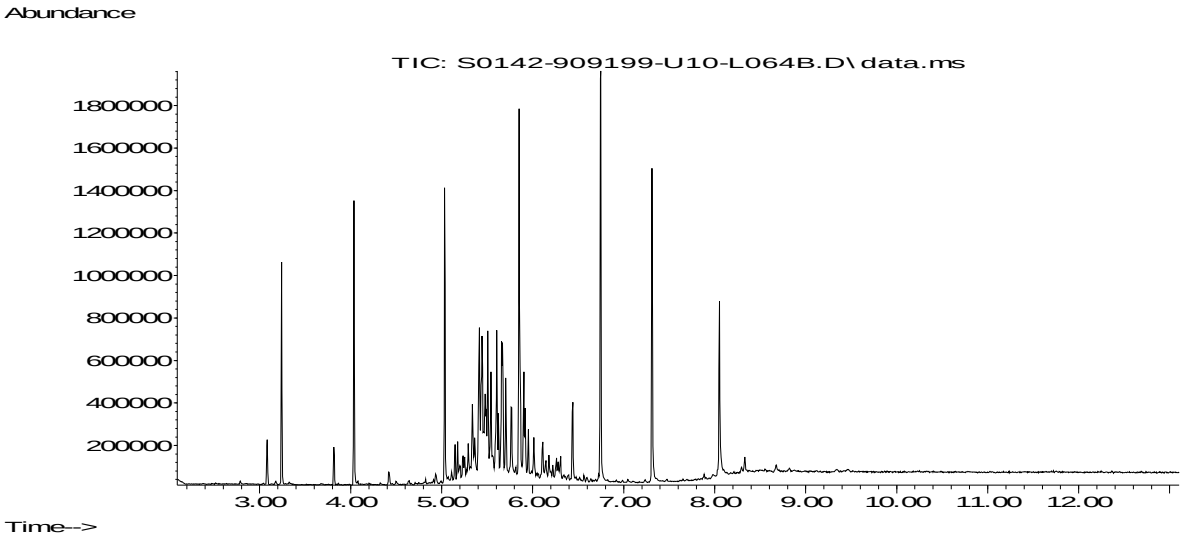

Abundance
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1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->

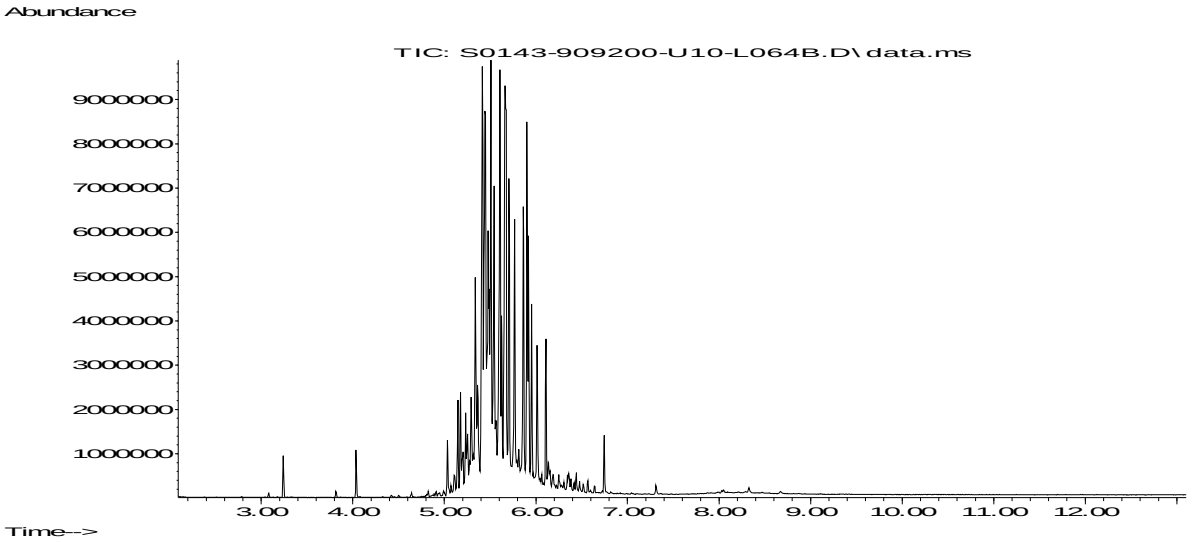

Abundance
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1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->

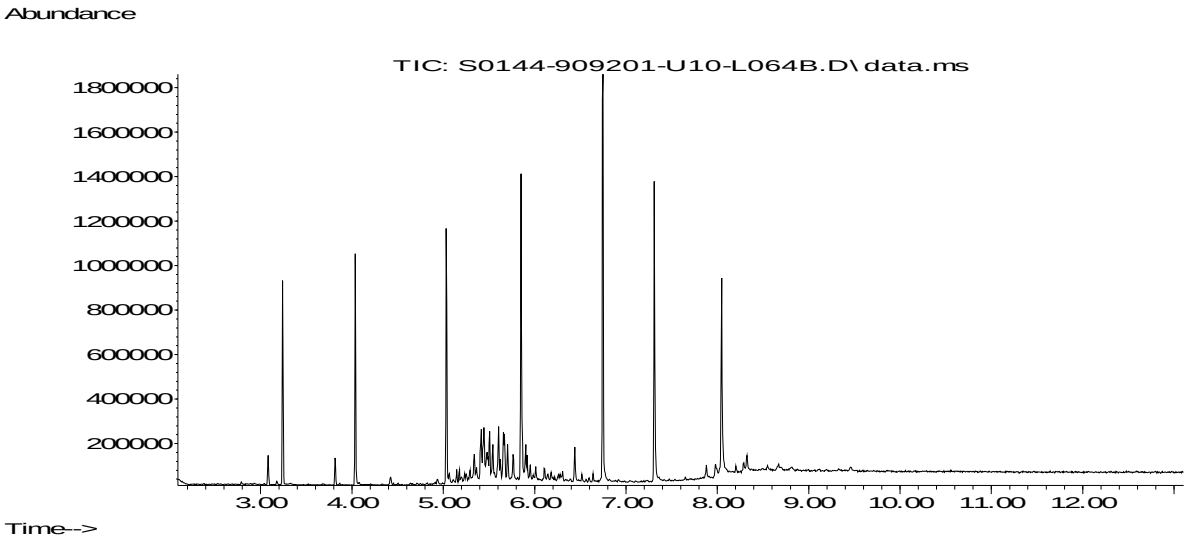

Abundance
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1400000
1200000
1000000
800000
600000
400000
200000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->


Abundance
TIC: S0153-909147-U13-L064B.D\ data.ms
4.5e+07
4e+07
3.5e+07
3e+07
2.5e+07
2e+07
1.5e+07
1e+07
5000000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->


Abundance
TIC: S0154-909148-U13-L064B.D\ data.ms
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->


Abundance
TIC: S0142-909199-U10-L064B.D\ data.ms
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1600000
1400000
1200000
1000000
800000
600000
400000
200000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->


Abundance
TIC: S0143-909200-U10-L064B.D\ data.ms
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8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->


Abundance
TIC: S0144-909201-U10-L064B.D\ data.ms
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->