

Taylor Wimpey (UK) Ltd

Ground Investigation Report
For

Fox's Bank, Halsnead Garden Village

December 2019

REPORT NO: 19TAY055/GI

- *Desk Studies and Site Walkovers*
- *Intrusive Contaminated Land Investigations*
- *Geotechnical Appraisals and Ground Investigations*
- *Landfill Gas Assessments and Remedial Design*
- *Remediation Design and Implementation*
- *Remediation Project Management and Supervision*
- *Site Abnormal Assessments (Foundations and Contaminated Land)*

GEOTECHNICAL - CONTAMINATED LAND- FLOOD RISK

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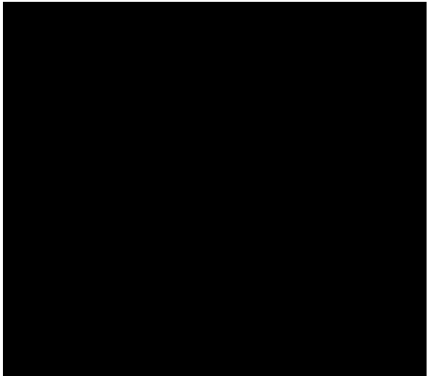
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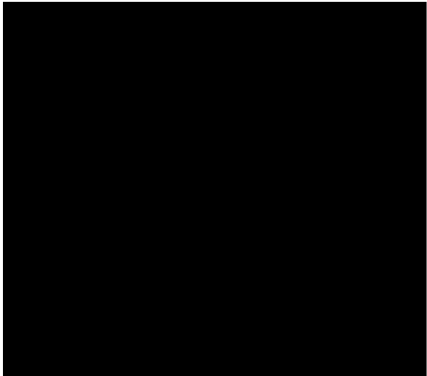
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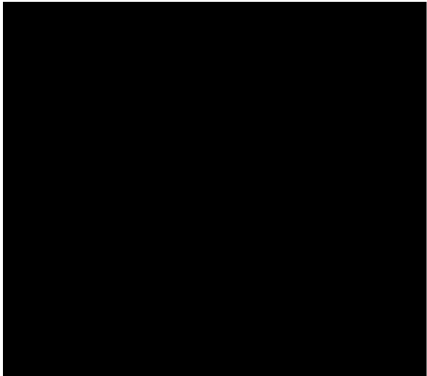
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1 EXECUTIVE SUMMARY

Note – The following summary is not exhaustive and is to be used for guidance purposes only. The full report should be consulted for full details.

1. Site Location

The site is located to the north of the M62 and east M62 junction 6 with an approximate postcode of L35 3SS. The coordinates on the British National Grid CRS are 347303, 389785. The proposed site is approximately 8.74 hectares in total.

2. Site Description

On Site

The site is located within a largely rural setting and is currently in use as arable agricultural land, which had very young crop at the time of the investigation.

The site had three areas of notable gradients. The first was a small elevation in the northeast of the site, the second area was located in the centre of the site, which dropped to the east and was moderately steep. The final area dropped to the west and was the gentlest of the observed gradients. At the base of this gradient in the northwest of the site was a large area of surface water flooding.

Very soft / wet ground was noted in the southeast and central southern areas of the site.

Surrounding Area

Surrounding land uses for the site are as follows:

- North – Agricultural land residential homes
- East – Fox's Bank Lane and agricultural land beyond
- South – M62 with agricultural land beyond
- West – Woodland (Halsnead Park) and a lake, with agricultural land beyond

3. Proposed Development

The proposed construction of residential dwellings with associated infrastructure, gardens and public open space.

4. Site History

On Site

Limited historical mapping provided by E3P showed the site has never been developed.

Surrounding Area

Initially the site was and largely remains in an agricultural setting. However, a colliery, and later a spoil heap, was located 400m south of the site (1928), a sewage and brickworks 200m and 400m south (1951) and the M62 was constructed adjacent to the southern boundary (1977). Residential development / expansion has taken place 100m north of the site (caravan park) and 500m north (Prescot).

5. Published Geology

The BGS map shows the geology beneath the site as the following:

- Superficial - Glacial Till – Till, Devensian – Clays, sands and gravels.
- Bedrock – Eastern Half - Kinnerton Sandstone Formation – Sandstone
Western Half - Pennine Middle Coal Measures – Mudstone, Siltstone and Sandstone

Radon

The EnviroCheck data states that the site is within a radon area where 1-3% of properties above the action level.

6. Hydrogeology and Hydrology

- The superficial deposits of the Till are designated as Secondary (Undifferentiated) aquifer.
- The bedrock deposits in the East are designated as a Principal Aquifer.
- The bedrock deposits of west are designated as a Secondary A Aquifer.
- The site lies within the Total Catchment Area of a Groundwater Source Protection Zone.
- The closest groundwater abstraction is 675m east, for potable supply.
- There are no recorded surface water features on site.

7. Summary of Environmental Data

Possible Contamination Sources and risk levels are shown below;

- Current Land Use On Site – Unlikely
- Historical Land Use On Site – Unlikely
- Surroundings Industrial Processes (Historic and Current) – Unlikely

In this qualitative risk assessment, a Low risk for ground gas and contamination exists across the site. Significant remedial action is not likely at the site; however, this cannot be confirmed until the geotechnical and contamination ground investigation has been completed.

8. Scope of Investigation

The trial pit and window sample fieldwork were carried out on the 23rd and 30th October 2019, and rotary undertaken between 19th and 29th November 2019 included the following:

- Twenty-five (25 No) machine excavated trial holes to between 0.95mbgl (TP04) and 3.10mbgl (TP08).
- Five (5 No) window sample boreholes drilled up to 4.00m bgl and installed with gas and groundwater monitoring wells to depths of up to 3.00m bgl.
- Six (6 No) ground gas monitoring visits over a period of at least three months with varying barometric pressures.
- Sixteen (16no.) rotary boreholes to depths between 15.00mbgl and 30.00mbgl to investigate potential coal workings below the site.
- Chemical analysis (Metals, PAH's and TPH's) of eleven (25 No) samples.
- Analysis of eleven (25 No) samples for asbestos screening.
- Collection and analysis of six (4 No) soil samples for geotechnical analysis.

9. Ground Conditions Encountered

Ground conditions consisted of TOPSOIL which is a brown / dark clayey gravelly fine to SAND over heterogeneous MADE GROUND over yellow or brown gravelly fine to coarse SAND in the east, or, yellow or brown gravelly fine to coarse SAND over grey or reddish brown CLAY / SILT in the west.

Olfactory and Visual Contamination

There was no significant visual contamination identified during the site investigation.

Obstructions

Other than solid geology and occasional boulders, no obstructions were noted.

Groundwater Fieldwork

Groundwater and sand intrusion was noted across the site, and occurred from approximately 1.30mbgl.

10. Specialist Ground Gas Measures (Ongoing)

The future development does not require any radon protection measures.

Ground gas monitoring is still underway and with no significantly elevated ground gasses or GSVs being recorded. It is currently thought that no ground gas protection measures will be required. This will be reviewed upon completion of the monitoring programme.

To date, no elevated or significantly depleted gases have been identified on site after one (1 No.) visits.

Based on gas results to date, the site has been preliminarily assessed as 'Green / CS1' – no gas protection measures will likely be required. This will be confirmed upon completion of the monitoring programme.

For the prices of purposes, it is considered prudent to allow for gas protection measures to Amber 1 / CS2 level until the completion of gas monitoring.

11. Contamination Assessment and Remedial Actions

Other than a 300mm growing medium, not remedial actions are currently anticipated.

Groundwater and Aquifer Risk

No significant risks to groundwater or aquifers are anticipated given the ground investigation findings and soil analysis results.

12. Off-Site Disposal of Surplus Soil

If there is the need to remove soil / made ground off-site it is recommended that the results of the contamination testing (and possibly further testing) should be assessed by a suitably qualified person. The Hazwaste™ report undertaken indicates the materials will be classed as Non-hazardous.

13. Foundations

In the east, suitable founding strata of loose to medium dense SAND was generally observed $\leq 1.30\text{mbgl}$. Underlying the superficial strata was SANDSTONE bedrock.

In the west of the site, suitable founding strata of soft to firm and firm to stiff CLAY or loose to medium dense SAND was generally observed $\leq 1.50\text{mbgl}$. Underlying the superficial strata in the west of the site was SILTSTONE bedrock.

Deepening of foundations in accordance with NHBC standards will be required where foundations are within the zone of influence of existing or proposed trees and shrub planting.

14. Concrete Design

The site can is recommended for a design class of DS-1, an ACEC class of AC-1 and a designated concrete class of DC-1.

15. Heave / Shrinkage Potential

LOW to MODERATE plasticity has been determined from geotechnical lab testing; foundation design for tree heave protection could be designed accordingly following discussion with the NHBC.

16. Ground Floor Construction

Given the variable nature of the made ground and presence of shrinkable soils at shallow depth, it is recommended that a suspended floor construction e.g. either in-situ RC slabs or block and beam flooring is adopted as per NHBC guidance.

17. Control of Groundwater

Shallow groundwater was encountered on site from around 1.30mbgl . It is likely that provision of pumping / shuttering will be necessary during excavation of foundation trenches during wet weather and to deeper excavations for sewers etc. It is good practice to have such equipment on standby in case of seasonal / abnormal weather conditions.

18. Highway

According to the criteria of Highways Agency HD 25/95 Volume 7 Section 2 Part 2 HD 25/94, a CBR value of circa 3% on the superficial deposits is anticipated, however confirming in-situ CBR's should be undertaken once final formation levels are available. Placement of geotextiles within the areas of roads / parking could also be designed to minimise the subgrade thickness.

2 SITE DESCRIPTION

2.1 Introduction

This investigation was carried out on the instruction of Taylor Wimpey on behalf of Taylor Wimpey, Gino Frederick Fantin & Dawn Sara Fantin, Mrs K Mullin, Reynard Land Whiston Limited and Evo Living Limited 17. The applicant is hereafter referred to as 'Taylor Wimpey'. The purpose of the work was to carry out a ground investigation to provide geotechnical and contamination risk information for the demolition of existing farm buildings and erection of 337 residential dwellings together with new vehicular access, SUDs ponds, landscaping and other associated works. A site boundary plan can be seen below;



2.2 Site Location

The site is located to the north of the M62 and east M62 junction 6 with an approximate postcode of L35 3SS. The coordinates on the British National Grid CRS are 347303, 389785. The proposed site is approximately 8.74 hectares in total. See Site Location Plan in Appendix A.

2.3 Site Description

2.3.1 On Site

The site is located within a largely rural setting and is currently in use as arable agricultural land, which had very young crop at the time of the investigation.

Site levels across site are variable between 33.03 and 43.08mAOD, notably in three distinct areas. The first was a small elevation in the northeast of the site that rose from approximately 36.08mAOD to approximately 39.76mAOD. The second area was located in the centre of the site which rose to around 43.87mAOD, and then dropped to the east to around 36.08mAOD and 33.08mAOD in the west. At the base of this gradient in the northwest of the site was a large area of surface water flooding.

Very soft / wet ground was noted in the southeast and central southern areas of the site.

These features are highlighted below;



Key:

-  Approximate gradient direction
-  Surface water
-  Very soft ground conditions

2.3.2 Surrounding Area

Surrounding land uses for the site are as follows:

- North – Agricultural land residential homes
- East – Fox's Bank Lane and agricultural land beyond
- South – M62 with agricultural land beyond
- West – Woodland (Halsnead Park) and a lake, with agricultural land beyond

2.4 Previous Reporting

The following desk study sections have been summarised from the E3P report referenced below. It should be noted that this report is for the adjacent field, and not the site of interest, the locations and distances have been adjusted to suit.

- Phase I Geo-Environmental Site Assessment for Fox's Bank Lane, Whiston, by E3P on behalf of Williams Estate Management, ref. 12-141r1, dated Nov 2017.

A geophysical survey was undertaken by Sumo Survey, as referenced below;

- Geophysical Survey Report for Land at Fox's Bank Lane, Whiston, on behalf of CgMs Heritage for Taylor Wimpey, ref. 13426, dated September 2018.

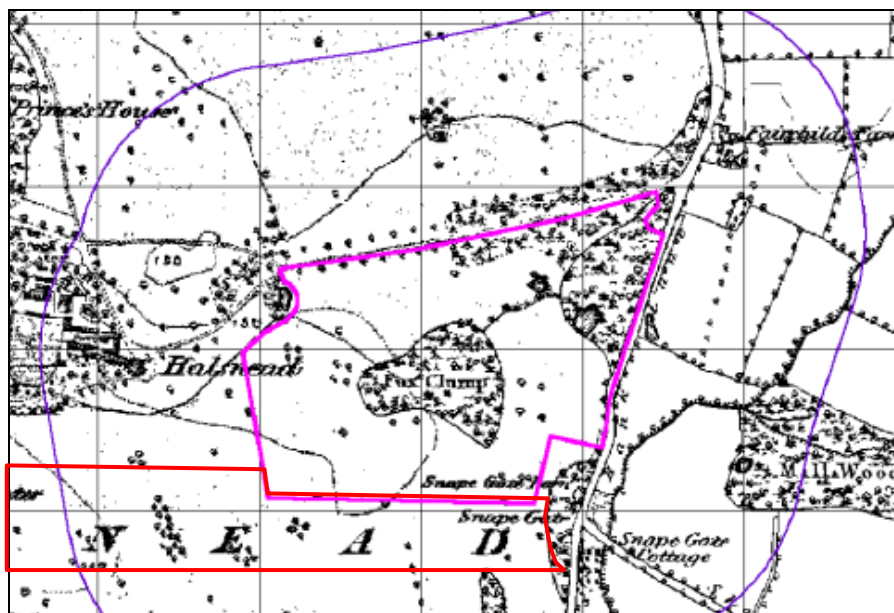
Whilst Betts Geo Environmental Ltd cannot be held liable for the third party, client furnished, results / data, it is suggested that it is reasonable to assume that the data provided in these reports have been undertaken with suitable care and due diligence by suitably experience consultants. As such the data is regarded as being of an appropriate standard to utilise within this report.

3.1 Site History

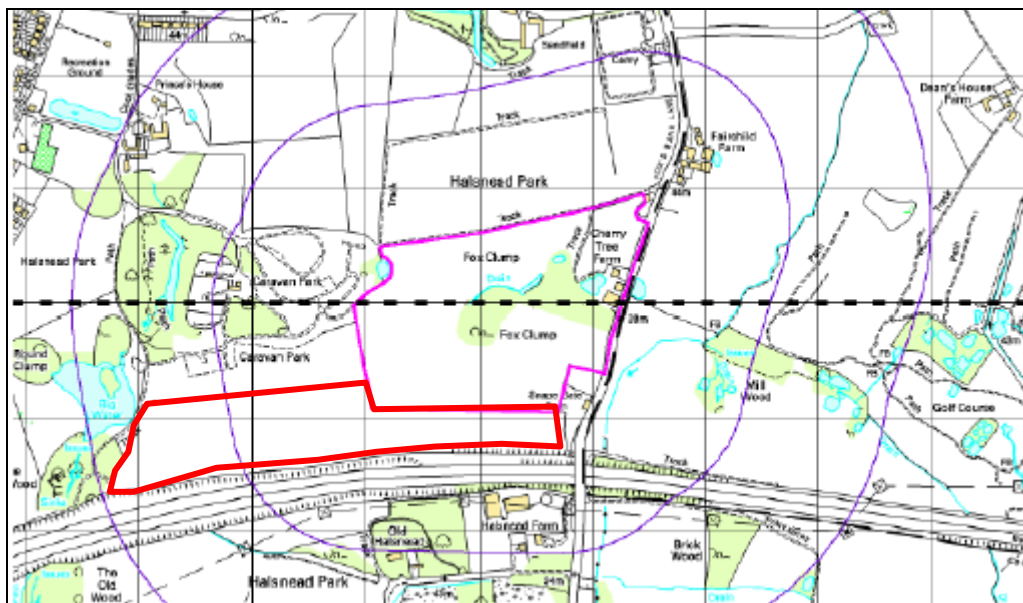
3.2 Summary of Site History

3.2.1 On Site

The first map provided by E3P, from 1849-1850, shows the site to be agricultural land, with occasional spread through the site.



The most recent map provided by E3P from 1999 shows the site of interest to be undeveloped.



3.2.2 Surrounding Area

The following table summarises the significant changes in historical use surrounding the site:

Date First Shown	Land Uses
1848-1850	Agricultural land surrounds the site. Farms can be seen 250m northwest and 200m south. A number of ponds can also be seen around the site.
1928	Cronton Colliery is shown 400m south.
1951	Colliery is expanded sewage and brick works also shown to be adjacent. Colliery has significant railway traversing east and west. Colliery spoil can be seen to the east of the colliery.
1977-1978	M62 constructed adjacent to southern boundary.
1990-1991	Caravan park built 100m north of the site. Prescot town can be seen 500m north of the site. Small brick works located 200m southeast.
1999	Large area 270m south occupied by colliery spoil heap.

3.3 Geology

The following section details the published and available geological data available for the site and the surrounding area. All data is taken from the Groundsure report located in Appendix H unless otherwise stated. This report should be referred to for full details.

3.4 Published Geology

The documented geology of the site is summarised on the British Geological Survey map principally, with further site-specific details detailed below.

Geology	Artificial Ground & Land Slip	Drift	Solid
1:10,000	None Recorded onsite	Glacial Till, Devensian - Sands, Clay and Gravels	<u>Eastern Half</u> Kinnerton Sandstone Formation - Sandstone <u>Western Half</u> Pennine Middle Coal Measures – Mudstone, Siltstone and Sandstone
Aquifer		Secondary Undifferentiated	Eastern Half – Principal Aquifer Western Half – Secondary A Aquifer

3.4.1 Linear Features

There are two faults located on site. One traverses the site in a north / south direction approximately in the centre of the site.

The second fault is located in the west of the site and traverses the site in a rough northwest / southeast direction (A previous investigation to the north of the site has located the fault in a slightly different location).

3.4.2 Historical Borehole Records

E3P highlighted the following BGS borehole records from their site boundaries;

LOCATION	DEPTH	MADE GROUND	DRIFT	SOLID
100m south	13.11m	None encountered	Topsoil underlain by Sandy Clay to circa 1m depth and Sand to circa 2m depth	Weathered Sandstone
75m southeast	10.18m	None encountered	Topsoil underlain by Sand to circa 4m depth	Weathered Sandstone
75m south	3.42m	None encountered	Topsoil underlain by Sandy Clay and Clayey Sand to circa 2m depth	Weathered Sandstone

3.5 Geological Features

3.5.1 Coal Mining

The EnviroCheck Report states the site is in an area which may be affected by coal mining.

A Coal Authority Mining Report was obtained (Ref: 51001696278001) dated November 2017 and is summarised below;

- *The property is underlain by probable unrecorded shallow workings;*
- *The site is underlain by 4No. Coal Outcrops, two of which are related to the Crombouke, as well as the London Delph and the Roger seam;*
- *The site is underlain by past underground mining related to the Wigan Four Feet and Rushy park at shallowest depth of 229m bgl;*
- *There are no known coal mine entries within, or within 20 metres of the site boundary;*
- *The site is in an area where the Coal Authority believe there is coal at or close to the surface which may have been worked in the past;*
- *There are no spine roadways beneath the site at shallow depth;*
- *There are no opencast mines within 500m of the site;*
- *There are no recorded Coal Authority tops within 500m of the site;*
- *There are no remediated sites within 50m of the site;*
- *The Coal Authority has not been made aware of any subsidence related to Coal Mining;*
- *The closest Mine Gas site is 457m south of the site;*
- *There is no known future underground mining;*
- *The property is in an area where notices to withdraw support were given in 1976 and 1979;*

The site requires further investigation and may influence your risk assessment. E3P recommend that you order the Coal Authority Mine Gas Emission Report, which will include more information about the hazard.

The west sector of the site is within a Development High Risk Area. Mine entries are identified immediately northwest of the site.

The 1:10,000 geological mapping for the area notes a geological fault running north south just within the western boundary of the site. This intersects 4No coal seams that approach the site from the west and cuts off the coal seam from progressing further east across the site. All the coal seams are dipping circa 11° south west.

Summary of Coal Mining Risk Assessment is given below;

COAL MINING RISK ASSESSMENT	YES / NO	RISK ASSESSMENT
Recorded Underground Coal Mining at Shallow Depth (<30m)	No	Low
Recorded Underground Coal Mining at Shallow Depth (>30m)	Yes	Low
Unrecorded Underground Coal Mining at Shallow Depth (<30m)	Yes	High
Mine Entries (Shaft / Adits)	No	Low
Coal Mining Geology – Fractures / Fissures	No	Low
Recorded Gas Emissions	No	Low
Recorded Mining Surface Hazard	No	Low
Surface Mining (opencast)	No	Very Low / Low

Based on the above, a high risk of unrecorded coal mining at shallow depth has been identified within the west of the site. The Coal Authority as a statutory consultee will require a series of rotary open holes across the site to determine the presence of any coal on site and understand the nature of any coal workings.

3.5.2 Brine Workings

The site is not situated within the Cheshire Brine Subsidence Compensation Board Compensation District & Consultation Areas; no further action is necessary.

3.6 Radon

The EnviroCheck Report indicates the site is partially situated in an area where between 1% and 3% of homes are above the Action Level, however, full radon protective measures are not necessary in the construction of new dwellings or extensions.

Betts Note- 1-3% properties affected suggest low radon risk and no protection measures required

3.7 Hydrological Features

The site is located within a currently defined Flood Risk Zone 1; defined as land assessed as having less than 1 in 1,000 annual probability of river or sea flooding (<0.1%), and as such is considered to be unaffected by river flooding. In addition, the EnviroCheck Report states there is a limited potential for groundwater flooding to occur at the site.

SURFACE WATER FEATURE	QUALITY	DISTANCE (m)	DIRECTION
Ponds	N/A	0	On site
Drains	N/A	40	east

3.7.1 Hydrogeological Features

- Superficial deposits are classed as Secondary Undifferentiated Aquifer (Low Permeability).
- Solid deposits are classed as Principal in the east (High Permeability) and Secondary A Aquifer in the west (Moderate Permeability).
- The site is located within a Total Catchment Area of a Groundwater Source Protection Zone.
- The closest groundwater abstraction is 675m east for potable supply.
- Whilst not on site, a large pond is located on the western boundary.

3.7.2 Preliminary Geotechnical Assessment

Based on the desk study information, the following geotechnical assessment has been made:

- Made Ground and obstructions associated with historical development in the vicinity of the existing farm steading, and infilling and restoration work in the south sector are anticipated. Existing buildings will require demolition with relic foundations grubbing out, prior to the construction of the proposed development;
- The very western sector of the site is marked as a Development High Risk area by the Coal Authority; Ponds on the site, which may be partially infilled, represent potential sources of alluvial deposits, silts and possible organic peat deposits, as well as Made Ground;
- A moderate risk associated with compressible ground is identified on the site; and
- An intrusive ground investigation is required to assess the ground conditions and undertake in-situ geotechnical testing to determine foundation solutions.

3.8 Landfill and Waste treatment Sites

According to the EnviroCheck report, there are no landfill sites within 500m of the site.

However, planning records indicate an application for infilling was made in the 1970s for an area extending into the south sector and beyond the south boundary of the site.

There are no Registered Waste Transfer Sites, Licenced Waste Management Sites, or Registered Waste Treatment or Disposal sites within 500m of the site.

4 SUMO SURVEY GEOPHYSICAL SURVEY REPORT SUMMARY

4.1 General

The survey work was undertaken using a magnetometer on traverse interval of 1.00m and sampled every 0.25m. The site of interest is referred to as Area 3 in the Sumo report.

The full report should be read in conjunction with the summary.

4.2 Conclusion Summary

The general level of background magnetic fluctuation is low, presenting no hindrance to the identification and assessment of anomalous responses. The results from this survey indicate the presence of natural variations, some former boundaries and a few anomalies of possible archaeological interest; as a consequence, the technique is likely to have detected any definitive archaeological features, if present.

Numerous anomalies have been recorded which are thought to have an anthropogenic origin. As a first point of reference, comparison with early mapping shows that only a few of these can be obviously related to mapped boundary features. The remaining anomalies are interpreted and classified based on coherence, apparent patterning and the wider context. A few linear anomalies form patterns which might indicate archaeological potential (though their precise nature and function remains unclear), while others can only be classified as Uncertain. Several strong anomalies and zones of response may be associated with industrial (mining) activity; however, this interpretation is cautious, and they could simply be the product of localised landscaping / land management.

5 SUMMARY OF ENVIRONMENTAL SENSITIVITY

The following section is a review of the environmental sensitivity of the site as discussed in previous sections 2 - 6. Significant potential risks are discussed in the following subsections and will then be evaluated as part of the Site Conceptual Model in Section 8.

Sources are defined as where pollution comes from, pathways are a route in which the pollution travels and receptors are anything affected by a pollutant. Further details on Source-Pathway-Receptor methodology can be found in Appendix D.

The table below focuses on significant site-specific sources, pathways and receptors. More 'generic' pathways and receptors (such as site end uses) will be covered as part of the initial Site Conceptual Model in Section 8.

5.1 Sources

Source	Distance/ Direction	Details	Significant Risk
Current Site Use – Agricultural	On Site	No significant contamination anticipated onsite from current land use. No significant contaminative processes anticipated onsite.	Unlikely
Historic Site Use – Agricultural	On Site	No significant site-wide contamination anticipated remaining onsite from historic land use but is dependent on demolition works.	Unlikely
Surrounding – Largely Agricultural	Adjacent to Site	Limited Industrial processes have occurred around the site. M62 located adjacent to the southern boundary.	Unlikely

5.2 Pathways and Receptors

Pathways and Receptors	Distance/ Direction	Details	Significant Risk
Aquifers	Below Site	Bedrock aquifer designated as Principal Aquifer of high permeability (East). Granular superficial deposits will not significantly limit vertical or horizontal migration. Secondary A Aquifer of moderate permeability in the West. Cohesive superficial deposits of lower permeability will limit lateral and vertical migration. No significant contamination anticipated onsite.	Low

6 INITIAL CONCEPTUAL SITE MODEL

For details on how the conceptual model is evaluated please refer to Appendix D.

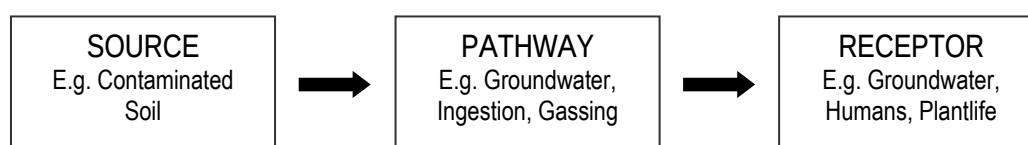
This section of the report aims to identify land which could potentially be affected by contamination, such that it could affect the value or re-use of the land, or such that mitigation would be required for certain proposed end uses of the land.

Potential contamination sources and environmentally sensitive receptors have been discussed in Section 7. Potentially significant risks are evaluated as part of the subsequent sub-sections.

6.1 Source-Pathway-Receptor Linkages

The risk assessment uses a 'Source-Pathway-Receptor' methodology for assessing whether a source of contamination could potentially lead to harmful consequences. This means that there needs to be a pollutant linkage from source to receptor for harm to be caused, this linkage consisting of a source of pollution; a pathway for the pollutant to move along; a receptor that is affected by the pollutant.

The current potential risks to site arising from various Source-Pathway-Receptor linkages are assessed below. A risk may be considered significant if all three of the stages are present and therefore providing a pollution linkage. The various sources, pathways and receptors are considered separately. The assessment is based on the future use, which is understood to be residential with home-grown produce.



Type of Contamination	Potential Sources	Potential Pathway	Potential Receptors	Pollution Linkage	Comment	Estimated Level of Risk
Ground Gas	Made Ground	Inhalation of Vapours	Construction/ Maintenance Workers	Potentially Active	Potential for biogenic ground gas production from organics within natural strata and former ponds, deep areas of made ground are not anticipated. Potential ground gas risk from underlying coal workings. Low permeability of the superficial till in the west will limit any migration from offsite sources.	Low - moderate
	Mine Workings	Vapours Penetrating Unprotected Buildings	Future Site Users	Potentially Active	Potential for biogenic ground gas production from organics within natural strata and former ponds, deep areas of made ground are not anticipated. Potential ground gas risk from underlying coal workings. Low permeability of the superficial till in the west will limit any migration from offsite sources.	Low - moderate
Surface and Near Surface Contaminants Within Soils	Current Site Use Historic land Uses Surrounding Land Uses	Ingestion, Inhalation, Dermal Contact	Current Site Users	Potentially Active	Potential for small localised spillages from agricultural machinery. No significant widespread contamination anticipated. Ground Investigation to confirm.	Low
			Construction Workers	Potentially Active	Potential for small localised spillages from agricultural machinery. No significant widespread contamination anticipated. Ground Investigation to confirm. Suitable PPE required for site workers.	Low
			Future Site Users	Potentially Active	Potential for small localised spillages from agricultural machinery. No significant widespread contamination anticipated. Ground Investigation to confirm. Ground Investigation to confirm any remedial actions required.	Low
			Adjacent Land Users	Potentially Active	Potential for small localised spillages from agricultural machinery. No significant widespread contamination anticipated. Ground Investigation to confirm. Ground Investigation to confirm any remedial actions required.	Low
		Direct Contact	Structures	Potentially Active	Potential for small localised spillages from agricultural machinery. No significant widespread contamination anticipated. Ground Investigation to confirm.	Low
		Absorption in Root Zone	Plants	Potentially Active	Potential for small localised spillages from agricultural machinery. No significant widespread contamination anticipated.	Low
Mobile Contaminants, Leachable e.g. from Pollution Sources Adjacent to Site/On Site	Current Site Use	Leaching into Groundwater	Groundwater	Potentially Active	Potential for small localised spillages from agricultural machinery. No significant widespread contamination anticipated.	Low
	Historic land Uses	Off-site Migration in Groundwater	Abstractions	Potentially Active	Potable abstraction 675m east. Site lies within Groundwater Total Catchment Source Protection Zone. Groundwater testing to confirm, if present. No significant widespread contamination anticipated.	Low
	Surrounding Land Uses		Controlled Waters	Potentially Active	Limited surface water within influencing distance of the site. Cohesive superficial deposits will limit horizontal and vertical migration.	Low
Organic and Inorganic Contaminants Within Soils / Groundwater	Current Site Use Historic land Uses Surrounding Land Uses	Potable Water Supply Pipes	Utilities Workers	Potentially Active	Potential for small localised spillages from agricultural machinery. No significant widespread contamination anticipated. Ground investigation to confirm. UU Assessment may be required.	Low

6.2 Contamination Summary

In this qualitative risk assessment, a generally Low / Low – Moderate risk for contamination and ground gas implies that remedial action may be necessary at the site but is unlikely, this cannot be confirmed until the geotechnical and contamination ground investigation has been completed.

6.3 Geotechnical Constraints

- Potential for tree heave should cohesive strata be encountered.
- Potential shallow coal mining under the site.
- Steep Banks adjacent to M62.
- Shallow groundwater.

7 FIELDWORK

7.1 Fieldwork Objectives

The objectives of the intrusive ground investigation will be to:

- Clarify the 'Initial Contamination Conceptual Model'.
- Clarify the Initial Risk Assessment.
- Benchmark the contamination status of the site.
- Provide data for the design of any remedial works that may be required.
- Provide a geotechnical appraisal for the site.

7.2 Fieldwork Scope

The trial pit and window sample fieldwork were carried out on the 23rd and 30th October 2019, and rotary undertaken between 19th and 29th November 2019 included the following:

- Twenty-five (25 No) machine excavated trial holes to between 0.95mbgl (TP04) and 3.10mbgl (TP08).
- Five (5 No) window sample boreholes drilled up to 4.00m bgl and installed with gas and groundwater monitoring wells to depths of up to 3.00m bgl.
- Six (6 No) ground gas monitoring visits over a period of at least three months with varying barometric pressures.
- Sixteen (16no.) rotary boreholes to depths between 15.00mbgl and 30.00mbgl to investigate potential coal workings below the site.
- Chemical analysis (Metals, PAH's and TPH's) of eleven (25 No) samples.
- Analysis of eleven (25 No) samples for asbestos screening.
- Collection and analysis of six (4 No) soil samples for geotechnical analysis.

The exploratory hole positions were selected and set out by Betts Geo Environmental Ltd (BGE) as shown on the Exploratory Hole Location Plan in Appendix B.

Prior to any intrusive works, each location was checked for services using a cable avoidance tool (CAT) and review of statutory service plans.

The exploratory holes were positioned to achieve a general spread across the site.

8 GROUND CONDITIONS

8.1 General

The exploratory holes were logged by an Engineer in general accordance with the recommendations of BS5930:2015. Detailed descriptions, together with relevant comments, are given in the Exploratory Hole Logs included in Appendix C.

Ground conditions consisted of TOPSOIL which is a brown / dark clayey gravelly fine to SAND over heterogeneous MADE GROUND over yellow or brown gravelly fine to coarse SAND in the east, or, yellow or brown gravelly fine to coarse SAND over grey or reddish brown CLAY / SILT in the west.

The full logs should be consulted in conjunction with this summary.

8.2 Ground Conditions Summary

Strata	Generalised Description	Thickness m	
		Top	Base
MADE GROUND / TOPSOIL	Brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal.	0.00	1.15
SAND	Loose to medium dense yellow / grey / reddish brown fine to coarse clayey SAND with occasional weak fine to medium angular to subangular sandstone gravel.	0.30	2.80
SAND (2)	Medium dense yellow / reddish-brown / brown fine to coarse occasionally silty occasionally clayey SAND with occasional weak fine to medium angular to subangular sandstone gravel. Occasional flecks of coal.	0.40	3.00
SAND (3)	Medium dense becoming dense reddish-brown fine to coarse SAND with occasional weak fine to medium sandstone angular to subangular gravel.	3.30	4.00
GRAVEL	Medium dense grey / grey and brown sandy silty fine to coarse GRAVEL. Gravel is angular to subangular of siltstone. Weathered bedrock.	2.50	3.00
GRAVEL & COBBLES	Dense to very dense sandy GRAVEL and COBBLES. Gravel and cobbles are fine to coarse angular to subangular of siltstone.	2.20	2.50
CLAY	Soft to firm yellowish brown sandy slightly silty CLAY.	0.40	0.85
CLAY (1)	Firm to stiff reddish brown and occasionally mottled grey sandy CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.	0.50	2.80
SILT	Firm to stiff grey sandy SILT. Strata is noted as damp. Occasional yellowish bands noted. With occasional flecks of coal. Possible weathered siltstone.	0.50	3.10

8.2.1 Topsoil / Made Ground

Topsoil was encountered from ground surface to depths of up to 1.15mbgl and was noted in all locations.

Topsoil generally comprised Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal.

8.2.2 Glacial Till

Natural Glacial Till was encountered beneath the topsoil in all locations and comprised either a fine to coarse gravelly SAND in the east, and a sandy silty CLAY or fine to coarse gravelly SAND in the west.

Standard Penetration Tests (SPT) 'N' values of between 5 and 25 were recorded within the fine-grained cohesive deposits.

Standard Penetration Tests (SPT) 'N' values of between 9 and 25 were recorded within the granular deposits.

Refusals were noted across the site and were attributed to SANDSTONE or SILTSTONE deposits. Refusal were generally noted at shallower depths in the east of the site.

4no. Atterburg tests were undertaken which recorded moisture contents of between 16% and 26% and a plasticity index of between 18% and 24%. A modified plasticity index of between 15% and 22% has been calculated which corresponds to materials with a Low to Moderate volume change potential.

8.3 Visual and Olfactory Contamination

There was no significant visual contamination identified during the investigation.

8.4 Obstructions

Other than solid geology and occasional boulders, no obstructions were noted.

8.5 Groundwater – During Fieldwork

Exploratory Hole	Depth (m bgl)	Strata	Remark
TP01	1.30	SAND	Seepage with some SAND intrusion
TP08	2.00-3.00	SAND	Seepages with some SAND intrusion
TP10	2.20	CLAY	Minor seepage
TP11	2.00-2.50	SAND	Damp with occasional sand intrusion
TP12	1.90-2.80	SAND	Minor seepages with some sand intrusion
TP13	1.90-2.80	CLAY	Strata damp
TP15	2.40	CLAY / SAND	Seepage
TP17	2.20	CLAY / GRAVEL	Wet
WS03	2.00	SAND	Damp with SAND intrusion, reduced install depth
WS04	2.00-2.60	SAND	Wet
	2.80-2.90	CLAY	Wet sand band with some sand intrusion
WS06	1.40-2.20	SAND	Wet
	3.00-3.50		Wet with some sand intrusion

SAND intrusion was noted across the site, and whilst not truly running SAND, this should be accounted for during foundation excavation.

8.6 Groundwater – During Post-Fieldwork Monitoring

The table below indicates groundwater encountered during the monitoring post fieldwork (1/6 visits have been undertaken);

Exploratory Hole	Depth to Water (mbgl)	Depth to Base of Installation (mbgl)
WS1	Dry	1.15
WS2	Dry	1.30
WS3	0.35	2.65
WS4	0.35	2.75
WS5	0.85	2.80
WS6	Flooded	2.50

9 MINING INVESTIGATION

9.1 Investigation Scope

- 16no. boreholes drilled to up to 30m under Coal Authority Permit (18995).
- Several shallow holes to 9m depth were drilled to prove the precise position of the Ecclestone West Fault, these were not logged as they were for location purposes only.

9.2 Investigation Conclusions

A large displacement fault has been known to be present under the site since the First Edition of the Geological Survey in 1882, although the drilling has proven the true location of the fault to be 100m west of the Geological Survey location. The drilling results also confirm the fault position identified during the 2018 investigation in the field immediately north of the current site. The precise location of the fault has been established and pegged-out on site.

The geological succession proved by the drilling work confirms the Geological Survey of the area with the 450m Ecclestone West Fault trending north across the site. This fault throws coal bearing Carboniferous Coal Measures of Westphalian B age in the west against Triassic Lower Mottled Sandstone to the east.

With rockhead at 2.0m or less and with the contrasting colours of the strata it would be possible to expose the fault by deep excavation.

There are no shallow coal seams east of the fault, although mining at 700m depth did take place from Cronton Colliery in the Felcroft Mine 2km south-east of the site in 1977. There are records of mining under the fault from Halsnead Colliery in the Rushy Park Mine at a depth of 400m, 200m north of the site, which were abandoned in 1896. Cronton Colliery, opened in 1915, worked the Rushy Park under the site in 1932 and left a substantial barrier of solid coal against the old Halsnead workings north and west of the site.

The workings in the Higher Florida Mine from Cronton Colliery encountered a 40m fault under the site with a downthrow east. It was not possible to prove the location of this fault during the current drilling programme because of a lack of distinctive strata. The Coal Authority show one coal seam possibly present at very shallow depth west of the fault. This is the Felcroft Mine at an estimated depth of 25m in the north-east of the site.

In descending order, the coal seams at Halsnead have the following local names and succession:

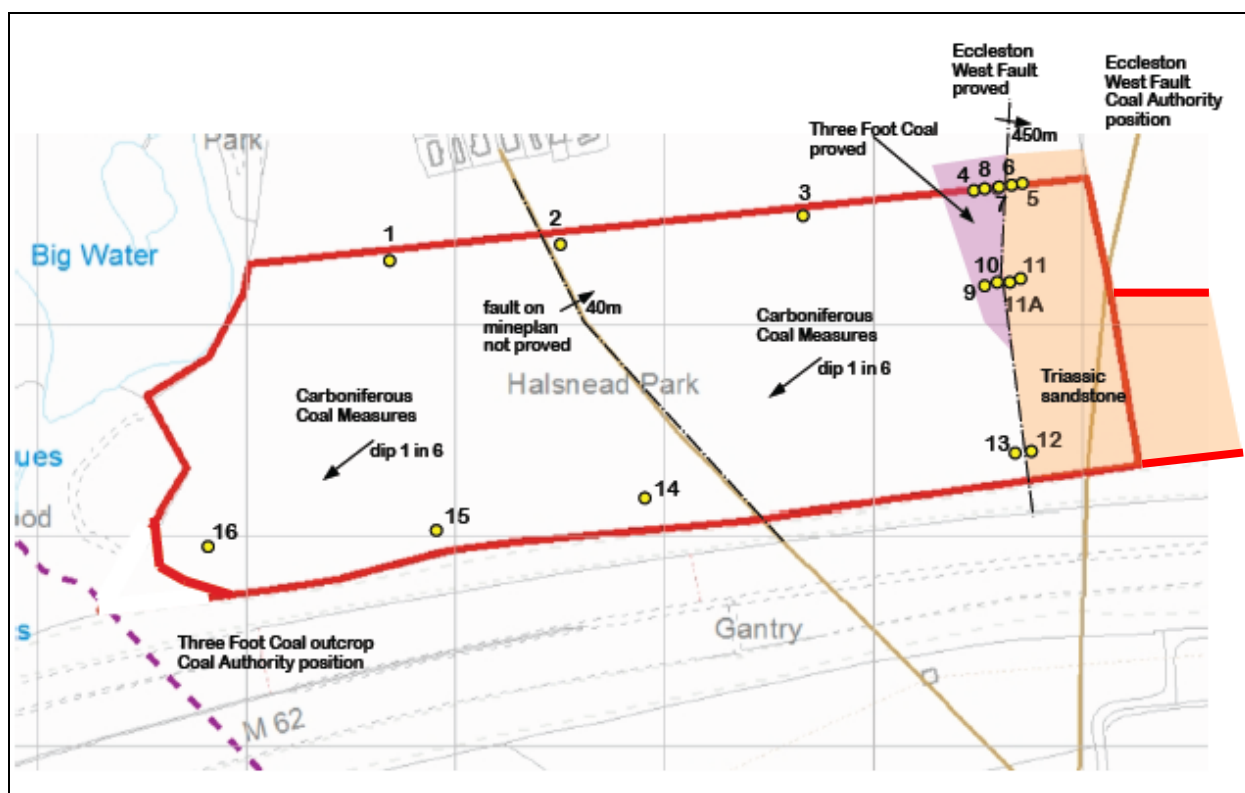
- Felcroft Mine 1.5m thick
- Pasture Mine (formerly known as Pastures) 2.4m thick
- Discovery Mine (formerly known as Discoverer) 2.0m thick
- Yard Mine (also incorrectly identified as Earthy Delf) 1.0m thick

The Coal Measures dip south-west at approximately 1 in 6, although there are variations in this nominal dip due to the influence of the fault.

Whilst no coal thicker than 1.0m was encountered in the drilling on the majority of the site, a small area of shallow coal 1.0m thick was proved to be present in the close proximity of the Eccleston West Fault. This coal is within a faulted block dipping east at 1 in 10, close to the western wall of the fault and presumed to have been displaced downwards from higher in the Coal Measure succession. If this is the origin of the faulted block then the only known coal seam of a similar recorded thickness is the unworked Three Foot Coal, encountered close to outcrop in the Cronton Colliery No 2 Shaft and inferred to outcrop in the extreme west of the site dipping to the south-west at 1 in 6.

Bh 16 in the west of the site was drilled to locate the Three-Foot Coal but the seam was proved to outcrop south-west of the site boundary.

The previous 2018 investigation north of the site also encountered minor faulting associated, and probably parallel, to the Eccleston West Fault. There was no evidence of any mining activity in any of the boreholes, the strata being consistently firm and hard with no soft drilling or loss of water flush. There is no evidence of any past shallow mining activity under the site.



If coal is located within service trenches, it may be required to be dug out and any electrical cables insulated to mitigate risk of accidental ignition of the coal.

10 LABORATORY TESTING

10.1 General

An assessment of potential determinants associated with the current/former site uses has been undertaken. Determinants originating from the current/former site uses may include metals, polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs) and asbestos. A general suite of testing should detect most potential contaminants.

Test	No. of Tests	Description
pH Values	29	Determination of pH (using Cyberscan pH meter).
Sulphate - Soluble 2:1 Extract	29	Dionex.
Arsenic, Cadmium, Chromium VI, Chromium III, Total Chromium, Lead, Mercury, Selenium, Copper, Nickel, Complex and Free Cyanide and Zinc.	25	Soil samples were analysed in accordance with UKAS/MCERTS standards Inductively coupled plasma atomic emission spectroscopy (ICP-OES)
Speciated Polycyclic Aromatic Hydrocarbons (PAH),	25	Determination of Polycyclic Aromatic Hydrocarbons by GC-MS. End/end extraction using DCM on as received sample. In house method modified USEPA 8270. Include coronene if required.
TPH CWG	25	TPH CWG (Aliphatics C5-6,>6-8,>8-10,>10-12,>12-16,>16-21,>2-35) (aromatics >C5-7,>7-8,>8-10,>10-12,>12-16,>16-21,>21-35) C5-8 fractions by Headspace GC-MS (003S). C8-35 fractions on as received sample extracted with hexane/acetone, aliphatic/aromatic splits run by GC-FID (005S), banded as listed above.
GRO/BTEX/MTBE by GC-FID (C5-10; C10-C12)	25	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12).
Organic Matter	25	Determination of Organic Matter by combustion.
Asbestos Screen	25	Visual Screening for Fibres.
Atterberg's	4	BS1377 Part 2. 1990, 4.3,5.3,5.4
Moisture Content	4	BS1377 Part 2. 1990, 3.2

11 CONTAMINATION ASSESSMENT

11.1 General

Contaminants of concern recorded at concentrations above relevant screening values are summarised below. For ease of description, the identification of contaminant sources and possible re-use of material, Topsoil, Made Ground, Natural Strata and Groundwater will be dealt with in separate sub-headings in this section of the report where required.

Our assessment is based on the following assumptions:

- The proposed site end use is of a high-risk rating (residential housing with gardens). For analysis purposes, 'residential with home grown produce' is deemed most appropriate end use.
- The superficial deposits of the Glacial Till are classed as a Secondary Undifferentiated Aquifer (Low Permeability).
- The bedrock deposits of the Sandstone are classed as a Secondary A Aquifer (Moderate Permeability) in the WEST and Principal Aquifer (High Permeability) in the EAST.
- It is deemed that some statistical analysis is appropriate. Where sample data numbers are low and/or targeted, each determinant result is reviewed further as an individual result as opposed to an average across the site.
- Site history has indicated a Low risk of contamination.
- Statistical analysis of the chemical test results has been undertaken in general accordance with Environment Agency 2009 SGV Guidance and AtRisk 2017 using the combined assessment criterion given by CLEA (Note: all SSVs for EA derivation are for a SOM of 6%, in line with Environment Agency Report SC050021/SR4 – this figure is deemed representative as an average value for a sandy loam soil). AtRisk 2017 are used to the nearest SOM percentage deemed appropriate.
- No free product was noted within the exploratory holes.
- Following the withdrawal of CLR 7-10 Guidance documents by the Environment Agency, statistical analysis has been undertaken in accordance with the CIEH/CL:AIRE 'Guidance on Comparing Soil Contamination Data with a Critical Concentration' (May 2008). As such, the use of the mean value test alone is not considered.

A full risk assessment is detailed within Section 14 of this report.

11.2 Soils Contamination Summary

11.2.1 Topsoil / Made Ground

All determinants for Metals, TPH's and PAH's fell below the residential home grown produce guidance.

11.2.2 Natural Strata

All determinants for Metals, TPH's and PAH's fell below the residential home grown produce guidance within the Natural Strata.

11.2.3 Asbestos

No asbestos was detected within any of the samples screened and no visual evidence of possible asbestos was noted in any of the exploratory holes.

11.3 Groundwater Contamination

Water samples are due to be collected, this section will be updated once sampling and its assessment has been completed.

12 ENVIRONMENTAL RISK ASSESSMENT

12.1 General

This section assesses likely risks to the identified receptors, arising from potential contamination sources. It provides a final qualitative assessment of the risks involved, indicating whether (where appropriate) any immediate action is required to mitigate certain risks.

In assessing the risk qualitatively, it is appropriate to use the methods outlined in the CIRIA document C552, "Contaminated Land Risk Assessment a Guide to Good Practice". It uses a classification of risk based on the magnitude of the potential consequence or severity of risk occurring, compared with the magnitude of the probability or likelihood of the risk occurring. These are indicated on the attached tables in Appendix J.

The superficial deposits are classed as Secondary Undifferentiated Aquifer (Low Permeability) and the Bedrock deposits are classed as a Principal Aquifer in the East and Secondary A Aquifer (Moderate Permeability) in the west. With respect to human health, the proposed end use (residential with home grown produce) is of high sensitivity. Therefore, the site's environmental setting is considered to be of a Moderate to High environmental sensitivity. Transient risks to construction workers can be addressed by the adoption of appropriate health and safety measures (see Section 15.2), therefore, the primary residual risks that require assessment are Site End Users. The following sections are split into soils and groundwater for clarity.

12.2 Assessment of Contamination Analytical Results

Soils

No Exceedances have been recorded against residential with plat uptake thresholds.

Groundwater and Aquifer Risk

No significant risks to groundwater or aquifers are anticipated given no contamination was observed.

Potable groundwater extraction located 675m east and the site is located within a Total Catchment Source Protection Zone.

The risk to groundwater / aquifers is therefore deemed as Low, due to lack of soil contamination and sources.

13 GROUND GAS ASSESSMENT (Preliminary)

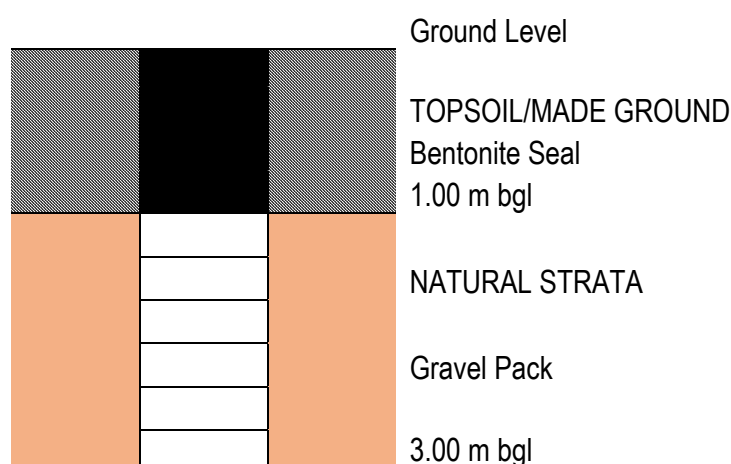
13.1 Ground Gas Requirements – Radon

The EnviroCheck data states that the site is within a low probability radon area (1-3% of properties above the action level), and therefore no special precautions are required.

13.2 Ground Gas Assessment

13.2.1 Ground Gas Boreholes Installations

The five (5 No.) boreholes were all installed to between 1.15mbgl and 3.00mbgl. A typical installation is shown below;



13.2.2 Summary of Results (Ongoing)

One out of six (1 / 6) ground gas visits have been completed with 5 more visits required, the initial visit is summarised below (see Appendix E for full results).

Borehole Number	Peak Flow (l/hr)	Baro. Pressure (mB)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	GSV CH ₄	GSV CO ₂
WS1	0.2	998	<0.1	0.1	20.4	0.0002	0.0002
WS2	0.2			1.2	20.4	0.0002	0.0024
WS3	0.2			0.4	20.3	0.0002	0.0008
WS4	0.1			0.2	20.5	0.0001	0.0002
WS5	0.2			1.8	20.4	0.0002	0.0036
WS6	Well Flooded						

13.2.3 Guidance

Three recent publications are used for ground gas risk assessment:

- 'Guidance on Evaluation of Development Proposals on Sites Where Methane and Carbon Dioxide are Present', Report Edition No.04 March 2007 NHBC – designed for use with low rise residential properties.
- CIRIA C665 'Assessing risks posed by hazardous ground gases for buildings' 2007 - for high rise residential / flats.
- BS8485:2015 'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'.

Further details / accompanying notes for the following gas risk assessment are enclosed in Appendix G. The proposed development at the site is private residential two-storey houses, therefore assessments using the NHBC Guidance are deemed most appropriate.

13.2.4 Gas Recommendations (Preliminary)

To date, no elevated or significantly depleted gases have been identified on site after one (1 No.) visits.

Based on gas results to date, the site has been preliminarily assessed as 'Green / CS1' – no gas protection measures will likely be required. This will be confirmed upon completion of the monitoring programme.

Site Area	Site Classification	Recommended Ground Gas Protection Measures
Whole Site	Green	No specialist ground gas protection is required.

For the prices of purposes, it is considered prudent to allow for gas protection measures to Amber 1 / CS2 level until the completion of gas monitoring.

14 REVISED CONCEPTUAL SITE MODEL

14.1 General

The Initial Conceptual Site Model has been amended in light of data obtained during the ground investigation, most notably the arsenic and lead contaminated soil in relation to the screening criteria for the proposed end use.

14.2 Final Conceptual Site Model

This section reassesses likely risks to the identified receptors, arising from potential contamination sources. It provides a final qualitative assessment of the risks involved, indicating whether (where appropriate) any immediate action is required to mitigate certain risks. It also discusses (where appropriate) what longer term measures or remedial works may be required in the future if the site were to be developed. It is considered that the site has not been assessed by the Local Authority as a contaminated site under the terms of the Environmental Protection Act 1990 Part IIa.

Target (Receptor)	Potential Source-Pathway Linkage	Remedial Action Required (where appropriate)	Est. Degree of Risk to Target Following Remedial Action Where Necessary
Site End Users	Inhalation of soil gases, odours or dust.	1/6 ground gas monitoring visits complete – Green / CS1 across site. To be reviewed upon completion of gas monitoring.	Low
Site End Users	Ingestion of, and skin contact with, contaminated soil.	Installation of 300mm growing medium.	Low
Site End Users	Ingestion of contaminants in vegetables etc. or in soils adhering to vegetables, etc	Installation of 300mm growing medium.	Low
Construction/ Maintenance Workers	Inhalation of soil gases, odours or dust.	PPE (gas monitoring data suggests ground gas will not affect construction workers; this is subject to further monitoring)	Low (assumed basic PPE is used)
Construction/ Maintenance Workers	Ingestion of, and skin contact with, contaminated soil	PPE and appropriate handwashing facilities to be provided to ground workers	Low (assumed basic PPE is used)
Plants	Adverse effects on growth caused by presence of phytotoxic contaminants in soil	Installation of 300mm growing medium.	Low
Buildings and Structures	Flow of ground gas into buildings. Asphyxiation, toxicity, explosion and fire hazards	1/6 ground gas monitoring visits complete – Green / CS1 across site. To be reviewed upon completion of gas monitoring.	Low
Foundations	Sulphate attack of foundations	Foundations to be designed as per section 16.4.	Low
Water Supplies	Hydrocarbons penetrating plastic water supply pipes.	United Utilities pipeline risk assessment required. Protect-A-line not anticipated.	Low
Groundwater	Migration of soluble contaminants into groundwater on or off site	No source; no pathway-receptor linkage identified; no remedial action required.	Low
Surface Water	Migration of soluble contaminants and/or direct run-off of contaminants	No source; no pathway-receptor linkage identified; no remedial action required.	Low

15 OUTLINE STRATEGY FOR RISK REDUCTION / REMEDIATION STRATEGY

15.1 General

The following section details any recommendations to reduce risk on site and recommends remedial actions (as per the previous sections of this report). For clarity, the section is split into sub-sections as per the conceptual site model (Section 14).

15.2 Construction / Maintenance Workers

The lead contamination encountered on site could be considered a risk to site workers. There are currently no assessment criteria for risks to construction workers, the following recommendations should be adhered to during site works:

- Site workers should wear gloves, boots and overalls and wash their hands before eating, drinking and smoking. Excessive dust generation should be avoided.
- It is recommended that during all excavations adequate ventilation should be maintained. If man entry into excavations is required, gas monitoring should be carried out as a precaution.
- If areas of suspected contamination are found then a suitably qualified person should undertake appropriate sampling, testing and further risk assessment.
- Although asbestos was not encountered on site, vigilance should be adhered, and any suspected asbestos should be notified, and a suitably qualified person appointed to inspect.

15.3 Site-End Users

No contamination identified, requirement for 300mm growing medium, as per NHBC guidance.

15.4 Ground Gas Protection Measures (Ongoing)

No radon protection measures will be required in the proposed dwellings.

Ground gas monitoring is not yet complete. To date, no elevated ground gasses or GSVs have been identified. The preliminary ground gas assessment has indicated that no ground gas protection measures will be required.

This will be reassessed upon completion of the gas monitoring.

15.5 Off-Site Disposal of Soils

No significant changes in site levels are understood to be proposed. However, any waste materials requiring excavation and offsite disposal can result in significant development costs.

The handling, re-use or disposal of waste is regulated by the Environment Agency. Any material excavated on-site may be classified as waste and it is the responsibility of the holder of a material to form their own view on whether or not it is waste. One of the ways this can be achieved is set out in the Development

Industry Code of Practice (CoP; Ref. 13). This builds on the Environment Agency guidance document Definition of waste: developing greenfield and brownfield sites (2006). The Agency will take into account the use of the CoP in deciding whether to regulate materials as waste. If materials are dealt with in accordance with the CoP, the Agency considers that those materials are unlikely to be waste at the point when they are to be used for the purpose of land development.

All material proposed for off-site disposal (e.g. during future construction works) should be given a proper description and waste classification assessment as required by the Environmental Protection Duty of Care Regulations (Ref. 14), and in accordance with WM3 and the Environment Agency Technical Guidance on the assessment and classification of Hazardous Waste.

The chemical laboratory data has been screened using the online Hazwaste™ software and the laboratory test results indicate that, generally, the materials onsite would be classified as Non-hazardous.

It is recommended that the results of the contamination testing (including the history of the site) be presented to the proposed landfills to obtain their acceptance of the information to date. However, further testing maybe required to fully assess the waste classification of the soils requiring offsite disposal. A copy of the Hazwaste™ summary report is presented in Appendix K. The results of these tests should be confirmed by the proposed waste receiver.

Segregation of the Topsoil and Natural Strata should be possible given the chemical analysis and very different visual identification.

15.6 Materials Management

Materials Management Any material excavated on site may be classified as waste and it is the responsibility of the holder of a material to form their own view on whether or not it is waste. This includes determining when waste that has been treated in some way can cease to be classed as waste for a particular purpose. If site-won material is to be re-used on site, a Materials Management Plan will be required, signed off by a Qualified Person as defined in the 'Development Industry Code of Practice' (CL:AIRE, MARCH 2011).

15.7 Piped Drinking Water Supplies

The use of Protect-A-Line is not anticipated; however, a pipeline assessment should be undertaken.

16 GEOTECHNICAL ASSESSMENT

16.1 Introduction

It is understood that the proposed development will consist of the construction of low-rise residential properties with associated private gardens, associated infrastructure, public open space and new highway. Specific loadings have not been provided; however, it is anticipated that associated foundation loadings will be low. Furthermore, no site levels have been provided, however, it is anticipated that they will tie in with existing housing.

16.2 Site Preparation and Excavation

Excavation of shallow site soils should not present any difficulty for conventional plant and equipment. However, it should be noted that bedrock was observed at shallow depth.

SAND intrusion was also noted in a number of locations, as were groundwater strikes. These features may lead to unstable excavations.

Shallow bedrock is evident in places and should be factored into deep excavations / cut & fill, and where any filling is required for piling (pile embedment may be insufficient).

Excavations undertaken during site works were occasionally unstable within SAND strata, all excavations should be planned, and due consideration should be given to providing temporary support or suitable battering. Excavations should be regularly inspected by a competent person to ensure continued safety. Further advice on the safety of excavations is given in *Health and Safety in Construction*. Shallow (<1.20mbgl) excavations for service trenches should be straight forward however, could be complicated by variable Made Ground on site.

16.3 Control of Groundwater

Shallow groundwater was encountered on site from 0.35mbgl during monitoring visits. It is likely that provision of pumping / shuttering will be necessary during excavation of foundation and service trenches and to deeper excavations for sewers etc. It is good practice to have such equipment on standby in case of seasonal / abnormal weather conditions.

Should sewers / excavations deeper than the boreholes / trial pits undertaken be required, further SI will be needed.

Care and planning where excavation is near to the Faultline / spring line is required and should highlighted as a construction risk to be managed.

16.4 Foundations

In the east, suitable founding strata of loose to medium dense SAND was generally observed ≤ 1.30 mbgl. Underlying the superficial strata was SANDSTONE bedrock.

In the west of the site, suitable founding strata of soft to firm and firm to stiff CLAY or loose to medium dense SAND was generally observed $\leq 1.50\text{mbgl}$. Underlying the superficial strata in the west of the site was SILTSTONE bedrock.

Therefore, following the site strip, it is anticipated that shallow strip and trench fill foundations may be adopted. Founding on these strata, the following allowable bearing pressures (ABP) may be expected;

- Soft to firm CLAY with an ABP of around 75kN/m^2
- Firm to stiff CLAY with an ABP of around $100\text{-}125\text{kN/m}^2$
- Stiff CLAY / SILT with an ABP of around 125kN/m^2
- Loose to medium dense SAND with an ABP of around 50kN/m^2
- Medium dense SAND with an ABP of around 75kN/m^2
- Medium dense to dense SAND with an ABP of around 100kN/m^2
- Weak bedrock with an ABP of around 125kN/m^2

Where granular strata are observed in combination with groundwater, these bearing pressure may be halved.

Sand intrusion was noted in small pockets within the trial pits and window sample locations. This should be accounted when excavating foundations.

Deepening of foundations in accordance with NHBC standards will be required where foundations are within the zone of influence of existing or proposed trees and shrub planting. Where foundations are within the zone of influence of trees and are deeper than 1.50mbgl , a suitable compressible material or void will be required.

Foundations should be wholly excavated on one stratum. Should proposed foundations different strata, trenching or stepping of foundations will be required. Due to the slope of the site, a foundation zoning plan should be undertaken when proposed cut & fill levels are made available.

16.5 Ground Floor Construction

It is recommended that a suspended floor construction e.g. either in-situ RC slabs or block and beam flooring is adopted as per NHBC guidance.

16.6 Soakaway

Soakaway tests were not undertaken during the fieldwork. However, they may be feasible in the east of the site. It should however be noted that bedrock was at shallow depth and the underlying aquifer is classed as a Principal Aquifer. Groundwater has also been observed from 1.30mbgl .

16.7 Heave / Shrinkage Potential

A summary of Atterburg limit tests is shown below. Full results are located in Appendix D.

Exploratory Position ID	Depth (m)	% <425um	% Plasticity Index	% Modified Plasticity Index	NHBC Volume Change Potential
TP5	1.20	89	19	17	Low
TP8	0.95	84	19	16	
TP9	0.70	93	24	22	Moderate
TP12	1.00	86	18	15	Low

LOW to MODERATE plasticity has been determined from geotechnical lab testing. Foundation design for tree heave protection could be designed accordingly following discussion with the NHBC.

16.8 Highway

According to the criteria of Highways Agency HD 25/95 Volume 7 Section 2 Part 2 HD 25/94, a CBR value of circa 3% on the SAND is anticipated, however confirming in-situ CBR's should be undertaken once layouts and levels are known. Placement of geotextiles within the areas of roads / parking could also be designed to minimise the subgrade thickness.

16.9 Protection of Buried Concrete

It is considered for concrete design purposes that a brownfield site and mobile groundwater conditions are applicable. The tables below anticipated concrete specifications;

Concrete Classification	
Design Sulphate Class	DS-1
ACEC Class	AC-1
Design Chemical Class	DC-1

17 REFERENCES

- 17.1 *Desk Study Report for Halsnead Park (Mullin Land)Area 12, Manchester – March 2019 by Betts Geo (Report reference: 19LPL070/DS).*
- 17.2 *BS 5930:2015 Code of Practice for Site Investigation.*
- 17.3 *BS1377: 2016 Methods of Test for Soils for Civil Engineering Purposes.*
- 17.4 *Assessment of risks to human health from land contamination: an overview of the development of guideline values and related research. EA, 2002.*
- 17.5 *Contaminated Land Risk Assessment; A Guide to Good Practice; CIRIA C552: 2001.*
- 17.6 *Health and Safety in Construction, HSG150, HSE, 1996.*
- 17.7 *Hazardous Waste: Interpretation of the Definition and Classification of Hazardous Waste, Environment Agency, WM2 Version 1.0, June 2003.*
- 17.8 *DoE (1991), The Building Regulations Approved Document C, Site Preparation and Resistance to Moisture, HMSO.*
- 17.9 *Baker W (1987), Investigation Strategy - lecture at City of Birmingham Development Department Symposium on Methane Generating Sites, 9 December 1987, Industrial Research Laboratories, Birmingham.*
- 17.10 *NHBC Standards, Chapter 4.2, 2017 Building Near Trees.*
- 17.11 *Highways Agency HD 25/95 volume 7 section 2 Part 2 HD 25/94.*
- 17.12 *Water Regulations Advisory Scheme (2002) The selection of materials for water supply pipes to be laid in contaminated land.*
- 17.13 *Anon (1997) Dutch in Policy Retreat on Contaminated Land ENDS (Environmental Data Services), 269, 46.*
- 17.14 *Piling In Layered Ground: Risks to Groundwater and Archaeology Science Report SC020074/SR Environment Agency October 2006.*
- 17.15 *Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention National Groundwater & Contaminated Land Centre report NC/99/73 F J Westcott, C M B Lean & M L Cunningham May 2001.*
- 17.16 *'Guidance on Evaluation of Development Proposals on Sites Where Methane and Carbon Dioxide are Present', Report Edition No.04 March 2007 NHBC – designed for use with low rise residential properties.*
- 17.17 *CIRIA C665 'Assessing risks posed by hazardous ground gases for buildings' 2007 - for high rise residential / flats.*
- 17.18 *BS8485:2015 'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'.*
- 17.19 *BRE 414 'Protective measures for housing on gas-contaminated land' Roger Johnson, Parkman Environment 2001.*

- 17.20 *BS 8500- 1:2006 'Concrete – Complementary British Standard to BS EN 206-1 – Part 1: Method of specifying and guidance for the specifier' November 2006.*
- 17.21 *'Planning Policy 23: Planning and Pollution Control' Office of the Deputy Prime Minister 2004.*
- 17.22 *CLR11 'Model Procedures for the Management of Land Contamination' DEFRA 2004.*
- 17.23 *BRE 465 'Cover Systems for Land Regeneration' 2004.*
- 17.24 *'The UK Approach for Evaluating the Human Health Risks from Petroleum Hydrocarbons in Soils, Environment Agency Science Report P5-080/TR3', Environment Agency (May 2005).*
- 17.25 *TOX12- Contaminants in Soil: Collation of Toxicological Data and Intake Values for Humans. Dioxins, Furans and Dioxin-like PCBs' Environment Agency 2003.*
- 17.26 *Atkins AtRisksoil.co.uk SSV's derived using CLEA for 1 or 6% SOM. Residential with home grown produce.2017*

APPENDIX A

(i) Site Location Plan



Site Location Plan

The site is located to the north of the M62 and east M62 junction 6 with an approximate postcode of L35 3SS. The coordinates on the British National Grid CRS are 347303, 389785. The proposed site is approximately 8.74 hectares in total.

APPENDIX B

- (i) Exploratory Hole Location Plans (N/A)



DO NOT SCALE

Aerial imagery taken from Google Maps © 2019

- TAYLOR WIMPEY LAND
- HALSNEAD PARK
- MULLIN LAND
- KMBC LAND
- DEVELOPMENT HIGH RISK AREA
- TRIAL PITS [20]
- WINDOW SAMPLES [6]

A	10/10/19	LH	PRELIM EXP HOLE LOC PLAN	
REV	DATE	BY	DESCRIPTION	CHK

DRAWING STATUS: **DRAFT**



BETTS GEO
CONSULTING ENGINEERS

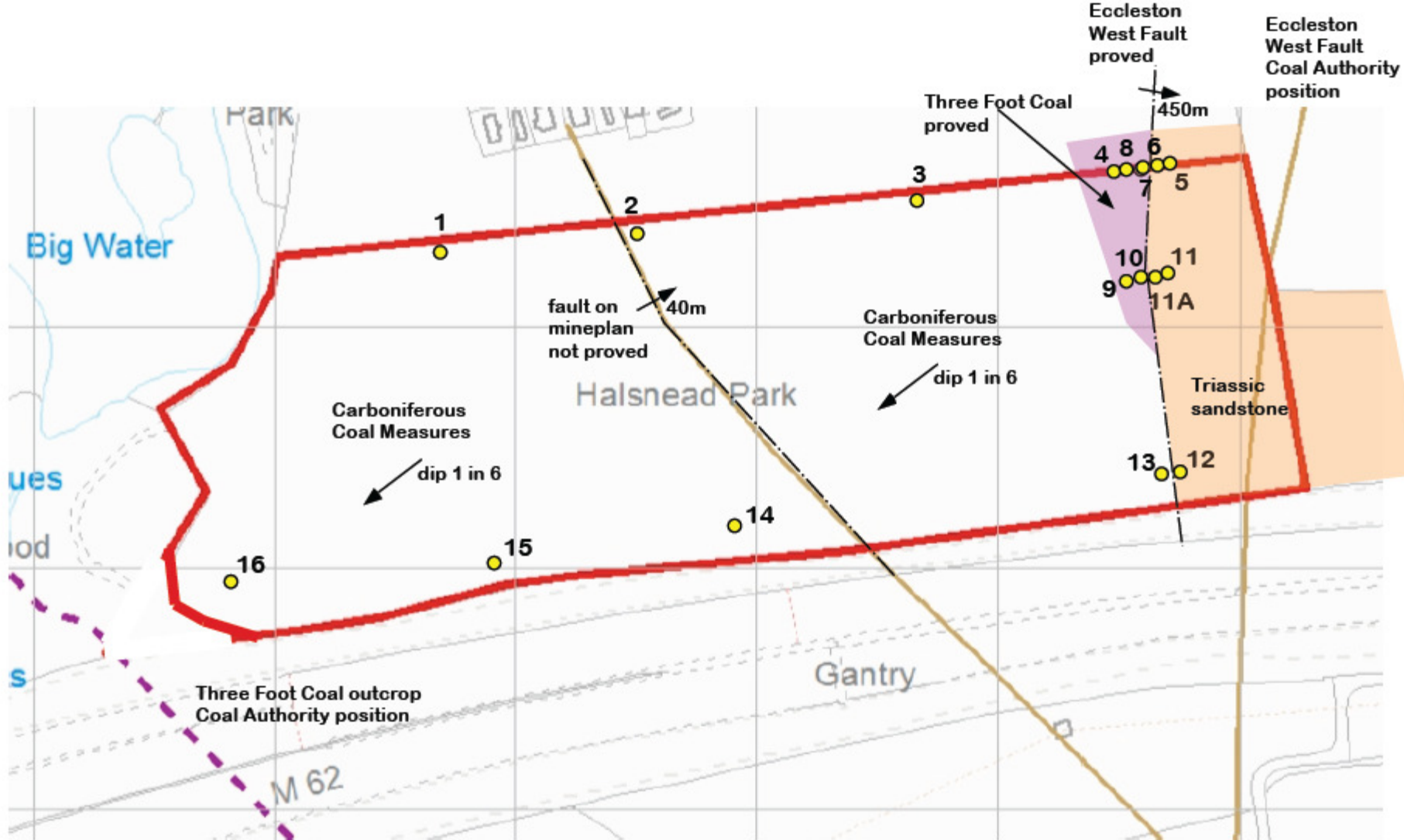
Unit 6, Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire CH5 2LY
Tel: 01244 288178 enquiries@betts-associates.co.uk

Taylor Wimpey

PROJECT:
HALSNEAD PARK, MULLIN LAND

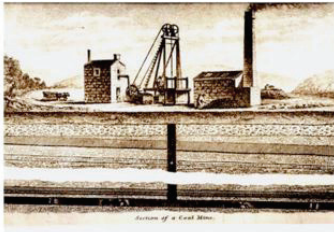
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PRELIMINARY EXPLORATORY HOLE LOCATION PLAN

DATE: 10/10/19	SCALE @ SIZE: NTS	DRAWN: LH	CHECKED: MJF
PROJECT No: 19TAY055	DRAWING No: 1	REV: C	



APPENDIX C

(i) Betts Exploratory Borehole Hole Logs



Bh 1

REF 1946
Bh 1

SITE
CLIENT

TITLE

ORIGIN

Mullin's Land, Halsnead
Betts Geo-Environmental

n/a

printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT
SCALE
GL AOD
RIG
ORIENTATION
FLUSH
BIT

19 Nov 2019
1:200

Montabert Hydrofore
vertical
river water bowser supply
75mm T/C

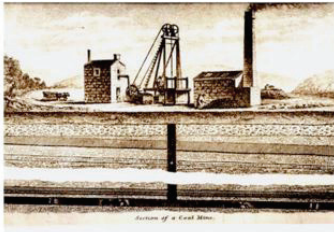
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0.0	0.0	clay		brown, sandy, firm	not taken	ground level
0.5						
1.0						
1.5						
2.0						
2.5	2.5	shale		grey, firm drilling occasional thin black shales		rockhead
3.0						
3.5						
4.0						
4.5						
5.0						
5.5						
6.0	6.1	sandstone		brown, firm drilling with black shale layers		
6.5						
7.0						
7.5						
8.0						
8.5						
9.0						
9.5						
10.0	10.3	shale		black, firm drilling grey shale layers		
10.5						
11.0						
11.5						
12.0	12.0	coal		black, firm drilling, thin		
12.5	12.2	shale		black, firm drilling grey shale layers		
13.0						
13.5						
14.0						
14.5						
15.0						
15.5						
16.0	16.0	shale		dark grey, firm drilling		
16.5						
17.0						
17.5						
18.0						
18.5						
19.0	19.3	sandstone		brown, firm drilling with black shale layers		
19.5						
20.0						
20.5						
21.0						
21.5						
22.0						
22.5						
23.0						
23.5						
24.0						
24.5						
25.0						
25.5						
26.0						
26.5						
27.0						
27.5						
28.0						
28.5						
29.0						
29.5						
30.0	30.0			bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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Wrexham
LL11 1BT
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Bh 2

REF 1946
Bh 2

SITE
CLIENT Mullin's Land, Halsnead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT
SCALE 19 Nov 2019
1:200

GL AOD

RIG
ORIENTATION Montabert Hydrofore
vertical
FLUSH river water bowser supply
BIT 75mm T/C

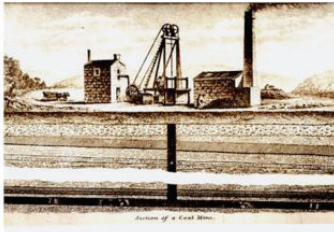
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1.0					
1.5					
2.0	2.1	shale	black, firm drilling		rockhead
2.5					
3.0					
3.5	3.5	shale	grey, firm drilling		
4.0					
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0	8.1	shale	dark grey, firm drilling		
8.5					
9.0					
9.5					
10.0	10.0	sandstone	brown, firm drilling		
10.5					
11.0					
11.5					
12.0	12.2	shale	dark grey, firm drilling		
12.5					
13.0					
13.5					
14.0	14.2	shale	black, firm drilling		
14.5					
15.0					
15.5					
16.0	16.3	sandstone	brown, firm drilling thin black shale layers		
16.5					
17.0					
17.5					
18.0					
18.5					
19.0					
19.5					
20.0					
20.5					
21.0					
21.5					
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26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0	30.0		bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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Bh 3

REF 1946
Bh 3

SITE
CLIENT

Mullin's Land, Halshead
Betts Geo-Environmental

TITLE

n/a

ORIGIN

printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT

20 Nov 2019

SCALE

1:200

GL AOD

RIG

Montabert Hydrofore

ORIENTATION

vertical

FLUSH

river water bowser supply

BIT

75mm T/C

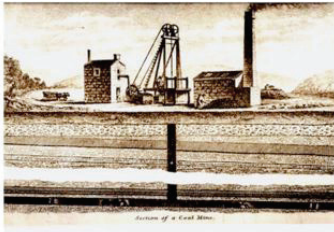
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1.0					
1.5					
2.0	2.1		brown, firm drilling		rockhead
2.5					
3.0					
3.5					
4.0	4.0		dark grey, firm drilling		
4.5	4.3		brown, firm drilling		
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
9.0	9.1		dark grey, firm drilling		
9.5					
10.0					
10.5					
11.0					
11.5					
12.0					
12.5					
13.0					
13.5					
14.0					
14.5	14.8		grey, hard drilling		
15.0			thin grey shale layers		
15.5					
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29.5					
30.0	30.0		bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 4

SITE
CLIENT Mullin's Land, Halsnead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 21 Nov 2019
SCALE 1:200
GL AOD
RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

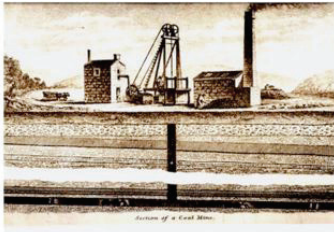
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1.0					
1.5					
2.0	2.1		brown, firm drilling		rockhead
2.5					
3.0					
3.5					
4.0	4.2		black, firm drilling		? Three Foot Coal
4.5					
5.0	5.1		dark grey, firm drilling		
5.5			thin black shale layers		
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
9.0					
9.5					
10.0					
10.5	10.6		brown, firm drilling		
11.0					
11.5					
12.0					
12.5					
13.0	13.2		grey, firm drilling		
13.5			thin black shale layers		
14.0			and thin grey sandstones		
14.5					
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29.5					
30.0	30.0		bottom of hole		

drilled and logged by
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IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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Bh 5

REF 1946
Bh 5

SITE
CLIENT Mullin's Land, Halsnead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 22 Nov 2019
SCALE 1:200
GL AOD

RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

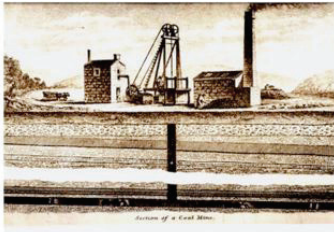
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1.0					
1.5					
2.0					
2.5					
3.0	3.1		pink, firm drilling with thin red marl layers		rockhead
3.5					
4.0					
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
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28.5					
29.0					
29.5					
30.0	30.0		bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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Bh 6

REF 1946
Bh 6

SITE
CLIENT Mullin's Land, Halshead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 22 Nov 2019
SCALE 1:200
GL AOD

RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

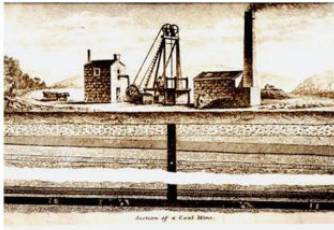
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1.0					
1.5					
2.0	1.8		pink, firm drilling with thin red marl layers		rockhead
2.5					
3.0					
3.5					
4.0					Triassic Sandstone
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
9.0					
9.5					
10.0					
10.5					
11.0					
11.5					
12.0					
12.5					
13.0					
13.5					
14.0					
14.5					
15.0	15.0		bottom of hole		
15.5					
16.0					
16.5					
17.0					
17.5					
18.0					
18.5					
19.0					
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26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0					

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 5

SITE
CLIENT Mullin's Land, Halsnead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT
SCALE 22 Nov 2019
1:200

GL AOD

RIG
ORIENTATION Montabert Hydrofore
vertical

FLUSH
river water bowser supply

BIT
75mm T/C

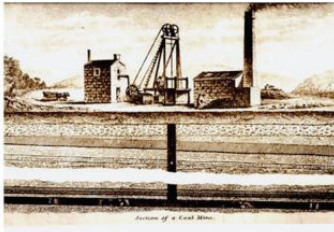
DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
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0.5					
1.0					
1.5					
2.0	2.1		brown, firm drilling		rockhead
2.5			grey shale layers		
3.0					
3.5					
4.0					
4.5					
5.0					
5.5					
6.0					
6.5	6.6		black, firm drilling		
7.0					
7.5					
8.0	8.1		black, firm drilling		? Three Foot Coal
8.5					
9.0					
9.5	9.6		dark grey, firm drilling		
10.0			thjin black shale layers		
10.5					
11.0					
11.5					
12.0					
12.5					
13.0					
13.5					
14.0					
14.5	14.6		brown, firm drilling		
15.0			grey shale layers		
15.5					
16.0					
16.5					
17.0	17.0		dark grey, firm drilling		
17.5			thin sandstone layers		
18.0					
18.5					
19.0					
19.5					
20.0					
20.5					
21.0					
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0	30.0		bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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Wrexham
LL11 1BT
www.nkc.co.uk



Bh 8

REF 1946
Bh 8

SITE
CLIENT

TITLE

ORIGIN

Mullin's Land, Halsnead
Betts Geo-Environmental

n/a

printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 22 Nov 2019
SCALE 1:200
GL AOD
RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

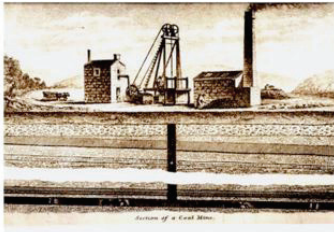
DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0	clay	brown, sandy, firm	not taken	ground level
0.5					
1.0					
1.5					
2.0	2.0	shale	grey, firm drilling occasional thin black shales		rockhead
2.5					
3.0					
3.5	3.6	sandstone	brown, firm drilling		
4.0					
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5	7.6	shale	dark grey, firm drilling		
8.0					
8.5	8.7	shale	black, firm drilling		
9.0					
9.5					
10.0					
10.5	10.5	coal	black, firm drilling		? Three Foot Coal
11.0					
11.5					
12.0	11.8	shale	black, firm drilling		
12.5					
13.0					
13.5					
14.0					
14.5					
15.0					
15.5					
16.0					
16.5					
17.0					
17.5					
18.0	18.3	sandstone	brown, firm drilling		
18.5					
19.0					
19.5					
20.0					
20.5					
21.0	21.0		bottom of hole		
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0					

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

Nkc Geotech Ltd
25 Grosvenor Road
Wrexham
LL11 1BT
www.nkc.co.uk



Bh 9

REF 1946
Bh 9

SITE
CLIENT

TITLE

ORIGIN

Mullin's Land, Halsnead
Betts Geo-Environmental

n/a

printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 26 Nov 2019
SCALE 1:200
GL AOD
RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

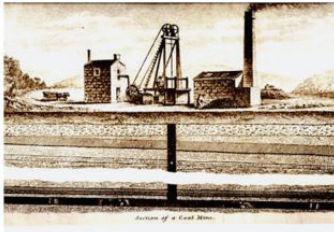
DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0	clay	brown, sandy, firm	not taken	ground level
0.5					
1.0					
1.5					
2.0	2.0	shale	black, firm drilling		
2.5					
3.0	2.8	coal	black, firm drilling		? Three Foot Coal
3.5					
4.0	4.3	shale	dark grey, firm drilling thjin black shale layers		
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
9.0	9.2	sandstone	brown, firm drilling grey shale layers		
9.5					
10.0					
10.5					
11.0					
11.5					
12.0					
12.5					
13.0					
13.5					
14.0					
14.5					
15.0	15.0		bottom of hole		
15.5					
16.0					
16.5					
17.0					
17.5					
18.0					
18.5					
19.0					
19.5					
20.0					
20.5					
21.0					
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0					

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 10

SITE
CLIENT

TITLE

ORIGIN

Mullin's Land, Halsnead
Betts Geo-Environmental

n/a

printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 26 Nov 2019
SCALE 1:200
GL AOD
RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

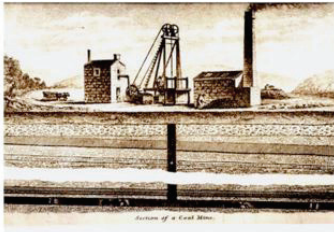
	DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0	clay		brown, sandy, firm	not taken	ground level
0.5						
1.0						
1.5						
2.0	2.1	shale		dark grey, firm drilling with thin black shale layers		
2.5						
3.0						
3.5						
4.0						
4.5						
5.0	5.2	coal		black, firm drilling		? Three Foot Coal
5.5						
6.0						
6.5	6.5	shale		dark grey, firm drilling thjin black shale layers		
7.0						
7.5						
8.0						
8.5						
9.0						
9.5						
10.0						
10.5						
11.0						
11.5						
12.0						
12.5	12.7	sandstone		brown, firm drilling grey shale layers		
13.0						
13.5						
14.0						
14.5						
15.0						
15.5						
16.0						
16.5						
17.0						
17.5						
18.0	18.0			bottom of hole		
18.5						
19.0						
19.5						
20.0						
20.5						
21.0						
21.5						
22.0						
22.5						
23.0						
23.5						
24.0						
24.5						
25.0						
25.5						
26.0						
26.5						
27.0						
27.5						
28.0						
28.5						
29.0						
29.5						
30.0	30.0			bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 11

SITE
CLIENT Mullin's Land, Halshead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 26 Nov 2019
SCALE 1:200
GL AOD
RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

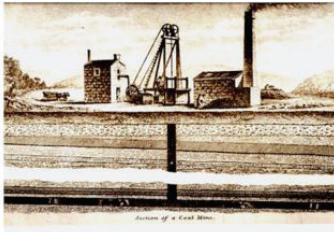
DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0		brown, sandy, firm	not taken	ground level
0.5					
1.0					
1.5					
2.0	2.0		pink, firm drilling		rockhead
2.5			thin red marl layers		
3.0					
3.5					
4.0					
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
9.0					
9.5					
10.0					
10.5					
11.0					
11.5					
12.0					
12.5					
13.0					
13.5					
14.0					
14.5					
15.0	15.0		bottom of hole		
15.5					
16.0					
16.5					
17.0					
17.5					
18.0					
18.5					
19.0					
19.5					
20.0					
20.5					
21.0					
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0					

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 12

SITE
CLIENT Mullin's Land, Halshead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 27 Nov 2019
SCALE 1:200
GL AOD
RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

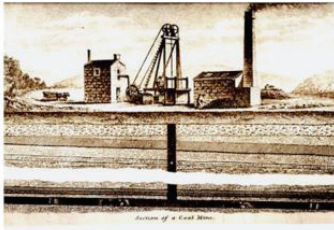
DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0	clay	brown, sandy, firm	not taken	ground level
0.5					
1.0					
1.5					
2.0	2.0	sandstone	pink, firm drilling thin red marl layers		rockhead
2.5					
3.0					
3.5					
4.0					
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
9.0					
9.5					
10.0					
10.5					
11.0					
11.5					
12.0					
12.5					
13.0					
13.5					
14.0					
14.5					
15.0	15.0		bottom of hole		
15.5					
16.0					
16.5					
17.0					
17.5					
18.0					
18.5					
19.0					
19.5					
20.0					
20.5					
21.0					
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0					

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 13

SITE
CLIENT Mullin's Land, Halshead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 27 Nov 2019
SCALE 1:200
GL AOD
RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

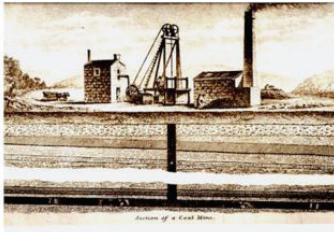
DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0	clay	brown, sandy, firm	not taken	ground level
0.5					
1.0					
1.5					
2.0	2.1	shale	grey, firm drilling occasional black shale layers		rockhead
2.5					
3.0					
3.5					
4.0					
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5	8.7	sandstone	brown, firm drilling		
9.0					
9.5					
10.0					
10.5					
11.0					
11.5					
12.0	12.5	shale	grey, firm drilling occasional black shale layers		
12.5					
13.0					
13.5					
14.0					
14.5					
15.0					
15.5					
16.0	16.2	shale	grey, firm drilling occasional black shale layers		
16.5					
17.0					
17.5					
18.0					
18.5					
19.0					
19.5					
20.0					
20.5					
21.0					
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0	30.0		bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 14

SITE
CLIENT Mullin's Land, Halsnead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT
SCALE 28 Nov 2019
1:200

GL AOD

RIG
ORIENTATION Montabert Hydrofore
vertical
FLUSH river water bowser supply
BIT 75mm T/C

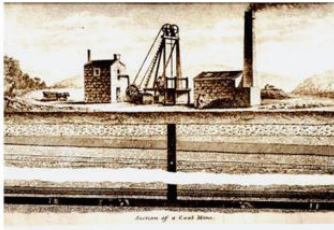
DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0	clay	brown, sandy, firm	not taken	ground level
0.5					
1.0					
1.5					
2.0					
2.5	2.3	sandstone	dark grey, firm drilling very occasional thin black shale layers		rockhead
3.0					
3.5					
4.0					
4.5					
5.0					
5.5					
6.0					
6.5	6.6	shale	dark grey, firm drilling		
7.0					
7.5					
8.0					
8.5					
9.0	9.1	sandstone	grey, firm drilling with thin black shale layers		
9.5					
10.0					
10.5					
11.0					
11.5					
12.0					
12.5					
13.0					
13.5					
14.0	14.0	shale	grey, firm drilling thin brown sandstone layers		
14.5					
15.0					
15.5					
16.0					
16.5					
17.0					
17.5					
18.0					
18.5					
19.0					
19.5					
20.0					
20.5					
21.0					
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0	30.0		bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 15

SITE
CLIENT Mullin's Land, Halshead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 28 Nov 2019
SCALE 1:200
GL AOD
RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

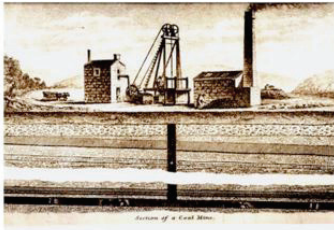
DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0	clay	brown, sandy, firm	not taken	ground level
0.5					
1.0					
1.5					
2.0	2.1	shale	grey, firm drilling with thin black shale lsyers		rockhead
2.5					
3.0					
3.5					
4.0	4.1	sandstone	brown, firm drilling with thin black shale lsyers		
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
9.0					
9.5					
10.0					
10.5					
11.0					
11.5					
12.0	12.0	shale	grey, firm drilling with thin black shale lsyers		
12.5					
13.0					
13.5					
14.0					
14.5					
15.0					
15.5					
16.0					
16.5					
17.0					
17.5		sandstone	brown, firm drilling with thin black shale lsyers		
18.0					
18.5					
19.0					
19.5					
20.0					
20.5	20.6	shale	grey, firm drilling with thin black shale lsyers		
21.0					
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0	30.0		bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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REF 1946
Bh 16

SITE
CLIENT Mullin's Land, Halshead
Betts Geo-Environmental

TITLE
n/a

ORIGIN
printout direct from rig on site
drilled & logged by Neil Catlow

PRINTOUT 29 Nov 2019
SCALE 1:200
GL AOD

RIG Montabert Hydrofore
ORIENTATION vertical
FLUSH river water bowser supply
BIT 75mm T/C

DEPTH	STRATA	GRAPHIC	DESCRIPTION	SPT N value	INTERPRETATION
0.0	0.0	clay	brown, sandy, soft	not taken	ground level
0.5					
1.0					
1.5					
2.0					
2.5	2.4	sandstone	brown, firm drilling		rockhead
3.0					
3.5					
4.0					
4.5					
5.0					
5.5					
6.0					
6.5					
7.0					
7.5					
8.0					
8.5					
9.0					
9.5					
10.0					
10.5					
11.0	10.8	shale	dark grey, firm drilling occasional black shale layers		
11.5					
12.0					
12.5					
13.0					
13.5					
14.0					
14.5					
15.0					
15.5					
16.0					
16.5					
17.0					
17.5					
18.0	18.2	shale	grey, firm drilling thin black shale layers		
18.5					
19.0					
19.5					
20.0					
20.5					
21.0					
21.5					
22.0					
22.5					
23.0					
23.5					
24.0					
24.5					
25.0					
25.5					
26.0					
26.5					
27.0					
27.5					
28.0					
28.5					
29.0					
29.5					
30.0	30.0		bottom of hole		

drilled and logged by
Neil Catlow B.Sc FGS

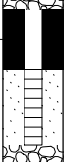
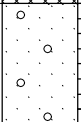
IN HOLE GAS TESTING

% O2	20.6
% CH4	0.0
% CO2	0.0
% LEL	0.0
ppm H2S	0.0
ppm CO	0.0

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LL11 1BT
www.nkc.co.uk

BOREHOLE LOG

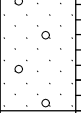
Project Halsnead Park (Mullin Land)				BOREHOLE No WS01	
Job No 19TAY055	Date 23-10-19 23-10-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)		
1.20		N75/ 115 mm				0.30	MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brickk, sandstone, plastic and occasional coal. TOPSOIL. Loose to medium dense brown slightly gravelly fine to coarse SAND. Gravel is is fine to medium subangular to subrounded of sandstone.	
						(0.85)		
						1.15		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Hole aborted on sandstone.
All dimensions in metres Scale 1:50			Client Taylor Wimpey			Method/ Plant Used ARGO Rig			Logged By KR		

BOREHOLE LOG

Project Halsnead Park (Mullin Land)				BOREHOLE No WS02	
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

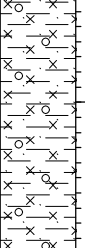
SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
0.20	ES					(0.40) 0.40		
						(0.80) 1.20		
1.20		N50/ 10 mm						

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Dry

All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used ARGO Rig	Logged By KR
--	--------------------------------	--	------------------------

BOREHOLE LOG

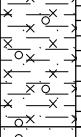
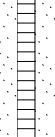
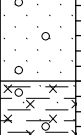
Project Halsnead Park (Mullin Land)				BOREHOLE No WS03	
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
0.30	ES					0.30		
1.20	N11					(1.70)		
2.00	N24					2.00		
2.50	N14/ 25 mm					(1.00)		
						3.00		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Sand intrusion reduced well depth.
All dimensions in metres Scale 1:50			Client Taylor Wimpey			Method/ Plant Used ARGO Rig			Logged By KR		

BOREHOLE LOG

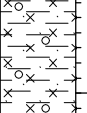
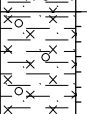
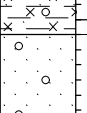
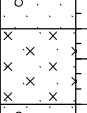
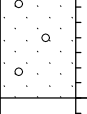
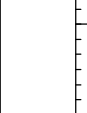
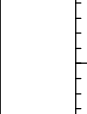
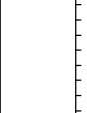
Project Halsnead Park (Mullin Land)				BOREHOLE No WS04	
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
0.40	ES					(0.50) 0.50		
						(0.50) 1.00		
1.20		N5				(1.00) 2.00		
2.00		N9				(0.60) 2.60		
3.00		N50/ 45 mm				(0.40) 3.00		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Strata wet from 2.00-2.60mbgl and a wet sand band 2.80-2.90mbgl. Some sand intrusion noted.
All dimensions in metres Scale 1:50			Client Taylor Wimpey			Method/ Plant Used ARGO Rig			Logged By KR		

BOREHOLE LOG

Project Halsnead Park (Mullin Land)				BOREHOLE No WS05	
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.35	ES					0.35	MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.		
						(0.85)	Firm reddish light brown and occasionally mottled grey sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.		
1.20		N9				1.20			
						(0.90)	Stiff with occasional firm pockets reddish brown and occasionally mottled grey sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.		
2.00		N25				2.10			
						(0.70)	Medium dense reddish brown fine to coarse SAND with occasional weak fine to medium sandstone angular to subangular gravel. Occasional flecks of coal.		
						2.80			
3.00		N25				(0.50)	Stiff reddish brown very sandy clayey SILT.		
						3.30			
						(0.70)	Medium dense become dense reddish brown fine to coarse SAND with occasional weak fine to medium sandstone angular to subangular gravel. Occasional flecks of coal.		
4.00		N50/ 50 mm				4.00			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Dry
All dimensions in metres Scale 1:50			Client Taylor Wimpey			Method/ Plant Used ARGO Rig			Logged By KR		

BOREHOLE LOG

Project Halsnead Park (Mullin Land)				BOREHOLE No WS06
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.20	ES					0.30	MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL. Soft to firm light brown very sandy CLAY.		
						(1.10)			
1.20	N12					1.40			
						(0.80)	Loose orangish brown fine to coarse SAND. Strata noted as wet with sand intrusion into borehole.		
2.00	N20					2.20			
						(0.80)	Firm reddish brown sandy SILT.		
3.00	N22					3.00			
						(0.50)	Loose reddish brown fine to medium SAND. Strata noted as wet with sand intrusion into borehole.		
						(0.50)	Very stiff reddish brown slightly sandy SILT.		
4.00	N50					4.00			

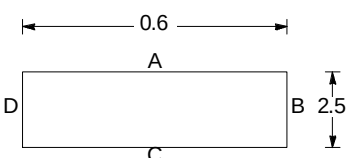
Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Strata wet from 1.40-2.20mbgl and 3.00-3.50mbgl with some sand intrusion.
All dimensions in metres Scale 1:50			Client Taylor Wimpey			Method/ Plant Used ARGO Rig			Logged By KR		

TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP01
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

A		B		C		D		Legend	
0									
1									
2									
3									
4									

STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-1.15		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.60	ES	
1.15-1.30		Loose becoming medium dense yellow fine to coarse slightly clayey SAND with occasional weak fine to medium angular to subangular sandstone gravel. Minor seepage at base.			
1.30-1.85		Medium dense reddish brown fine to coarse SAND with occasional weak fine to medium angular to subangular sandstone gravel. Occasional clayey bands noted. Occasional flecks of coal noted.			

Shoring/Support: Stability: Stable 				GENERAL REMARKS	
				Seepage at 1.30mbgl with wet sand intrusion. Aborted on bedrock strata.	

All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP02
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

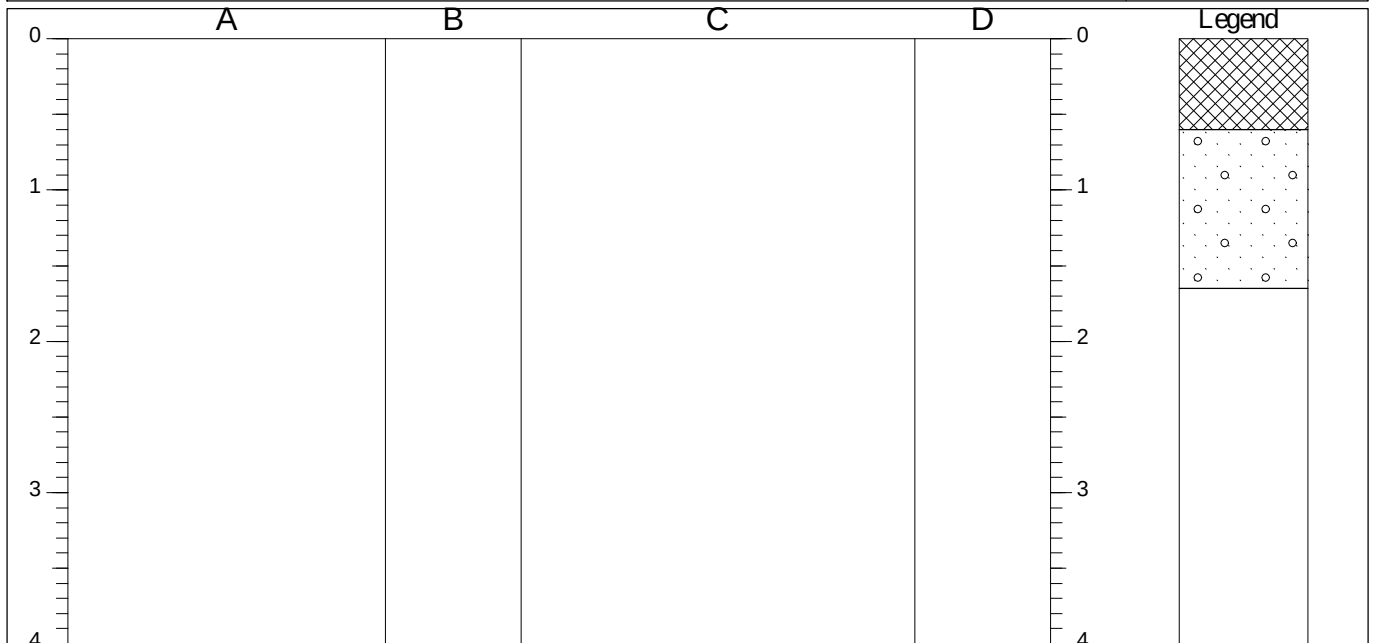
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STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.50	ES	
0.50-0.60		Loose orangish brown fine to coarse SAND with occasional weak fine to medium angular to subangular sandstone gravel.			
0.60-1.65		Medium dense reddish brown fine to coarse slightly clayey SAND with occasional weak fine to medium angular to subangular sandstone gravel. Occasional flecks of coal.			

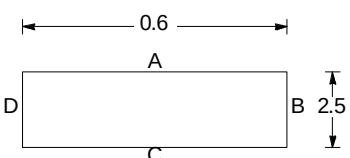
Shoring/Support: Stability: Stable	GENERAL REMARKS
	Aborted on bedrock strata.

TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP03
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



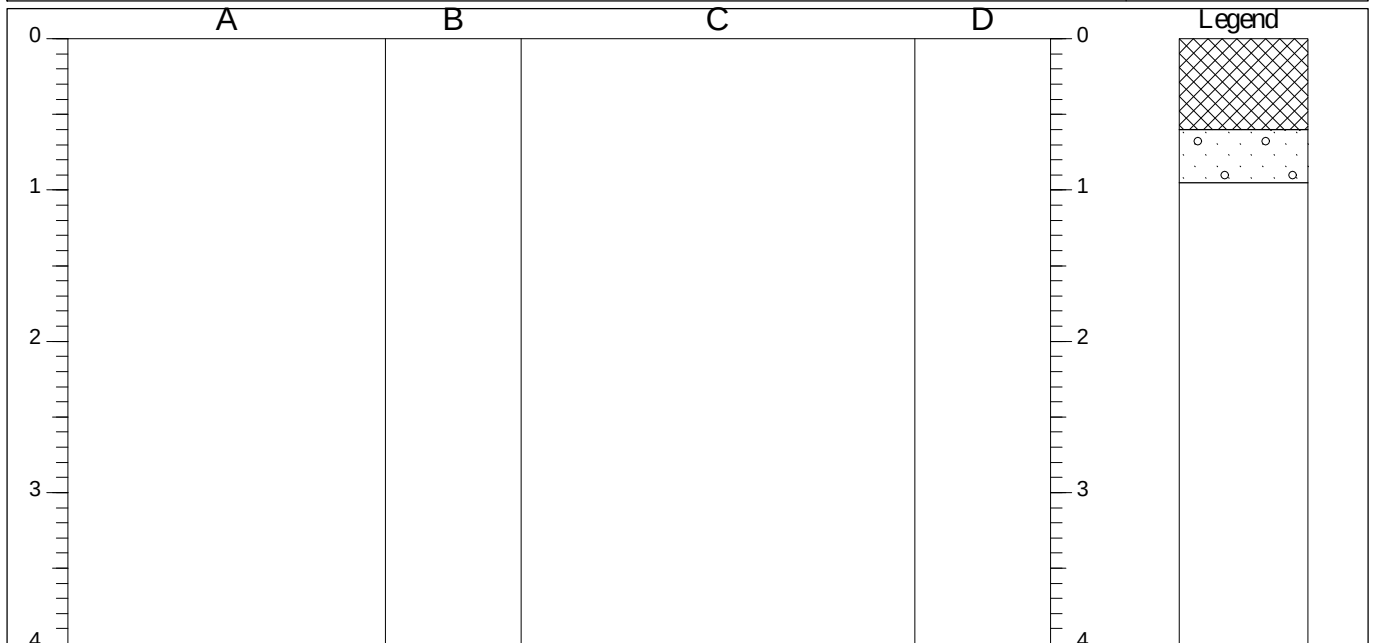
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.60		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.60	ES	
0.60-1.65		Loose becoming medium dense yellow fine to coarse SAND with occasional weak fine to medium angular to subangular sandstone gravel. Rare sandstone cobbles at depth.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Aborted on bedrock strata.
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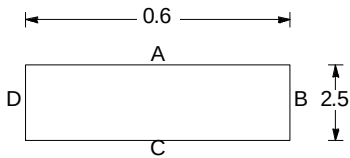
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP04
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



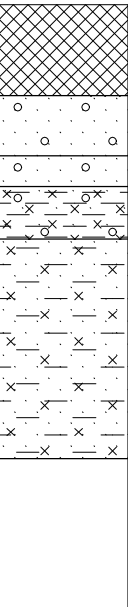
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.60		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.20	ES	
0.60-0.95		Medium dense reddish brown fine to coarse SAND with occasional weak fine to medium angular to subangular sandstone gravel. Occasional flecks of coal. Rare yellowish brown laminations noted.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS
	Hole aborted on sandstone.

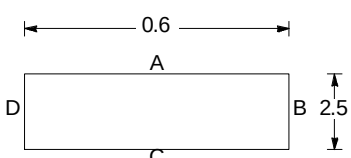
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP05
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

A		B		C		D		Legend	
0								0	
1								1	
2								2	
3								3	
4								4	

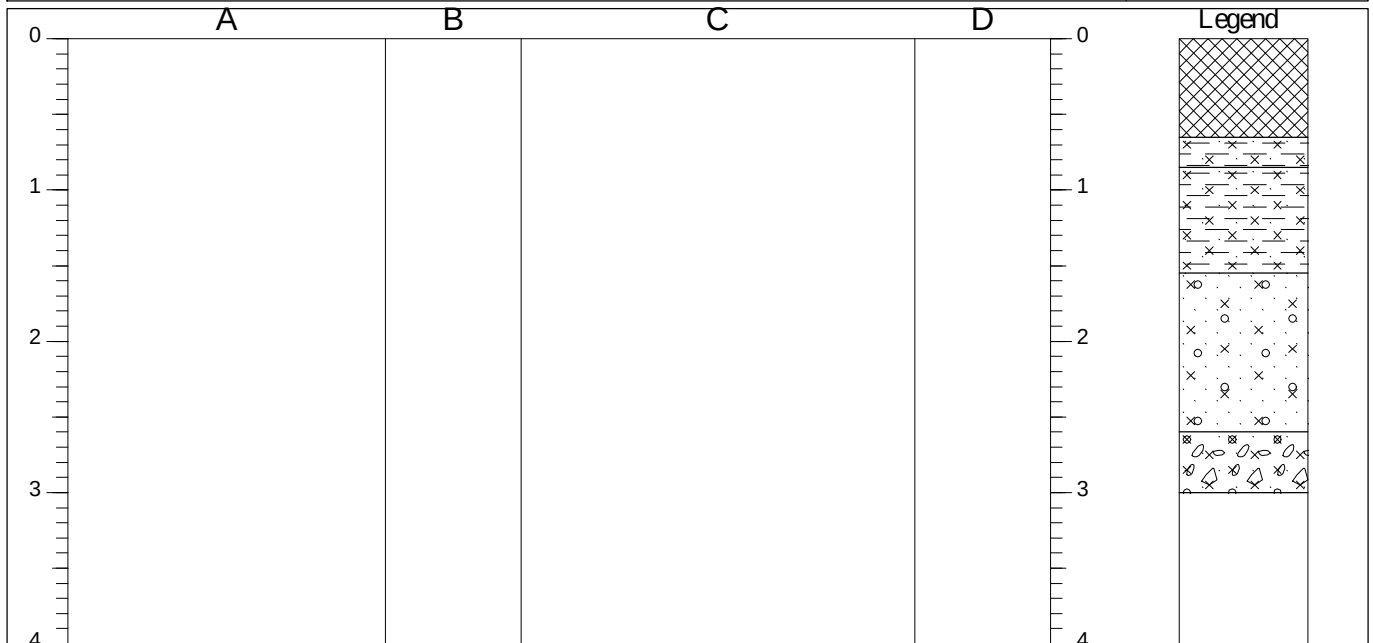
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.60		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.			
0.60-1.00		Loose becoming medium dense yellow fine to coarse SAND with occasional weak fine to medium angular to subangular sandstone gravel.	0.60	ES	
1.00-1.20		Medium dense reddish brown fine to coarse SAND with occasional weak fine to medium angular to subangular sandstone gravel. Occasional flecks of coal.	1.20	D	
1.20-1.55		Firm to stiff reddish brown and occasionally mottled grey very sandy slightly CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.			
1.55-3.00		Loose to medium dense reddish brown clayey silty fine to medium SAND. Weak sandstone gravel noted with depth. Becoming medium dense from circa 2.40mbgl.			

Shoring/Support: Stability: Stable		GENERAL REMARKS Hole aborted on sandstone.
		

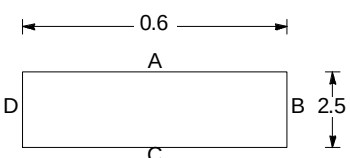
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP06
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



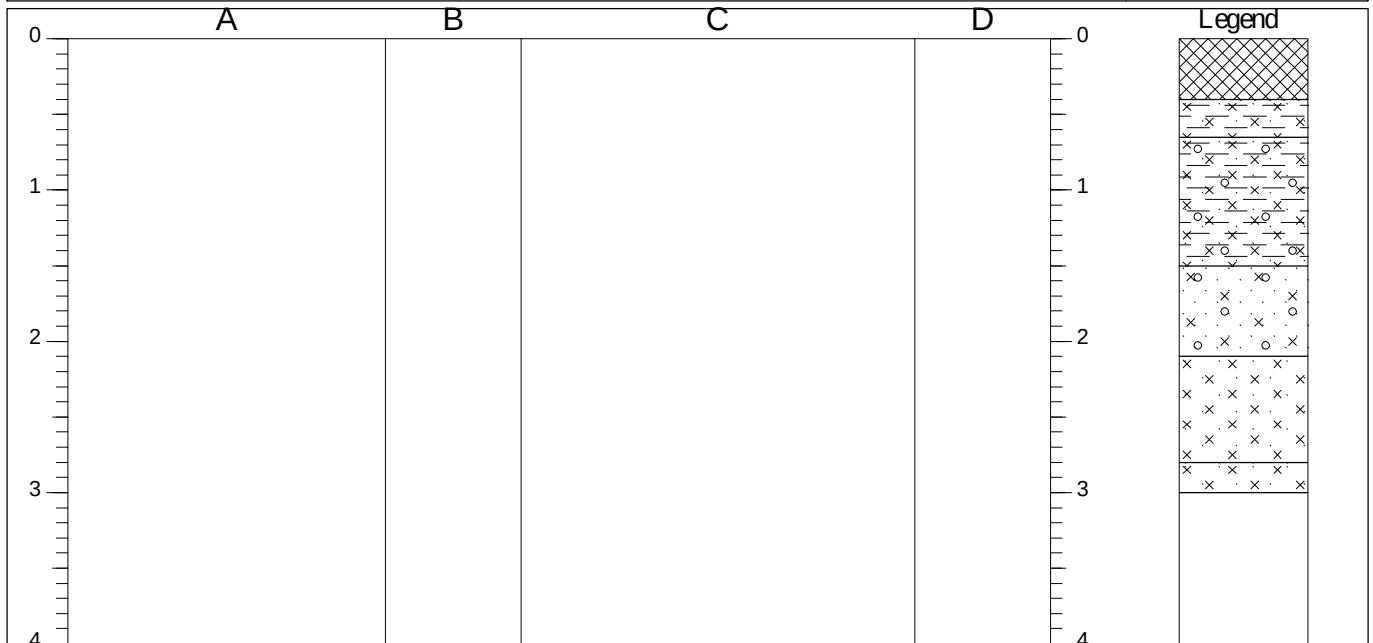
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.65		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.30	ES	
0.65-0.85		Soft to firm yellowish brown very sandy slightly silty CLAY.			
0.85-1.55		Firm to stiff reddish brown and occasionally mottled grey sandy silty CLAY.			
1.55-2.60		Medium dense brown very silty clayey slightly gravelly fine SAND. Gravel is fine to medium angular to subangular of siltstone.			
2.60-3.00		Medium dense grey sandy silty fine to coarse GRAVEL. Gravel is angular to subangular of siltstone. Weathered bedrock.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Hole aborted on sandstone / siltstone.
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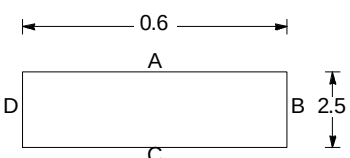
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP07
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



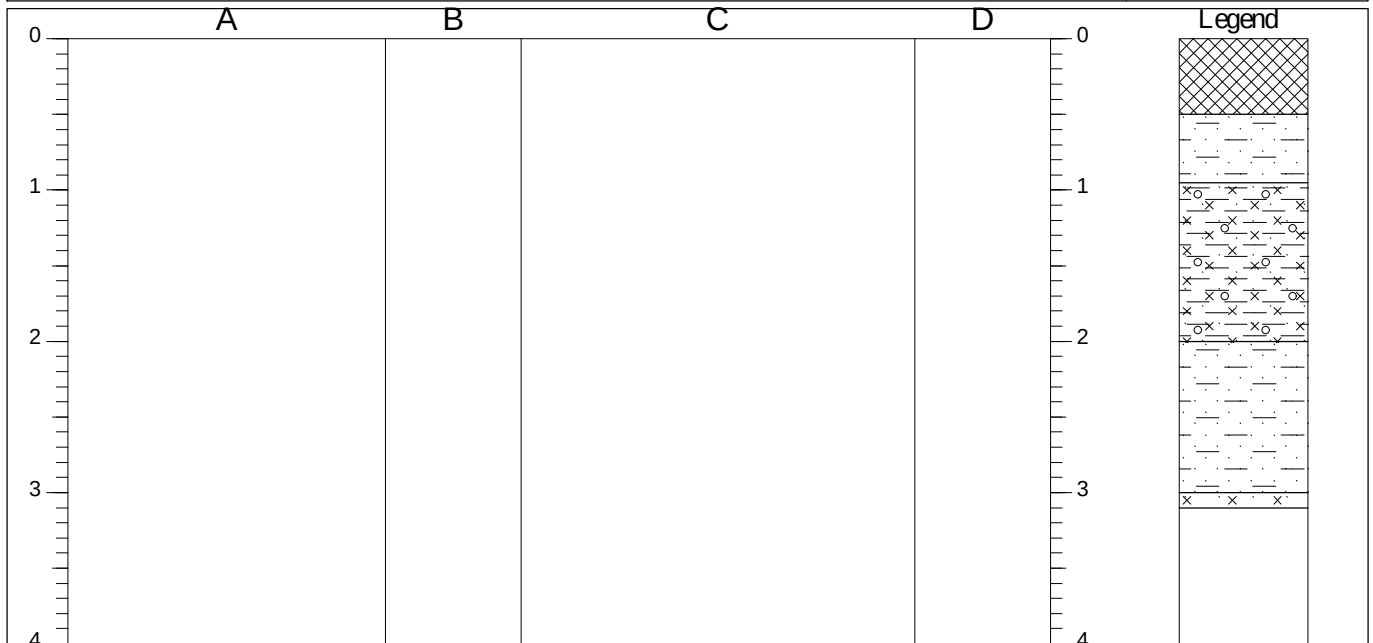
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.65	ES	
0.40-0.65		Soft to firm yellowish brown very sandy slightly silty CLAY with occasional flecks of coal.			
0.65-1.50		Firm reddish brown and occasionally mottled grey very sandy slightly CLAY. Gravel is fine to medium angular to subangular of sandstone and silstone with occasional flecks of coal.			
1.50-2.10		Medium dense brown very silty clayey slightly gravelly fine SAND. Gravel is fine to medium angular to subangular of siltstone.			
2.10-2.80		Firm grey very sandy SILT. Strata is noted as damp. Occasional yellowish bands noted. Possible weathered siltstone.			
2.80-3.00		Firm yellowish brown very sandy SILT.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Dry

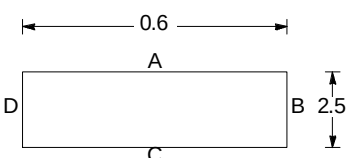
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP08
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



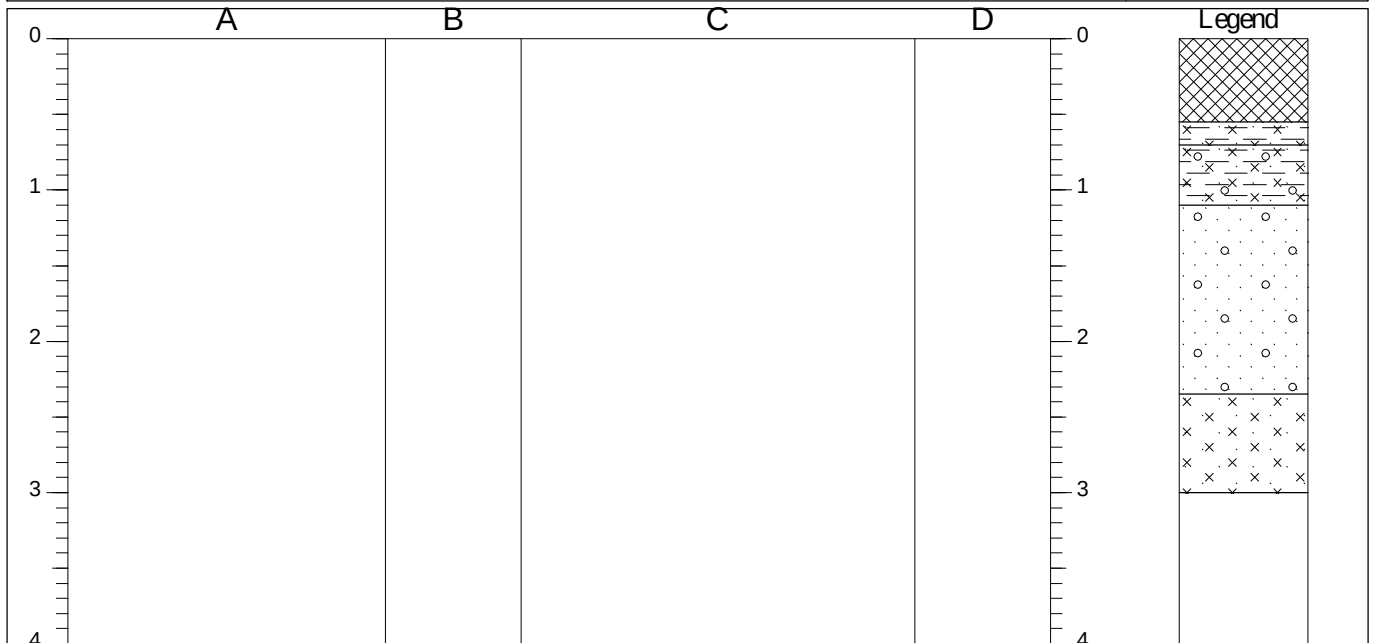
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.20	ES	
0.50-0.95		Loose grey slightly clayey fine to medium SAND.			
0.95-2.00		Firm reddish brown and occasionally mottled grey very sandy slightly CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.	0.95	D	
2.00-3.00		Medium dense reddish brown occasionally mottled grey slightly clayey fine to medium SAND with occasional thin coal laminations. Strata is damp with minor seepages with some sand intrusion.			
3.00-3.10		Firm to stiff brown sandy SILT.			

Shoring/Support: Stability: Significant collapses noted within sands.	GENERAL REMARKS Seepages 2.00-3.00mbgl with some sand intrusion.
	

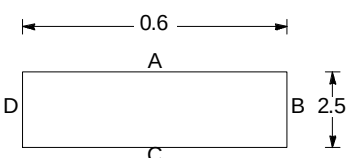
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP09
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



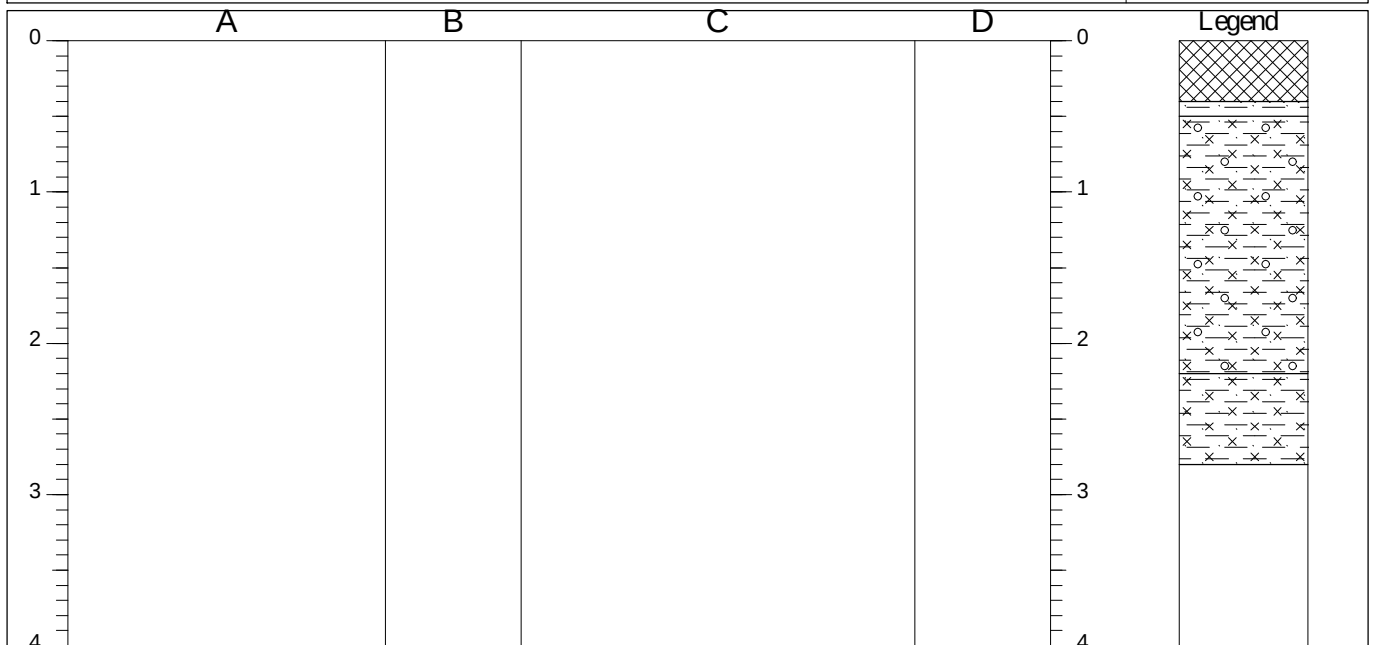
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.55		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic, wood/timber and occasional coal. TOPSOIL.	0.70 0.70	D ES	
0.55-0.70		Soft to firm brownish yellow very sandy slightly silty CLAY.			
0.70-1.10		Firm reddish brown and occasionally mottled grey very sandy slightly CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.			
1.10-2.35		Loose to medium dense light reddish brown fine to coarse slightly clayey SAND with occasional weak fine to medium sandstone angular to subangular gravel. Occasional flecks of coal.			
2.35-3.00		Firm to stiff reddish brown sandy SILT.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Dry
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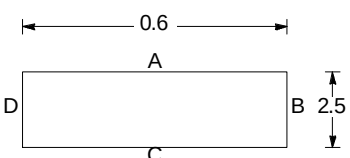
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP10
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



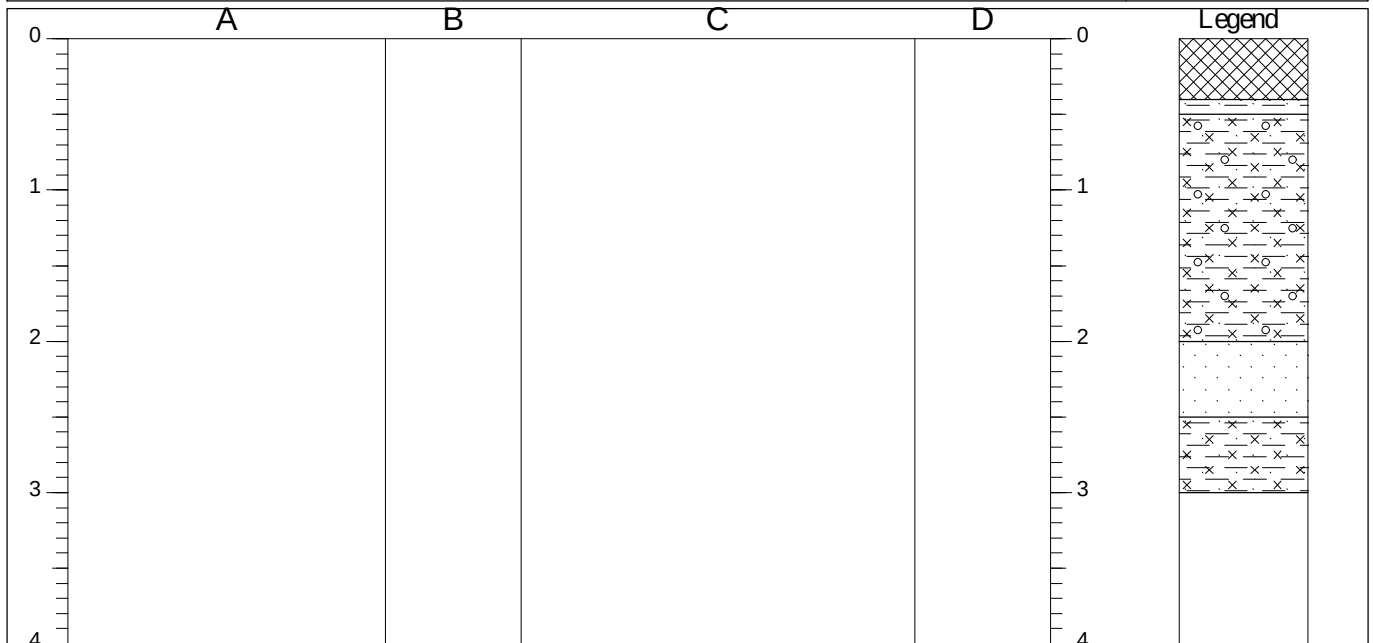
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.20	ES	
0.40-0.50		Soft orangish brown sandy CLAY.			
0.50-2.20		Firm reddish brown and occasionally mottled grey sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal. Minor seepage at base of strata.			
2.20-2.80		Firm grey sandy silty CLAY with occasional siltstone gravel and cobbles. Rare coal laminations also noted, becoming more common with depth.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Minor seepage at 2.20mbgl. Hole aborted on possible coal outcrop.
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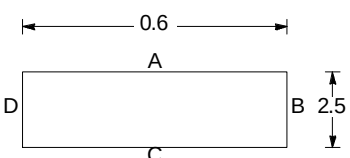
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP11
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



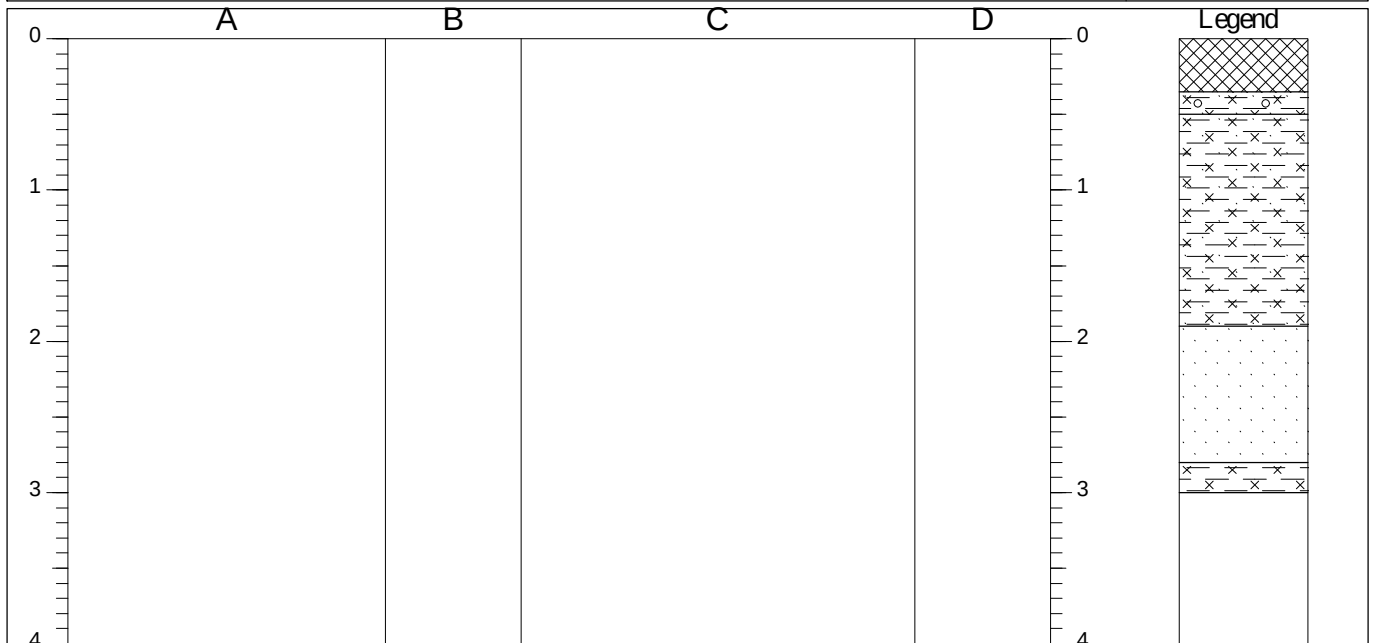
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.50	ES	
0.40-0.50		Soft light brown sandy CLAY.			
0.50-2.00		Firm to stiff reddish brown and occasionally mottled grey very sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal. Occasional sand bands / pockets noted. Cobbles present with depth.			
2.00-2.50		Loose to medium dense becoming dense light reddish brown fine to coarse SAND. Strata is damp, minor sand intrusion noted.			
2.50-3.00		Firm to stiff reddish brown very silty slightly sandy CLAY. Occasional very sandy bands noted.			

Shoring/Support: Stability: Collapse noted 2.00-2.50mbgl.		GENERAL REMARKS Damp 2.00-2.50mbgl with occasional sand intrusion.
		

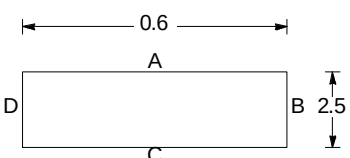
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP12
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



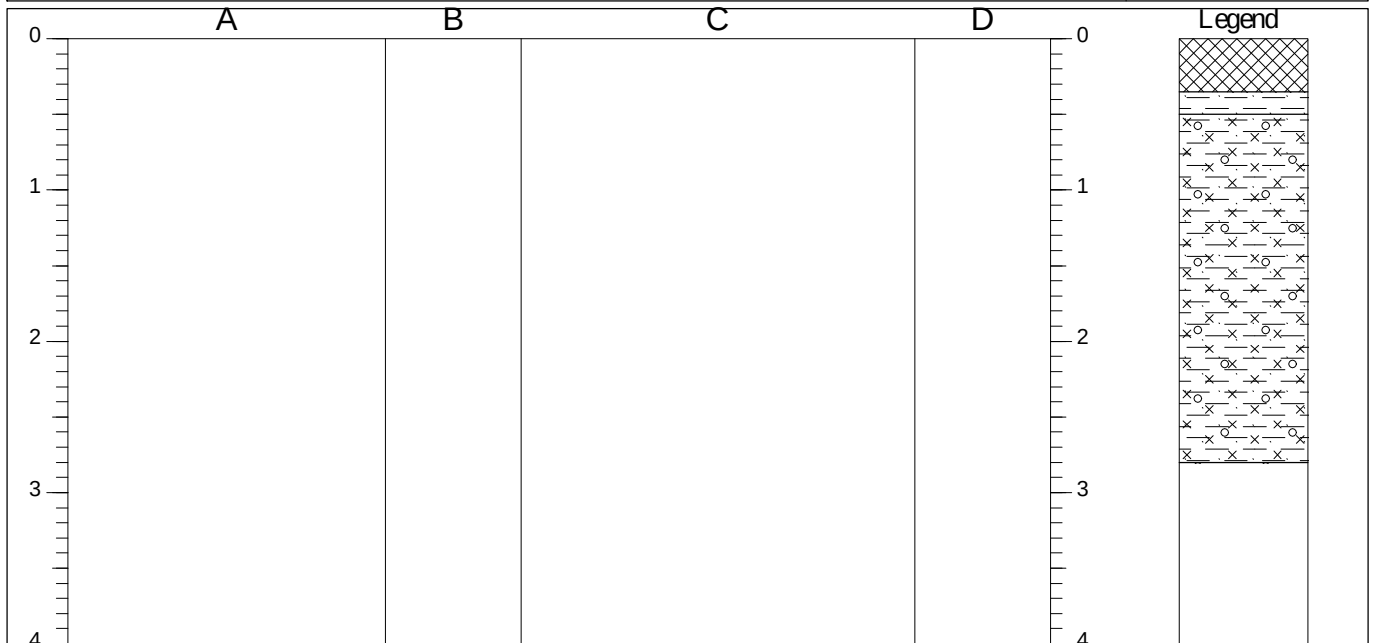
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.35		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.20	ES	
0.35-0.50		Soft light reddish brown and occasionally mottled grey sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone.			
0.50-1.90		Firm reddish brown and occasionally mottled grey sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.	1.00	D	
1.90-2.80		Loose to medium dense greyish reddish brown fine to coarse SAND. Strata is damp with minor sand intrusion. Occasional grey lenses noted.			
2.80-3.00		Stiff reddish brown very silty CLAY.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Minor seepages 1.90-2.80mbgl with some sand intrusion.
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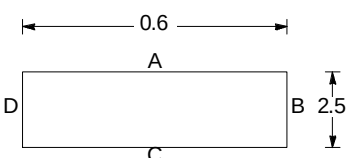
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP13
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



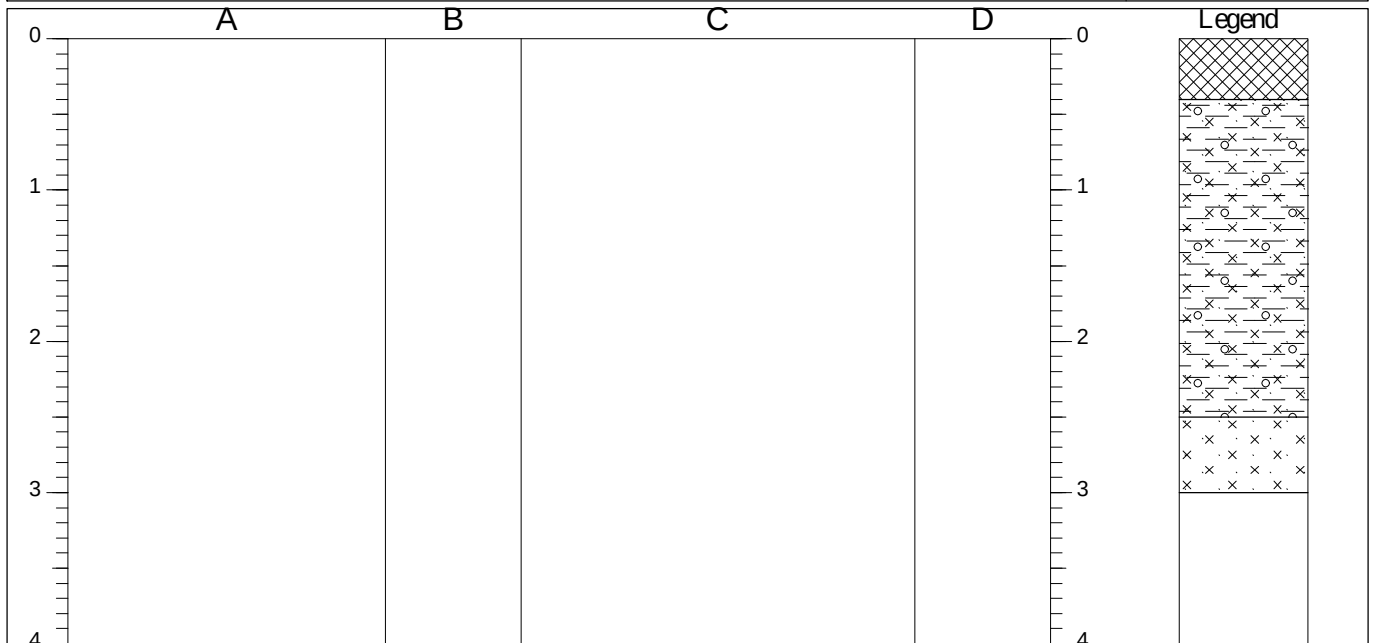
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.35		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.50	ES	
0.35-0.50		Firm light brown and occasionally mottled grey very sandy CLAY with occasional flecks of coal.			
0.50-2.80		Firm becoming stiff reddish brown and occasionally mottled grey very sandy silty slightly gravelly CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.			

Shoring/Support: Stability: 	GENERAL REMARKS Strata damp 1.90-2.80mbgl.
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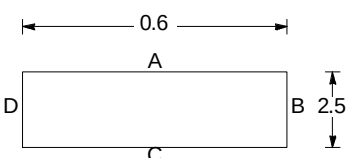
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP14
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



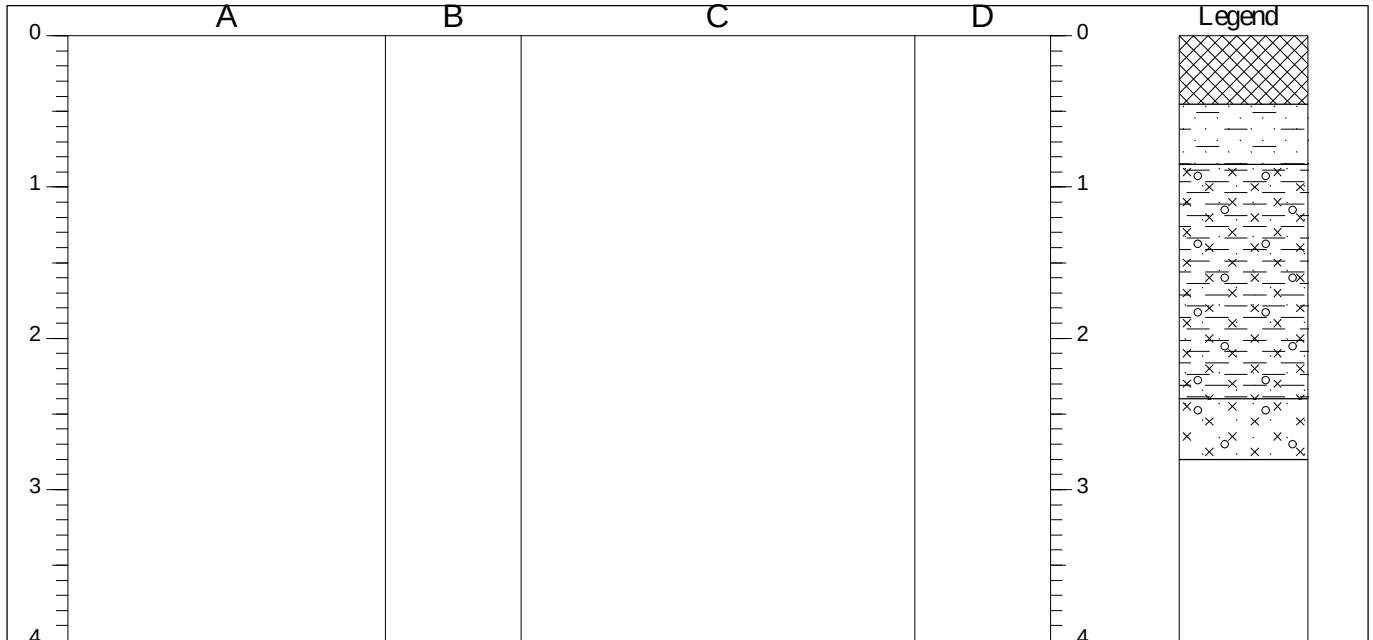
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.20	ES	
0.40-2.50		Firm to stiff reddish brown and occasionally mottled grey sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal. Common narrow grey sands bands present. Becoming stiff from circa 2.00mbgl.			
2.50-3.00		Stiff reddish brown very sandy SILT with occasional flecks of coal.			

Shoring/Support: Stability: Stable	GENERAL REMARKS Land drain at 0.60mbgl.
	

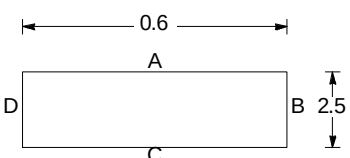
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP15
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



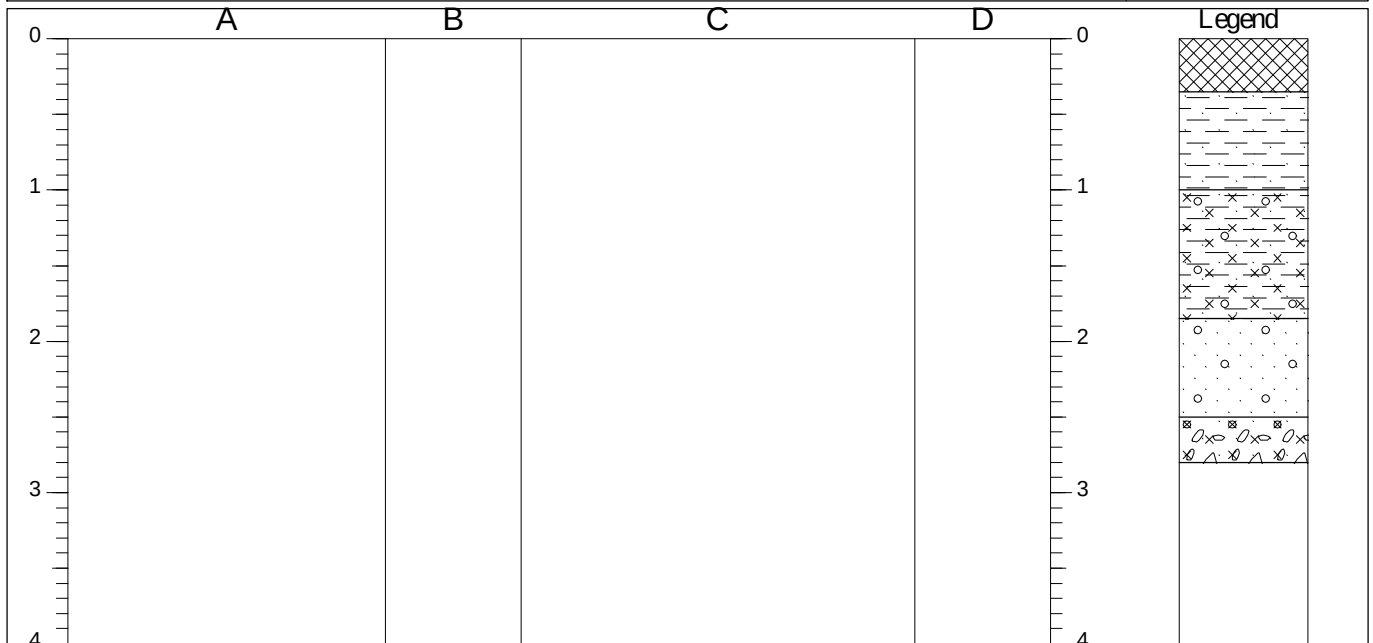
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.45		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.20	ES	
0.45-0.85		Loose light brown and grey very clayey SAND.			
0.85-2.40		Firm to stiff reddish brown and occasionally mottled grey sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal. Sand band noted at 2.20mbgl. Seepage noted at base of strata.			
2.40-2.80		Stiff reddish brown very sandy clayey SILT with occasional flecks of coal. Becoming very stiff and gravelly with depth.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Seepage at 2.40mbgl. Aborted on very hard clay.
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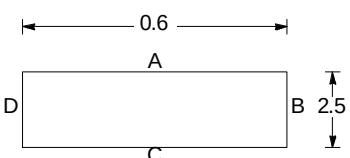
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP16
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



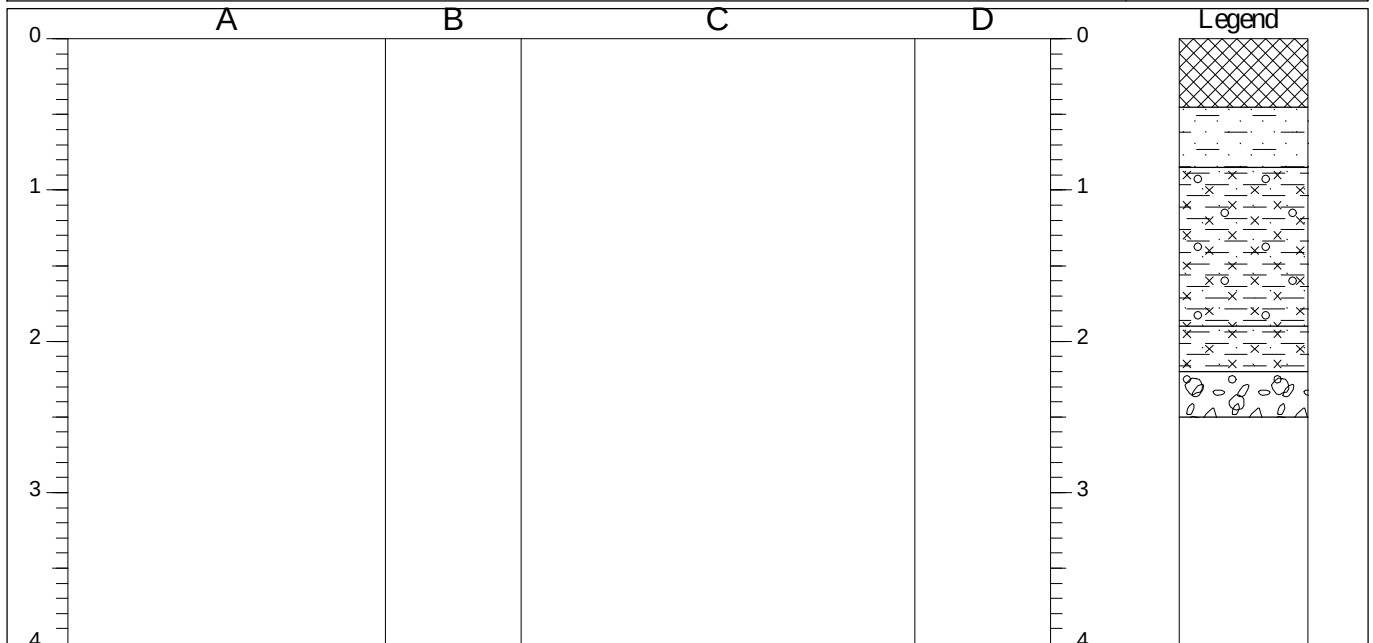
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.35		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.40	ES	
0.35-1.00		Soft and greyish brown and mottled grey sandy CLAY.			
1.00-1.85		Firm reddish brown and occasionally mottled grey sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.			
1.85-2.50		Medium dense reddish brown and grey fine to coarse SAND. Occasional flecks of coal. Weak siltstone gravels noted with depth.			
2.50-2.80		Medium dense sandy silty GRAVEL. Gravel is fine coarse angular to subangular of siltstone. Weathered bedrock.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Dry
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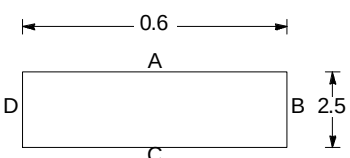
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP17
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



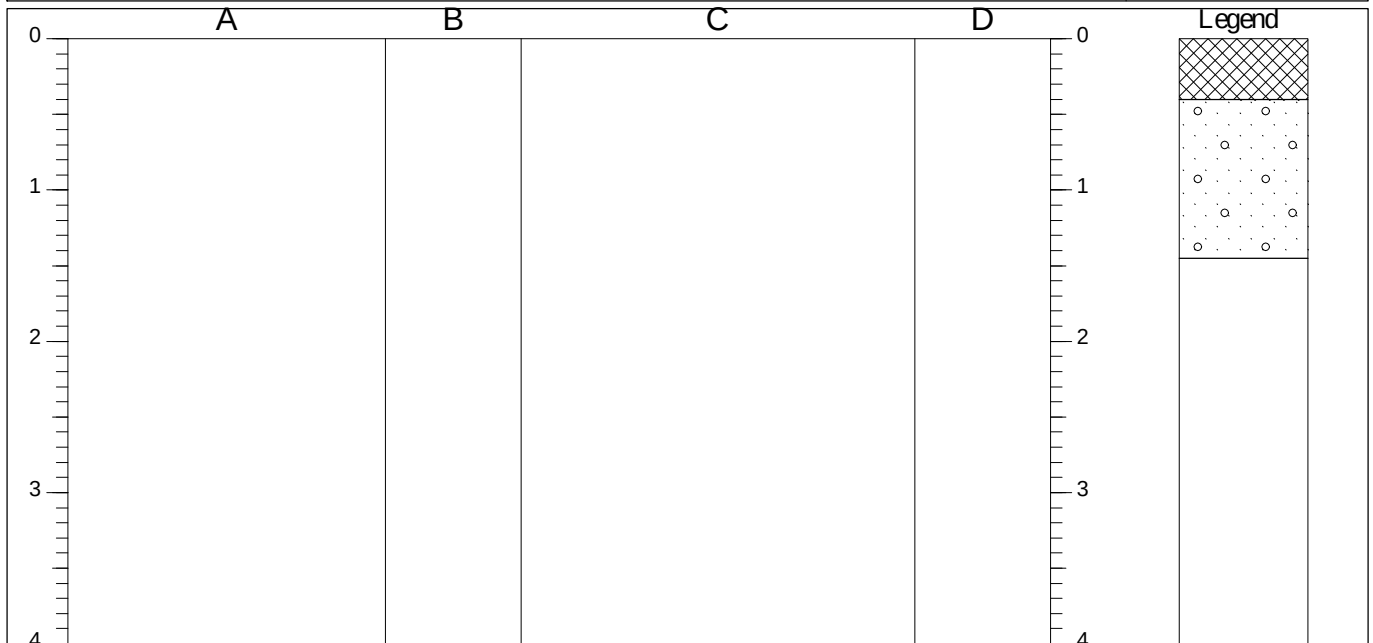
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.45		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.30	ES	
0.45-0.85		Loose to medium dense brown very clayey fine to medium SAND.			
0.85-1.90		Firm reddish brown and occasionally mottled grey very sandy silty CLAY. Gravel is fine to medium angular to subangular of sandstone and siltstone with occasional coal.			
1.90-2.20		Firm grey very sandy silty CLAY.			
2.20-2.50		Dense to very dense sandy GRAVEL and COBBLES. Gravel and cobbles are fine to coarse angular to subangular of siltstone. Strata noted as wet.			

Shoring/Support: Stability: Stable 		GENERAL REMARKS Strata wet from 2.20mbgl.
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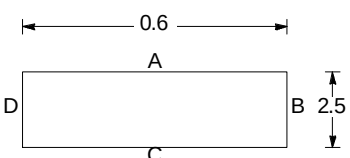
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP18
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



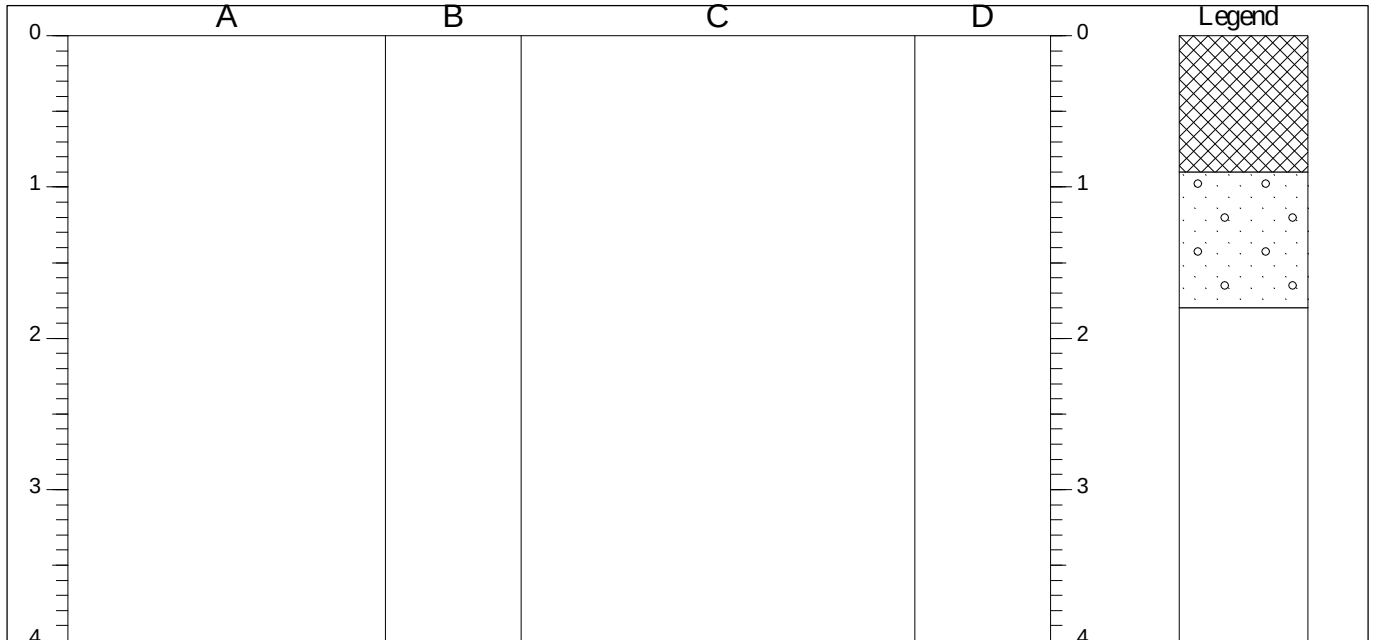
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.40	ES	
0.40-1.45		Medium dense reddish brown fine to coarse SAND with occasional weak fine to medium sandstone angular to subangular gravel. Occasional flecks of coal.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Aborted on sandstone bedrock.
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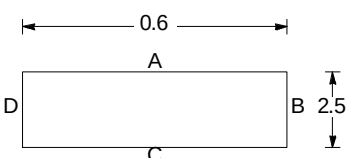
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP19
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



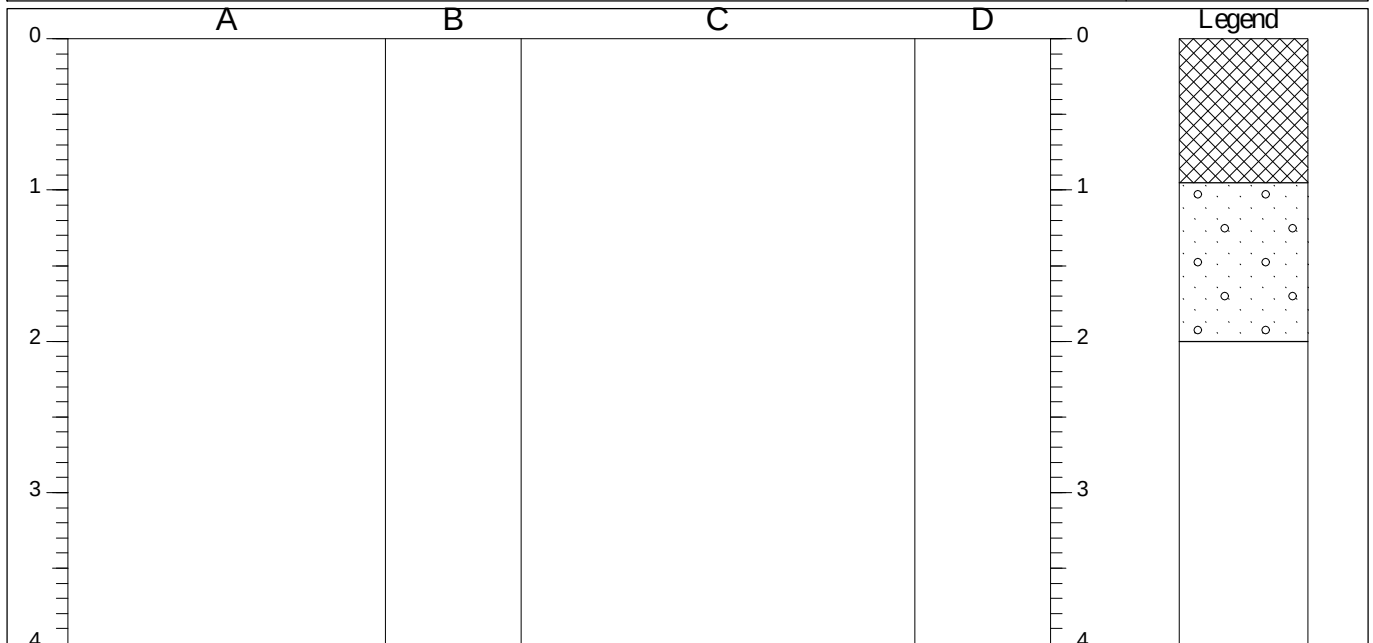
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.90		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	0.20	ES	
0.90-1.80		Medium dense becoming very dense yellow fine to coarse SAND with occasional weak fine to medium sandstone angular to subangular gravel. Becoming darker with depth.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Hole aborted on sandstone.
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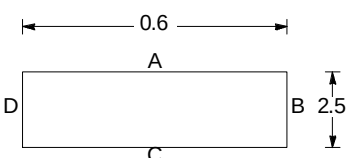
All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Halsnead Park (Mullin Land)				TRIAL PIT No TP20
Job No 19TAY055	Date 30-10-19 30-10-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.95		MADE GROUND: Dark brown clayey gravelly fine to medium SAND. Gravel is fine to coarse angular to subrounded of brick, sandstone, plastic and occasional coal. TOPSOIL.	1.00	ES	
0.95-2.00		Medium dense becoming very dense yellow fine to coarse SAND with occasional weak fine to medium sandstone angular to subangular gravel. Becoming darker with depth.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Hole aborted on sandstone.
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All dimensions in metres Scale 1:50	Client Taylor Wimpey	Method/ Plant Used 13t tracked excavator	Logged By KR
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APPENDIX D

(i) Contamination Test Results

SUMMARY OF CONTAMINATION ANALYSIS: SOIL

SUMMARY OF CONTAMINATION ANALYSIS: METALS

Project Name Halsnead Park, Mullin Land, Whiston
Project No 19TAY005
Date 30/10/2019

SOIL TYPE	TS / MG	N	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG
SAMPLE LOCATION	TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10	TP11	TP12	TP13	TP14	TP15	TP16	TP17	TP18	TP19	TP20	WS2	WS3	WS4	WS5	WS6
DEPTH (m)	0.60	0.50	0.60	0.20	0.60	0.30	0.65	0.20	0.70	0.20	0.50	0.20	0.50	0.20	0.20	0.40	0.30	0.40	0.20	1.00	0.20	0.30	0.40	0.35	0.20
pH	7.76	8.47	7.06	7.91	7.2	7.27	7.45	8.4	7.84	8.2	7.85	7.95	7.65	7.95	8.22	8.09	7.92	7.41	7.45	7.62	8.11	7.54	8.17	7.66	8.13
Sulphate (water sol 2:1)	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.02	<0.01	0.02	<0.01	0.04	<0.01	0.03	<0.01	<0.01	0.12	<0.01	0.01	0.04	0.02	<0.01	0.04	<0.01	0.05	<0.01
Organic matter	1.8	0.2	<0.1	3.5	0.7	2.3	0.4	4.4	0.6	2.6	0.7	2.9	0.6	5.5	4.6	1.1	3.4	0.3	2.1	0.2	3.1	0.6	3.9	0.5	3.8
Arsenic	6	2	3	5	2	2	4	10	7	4	2	5	1	8	6	<1	7	4	7	2	5	3	6	2	7
Cadmium	0.6	<0.5	<0.5	0.7	<0.5	<0.5	0.8	1.2	1	0.8	0.9	0.8	0.9	1.1	0.9	1.6	0.9	<0.5	0.8	<0.5	0.8	0.7	0.9	0.8	0.9
Copper	28	2	<1	35	7	16	15	59	16	27	10	32	9	39	35	9	37	4	29	<1	32	9	36	12	36
Chromium (hexavalent)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Lead	36	6	2	33	7	17	9	55	10	31	7	33	8	47	41	14	44	5	32	2	35	7	41	7	38
Mercury	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Nickel	13	6	4	14	14	8	41	17	46	16	23	17	29	21	16	19	14	7	15	5	14	21	16	26	16
Selenium	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc	42	13	6	73	22	28	37	102	40	61	29	67	33	84	71	34	103	18	65	11	65	23	71	37	63
Asbestos in Soil	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Matrix	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Quantification	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organic matter	1.8	0.2	<0.1	3.5	0.7	2.3	0.4	4.4	0.6	2.6	0.7	2.9	0.6	5.5	4.6	1.1	3.4	0.3	2.1	0.2	3.1	0.6	3.9	0.5	3.8

Metals	Mean Value Test *	Range		AtRisk 2017 (mg/kg)	AtRisk 2017 (mg/kg)	DEFRA C4SL 2017
	US ₉₅	Largest Value (mg/kg)	Smallest Value (mg/kg)	With Homegrown Produce (1% SOM)	With Homegrown Produce (6% SOM)	
pH	7.94	8.47	7.06			-
Sulphate (water sol 2:1)	0.03	0.12	<0.01			-
Organic matter	2.65	5.50	0.20			
Arsenic	5.39	10.00	<1	32	32	37
Cadmium	0.91	1.60	0.60	10	10	22.1
Copper	27.50	59.00	2.00	4730	4790	-
Chromium (hexavalent)	1.12	<1	<1	3.62	3.63	20.5
Lead	29.20	55.00	2.00			200
Mercury	0.17	<0.17	<0.17	8.81	15.8	-
Nickel	21.67	46.00	4.00	EA/AtRisk withdrawn Aug 2015		
Selenium	1.00	<1	<1	375	375	-
Zinc	58.68	103.00	6.00	20000	20300	-

NOTE:

Any individual results and mean value tests above SGVs are shown RED highlighted.

Any outlier values which exceed relevant SGVs are shown in red

*- The calculations for the mean value test include outliers

** - Results for this determinand are assessed with no background levels taken into account

Results are expressed as mg/kg unless otherwise stated

ALL RESULTS PRESENTED ARE ASSESSED UNDER THE COMBINED CLEA ASSESSMENT CRITERION AS OUTLINED WITHIN SRASSUMING NO FREE PRODUCT WAS OBSERVED DURING FIELDWORK- SEE 'GUIDANCE NOTES ON CONTAMINATION'

SGVs are derived from the EA 2009 SGVs which are taken from AtRisk 2015. Category 4 screening levels have been adopted by the EA and have been included as new guidance.

Note: The SGV for elemental mercury has been used to assess total mercury concentrations at the site. The Environment Agency's Science Report SC050021 (Mercury SGV states that 'for general surface contamination and to simplify the assessment the SGVs for inorganic mercury can normally be compared with chemical analysis for total mercury content. ... Based on the latter, SGV for elemental mercury (170mg/kg) in the soil assessment is used

NAD - NO ASBESTOS DETECTED

TS - Topsoil, MG - Made Ground and N - Natural Ground

SUMMARY OF CONTAMINATION ANALYSIS: SOIL

SUMMARY OF CONTAMINATION ANALYSIS: TPH

Project Name	Halsnead Park, Mullin Land, Whiston
Project No	19TAY005
Date	30/10/2019

SOIL TYPE	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N
SAMPLE LOCATION	TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10	TP11	TP12	TP13	TP14	TP15	TP16	TP17	TP18	TP19	TP20	WS2	WS3	WS4	WS5	WS6	
DEPTH (m)	0.60	0.50	0.60	0.20	0.60	0.30	0.65	0.20	0.70	0.20	0.50	0.20	0.50	0.20	0.20	0.40	0.30	0.40	0.20	1.00	0.20	0.30	0.40	0.35	0.20	
Ali >C5-C6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Ali >C6-C8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Ali >C8-C10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Ali >C10-C12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Ali >C12-C16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Ali >C16-C21	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	
Ali >C21-C35	6	<1	<1	15	<1	<1	<1	<1	<1	20	<1	7	<1	22	14	<1	12	<1	1	1	5	<1	39	<1	5	
Total Aliphatics	6	<1	<1	15	<1	<1	<1	<1	10	<1	22	<1	7	<1	24	14	<1	12	<1	1	5	<1	40	<1	5	
Aro >C5-C7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Aro >C7-C8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Aro >C8-C10	1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	
Aro >C10-C12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Aro >C12-C16	2	<1	<1	2	<1	<1	<1	<1	1	<1	1	<1	1	1	1	<1	<1	<1	<1	2	<1	<1	2	<1	1	
Aro >C16-C21	5	<1	<1	2	<1	<1	<1	2	<1	2	<1	1	<1	2	2	<1	1	<1	<1	<1	1	<1	2	<1	1	
Aro >C21-C35	20	<1	<1	9	<1	1	<1	6	<1	8	<1	5	<1	9	7	<1	6	<1	3	<1	5	<1	14	<1	3	
Total Aromatics	28	<1	<1	14	<1	1	<1	10	<1	12	<1	7	<1	14	12	<1	7	<1	3	<1	8	<1	22	<1	7	
TPH (Ali & Aro)	32	<1	<1	29	<1	1	<1	21	<1	33	<1	14	<1	38	26	<1	19	<1	5	1	13	<1	61	<1	12	
BTEX - Benzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
BTEX - Toluene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
BTEX - Ethyl Benzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
BTEX - m & p Xylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
BTEX - o Xylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
MTBE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Organic Matter	1.8	0.2	<0.1	3.5	0.7	2.3	0.4	4.4	0.6	2.6	0.7	2.9	0.6	5.5	4.6	1.1	3.4	0.3	2.1	0.2	3.1	0.6	3.9	0.5	3.8	

TPH	Mean Value Test *	Range		AIRisk 2017 (mg/kg) Residential with Home Grown Produce	AIRisk 2017 (mg/kg) Residential with Home Grown Produce	DEFRA CASL 2017
	US ₉₅	Largest Value (mg/kg)	Smallest Value (mg/kg)	1% SOM WITHOUT Free Product***	6% SOM WITHOUT Free Product***	6% SOM WITHOUT Free Product***
Ali >C5-C6	0.01	<0.01	<0.01	42.7	369	-
Ali >C6-C8	0.01	<0.01	<0.01	99.3	1240	-
Ali >C8-C10	1.00	<1	<1	13.9	204	-
Ali >C10-C12	1.00	<1	<1	81.7	1180	-
Ali >C12-C16	1.00	<1	<1	385	4130	-
Ali >C16-C21	1.00	<1	<1			
Ali >C21-C35	9.73	39.00	<1	210000	210100	-
Total Aliphatics	9.98	40.00	<1			
Aro >C5-C7	0.01	<0.01	<0.01	0.137	0.871	-
Aro >C7-C8	0.01	<0.01	<0.01	113	780	-
Aro >C8-C10	1.12	2.00	<1	20.5	232	-
Aro >C10-C12	1.00	<1	<1	70	468	-
Aro >C12-C16	1.31	2.00	<1	165	830	-
Aro >C16-C21	1.71	5.00	<1	319	1040	-
Aro >C21-C35	6.07	20.00	<1	1120	1710	-
Total Aromatics	8.94	28.00	<1			
TPH (Ali & Aro)	17.97	61.00	<1			
BTEX - Benzene	0.01	<0.01	<0.01	0.0493	0.33	0.871
BTEX - Toluene	0.01	<0.01	<0.01	113	780	-
BTEX - Ethyl Benzene	0.01	<0.01	<0.01	50.7	453	-
BTEX - m & p Xylene	0.01	<0.01	<0.01	24	312	-
BTEX - o Xylene	0.01	<0.01	<0.01	26.4	336	-
MTBE	0.01	<0.01	<0.01	27.6	220	

	UU Drinking Water Guidelines
	PE Threshold
Total BTEX & MTBE	0.1
EC5-EC10 Ali-Aro	2
EC10-EC16 Ali-Aro	10
EC16-EC40 Ali-Aro	500

Results expressed as mg/kg air dried unless otherwise stated

* - The calculations for the mean value test include outliers

*** THESE RESULTS PRESENTED ARE ASSESSED UNDER THE COMBINED CLEA ASSESSMENT CRITERION AS OUTLINED WITHIN SR4 ASSUMING NO FREE PRODUCT WAS OBSERVED DURING FIELDWORK- SEE 'GUIDANCE NOTES ON CONTAMINATION'.

NOTES:

For the Purpose of this investigation- results will be assessed against **RESIDENTIAL GUIDELINES WITH HOMEGROWN PRODUCE WITH NO FREE PRODUCT.**

Project Name	Halsnead Park, Mullin Land, Whiston
Project No	19TAY005
Date	30/10/19

SOIL TYPE	TS / MG	N	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG	N	TS / MG
SAMPLE LOCATION	TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10	TP11	TP12	TP13	TP14	TP15	TP16	TP17	TP18	TP19	TP20	WS2	WS3	WS4	WS5	WS6	
DEPTH (m)	0.60	0.50	0.60	0.20	0.60	0.30	0.65	0.20	0.70	0.20	0.50	0.20	0.50	0.20	0.20	0.10	0.30	0.40	0.20	1.00	0.20	0.30	0.40	0.35	0.20	
Acenaphthene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Anthracene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Benzo(a)anthracene	0.2	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Benzo(a)pyrene	0.31	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Benzo(b)fluoranthene	0.31	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo(k)perylene	0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo(k)fluoranthene	0.14	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	
Chrysene	0.29	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	
Dibenzo(ah)anthracene	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Fluoranthene	0.31	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Indeno(123-cd)pyrene	0.3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Naphthalene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Phenanthrene	0.1	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Pyrene	0.32	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	
Organic Matter	1.8	0.2	<0.1	3.5	0.7	2.3	0.4	4.4	0.6	2.6	0.7	2.9	0.6	5.5	4.6	1.1	3.4	0.3	2.1	0.2	3.1	0.6	3.9	0.5	3.8	

PAH	Mean Value Test *	Range		AtRisk 2017 (mg/kg) Residential with Home Grown Produce	AtRisk 2017 (mg/kg) Residential with Home Grown Produce	DEFRA's C4SL 2017
	US ₉₅	Largest Value (mg/kg)	Smallest Value (mg/kg)	1% SOM WITHOUT Free Product***	6% SOM WITHOUT Free Product***	6% SOM WITHOUT Free Product***
Acenaphthene	0.01	0.01	<0.01	608	2760	-
Acenaphthylene	0.01	<0.01	<0.01			-
Anthracene	0.02	<0.02	<0.02	10200	26200	-
Benzo(a)anthracene	0.06	0.20	<0.04	4.52	8.54	-
Benzo(a)pyrene	0.07	0.31	<0.04	1.51	2.05	4.95
Benzo(b)fluoranthene	0.08	0.31	<0.05	7.72	9.86	-
Benzo(k)fluoranthene	0.08	0.28	<0.05	96.2	103	-
Benzo(k)pyrene	0.08	0.14	<0.07	84.4	100	-
Chrysene	0.09	0.29	<0.06	585	927	-
Dibenzo(a,h)anthracene	0.04	0.06	<0.04	0.838	1	-
Fluoranthene	0.11	0.31	<0.08	983	2980	-
Fluorene	0.01	<0.00	<0.01	735	2610	-
Indeno(123-cd)pyrene	0.06	0.30	<0.03	7.31	9.75	-
Naphthalene	0.03	<0.02	<0.03	0.829	12.2	-
Phenanthrene	0.04	0.10	<0.03			-
Pyrene	0.10	0.32	<0.07	668	2120	-

* - The calculations for the mean value test include outliers

NOTES:

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FINAL ANALYTICAL TEST REPORT

Envirolab Job Number:

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Issue Number:

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Date: 00/00/00

Client:

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Project Manager:

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Project Name:

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Project Ref:

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Order No:

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Date Samples Received:

00/00/0000

Date Instructions Received:

00/00/0000

Date Analysis Completed:

00/00/0000

Prepared by:

Approved by:

M Marshall

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Envirolab Job Number: 19/10422

Client Project Name: Warburton

Client Project Ref: 18RED154

Lab Sample ID	19/10422/1	19/10422/2	19/10422/3	19/10422/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP201	TP201	TP203						
Depth to Top	0.10	0.75	1.60	0.10						
Depth To Bottom										
Date Sampled	01-Nov-19	01-Nov-19	01-Nov-19	01-Nov-19						
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES						
Sample Matrix Code	4AE	4A		5AE						
% Stones >10mm _A	<0.1	<0.1	-	<0.1				% w/w	0.1	A-T-044
pH _D ^{M#}	6.33	7.21	-	6.48				pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.02	<0.01	-	<0.01				g/l	0.01	A-T-026s
Organic matter _D ^{M#}	3.4	0.3	-	4.2				% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	15	<1	-	17				mg/kg	1	A-T-024s
Cadmium _D ^{M#}	0.8	<0.5	-	0.8				mg/kg	0.5	A-T-024s
Copper _D ^{M#}	27	3	-	46				mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	-	<1				mg/kg	1	A-T-040s
Lead _D ^{M#}	47	2	-	70				mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	-	<0.17				mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	14	6	-	18				mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	-	2				mg/kg	1	A-T-024s
Zinc _D ^{M#}	63	9	-	79				mg/kg	5	A-T-024s
VPH total (>C5-C10)	2	<1	-	1				mg/kg	1	Calc-stone+mois
1.01 % Moisture BS1377 1990 pt2 cl3.2 _A [#]	-	-	Appended	-					0.1	Subcon SS
1.02 Atterburg 4Pt BS1377 1990 pt2 cl4.4,5.3+5.4 _A [#]	-	-	Appended	-					1	Subcon SS





Envirolab Job Number: 19/10422

Client Project Name: Warburton

Client Project Ref: 18RED154

Lab Sample ID	19/10422/1	19/10422/2	19/10422/3	19/10422/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP201	TP201	TP203						
Depth to Top	0.10	0.75	1.60	0.10						
Depth To Bottom										
Date Sampled	01-Nov-19	01-Nov-19	01-Nov-19	01-Nov-19						
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES						
Sample Matrix Code	4AE	4A		5AE						
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	-	NAD						A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	-	N/A						A-T-045





Envirolab Job Number: 19/10422

Client Project Name: Warburton

Client Project Ref: 18RED154

Lab Sample ID	19/10422/1	19/10422/2	19/10422/3	19/10422/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP201	TP201	TP203						
Depth to Top	0.10	0.75	1.60	0.10						
Depth To Bottom										
Date Sampled	01-Nov-19	01-Nov-19	01-Nov-19	01-Nov-19						
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES						
Sample Matrix Code	4AE	4A		5AE						
PAH-16MS										
Acenaphthene _A ^{M#}	0.01	<0.01	-	0.01				mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.05	<0.02	-	0.04				mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.31	<0.04	-	0.10				mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.37	<0.04	-	0.08				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.37	<0.05	-	0.08				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.27	<0.05	-	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.15	<0.07	-	<0.07				mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.37	<0.06	-	0.13				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	-	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.52	<0.08	-	0.25				mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.01	<0.01	-	0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.30	<0.03	-	0.05				mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	-	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.22	<0.03	-	0.19				mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.52	<0.07	-	0.24				mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	3.48	<0.08	-	1.18				mg/kg	0.01	A-T-019s



Envirolab Job Number: 19/10422

Client Project Name: Warburton

Client Project Ref: 18RED154

Lab Sample ID	19/10422/1	19/10422/2	19/10422/3	19/10422/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP201	TP201	TP201	TP203						
Depth to Top	0.10	0.75	1.60	0.10						
Depth To Bottom										
Date Sampled	01-Nov-19	01-Nov-19	01-Nov-19	01-Nov-19						
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES						
Sample Matrix Code	4AE	4A		5AE						
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	-	<1				mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	-	<1				mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	-	<1				mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	1	<1	-	<1				mg/kg	1	A-T-055s
Ali >C21-C35 _A	21	<1	-	18				mg/kg	1	A-T-055s
Total Aliphatics _A	22	<1	-	18				mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	2	<1	-	1				mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	1	<1	-	<1				mg/kg	1	A-T-055s
Aro >C12-C16 _A	2	<1	-	1				mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	8	<1	-	5				mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	42	<1	-	21				mg/kg	1	A-T-055s
Total Aromatics _A	57	<1	-	30				mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	79	<1	-	48				mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	-	<0.01				mg/kg	0.01	A-T-022s



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Project No: 19/10422
Date Received: 04/11/2019 (am)
Cool Box Temperatures (°C): 9.0

[illegible]



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number:

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Issue Number:

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Date: 00/00/00

Client:

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Project Manager:

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Project Name:

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Project Ref:

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Order No:

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Date Samples Received:

00/00/00

Date Instructions Received:

00/00/00

Date Analysis Completed:

00/00/00

Prepared by:

Approved by:

Signature

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Signature

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Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/1	19/10420/2	19/10420/3	19/10420/4	19/10420/5	19/10420/6	19/10420/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP2	TP3	TP4	TP5	TP5	TP6			
Depth to Top	0.60	0.50	0.60	0.20	0.60	1.20	0.30			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4A	4A	4A	4AE	4AE	5A	4AE			
% Stones >10mm _A	<0.1	<0.1	<0.1	1.9	<0.1	<0.1	2.6	% w/w	0.1	A-T-044
pH _D ^{M#}	7.76	8.47	7.06	7.91	7.20	6.60	7.27	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.04	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	1.8	0.2	<0.1	3.5	0.7	-	2.3	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	6	2	3	5	2	-	2	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	0.6	<0.5	<0.5	0.7	<0.5	-	<0.5	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	28	2	<1	35	7	-	16	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	-	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	36	6	2	33	7	-	17	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	<0.17	<0.17	-	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	13	6	4	14	14	-	8	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	-	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	42	13	6	73	22	-	28	mg/kg	5	A-T-024s
VPH total (>C5-C10)	1	<1	<1	1	<1	-	<1	mg/kg	1	Calc-stone+mois
1.01 % Moisture BS1377 1990 pt2 cl3.2 _A [#]	-	-	-	-	-	Appended	-		0.1	Subcon SS
1.02 Atterburg 4Pt BS1377 1990 pt2 cl4.4,5.3+5.4 _A [#]	-	-	-	-	-	Appended	-		1	Subcon SS



Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/1	19/10420/2	19/10420/3	19/10420/4	19/10420/5	19/10420/6	19/10420/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP2	TP3	TP4	TP5	TP5	TP6			
Depth to Top	0.60	0.50	0.60	0.20	0.60	1.20	0.30			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4A	4A	4A	4AE	4AE	5A	4AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	-	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A	N/A	-	N/A			A-T-045



Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/1	19/10420/2	19/10420/3	19/10420/4	19/10420/5	19/10420/6	19/10420/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP2	TP3	TP4	TP5	TP5	TP6			
Depth to Top	0.60	0.50	0.60	0.20	0.60	1.20	0.30			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4A	4A	4A	4AE	4AE	5A	4AE			
PAH-16MS										
Acenaphthene _A ^{M#}	0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.20	<0.04	<0.04	<0.04	<0.04	-	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.31	<0.04	<0.04	<0.04	<0.04	-	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.31	<0.05	<0.05	<0.05	<0.05	-	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.28	<0.05	<0.05	<0.05	<0.05	-	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.14	<0.07	<0.07	<0.07	<0.07	-	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.29	<0.06	<0.06	<0.06	<0.06	-	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.06	<0.04	<0.04	<0.04	<0.04	-	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.31	<0.08	<0.08	<0.08	<0.08	-	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.30	<0.03	<0.03	<0.03	<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.10	<0.03	<0.03	<0.03	<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.32	<0.07	<0.07	<0.07	<0.07	-	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	2.65	<0.08	<0.08	<0.08	<0.08	-	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/1	19/10420/2	19/10420/3	19/10420/4	19/10420/5	19/10420/6	19/10420/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP2	TP3	TP4	TP5	TP5	TP6			
Depth to Top	0.60	0.50	0.60	0.20	0.60	1.20	0.30			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4A	4A	4A	4AE	4AE	5A	4AE			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	-	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	-	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1	-	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	<1	<1	-	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	6	<1	<1	15	<1	-	<1	mg/kg	1	A-T-055s
Total Aliphatics _A	6	<1	<1	15	<1	-	<1	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	1	<1	<1	1	<1	-	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	-	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	2	<1	<1	2	<1	-	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	5	<1	<1	2	<1	-	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	20	<1	<1	9	<1	-	1	mg/kg	1	A-T-055s
Total Aromatics _A	28	<1	<1	14	<1	-	1	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	32	<1	<1	29	<1	-	1	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/8	19/10420/9	19/10420/10	19/10420/11	19/10420/12	19/10420/13	19/10420/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP7	TP8	TP8	TP9	TP10	TP11	TP12			
Depth to Top	0.65	0.20	0.95	0.70	0.30	0.50	0.20			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5A	5A	5A	5A	5AB	5AE	4ABE			
% Stones >10mm _A	1.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.7	% w/w	0.1	A-T-044
pH _D ^{M#}	7.45	8.40	7.91	7.84	8.20	7.85	7.95	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.02	<0.01	0.02	0.02	<0.01	0.04	<0.01	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	0.4	4.4	-	0.6	2.6	0.7	2.9	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	4	10	-	7	4	2	5	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	0.8	1.2	-	1.0	0.8	0.9	0.8	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	15	59	-	16	27	10	32	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	-	<1	<1	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	9	55	-	10	31	7	33	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	-	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	41	17	-	46	16	23	17	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	1	-	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	37	102	-	40	61	29	67	mg/kg	5	A-T-024s
VPH total (>C5-C10)	<1	<1	-	<1	<1	<1	<1	mg/kg	1	Calc-stone+mois
1.01 % Moisture BS1377 1990 pt2 cl3.2 _A [#]	-	-	Appended	Appended	-	-	-		0.1	Subcon SS
1.02 Atterburg 4Pt BS1377 1990 pt2 cl4.4,5.3+5.4 _A [#]	-	-	Appended	Appended	-	-	-		1	Subcon SS



Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/8	19/10420/9	19/10420/10	19/10420/11	19/10420/12	19/10420/13	19/10420/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP7	TP8	TP8	TP9	TP10	TP11	TP12			
Depth to Top	0.65	0.20	0.95	0.70	0.30	0.50	0.20			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5A	5A	5A	5A	5AB	5AE	4ABE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	-	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	-	N/A	N/A	N/A	N/A			A-T-045



Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/8	19/10420/9	19/10420/10	19/10420/11	19/10420/12	19/10420/13	19/10420/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP7	TP8	TP8	TP9	TP10	TP11	TP12			
Depth to Top	0.65	0.20	0.95	0.70	0.30	0.50	0.20			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5A	5A	5A	5A	5AB	5AE	4ABE			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	-	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	-	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	-	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	-	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	-	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	-	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	-	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	<0.08	-	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/8	19/10420/9	19/10420/10	19/10420/11	19/10420/12	19/10420/13	19/10420/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP7	TP8	TP8	TP9	TP10	TP11	TP12			
Depth to Top	0.65	0.20	0.95	0.70	0.30	0.50	0.20			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5A	5A	5A	5A	5AB	5AE	4ABE			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	-	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	-	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	-	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	-	<1	1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	<1	10	-	<1	20	<1	7	mg/kg	1	A-T-055s
Total Aliphatics _A	<1	10	-	<1	22	<1	7	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	<1	-	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	-	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	1	-	<1	1	<1	1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	2	-	<1	2	<1	1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	<1	6	-	<1	8	<1	5	mg/kg	1	A-T-055s
Total Aromatics _A	<1	10	-	<1	12	<1	7	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	<1	21	-	<1	33	<1	14	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/15	19/10420/16	19/10420/17	19/10420/18	19/10420/19	19/10420/20	19/10420/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP12	TP13	TP14	TP15	TP16	TP17	TP18			
Depth to Top	1.00	0.50	0.20	0.20	0.40	0.30	0.40			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5A	5A	5AE	5AE	5AE	4AE	4A			
% Stones >10mm _A	9.7	<0.1	3.7	<0.1	<0.1	1.9	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	7.21	7.65	7.95	8.22	8.09	7.92	7.41	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	0.03	<0.01	<0.01	0.12	<0.01	0.01	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	-	0.6	5.5	4.6	1.1	3.4	0.3	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	-	1	8	6	<1	7	4	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	-	0.9	1.1	0.9	1.6	0.9	<0.5	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	-	9	39	35	9	37	4	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	-	<1	<1	<1	<2	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	-	8	47	41	14	44	5	mg/kg	1	A-T-024s
Mercury _D	-	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	-	29	21	16	19	14	7	mg/kg	1	A-T-024s
Selenium _D ^{M#}	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	-	33	84	71	34	103	18	mg/kg	5	A-T-024s
VPH total (>C5-C10)	-	<1	1	1	<1	<1	<1	mg/kg	1	Calc-stone+mois
1.01 % Moisture BS1377 1990 pt2 cl3.2 _A [#]	Appended	-	-	-	-	-	-		0.1	Subcon SS
1.02 Atterburg 4Pt BS1377 1990 pt2 cl4.4,5.3+5.4 _A [#]	Appended	-	-	-	-	-	-		1	Subcon SS



Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/15	19/10420/16	19/10420/17	19/10420/18	19/10420/19	19/10420/20	19/10420/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP12	TP13	TP14	TP15	TP16	TP17	TP18			
Depth to Top	1.00	0.50	0.20	0.20	0.40	0.30	0.40			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5A	5A	5AE	5AE	5AE	4AE	4A			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	-	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	-	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045



Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/15	19/10420/16	19/10420/17	19/10420/18	19/10420/19	19/10420/20	19/10420/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP12	TP13	TP14	TP15	TP16	TP17	TP18			
Depth to Top	1.00	0.50	0.20	0.20	0.40	0.30	0.40			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5A	5A	5AE	5AE	5AE	4AE	4A			
PAH-16MS										
Acenaphthene _A ^{M#}	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	-	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	-	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	-	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	-	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	-	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/15	19/10420/16	19/10420/17	19/10420/18	19/10420/19	19/10420/20	19/10420/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP12	TP13	TP14	TP15	TP16	TP17	TP18			
Depth to Top	1.00	0.50	0.20	0.20	0.40	0.30	0.40			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5A	5A	5AE	5AE	5AE	4AE	4A			
TPH CWG										
Ali >C5-C6 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	-	<1	1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	-	<1	22	14	<1	12	<1	mg/kg	1	A-T-055s
Total Aliphatics _A	-	<1	24	14	<1	12	<1	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	-	<1	1	1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	-	<1	1	1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	-	<1	2	2	<1	1	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	-	<1	9	7	<1	6	<1	mg/kg	1	A-T-055s
Total Aromatics _A	-	<1	14	12	<1	7	<1	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	-	<1	38	26	<1	19	<1	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/22	19/10420/23	19/10420/24	19/10420/25	19/10420/26	19/10420/27	19/10420/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP19	TP20	WS2	WS3	WS4	WS5	WS6			
Depth to Top	0.20	1.00	0.20	0.30	0.40	0.35	0.20			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4ABE	4A	5A	5A	5AE	5A	5AE			
% Stones >10mm _A	<0.1	6.9	<0.1	2.3	<0.1	4.8	4.0	% w/w	0.1	A-T-044
pH _D ^{M#}	7.45	7.62	8.11	7.54	8.17	7.66	8.13	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.04	0.02	<0.01	0.04	<0.01	0.05	<0.01	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	2.1	0.2	3.1	0.6	3.9	0.5	3.8	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	7	2	5	3	6	2	7	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	0.8	<0.5	0.8	0.7	0.9	0.8	0.9	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	29	<1	32	9	36	12	36	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	32	2	35	7	41	7	38	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	15	5	14	21	16	26	16	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	65	11	65	23	71	37	63	mg/kg	5	A-T-024s
VPH total (>C5-C10)	<1	<1	<1	<1	2	<1	<1	mg/kg	1	Calc- stone+mois



Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/22	19/10420/23	19/10420/24	19/10420/25	19/10420/26	19/10420/27	19/10420/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP19	TP20	WS2	WS3	WS4	WS5	WS6			
Depth to Top	0.20	1.00	0.20	0.30	0.40	0.35	0.20			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4ABE	4A	5A	5A	5AE	5A	5AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045



Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/22	19/10420/23	19/10420/24	19/10420/25	19/10420/26	19/10420/27	19/10420/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP19	TP20	WS2	WS3	WS4	WS5	WS6			
Depth to Top	0.20	1.00	0.20	0.30	0.40	0.35	0.20			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4ABE	4A	5A	5A	5AE	5A	5AE			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 19/10420

Client Project Name: Halsnead Park, Mullin Land, Whiston

Client Project Ref: 19TAY005

Lab Sample ID	19/10420/22	19/10420/23	19/10420/24	19/10420/25	19/10420/26	19/10420/27	19/10420/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP19	TP20	WS2	WS3	WS4	WS5	WS6			
Depth to Top	0.20	1.00	0.20	0.30	0.40	0.35	0.20			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4ABE	4A	5A	5A	5AE	5A	5AE			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	<1	1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	1	1	5	<1	39	<1	5	mg/kg	1	A-T-055s
Total Aliphatics _A	1	1	5	<1	40	<1	5	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	<1	<1	<1	2	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	<1	2	<1	2	<1	1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	<1	1	<1	2	<1	1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	3	<1	5	<1	14	<1	3	mg/kg	1	A-T-055s
Total Aromatics _A	3	<1	8	<1	22	<1	7	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	5	1	13	<1	61	<1	12	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s



9

9

Clients Project No: 19TAY005

[illegible]

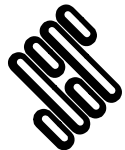
APPENDIX E

(i) Geotechnical Test Results

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with clauses 3.2,4.3,4.4,5.3,5.4,7.2,8.2,8.3 of BS1377:Part 2:1990

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
TP5	19/10420/6	D	1.20	17	30	11	19	89	Brown slightly sandy slightly gravelly CLAY
TP8	19/10420/10	D	0.95	26	39	20	19	84	Brown slightly sandy slightly gravelly CLAY
TP9	19/10420/11	D	0.70	19	41	17	24	93	Brown slightly sandy slightly gravelly CLAY
TP12	19/10420/15	D	1.00	16	33	15	18	86	Brown slightly sandy slightly gravelly CLAY



**STRUCTURAL
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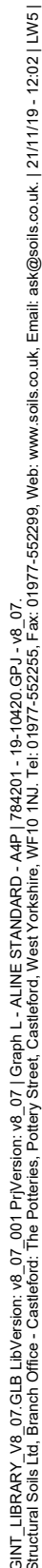
Contract:

19/10420

Contract Ref:

784201





TESTING VERIFICATION CERTIFICATE



1774

The test results included in this report are certified as:-

ISSUE STATUS: **FINAL**

In accordance with the Structural Soils Ltd Laboratory Quality Management System, results sheets and summaries of results issued by the laboratory are checked by an approved signatory. The integrity of the test data and results are ensured by control of the computer system employed by the laboratory as part of the Software Verification Program as detailed in the Laboratory Quality Manual.

This testing verification certificate covers all testing compiled on or before the following datetime: **21/11/2019 15:19:16**.

Testing reported after this date is not covered by this Verification Certificate.

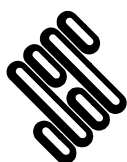
Approved Signatory
Luke Fisher (Materials Laboratory Manager)

(Head Office)
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Hertfordshire
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Tonbridge Laboratory
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Hildenborough
Tonbridge
TN11 9HU



**STRUCTURAL
SOILS LTD**

Contract:

19/10420

Job No:

784201



APPENDIX F

- (i) Historical Maps (N/A)

APPENDIX G

(i) Gas Monitoring Data

Site: Mullin Land, Halsnead Park

Job Number: 19TAY055

Date of Monitoring: 14/11/19

Ground Gas Monitoring Round 1



Borehole	Gas Flow (l/hr)	Atmospheric Pressure (mB)	Methane CH ₄ (%v/v)		Carbon Dioxide CO ₂ (% v/v)		Oxygen (%v/v)		Other Gases			Depth to Water	
			Peak	Steady	Peak	Steady	Min	Steady	PID	H ₂ S	CO	(mbgl)	BH depth
WS1	0.2	998	0.0	0.0	0.1	0.1	20.3	20.4	-	-	-	Dry	1.15
WS2	0.2	998	0.0	0.0	1.4	1.2	19.6	20.4	-	-	-	Dry	1.30
WS3	0.2	998	0.0	0.0	0.4	0.4	20.2	20.3	-	-	-	0.35	2.65
WS4	0.1	998	0.0	0.0	0.3	0.2	20.4	20.5	-	-	-	0.35	2.75
WS5	0.2	998	0.0	0.0	2.0	1.8	19.6	20.4	-	-	-	0.85	2.80
WS6	Well Flooded											0.00	2.50

Notes:

Monitoring order is left to right across the table

Monitoring should be for **not less** than 3 minutes. However, if high concentrations of gases are initially recorded, monitoring should be for up to 10 minutes

Relevant Information at the Time of Monitoring	
Monitored by:	RD
Weather:	Overcast with light cloud, slight breeze, cold, damp.
Equipment Used:	GA5000
	Solinst Mini Interface Meter
Visible signs of damage/stress:	N/A
Other Comments/Observations:	Pressure rising.

APPENDIX H

- (i) Groundsure Dataset and Coal Authority Report (N/A)

APPENDIX I

(i) Conceptual Model

The report aims to identify land which could potentially be affected by contamination, such that it could affect the value or re-use of the land, or such that mitigation would be required for certain proposed end uses of the land.

The assessment also aims to identify land which would be regarded as 'contaminated land' under the terms of the Environmental Protection Act 1990, Part IIa. This act includes a stricter test for contaminated land than that outlined above. Land is considered to be contaminated if either:

- the land is causing significant harm to people, ecosystems or infrastructure; or
- there is a significant possibility that such harm could be caused; or
- Pollution of controlled waters is being, or is likely to be, caused.

The following situations are defined as being where harm is to be regarded as significant:

- chronic or quite toxic effect, serious injury or death to humans;
- irreversible or other adverse harm to the ecological system;
- substantial damage to or failure of buildings;
- death of, or disease or other physical damage affecting, livestock or crops;
- Pollution of controlled waters.

The risk assessment uses a 'Source-Pathway-Receptor' methodology for assessing whether a source of contamination could potentially lead to harmful consequences. This means that there needs to be a pollutant linkage from source to receptor for harm to be caused, this linkage consisting of:

- a source of pollution;
- a pathway for the pollutant to move along;
- A receptor that is affected by the pollutant.

As an example, the pollutant source could be an identified leak of oil or an area of dumped waste.



The pathways could include transport of the contaminant by groundwater, surface water, windblown dust, or vapours, and for human receptors will include the means, by which contaminants enter the body, for example skin contact, ingestion and inhalation.

Receptors include people, other living organisms, the built environment and groundwater and surface waters (these latter two also being contaminant pathways).

The source-pathway-receptor methodology relationship allows an assessment of the environmental risk to be determined, based on the nature of the source, the degree of exposure of the receptor to the source and the sensitivity of the receptor.

This section of the report is based on the information set out in the previous sections of the report and should not be read independently of such sections.

Initial Conceptual Model

From the available information the preliminary conceptual model is visualised as follows:

Target (Receptor)	POTENTIAL SOURCE-PATHWAY LINKAGE
Site Users / Residents	Inhalation of soil gas, odours or dust.
	Ingestion of, and skin contact with, contaminated soil.
	Ingestion of contaminants in vegetables etc. or in soils adhering to vegetables, etc.
Construction/ Maintenance Workers.	Inhalation of soil gas, odours or dust
	Ingestion of, and skin contact with, contaminated soil
Plants	Adverse effects on growth caused by presence of contaminants in soil
Buildings and Structures	Flow of ground gas into buildings. Asphyxiation, toxicity, explosion and fire hazards
	Sulphate attack of foundations
	Hydrocarbons penetrating plastic water supply pipes
Groundwater	Migration of soluble contaminants into groundwater on or off site. Migration of oils into groundwater on or off site.
Surface Water	Migration of soluble contaminants and/or direct run-off of contaminants. Migration of oils into groundwater on or off site.

Initial Environmental Risk Assessment

General

It is accepted that an environmental risk assessment can be based on a source-pathway-target model. An examination is carried out as to whether a target will be at risk from a contamination source, that a source exists, and whether there are any pathways (routes of exposure) which might actually link the source to the target.

Environmental risk assessments rely heavily on numerical trigger concentrations or guidelines because exposure of targets to contamination is difficult to quantify directly. Quantification of risk is therefore mainly undertaken for general scenarios in order to derive trigger levels. These are derived for various contaminants for particular targets and routes of exposure. An example of a sensitive target would be users of a domestic back garden, where routes of exposure might be skin contact, dust inhalation, direct ingestion and indirect ingestion via cultivation and consumption of fruit and vegetables.

In March 2002, the first parts of the new CLEA risk assessment guidance were released by DEFRA/Environment Agency.

The risk assessment approach is an extension of the 'fit for use' concept whereby land is cleaned up to a standard fit for the proposed use, that is, so all remaining risks are acceptable. However, as well as being 'fit for use', the environmental risk assessment approach also addresses the soil and water environment so that these are also safeguarded where necessary. For example if a site was contaminated with heavy metals and the development comprised the proposed construction of hard standings and buildings only, the fit-for-use approach might require no remediation for the site. However, consideration of the wider environment needs to address whether groundwater is being contaminated, and if so whether remediation is required for this reason.

The following classification presented by CIRIA has been used in the assessment of risk:

Estimation of risk from consideration of magnitude, consequences and probabilities				
Probability	Consequences			
	Severe	Moderate	Mild	Minor
High	Very high	High	Moderate	Moderate / Low
Medium	High	Moderate	Moderate / Low	Low
Low	Moderate	Moderate / Low	Low	Very Low
Unlikely	Moderate / Low	Low	Very Low	Very Low

Reference: Contaminated Land Risk Management; A Guide to Good Practice, CIRIA C552:2001.

CIRIA C665 Situation A Ground Gas Conceptual Model

The risk table contained in C665 is basically a modified risk assessment from CIRIA 152 1995, by which a conceptual model and semi-quantitative risk assessment can be made.

APPENDIX J

(i) Notes on Ground Gas

Ground Gas

The Building Regulations and BRE Report 212 state that precautions are not mandatory against carbon dioxide unless 5.0% volume is exceeded. These documents do not give a threshold level for methane, but Baker suggests that this level is 0.1% volume. For methane up to 1.0% volume, and carbon dioxide above 5.0% volume, the Building Regulations and BRE Report state that passive measures may be adopted. Above 1.0% methane further specific guidance must be sought.

CIRIA Report 149 gives further guidance on the appropriate precautions for various gas regimes, called characteristic situations in this report. In the DETR Guide for Design by Ove Arup, various types of passive measures are assessed for performance with different gas regimes. The assessments used computational fluid dynamic (CFD) modelling.

A gas regime is essentially defined by two parameters:

- i) The concentration of the gas (e.g. % methane)
- ii) The emission rate of the gas from the ground.

The fact that two parameters are used is problematic if the site is to be classified on the basis of Table 28 in CIRIA Report 149. This is because high gas concentrations are often encountered which fall into an onerous gas regime; whereas the low flow rates which are also frequently encountered fall into less onerous gas regimes.

In order to use the Guide for Design to decide if passive measures are suitable, it is necessary to combine the gas concentration and the emission rate.

Three recent publications are used for ground gas risk assessment:

- CIRIA C665 (2007) for high rise residential / flats,
- 'Guidance on Evaluation of Development Proposals on Sites Where Methane and Carbon Dioxide are Present' Report Edition No.04 March 2007 NHBC – designed for use with low rise residential properties,
- BS8485:2015 (June 2015) 'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'

These documents improve upon the approach used in previous CIRIA and Wilson /Card Papers, by placing emphasis on gas flow rates, but still retain some reliance on the gas concentrations themselves.

CIRIA C665 Situation A Ground Gas Conceptual Model

The risk table contained in C665 is basically a modified risk assessment from CIRIA 152 1995, by which a conceptual model and semi-quantitative risk assessment can be made.

High Rise / Flats (CIRIA 665 Table 8.5)

Characteristic Situation (CIRIA Report 149)	Risk Classification	Gas Screening Value (CH ₄ or CO ₂) (l/hr) ¹	Additional Factors	Typical Source of Generation
1	Very Low Risk	<0.07	Typically methane ≤1%v/v and/or carbon dioxide ≤5%v/v. Otherwise consider increase to Situation 2	Natural soils with low Organic content. "Typical" Made Ground
2	Low risk	<0.7	Borehole flow rate not to exceed 70l/hr. Otherwise consider increase to Situation 3	Natural soil, high peat/organic content. "Typical" Made Ground
3	Moderate Risk	<3.5		Old landfill, inert waste, Mine working flooded
4	Moderate to High Risk	<15	Quantitative risk assessment required to evaluate scope of protective measures	Mine working susceptible to flooding, completed landfill (WMP 26B criteria)
5	High Risk	<70		Mine working unflooded inactive with shallow workings near surface
6	Very High Risk	>70		Recent landfill site
Notes: 1. Gas screening value: litres of gas/hour is calculated by multiplying the gas concentration (%) by the measured borehole flow rate (l/hr); 2. Site characterisation should be based on gas monitoring of concentrations and borehole flow rates for the minimum periods as defined within CIRIA Report 665; 3. Source of gas and generation potential/performance must be identified; 4. Soil gas investigation to be in accordance with guidance contained within CIRIA Report 665; 5. If there is no detectable flow, use the limit of detection of the instrument; 6. The boundaries between the Partners in Technology classifications do not fit exactly with the boundaries for the above classification.				

Typical scope of protective measures (extract from CIRIA Report 665 Table 8.6)

Characteristic Situation (from Table 8.5)	Number of Levels of Protection	Typical Scope of Protective Measures for Residential Building (not low-rise traditional housing) ¹
1	None	No special precautions
2	2	a) Reinforced concrete cast in situ floor slab (suspended, non-suspended or raft) with at least 1200g DPM and under-floor venting b) Beam and block or pre-cast concrete and 2000 g DPM/reinforced gas membrane and under-floor venting. All joints and penetrations sealed.
3	2	All types of floor slab as above. All joints and penetrations sealed. Proprietary gas resistant membrane and passively ventilated or positively pressurised under-floor sub-space.
4	3	All types of floor slab as above. All joints and penetrations sealed. Proprietary gas resistant membrane and passively ventilated under-floor subspace or positively pressurised under-floor sub-space, over-site capping or blinding and in ground venting layer
5	4	Reinforced concrete cast in situ floor slab (suspended, non-suspended or raft). All joints and penetrations sealed. Proprietary gas resistant membrane and ventilated or positively pressurised under-floor sub-space, over-site capping and in ground venting layer and in ground venting wells or barriers.
6	5	Not suitable unless gas regime is reduced first and quantitative risk assessment carried out to assess design of protection measures in conjunction with foundation design.

Notes:

1. Not suitable for use with low rise traditional housing. (Use the NHBC document instead);
2. Typical scope of protective measures may be rationalised for specific developments on the basis of quantitative risk assessments;
3. Note the type of protection is given for illustration purposes only. Information on the detailing and construction of passive protection measures is given in BR414 (Johnson, 2001). Individual site specific designs should provide the same number of separate protective methods for any given characteristic situation. See CIRIA Report 49;
4. In all cases there should be minimum penetration of ground slabs by services and minimum number of confined spaces such as cupboards above the ground slab. Any confined spaces should be ventilated;
5. Foundation design must minimise differential settlement particularly between structural elements and ground-bearing slabs;
6. Commercial buildings with basement car parks, provided with ventilation in accordance with the Building Regulations, may not require gas protection for Characteristic Situations 3 and 4;
7. Floor slabs should provide an acceptable formation on which to lay the gas membrane. If a block beam floor is used it should be well detailed so it has no voids in it that membranes have to span, and all holes for service penetrations should be filled. The minimum density of the blocks should be 600kg/m³ and the top surface should have a 4:1 ratio sand to cement grout brushed into all joints before placing any membrane (this is also good practice to stabilise the floor and should be carried out regardless of the need for ground gas membranes);
8. The ground gas-resistant membrane can also act as the damp-proof membrane;
9. Based on Building Regulations Approved Document C (Office of the Deputy Prime Minister, 2004a), which states that "a membrane below the concrete could be formed with a sheet of polyethylene, which should be at least 300µ thick (1200 gauge)". Please note the alteration from 300mm (as stated in the Approved Document C) to 300µ, as 300mm is a typographical error that has been recognised and corrected for within this report and CIRIA Report 665.

Low Rise Residential (NHBC)

Table 14.1: Gas Risk Assessment - Traffic Lights with Typical Maximum Concentrations and Gas Screening Values

Classification	Methane ¹		Carbon Dioxide ¹	
	Typical Maximum Concentration ³ (%v/v)	Gas Screening Value ^{2,4} (l/hr)	Typical Maximum Concentration ³ (%v/v)	Gas Screening Value ^{2,4} (l/hr)
Green				
	1	0.13	5	0.78
Amber 1				
	5	0.63	10	1.60
Amber 2				
	20	1.60	30	3.10
Red				

Notes:

1. The worst-case ground gas regime identified on the site, either methane or carbon dioxide, at the worst case temporal conditions that the site may be expected to encounter will be the decider as to what Traffic Light is allocated;
2. Borehole Gas Volume Flow Rate, in litres per hour as defined in Wilson and Card (1999), is the borehole flow rate multiplied by the concentration in the air stream of the particular gas being considered;
3. The Typical Maximum Concentrations can be exceeded in certain circumstances should the Conceptual Site Model indicate it is safe to do so;
4. The Gas Screening Value thresholds should not generally be exceeded without the completion of a detailed ground gas risk assessment taking into account site-specific conditions.

Table 14.2: Ground Gas Protection Measures Required for the Traffic Lights

Traffic Light	Ground Gas Protection Measures Required
Green	Ground gas protection measures are not required. (note based on standard NHBC house detail with 150mm void space under suspended floor)
Amber 1	Low-level ground gas protection measures are required, using a membrane and ventilated sub-floor void that creates a permeability contrast to limit the ingress of gas into buildings. Gas protection measures are to be installed as prescribed in BRE 414. Ventilation of the sub-floor void should be designed to provide a minimum of one complete volume change per 24 hours.
Amber 2	High-level ground gas protection measures are required, creating a permeability contrast to prevent ingress of gas into buildings. Gas protection measures are to be installed as prescribed in BRE 414. Membranes used should always be fitted by a specialist contractor and should be fully certified (see Appendix G). As with Amber 1, ventilation of the sub-floor void should be designed to provide a minimum of one complete volume change per 24 hours.
Red	Standard residential housing is not normally acceptable without further Ground Gas Risk Assessment and/or possible remedial mitigation measures to reduce/remove the source of the ground gases. In certain circumstances, active protection methods could be applied, but only when there is a legal agreement assuring the management and maintenance of the system for the life of the property.

BS8485:2015 Code of Practice for design of protective measures for CH₄ and CO₂ ground gases for new buildings

Table 3 page 21: Building Types

	Type A	Type B	Type C	Type D
Ownership	Private	Private or commercial/public, possible multiple	Commercial/Public	Commercial/Industrial
Control (change of use, structural alterations, ventilation)	None	Some but not all	Full	Full
Room Sizes	Small	Small/medium	Small to large	large industrial/retail park style

Type A) Private ownership with no building management controls on alterations to the internal structure, the use of rooms, the ventilation of the rooms or the structural fabric of the building. Some small rooms present. Probably conventional building construction (rather than civil engineering). Examples include private housing and some retail premises.

Type B) Private or commercial property with central building management control of any alterations to the buildings or its uses but limited or no central building management control of the maintenance of the building, including gas protection measures. Multiple occupancy. Small to medium size rooms with passive ventilation of rooms and other internal spaces throughout the ground floor and basement areas. May be conventional building or civil engineering construction. Examples include managed apartments, multiple occupancy offices, some retail premises and parts of public buildings (such as schools, hospitals and leisure centres) and parts of hotels.

Type C) Commercial building with central building management control of any alterations to the building or its uses and central building management control of the maintenance of the building, including the gas protection measures. Small to large rooms with active ventilation or good passive ventilation of all rooms and other internal spaces throughout ground floor and basement areas. Probably civil engineering construction. Examples include offices, some retail premises and parts of some public buildings (such as schools, hospitals, leisure centres and parts of hotels).

Type D) Industrial style building having large volume internal spaces that are well ventilated. Corporate ownership with building management controls on alterations to the ground floor and basement of the building and on maintenance of ground gas protective measures. Probably civil engineering construction. Examples are retail park sales buildings, factory shop floors, warehouses. (Small rooms within these style buildings should be separately categorised as Type B or Type C).

Table 4 page 22: Gas Protection Score by CS and Type of Building

Characteristic Gas Situation, CS	NHBC Traffic Light	Required Gas Protection High Risk			
		High Risk		Medium Risk	Low Risk
		Type A Building	Type B Building	Type C Building	Type D Building
1	Green	0	0	0	0
2	Amber 1	3.5	3.5	2.5	1.5
3	Amber 2	4.5	4	3	2.5
4	Red	6.5 ^{A)}	5.5 ^{A)}	4.5	3.5
5		- B)	6.5 ^{A)}	5.5	4.5
6		- B)	- B)	7.5	6.5

NOTE Traffic light indications are taken from NHBC Report No: 10627-R01 (04) [3] and are mainly applicable to low-rise residential housing. These are for comparative purposes but the boundaries between the traffic light indications and CS values do not coincide.

- A) Residential buildings should not be built on CS4 or higher sites unless the type of construction or site circumstances allow additional levels of protection to be incorporated e.g. high performance ventilation or pathway intervention measures, and an associated sustainable system of management of maintenance of the gas control system e.g. in institutional and/or fully service contractual situations.
- B) The gas hazard is too high for this empirical method to be used to define the gas protection measures.

Selection of Appropriate Measures Section 7.2 BS8485:2015

Structural Barriers - Table 5 Gas Protection Scores for Structural Barriers pg 23

Floor and Substructure Design (Annex A)	Score ^{A)}
Precast suspended segmental subfloor (i.e. beam and block)	0
Cast in situ ground bearing floor slab (with nominal mesh reinforcement)	0.5
Cast in situ monolithic reinforced ground bearing raft or reinforced cast in situ suspended floor slab with minimal penetrations	1 or 1.5 ^{B)}
Basement floor and walls conforming to BS 8210:2009 Grade 2 waterproofing ^{C)}	2
Basement floor and walls conforming to BS 8210:2009 Grade 3 waterproofing ^{C)}	2.5
A) the scores are conditional on breaches of floor slabs etc being effectively sealed B) to achieve the score of 1.5 the raft or suspended slab should be well reinforced to control cracking and have minimal penetrations in cast in (A2.2.2) C) the score is conditional on the waterproofing not being used on the use of geosynthetic clay liner waterproofing product (see C3 Note 4)	

Ventilation Measures

Ventilation protection measures should be one of five types and points can only be scored for one of these measures;

- Pressure relief pathway only (no effective dispersal layer)
- Passive dispersal layer
- Active dispersal layer (fan suction)
- Active positive pressurisation (air blanket)
- Ventilated basement substructure present.

Note 1 - for Type A buildings active ventilation measures are inappropriate

Note 2 - There are a wide range of different media used to form gas dispersal layer for both passive and active systems, and are more likely to be developed

Note 3 - The types of media include expanded polystyrene void formers, geocomposite void formers, no (low) fines gravel and drains formed by perforated pipes or geocomposites.

Note 4 - The continuity of the media beneath the floor slab might be interrupted by ground beams, pile caps, edge beams and other intrusions extending below the level of the media blanket, which might significantly reduce the effectiveness of the dispersal layer.

Note 5 - The effective volume of the gas dispersal layer might be reduced by its placement on a soft layer (for example sand binding) which reduces its gas permeability and dispersal effectiveness. The effective volume would also be reduced or eliminated if the media became flooded with groundwater or clay heave.

Note 6 - The performance of passive systems can be significantly affected by the number and type of side ventilation terminals. Common side terminals are airbricks, low level vents and high level vent stacks. Guidance on side ventilation is given in Annex B

Table 6 Gas Protection Measures for Ventilation Protection Measures

Protection Element/System	Score	Comments
a) Pressure relief pathway (usually formed of low fines gravel or with a thin geocomposite blanket or strips terminating in a gravel trench external to the building).	0.5	Whenever possible a pressure relief pathway (as a min) should be installed in all gas protection measures systems. If the layer has a low perm and/or is not terminated in a venting trench (or similar) then the score is zero.
b) Passive sub floor dispersal layer: Very good performance Good performance Media used to provide dispersal layer are *Clear void *Polystyrene void former blanket *Geocomposite void former blanket *No fines gravel layer with gas drains *No fines gravel layer	2.5 1.5	Performance criteria for methane and carbon dioxide are shown in Fig B.6 and B.7 respectively. The ventilation effectiveness of different media depends on the number of different factors including the transmissivity of the medium, the width of the building, the side ventilation spacing and type and thickness of the layer. The selected score should be assigned taking into account the recommendations in Annex B. Passive ventilation should be designed to meet at least good performance, see Annex B.
c) Active dispersal layer, usually comprising fans with active abstraction (suction) from a subfloor dilution layer, with roof level vents. The dilution layer may comprise a clear void or be formed of geocomposite or polystyrene void formers.	1.5-2.5	This system relies on continued serviceability of the pumps, therefore alarm and response systems should be in place. There should be a robust management systems in place to ensure the continued maintenance of the system, including pumps and vents. Active ventilation should always be designed for good performance as described in Annex B.
d) Active pressurisation by the creation of a blanket of external fresh air beneath the building floor slab by pumps supplying air to the points across the central footprint of the building into a permeable layer, usually formed of a thin geocomposite blanket.	1.5-2.5	This system relies on continued operation of the pumps, therefore alarm and response systems in place. The score assigned should be based on the coverage of the building footprint and the redundancy of the system. Active ventilation should always be designed to meet at least good performance.

Gas Membranes

Gas resistant membranes should be;

- Sufficiently impervious to methane (CH₄) and carbon dioxide (CO₂)
- Capable after installation of providing a complete barrier to the entry of the relevant gas
- Sufficiently durable to remain serviceable for the anticipated life of the building and duration of gas emissions
- Sufficiently strong to withstand in service stresses (e.g. due to ground settlement if placed below floor slab)
- Sufficiently strong to withstand the installation process and following construction activities until covered (e.g. penetration from steel fibres in fibre reinforced concrete, penetration of reinforcement ties, tearing due to working above it and dropping of tools)
- Chemically resistant to degradation by other contaminants that might be present

Note 1 – a methane gas transmission rate of <40ml/day/m²/atm (avg) for sheets and joints (BSISO15105-1) usually considered sufficient

Note 2 – Guidance on the relevant properties of a), c) and e) is provided in CIRIA C748 [10]

Note 3 – Advice on membrane selection is in Annex C.

Note 4 – The installation and subsequent protection of the membrane are key factors in its performance. A poorly installed membrane cannot perform, however a well detailed and irrespective of the performance of the material. Historically ref was made to verification and integrity testing without any referenced documents against which to judge. The verification process is now described in CIRIA C735 [N1] and as such confidence in the installation can be measured. The process removes the uncertainty of unqualified or inexperienced installation operatives by requiring a *verification plan* to be drawn up prior to installation, with frequency and type of verification being dependent on the qualifications of the operatives, site risk and design criteria. (see 8.3.2 pg 30)

Note 5 – Current guidance on verification recommendations takes in account the risk of the overall design and confidence of installation and sets a frequency and level of verification appropriate.

Protection Element/System	Score	Comments
Gas resistant membrane meeting all of the following criteria:	2	The performance of the membranes is heavily dependent on the quality and design of the installation, resistance to damage after installation and integrity of joints. For example a minimum 0.4mm thickness (equivalent 370g/m ² for polyethylene) reinforced membrane (virgin polymer) meets performance in Table 7 (see C3). If a membrane is installed that does not meet all the criteria in Column 1 the score is Zero
*sufficiently impervious to the gases with a methane gas transmission rate <40ml/day/m ² atm(avg) for sheet and joints BS ISO15105-1		
*sufficiently durable to remain servicable for the anticipated life of the building and duration of gas emissions		
*sufficiently strong to withstand in-service stresses (eg settlement if placed below floor slab)		
*e) Sufficiently strong to withstand the installation process and following construction activities until covered (e.g. penetration from steel fibres in fibre reinforced concrete, penetration of reinforcement ties, tearing due to working above it and dropping of tools		
*capable after installation of providing a complete barrier to the entry of relevant gases		
*verified in accordance with CIRIA C735 [N1]		

In-Ground Pathway Intervention - A sites in-ground pathways from offsite sources should be investigated for migratory gases – Note 1 methods of pathway intervention include simple vertical membrane installations, vent trenches, rows of stone columns, activated trenches and proprietary systems. Note 2 – for residential dwellings, management and maintenance is only acceptable where pathway intervention measures (e.g. venting trenches) are beyond the extent of the buildings, on or close to the boundary of the property in a position where access can be guaranteed.

Detailed Design – Once the design measures have been selected in accordance with Section 7.2, these should be developed into a detailed design supported by detailed drawings and specifications. The design should be described in the design report Section 8.3.

APPENDIX K

(i) Off-site Disposal of Surplus Soil Guidance Notes

The disposal of waste (including surplus soils and contaminated soils) to landfill sites is governed by the *Landfill (England & Wales) Regulations 2002*, the *Hazardous Waste Technical Guidance document WM2 (2003)* and associated legislation.

One of the aims of the above legislation is to encourage waste producers (including developers disposing of surplus soils etc) to reduce their waste (and not just discard and disown it). This can be achieved by recycling or reusing the waste. In the case of contaminated sites where leaving contaminated material in-situ poses a risk to a potential receptor such as groundwater resources, further testing and assessment for such risk could reduce the quantities requiring disposal. If there is still unacceptable risk from contaminated soil being left in place, then it may be possible to reduce the risk to an acceptable level (such that the material can be left in place) by in-situ or ex-situ clean-up of the soils.

Before waste can be disposed of, the producer of the waste must undertake a number of steps. '*Initial Waste Testing and Characterisation*' is firstly undertaken to determine whether the waste is non-hazardous or hazardous. The exceptions are that some wastes such as coal tars, 'tank bottom sludge's', etc are immediately classed as hazardous, regardless of any testing or threshold concentrations.

Any inert or hazardous waste destined for landfill must undergo '*Compliance Testing*' using the Waste Acceptance Criteria (WAC). There are different inert and hazardous WAC limits relating to landfill sites that are correspondingly licensed to accept inert or hazardous waste.

If the '*Initial Waste Testing and Characterisation*' shows a waste to be hazardous, then it is a requirement that the material be tested against the WAC-hazardous suite of tests. If it passes the WAC-hazardous testing, then it can be taken to a hazardous waste landfill site. If the material fails the WAC-hazardous testing, then the material must be treated before undergoing re-characterisation, further WAC-hazardous testing and then potential disposal at a hazardous waste disposal site.

If the '*Initial Waste Testing and Characterisation*' shows a waste to be non-hazardous, then it can be taken to a non-hazardous waste landfill site, without further testing. The producer may however decide to undertake WAC-inert testing, in an attempt to reclassify the waste as inert, in which case the waste could then go to an inert landfill site.

The volumes of soils associated with potential hotspots on a site (be they hazardous or non-hazardous) which might require off-site disposal, could potentially be reduced by further on-site sampling and subsequent testing.

With regard to the *Compliance Testing*, it should be noted that some landfill sites are permitted to increase the standard WAC-hazardous/inert limit concentrations, such that they might accept waste that would normally fail such limits.

We would recommend that the contamination testing results (including the history of the site) be presented to the proposed landfills, to determine if they will accept waste generated at the site and what classification they would impose.

Waste Classification Report



T8KW4-3CCVG-P3QHK

Job name

19TAY055 - Halsnead Park (Mullin Land)

Description/Comments

Project

19TAY055

Site

Halsnead Park (Mullin Land)

Related Documents

#	Name	Description
None		

Waste Stream Template

Betts Geo Core Contaminated Land Waste Suite WM3

Classified by

Name:
Beverley Lewis
Date:
10 Dec 2019 09:06 GMT
Telephone:
01244 288 179

Company:
betts geoenvironmental ltd
Unit 6-7, Old Marsh Farm Barn
Welsh Rd, Sealand
Deeside
CH5 2LY

Report

Created by: Beverley Lewis
Created date: 10 Dec 2019 09:06 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	TP1	0.60	Non Hazardous		3
2	TP2	0.50	Non Hazardous		5
3	TP3	0.60	Non Hazardous		7
4	TP4	0.20	Non Hazardous		9
5	TP5	0.60	Non Hazardous		11
6	TP6	0.30	Non Hazardous		13
7	TP7	0.65	Non Hazardous		15
8	TP8	0.20	Non Hazardous		17
9	TP9	0.70	Non Hazardous		19
10	TP10	0.30	Non Hazardous		21
11	TP11	0.50	Non Hazardous		23
12	TP12	0.20	Non Hazardous		25

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
13	TP13	0.50	Non Hazardous		27
14	TP14	0.20	Non Hazardous		29
15	TP15	0.20	Non Hazardous		31
16	TP16	0.40	Non Hazardous		33
17	TP17	0.30	Non Hazardous		35
18	TP18	0.40	Non Hazardous		37
19	TP19	0.20	Non Hazardous		39
20	TP20	1.00	Non Hazardous		41
21	WS2	0.20	Non Hazardous		43
22	WS3	0.30	Non Hazardous		45
23	WS4	0.40	Non Hazardous		47
24	WS5	0.35	Non Hazardous		49
25	WS6	0.20	Non Hazardous		51
26	TP201	0.10	Non Hazardous		53
27	TP201[2]	0.75	Non Hazardous		55
28	TP203	0.10	Non Hazardous		57

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	59
Appendix B: Rationale for selection of metal species	60
Appendix C: Version	60

Classification of sample: TP1

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP1	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.60 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				6 mg/kg		6 mg/kg	0.0006 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.6 mg/kg		0.6 mg/kg	0.00006 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				28 mg/kg	1.126	31.525 mg/kg	0.00315 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	36 mg/kg	1.56	56.153 mg/kg	0.0036 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				13 mg/kg	1.579	20.533 mg/kg	0.00205 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				42 mg/kg	2.774	116.514 mg/kg	0.0117 %		
	024-007-00-3									
10	pH		PH		7.76 pH		7.76 pH	7.76 pH		
11	TPH (C6 to C40) petroleum group		TPH		34 mg/kg		34 mg/kg	0.0034 %		
12	acenaphthene				0.01 mg/kg		0.01 mg/kg	0.000001 %		
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				0.02 mg/kg		0.02 mg/kg	0.000002 %		
		204-371-1	120-12-7							
15	benzo[a]anthracene				0.2 mg/kg		0.2 mg/kg	0.00002 %		
	601-033-00-9	200-280-6	56-55-3							

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
16	benzo[a]pyrene; benzo[def]chrysene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
	601-032-00-3	200-028-5	50-32-8									
17	benzo[b]fluoranthene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
	601-034-00-4	205-911-9	205-99-2									
18	benzo[ghi]perylene				0.28	mg/kg		0.28	mg/kg	0.000028 %		
		205-883-8	191-24-2									
19	benzo[k]fluoranthene				0.14	mg/kg		0.14	mg/kg	0.000014 %		
	601-036-00-5	205-916-6	207-08-9									
20	chrysene				0.29	mg/kg		0.29	mg/kg	0.000029 %		
	601-048-00-0	205-923-4	218-01-9									
21	dibenz[a,h]anthracene				0.06	mg/kg		0.06	mg/kg	0.000006 %		
	601-041-00-2	200-181-8	53-70-3									
22	fluoranthene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
		205-912-4	206-44-0									
23	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7									
24	indeno[123-cd]pyrene				0.3	mg/kg		0.3	mg/kg	0.00003 %		
		205-893-2	193-39-5									
25	naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
26	phenanthrene				0.1	mg/kg		0.1	mg/kg	0.00001 %		
		201-581-5	85-01-8									
27	pyrene				0.32	mg/kg		0.32	mg/kg	0.000032 %		
		204-927-3	129-00-0									
28	benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
29	toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
30	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
31	xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
Total:										0.0253 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
⚙️	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0034%)

Classification of sample: TP2

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP2	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				2 mg/kg		2 mg/kg	0.0002 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				2 mg/kg	1.126	2.252 mg/kg	0.000225 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	6 mg/kg	1.56	9.359 mg/kg	0.0006 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				6 mg/kg	1.579	9.477 mg/kg	0.000948 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				13 mg/kg	2.774	36.064 mg/kg	0.00361 %		
	024-007-00-3									
10	pH		PH		8.47 pH		8.47 pH	8.47 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.00637 %	

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP3

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP3	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.60 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic trioxide				3 mg/kg		3 mg/kg		0.0003 %		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium sulfide			1	<0.5 mg/kg		<0.5 mg/kg		<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg		<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				<1 mg/kg	1.126	<1.126 mg/kg		<0.000113 %		<LOD
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	2 mg/kg	1.56	3.12 mg/kg		0.0002 %		
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg		<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				4 mg/kg	1.579	6.318 mg/kg		0.000632 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg		<0.000255 %		<LOD
	034-002-00-8										
9	zinc { zinc chromate }				6 mg/kg	2.774	16.645 mg/kg		0.00166 %		
	024-007-00-3										
10	pH		PH		7.06 pH		7.06 pH		7.06 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg		<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
		201-469-6	83-32-9								
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
		205-917-1	208-96-8								
14	anthracene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		204-371-1	120-12-7								
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg		<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.0037 %	

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
●	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP4

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP4	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				5 mg/kg		5 mg/kg	0.0005 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.7 mg/kg		0.7 mg/kg	0.00007 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				35 mg/kg	1.126	39.406 mg/kg	0.00394 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	33 mg/kg	1.56	51.474 mg/kg	0.0033 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				14 mg/kg	1.579	22.113 mg/kg	0.00221 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				73 mg/kg	2.774	202.513 mg/kg	0.0203 %		
	024-007-00-3									
10	pH		PH		7.91 pH		7.91 pH	7.91 pH		
11	TPH (C6 to C40) petroleum group		TPH		29 mg/kg		29 mg/kg	0.0029 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.0337 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0029%)

Classification of sample: TP5

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP5	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.60 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				2 mg/kg		2 mg/kg	0.0002 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				7 mg/kg	1.126	7.881 mg/kg	0.000788 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	7 mg/kg	1.56	10.919 mg/kg	0.0007 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				14 mg/kg	1.579	22.113 mg/kg	0.00221 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				22 mg/kg	2.774	61.031 mg/kg	0.0061 %		
	024-007-00-3									
10	pH		PH		7.2 pH		7.2 pH	7.2 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.0108 %	

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP6

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP6	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				2 mg/kg		2 mg/kg	0.0002 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				16 mg/kg	1.126	18.014 mg/kg	0.0018 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	17 mg/kg	1.56	26.517 mg/kg	0.0017 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				8 mg/kg	1.579	12.636 mg/kg	0.00126 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				28 mg/kg	2.774	77.676 mg/kg	0.00777 %		
	024-007-00-3									
10	pH		PH		7.27 pH		7.27 pH	7.27 pH		
11	TPH (C6 to C40) petroleum group		TPH		1 mg/kg		1 mg/kg	0.0001 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.0134 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
⚙	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0001%)

Classification of sample: TP7

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP7	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.65 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				4 mg/kg		4 mg/kg	0.0004 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.8 mg/kg		0.8 mg/kg	0.00008 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				15 mg/kg	1.126	16.888 mg/kg	0.00169 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	9 mg/kg	1.56	14.038 mg/kg	0.0009 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				41 mg/kg	1.579	64.759 mg/kg	0.00648 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				37 mg/kg	2.774	102.643 mg/kg	0.0103 %		
	024-007-00-3									
10	pH		PH		7.45 pH		7.45 pH	7.45 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.0205 %	

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP8

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP8	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				10 mg/kg		10 mg/kg	0.001 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	1.2 mg/kg		1.2 mg/kg	0.00012 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				59 mg/kg	1.126	66.427 mg/kg	0.00664 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	55 mg/kg	1.56	85.79 mg/kg	0.0055 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				17 mg/kg	1.579	26.851 mg/kg	0.00269 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1 mg/kg	2.554	2.554 mg/kg	0.000255 %		
	034-002-00-8									
9	zinc { zinc chromate }				102 mg/kg	2.774	282.963 mg/kg	0.0283 %		
	024-007-00-3									
10	pH		PH		8.4 pH		8.4 pH	8.4 pH		
11	TPH (C6 to C40) petroleum group		TPH		20 mg/kg		20 mg/kg	0.002 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.0468 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
⚙	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.002%)

Classification of sample: TP9

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP9	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.70 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				7 mg/kg		7 mg/kg	0.0007 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	1 mg/kg		1 mg/kg	0.0001 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				16 mg/kg	1.126	18.014 mg/kg	0.0018 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	10 mg/kg	1.56	15.598 mg/kg	0.001 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				46 mg/kg	1.579	72.657 mg/kg	0.00727 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				40 mg/kg	2.774	110.966 mg/kg	0.0111 %		
	024-007-00-3									
10	pH		PH		7.84 pH		7.84 pH	7.84 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.0227 %	

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP10

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP10	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				4 mg/kg		4 mg/kg	0.0004 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.8 mg/kg		0.8 mg/kg	0.00008 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				27 mg/kg	1.126	30.399 mg/kg	0.00304 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	31 mg/kg	1.56	48.354 mg/kg	0.0031 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				16 mg/kg	1.579	25.272 mg/kg	0.00253 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				61 mg/kg	2.774	169.223 mg/kg	0.0169 %		
	024-007-00-3									
10	pH		PH		8.2 pH		8.2 pH	8.2 pH		
11	TPH (C6 to C40) petroleum group		TPH		34 mg/kg		34 mg/kg	0.0034 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:											0.03 %			

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
⚙	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0034%)

Classification of sample: TP11

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP11	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				2 mg/kg		2 mg/kg	0.0002 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.9 mg/kg		0.9 mg/kg	0.00009 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				10 mg/kg	1.126	11.259 mg/kg	0.00113 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	7 mg/kg	1.56	10.919 mg/kg	0.0007 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				23 mg/kg	1.579	36.328 mg/kg	0.00363 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				29 mg/kg	2.774	80.45 mg/kg	0.00805 %		
	024-007-00-3									
10	pH		PH		7.85 pH		7.85 pH	7.85 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.0145 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP12

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP12	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				5 mg/kg		5 mg/kg	0.0005 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.8 mg/kg		0.8 mg/kg	0.00008 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				32 mg/kg	1.126	36.028 mg/kg	0.0036 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	33 mg/kg	1.56	51.474 mg/kg	0.0033 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				17 mg/kg	1.579	26.851 mg/kg	0.00269 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				67 mg/kg	2.774	185.868 mg/kg	0.0186 %		
	024-007-00-3									
10	pH		PH		7.95 pH		7.95 pH	7.95 pH		
11	TPH (C6 to C40) petroleum group		TPH		14 mg/kg		14 mg/kg	0.0014 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.0307 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
⚙	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0014%)

Classification of sample: TP13

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP13	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				1 mg/kg		1 mg/kg	0.0001 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.9 mg/kg		0.9 mg/kg	0.00009 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				9 mg/kg	1.126	10.133 mg/kg	0.00101 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	8 mg/kg	1.56	12.479 mg/kg	0.0008 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				29 mg/kg	1.579	45.805 mg/kg	0.00458 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				33 mg/kg	2.774	91.547 mg/kg	0.00915 %		
	024-007-00-3									
10	pH		PH		7.65 pH		7.65 pH	7.65 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.0165 %	

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
●	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP14

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP14	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				8 mg/kg		8 mg/kg	0.0008 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	1.1 mg/kg		1.1 mg/kg	0.00011 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				39 mg/kg	1.126	43.91 mg/kg	0.00439 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	47 mg/kg	1.56	73.311 mg/kg	0.0047 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				21 mg/kg	1.579	33.169 mg/kg	0.00332 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				84 mg/kg	2.774	233.028 mg/kg	0.0233 %		
	024-007-00-3									
10	pH		PH		7.95 pH		7.95 pH	7.95 pH		
11	TPH (C6 to C40) petroleum group		TPH		38 mg/kg		38 mg/kg	0.0038 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:											0.041 %			

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0038%)

Classification of sample: TP15

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP15	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				6 mg/kg		6 mg/kg	0.0006 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.9 mg/kg		0.9 mg/kg	0.00009 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				35 mg/kg	1.126	39.406 mg/kg	0.00394 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	41 mg/kg	1.56	63.952 mg/kg	0.0041 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				16 mg/kg	1.579	25.272 mg/kg	0.00253 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				71 mg/kg	2.774	196.964 mg/kg	0.0197 %		
	024-007-00-3									
10	pH		PH		8.22 pH		8.22 pH	8.22 pH		
11	TPH (C6 to C40) petroleum group		TPH		26 mg/kg		26 mg/kg	0.0026 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:											0.0341 %			

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
●	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0026%)

Classification of sample: TP16

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP16	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic trioxide				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium sulfide			1	1.6 mg/kg		1.6 mg/kg	0.00016 %			
	048-010-00-4	215-147-8	1306-23-6								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<2 mg/kg	1.923	<3.846 mg/kg	<0.000385 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				9 mg/kg	1.126	10.133 mg/kg	0.00101 %			
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	14 mg/kg	1.56	21.837 mg/kg	0.0014 %			
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				19 mg/kg	1.579	30.01 mg/kg	0.003 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc chromate }				34 mg/kg	2.774	94.321 mg/kg	0.00943 %			
	024-007-00-3										
10	pH		PH		8.09 pH		8.09 pH	8.09 pH			
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %			<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		201-469-6	83-32-9								
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		205-917-1	208-96-8								
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
	601-033-00-9	200-280-6	56-55-3								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.016 %	

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP17

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP17	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: **0% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				7 mg/kg		7 mg/kg	0.0007 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.9 mg/kg		0.9 mg/kg	0.00009 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				37 mg/kg	1.126	41.658 mg/kg	0.00417 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	44 mg/kg	1.56	68.632 mg/kg	0.0044 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				14 mg/kg	1.579	22.113 mg/kg	0.00221 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				103 mg/kg	2.774	285.737 mg/kg	0.0286 %		
	024-007-00-3									
10	pH		PH		7.92 pH		7.92 pH	7.92 pH		
11	TPH (C6 to C40) petroleum group		TPH		19 mg/kg		19 mg/kg	0.0019 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.0426 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0019%)

Classification of sample: TP18

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP18	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: **0% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				4 mg/kg		4 mg/kg	0.0004 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				4 mg/kg	1.126	4.504 mg/kg	0.00045 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	5 mg/kg	1.56	7.799 mg/kg	0.0005 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				7 mg/kg	1.579	11.056 mg/kg	0.00111 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				18 mg/kg	2.774	49.935 mg/kg	0.00499 %		
	024-007-00-3									
10	pH		PH		7.41 pH		7.41 pH	7.41 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.00824 %	

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP19

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP19	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				7 mg/kg		7 mg/kg	0.0007 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.8 mg/kg		0.8 mg/kg	0.00008 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				29 mg/kg	1.126	32.651 mg/kg	0.00327 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	32 mg/kg	1.56	49.914 mg/kg	0.0032 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				15 mg/kg	1.579	23.692 mg/kg	0.00237 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				65 mg/kg	2.774	180.32 mg/kg	0.018 %		
	024-007-00-3									
10	pH		PH		7.45 pH		7.45 pH	7.45 pH		
11	TPH (C6 to C40) petroleum group		TPH		4 mg/kg		4 mg/kg	0.0004 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.0286 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
⚙	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0004%)

Classification of sample: TP20

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP20	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic trioxide				2 mg/kg		2 mg/kg		0.0002 %		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium sulfide			1	<0.5 mg/kg		<0.5 mg/kg		<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg		<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				<1 mg/kg	1.126	<1.126 mg/kg		<0.000113 %		<LOD
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	2 mg/kg	1.56	3.12 mg/kg		0.0002 %		
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg		<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				5 mg/kg	1.579	7.897 mg/kg		0.00079 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg		<0.000255 %		<LOD
	034-002-00-8										
9	zinc { zinc chromate }				11 mg/kg	2.774	30.516 mg/kg		0.00305 %		
	024-007-00-3										
10	pH		PH		7.62 pH		7.62 pH		7.62 pH		
11	TPH (C6 to C40) petroleum group		TPH		1 mg/kg		1 mg/kg		0.0001 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
		201-469-6	83-32-9								
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
		205-917-1	208-96-8								
14	anthracene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		204-371-1	120-12-7								
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg		<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.00504 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0001%)

Classification of sample: WS2

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS2	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				5 mg/kg		5 mg/kg	0.0005 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.8 mg/kg		0.8 mg/kg	0.00008 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				32 mg/kg	1.126	36.028 mg/kg	0.0036 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	35 mg/kg	1.56	54.594 mg/kg	0.0035 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				14 mg/kg	1.579	22.113 mg/kg	0.00221 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				65 mg/kg	2.774	180.32 mg/kg	0.018 %		
	024-007-00-3									
10	pH		PH		8.11 pH		8.11 pH	8.11 pH		
11	TPH (C6 to C40) petroleum group		TPH		13 mg/kg		13 mg/kg	0.0013 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:											0.0298 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0013%)

Classification of sample: WS3

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS3	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				3 mg/kg		3 mg/kg	0.0003 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.7 mg/kg		0.7 mg/kg	0.00007 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				9 mg/kg	1.126	10.133 mg/kg	0.00101 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	7 mg/kg	1.56	10.919 mg/kg	0.0007 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				21 mg/kg	1.579	33.169 mg/kg	0.00332 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				23 mg/kg	2.774	63.805 mg/kg	0.00638 %		
	024-007-00-3									
10	pH		PH		7.54 pH		7.54 pH	7.54 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.0125 %	

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: WS4

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS4	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				6 mg/kg		6 mg/kg	0.0006 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.9 mg/kg		0.9 mg/kg	0.00009 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				36 mg/kg	1.126	40.532 mg/kg	0.00405 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	41 mg/kg	1.56	63.952 mg/kg	0.0041 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				16 mg/kg	1.579	25.272 mg/kg	0.00253 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				71 mg/kg	2.774	196.964 mg/kg	0.0197 %		
	024-007-00-3									
10	pH				8.17 pH		8.17 pH	8.17 pH		
11	TPH (C6 to C40) petroleum group				62 mg/kg		62 mg/kg	0.0062 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:												0.0378 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0062%)

Classification of sample: WS5

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS5	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.35 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				2 mg/kg		2 mg/kg	0.0002 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.8 mg/kg		0.8 mg/kg	0.00008 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				12 mg/kg	1.126	13.511 mg/kg	0.00135 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	7 mg/kg	1.56	10.919 mg/kg	0.0007 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				26 mg/kg	1.579	41.067 mg/kg	0.00411 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				37 mg/kg	2.774	102.643 mg/kg	0.0103 %		
	024-007-00-3									
10	pH		PH		7.66 pH		7.66 pH	7.66 pH		
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.0174 %	

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: WS6

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS6	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				7 mg/kg		7 mg/kg	0.0007 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.9 mg/kg		0.9 mg/kg	0.00009 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				36 mg/kg	1.126	40.532 mg/kg	0.00405 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	38 mg/kg	1.56	59.273 mg/kg	0.0038 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				16 mg/kg	1.579	25.272 mg/kg	0.00253 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				63 mg/kg	2.774	174.771 mg/kg	0.0175 %		
	024-007-00-3									
10	pH		PH		8.13 pH		8.13 pH	8.13 pH		
11	TPH (C6 to C40) petroleum group		TPH		12 mg/kg		12 mg/kg	0.0012 %		
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-032-00-3	200-028-5	50-32-8										
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2										
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-883-8	191-24-2										
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
		601-036-00-5	205-916-6	207-08-9										
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD	
		601-048-00-0	205-923-4	218-01-9										
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD	
		601-041-00-2	200-181-8	53-70-3										
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD	
			205-912-4	206-44-0										
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			201-695-5	86-73-7										
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			205-893-2	193-39-5										
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
		601-052-00-2	202-049-5	91-20-3										
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD	
			201-581-5	85-01-8										
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD	
			204-927-3	129-00-0										
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
Total:											0.0304 %			

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0012%)

Classification of sample: TP201

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP201	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.10 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				15 mg/kg		15 mg/kg	0.0015 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.8 mg/kg		0.8 mg/kg	0.00008 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				27 mg/kg	1.126	30.399 mg/kg	0.00304 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	47 mg/kg	1.56	73.311 mg/kg	0.0047 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				14 mg/kg	1.579	22.113 mg/kg	0.00221 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc chromate }				63 mg/kg	2.774	174.771 mg/kg	0.0175 %		
	024-007-00-3									
10	pH		PH		6.33 pH		6.33 pH	6.33 pH		
11	TPH (C6 to C40) petroleum group		TPH		79 mg/kg		79 mg/kg	0.0079 %		
12	acenaphthene				0.01 mg/kg		0.01 mg/kg	0.000001 %		
		201-469-6	83-32-9							
13	acenaphthylene				0.01 mg/kg		0.01 mg/kg	0.000001 %		
		205-917-1	208-96-8							
14	anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
		204-371-1	120-12-7							
15	benzo[a]anthracene				0.31 mg/kg		0.31 mg/kg	0.000031 %		
	601-033-00-9	200-280-6	56-55-3							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
16	benzo[a]pyrene; benzo[def]chrysene				0.37 mg/kg		0.37	mg/kg	0.000037 %		
	601-032-00-3	200-028-5	50-32-8								
17	benzo[b]fluoranthene				0.37 mg/kg		0.37	mg/kg	0.000037 %		
	601-034-00-4	205-911-9	205-99-2								
18	benzo[ghi]perylene				0.27 mg/kg		0.27	mg/kg	0.000027 %		
		205-883-8	191-24-2								
19	benzo[k]fluoranthene				0.15 mg/kg		0.15	mg/kg	0.000015 %		
	601-036-00-5	205-916-6	207-08-9								
20	chrysene				0.37 mg/kg		0.37	mg/kg	0.000037 %		
	601-048-00-0	205-923-4	218-01-9								
21	dibenz[a,h]anthracene				<0.04 mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
22	fluoranthene				0.52 mg/kg		0.52	mg/kg	0.000052 %		
		205-912-4	206-44-0								
23	fluorene				0.01 mg/kg		0.01	mg/kg	0.000001 %		
		201-695-5	86-73-7								
24	indeno[123-cd]pyrene				0.3 mg/kg		0.3	mg/kg	0.00003 %		
		205-893-2	193-39-5								
25	naphthalene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
26	phenanthrene				0.22 mg/kg		0.22	mg/kg	0.000022 %		
		201-581-5	85-01-8								
27	pyrene				0.52 mg/kg		0.52	mg/kg	0.000052 %		
		204-927-3	129-00-0								
28	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
29	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
30	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
31	xylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
Total:									0.0377 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
⚙	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0079%)

Classification of sample: TP201[2]

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP201[2]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.75 m		

Hazard properties

None identified

Determinands

Moisture content: **0% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic trioxide				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium sulfide			1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				3 mg/kg	1.126	3.378 mg/kg	0.000338 %			
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	2 mg/kg	1.56	3.12 mg/kg	0.0002 %			
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				6 mg/kg	1.579	9.477 mg/kg	0.000948 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc chromate }				9 mg/kg	2.774	24.967 mg/kg	0.0025 %			
	024-007-00-3										
10	pH		PH		7.21 pH		7.21 pH	7.21 pH			
11	TPH (C6 to C40) petroleum group		TPH		<2 mg/kg		<2 mg/kg	<0.0002 %			<LOD
12	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		201-469-6	83-32-9								
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		205-917-1	208-96-8								
14	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
15	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
	601-033-00-9	200-280-6	56-55-3								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
16		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
17		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
18	●	benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
19		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
20		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
21		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
22	●	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
23	●	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
24	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
25		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
27	●	pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
28		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
29		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
30	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
31		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1]	95-47-6 [1]									
			203-396-5 [2]	106-42-3 [2]									
			203-576-3 [3]	108-38-3 [3]									
			215-535-7 [4]	1330-20-7 [4]									
Total:												0.00487 %	

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
●	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP203

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP203	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.10 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic trioxide				17 mg/kg		17 mg/kg	0.0017 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium sulfide			1	0.8 mg/kg		0.8 mg/kg	0.00008 %		
	048-010-00-4	215-147-8	1306-23-6							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				46 mg/kg	1.126	51.791 mg/kg	0.00518 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	70 mg/kg	1.56	109.187 mg/kg	0.007 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				18 mg/kg	1.579	28.431 mg/kg	0.00284 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2 mg/kg	2.554	5.107 mg/kg	0.000511 %		
	034-002-00-8									
9	zinc { zinc chromate }				79 mg/kg	2.774	219.158 mg/kg	0.0219 %		
	024-007-00-3									
10	pH		PH		6.48 pH		6.48 pH	6.48 pH		
11	TPH (C6 to C40) petroleum group		TPH		48 mg/kg		48 mg/kg	0.0048 %		
12	acenaphthene				0.01 mg/kg		0.01 mg/kg	0.000001 %		
		201-469-6	83-32-9							
13	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
14	anthracene				0.04 mg/kg		0.04 mg/kg	0.000004 %		
		204-371-1	120-12-7							
15	benzo[a]anthracene				0.1 mg/kg		0.1 mg/kg	0.00001 %		
	601-033-00-9	200-280-6	56-55-3							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
16	benzo[a]pyrene; benzo[def]chrysene				0.08 mg/kg		0.08 mg/kg	0.000008 %		
	601-032-00-3	200-028-5	50-32-8							
17	benzo[b]fluoranthene				0.08 mg/kg		0.08 mg/kg	0.000008 %		
	601-034-00-4	205-911-9	205-99-2							
18	benzo[ghi]perylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-883-8	191-24-2							
19	benzo[k]fluoranthene				<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
20	chrysene				0.13 mg/kg		0.13 mg/kg	0.000013 %		
	601-048-00-0	205-923-4	218-01-9							
21	dibenz[a,h]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
22	fluoranthene				0.25 mg/kg		0.25 mg/kg	0.000025 %		
		205-912-4	206-44-0							
23	fluorene				0.01 mg/kg		0.01 mg/kg	0.000001 %		
		201-695-5	86-73-7							
24	indeno[123-cd]pyrene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
		205-893-2	193-39-5							
25	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
26	phenanthrene				0.19 mg/kg		0.19 mg/kg	0.000019 %		
		201-581-5	85-01-8							
27	pyrene				0.24 mg/kg		0.24 mg/kg	0.000024 %		
		204-927-3	129-00-0							
28	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
29	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
30	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
31	xylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.0444 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
⚙️	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The hazard phase HP3(i) refers to flammable liquids however as the material is a solid this is not applicable and has been discounted

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0048%)

Appendix A: Classifier defined and non CLP determinands

• pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

• TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Aquatic Chronic 2 H411, Repr. 2 H361d, Carc. 1B H350, Muta. 1B H340, STOT RE 2 H373, Asp. Tox. 1 H304, Flam. Liq. 3 H226

• acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 2 H411, Aquatic Chronic 1 H410, Aquatic Acute 1 H400, Skin Irrit. 2 H315, STOT SE 3 H335, Eye Irrit. 2 H319

• acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Skin Irrit. 2 H315, STOT SE 3 H335, Eye Irrit. 2 H319, Acute Tox. 1 H310, Acute Tox. 1 H330, Acute Tox. 4 H302

• anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410, Aquatic Acute 1 H400, Skin Sens. 1 H317, Skin Irrit. 2 H315, STOT SE 3 H335, Eye Irrit. 2 H319

• benzo[ghi]perylene (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410, Aquatic Acute 1 H400

• fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410, Aquatic Acute 1 H400, Acute Tox. 4 H302

• fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410, Aquatic Acute 1 H400

• indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2 H351

• phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Skin Irrit. 2 H315, Aquatic Chronic 1 H410, Aquatic Acute 1 H400, Skin Sens. 1 H317, Carc. 2 H351, STOT SE 3 H335, Eye Irrit. 2 H319, Acute Tox. 4 H302

• **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

• **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4

Description/Comments:

Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)

Additional Hazard Statement(s): Carc. 2 H351

Reason for additional Hazards Statement(s)/Risk Phrase(s):

03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

Appendix B: Rationale for selection of metal species

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species based on hazard statements

copper {dicopper oxide; copper (I) oxide}

Worst case species based on hazard statements

lead {lead chromate}

Worst case species based on hazard statements

mercury {mercury dichloride}

Worst case species based on hazard statements

nickel {nickel dihydroxide}

Worst case species based on hazard statements

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species based on hazard statements

zinc {zinc chromate}

Worst case species based on hazard statements

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.1, May 2018**

HazWasteOnline Classification Engine Version: 2019.316.4053.8153 (12 Nov 2019)

HazWasteOnline Database: 2019.316.4053.8153 (12 Nov 2019)

This classification utilises the following guidance and legislation:

WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004

1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010

2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

APPENDIX L

(i) Validation Report Guidance Notes

Unforeseen Hotspots of Contamination

Given the existence of made ground on the site it would be prudent to maintain vigilance during site clearance and construction, in case any further areas of suspected contamination are encountered.

If areas are found then a suitably qualified person should undertake appropriate sampling, testing and further risk assessment.

Any hotspots encountered during site clearance, not previously encountered in the ground investigation, are to be removed to a suitably licensed landfill site.

A validation report (see below) will be produced on completion of these works. This report will serve to confirm that the works were undertaken in accordance with the relevant legislation, the method statement, specification and planning conditions.

Validation Report Recommendations

It is suggested that the following records will be kept on site to provide a basis for the validation report:

- Daily record sheets of the remediation works to include a summary of the day's activities
- Weather conditions
- Plant, personnel and visitors to the remediation site
- Aspects relating to Health & Safety, environmental control or non-compliance with the specification or the Method Statements.
- All in situ and laboratory testing results.

All requirements of the remediation specification should be complied with; on completion of the remediation a validation report should be provided. This report will comprise the relevant site records and act as certification that the remedial and ground preparation works have been carried out in accordance with the specification.

The validation report will include the following:

- A description of the works undertaken.
- Records of any remediation works, including daily diary sheets.
- Progress photographs.
- Any chemical and geotechnical validation test results.
- As built surveys, including base excavations and top and bottom of capping layer.
- A statement that the works have been undertaken in accordance with the agreed specification

APPENDIX M

(i) Notes on Limitations

This report does not consider ecological impacts (e.g. bats) or botanical risks (e.g. Japanese knotweed). It is recommended that these are considered as part of the assessment of development constraints for the site.

The assessment and judgements given in this report are directed by both the finite data on which they are based and the proposed works to which they are addressed. The data essentially comprised a study of available documented information from various sources (including Client Furnished reports) together with discussions with relevant authorities and other interested parties. There may also be circumstances at the site that are not documented. The information reviewed is not exhaustive and has been accepted in good faith as providing representative and true data pertaining to site conditions. If additional information becomes available which might impact our environmental conclusions, we request the opportunity to review the information, reassess the potential concerns and modify our opinion if warranted.

It should be noted that any risks identified in this report are perceived risks based on the available information. Actual risks can only be assessed following a physical investigation of the site.

The site investigation has been carried out to provide information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made. Betts Geo Environmental Ltd undertake to exercise all reasonable skill, care and due diligence in the exercise of the investigation with respect to sampling techniques, sample storage and report interpretation.

The assessments and judgement given in this report are directed by both the finite data on which they are based and the proposed works to which they are addressed. Data acquisition is subject to the limitations of the methods of investigation used. Exploratory holes undertaken during fieldwork investigate small a small volume of ground in relation to the size of the site and as such can only provide an indication of site conditions. There may be conditions pertaining to the site and the proposed development i.e. localised "hotspots" of contamination, which have not been disclosed by the investigations.

The findings and opinions are relevant to the dates of our site works and should not be relied upon to represent conditions at substantially later dates. Conditions at the site will change over time due to natural variations and anthropogenic activities. Groundwater, surface water and soil gas conditions should be anticipated to change with diurnal, seasonal and meteorological variations.

The opinions expressed in this report regarding any contamination are based on simple statistical analysis and comparison with available guidance values. No liability can be accepted for the retrospective effects of any changes or amendments to these values.

This report was prepared by Betts Geo Environmental Ltd for the sole and exclusive use of Taylor Wimpey. In response to particular instructions, any other parties using the information contained in this report do so at their own risk and any duty of care to those parties is excluded.

This document has been prepared for the titled project only and should any third party wish to use or rely upon the contents of the report, written approval from Betts Geo Environmental Ltd must be sought.

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For this document to any other party other than the person by whom it was commissioned.