Carr Top Road, Golcar

Updated Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy

Job Number: LKC201909

Date: April 2025

Client: Violet Homes Ltd

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Eton Business Park, Eton Hill Rd, Radcliffe, Greater Manchester M26 2ZS
0161 763 7200 info@thelkgroup.com www.thelkgroup.com

Company registered in England and Wales No. 06767704

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1. Introduction

1.1. Background

LK Consult Ltd (LKC) has been commissioned to carry out a Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy for the development site off Carr Top Road, Golcar. The investigation was undertaken in support of a planning application to develop the site for residential use (planning reference: 2022/44/90649/W).

The following work has previously been undertaken:

- Phase 1 Geoenvironmental Study, undertaken by JNP Group (Ref: S10474 Ph1 Geo, dated October 2017).
- Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy, undertaken by LKC (Ref: LKC201909-02 R0, dated February 2021).

The Phase 1 referenced above was not made available to LKC at the time of the original Phase 2. As such, available desk study information was reviewed and preliminary conceptual model was developed within this Phase 2 report.

This report includes a review and update of all previous investigation work undertaken as well as a review of current site settings and ground conditions based on a site visit and additional investigation work.

This investigation has been undertaken to confirm the ground conditions below the site and to allow a contamination and geotechnical assessment to be undertaken.

The investigation will aim to confirm the risks of the potential pollutant linkages identified in the PRA and recommend further assessment / remediation, as required.

A summary of the site details is presented in Table 1-1. Figure 1 indicates the site location and boundary plan. Figure 2 indicates the development plan.

Location	Land to the south of Carr Top Road, accessed via Hillcrest View (adjacent new housing development). Centred at approximate National Grid Reference 409450E 415550N.
Area	4,800m^2.
Topography	168 metres above ordnance datum (AOD). Site slopes towards the southwest, with a steeper slope in the south of the site.
Current Site Use	New housing development comprising stone houses with private gardens (front and rear) and associated infrastructure.

Table 1-1: Summary of site details.

As detailed in the current site use, the site has been developed since the above reports were issued. It is understood that site levels have been reduced as part of the groundworks, cross sections are provided in Figures and Plans.

2. Phase 1 Preliminary Risk Assessment

This section includes a review of available desk-study information and a review of site investigation risk assessments from an adjacent site. These have been used to develop a preliminary conceptual model. This assessment is based on the pre-development site setting.

2.1. Historical Review

The site history is based on a review of the Phase 1 Geoenvironmental Study, undertaken by JNP Group, the Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy, undertaken by LKC and a review of aerial photography from Google Earth.

Site Features	Location on Site	Dates Present		Comments
		From	To	
Vacant Land	Whole site	1854	1907/1908	N/A.
Building	Centre	1918/1919	1918/1919	Use not specified. No longer present on 1932 mapping.
Allotment Gardens and buildings	North, centre and east	1961	1993	Several buildings present which are assumed to be associated with the allotments. Last annotated on 1993 mapping.
Vacant Vegetated Land	Whole site	2003	2018	Aerial photography shows disused, rough vegetated ground from 2003. From 2019, the eastern area of the site appears to have been used for the storage of materials associated with the development of the adjacent site (Hillcrest View). Construction of the site development appears to have commenced from 2021/2022.

Table 2-1: Summary of site features. Dates based on available historical image editions.

Table 2-2 summarises potentially contaminative land uses within approximately 50m and potentially infilled features within approximate 250m.

Surrounding Area Features	Distance (m)	Direction	Dates Present		Comments
			From	To	
Albion Mill	100	S	1892/93	1993	Including small mill pond. Still annotated as a mill on 1993 mapping. Building still present, now residential apartments.
Allotment Gardens	Adjacent	W	1962	1993	Named as Fullwood Drive Allotments. Aerial photography shows disused, rough vegetated ground from 2003.

Table 2-2: Summary of potentially contaminative features within 50m and potentially infilled features with 250m. Dates are based on available image editions.

2.2. Environmental Setting

The environmental setting is summarised in Table 2-3.

Categories			Details
Geology	Artificial		None recorded on site.
	Superficial		None recorded on site.
	Bedrock		Millstone Grit Group (mudstone siltstone, sandstone) recorded in the north of the site. Guiseley Grit (sandstone) recorded in the south of the site.
	BGS logs		100m S BGS Ref: SE01NE3 Well to 5.49m – borehole started at the base of the well. Clay to 9.75m, Slate to 14.63m, Grey rock to 14.63m, Millstone grit to 23.16m, Grey rock to 28.19m, Yellow rock to 31.24m, Grey rock to 42.98m, Hard shale to 60.5m, Shale and rock to 62.64m, Hard shale to 67.21m, Grey rock to 71.48m.
Hydro-geology	Aquifer Designation	Superficial	None.
		Bedrock	Secondary B Aquifer.
	Source Protection Zone (SPZ)		Site is not within an SPZ.
Hydrology	Nearest Surface Water		None within 100m.
	Water Quality Data		No water quality data.
	Flooding		No risk of flooding from rivers or sea.
Minerals / Mining			Not within a coal reporting area. Not within DHRA.
Landfill sites	Known/Registered		None within 250m.
	Potential		Small mill pond associated with Albion Mill approx. 100m south.
Radon			1-3% of homes above Action Level. No protective measures are necessary in the construction of new dwellings or extensions.
Designated Sites			None.
Fuel Station Entries			None within 100m.

Table 2-3: Summary of the environmental setting.

2.3. Site Reconnaissance

A site reconnaissance was carried out by JNP in October 2017. The site was described as overgrown with brambles and trees, positioned on a steep hillside. There was evidence of a former outbuilding on site. It was noted that 'badger setts are evident on the northwest side of the site which also shows evidence of fly tipping and incinerator waste debris'.

LKC carried out a site reconnaissance in 2021. The site was described as rough grassland with a knee-high fence boundary. A sandstone block with plaque was noted in the centre of the site.

2.4. Previous Investigation Work (adjacent development site)

LKC were provided with several reports previously undertaken for the adjacent development site (Hillside View).

A Phase 2 report (Ref: 22604/05-17/4877, dated May 2017) was undertaken by Mewies Engineering Consultants Ltd (M-EC). The intrusive works were carried out on in March 2017 and comprised 5no. trial pits.

Ground conditions comprised:

- Made ground to 0.20-1.00m (silty gravelly clay with brick, sandstone, broken pottery fragments, plastic fragments).
- Firm, light cream silty sandy CLAY to 0.2-1.9m.
- Dark very clayey silty gravelly SAND to 1.0-3.1m.
- Organic clayey silt encountered in one location TP103.
- Dark black clayey silty slightly gravelly SAND (weathered bedrock) from 1.8m.
- Dark thinly laminated weathered shale (weathered bedrock) from 1.6-2.8m to unknown depth.

Groundwater was encountered at 0.50mbgl in TP01 and 1.8m in TP102, as a slight seepage but no significant flow observed.

Soil results were compared to relevant GACs and only one sample was noted to have elevated lead above assessment criteria; however, it was not considered to pose a significant risk.

Slightly elevated lead was also identified as possible in the groundwater however it was not considered to pose a significant risk to the surrounding water courses (45m SE).

An additional gas monitoring assessment undertaken by ME-C (ref: BH/22604/5961, dated 2nd May 2018) was also provided to LKC and this details further phases of investigation which are summarised below.

A second phase of investigation work was undertaken in July 2017 and this comprised 6no. window sample boreholes in areas previously inaccessible with a JCB. Following the installation of gas monitoring wells in the four of the boreholes, 6no. gas monitoring visits were undertaken between July 2017 and August 2017.

The results of the initial gas monitoring identified elevated methane and carbon dioxide in WS01 and WS03 (maximum concentrations of methane and carbon dioxide as 5.8%v/v and 13.1%v/v respectively), both located in the south of the site. No positive flow rates were recorded in any monitoring well.

To further assess the gas risk, a third phase of investigation work was undertaken in February 2018 and this comprised the drilling of eight additional boreholes drilled in the southern area of the site (including in the location of WS01 and WS03). A further 6no. gas monitoring visits on all monitoring wells over a three month period (including worse-case scenarios). A number of the wells were dual installed to assess the shallow and deep gas regime.

The results of the second phase of gas monitoring on the adjacent site recorded no methane or flow above detection limits. A maximum carbon dioxide concentration of 7.6%v/v was recorded in WS107.

Precautionary gas protection measures were recommended in the central and southern plots (Amber 2 in 2 plots in the south-east and Amber 1 across the remainder of the central and southern plots).

<u>LKC Gas Assessment (offsite source)</u>

Gas monitoring on the adjacent site on the initial phase of monitoring (2017) showed maximum concentrations of methane and carbon dioxide as 5.8%v/v and 13.1%v/v, respectively. No positive flow rates were recorded in any monitoring well. However, the

results of the second phase of gas monitoring (2018) on the adjacent site recorded no methane or flow above detection limits. A maximum carbon dioxide concentration of 7.6%v/v was recorded. It should be noted that the second phase of monitoring included boreholes very close to the initial boreholes (WS01 and WS03).

LKC noted that the previous gas risk assessment undertaken for the adjacent site did not consider the potential source of the hazardous gas and also did not take into account the negligible flow rates.

It is understood that, on the adjacent site, the highest initial concentrations of methane were recorded in an area where the ground had been made up of existing vegetation. This could potentially be the gas source. It is assumed that this material has been removed as part of the development and is no longer a potential source. Given the additional investigation data, it is assumed that the gas is very localised and not anticipated to be a significant source.

No elevated methane was recorded during the more recent gas monitoring and no significant flow has been recorded.

Given the number and location of the monitoring boreholes in the second phase of monitoring, these are considered to be more representative of the adjacent site conditions. The methane is therefore not considered to pose a significant risk. However, the carbon dioxide needs further consideration given it is elevated above the trigger value of 5%v/v.

The full dataset from the initial phase of gas monitoring is not available, however the full dataset from the second phase of gas monitoring is available for review and has been assessed further below.

Wilson *et al* suggests there is no need to increase the classification if the carbon dioxide is caused by biological respiration of small quantities of organic material. Plate 2-4 summarises the gas monitoring data using the methodology described by Wilson *et al*. This assessment is useful where there is low gas flow rates.

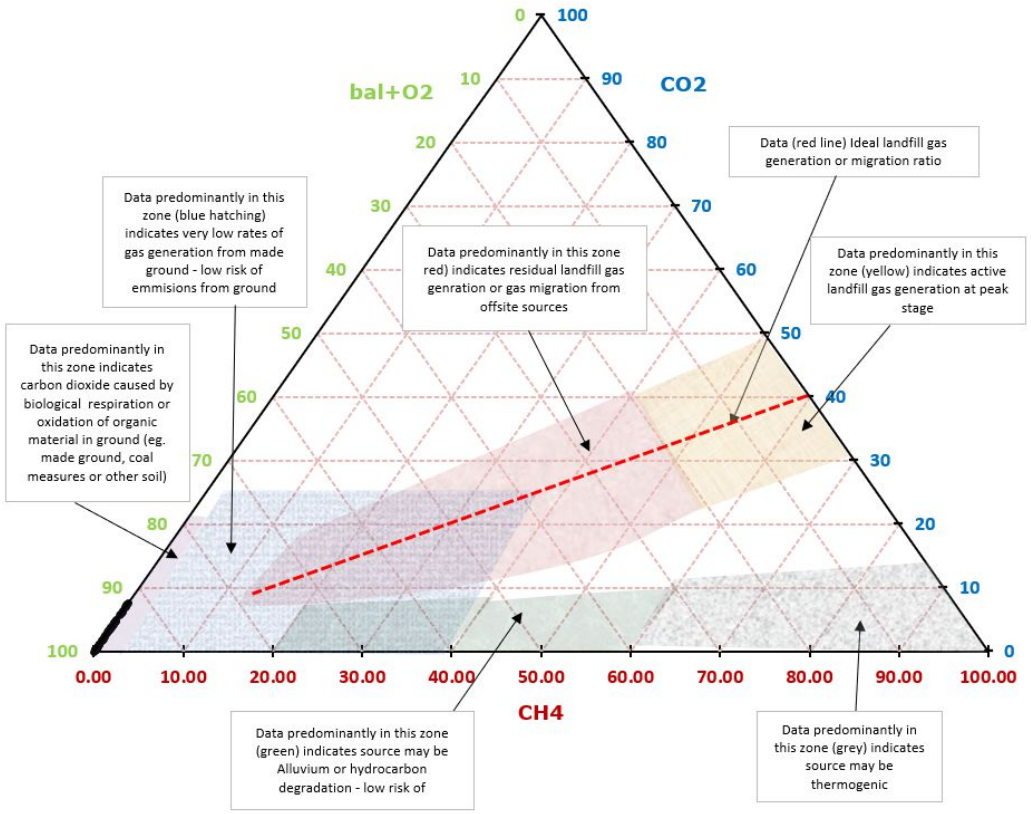


Plate 2-4: Gas Monitoring Ternary Plot.

Wilson *et al* goes on to say 'where gas monitoring results plot within the zone shown …for microbial respiration there is no requirement to increase the Characteristic Situation simply because CO_2 concentrations exceed 5%'.

All the data (plotted above) falls within the area of the ternary plot which is indicative of microbial respiration. This indicates the carbon dioxide is likely to be from microbial degradation in the soil. Furthermore, CL:AIRE Research Bulletin 17 states 'Carbon dioxide in natural soils such as Glacial Deposits and Chalk can often be recorded at up to 15% in monitoring wells, but that this does not pose a risk to development'. The maximum concentration of carbon dioxide observed on site is 7.4% v/v with negligible flow rates to drive any gas migration.

Give the results of the second phase of gas monitoring and additional assessment above, LKC does not anticipate there to be a significant source of gas from the adjacent site. The initial readings of methane were only recorded in the first phase of monitoring and not recorded in the more comprehensive 2nd phase of monitoring, suggesting only a very small, localised pocket of gas. Based on the above assessment the carbon dioxide recorded is assumed to be associated with microbial respiration of minimal organic matter and not anticipated to pose a significant risk.

Although the data is from 2017-2018, the data is still considered to be applicable as gas levels are unlikely to increase in any significant quantities given the ground conditions encountered. It should also be considered that reduced level digs on the adjacent site and the current site is likely to remove and reduce potential gas sources.

No significant offsite gas sources are anticipated considering low flow rates and concentrations identified. In addition, any residual gas migration will be impeded by intervening clay strata.

2.5. Conceptual Model

Potential contamination sources are detailed in Table 2-5.

Source	Contaminants
Onsite former buildings	- Asbestos Containing Material (ACM).
Onsite Made Ground (former building demolition, general made ground from site levelling) – Significant depths of made ground not anticipated.	- Ash and clinker (e.g. from hearths and boilers, often historically used for site raising / levelling): Heavy metals, sulphates and PAHs. - Other unknown inorganic / organic contaminants (dependant on fill material source). - If significant depth of organic / putrescible material (not anticipated): Hazardous gas (principally carbon dioxide and methane).
Allotment	- Assuming the use of ash and clinker for drainage: heavy metals, sulphates, PAHs[1]. - Significant pesticide use not anticipated. Significant pesticide use is more consistent with extensive farming, which has not occurred on site.
Fly tipping and burnt materials	- Ash and clinker (from bonfires): Heavy metals, sulphates and PAHs. - Other unknown organic and inorganic contaminants dependant on waste materials.
Surrounding Industries (Albion Mill)	- Metals, inorganic compounds and organic compounds. - Not expected to be a significant source of contamination due to distance from site.
Adjacent residential site to west (based on site investigation data)	- Significant soil / groundwater contamination not anticipated. - Based on assessment undertaken, significant gas source not anticipated (see section 2.4 for further details).
Offsite potentially infilled ground	- Main feature is a small mill pond associated with Albion Mill which is not considered to be a significant source of gas.

Table 2-5: Potential contamination sources

Potential receptors are detailed in Table 2-6.

Receptors	
- Human Health	- Future site users (including residents, visitors and site workers). - Offsite land users.
- Controlled Waters	- Secondary B Aquifer (bedrock). - No surface water features considered to be a significant receptor.
- Buildings and structures.	
- Potable water pipes.	
- Flora within future gardens/landscaping.	

Table 2-6: Potential receptors

Potential pathways are detailed in Table 2-7.

Pathways		
Soil	Human Health[2] (residential land use: houses with private gardens)	- Ingestion of soil. - Ingestion of soil-derived indoor dust. - Ingestion of contaminated vegetables. - Ingestion of soil attached to vegetables. - Dermal contact with soil. - Dermal contact with soil-derived indoor dust. - Inhalation of soil-derived outdoor dust. - Inhalation of soil-derived indoor dust. - Inhalation of vapours outside. - Inhalation of vapours inside.
	- Windblown dust / fibres to adjacent receptors.	
	- Direct contact with receptors (building foundations, services).	
	- Root uptake.	
Water	- Surface run-off over impermeable surface. - Site is sloping but grassed; therefore, surface run-off will be limited.	
	- Infiltration into the ground, through potentially contaminated material (contamination possibly going into solution). - Site is sloping but grassed; therefore, infiltration is likely to occur.	
	- Migration through potentially permeable strata and preferential pathways. - Superficial (Till) likely to be low permeability. - Bedrock (mudstone, sandstone) likely to variable permeable. - Preferential pathways: services.	
Gas	- Migration through potentially permeable strata and preferential pathways. - Superficial (Till) likely to be low permeability. - Bedrock (mudstone, sandstone) likely to variable permeable. - Preferential pathways: services.	
	- Migration into buildings (e.g. via services) and accumulation of gases in confined	

Table 2-7: Potential pathways.

The preliminary contamination conceptual model using contaminant-pathway-receptor linkages based on guidance in LCRM[3] has been summarised in Table 2-8.

Each pollutant linkage is described along with an assessment of the risk based upon guidance on probabilities and consequences outlined in CIRIA C552[4]. The risk matrix is provided in Appendix A.

The probability is based on the site history, site reconnaissance, environmental setting, pathways, and receptors.

Reasonable worst-case consequence has been assumed at this stage.

Where LKC identified a low to very low risk, targeted or low-density intrusive investigation work, a watching brief (during construction work) or no investigation work will be recommended. This will be dependent on the nature of the site and the proposed development.

Where the risk falls into the moderate/low risk, LKC will undertake an assessment to establish what further work will be required.

Where LKC identifies a moderate or higher risk, intrusive investigation work or precautionary remediation is recommended.

Due to the minor consequence associated with the phytotoxic effect to flora (i.e., loss of plants in a landscaping scheme), the overall risk for the majority of sites will be very

low to low. Where soils contain significant concentrations of heavy metals, in general there will other pollutant linkages (i.e., the risk to human health) that will trigger the requirement for remediation (e.g., a clean environmental cover system). As such the risk to flora associated with phytotoxic contaminants will not be considered further.

The risk to buildings associated with elevated sulphate will be considered as part of the geotechnical assessment and will not be included in the contamination risk assessment.

PL	Pathway	Receptor	Contaminants of Concern (CoC)	Probability	Consequence	Risk	Recommendations
1	- Dermal contact. - Inhalation of soil, fibres and dust. - Ingestion of soils, dust, vegetables, soil attached to vegetables. - Windblown dust.	- Future site users. - Offsite receptors.	- Asbestos. - Heavy metals. - PAHs. - Petroleum hydrocarbons. - Other inorganic and organic contaminants. (source – made ground / allotments)	Low likelihood (given site history, site conditions and proposed end use)	Medium	**Moderate** / Low (moderate assumed until ground conditions confirmed)	Intrusive investigation required. Soil analysis of CoC, subject to ground conditions encountered.
2	- Inhalation of vapours. - Migration via permeable strata and preferential pathways.	- Future site users. - Offsite receptors.	- Volatile contaminants (TPHCWG, SVOC, VOCs). (source – made ground / allotments)	Low Likelihood (given site history, site conditions and proposed end use)	Medium	**Moderate** / Low (moderate assumed until ground conditions confirmed)	Intrusive investigation required, to include PID testing. Soil analysis of CoC, subject to ground conditions encountered and PID testing.
3	- Inhalation of gas. - Migration via permeable strata and preferential pathways. - Explosion in confined spaces. - Exposure to radon.	- Future site users. - Buildings. - Offsite land users.	- Ground / hazardous gas (carbon dioxide, methane). (source – made ground)	Unlikely (significant gas source not anticipated)	Severe	Moderate / **Low** (low risk assumed as significant gas source not anticipated)	Intrusive investigation to confirm ground conditions. If significant gas source identified, gas monitoring or gas protection measures required. **Offsite source is not considered a risk.**
			- Radon (source – geology)	Unlikely (as 1-3% of homes above action level)	Medium	**Low**	(1-3%) No protective measures are necessary in the construction of new dwellings or extensions.
4	- Surface run-off. - Migration via permeable strata and preferential pathways. - Perched waters migration.	- Groundwater (Secondary B Aquifer).	- Mobile contaminants such as metals, PAHs, hydrocarbons. (source – made ground / allotments)	Low Likelihood (only minimal mobile contamination anticipated but direct pathway)	Medium	**Moderate** / Low (moderate assumed until ground conditions confirmed)	Intrusive investigation required. Groundwater sampling, subject to ground conditions encountered. Analysis of CoC.
5	- Ingestion of tainted water supply.	- Future site users. - Water pipes.	- Organic contaminants such as petroleum hydrocarbons, naphthalene. (source – allotments)	Low Likelihood (although some contamination may be present, significant contamination not expected at pipeline depth)	Medium	**Moderate /** Low (moderate assumed until ground conditions confirmed)	Intrusive investigation required. Soil analysis of CoC, subject to ground conditions encountered.

Table 2-8: Preliminary Contamination Conceptual Model.

Notes: PL = Pollutant Linkage. Contaminant of Concern (CoC)

3. Ground Investigation

Two phases of investigation work have been undertaken at the site. The main investigation was undertaken in 2001 and is detailed in Sections 3.1 to 3.5. A second phase of investigation work was undertaken post development in March 2025 and is detailed in Section 3.6.

3.1. Site Investigation Design and Methodology (main investigation)

In order to assess the ground conditions at the site and to investigate the potential pollutant linkages identified in the preliminary contamination conceptual model an intrusive investigation was undertaken.

The investigation was carried out on 7th January 2021 and comprised the following:

- 5no. window sample boreholes drilled to 2.32 to 5.30 metres below ground level (mbgl) (ref. WS101 to WS105).
- 8no. trial pits (using JCB / 10t tracked machine) excavated to 3.00 to 3.80mbgl (ref. TP101 to TP105).

To allow access for the drilling rig, the strata was removed, and a suitable path created. Where the strata had been reworked and removed, hand dug logs have been done (HD101-103 correlating to WS102-WS104 respectively).

All site investigation locations are shown in Figure 3.

The number of site investigation points corresponds to approximately one location per 18m square centres. This is considered to be a conservative sampling density and is in line with BS10175[5] for a 'main investigation'.

All profile logs are provided in Appendix B and are in line with BS14688-1[6] and BS5930[7].

3.2. Well Installations

3no. of the boreholes (WS101, WS103 and WS105) were installed with monitoring wells for gas and groundwater monitoring. This was precautionary in case a risk of gas or to groundwater was identified. Monitoring wells were installed in accordance with BS10175 and CIRIA C665[8] and generally comprised approximately 0.5-1.0m plain pipe over a length of slotted pipe surrounded by pea gravel and sealed at the top with bentonite and concrete.

The response zones for the window sample boreholes were installed along the entire length of the borehole.

Well installation details are provided in profile logs in Appendix B.

3.3. Sampling Protocol

3.3.1. Soil Sampling (Contamination)

Standard sampling protocol and preservation of samples was undertaken as described in the EA guidance on site investigation[9].

Soil was collected for onsite testing. A plastic zip bag was half filled with soil allowing a suitably sized headspace. The bag was sealed and stored for at least 20 minutes before being tested for total volatile organic compounds (TVOCs) using a PhoCheck Tiger photoionisation detector (PID). Results of the PID readings are presented on the profile logs (Appendix B). The on-site monitoring was carried out in line CIRIA C665[10] to aid in screening samples for volatile analysis.

Soil samples of approximately 500g were recovered in amber jars, amber vials for volatile analysis and plastic tubs. All the samples were labelled and stored in cool boxes prior to being collected by courier at the end of the day for delivery to the Chemtest laboratory in Newmarket for chemical testing. If collection was not possible the same day then samples were stored in the sample storage fridge at the LK Group offices below 4˚C. Samples were tracked using appropriate Chain of Custody forms provided by Chemtest.

Many of the contamination tests are UKAS or MCERTS accredited and further details are given in the Certificate of Analysis presented in Appendix C. Table 3-1 shows the soil testing undertaken in the main investigation.

Contaminants	Location & Depth (mbgl)		Justification
Metals / metalloids, pH, water soluble sulphate, speciated PAHs, SOM and asbestos screen.	TP101 0.0-0.3 TP102 0.0-0.3 TP103 0.3-1.0 TP106 0.3-1.0 TP107 0.0-0.2 TP108 0.0-0.2	WS101 0.2-0.5 WS102 0.0-0.5 WS103 0.0-0.5 WS104 0.0-0.5 WS105 0.0-0.3 (Total = 11)	A basic suite with a broad selection of contaminants tested on samples across the site where no significant evidence of contamination was identified (with the exception of occasional ash and brick) and no TVOCs identified from the PID tests.
Metals / metalloids, pH, water soluble sulphate, cyanide suite, phenol, TPHCWG, BTEX, MTBE, speciated PAHs, SOM and asbestos screen.	TP104 0.5-1.5 (Total = 1)		Although no visual/olfactory evidence of contamination was identified (with the exception of some ash), a detailed suite was undertaken.
pH and water-soluble sulphate	TP101 0.8-1.5 TP105 0.5-1.5 TP107 0.5-1.0	WS104 0.5-1.0 (Total = 4)	This test was undertaken to confirm the concrete conditions of the ground across the site.

Table 3-1. Summary of soil sample testing undertaken.

Notes:

If asbestos present during screen identification and quantification will be undertaken.

Metal/metalloids=arsenic, cadmium, chromium, (total and hexavalent), copper, lead, mercury, nickel, selenium, vanadium, zinc and boron; TPHCWG=carbon banded and aromatic/aliphatic split petroleum hydrocarbons; PAH=polycyclic aromatic hydrocarbons, BTEX=benzene, toluene, ethylbenzene and xylenes; MTBE=Methyl tert-butyl ether, SOM=Soil Organic Matter.

3.3.2. *Soil Sampling (Geotechnical)*

Soil samples taken during the investigation were collected in tubs and bulk bags and sent to Murray Rix Laboratories for geotechnical testing.

Many of the tests are UKAS accredited and further details are given in the laboratory report presented in Appendix D. Table 3-2 shows the geotechnical testing undertaken.

Testing	No. Samples	Location	Justification
Atterberg Limits (plasticity testing)	4	WS101 1.8-2 WS104 1.6-2 TP102 0.3-1.2 TP104 0.5-1.5 TP107 1.5-2	A selection of clay samples across the site were tested for Atterberg Limits to assess their shrinkability potential associated with current and proposed trees.
Particle Size Distribution (PSD)	1	WS102 1.5-2 TP101 2-2.5 TP106 1.5-2 TP108 2-3	PSD undertaken to confirm grading of granular material.

Table 3-2. Summary of geotechnical testing undertaken.

3.3.3. *Water Sampling / Leaching Testing*

Groundwater sampling was not carried out as part of this investigation.

A moderate risk was identified in the preliminary contamination conceptual model for controlled waters (pollutant linkage 4) and further action was only recommended if significant soil contamination was identified on site. Based on the ground conditions encountered, LKC did not consider testing to be required. This is discussed further in Section 6.4.

3.4. In-situ Testing

3.4.1. *Geotechnical Testing*

In-situ geotechnical tests were performed in the boreholes to further characterise the sub-soil conditions. The following tests were undertaken:

- Standard Penetration Tests (SPTs) were performed in the window sample boreholes at approximately 1m intervals, generally within the natural strata.
- Shear Vane tests (giving undrained shear strength) were performed in the (to a maximum depth of 3mbgl) trial pits at approximately 1m intervals, within the natural clay strata.
- Pocket penetrometer tests were performed in the window sample boreholes (to a maximum of 3mbgl) at 1m intervals within the natural clay strata.

Shear vanes tests were not always possible due to the gravel rich nature of some of the clay deposits.

The SPT, shear vane, and pocket penetrometer readings are provided within the profile logs (Appendix B).

3.5. Gas Monitoring

Gas monitoring was not carried out as part of this investigation.

A low risk was identified in the preliminary contamination conceptual model for gas (Pollutant Linkage 3) and further action was only recommended if significant organic / putrescible material was identified on site.

Based on the ground conditions encountered, LKC did not consider gas monitoring to be required. This is discussed further in Section 6.3.

3.6. Additional Post Development Investigation

Additional investigation work has been undertaken on the site to confirm the current ground conditions on site.

Since the last phase of investigation in 2021, the site has been developed and details of the groundworks and construction work are detailed below:

- A reduce level dig has occurred to allow a developable platform. Cross sections showing the changes in level are provided in Figures and Plans.
- The reduce level dig has removed a significant amount of the made ground previously encountered on site.
- The plots have been built. Foundation details are provided in Figures and Plans and include sub-floor ventilation and a damp proof membrane.
- Private front and rear gardens have been installed.
- It is understood that no unexpected ground conditions or contamination was identified during groundworks.

We have not been able to establish the volumes of material removed from site or if soils have been imported to site as the groundworkers have not been contactable. As such additional investigation work has been undertaken to confirm the ground conditions and ensure the soils area suitable for use on site.

A site visit was undertaken on 25th March 2025. Site photos are provided in Appendix G.

Hand dug pits were carried out in the front and rear gardens depending on access and to allow good coverage across the site. Locations are shown on Figure 4.

Logs of the hand dug pits are provided in Appendix G.

Samples were collected for laboratory analysis as detailed in Table 3-3.

Standard sampling protocol and preservation of samples was undertaken as described in the EA guidance on site investigation as detailed in Section 3.3.1. PID testing was undertaken on all samples collected.

Many of the contamination tests are UKAS or MCERTS accredited and further details are given in the Certificate of Analysis presented in Appendix C. Table 3-3 shows the soil testing undertaken.

Contaminants	Location		Justification
Metals / metalloids, pH, water soluble sulphate, speciated PAHs, SOM and asbestos screen.	ES2 (Plot 11) ES3 (Plot 11) ES4 (Plot 10) ES5 (Plot 9) ES6 (Plot 8) ES7 (Plot 7) ES10 (Plot 5) ES11 (Plot 4)	ES12 (Plot 4) ES13 (Plot 3) ES14 (Plot 3) ES16 (Plot 1) ES17 (Plot 1) ES18 (Plot 13) ES19 (Plot 13) (Total = 15)	A basic suite with a broad selection of contaminants tested on samples across the site where no significant evidence of contamination was identified (with the exception of occasional ash and brick) and no TVOCs identified from the PID tests.
Metals / metalloids, pH, water soluble sulphate, cyanide suite, phenol, TPHCWG, BTEX, MTBE, speciated PAHs, SOM and asbestos screen.	ES1 (Plot 12) ES8 (Plot 6) ES9 (Plot 5)	ES15 (Plot 2) (Total = 4)	Although no visual/olfactory evidence of contamination was identified (with the exception of some ash), a detailed suite was undertaken to confirm the absence of contamination.
Pesticide Suite	ES1 (Plot 12) ES6 (Plot 8)	ES15 (Plot 2) (Total = 3)	Although significant source of pesticides not anticipated, confirmatory testing undertaken as a precaution.

Table 3-3. Summary of soil sample testing undertaken.

Notes:

If asbestos present during screen identification and quantification will be undertaken.

Metal/metalloids=arsenic, cadmium, chromium, (total and hexavalent), copper, lead, mercury, nickel, selenium, vanadium, zinc and boron; TPHCWG=carbon banded and aromatic/aliphatic split petroleum hydrocarbons; PAH=polycyclic aromatic hydrocarbons, BTEX=benzene, toluene, ethylbenzene and xylenes; MTBE=Methyl tert-butyl ether, SOM=Soil Organic Matter.

4. Ground Conditions

4.1. Geology

4.1.1. Main Investigation 2021

The ground conditions from the 2021 investigation comprised topsoil / made ground generally underlain by natural gravelly sandy clay, following bedrock (weathered mudstone). A summary is provided in Table 4-1. Profile logs are provided in Appendix B.

Depth to Top of Strata (mbgl)	Depth to Base of Strata (mbgl)	Thickness of Strata (m)	Description
0.0	0.2 to 0.6	0.2 to 0.6	**TOPSOIL:** Dark brown sandy clayey SILT with organic matter. Noted in TP104, WS101, HD102 (WS103),
0.0	0.2 to 0.5	0.2 to 0.5	**MADE GROUND 1:** Gravelly sandy SILT with brick fragments, glass fragments and sandstone flags. Land drain seen in TP101. Noted in TP101, TP102 TP105, TP106, HD101 (WS102), Sand made ground seen in TP107.
0.0 to 0.2	0.3 to 1.9	0.3 to 1.70	**MADE GROUND 2:** slightly gravelly sandy CLAY Noted in TP103, TP108, WS104, WS105, HD103 (WS104)
1.9	2.1	0.20	**MADE GROUND 3:** Black gravelly silty SAND with frequent coal and ash. Noted in TP103 only.
0.0 to 1.9	0.5 to 2.1	0.2 to 0.9	**SAND:** Gravelly silty / clayey SAND. Noted in TP101, TP103, TP106, WS101, WS101, WS102, WS103, WS104
0.2 to 0.5	0.5 to 2.0	0.2 to 1.8	**CLAY:** Slightly gravelly sandy CLAY, Noted in all the boreholes and trial pits.
0.8 to 1.5	1.5 to 3.5	0.5 to 2	**CLAY:** (very) Gravelly sandy CLAY. Noted in WS101, WS103, WS104, WS015
1.2 to 3.0	>3.80 to >5.45	0.8 to 1.80	**WEATHERED BEDROCK:** Weathered mudstone bedrock recovered as: clayey sandy gravel. De-structured highly weathered with iron staining. Seen in all the boreholes and trial pits except WS105.

Table 4-1: Summary of ground conditions.

No visual / olfactory evidence of hydrocarbons or volatile contaminants in any locations. PID reading were less than or equal to 0.2ppm.

A land drain was noted in TP101 at 0.2mbgl.

4.1.2. Additional Investigation 2025

Topsoil (made ground) was recorded in all locations to depths of 0.1-0.5mbgl. The topsoil generally comprised dark brown slightly gravelly, slightly sandy SILT/CLAY. Anthropogenic material included localised / rare brick fragments, timber and ceramics. Given the nature of the material, this is likely to be re-worked site material rather than imported topsoil.

Gravel was recorded below the topsoil in the front gardens of plots 7-10 which is assumed to be associated with service ducts in these areas.

Clay was recorded below the topsoil across the remainder of the site and comprised soft to firm consistency gravelly sandy CLAY.

No visual / olfactory evidence of hydrocarbons or volatile contaminants in any locations. PID reading were less than 0.1ppm. Profile logs are provided in Appendix G.

4.2. Groundwater

4.2.1. Groundwater Levels

Groundwater strikes were recorded during the investigation in trial pits and boreholes.

No groundwater was present in the trial pits.

All the boreholes were dry except WS103, where a water strike was recorded at 1.20mbgl within the gravel (possibly weathered mudstone) strata.

No groundwater was encountered in the additional phase of investigation.

4.3. In-Situ Geotechnical Testing

4.3.1. Standard Penetration Tests

In-situ standard penetration tests (SPTs) were undertaken, predominantly in the natural ground. The results are summarised in Table 4-2 and provided within the profile logs in Appendix B.

Approximate Depth (mbgl)	SPT 'N' Values				
	WS101	**WS102**	**WS103**	**WS104**	**WS105**
1-2	12 (C)	11 (C)	24 (G)	6 (S)	19 (C)
2-3	16 (C)	20 (G)	50 (M)	12 (C)	50 (G)
3-4	23 (C)	50 (M)	-	13 (C)	-
4-5	31 (M)	-	-	50 (M)	-
5-6	50 (M)	-	-	-	-
GW Level	-	-	1.20	-	-

Table 4-2: Summary of SPT (N) values.

Notes:

S=Sand; C=Clay; M=Mudstone.

Groundwater level based on strikes during investigation and monitoring data.

4.3.2. Shear Vanes

Hand shear vane readings, recording undrained shear strength (USS), were taken within the clay strata. The results are summarised in Table 4-3 and provided within the profile logs in Appendix B.

The clay become more gravel rich with depth, therefore results may be lower than the actual clay strength.

Approximate Depth (mbgl)	Average Undrained Shear Strength (kN/m²)							
	TP101	TP102	TP103	TP104	TP105	TP106	TP107	TP108
1-2	60	40		45	45	-	50	40
GW Level	-	-	-	-	-	-	-	-

Table 4-3: Summary of average hand shear vane readings.

Notes:

Groundwater level based on strikes during investigation.

Shear vane readings can be influenced by coarse material including coarse silt.

4.3.3. Pocket Penetrometer

Hand pocket penetrometer readings, recording undrained shear strength (USS), were taken within clay strata up to a depth of 3.0mbgl. The results are summarised in Table 4-4 and provided within the profile logs in Appendix B.

The clay become more gravel rich with depth, therefore results may be higher than the actual clay strength.

Approximate Depth (mbgl)	Average Undrained Shear Strength (kN/m^2)				
	WS101	WS102	WS103	WS104	WS105
0-1	28.6	85.8	73.6	24.5	49.0
1-2	80.0	49.0	-	53.1	81.6
GW Level	-	-	1.20	-	

Table 4-4: Summary of average pocket penetrometer readings.
Groundwater level based on strikes during investigation.
Pocket penetrometer readings can be influenced by coarse material including coarse silt.

4.4. Geotechnical Laboratory Testing

4.4.1. Particle Size Distribution

Particle size distribution (PSDs) tests were carried out on granular strata to confirm the material type. Full results are presented in Appendix D and summarised below in Table 4-5.

Location	Depth (mbgl)	Material	Percent passing through sieve		
			63mm	2mm	0.063mm
TP106	1.5-2.0	Brown clay bound silty SAND with occasional gravel.	100	88	33
WS102	1.5-2.0	Firm to stiff brown silty sandy CLAY	100	99	71
TP101	2.0-2.5	Firm to stiff brown silty sandy CLAY	100	100	88
TP108	2.0-3.0	Firm black silty sandy CLAY.	100	99	91

Table 4-5: Summary of particle size distribution results.
Notes:
% passing: 63mm = cobble / gravel boundary; 2mm = gravel / sand boundary; 0.063mm = sand / silt boundary

4.4.2. Atterberg Limits

Representative samples of natural clay were subjected to Atterberg Limits (plasticity) and Moisture Content testing. Results are presented in Appendix D and summarised in Table 4-6.

Table 4-6 also includes the modified plasticity index as detailed in Chapter 4.2-D5 of the NHBC standards (modified plasticity index = plasticity index x % less than 425µm sieve / 100%).

Location	Depth (mbgl)	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Class	Passing 425 micron (%)	Modified Plasticity Index (%)
WS101	1.8-2	33	42	20	22	CL	90	19.8
WS104	1.6-2	23	38	18	20	CL	94	18.8
TP102	0.3-1.2	21	36	19	17	CL	96	16.3
TP104	0.5-1.5	23	38	17	21	CL	95	19.95
TP107	1.5-2	24	39	16	23	CL	92	21.16

Table 4-6: Summary of plasticity index testing.

The modified plasticity index is between 16% and 21%. This characterises the clay as having a low to medium volume change potential.

4.4.3. Sulphate and pH

Water soluble sulphate and pH tests were carried out on soil samples. Full results are presented in Appendix C and summarised in Table 4-7.

Strata	pH	Sulphate (g/l)
Made Ground	5.3-8.3	<0.01-0.2
Natural	5.9-6.9	<0.01-0.048

Table 4-7: Summary of pH and sulphate results.

5. Geotechnical Assessment

5.1. Proposed Development

This section has not been updated with the additional investigation data as is not considered to be relevant for the foundation assessment. The assessment below is based on the 2021 investigation only.

It is understood that the proposed development will comprise 12no. residential houses with associated private gardens. Details of the proposed loadings for the housing are not known at this stage and therefore the preliminary geotechnical assessment will be based on the undrained shear strength for cohesive soils.

The finished ground levels will not vary significantly from current levels. However, should the development proposals or finished levels be altered then the comments/recommendations in this section may require revising.

The depths of any underground engineering works (sewers etc.) have not been taken into account in the following assessment. It is considered that any such works will be designed so as not to have an effect on, or compromise, proposed or existing foundations or ground stability.

- Made ground (MG) was recorded to a depth of 0.2 – 0.5mbgl and generally consisted of gravelly sandy silt or slightly gravelly sandy clay, with brick fragments, rootlets, plastic, glass and stone flags, except at locations TP104, WS101 and WS103 where Topsoil was present.
- Made ground to a depth of 2.1mbgl was recorded at location TP103, consisting of a layer of silty sand with a thickness of 0.2m, underlain by sandy clay with a thickness of 1.7m and a basal layer of silty sand with frequent ash and coal.

Given the nature of the proposed development it is considered that the structure meets the criteria of Geotechnical Category 1 of EC 7[11].

Given the nature of the development it is considered that acceptable risk from settlement is a total settlement value of 25mm for a masonry structure.

5.2. Summary of Ground Conditions

Ground conditions identified at the site are detailed in Section 4.1 and summarised in Table 5-1 below:

Strata	Typical Description	Min Depth to top of Strata (mbgl)	Max Depth to top of Strata (mbgl)	Max Thickness (m)
Topsoil	Dark brown sandy clayey silt with organic matter and frequent roots and rootlets.	0.00	0.5	0.5
Made Ground	Dark brown gravelly sandy silt with brick fragments.	0.00	0.5	0.5
	Dark brown sandy clay with brick, glass and plastic fragments.	0.00	1.9	1.7
Granular	Light brown to orangish brown locally gravelly clayey SAND.	0.0	2.1	0.9
	Dark grey clayey GRAVEL.	0.7	3.0	1.9
Cohesive	Soft to firm consistency low to medium strength light brown locally grey mottled slightly gravelly very sandy CLAY.	0.2	2.0	1.8
	Firm to very stiff consistency medium to high strength dark brown gravelly sandy CLAY.	0.8	3.5	2.0
Bedrock	Highly weathered MUDSTONE, recovered as sandy very clayey GRAVEL.	1.2	>5.3	>1.8

Table 5-1: Summary of ground conditions.

Groundwater was recorded in borehole WS103 only at a depth of 1.20mbgl within the gravel layer of the natural strata.

5.3. Site Preparation

The site should be cleared and any vegetation below areas of proposed development stripped in accordance with Series 200 of the Specification for Highway Works. This should include:

- Roots present below the footprint of proposed structures and infrastructure should be grubbed out and the resulting void infilled with suitable compacted engineered fill;
- Redundant services should be sealed off and grubbed out and replaced with suitable compacted engineered fill; and
- Buried structures and old foundations have not been encountered on site; however if present during construction works these should be excavated from below the proposed development footprint with the resulting void backfilled.

No hardstanding was encountered on site.

5.4. Foundation Conditions and Bearing Capacity

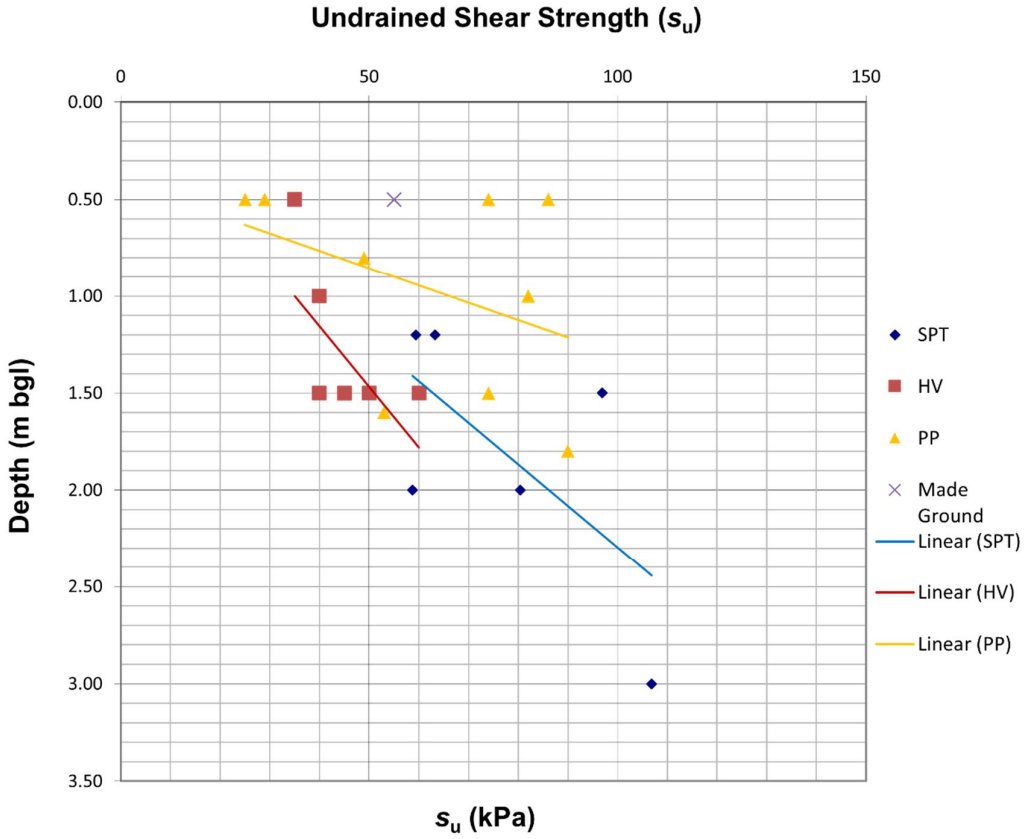
5.4.1. General

It is considered that the Made Ground and soft consistency cohesive soils of the natural strata are not suitable for a founding material due to the inherent variability of the material. The loading should be transferred to the firm becoming stiff and very stiff CLAY or medium dense GRAVEL to a minimum depth of 0.8m.

Foundation options will be dependent upon the location and types of structures which are proposed but are considered likely to comprise:

- Conventional strip foundations on the underlying natural granular and cohesive soils supporting walls; and,
- Pad footings supporting column loads.

An assessment of the undrained shear strength (s_u) has been undertaken using data obtained from in-situ geotechnical tests. This data is shown in Graph 5-1.

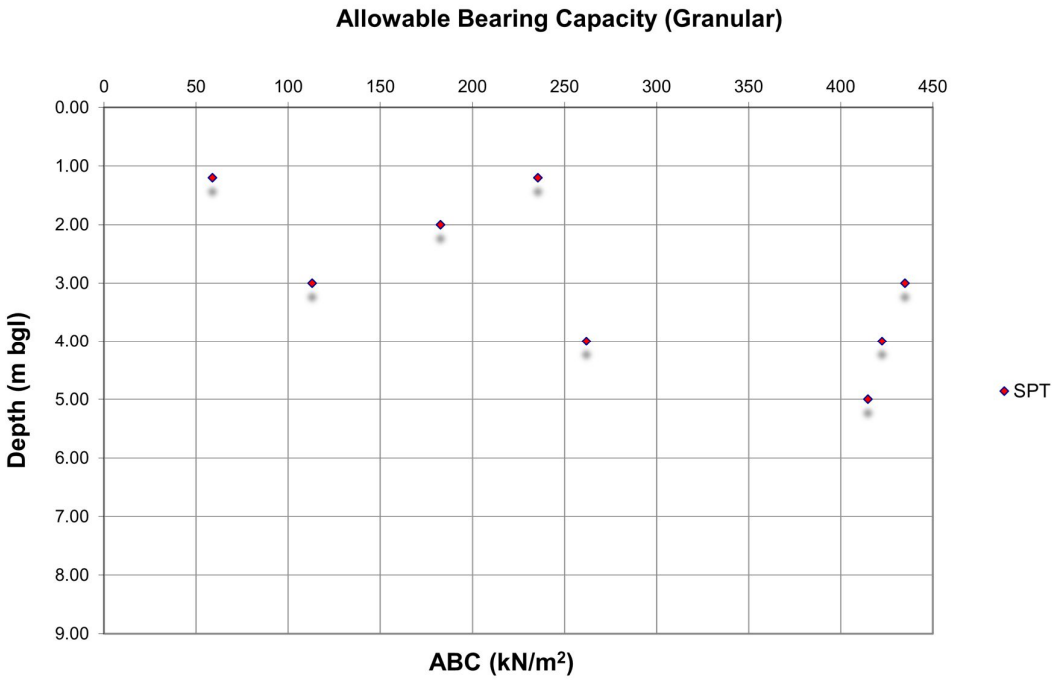


Graph 5-1: Summary of s_u vs depth from in-situ SPT, SV and PP testing for cohesive soils.

Graph 5-1 shows that the strength of the cohesive deposits typically increase gradually with depth to a depth of 1.0mbgl and swiftly below 1.0mbgl, with the results of the pocket penetrometer (PP) testing returning higher shear strength values.

A conservative s_u of 50kPa is assigned to the cohesive soils from a depth of *c*. 0.8mbgl for the natural strata, returning an allowable bearing capacity (ABC) of 100kN/m^2 for standard strip foundation.

For granular material, an assessment of the ABC has been undertaken using data obtained from in-situ geotechnical tests. This data is shown in Graph 5-2.



Graph 5-2: Summary of s_u vs depth from in-situ SPT, SV and PP testing for cohesive soils.

Graph 5-2 shows that a linear increase of ABC values with depth. A conservative value of ABC of 75kN/m^2 can be used at c. 1.0mbgl in the granular material.

From the proposed development drawing, shown in Figure 3, Plots 1 to 3 and 5 will be founded on the firm to very stiff CLAY, while Plots 4 and 6 to 11 on the sandy GRAVEL. Lateral variability of the granular and cohesive soils across the site will need to be assessed during construction works in order to determine the most suitable foundation solution. Strip or pad foundations or a combination of both should be considered, along with potential differential settlement of the proposed housing and of any adjacent structures, if any are present in the vicinity.

These options are discussed in the following Sections.

5.4.2. Strip Foundations

Strip foundations should be constructed at least 150mm in to the underlying firm becoming stiff to very stiff CLAY. At a depth of 1.0mbgl an allowable bearing capacity of 227kN/m² has been calculated using a Factor of safety of 3 and an undrained shear strength of 70kN/m² taken from Graph 5-1.

Atterberg limits determinations, summarised in Table 3.6 show the clay to be of intermediate plasticity and as such the sides of the foundations may require protection using clay board or similar.

Foundation depths should take account of the presence of existing and proposed trees with foundations deepened locally in accordance with the requirements of NHBC Standards for a clay of intermediate plasticity and a modified plasticity index of low volume change. It is recommended that at working drawing stage a foundation schedule is prepared for the development taking account of the soil plasticity and the locations of trees. See Section 8 for further recommendations.

5.4.3. Pad Foundations

Based upon the s_u obtained from the in-situ and laboratory testing of the cohesive natural strata, an assessment has been made on a pad foundation supporting column loads. For preliminary assessment purposes, two sizes of pad ($1m^2$ and $2m^2$) have been considered at depths of 1m and 2mbgl. The ABC incorporates a Factor of Safety (FoS) of 3 for conservancy, results are shown in Table 5-2. an undrained shear strength of $80kN/m^2$ taken from Graph 5-1.

Pad Size	Pad Depth (mbgl)	Net Ultimate Bearing Capacity (q_{nf}) kN/m^2	Allowable Bearing Capacity (kN)	s_u (kPa)
$1m^2$ (1.00m x 1.00m)	1.00	642	229	80
	2.00	708	260	80
$2m^2$ (1.42m x 1.42m)	1.00	618	436	80
	2.00	676	498	80

Table 5-2: Summary of pad ABC in cohesive soils.

The pads show an ABC of 229kN for a $1m^2$ increasing to 436kN for a $2m^2$ pad foundation placed at a depth of 1mbgl within the target stratum of firm becoming stiff to very stiff clay. The increasing of level foundation to 2mbgl has little benefit to ABC.

The above is for assessment purposes only, foundation design should be undertaken by a specialist contractor.

5.5. Ground Floor Slabs

Due to the presence of varying MG thickness typically to a depth of 0.5mbgl across the site, with the exception of location TP103 where MG is 1.9m thick, it is considered that suitable preparation of the sub-grade, by a combination of excavation and re-compaction, a suspended floor slab should prove suitable for the proposed buildings.

Floor slabs should be designed by a suitably experienced structural engineer.

5.6. Drainage

The presence of substantial depths of Made Ground in places of the site may result in settlement. It is therefore recommended that drain runs are designed using steeper gradients and flexible joints to allow for some differential settlement.

5.7. Concrete Durability

Based upon the results of the chemical analyses summarised in Table 4-7 it is considered that subsurface concrete can be designed in accordance with Design Sulphate Class DS-1, Aggressive Chemical Environment for Concrete Classification (ACEC) AC-1s in accordance with the recommendations provided in BRE Special Digest 1 (2005). It has been assumed that there is no groundwater and water table is static.

At location WS103, groundwater level was struck at 1.2mbgl. If the groundwater level is considered fluctuating, then a DS-1 AC-2z should be considered in the design.

If the foundations are located under the water table or in granular material where perched water can be encountered, then a DS-1 AC-2z class should be used for the design.

5.8. Excavations

Site observations indicated that excavations should be feasible in the near surface with normal plant.

Due to the variability of the Made Ground it is considered that all excavations are supported or battered back in accordance with guidance contained in CIRIA R97[12].

A single groundwater strike was recorded at 1.2mbgl within and it is considered that conventional sump pumping should be adequate to dewater any excavations. Trial pits were generally stable.

Water seepage may be encountered in granular horizons, mostly gravel, of the natural strata and a conventional sump pumping should be adequate during construction works.

5.9. Construction Activity and Inspection

The following activities and inspections should be incorporated in to the site works:

- Due to the variability of the soils at the site it is recommended that sufficient allowance is made for the inspection of formation and sub formations to foundations and pavement construction;
- Excavations where access is required should be subject to a risk assessment from a competent person and where appropriate mitigation measures such as benching back the sides or use of support systems in accordance with CIRIA R97 utilised;
- It is considered that de-watering may be required, especially following periods of heavy rainfall or where groundwater was encountered. Removal of surface water and water within trenches should be possible with conventional sump pumping. Discharge of any water should be agreed with the relevant regulatory body and be undertaken under a trade effluent discharge, where required. Measures to remove silt and suspended solids may be required and consideration should be given to provision of space for settling tanks or an attenuation pond;
- Where access to confined spaces is required appropriate mitigation measures should be addressed within the Construction Stage Health and Safety Plan. Particular account should be taken of the gas results;
- The presence of potential contamination and mitigation measures should be addressed as part of the Construction Stage Health and Safety Plan and should include measures to design out the risks, reduce their impact and finally the use of Personnel Protective Equipment (PPE).

6. Generic Risk Assessment

6.1. Introduction

Current good practice requires that the findings from a site investigation should be evaluated on a site-specific basis, using a risk-based approach. Risk assessment involves identification and evaluation of the hazards presented by the concentrations of contaminants measured followed by an evaluation of the risks which are associated with these hazards (LCRM[13]). Information gathered from the risk assessment has been collated in the revised contamination conceptual model in Section 6.6.

6.2. Soil Risk Assessment

6.2.1. Methodology

With regards to the soil risk assessment LKC will use the following hierarchy:

- Category 4 Screening Levels (C4SLs) [14, 15].
- LQM Suitable 4 Use Levels (S4ULs) [16, 17, 18, 19].
- ATRISK Soil Screening Values (SSVs) and CL:AIRE Generic Assessment Criteria (GACs)[20].

The proposed development is for residential houses with gardens, therefore the assessment criteria for residential with plant uptake has been used.

All criteria have been generated using the CLEA V1.06/07 model[21] based either on 1%, 2.5% and 6% Soil Organic matter (SOM). Results will be compared to the nearest appropriate SOM.

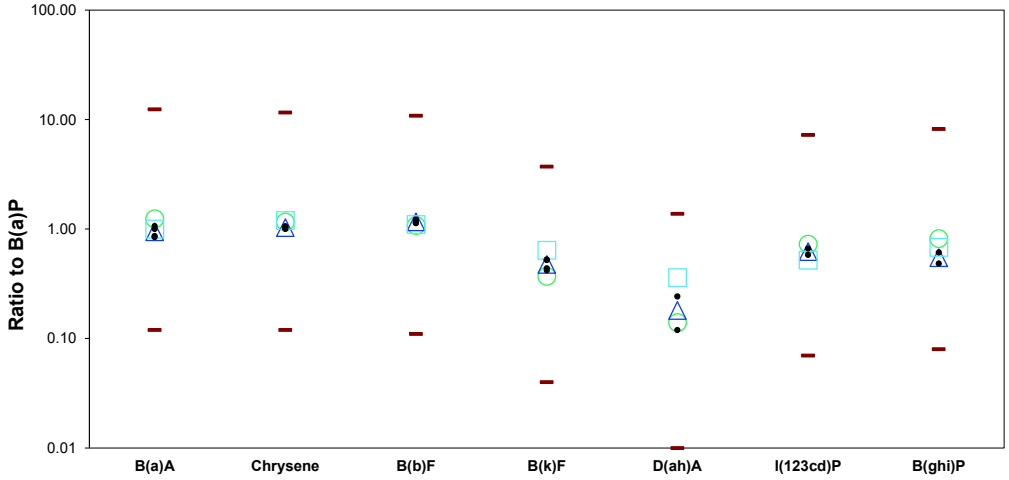
A summary of the generic assessment criteria used in this assessment is provided in Appendix E.

B(a)P as Surrogate Marker

LKC consider the main risk drivers for PAHs are benzo(a)pyrene (B(a)P) and naphthalene. This is due to B(a)P possibly being a carcinogen and most toxic of the PAHs[22,23] and naphthalene the most volatile and soluble[24]. The C4SLs indicate B(a)P as a surrogate marker for carcinogenic PAHs, if it falls within appropriate limits, since the risk from other non-carcinogenic PAHs are considered negligible[25]. For B(a)P to be used as a surrogate marker it should follow the profile described by the HPA (2008)[26] and CL:AIRE (2013). Naphthalene will be treated separately using the LQM S4ULs.

LKC undertook an assessment of the PAH data for the site with regards to using B(a)P as a surrogate marker for carcinogenic PAHs as per HPA and CL:AIRE guidelines. The primary toxicological study related to Culp *et.al*[27], which was based on coal tar mixtures (>80,000mg/kg of total PAHs) fed in food to mice over a two-year carcinogenicity study.

Graph 6-1 summarises the study site data with respect to how the ratios of carcinogenic PAHs relate to B(a)P, within the confidence limits provided in the HPA document.



Graph 6-1: The ratio of PAH to B(a)P in soil for all available data at the site (where values were >LOD to allow the calculation of a ratio).

Notes:

B(a)P = Benzo(a)pyrene; D(ah)A = Dibenzo(ah)anthracene; B(a)A = Benzo(a)anthracene; B(b)F = Benzo(b)fluoranthene; B(k)F = benzo(k)fluoranthene; I(123cd)P = Indeno(123cd)pyrene; B(ghi)P = Benzo(ghi)perylene

●= Ratio to B(a)P for all data ○ = Mean ratio to B(a)P for Culp data △ = Mean ratio to B(a)P from all data at the site

□ = Mean ratio to B(a)P for UK data presented by HPA ▬ = Upper and Lower limits (order of magnitude from Culp data)

6.2.2. Soil Results Comparison against Assessment Criteria

Results from the main investigation have been compared to the relevant assessment criteria. Certificates of analysis are presented in Appendix C.

No elevated contaminants were identified. However, asbestos was identified in 1no. location (out of 12 samples screened), as detailed in Table 6-1.

Sample Location	ID	Type	Total Asbestos (%)
WS104 (0-0.5m)	Crocidolite	Fibres/Clumps	<0.001

Table 6-1: Details of asbestos identified – Main Investigation.

Results from the additional investigation have been compared to relevant assessment criteria. Certificates of analysis are presented in Appendix G.

Elevated results are provided in Table 6-2. No asbestos was identified in any soil samples analysed.

Sample Location / Depth (mbgl)	Contaminant	Criteria	Total No. of Samples Tested	Sample Result > Criteria
ES4 (Plot 10)	Arsenic	37	19	39

Table 6-2: Summary of Elevated Results – Additional Investigation.

Notes:

All units in mg/kg.

Only results that exceeded assessment criteria have been shown and results from all depths are noted.

Results have been compared to the nearest appropriate SOM for the assessment criteria hierarchy described in Section 6.2.

6.2.3. Direct Contact Risk – Pollutant Linkage 1

No elevated PAHs, metals or petroleum hydrocarbons were identified in the samples tested from the main investigation.

Slightly elevated arsenic was identified in one sample from the additional investigation. This is located in the front garden of Plot 10 (sample reference ES4). The result is only marginally elevated (39mg/kg compared to the assessment criteria of 37mg/kg). Only

one sample out of 19 samples contained elevated arsenic therefore the contamination is assumed to be localised.

The sample was taken from the front garden where minimal landscaping is present (see photographs presented in Appendix G). It is unlikely that there will be significant exposure to soils by site users in this area of the site. The value falls below the 'residential without plant uptake assessment criteria', which may be more applicable for this area of the site.

Given only one sample has been found to contain marginally elevated arsenic and the location is within the front garden, where exposure will be minimal, the probability of arsenic posing a risk to site users is unlikely. With a moderate consequence, the risk is considered to be moderate and no remediation is recommended.

Asbestos was identified in one sample out of fifteen tested from the main investigation and the asbestos quantification for this sample was <0.001%. It is assumed that a significant quantity of the made ground has been excavated and removed from site as part of the earthworks. The additional investigation work did not detect any asbestos within the soils sampled and screened.

The probability of asbestos affected site users is considered to be unlikely. With a severe consequence, the risk is moderate / low. A low risk is assumed and remediation is not required.

To confirm the absence of pesticide contamination, 4no. representative samples from the additional investigation were tested for a standard pesticide suite. All values are below limits of detection.

No visual / olfactory evidence of any further contaminants were identified in the ground encountered during the investigation. No further elevated contaminants were identified from the soil laboratory results when compared to relevant assessment criteria. All PID results were recorded at a maximum of 0.2ppm TVOCs.

The probability of metals, PAHs, pesticides and other organic / inorganic contaminants affecting site users is considered to be unlikely. With a medium consequence, the risk is low and remediation is not required.

6.2.4. Risk from Inhalation of Vapours – Pollutant Linkage 2

No visual / olfactory evidence of volatile contaminants was identified during the main and addition investigation work. The PID did not detect any significant TVOCs. Confirmatory soil analysis did not detect any significant volatile organic compounds.

LKC therefore consider the probability of volatile contaminants affecting site users as unlikely. The consequence is expected to be medium, giving a low risk and no remediation is required.

6.3. Gas Risk Assessment

Gas monitoring has not been carried out as part of this investigation. A low risk was assumed in the Preliminary Contamination Conceptual Model and gas monitoring was only considered to be required if a significant gas source was identified on site during investigation work.

Made ground in the main investigation was generally encountered at thicknesses less than 0.5m (locally deeper to a maximum depth of 2.1mbgl) and comprised sandy gravelly clay or gravelly sandy silt. Topsoil with some organic content was recorded at the surface in several locations but this will be stripped off prior to development works.

Additional investigation work carried out following earthworks (reduced level dig) and construction work recorded topsoil to a maximum depth of 0.5m over clay strata.

LKC conclude that no significant source of gas has been identified onsite or offsite.

It should also be noted that the foundations include sub-floor ventilation and a damp proof membrane which will provide a basic level of gas protection. Foundation details are provided in Figures and Plans.

Given no significant gas source has been identified and foundations installed provide a basic level of gas protection measures, the probability of gas posing a risk to receptors is unlikely. With a severe consequence the risk is moderate / low. A low risk is assumed.

6.4. Controlled Water Assessment

The PRA identified a low risk with respect to controlled waters as no significant source of mobile contamination was anticipated. Furthermore, the site is not within a Source Protection Zone and no abstractions have been identified within influencing distance. The surface water is not considered to be a significant receptor.

The site investigation did not identify any significant sources of likely mobile contamination within the soils. This confirms an unlikely probability of onsite contamination affecting controlled waters. With a medium consequence the risk is anticipated to be low and no remediation is required.

6.5. Potable Water Supply

Soil results were compared to UKWIR[28] guidance. Only contaminants of concern, based on the preliminary conceptual model and ground conditions encountered, were analysed. The following contaminants were not considered to be a risk and therefore not included in the analysis suites: chlorinated compounds, cresols, ethers, nitrobenzene, ketones, aldehydes and amines.

The following elevated contaminants were identified:

- Localised elevated TVOCs (based on naphthalene) in made ground in the north of the site.

Based on the shallow and localised nature of the elevated naphthalene, it is unlikely that barrier pipe will be required for this development, particularly given the reduced level dig undertaken.

The probability of organic contaminants affecting potable water pipes is unlikely. Given the consequence is considered to be moderate, the risk is anticipated to be low and no remediation is anticipated.

It is assumed that the water pipes have been installed in line with the Utility requirements.

6.6. Revised Contamination Conceptual Model

The preliminary contamination conceptual model (Table 2-8) has been revised following the risk assessments undertaken in Sections 6.1-6.4. The revised contamination conceptual model follows the same methodology and guidance used in the preliminary contamination conceptual model. The risk matrix is provided in Appendix A.

The revised contamination conceptual model is presented in Table 6-3.

Where a very low risk or low risk is identified no specific remediation is required.

Where there is a moderate / low risk is identified, some form of remediation may be required depending on the pollutant linkage, the type and concentration of contaminants present and the proposed development.

Where LKC identifies a moderate or higher risk, remediation or further investigation work is recommended.

PL	Pathway	Receptor	Contaminants of Concern (CoC)	Probability	Consequence	Risk	Recommendations
1	- Dermal contact. - Inhalation of soil, fibres and dust. - Ingestion of soils, dust, vegetables, soil attached to vegetables. - Windblown dust.	- Future site users. - Offsite receptors.	- Heavy metals. - PAHs. - Petroleum hydrocarbons. - Other inorganic and organic contaminants. - Asbestos.	Unlikely (no elevated concentrations of contaminants)	Medium	**Low**	No remediation required.
2	- Inhalation of vapours. - Migration via permeable strata and preferential pathways.	- Future site users. - Offsite receptors.	- Volatile contaminants (TPHCWG, SVOC, VOCs).	Unlikely (no evidence of volatile contamination)	Medium	**Low**	No remediation required.
3	- Inhalation of gas. - Migration via permeable strata and preferential pathways. - Explosion in confined spaces. - Exposure to radon.	- Future site users. - Buildings. - Offsite land users.	- Ground / hazardous gas (carbon dioxide, methane).	Unlikely (no viable source identified and basic level of protection included in construction of foundations)	Severe	Moderate / **Low** (low risk assumed as significant gas source not anticipated)	No remediation required.
			- Radon	Unlikely (as 1-3% of homes above action level)	Medium	**Low**	(1-3%) No protective measures are necessary in the construction of new dwellings or extensions.
4	- Surface run-off. - Migration via permeable strata and preferential pathways. - Perched waters migration.	- Groundwater (Secondary B Aquifer).	- Mobile contaminants such as metals, PAHs, hydrocarbons.	Unlikely (no evidence of significant mobile contamination.	Medium	**Low**	No remediation required.
5	- Ingestion of tainted water supply.	- Future site users. - Water pipes.	- Organic contaminants such as petroleum hydrocarbons, naphthalene.	Unlikely (significant organic contamination not expected at pipeline depth)	Medium	**Low**	No remediation required.

Table 6-3: Revised Contamination Conceptual Model.

7. Waste Disposal Assessment

7.1. HazWaste Assessment

This section has not been updated with the additional investigation data as is not considered to be relevant for the foundation assessment. The assessment below is based on the 2021 investigation only.

The soil contamination results as presented in Appendix C have been used to help determine the waste classification of material for off-site disposal.

As an initial screen the soil results were inputted into Hazwaste Online™. This is a web-based facility that allows an assessment waste as either hazardous or non-hazardous waste based on relevant guidance and legislation.

Hazwaste Online™. has been designed to cover, amongst other waste types, the European Waste List of Waste (LoW) code number 17 "Construction and Demolition Waste (Including Excavated Soil from Contaminated Sites)".

Where less than limits of detection (LOD) were recorded, the value of the LOD was inputted.

Where applicable, appropriate metal species based on hazard statements/ molecular weight, site history, ground conditions and likely species present in soils were used (e.g. metal oxides relating to an ash based source).

The results show that all the samples tested are classified as NON-HAZARDOUS WASTE and LoW code "17-05-04 - soil and stones other than those mentioned in 17 05 03" is suitable. The Hazwaste Online™ output sheets are provided in Appendix F.

8. Conclusions

8.1. Geotechnical

It is considered that the Made Ground and soft consistency cohesive soils of the natural strata are not suitable for a founding material due to the inherent variability of the material. The loading should be transferred to the firm becoming stiff and very stiff CLAY or medium dense GRAVEL to a minimum depth of 0.8m.

Foundation options will be dependent upon the location and types of structures which are proposed but are considered likely to comprise:

- Conventional strip foundations on the underlying natural granular and cohesive soils supporting walls; and,
- Pad footings supporting column loads.

A conservative s_u of 50kPa is assigned to the cohesive soils from a depth of *c*. 0.8mbgl for the natural strata, returning an allowable bearing capacity (ABC) of 100kN/m^2 for standard strip foundation.

A conservative value of ABC of 75kN/m^2 can be used at c. 1.0mbgl in the granular material.

Due to the presence of varying MG thickness typically to a depth of 0.5mbgl across the site, with the exception of location TP103 where MG is 1.9m thick, it is considered that suitable preparation of the sub-grade, by a combination of excavation and re-compaction, a suspended floor slab should prove suitable for the proposed buildings.

A single groundwater strike was recorded at 1.2mbgl within and it is considered that conventional sump pumping should be adequate to dewater any excavations. Trial pits were generally stable.

The concrete classification in accordance with BRE Special Digest 1 (2005) is DS-1 AC1s, where no groundwater is present and the water table is static. At location WS103, groundwater level was struck at 1.2mbgl. If the groundwater level is considered fluctuating, then a DS-1 AC-2z should be considered in the design. If the foundations are located under the water table or in granular material where perched water can be encountered, then a DS-1 AC-2z class should be used for the design.

8.2. Contamination Assessment

A revised contamination conceptual model has been produced by LKC which is summarised in Table 8-1.

PL	Contaminant	Risk	Recommendations
1	Asbestos, metals, PAHs, petroleum hydrocarbons, other inorganic / inorganic contaminants	Low	No remediation required.
2	Volatile contaminants	Low	No remediation required.
3	Carbon dioxide and methane / radon	Moderate / Low	Low risk assumed. No remediation required.
4	Groundwater (mobile contaminants)	Low	No remediation required.
5	Organic contaminants.	Low	No remediation required.

Table 8-1: Summary Risk Table.
PL=Pollutant Linkage, see Table 6-3 for details.

8.3. Waste Assessment

The results show that all the samples tested are classified as non-hazardous for disposal.

9. Recommendations

The recommendations/requirements provided below are considered appropriate for the site based on the site investigation work undertaken.

A summary of remediation requirements is included in Table 9-1.

PL	Recommendation
1	No remediation required
2	No remediation required
3	No remediation required
4	No remediation required
5	No remediation required

Table 9-1: Remediation Summary.

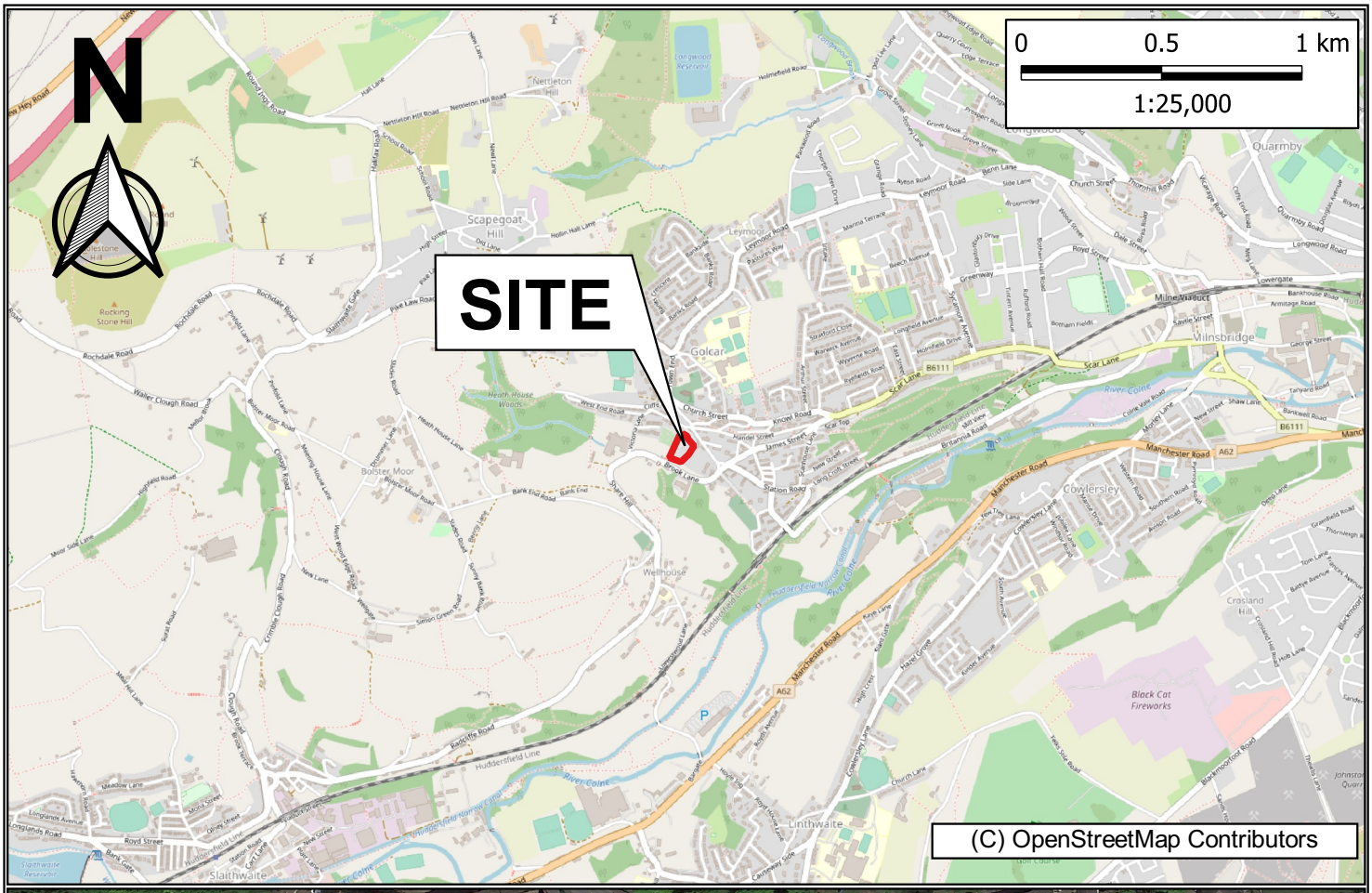
Based on the findings of the site investigation and risk assessment, no remediation is required. It is understood that no unexpected ground conditions or contamination was identified during groundworks.

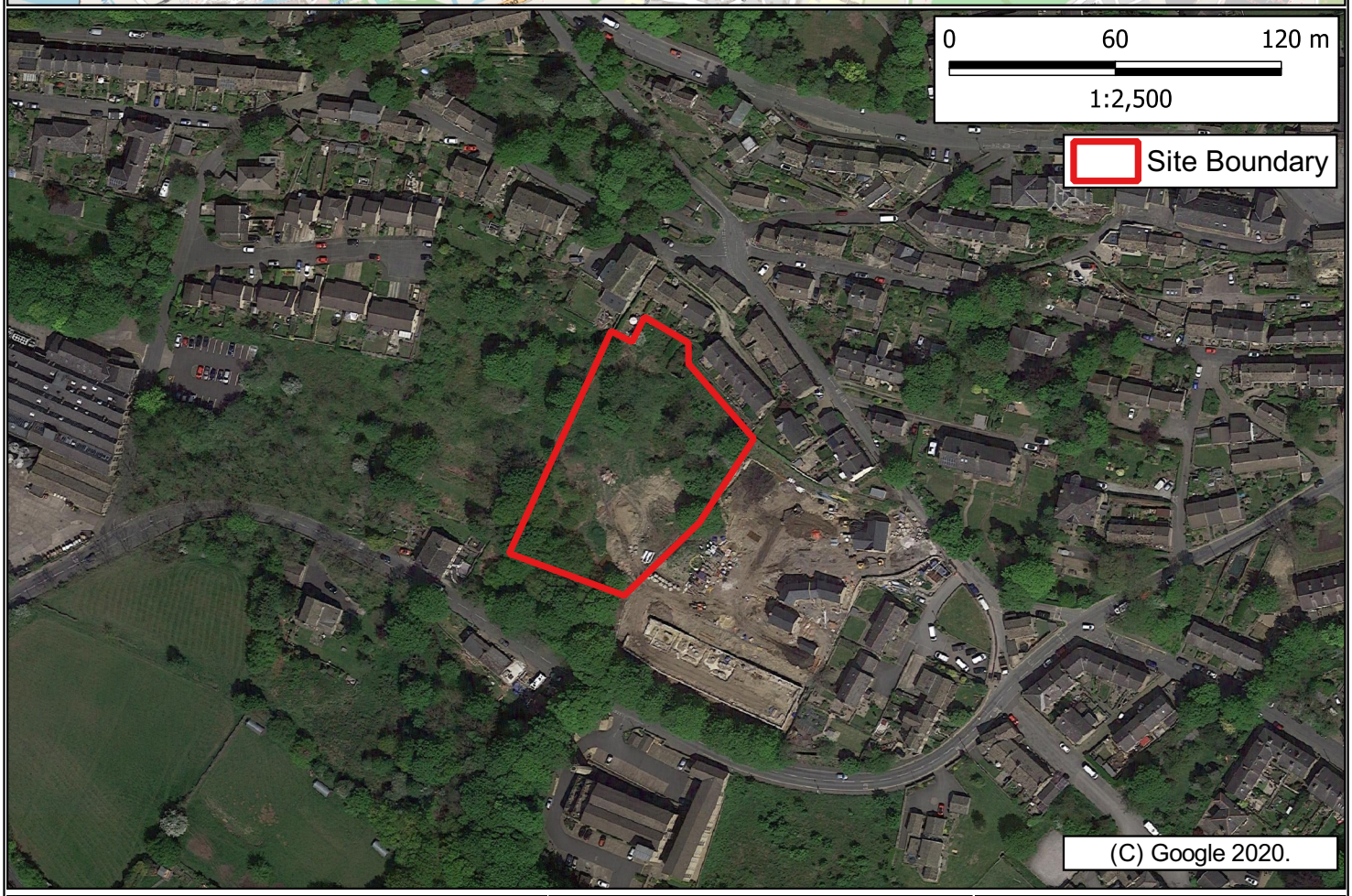
Soils currently on site have been appropriately tested to confirm that they are suitable for use on site.

As the development is complete no further investigation or validation work is anticipated to be required.

It is recommended that the associated contamination planning conditions is discharged following a review of this report by an appropriate contamination land officer.

Figures and Plans





Client: Violet Homes Ltd				Title: Site Location & Boundary Plan	LK CONSULT
Site: Carr Top Road, Golcar				Scale (see scale bar): 1:25,000 & 1:2,000 @ A4	Figure: 1
Job No.: LKC 20 1909	Drawn By: NJ	Checked By: CH	Drawn: Jan 2021		Revision:

Extract from: Nicol Thomas
Drawing Ref: Site Plan, No.(PA)01, Rev:C (02/08/2019)

KEY

- Site Boundary
- Easement Line
- 1.8m vertical board timber fence
- Hedge
- Retaining wall
- 1200mm new wall

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LK CONSULT LIMITED

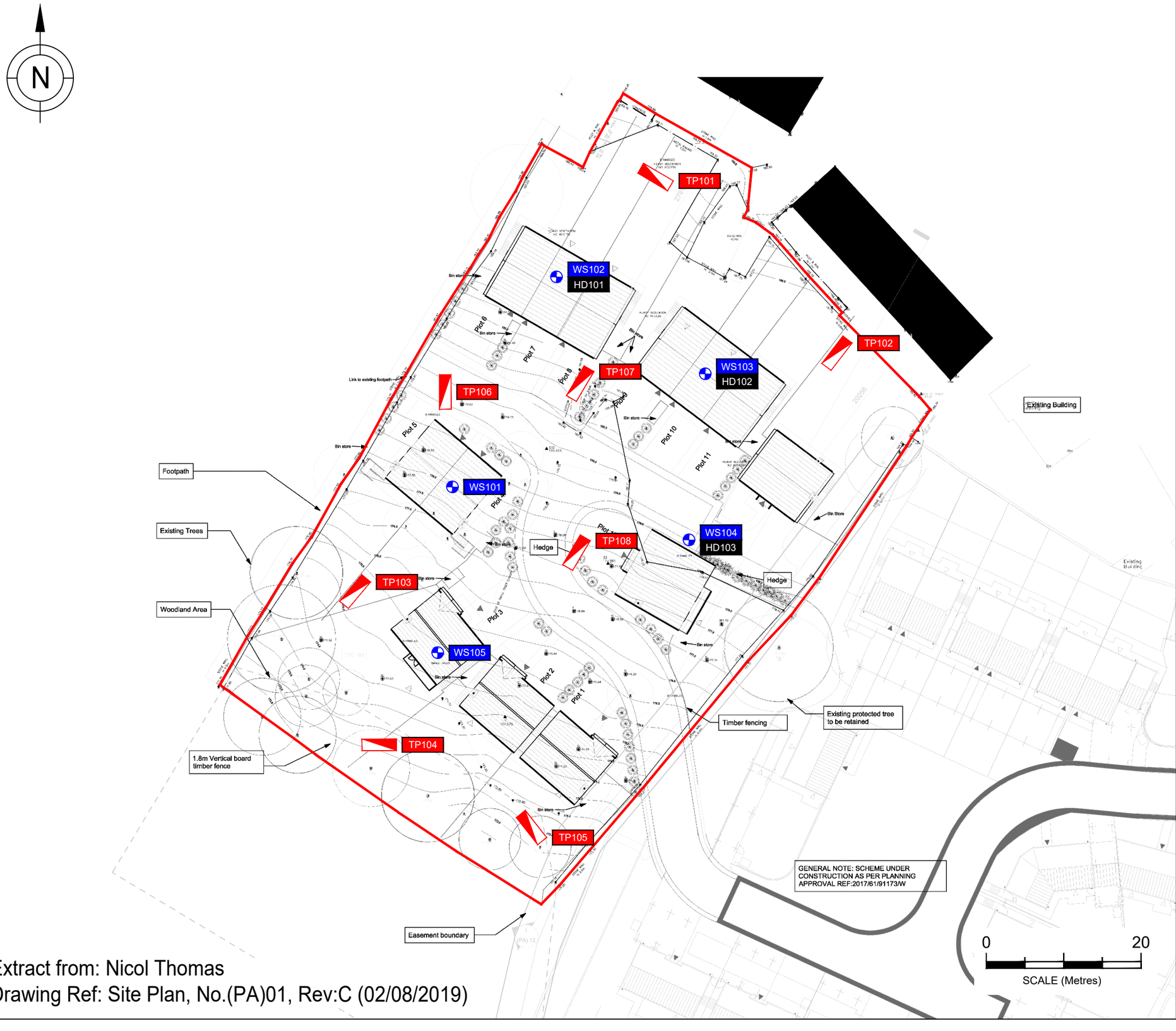
Client: Violet Homes Ltd

Site: Carr Top Lane, Golcar

Title: Proposed Development Plan

Job No.:	Scale (See Scale Bar):	Figure:	Revision:
LKC 20 1909	1:500 @ A3	2	

Drawn By:	Checked By:	Drawn:
AC	EM	Jan 2021



Extract from: Nicol Thomas
Drawing Ref: Site Plan, No.(PA)01, Rev:C (02/08/2019)

KEY

- Site Boundary
- Window Sample Borehole (WS)
- Trial Pit (TP)
- HD — Hand Dug Trial Pit (HD)

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LK CONSULT LIMITED

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Site: Carr Top Lane, Golcar

Title: Site Investigation Location Plan

Job No.:	Scale (See Scale Bar):	Figure:	Revision:
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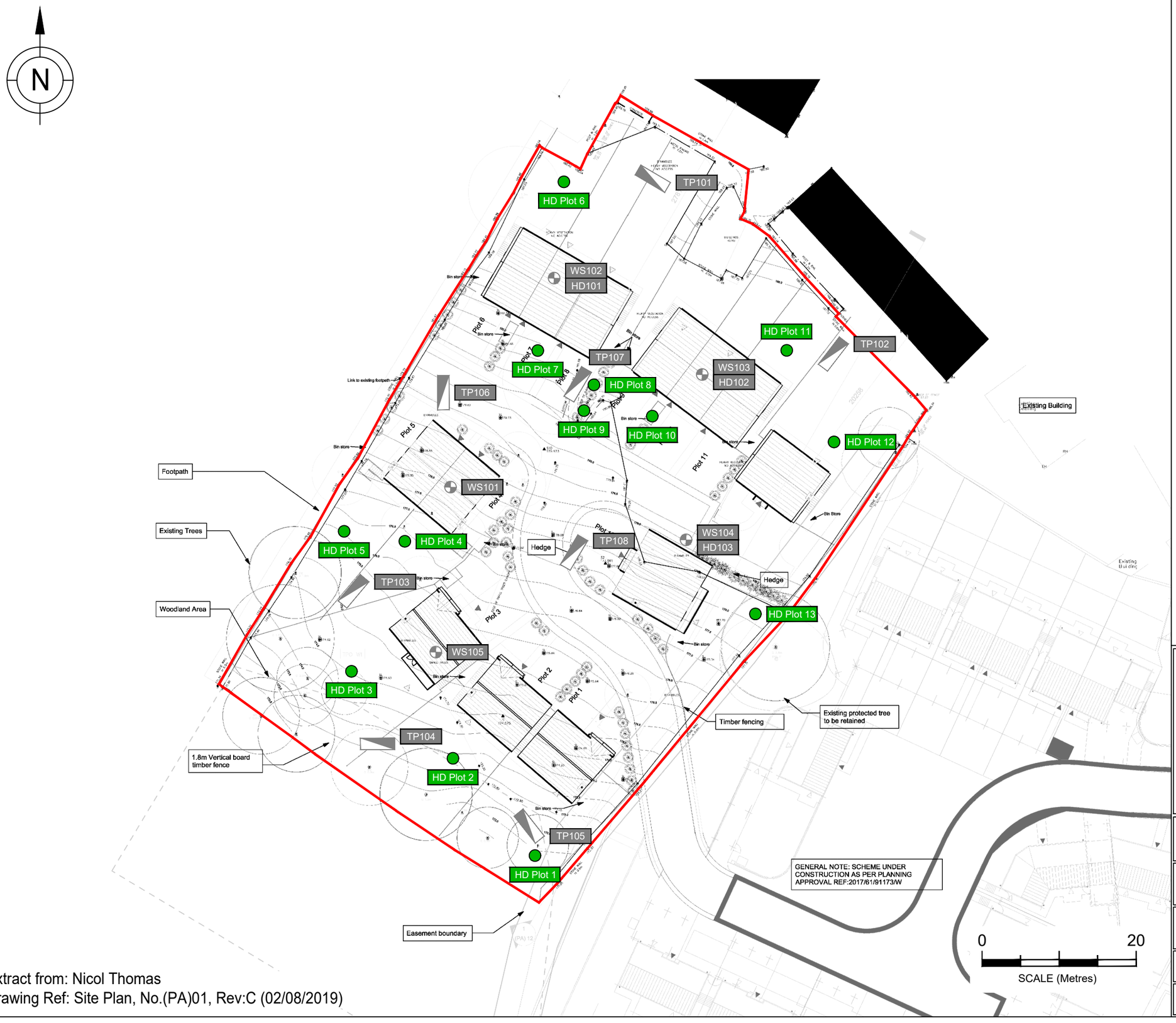
Drawn By:	Checked By:	Drawn:
AC	EM	Jan 2021



Extract from: Nicol Thomas
Drawing Ref: Site Plan, No.(PA)01, Rev:C (02/08/2019)

KEY

- Site Boundary
- Hand Dug Trial Pit (HD)

Previous SI Locations (LKC January 2021):

- Window Sample Borehole (WS)
- Trial Pit (TP)
- Hand Dug Trial Pit (HD)

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LK CONSULT LIMITED

Client: Violet Homes

Site: Carr Top Lane, Golcar

Title: Additional Site Investigation Location Plan

Job No.:	Scale (See Scale Bar):	Figure:	Revision:
LKC201909	1:500 @ A3	4	

Drawn By:	Checked By:	Drawn:
AC	LD	Apr 2025

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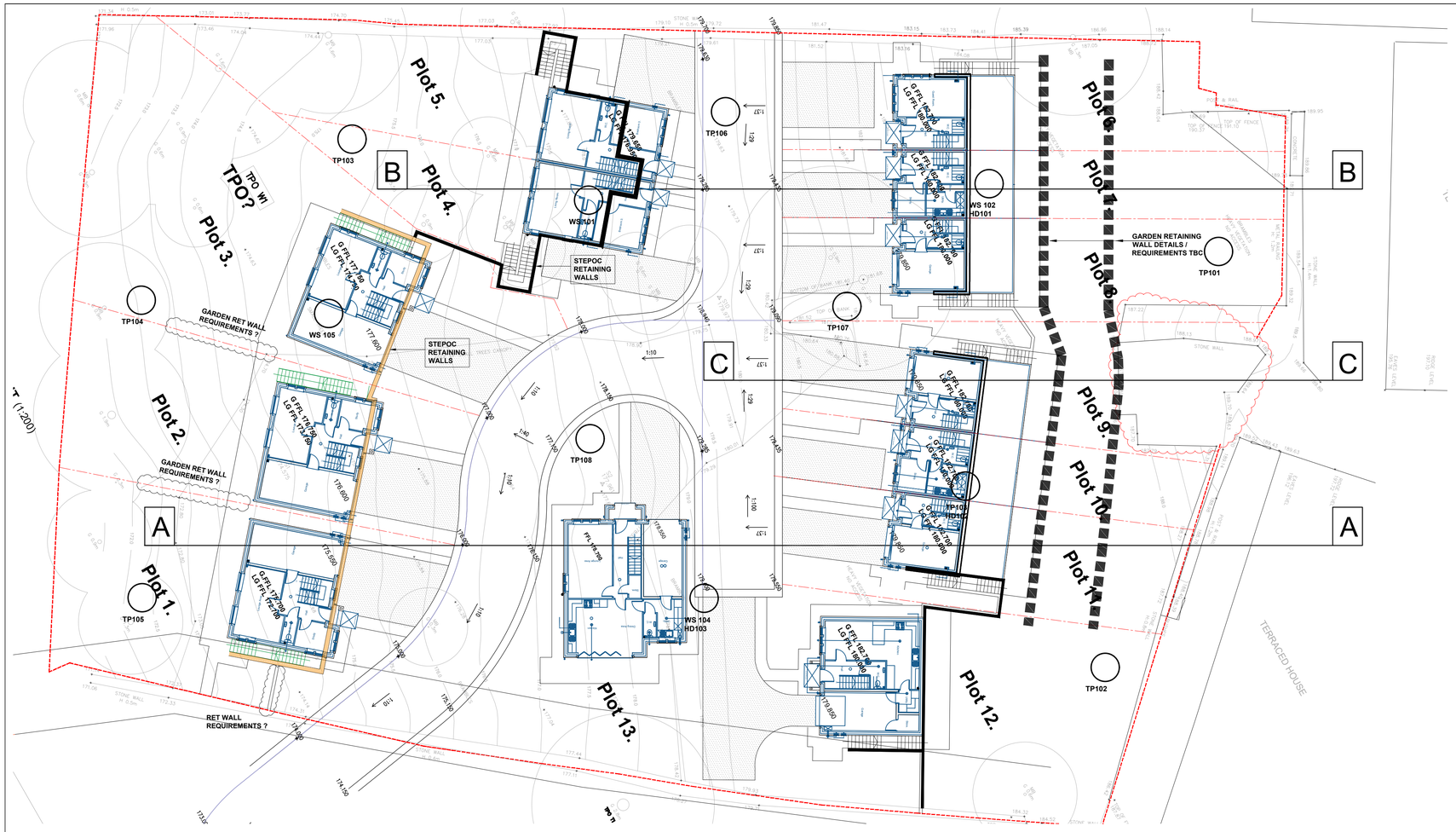
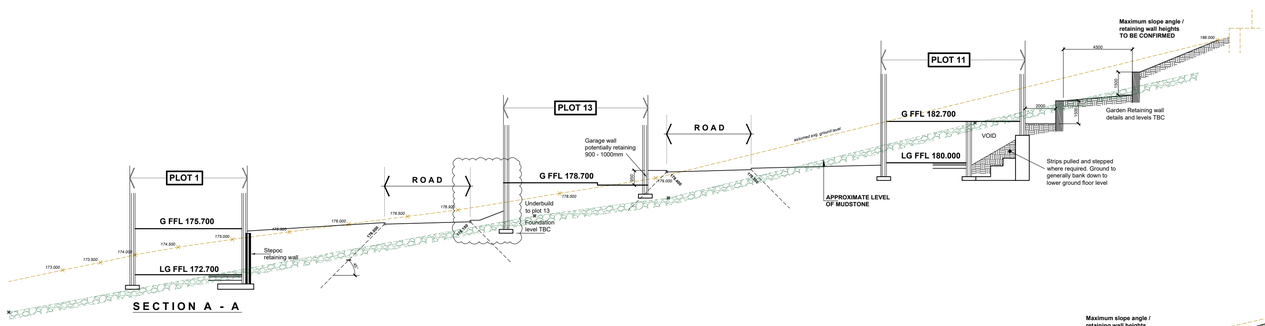
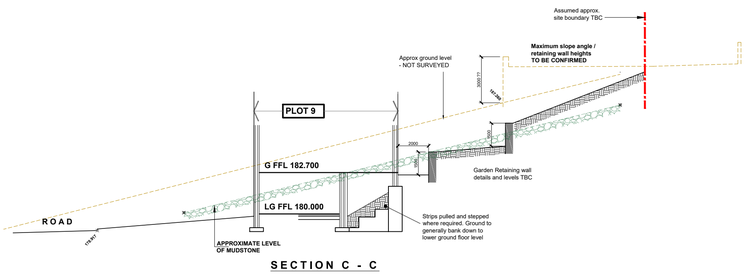
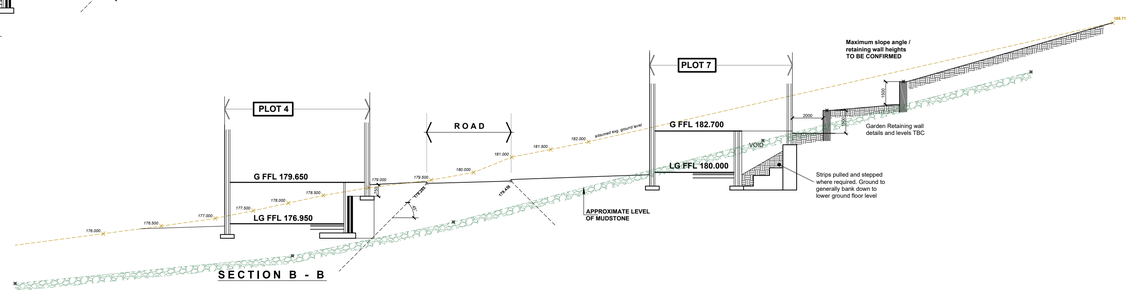








FOR APPROVAL

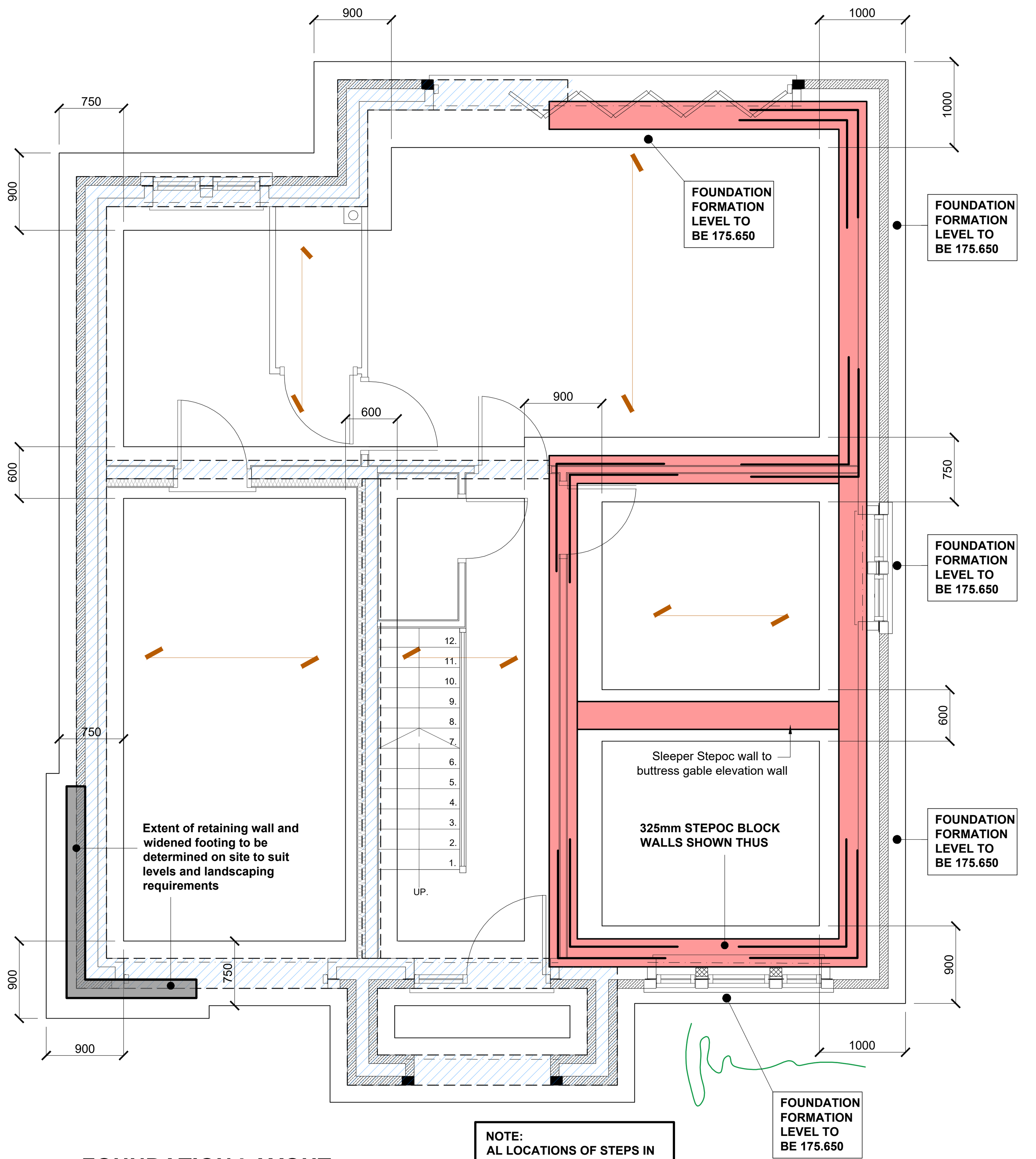
Revision	By	Check	Date	Description

Partington & Associates Limited
Structural Design Consultants

13 Gillibrand Street
Chorley
Lancashire PR7 2EJ

Tel: (01257) 249882 / 249863
e-mail: info@partington-associates.com
www.partington-associates.com

Client	BRIERSTONE LTD.	Scale @A1	1:50
Project	CARR TOP LANE GOLCAR	Date	JAN 2020
		Drawn	SB/PE
Title	PROPOSED SITE LAYOUT	Check	DO
Job No. 4515-20	Dwg No. 100 Rev. -	Approved	DO



FOUNDATION LAYOUT (1:50)

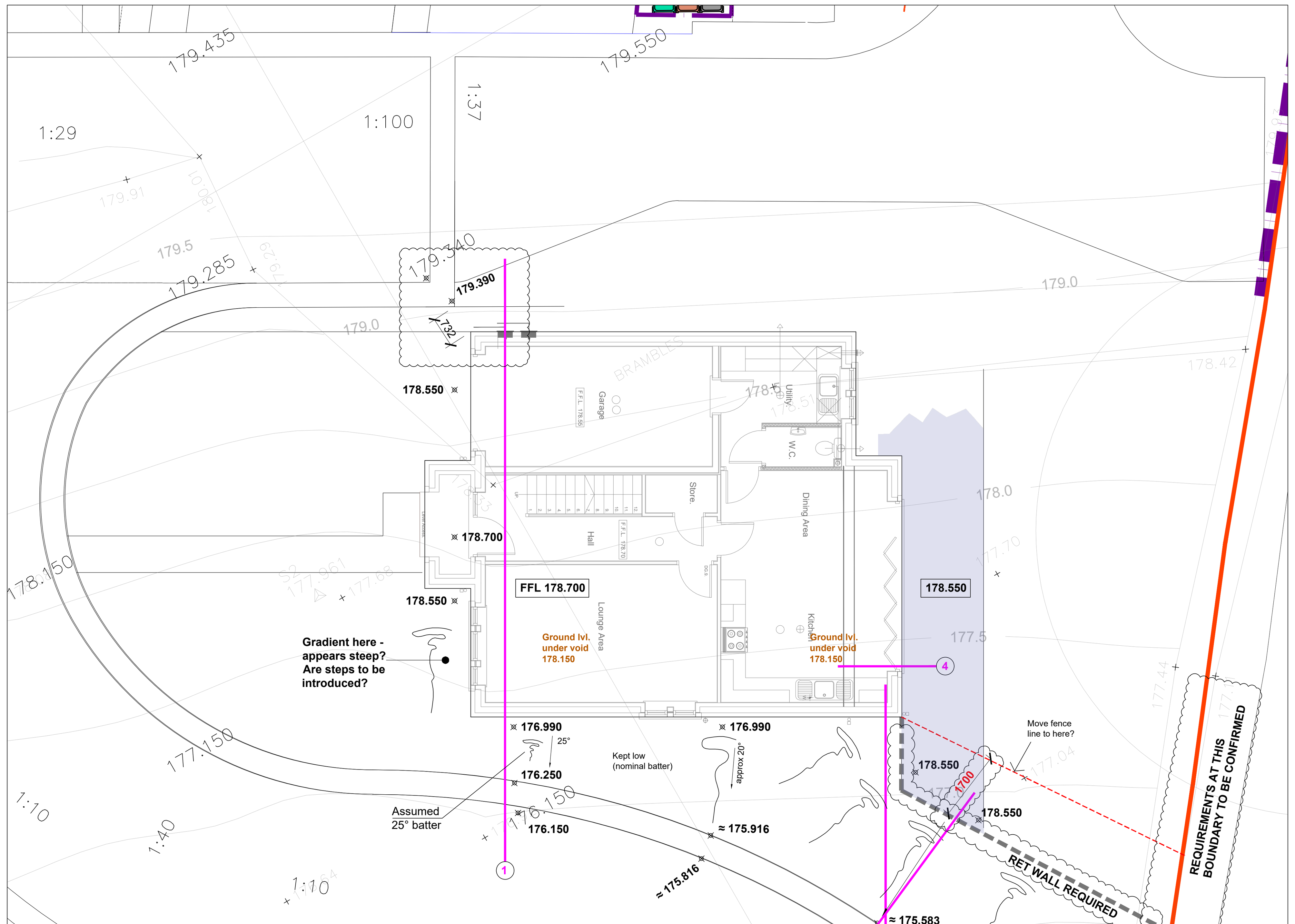
(INDICATING STRUCTURE OVER)

INDICATES SPAN OF LOWER GROUND FLOOR BEAM & BLOCK UNITS

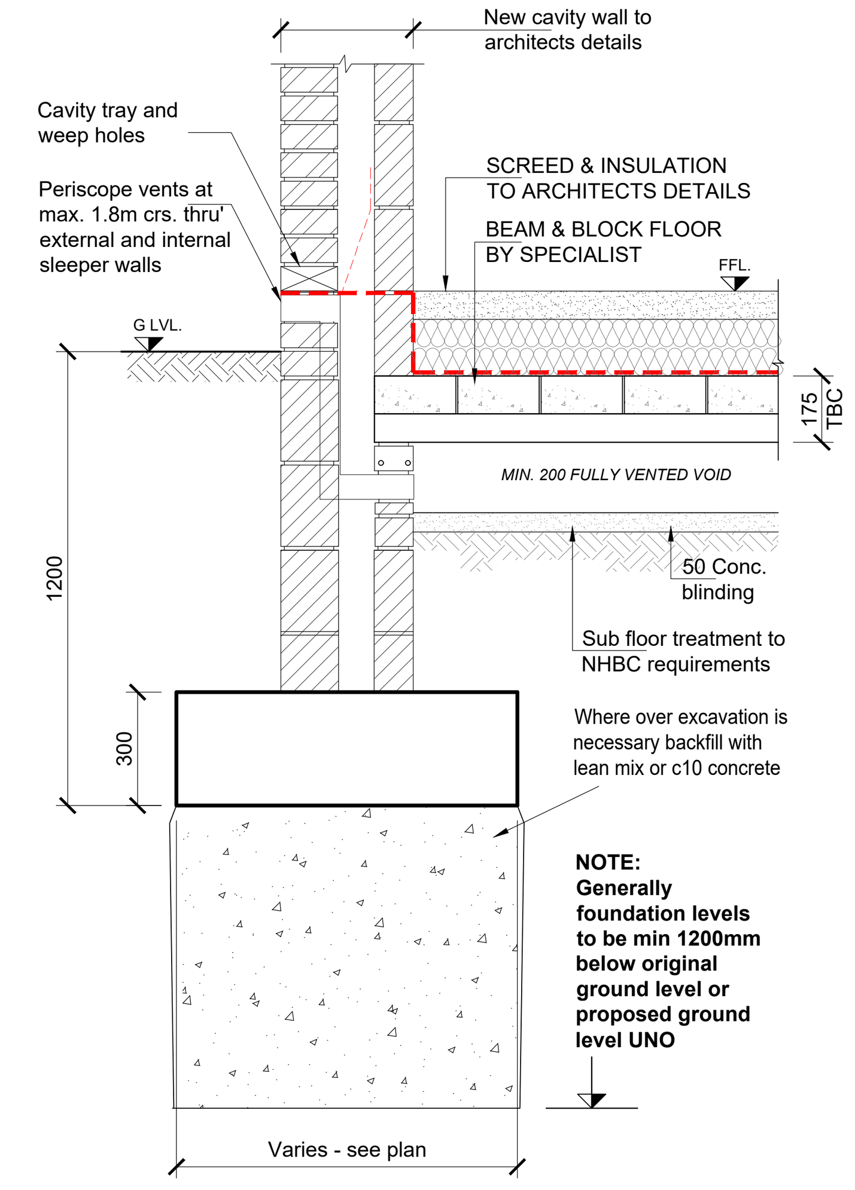
NOTE:
AL LOCATIONS OF STEPS IN FOUNDATIONS TO BE AGREED

NOTE:
Generally foundation levels to be min 1200mm below original ground level or proposed ground level UNO

NOTE:
All Stepoc wall details including reinforcement TBC
Allow for 1250 x 1250 H16 corner bars in pairs at 225 crs.



PART SITE PLAN (1:200)



TYPICAL FOUNDATION DETAIL (1:20)

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FOUNDATION NOTES

WHERE OVER EXCAVATION IS NECESSARY TO REACH SUITABLE GROUND, THE TRENCH MAY BACKFILLED USING LEAN MIX CONCRETE UP TO THE UNDERSIDE OF STRUCTURAL FOOTING.

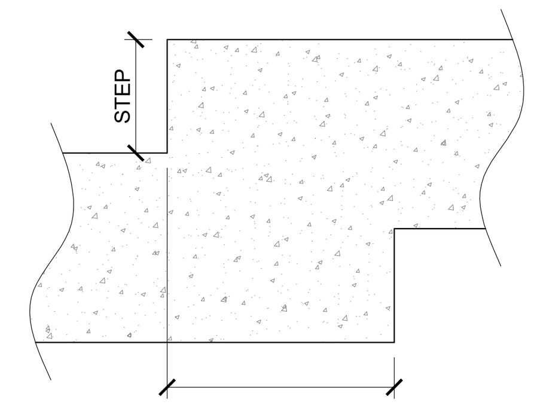
CONCRETE TO STRUCTURAL FOOTING TO BE C20 MIN UNLESS SPECIFIED OTHERWISE.

GROUND TO BE CAPABLE OF 100kN/m² SAFE BEARING PRESSURE AND APPROVED AS SUCH BY THE BUILDING INSPECTOR OR ENGINEER

ALL MASONRY BELOW GROUND TO BE TRENCH BLOCK OR FROST RESISTANT BRICK/BLOCK.

CAVITY CONSTRUCTION TO BE BACKFILLED WITH MORTAR UP TO 150mm BELOW UNDERSIDE OF SLAB.

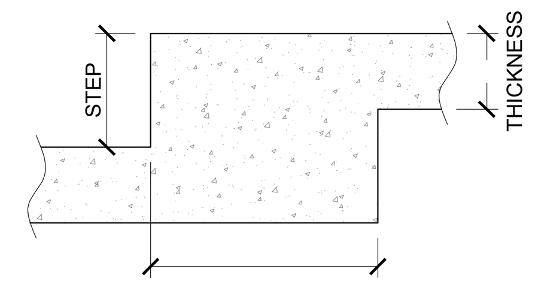
ADOPT 1:3 CEMENT:SAND (WITH PLASTICISER) MORTAR BELOW DPC.



OVERLAP NOT LESS THAN THE GREATEST OF: 2 x STEP HEIGHT OR 1.0m

TRENCH FILL

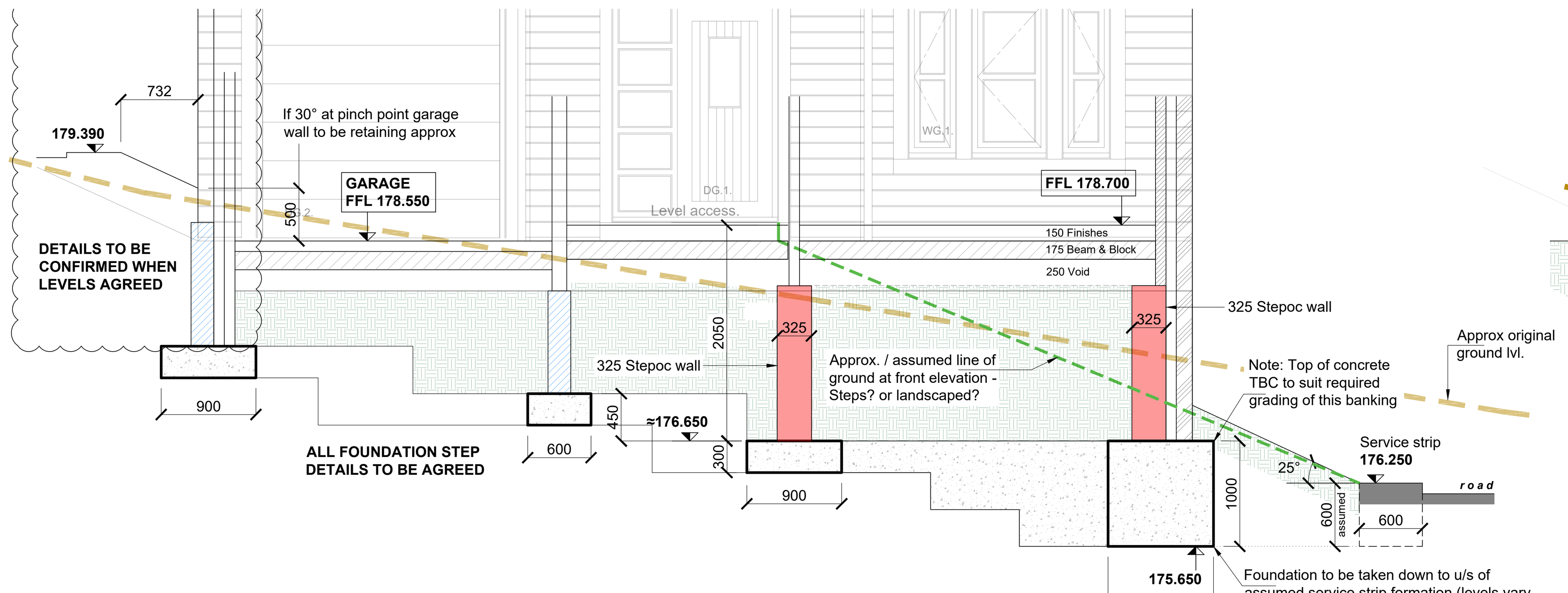
ALL STEPPED FOUNDATION DETAILS TO BE IN ACCORDANCE WITH NHBC STANDARDS (Ch 4.4)



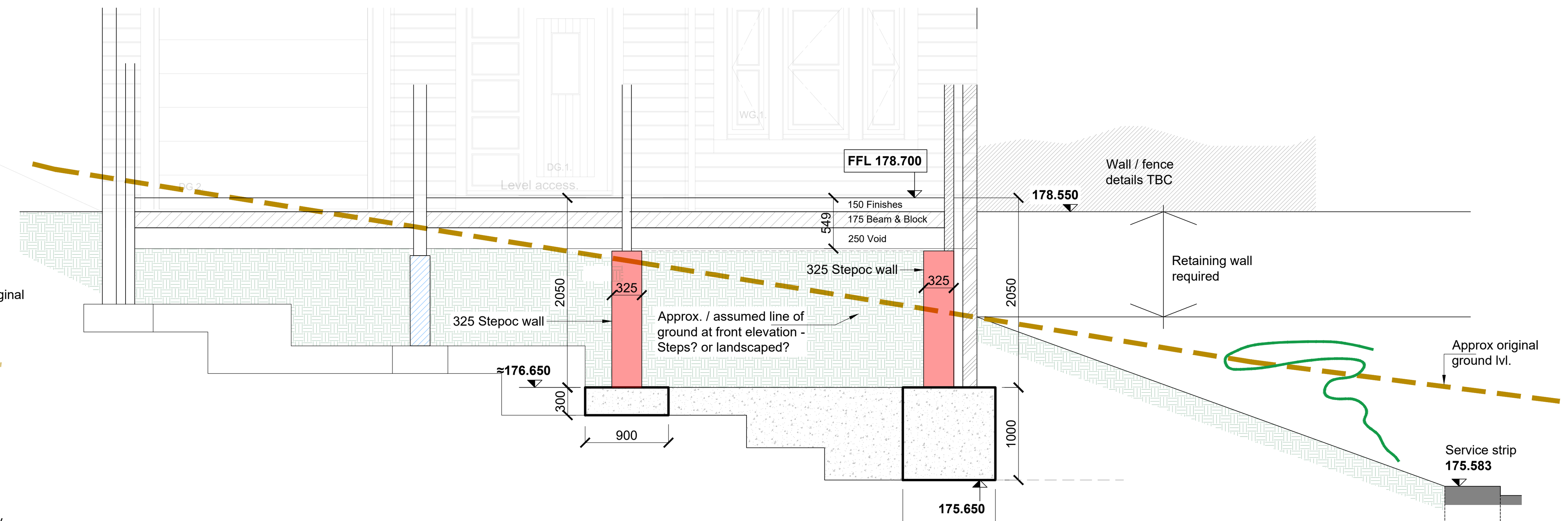
OVERLAP NOT LESS THAN THE GREATEST OF:-
2 X STEP HEIGHT
OR THICKNESS
OR 300MM

STRIP FOOTINGS

TYPICAL FOUNDATION STEPPING DETAILS (1:20)



SECTION 1 - 1 (1:50)



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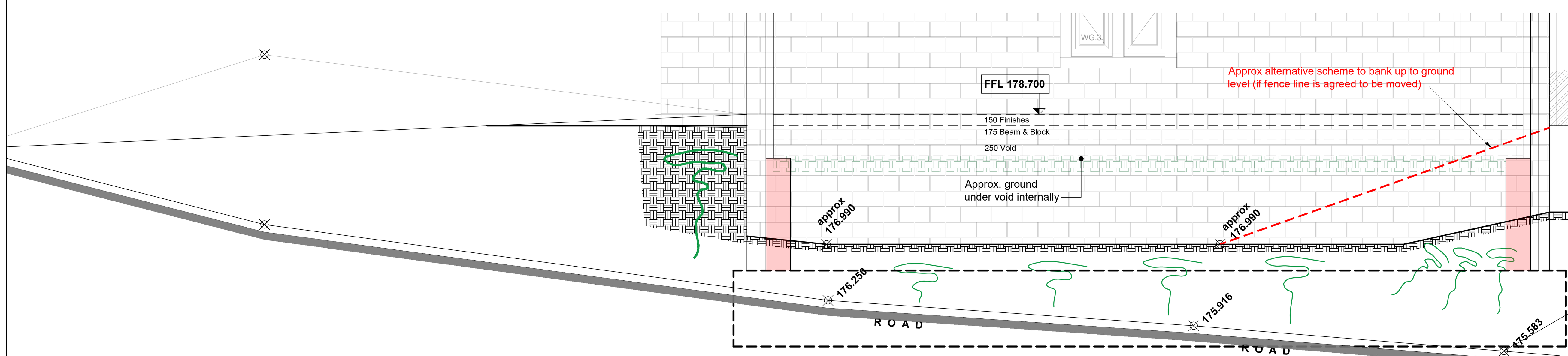
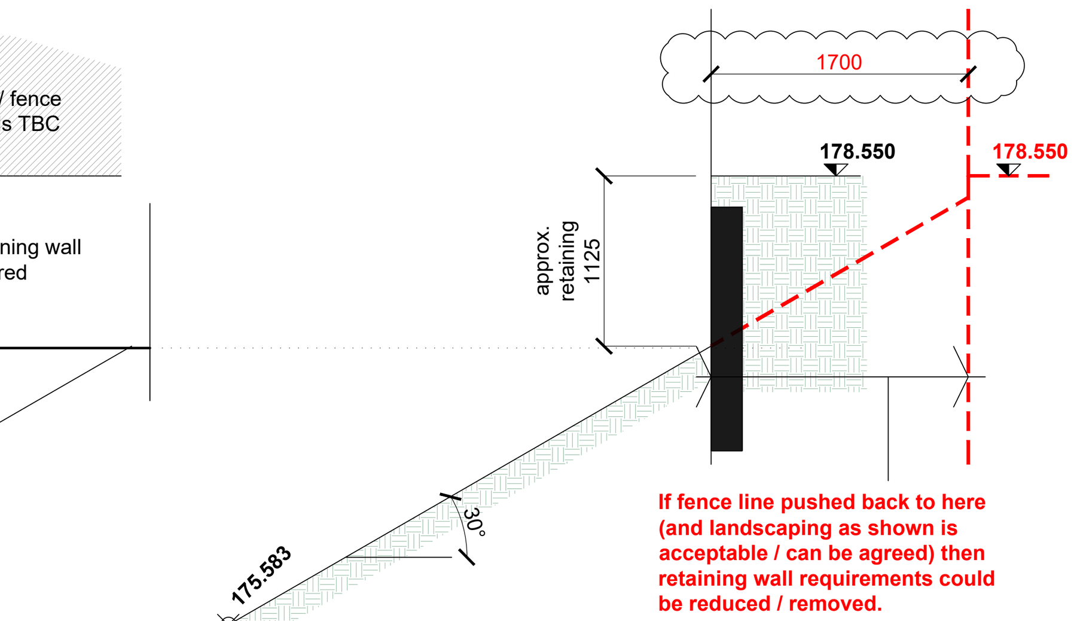


ELEVATION A - A (1:50)



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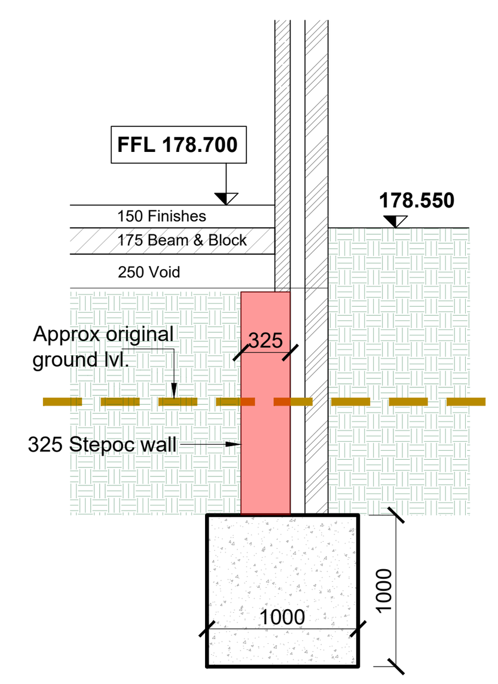


SECTION 4 - 4 (1:50)

FOR CONSTRUCTION

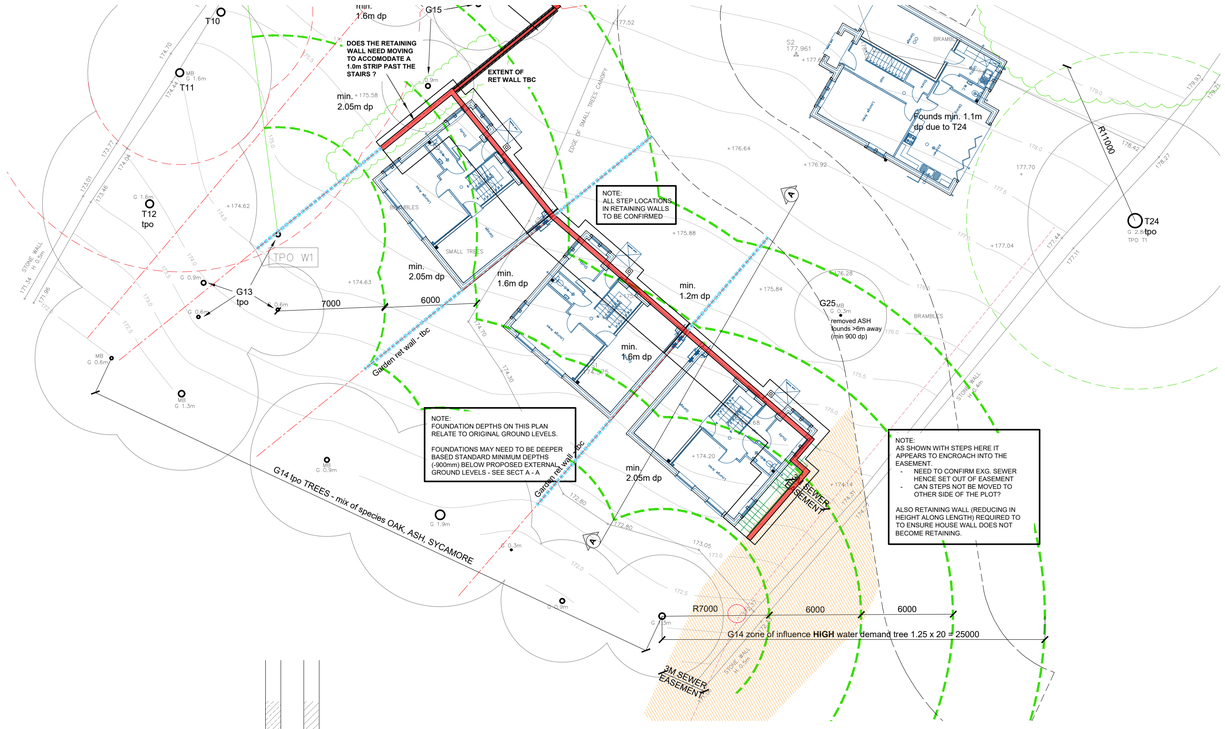
Revision	By	Check	Date	Description
B	PE	DO	OCT 22	REVISED FOR CONSTRUCTION
A	PE	DO	MAY 22	RETAINING WALLS UPDATED AT CLIENT REQUEST

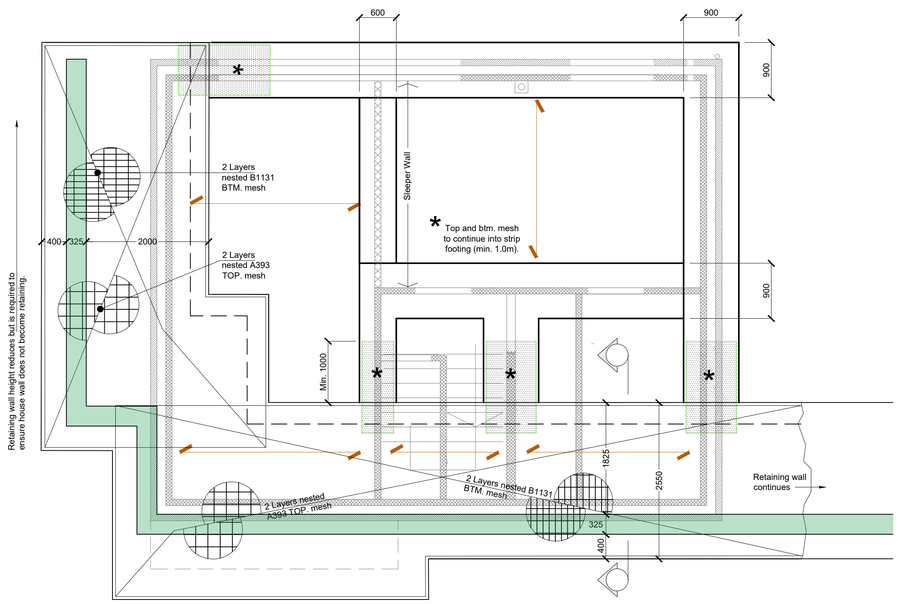
Partington & Associates Limited
Structural Design Consultants

13 Gillibrand Street
Chorley
Lancashire PR7 2EJ

Tel: (01257) 249882 / 249863
e-mail: info@partington-associates.com
www.partington-associates.com

Client	BRIERSTONE LTD	Scale @A1	1:50
Project	CARR TOP LANE GOLCAR	Date	Jan '22
		Drawn	PE
Title	PLOT 13	Check	DO
Job No. 4515-21	Dwg No. F13 / Rev. B	Approved	DO

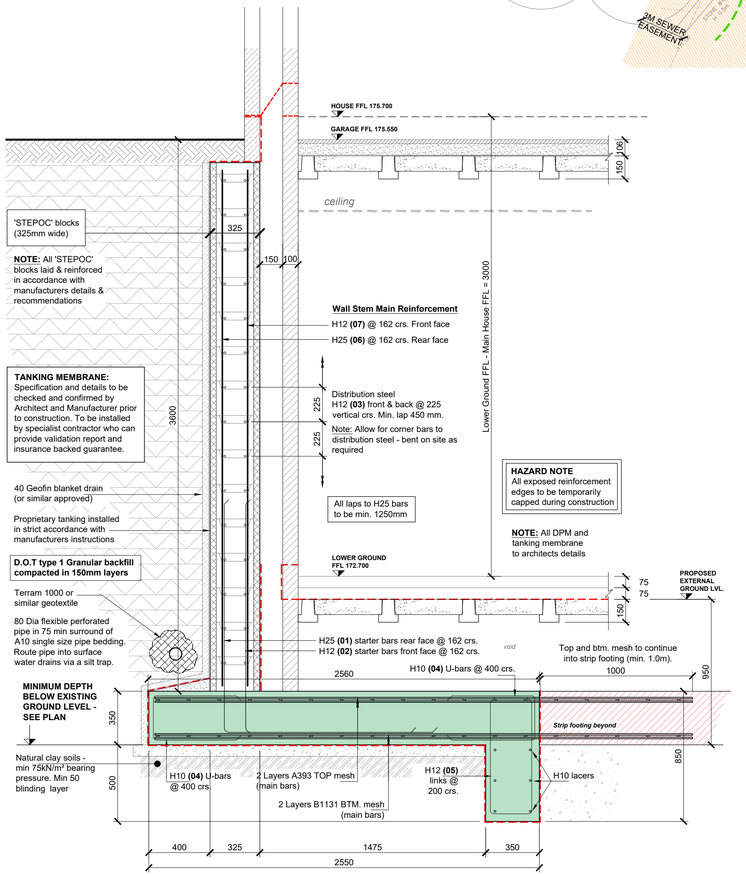




FOUNDATION LAYOUT (1:50)

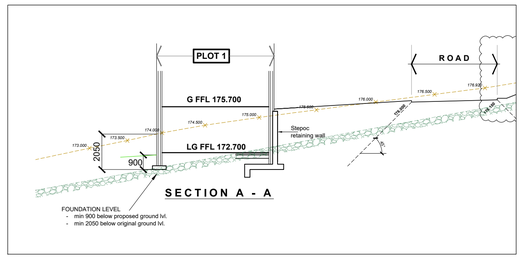
PLOT 1

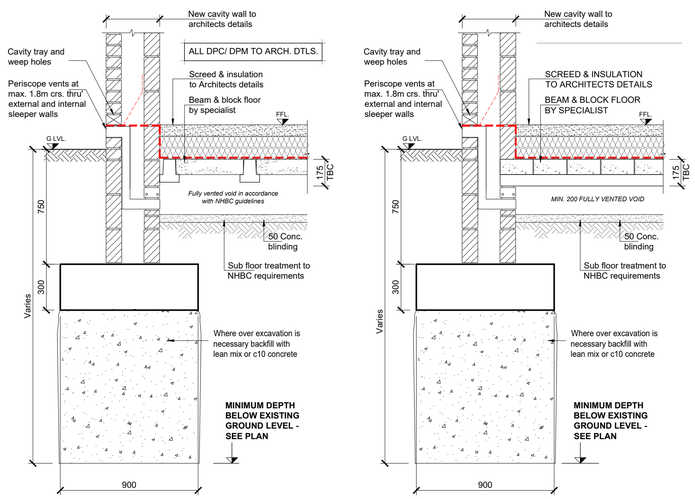
INDICATES SPAN OF LOWER GROUND FLOOR BEAM & BLOCK FLOOR UNITS

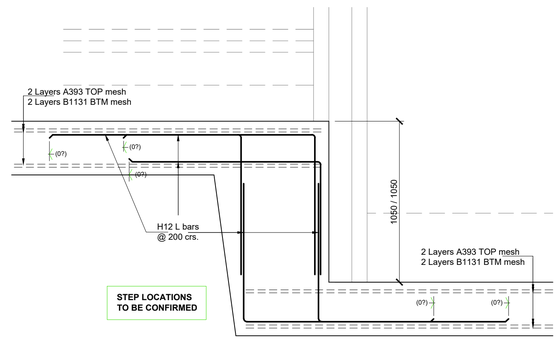


TYPICAL RETAINING WALL DETAIL (1:20)

PLOTS 1, 2 & 3







TYPICAL RETAINING WALL STEP DETAIL (1:20)

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REVIEW ALL DRAWINGS AND REPORT ANY DISCREPANCIES TO PARTINGTON & ASSOCIATES PRIOR TO COMMENCEMENT.

ALL WORK IS TO COMPLY WITH ALL RELEVANT HEALTH AND SAFETY LEGISLATION AND REGULATIONS

DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS AND LEVELS INCLUDING ANY ABUTMENT TO EXISTING STRUCTURES TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT.

WORK FROM FIGURED DIMENSIONS ONLY.

THE CONTRACTOR SHALL PROVIDE ALL THE NECESSARY TEMPORARY WORKS AND TO ENSURE OVERALL STABILITY OF THE BUILDING DURING THE CONSTRUCTION PERIOD.

ASSUMPTIONS NOTED ON THIS DRAWING ARE TO BE CHECKED AND CONFIRMED. IF FOUND TO BE DIFFERENT ENGINEER SHOULD BE INFORMED TO CONFIRM ADEQUACY OF THE DESIGN.

NO DEVIATION FROM DETAILS SHOWN ON THIS DRAWING IS ALLOWED WITHOUT PARTINGTON & ASSOCIATES PRIOR PERMISSION IN WRITING.

ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT SPECIFICATIONS ISSUED BY PARTINGTON & ASSOCIATES, BRITISH STANDARD CODES OF PRACTICE, STATUTORY REQUIREMENTS AND THE CONTRACT DOCUMENTS.

STEELWORK NOTES

THE CONTRACTOR SHALL MAKE ALL NECESSARY ALLOWANCES FOR CONSTRUCTION TOLERANCES BETWEEN CONCRETE & STEEL

ALL STEEL TO BE GRADE S355 TO BS EN 10025 UNLESS NOTED OTHERWISE

ALL BOLTS SHALL BE GRADE 8.8, MINIMUM TWO BOLTS FOR CONNECTION

ALL WELDS TO BE 6 CONTINUOUS FW (U.N.O)

ALL LOADS ARE FACTORED IN ACCORDANCE WITH BS 5950 : PART 1 (U.N.O)

FIRE PROTECTION AND FINISHES TO ARCHITECTS DETAILS

ALL STEELWORK TO BE MANUFACTURED BY A CE MARKED STEELWORK FABRICATOR WHO HAS OBTAINED A MINIMUM EXECUTION CLASS EQUAL TO THAT REQUIRED FOR THE PROJECT. ALL SUPPORTING QUALIFICATIONS TO BE PROVIDED PRIOR TO FABRICATION

ALL STEELWORK TO BE CE MARKED PRIOR TO DELIVERY AND SHOULD MEET THE FOLLOWING EXECUTION CLASS IN ACCORDANCE WITH BS EN 1090-2
EXECUTION CLASS = EXC2

ALL DIMENSIONS TO BE CHECKED BY FABRICATOR PRIOR TO ERECTION OF STEELWORK

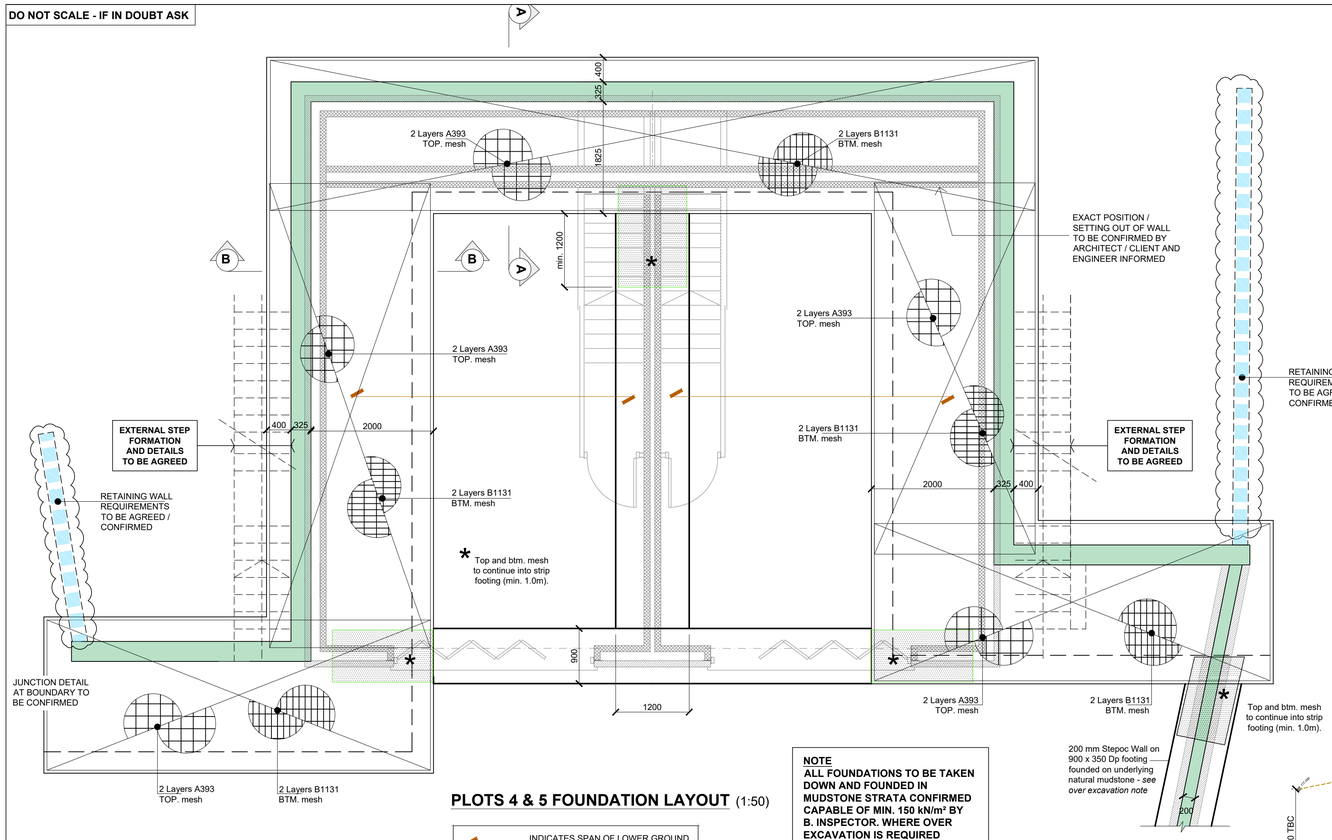
FOR CONSTRUCTION

Revision	By	Check	Date	Description
C	PWE	DO	Oct 22	Drawing revsied For Construction
B	PWE	DO	Feb 22	Drawing updated to suit latest layouts
A	PWE	DO	Feb 22	Drawing updated

Partington & Associates Limited
Structural Design Consultants
13 Gillibrand Street
Chorley
Lancashire PR7 2EJ
Tel: (01257) 249882 / 249863
e-mail: info@partington-associates.com
www.partington-associates.com

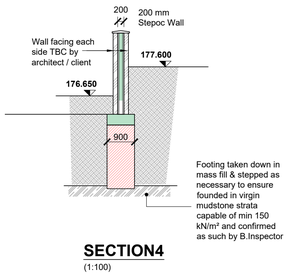
Client	BRIERSTONE LTD	Scale @A1	1:50 @ A1
Project	CARR TOP LANE GOLCAR	Date	Jan '22
		Drawn	SB
Title	FOUNDATION DETAILS - PLOT 1, 2 & 3	Check	DO
Job No.	4515-21	Dwg No. F-01 Rev. C	Approved DO

DO NOT SCALE - IF IN DOUBT ASK

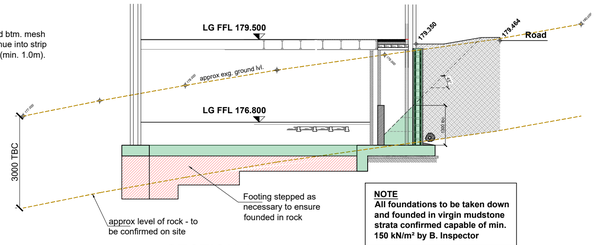


PLOTS 4 & 5 FOUNDATION LAYOUT (1:50)

NOTE
ALL FOUNDATIONS TO BE TAKEN DOWN AND FOUNDED IN MUDSTONE STRATA CONFIRMED CAPABLE OF MIN. 150 kN/m² BY B. INSPECTOR. WHERE OVER EXCAVATION IS REQUIRED BACKFILL WITH GEN 1 CONCRETE

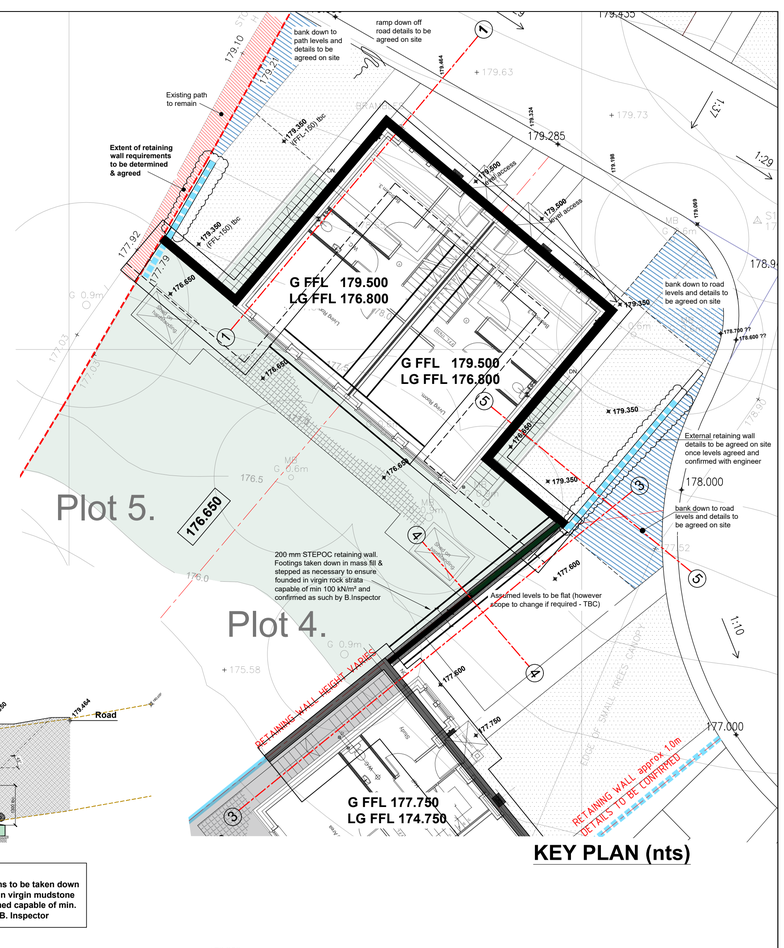


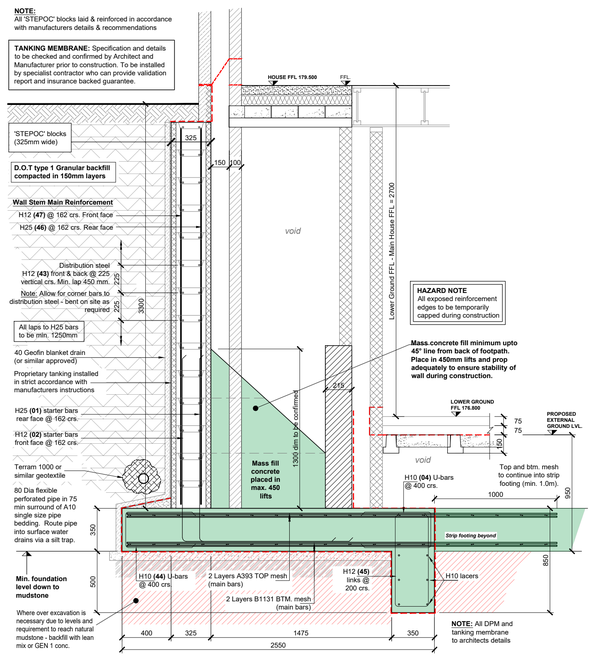
SECTION4
(1:100)



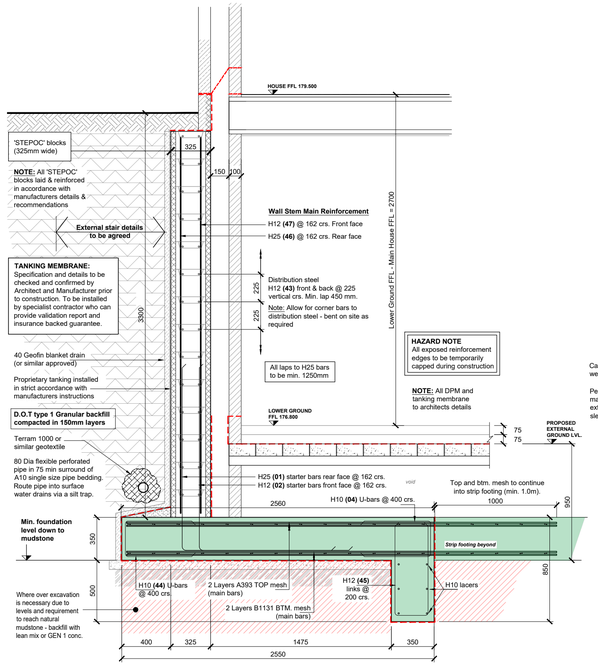
NOTE
All foundations to be taken down and founded in virgin mudstone strata confirmed capable of min. 150 kN/m² by B. Inspector

SECTION 1
(1:100)

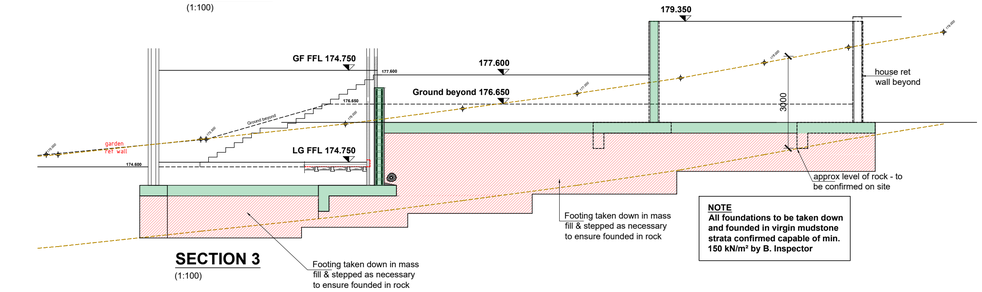




SECTION A - A (1:25)
PLOTS 4 & 5

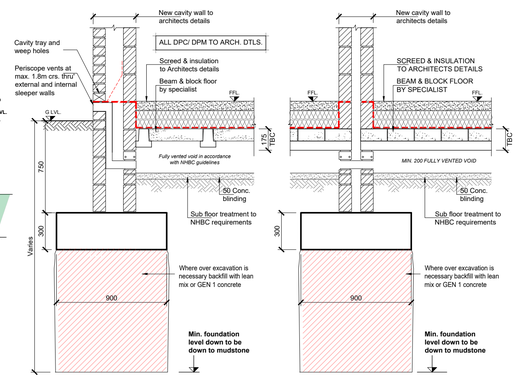


SECTION B - B (1:25)
PLOTS 4 & 5



NOTE
All foundations to be taken down and founded in virgin mudstone strata confirmed capable of min. 150 kN/m² by B. Inspector

SECTION 3
(1:100)



DRAWING TO BE READ IN CONJUNCTION WITH 4515-21 DRG 50

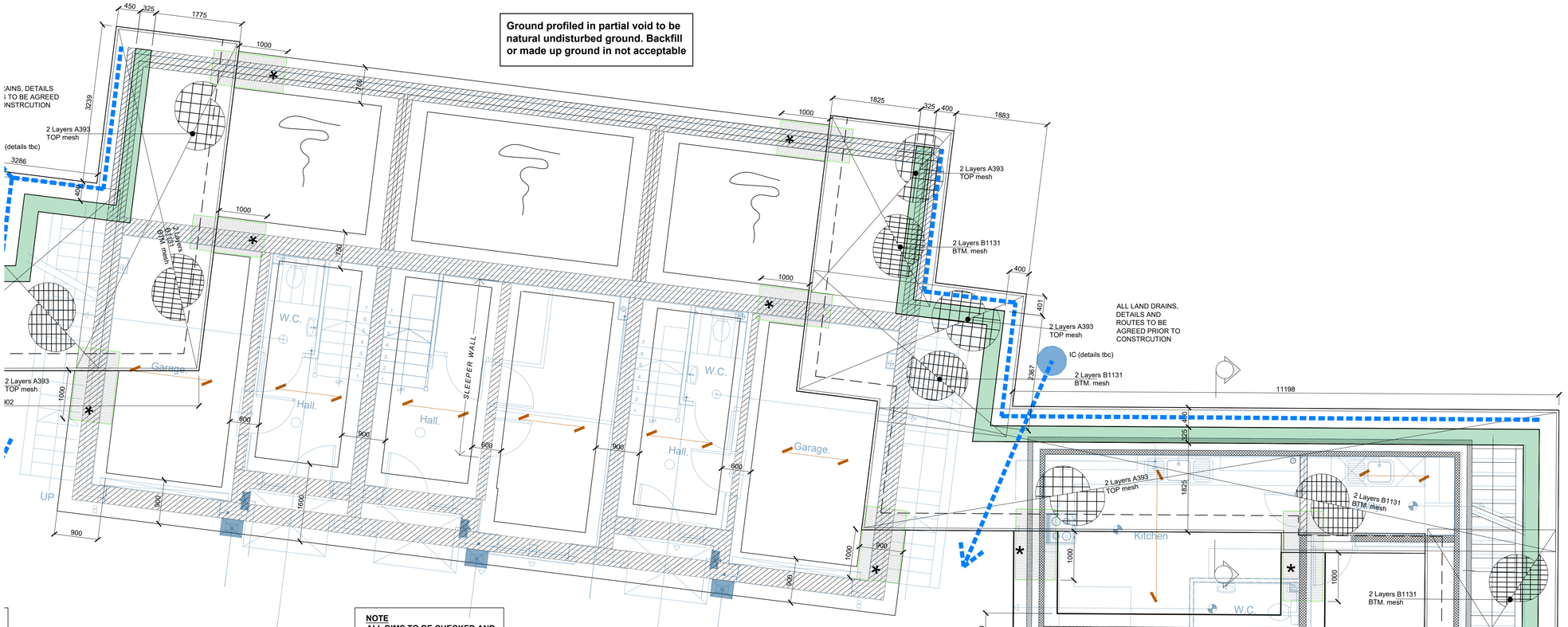
FOR CONSTRUCTION

Revision	By	Check	Date	Description
C	PE	DO	OCT 22	REVISED FOR CONSTRUCTION
B	PE	DO	JULY 22	RETAINING WALL RC BACKFILL ALTERED
A	PE	DO	MAY 22	RETAINING WALLS UPDATED AT CLIENT REQUEST

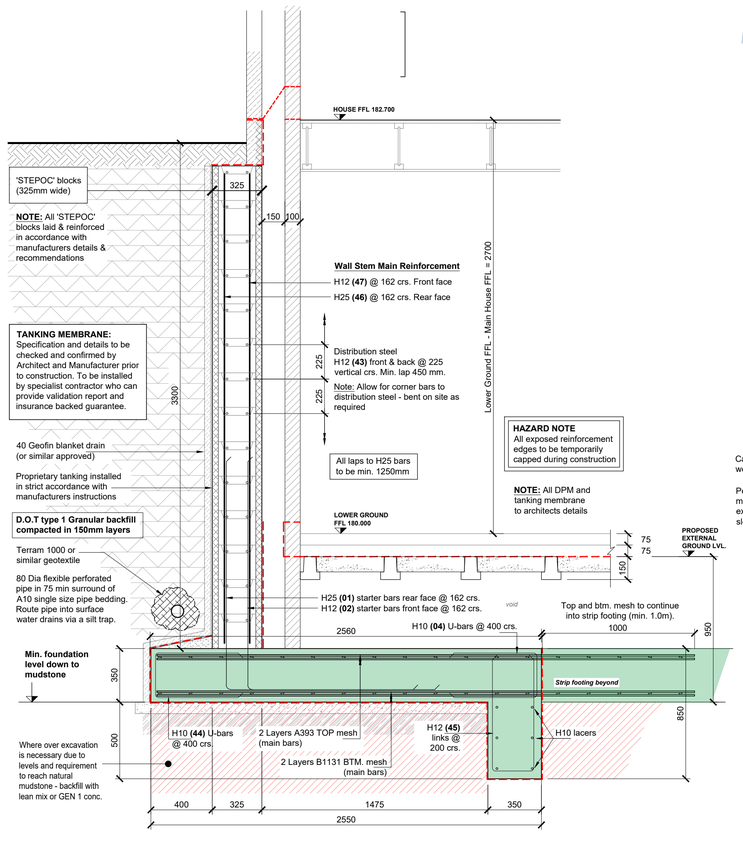
Partington & Associates Limited
Structural Design Consultants
13 Gillibrand Street
Chorley
Lancashire PR7 2EJ
Tel: (01257) 249882 / 249863
e-mail: info@partington-associates.com
www.partington-associates.com

Client	BRIERSTONE LTD	Scale @A1	1:50 @ A1
Project	CARR TOP LANE, GOLCAR	Date	Jan '22
		Drawn	SB
Title	PLOTS 4 & 5	Check	DO
Job No.	4515-21	Dwg No. F02	Rev. C / Approved DO

DO NOT SCALE - IF IN DOUBT ASK

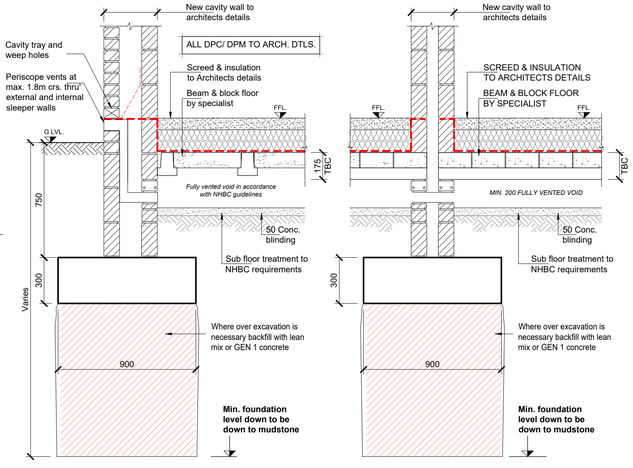


NOTE
ALL DIMS TO BE CHECKED AND CO-ORDINATED BY ARCHITECT PRIOR TO CONSTRUCTION



TYPICAL RETAINING WALL DETAIL (1:20)

PLOTS 4 & 5



FOUNDATION LAYOUT (1:50)

(INDICATING STRUCTURE OVER)

INDICATES SPAN OF LOWER GROUND FLOOR BEAM & BLOCK UNITS

NOTE
ALL FOUNDATIONS TO BE TAKEN DOWN AND FOUNDED IN MUDSTONE STRATA CONFIRMED CAPABLE OF MIN. 150 kN/m² BY B. INSPECTOR. WHERE OVER EXCAVATION IS REQUIRED BACKFILL WITH GEN 1 CONCRETE

* Top and btm. mesh to continue into strip footing (min. 1.0m).

FOR CONSTRUCTION

Revision	By	Check	Date	Description
A	PE	DO	OCT 22	REVISED FOR CONSTRUCTION

Partington & Associates Limited
Structural Design Consultants
13 Gillibrand Street, Chorley, Lancashire PR7 2EJ
Tel: (01257) 249882 / 249863
e-mail: info@partington-associates.com
www.partington-associates.com

Client	BRIERSTONE LTD	Scale @A1	1:50 @ A1
Project	CARR TOP LANE, GOLCAR	Date	Jan '22
		Drawn	SB
Title	PLOTS 6-8 & 9-11 & 12 (2 of 2)	Check	DO
Job No.	4515-21	Dwg No. F04	Rev. A
		Approved	DO

Appendix A – Risk Matrix

RISK EVALUATION

The method for risk evaluation is a qualitative method of interpreting the output from the risk estimation stage of the assessment, based on CIRIA 552[29]. It involves the classification of the:

- Magnitude of the potential consequence (severity) of the risk occurring (Table A).
- Magnitude if the probability (likelihood) of the risk occurring (Table B).

Consequence (Severity)		
Classification	**Definition**	**Example**
Severe	Short term (acute) risk to human health likely to results in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note: water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings/properties. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definition of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).	High Concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled waters. Explosion, causing building collapse (can also equate to short term human health risk if buildings are occupied).
Medium	Chronic damage to Human Health ('significant harm' as defined in DETR, 2000). Pollution of sensitive water resources (note Water Resources Act contains no scope for considering significance of pollution). A significant change in a particular ecosystem, or organism forming part of such ecosystem.	Concentrations of a contaminant from site exceed generic, or site-specific assessment criteria. Leaching of contaminants from a site to a major or minor aquifer (Principal and Secondary). Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures, and services ('significant harm' as defined in DETR, 2000). Damage to sensitive buildings/structures/services or the environment.	Pollution of non-classified groundwater. Damage to building rendering it unsafe to occupy (e.g., foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable damage to buildings, structures, and services.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discoloration of concrete.

Table A. Classification of Consequence

Probability (Likelihood)	
Classification	**Definition**
High Likelihood	There is a pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollutant linkage, and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Unlikely	There is a pollutant linkage, but circumstances are such that it is improbable that an event would occur in the very long term.

Table B. Classification of Probability.

These classifications are then compared to indicate the risk presented by each pollutant linkage (Table C). It is important that this classification is only applied where there is a possibility (which can range from high likelihood to unlikely) of a pollutant linkage existing.

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	**Very High Risk**	**High Risk**	Moderate Risk	Moderate / Low Risk
	Likely	**High Risk**	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Table C. Comparison of Consequence against Probability

Once the risk has been determined the corresponding action can be assessed (Table D).

Risk	Action Required
Very High Risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR there is evidence that sever harm to a designated receptor is currently happening. This risk, if realised, is likely to results in a substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
High Risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate Risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low Risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Table D. Description of the Classification and Likely Action Required.

Where a very low risk is identified no specific remediation is required.

Where a low risk is identified, some form of remediation may be required depending on the pollutant linkage, the type and concentration of contaminants present and the proposed development.

Where there is a moderate/low risk is identified, an assessment will be undertaken to establish what category the pollutant linkage will fall into.

Where LKC identifies a moderate or higher risk, remediation or further investigation work is recommended.

Appendix B – Profile Logs

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **TP101**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Trial pit excavated to 3.00mbgl.	1.00m x 0.75m x 3.00	196.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409656 E 415673 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.30	ES1 PID=<0.10ppm.				(0.30)	MADE GROUND: Dark brown sandy SILT with frequent rootlets, roots, and brick fragments. Sand is fine to coarse.		
				195.70	0.30	Land drain present at 0.20mbgl.		
0.30-0.80	ESB2 PID=<0.10ppm.				(0.50)	Light brown and grey mottled slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is fine to medium, angular of mudstone and sandstone.		
0.80-1.50	ESB3 PID=<0.10ppm.			195.20	0.80	Firm consistency medium strength dark brown gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to coarse angular of mudstone.		
1.50	SV =60kPa.				(1.20)			
2.00-2.50	B4			194.00	2.00	Highly weathered laminated dark grey and brown with orange iron staining MUDSTONE. Recovered as sandy very clayey gravel. Sand is fine to coarse. Gravel is fine to coarse, angular of mudstone.		
					(1.00)			
				193.00	3.00	Complete at 3.00m		

Remarks

Elevation and location estimated from handheld GPS accurate to 5.00m.
Trial pit dry and stable.

Scale (approx)	**Logged By**	**Figure No.**
1:40	NJ	LKC 20 1909.TP101

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **TP102**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Trial pit excavated to 3.00mbgl.	1.00m x 0.50m x 3.00m	192.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409684 E 415655 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.30	ESB1 PID=<0.10ppm.				(0.30)	MADE GROUND: Dark brown slightly gravelly sandy SILT with frequent roots, rootlets and rare brick fragments. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone.		
0.30-1.20	ESB2 PID=<0.10ppm.			191.70	0.30			
					(0.70)	Soft consistency light brown and grey mottled very sandy CLAY. Sand is fine to coarse.		
				191.00	1.00			
					(0.70)	Firm consistency low to medium strength light brown gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is fine, angular of mudstone.		
1.50	SV =40kPa.			190.30	1.70			
2.00-3.00	B3				(1.30)	Highly weathered laminated black and light brown with orange iron staining MUDSTONE. Recovered as sandy very clayey gravel. Sand is fine to coarse. Gravel is fine to coarse, angular of mudstone and sandstone.		
				189.00	3.00	Complete at 3.00m		

Remarks

Trial pit dry and stable.
Elevation and location estimated from handheld GPS accurate to 5.00m.

Scale (approx)	**Logged By**	**Figure No.**
1:40	NJ	LKC 20 1909.TP102

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **TP103**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Trial pit excavated to 3.00mbgl.	1.00m x 0.50m x 3.00	185.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409628 E 415628 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.20	ESB1 PID=<0.10ppm.			184.80	(0.20) 0.20	MADE GROUND: Dark brown silty SAND with rare glass, brick fragments. Sand is fine to coarse.		
0.30-1.00 0.50	ESB2 PID=<0.10ppm. SV =55kPa.				(1.70)	MADE GROUND: Light brown and grey mottled slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine, angular of mudstone. Possible reworked strata.		
1.50	SV =45kPa.			183.10	1.90			
1.90-2.10 2.00-2.50	ES3 PID=<0.10ppm. B4			182.90	(0.20) 2.10	MADE GROUND: Black gravelly silty SAND with frequent ash and coal. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone.		
					(0.40)	Light orangish brown gravelly silty SAND. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone.		
2.50-3.00	B5			182.50	2.50			
					(0.50)	Highly weathered laminated light brown and dark brown with orange iron staining MUDSTONE. Recovered as sandy very clayey gravel. Sand is fine to coarse. Gravel is fine to coarse, angular of sandstone and mudstone.		
				182.00	3.00	Complete at 3.00m		

Remarks

Elevation and location estimated from handheld GPS accurate to 5.00m.
Trial pit dry and stable.

Scale (approx)	**Logged By**	**Figure No.**
1:40	NJ	LKC 20 1909.TP103

LK CONSULT LTD Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **TP104**	
Excavation Method Trial pit excavated to 3.00mbgl.	**Dimensions** .00m x 0.50m x 3.00m	**Ground Level (mOD)** 181.00	**Client** Brierstone Ltd	**Job Number** LKC 20 1909
	Location (Handheld GPS) 409640 E 415602 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.20	ESB1 PID=<0.10ppm.			180.80	(0.20) 0.20	TOPSOIL: Dark brown slightlu gravelly sandy peaty SILT with frequent roots, rootlets and organic material. Sand is fine to coarse. Organic odour noted.		
0.50-1.50	ESB2 PID=<0.10ppm.				(1.80)	Soft to firm consistency medium strength light brown and grey slightly gravelly sandy CLAY with occasional rootlets in the top 0.50m. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone and mudstone.		
1.50	SV =45kPa.			179.00	2.00	Highly weathered laminated dark grey and brown with orange iron staining MUDSTONE. Recovered as very clayey gravel. Gravel is fine to coarse, angular of sandstone and mudstone.		
2.00-3.00	B3				(1.00)			
				178.00	3.00	Complete at 3.00m		

Remarks

Elevation and location estimated from handheld GPS accurate to 5.00m.
Trial pit dry and stable.

Scale (approx)	Logged By	Figure No.
1:40	NJ	LKC 20 1909.TP104

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **TP105**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Trial pit excavated to 3.00mbgl.	1.00m x 0.50m x 3.00m	181.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409640 E 415602 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.20	ESB1 PID=0.10ppm.			180.80	(0.20) 0.20	MADE GROUND: Dark brown slightly gravelly sandy SILT with frequent roots, rootlets, rare brick fragments, plastic fragments. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone.		
0.50-1.50	ESB2 PID=<0.10ppm.				(1.80)	Firm consistency medium strength light brown and grey mottled slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine, angular of sandstone and mudstone.		
1.50 1.50-2.00	SV =45kPa. B3							
2.00-3.00	B4			179.00	2.00	Highly weathered laminated dark brown and light brown MUDSTONE. Recovered as sandy clayey gravel. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone and mudstone. Probable destructed highly weathered bedrock.		
					(1.00)			
				178.00	3.00	Complete at 3.00m		

Remarks

Elevation and location estimated from handheld GPS accurate to 5.00m.
Trial pit dry and stable.

Scale (approx)	**Logged By**	**Figure No.**
1:40	NJ	LKC 20 1909.TP105

LK CONSULT LTD Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **TP106**	
Excavation Method Trial pit excavated to 3.80mbgl.	**Dimensions** 1.00m x 0.50m x 3.00m	**Ground Level (mOD)** 180.00	**Client** Brierstone Ltd	**Job Number** LKC 20 1909
	Location (Handheld GPS) 409629 E 415645 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.20	ESB1 PID=0.10ppm.			179.80	(0.20) 0.20	MADE GROUND: Dark brown sandy SILT with frequent roots and rootlets, rare brick fragments. Sand is fine to coarse.		
0.30-1.00	ESB2 PID=0.20ppm.				(0.90)	Light brown clayey SAND with frequent clay inclusions. Sand is fine to coarse. Possibly reworked.		
1.10-1.50	B3			178.90	1.10	Black very clayey sandy GRAVEL with large clay inclusions. Sand is fine to coarse. Gravel is fine, angular of mudstone. Possibly reworked.		
1.50-2.00	B4							
2.00-3.00	B5				(1.90)			
				177.00	3.00	Highly weathered laminated dark brown and black with orange iron staining MUDSTONE. Recovered as sandy very clayey gravel. Sand is fine to coarse. Gravel is fine to medium, angular of mudstone and sandstone. Probable destructed highly weathered bedrock.		
					(0.80)			
				176.20	3.80	Complete at 3.80m		

Remarks

Elevation and location estimated from handheld GPS accurate to 5.00m.
Trial pit dry and stable.

Scale (approx)	Logged By	Figure No.
1:40	NJ	LKC 20 1909.TP106

LK CONSULT LTD Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **TP107**	
Excavation Method Trial pit excavated to 3.00mbgl.	**Dimensions** 1.00m x 0.50m x 3.00m	**Ground Level (mOD)** 188.00	**Client** Brierstone Ltd	**Job Number** LKC 20 1909
	Location (Handheld GPS) 409646 E 415651 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.20	ESB1 PID=<0.10ppm.				(0.30)	MADE GROUND: Dark brown gravelly silty SAND with frequent roots, rootlets, brick fragments, occasional glass fragments, sandstone flag fragments. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone.		
0.50	SV =45kPa.			187.70	0.30			
0.50-1.00	ESB2 PID=<0.10ppm.				(0.70)	Soft consistency medium strength light brown sandy CLAY with occasional rootlets. Sand is fine to medium.		
				187.00	1.00			
					(0.90)	Firm consistency medium strength dark brown gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone and mudstone.		
1.50-1.90	SV =50kPa.							
1.50-2.00	B3			186.10	1.90			
2.00-3.00	B4				(1.10)	Highly weathered laminated dark brown and light brown with orange iron staining MUDSTONE. Recovered as sandy very clayey gravel. Sand is fine to coarse. Gravel is fine to coarse angular of sandstone and mudstone.		
				185.00	3.00	Complete at 3.00m		

Remarks

Trial pit dry and stable.
Elevation and location estimated from handheld GPS accurate to 5.00m.

Scale (approx)	Logged By	Figure No.
1:40	NJ	LKC 20 1909.TP107

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **TP108**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Trial pit excavated to 3.00mbgl.	1.00m x 0.50m x 3.00m	186.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409652 E 415643 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.20	ESB1 PID=0.20ppm.			185.80	(0.20) 0.20	MADE GROUND: Dark brown sandy CLAY with frequent brick fragments, glass fragments, sandstone flag fragments. Sand is fine to coarse.		
0.20-0.70	ESB2 PID=0.20ppm.				(0.50)	Soft consistency low strength very light brown sandy CLAY. Sand is fine to medium. Probable reworked.		
0.50	SV =35kPa.			185.30	0.70	Firm consistency low to medium strength light brown gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to medium, angular, of sandstone and mudstone.		
0.70-1.50	ESB3 PID=0.10ppm.				(0.50)			
1.00	SV =40kPa.			184.80	1.20	Highly weathered laminated dark brown with orange iron staining MUDSTONE. Recovered as sandy very clayey gravel. Sand is fine to coarse. Gravel is fine to medium, angular of sandstone and mudstone.		
2.00-3.00	B4				(1.80)			
				183.00	3.00	Complete at 3.00m		

Remarks

Elevation and location estimated from handheld GPS accurate to 5.00m.
Trial pit dry and stable.

Scale (approx)	**Logged By**	**Figure No.**
1:40	NJ	LKC 20 1909.TP108

LK CONSULT LTD

Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com

Site
Carr Top Lane, Golcar

Number
WS101

Excavation Method
Drive-in Windowless Sampler driven to 5.295mbgl.

Dimensions

Ground Level (mOD)
185.00

Client
Brierstone Ltd

Job Number
LKC 20 1909

Location (Handheld GPS)
409632 E 415647 N

Dates
07/01/2021

Engineer
LKC

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00-0.20	ES1			184.80	(0.20) 0.20	TOPSOIL: Dark brown slightly sandy clayey SILT with frequent rootlets. Sand is fine to medium.			
0.20-0.50	ES2			184.50	(0.30) 0.50	Very light brown and orangish brown very clayey SAND with occasional very sandy clay lenses and rare rootlets. Sand is fine to medium.			
0.50-1.00	B3								
0.50-1.00	PP 28.6kPa								
					(1.00)	Soft consistency low strength orangish brown and grey mottled slightly gravelly very sandy CLAY with occasional sand lenses. Sand is fine to medium. Gravel is fine to coarse, sub-angular comprising mudstone.			
1.20-1.65	SPT N=12		2,2/3,3,3,3						
1.20-1.65	X3								
1.50-1.80	PP 73.6kPa			183.50	1.50	Firm to stiff becoming soft to firm consistency medium to high strength dark grey very gravelly silty CLAY (laminated). Gravel is fine to coarse, sub-angular comprising laminated mudstone and sandstone.			
1.80-2.00	B5					Firm to stiff consistency and high strength between 1.50-2.00mbgl.			
1.80-2.00	PP 89.9kPa					Frequent rootlets at 1.90mbgl.			
2.00-2.45	SPT N=16		2,3/4,4,4,4			Soft to firm consistency from 2.00mbgl.			
2.00-2.45	X6								
					(2.00)				
2.50-3.00	B7								
3.00-3.45	SPT N=23		4,5/5,5,5,8						
3.00-3.45	X8								
3.50-4.00	B9			181.50	3.50	Highly weathered laminated dark grey and black MUDSTONE. Recovered as clayey laminated gravel. Gravel is fine to coarse, sub-angular comprising laminated mudstone (friable, iron stained and very soft).			
4.00-4.45	SPT N=31		6,6/7,7,8,9						
4.00-4.45	X10								
					(1.80)				
5.00-5.30	SPT 50/145		12,13/25,25						
5.00-5.45	X11			179.70	5.30	Complete at 5.30m			

Remarks
Borehole dry and stable.
Location accurate to 3.00-5.00m.
Elevation estimated from https://www.freemaptools.com/elevation-finder.htm
SPT refusal at 5.295mbgl on probable highly weathered laminated mudstone bedrock.

Scale (approx)
1:40

Logged By
EM

Figure No.
LKC 20 1909.WS101

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Number** **WS102**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Drive-in Windowless Sampler driven to 3.425mbgl.		190.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409645 E 415661 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.50	ES1				(0.50)	Very light brown clayey SAND with rare sub-angular sandstone cobbles. Sand is fine to medium.		
				189.50	0.50			
0.50-1.00	PP 85.8kPa					Stiff consistency high strength orangish brown and grey mottled slightly gravelly slightly sandy CLAY with rare roots.Sand is fine to medium. Gravel is fine to medium, sub-angular comprising mudstone and sandstone.		
0.80-1.00	B2				(0.90)			
1.20-1.65	SPT N=11		1,2/2,3,3,3					
1.20-1.65	X3			188.60	1.40			
1.50-2.00	B4					Dark grey claybound GRAVEL (possible highly weathered laminated mudstone bedrock). Gravel is fine to medium, sub-angular comprising laimiated mudstone (friable and very soft).		
					(1.10)			
2.00-2.45	SPT N=20		2,3/4,5,5,6					
2.00-2.45	X5							
				187.50	2.50			
2.50-3.00	B6					Highly weathered laminated dark grey and black MUDSTONE. Recovered as clayey laminated gravel. Gravel is fine to coarse, sub-angular comprising laminated mudstone (friable, iron stained and very soft).		
					(0.93)			
3.00-3.43	SPT 50/275		10,11/13,13,13,11					
3.00-3.43	X7							
				186.57	3.43	Complete at 3.43m		

Remarks
Borehole dry and stable.
Up to 0.50m of surface material stripped to allow access for the drilling rig, depths are based on new levels in the borehole position. Refer to HD101 for log of stripped material.
Location accurate to 3.00-5.00m.
Elevation estimated from https://www.freemaptools.com/elevation-finder.htm
SPT refusal at 3.425mbgl on probable highly weathered laminated mudstone bedrock.

Scale (approx)	**Logged By**
1:40	EM

Figure No.
LKC 20 1909.WS102

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Number** **WS103**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Drive-in Windowless Sampler driven to 2.405mbgl.		190.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409679 E 415654 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00-0.50	ES1				(0.50)	Soft consistency very light brown and orangish brown very sandy CLAY with occasional clayey sand lenses, rare rootlets and sub-angular sandstone cobbles. Sand is fine to medium.			
0.50-0.70	B22			189.50	0.50				
0.50-0.70	PP 73.6kPa				(0.20)	Firm consistency medium strength light grey and orangish brown mottled slightly gravelly slightly sandy CLAY with rare rootlets. Sand is fine to medium. Gravel is fine to medium, sub-angular comprising sandstone and mudstone.			
0.70-1.00	B3			189.30	0.70				
1.20-1.65	X4		Water strike(1) at 1.20m.		(0.80)	Dark grey claybound GRAVEL (possible highly weathered laminated mudstone bedrock). Gravel is fine to medium, sub-angular comprising laminated mudstone (friable and very soft).		▽1	
1.20-1.65	SPT N=24		4,5/6,6,6,6						
1.50-2.00	B5			188.50	1.50	Highly weathered laminated dark grey and black MUDSTONE. Recovered as clayey laminated gravel. Gravel is fine to coarse, sub-angular comprising laminated mudstone (friable, iron stained and very soft).			
2.00-2.41	SPT 50/255		7,9/14,14,13,9		(0.91)				
2.00-2.41	X6								
				187.59	2.41	Complete at 2.41m			

Remarks
Up to 0.60m of surface material stripped to allow access for the drilling rig, depths are based on new levels in the borehole position. Refer to HD102 for log of stripped material.
Water strike recorded at 1.20mbgl. Strata damp from 0.70mbgl.
SPT refusal at 2.405mbgl on probable highly wethered laminated mudstone bedrock.
Borehole stable.
Location accurate to 3.00-5.00m.
Elevation estimated from https://www.freemaptools.com/elevation-finder.htm

Scale (approx)	**Logged By**
1:40	EM

Figure No.
LKC 20 1909.WS103

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Number** **WS104**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Drive-in Windowless Sampler driven to 4.405mbgl.		185.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409659 E 415632 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.50	ES1				(0.50)	MADE GROUND: Brown sandy silty CLAY with occasional brick fragments, rootlets and rare glass. Sand is fine to medium.		▽1
			Water strike(1) at 0.30m.	184.50	0.50			
0.50-1.00 0.50-1.00	ESB2 PP 24.5kPa				(0.70)	Soft to firm consistency low strength light grey and organgish brown mottled slightly gravelly very sandy CLAY with occasional rootlets and sub-angular sandstone cobbles. Sand is fine to medium. Gravel is fine to medium, sub-angular comprising sandstone.		
1.20-1.65 1.20-1.40 1.20-1.65	SPT N=6 B4 X3		2,1/1,1,2,2	183.80 183.60	1.20 (0.20) 1.40	Orangish brown gavelly very clayey SAND. Sand is fine to medium. Gravel is fine to medium, sub-angular comprising sandstone. Strata is wet.		
1.60-2.00 1.60-2.00	B5 PP 53.1kPa					Firm consistency medium strength dark grey very gravelly silty CLAY (laminated). Gravel is fine to coarse, sub-angular comprising laminated mudstone (very soft and friable with iron staining) and sandstone.		
2.00-2.45 2.00-2.45	SPT N=12 X6		2,3/3,3,3,3		(1.60)	Partial recovery between 2.00-3.00mbgl.		
3.00-3.45 3.00-3.45	SPT N=13 X7		3,3/3,3,3,4	182.00	3.00	Highly weathered laminated dark grey and black MUDSTONE. Recovered as clayey laminated gravel. Gravel is fine to coarse, sub-angular comprising laminated mudstone (friable, iron stained and very soft).		
4.00-4.41 4.00-4.41	SPT 50/255 X8		7,8/10,16,16,8		(1.41)			
				180.59	4.41	Complete at 4.41m		

Remarks
Perched water at 0.30mbgl.
Partial recovery between 2.00-3.00mbgl.
Up to 0.40m of surface material stripped to allow access for the drilling rig, depths are based on new levels in the borehole position. Refer to HD103 for log of stripped material.
Location accurate to 3.00-5.00m.
Elevation estimated from https://www.freemaptools.com/elevation-finder.htm

Scale (approx)	**Logged By**
1:40	EM

Figure No.
LKC 20 1909.WS104

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Number** **WS105**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Drive-in Windowless Sampler driven to 2.32mbgl.		180.00	Brierstone Ltd	LKC 20 1909
	Location (Handheld GPS) 409642 E 415614 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00-0.30	ES1				(0.30)	MADE GROUND: Dark brown sandy silty CLAY with occasional rootlets, rare brick fragments and glass. Sand is fine to medium.			
				179.70	0.30				
0.30-0.50	ES2				(0.20)	Soft consistency very light brown and orangish brown very sandy CLAY with occasional rootlets. Sand is fine to medium.			
				179.50	0.50				
0.60-1.00	B3				(0.50)				
0.80-1.00	PP 49kPa					Soft to firm consistency medium strength orangish brown and grey mottled slightly gravelly sandy CLAY with rare rootlets. Sand is fine to medium. Gravel is fine to coarse, sub-angular comprising sandstone.			
1.00-1.50	PP 81.6kPa			179.00	1.00				
1.20-1.65	SPT N=19		2,3/4,5,5,5		(0.50)				
1.20-1.65	X4								
1.50-2.00	B5			178.50	1.50	Firm consistency high strength dark grey very gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded comprising mudstone and sandstone.			
					(0.50)				
				178.00	2.00	Orange and very light grey very clayey SAND. Sand is fine to medium.			
2.00-2.32	SPT 50/170		10,13/17,23,10		(0.32)				
2.00-2.32	X6			177.68	2.32	Orange and very light grey very sandy GRAVEL (possible sandstone cobble or highly weathered bedrock). Sand is fine to medium. Gravel is fine to coarse, sub-angular comprising sandstone.			
						Complete at 2.32m			

Remarks
SPT refusal at 2.32mbgl on possible sandstone cobble or highly weathered sandstone bedrock.
Borehole dry and stable.
Location accurate to 3.00-5.00m.
Elevation estimated from https://www.freemaptools.com/elevation-finder.htm

Scale (approx)	**Logged By**
1:40	EM

Figure No.
LKC 20 1909.WS105

LK CONSULT LTD Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** Carr Top Lane, Golcar	**Trial Pit Number** **HD101**	
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions**	**Ground Level (mOD)** 190.00	**Client** Brierstone Ltd	**Job Number** LKC 20 1909
	Location (Handheld GPS) 409645 E 415661 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.50	ES1				(0.50)	MADE GROUND: Dark brown sandy clayey SILT with occasional rootlets, rare roots, brick fragments and glass. Sand is fine to medium.		
				189.50	0.50	Complete at 0.50m		

Remarks

Material stripped by JCB to allow access to borehole position WS102 for window sample drilling rig.
Location adjacent o WS102.

Scale (approx)	Logged By	Figure No.
1:20	EM	LKC 20 1909.HD101

LK CONSULT LTD

Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com

Site Carr Top Lane, Golcar				**Trial Pit Number** HD102
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions**	**Ground Level (mOD)** 190.00	**Client** Brierstone Ltd	**Job Number** LKC 20 1909
	Location (Handheld GPS) 409679 E 415654 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.60	ES1				(0.60)	TOPSOIL: Dark brown sandy SILT with abundant rootlets and occasional roots (top 0.20m) and occasional rootlets with depth. Sand is fine to medium.		
				189.40	0.60	Complete at 0.60m		

Remarks

Material stripped by JCB to allow access to borehole position WS103 for window sample drilling rig.
Location adjacent to WS103.

Scale (approx)	Logged By	Figure No.
1:20	EM	LKC 20 1909.HD102

LK CONSULT LTD

Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com

Site Carr Top Lane, Golcar				**Trial Pit Number** HD103
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions**	**Ground Level (mOD)** 185.00	**Client** Brierstone Ltd	**Job Number** LKC 20 1909
	Location (Handheld GPS) 409659 E 415632 N	**Dates** 07/01/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.40)	MADE GROUND: Brown sandy silty CLAY with occasional pockets of frequent rootlets, brick fragments, rootlets and rare glass. Sand is fine to medium.		
				184.60	0.40	Complete at 0.40m		

Remarks

Material stripped by JCB to allow access to borehole position WS104 for window sample drilling rig.
Location adjacent to WS104.

Scale (approx)	Logged By	Figure No.
1:20	EM	LKC 20 1909.HD103

Appendix C – Certificates of Analysis (Soil)

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	21-00375-1
Initial Date of Issue:	19-Jan-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Catherine Baranek Chris Hughes Contaminated Land
Project	LKC 20 1909 Carr Top Lane

Quotation No.:		**Date Received:**	11-Jan-2021
Order No.:	738248	**Date Instructed:**	13-Jan-2021
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	19-Jan-2021
Date Approved:	19-Jan-2021		
Approved By:			

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKC 20 1909 Carr Top Lane

Client: LK Consult		**Chemtest Job No.:**			21-00375	21-00375	21-00375	21-00375	21-00375	21-00375
Quotation No.:		**Chemtest Sample ID.:**			1122097	1122098	1122100	1122102	1122103	1122104
		Sample Location:			WS101	WS102	WS103	WS104	WS104	WS105
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.00	0.00	0.00	0.50	0.00
		Bottom Depth (m):			0.50	0.50	0.50	0.50	1.00	0.30
		Date Sampled:			07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021
		Asbestos Lab:			COVENTRY	COVENTRY	COVENTRY	COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type	U	2192		N/A	-	-	-	Fibres/Clumps		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Crocidolite		No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	Stereo Microscopy		-
Asbestos by Gravimetry	U	2192	%	0.001				<0.001		
Total Asbestos	U	2192	%	0.001				<0.001		
Moisture	N	2030	%	0.020	21	16	16	22	22	22
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Black	Brown
Other Material	N	2040		N/A	Stones	None	Stones	Roots	Stones	None
Soil Texture	N	2040		N/A	Clay	Sand	Sand	Clay	Clay	Sand
pH	M	2010		4.0	6.2	6.3	6.3	8.3	6.8	6.7
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.010	< 0.010	0.013	0.13	0.018	0.20
Arsenic	M	2450	mg/kg	1.0	3.1	1.9	4.0	15		27
Cadmium	M	2450	mg/kg	0.10	0.10	< 0.10	< 0.10	0.81		0.17
Chromium	M	2450	mg/kg	1.0	13	6.3	13	28		26
Copper	M	2450	mg/kg	0.50	6.5	4.0	8.3	35		59
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.15		0.26
Nickel	M	2450	mg/kg	0.50	10	5.0	12	15		13
Lead	M	2450	mg/kg	0.50	16	10	19	83		120
Selenium	M	2450	mg/kg	0.20	0.20	< 0.20	< 0.20	0.36		0.76
Vanadium	U	2450	mg/kg	5.0	15	8.8	15	44		30
Zinc	M	2450	mg/kg	0.50	39	22	49	84		57
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50		< 0.50
Organic Matter	M	2625	%	0.40	0.90	< 0.40	0.52	4.3		8.6
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	1.8		0.22
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.27		< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	1.9		0.45
Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	1.5		0.41
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.69		0.26
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.73		0.30
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.79		< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.36		< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.69		< 0.10

Results - Soil

Project: LKC 20 1909 Carr Top Lane

Client: LK Consult		**Chemtest Job No.:**			21-00375	21-00375	21-00375	21-00375	21-00375	21-00375
Quotation No.:		**Chemtest Sample ID.:**			1122097	1122098	1122100	1122102	1122103	1122104
		Sample Location:			WS101	WS102	WS103	WS104	WS104	WS105
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.00	0.00	0.00	0.50	0.00
		Bottom Depth (m):			0.50	0.50	0.50	0.50	1.00	0.30
		Date Sampled:			07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021
		Asbestos Lab:			COVENTRY	COVENTRY	COVENTRY	COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	8.7		< 2.0

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

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

Charges may apply to extended sample storage

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

customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	21-00368-1
Initial Date of Issue:	22-Jan-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Catherine Baranek Chris Hughes Contaminated Land
Project	LK 20 1909 Carr Top Lane, Golcar

Quotation No.:		**Date Received:**	11-Jan-2021
Order No.:	738248	**Date Instructed:**	13-Jan-2021
No. of Samples:	10		
Turnaround (Wkdays):	5	**Results Due:**	19-Jan-2021
Date Approved:	22-Jan-2021		
Approved By:			

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LK 20 1909 Carr Top Lane, Golcar

Client: LK Consult		**Chemtest Job No.:**			21-00368	21-00368	21-00368	21-00368	21-00368	21-00368	21-00368	21-00368	21-00368
Quotation No.:		**Chemtest Sample ID.:**			1122041	1122043	1122044	1122047	1122050	1122052	1122054	1122056	1122057
Order No.: 738248		Client Sample Ref.:			TP101	TP101	TP102	TP103	TP104	TP105	TP106	TP107	TP107
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.0	0.8	0.0	0.3	0.5	0.5	0.3	0.0	0.5
		Bottom Depth (m):			0.3	1.5	0.3	1.0	1.5	1.5	1.0	0.2	1.0
		Date Sampled:			07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021
		Asbestos Lab:			COVENTRY		COVENTRY	COVENTRY	COVENTRY			COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-	-	-		-	-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	
ACM Detection Stage	U	2192		N/A	-		-	-	-		-	-	
Moisture	N	2030	%	0.020	22	13	22	17	17	14	18	24	18
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	None	Stones	Roots	Stones	Stones	Stones	Stones	Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Clay	Clay	Sand	Clay	Sand	Clay	Sand	Clay
Chromatogram (TPH)	N			N/A					See Attached				
pH	M	2010		4.0	6.3	6.9	5.8	5.3	6.1	5.9	5.7	5.6	6.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40					< 0.40				
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.15	0.048	0.010	< 0.010	< 0.010	< 0.010	0.011	0.016	0.013
Cyanide (Free)	M	2300	mg/kg	0.50					< 0.50				
Cyanide (Total)	M	2300	mg/kg	0.50					< 0.50				
Arsenic	M	2450	mg/kg	1.0	26		17	3.2	4.8		11	21	
Cadmium	M	2450	mg/kg	0.10	0.24		0.20	< 0.10	< 0.10		< 0.10	0.16	
Chromium	M	2450	mg/kg	1.0	29		30	12	18		25	31	
Copper	M	2450	mg/kg	0.50	47		43	7.2	9.3		29	41	
Mercury	M	2450	mg/kg	0.10	0.84		0.49	< 0.10	< 0.10		< 0.10	0.41	
Nickel	M	2450	mg/kg	0.50	14		22	7.7	12		21	17	
Lead	M	2450	mg/kg	0.50	140		93	9.8	11		18	100	
Selenium	M	2450	mg/kg	0.20	0.51		0.28	0.30	0.34		0.45	0.54	
Vanadium	U	2450	mg/kg	5.0	28		31	16	22		25	27	
Zinc	M	2450	mg/kg	0.50	91		78	29	51		40	53	
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50		< 0.50	< 0.50	< 0.50		< 0.50	< 0.50	
Organic Matter	M	2625	%	0.40	3.8		3.5	0.69	< 0.40		1.1	6.6	
Diesel Present	N	2670		N/A					False				
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0					< 1.0				
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0					< 1.0				
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0					< 1.0				
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0					< 1.0				
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0					< 1.0				
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0					< 1.0				
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0					< 1.0				
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0					< 1.0				
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0					< 5.0				
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0					< 1.0				

Results - Soil

Project: LK 20 1909 Carr Top Lane, Golcar

Client: LK Consult		**Chemtest Job No.:**			21-00368	21-00368	21-00368	21-00368	21-00368	21-00368	21-00368	21-00368	21-00368
Quotation No.:		**Chemtest Sample ID.:**			1122041	1122043	1122044	1122047	1122050	1122052	1122054	1122056	1122057
Order No.: 738248		Client Sample Ref.:			TP101	TP101	TP102	TP103	TP104	TP105	TP106	TP107	TP107
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.0	0.8	0.0	0.3	0.5	0.5	0.3	0.0	0.5
		Bottom Depth (m):			0.3	1.5	0.3	1.0	1.5	1.5	1.0	0.2	1.0
		Date Sampled:			07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021	07-Jan-2021
		Asbestos Lab:			COVENTRY		COVENTRY	COVENTRY	COVENTRY			COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0					< 1.0				
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0					< 1.0				
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0					< 1.0				
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0					< 1.0				
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0					< 1.0				
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0					< 1.0				
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0					< 1.0				
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0					< 5.0				
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0					< 10				
Benzene	M	2760	µg/kg	1.0					< 1.0				
Toluene	M	2760	µg/kg	1.0					< 1.0				
Ethylbenzene	M	2760	µg/kg	1.0					< 1.0				
m & p-Xylene	M	2760	µg/kg	1.0					< 1.0				
o-Xylene	M	2760	µg/kg	1.0					< 1.0				
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0					< 1.0				
Naphthalene	M	2800	mg/kg	0.10	< 0.10		< 0.10	< 0.10	< 0.10		< 0.10	1.4	
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10		< 0.10	< 0.10	< 0.10		< 0.10	0.13	
Acenaphthene	M	2800	mg/kg	0.10	< 0.10		< 0.10	< 0.10	< 0.10		< 0.10	0.97	
Fluorene	M	2800	mg/kg	0.10	< 0.10		< 0.10	< 0.10	< 0.10		< 0.10	0.81	
Phenanthrene	M	2800	mg/kg	0.10	1.1		0.19	< 0.10	< 0.10		< 0.10	8.0	
Anthracene	M	2800	mg/kg	0.10	0.26		< 0.10	< 0.10	< 0.10		< 0.10	1.8	
Fluoranthene	M	2800	mg/kg	0.10	1.9		0.53	< 0.10	< 0.10		< 0.10	8.5	
Pyrene	M	2800	mg/kg	0.10	1.5		0.42	< 0.10	< 0.10		< 0.10	7.0	
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.82		0.27	< 0.10	< 0.10		< 0.10	3.3	
Chrysene	M	2800	mg/kg	0.10	0.95		0.33	< 0.10	< 0.10		< 0.10	3.2	
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.1		0.39	< 0.10	< 0.10		< 0.10	3.5	
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.50		0.14	< 0.10	< 0.10		< 0.10	1.3	
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.95		0.32	< 0.10	< 0.10		< 0.10	3.1	
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.63		< 0.10	< 0.10	< 0.10		< 0.10	1.8	
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.23		< 0.10	< 0.10	< 0.10		< 0.10	0.37	
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.58		< 0.10	< 0.10	< 0.10		< 0.10	1.5	
Total Of 16 PAH's	N	2800	mg/kg	2.0	11		2.6	< 2.0	< 2.0		< 2.0	47	
Total Phenols	M	2920	mg/kg	0.30					< 0.30				

Results - Soil

Project: LK 20 1909 Carr Top Lane, Golcar

Client: LK Consult			**Chemtest Job No.:**		21-00368
Quotation No.:			**Chemtest Sample ID.:**		1122058
Order No.: 738248			Client Sample Ref.:		TP108
			Sample Type:		SOIL
			Top Depth (m):		0.0
			Bottom Depth (m):		0.2
			Date Sampled:		07-Jan-2021
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-
Moisture	N	2030	%	0.020	17
Soil Colour	N	2040		N/A	Black
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	
pH	M	2010		4.0	5.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.013
Cyanide (Free)	M	2300	mg/kg	0.50	
Cyanide (Total)	M	2300	mg/kg	0.50	
Arsenic	M	2450	mg/kg	1.0	3.9
Cadmium	M	2450	mg/kg	0.10	< 0.10
Chromium	M	2450	mg/kg	1.0	12
Copper	M	2450	mg/kg	0.50	9.7
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	8.2
Lead	M	2450	mg/kg	0.50	18
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	14
Zinc	M	2450	mg/kg	0.50	38
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	1.3
Diesel Present	N	2670		N/A	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	

Results - Soil

Project: LK 20 1909 Carr Top Lane, Golcar

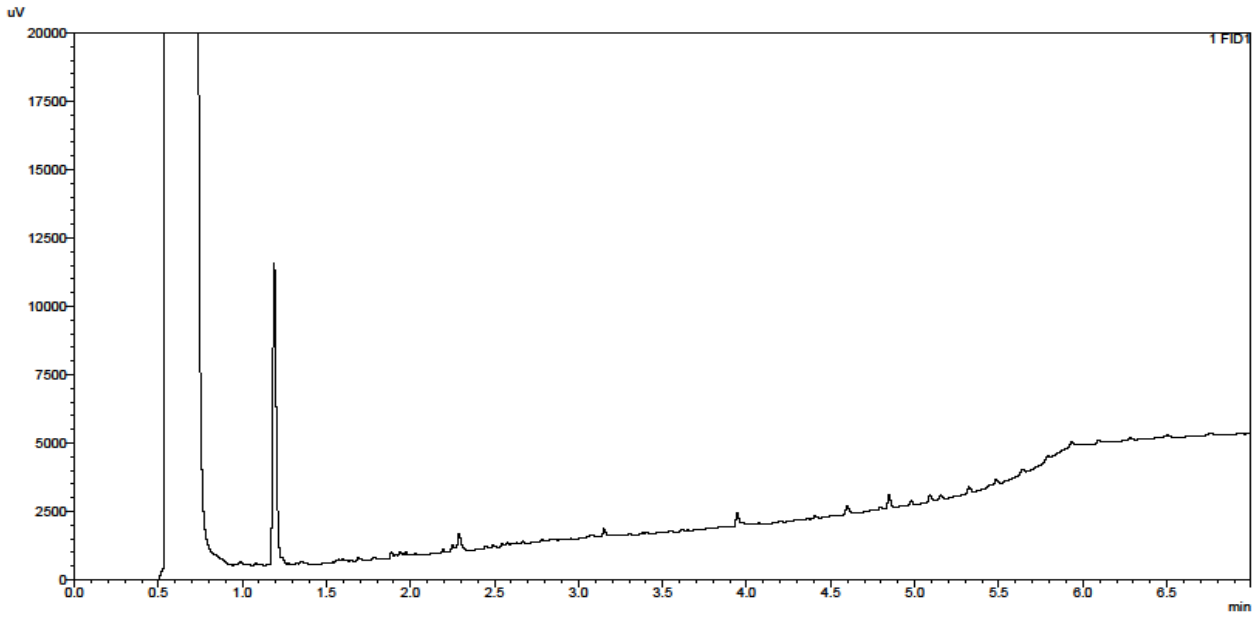
Client: LK Consult			**Chemtest Job No.:**		21-00368
Quotation No.:			**Chemtest Sample ID.:**		1122058
Order No.: 738248			Client Sample Ref.:		TP108
			Sample Type:		SOIL
			Top Depth (m):		0.0
			Bottom Depth (m):		0.2
			Date Sampled:		07-Jan-2021
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	
Benzene	M	2760	µg/kg	1.0	
Toluene	M	2760	µg/kg	1.0	
Ethylbenzene	M	2760	µg/kg	1.0	
m & p-Xylene	M	2760	µg/kg	1.0	
o-Xylene	M	2760	µg/kg	1.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.12
Anthracene	M	2800	mg/kg	0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.23
Pyrene	M	2800	mg/kg	0.10	0.18
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.15
Chrysene	M	2800	mg/kg	0.10	0.14
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.30	

TPH Chromatogram on Soil Sample: 1122050

<Sample Information>

Sample Name : 1122050 21-00368
Data Filename : 13 January 2021_13012021_1122050 21-00368_089.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 45
Date Acquired : 14/01/2021 00:42:08
Date Processed : 14/01/2021

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-00368	1122050	S		TP104		0.5	No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

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

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

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

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Appendix D – Certificates of Analysis (Geotechnical)

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client	LK Consult Ltd
Address	Unit 29 Eton Business Park Eton Hill Road Radcliffe Greater Manchester M26 2ZS
Contract	LKC 20 1909 - Carr Top Lane, Golcar
Job Number	MRN 4066/13
Date of Issue	27 January 2021
Page	**1 of 10**

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

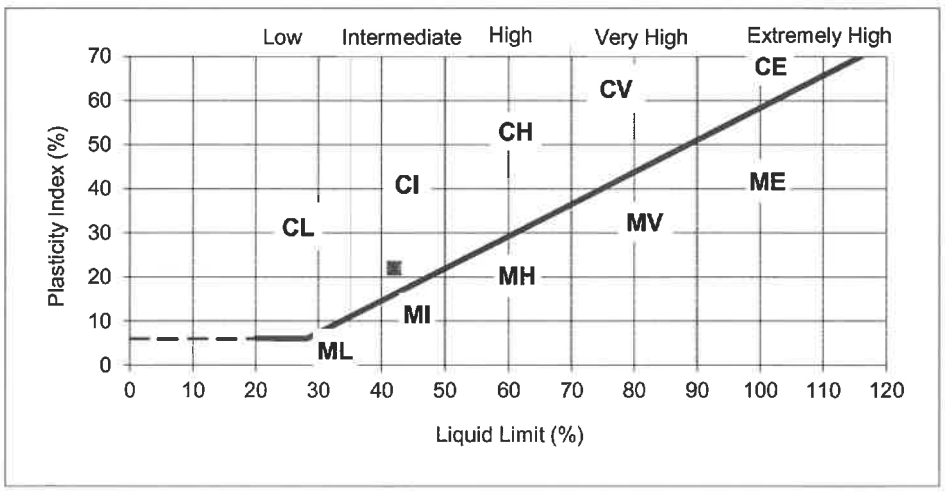
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	WS101/B5/1.8-2m	DATE SAMPLED	07-Jan-21
SAMPLE No.	95426	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Soft to firm brown silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
33	42	20	22	90



REMARKS
Sample tested after wet sieving

SIGNED

NAME O.P. Davies BA (Hons) DATE 27-Jan-21
(Laboratory Manager)

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

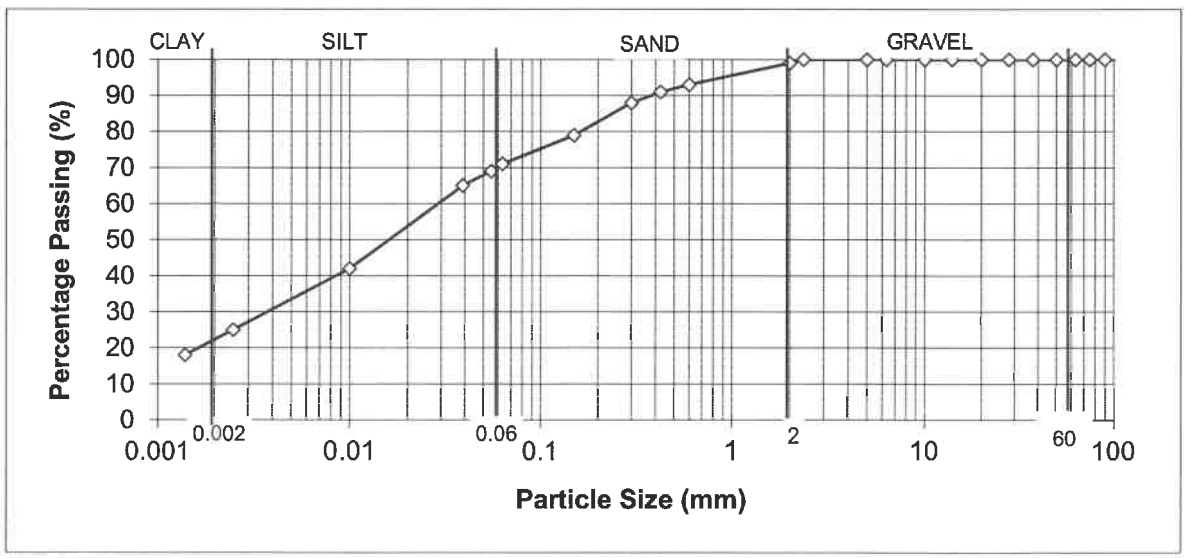
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	WS102/B4/1.5-2m	DATE SAMPLED	07-Jan-21
LAB SAMPLE No	95427	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Firm to stiff brown silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	100	
90	100		2	99	
75	100		0.6	93	
63	100		0.425	91	
50	100		0.3	88	
37.5	100		0.15	79	
28	100		0.063	71	
20	100		0.055	69	
14	100		0.039	65	
10	100		0.01	42	
6.3	100		0.0025	25	
5	100		0.0014	18	



REMARKS
As received moisture content = 24%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 27-Jan-21

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

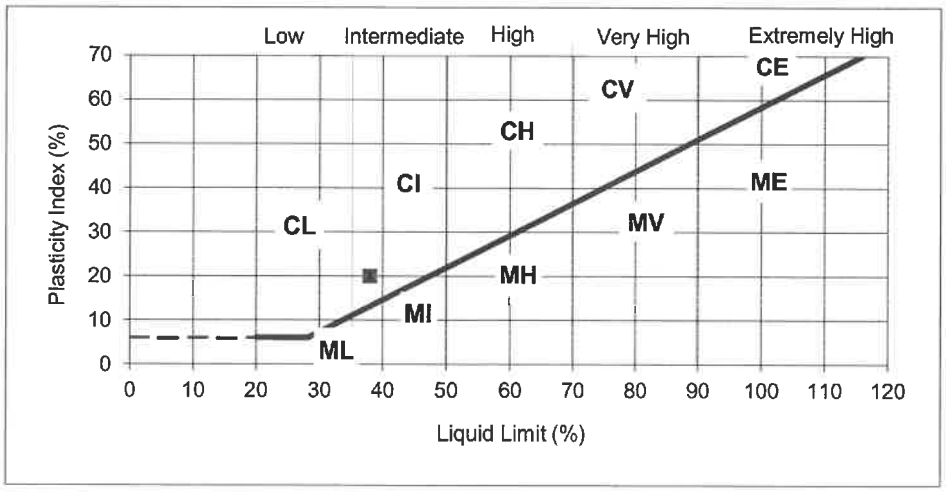
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	WS104/B5/1.6-2m	DATE SAMPLED	07-Jan-21
SAMPLE No.	95428	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Firm to stiff brown silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
23	38	18	20	94



REMARKS
Sample tested after wet sieving

SIGNED

NAME O.P. Davies BA (Hons) DATE 27-Jan-21
(Laboratory Manager)

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

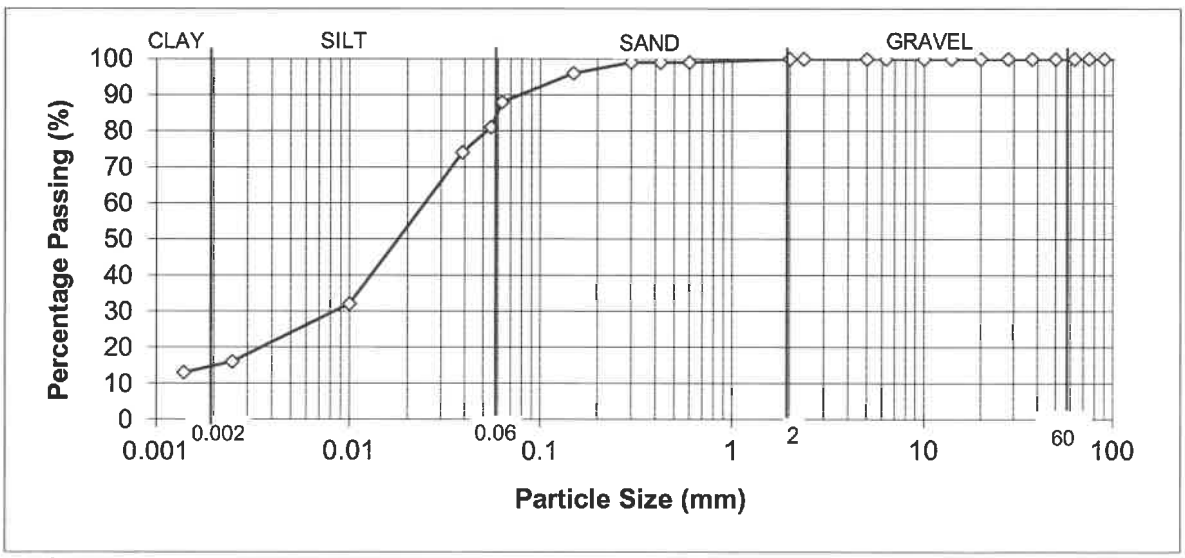
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	TP101 2-2.5	DATE SAMPLED	07-Jan-21
LAB SAMPLE No	95429	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Firm to stiff brown silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	100	
90	100		2	100	
75	100		0.6	99	
63	100		0.425	99	
50	100		0.3	99	
37.5	100		0.15	96	
28	100		0.063	88	
20	100		0.055	81	
14	100		0.039	74	
10	100		0.01	32	
6.3	100		0.0025	16	
5	100		0.0014	13	



REMARKS
As received moisture content = 23%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 27-Jan-21

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

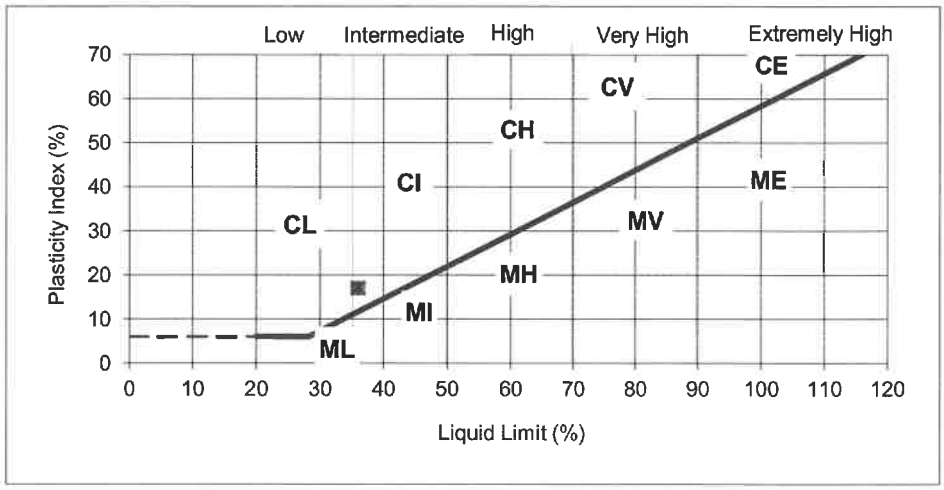
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	TP102 0.3-1.2	DATE SAMPLED	07-Jan-21
SAMPLE No.	95430	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Stiff brown silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
21	36	19	17	96



REMARKS
Sample tested after wet sieving

SIGNED ·

NAME O.P. Davies BA (Hons) DATE 27-Jan-21
(Laboratory Manager)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

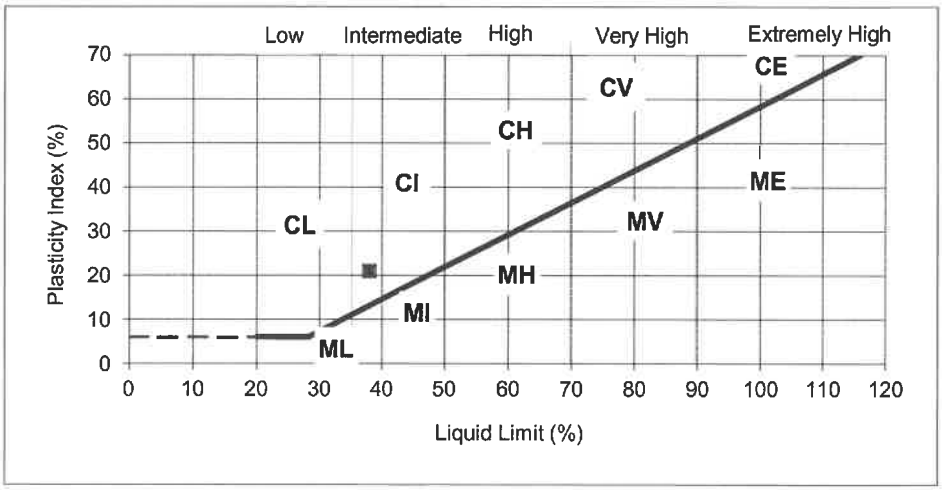
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	TP104 0.5-1.5	DATE SAMPLED	07-Jan-21
SAMPLE No.	95431	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Stiff brown silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
23	38	17	21	95



REMARKS
Sample tested after wet sieving

SIGNED

NAME O.P. Davies BA (Hons) DATE 27-Jan-21
(Laboratory Manager)

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

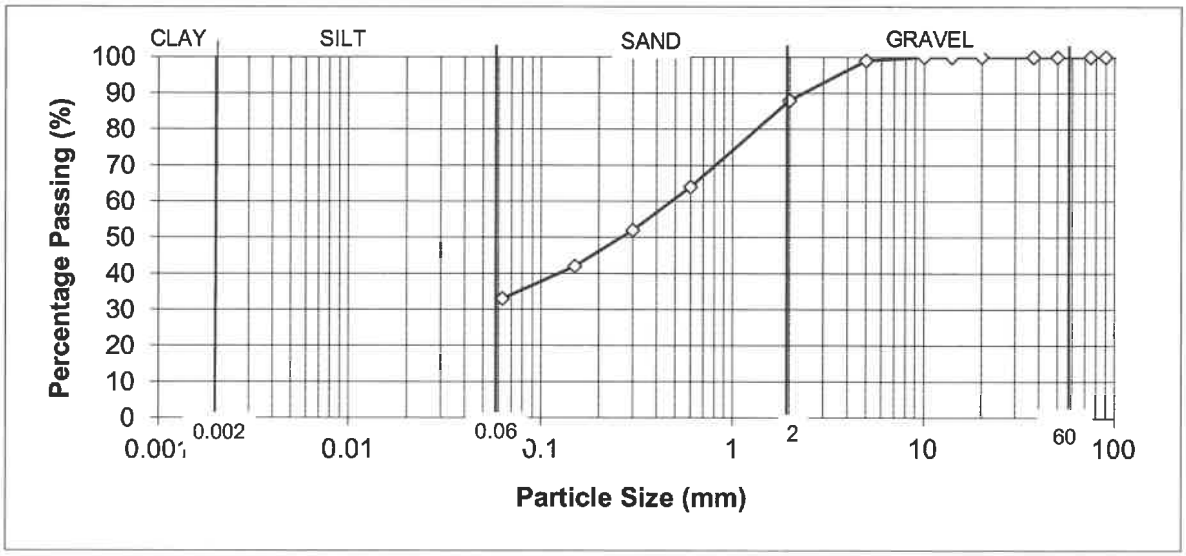
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	TP106 1.5-2	DATE SAMPLED	07-Jan-21
LAB SAMPLE No	95432	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Brown clay bound silty SAND with occasional gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		10	100	
90	100		5	99	
75	100		2	88	
50	100		0.6	64	
37.5	100		0.3	52	
20	100		0.15	42	
14	100		0.063	33	



REMARKS
As received moisture content = 22%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 27-Jan-21

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

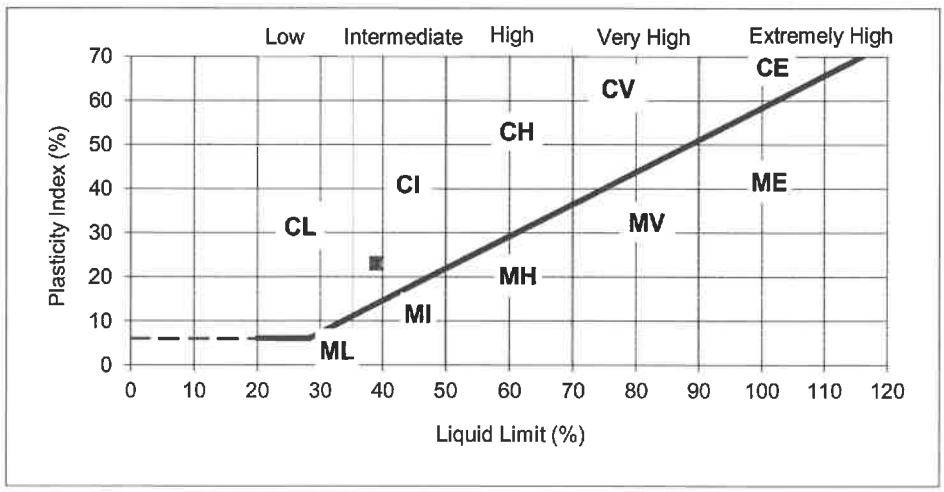
LIQUID AND PLASTIC LIMIT
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	TP107 1.5-2	DATE SAMPLED	07-Jan-21
SAMPLE No.	95433	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Firm to stiff brown silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
24	39	16	23	92



REMARKS
Sample tested after wet sieving

SIGNED

NAME O.P. Davies BA (Hons) DATE 27-Jan-21
(Laboratory Manager)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

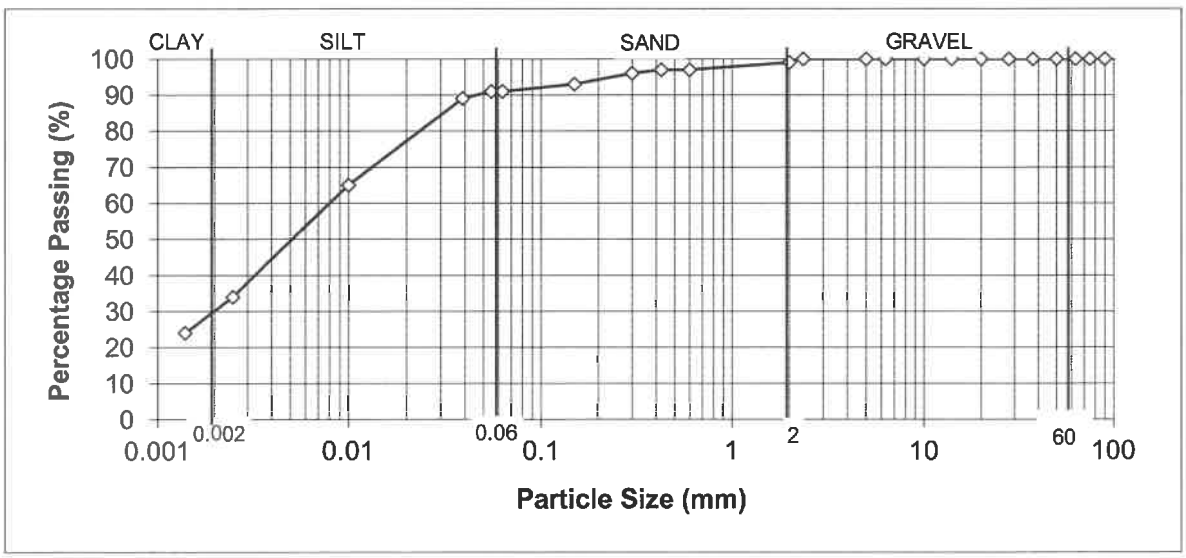
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Consult Ltd
SITE	LKC 20 1909 - Carr Top Lane, Golcar
JOB NUMBER	MRN 4066/13

SAMPLE LABEL	TP108 2-3	DATE SAMPLED	07-Jan-21
LAB SAMPLE No	95434	DATE RECEIVED	15-Jan-21
DATE TESTED	18-Jan-21	SAMPLED BY	Client

MATERIAL	Firm black silty sandy CLAY
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	100	
90	100		2	99	
75	100		0.6	97	
63	100		0.425	97	
50	100		0.3	96	
37.5	100		0.15	93	
28	100		0.063	91	
20	100		0.055	91	
14	100		0.039	89	
10	100		0.01	65	
6.3	100		0.0025	34	
5	100		0.0014	24	



REMARKS

As received moisture content = 29%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 27-Jan-21

Appendix E – Generic Assessment Criteria Values

Generic Assessment Criteria Values

	Contaminant	SOM	Res +	Res -	Allot.	Comm.	POSresi	POSpark	Source
Metals	Inorganic Arsenic	N/A	37	40	49	640	79	168	DEFRA C4SL
	Beryllium	N/A	1.7	1.7	35	12	2.2	63	LQM S4UL
	Boron	N/A	290	11,000	45	240,000	21,000	46,000	LQM S4UL
	Cadmium	N/A	26	149	4.9	410	220	880	DEFRA C4SL
	Chromium (III)	N/A	910	910	18,000	8,600	1,500	33,000	LQM S4UL
	Chromium (VI)	N/A	21.0	21.0	170.0	49	23.0	250	DEFRA C4SL
	Copper	N/A	2,400	7,100	520	68,000	12,000	44,000	LQM S4UL
	Lead	N/A	200	310	80	2,330	630	1,300	DEFRA C4SL
	Elemental Mercury	N/A	1.2	1.2	21	58 (25.8) vap	16	30 (25.8) vap	LQM S4UL
	Inorganic Mercury	N/A	40	56	19	1,100	120	240	LQM S4UL
	Methylmercury	N/A	11	15	6.0	320	40	68	LQM S4UL
	Nickel (2015 update)	N/A	130	180	53	980	230	800	LQM S4UL
	Selenium	N/A	250	430	88	12,000	1,100	1,800	LQM S4UL
	Vanadium	N/A	410	1,200	91	9,000	2,000	5,000	LQM S4UL
	Zinc	N/A	3,700	40,000	620	730,000	81,000	170,000	LQM S4UL
Polycyclic Aromatic Hydrocarbons (PAHs)	Acenaphthene	1%	210	3,000 (57.1) sol	34	84,000 (57.0) sol	15,000	29,000	LQM S4UL
		2.5%	510	4,700 (141) sol	85	97,000 (141) sol	15,000	30,000	LQM S4UL
		6%	1,100	6,000 (336) sol	200	100,000	15,000	30,000	LQM S4UL
	Acenaphthylene	1%	170	2,900 (86.1) sol	28	83,000 (86.1) sol	15,000	29,000	LQM S4UL
		2.5%	420	4,600 (212) sol	69	97,000 (212) sol	15,000	30,000	LQM S4UL
		6%	920	6,000 (506) sol	160	100,000	15,000	30,000	LQM S4UL
	Anthracene	1%	2,400	31,000 (1.17) vap	380	520,000	74,000	150,000	LQM S4UL
		2.5%	5,400	35,000	950	540,000	74,000	150,000	LQM S4UL
		6%	11,000	37,000	2,200	540,000	74,000	150,000	LQM S4UL
	Benz(a)anthracene	1%	7.2	11	2.9	170	29	49	LQM S4UL
		2.5%	11	14	6.5	170	29	56	LQM S4UL
		6%	13	15	13	180	29	62	LQM S4UL
	Benzo(a)pyrene (only)	1%	5.0	5.3	5.70	77	10.0	21	DEFRA C4SL
		2.5%	5.0	5.3	5.70	77	10.0	21	DEFRA C4SL
		6%	5.0	5.3	5.70	77	10.0	21	DEFRA C4SL
	Benzo(a)pyrene (surrogate marker Coal Tar)	1%	0.8	1.2	0.32	15	2.2	4	LQM S4UL
		2.5%	1.0	1.2	0.67	15	2.2	5	LQM S4UL
		6%	1.1	1.2	1.20	15	2.2	5	LQM S4UL
	Benzo(b)fluoranthene	1%	2.6	3.9	0.99	44	7.1	13	LQM S4UL
		2.5%	3.3	4.0	2.1	44	7.2	15	LQM S4UL
		6%	3.7	4.0	3.9	45	7.2	16	LQM S4UL
	Benzo(ghi)perylene	1%	320	360	290	3,900	640	1,400	LQM S4UL
		2.5%	340	360	470	4,000	640	1,500	LQM S4UL
		6%	350	360	640	4,000	640	1,600	LQM S4UL
	Benzo(k)fluoranthene	1%	77	110	37	1,200	190	370	LQM S4UL
		2.5%	93	110	75	1,200	190	410	LQM S4UL
		6%	100	110	130	1,200	190	440	LQM S4UL
	Chrysene	1%	15	30	4.1	350	57	93	LQM S4UL
		2.5%	22	31	9.4	350	57	110	LQM S4UL
		6%	27	32	19	350	57	120	LQM S4UL
	Dibenzo(ah)anthracene	1%	0.24	0.31	0.14	3.5	0.57	1.1	LQM S4UL
		2.5%	0.28	0.32	0.27	3.6	0.58	1.3	LQM S4UL
		6%	0.3	0.32	0.43	3.6	0.58	1.4	LQM S4UL
	Fluoranthene	1%	280	1,500	52	23,000	3,100	6,300	LQM S4UL
		2.5%	560	1,600	130	23,000	3,100	6,300	LQM S4UL
		6%	890	1,600	290	23,000	3,100	6,400	LQM S4UL
	Fluorene	1%	170	2,800 (36.0) sol	27	63,000 (30.9) sol	9,900	20,000	LQM S4UL
		2.5%	400	3,800 (76.5) sol	67	68,000	9,900	20,000	LQM S4UL
		6%	860	4,500 (183) sol	160	71,000	9,900	20,000	LQM S4UL
	Indeno(123-cd)pyrene	1%	27	45	9.5	500	82	150	LQM S4UL
		2.5%	36	46	21	510	82	170	LQM S4UL
		6%	41	46	39	510	82	180	LQM S4UL
	Naphthalene	1%	15	15	65	1,600*	11,000*	8,400*	DEFRA C4SL
		2.5%	36	36	130	3,700*	15,000*	17,00*	DEFRA C4SL
		6%	85	85	200	8,400*	1,200*	1,900*	DEFRA C4SL
	Phenanthrene	1%	95	1,300 (36.0) sol	15	22,000	3,100	6,200	LQM S4UL
		2.5%	220	1,500	38	22,000	3,100	6,200	LQM S4UL
		6%	440	1,500	90	22,000	3,100	6,300	LQM S4UL
	Pyrene	1%	620	3,700	110	54,000	7,400	15,000	LQM S4UL
		2.5%	1,200	3,800	270	54,000	7,400	15,000	LQM S4UL
		6%	2,000	3,800	620	54,000	7,400	15,000	LQM S4UL
	Coal Tar (B(a)P as surrogate marker)	1%	0.79	1.2	0.32	15	2.2	4.4	LQM S4UL
		2.5%	0.98	1.2	0.67	15	2.2	4.7	LQM S4UL
		6%	1.1	1.2	1.2	15	2.2	4.8	LQM S4UL

Generic Assessment Criteria Values

	Contaminant	SOM	Res +	Res -	Allot.	Comm.	POSresi	POSpark	Source
BTEX Compounds	Benzene	1%	0.87	0.38	0.017	27	72	90	LQM S4UL
		2.5%	0.17	0.70	0.034	47	72	100	LQM S4UL
		6%	0.37	1.4	0.075	90	73	110	LQM S4UL
	Toluene	1%	130	880 (869) vap	22	56,000 (869) vap	56,000	87,000 (869) vap	LQM S4UL
		2.5%	290	1,900	51	110,000 (1,920) vap	56,000	95,000 (1,920) vap	LQM S4UL
		6%	660	3,900	120	180,000 (4,360) vap	56,000	100,000 (4,360)	LQM S4UL
	Ethylbenzene	1%	47	83	16	5,700 (518) vap	24,000	17,000 (518) vap	LQM S4UL
		2.5%	110	190	39	13,000 (1,220) vap	24,000	22,000 (1,220) vap	LQM S4UL
		6%	260	440	91	27,000 (2,840) vap	25,000	27,000 (2,840) vap	LQM S4UL
	o-xylene	1%	60	88	28	6,600 (478) sol	41,000	17,000 (478) sol	LQM S4UL
		2.5%	140	210	67	15,000 (1,120) sol	42,000	24,000 (1,120) sol	LQM S4UL
		6%	330	480	160	33,000 (2,620) sol	43,000	33,000 (2,620) sol	LQM S4UL
	m-xylene	1%	59	82	31	6,200 (625) vap	41,000	17,000 (625) vap	LQM S4UL
		2.5%	140	190	74	14,000 (1,470) vap	42,000	24,000 (1,470) vap	LQM S4UL
		6%	320	450	170	31,000 (3,460) vap	43,000	32,000 (3,460) vap	LQM S4UL
	p-xylene	1%	56	79	29	5,900 (576) sol	41,000	17,000 (576) sol	LQM S4UL
		2.5%	130	180	69	14,000 (1,350) sol	42,000	23,000 (1,350) sol	LQM S4UL
		6%	310	430	160	30,000 (3,170) sol	43,000	31,000 (3,170) sol	LQM S4UL
Petroleum Hydroc	**Aliphatic**								
	EC 5-6	1%	42	42	730	3,200 (304) sol	570,000(304)sol	95,000 (304) sol	LQM S4UL
	EC>6-8	1%	100	100	2,300	7,800 (144) sol	600,000	150,000 (144) sol	LQM S4UL
	EC>8-10	1%	27	27	320	2,000 (78) sol	13,000	14,000 (78) vap	LQM S4UL
	EC>10-12	1%	130 (48) vap	130 (48) vap	2,200	9,700 (48) sol	13,000	21,000 (48) vap	LQM S4UL
	EC>12-16	1%	1,100 (24) sol	1,100 (24) sol	11,000	59,000 (24) sol	13,000	25,000 (24) sol	LQM S4UL
	EC>16-35	1%	65,000 (8.48)	65,000 (8.48) f ,sol	260,000 f	160,000 f	250,000 f	450,000 f	LQM S4UL
	EC>35-44	1%	65,000 (8.48)	65,000 (8.48) f ,sol	260,000 f	160,000 f	250,000 f	450,000 f	LQM S4UL
	Aliphatic								
	EC 5-6	2.5%	78	78	1,700	5,900 (558) sol	590,000	130,000 (558) sol	LQM S4UL
	EC>6-8	2.5%	230	230	5,600	17,000 (322) sol	610,000	220,000 (322) sol	LQM S4UL
	EC>8-10	2.5%	65	65	770	4,800 (190) vap	13,000	18,000 (190) vap	LQM S4UL
	EC>10-12	2.5%	330 (118) vap	330 (118) vap	4,400	23,000 (118) vap	13,000	23,000 (118) vap	LQM S4UL
	EC>12-16	2.5%	2,400 (59) sol	2,400 (59) sol	13,000	82,000 (59) sol	13,000	25,000 (59) sol	LQM S4UL
	EC>16-35	2.5%	92,000 (21)	92,000 (21) f ,sol	270,000 f	1,700,000 f	250,000 f	480,000 f	LQM S4UL
	EC>35-44	2.5%	92,000 (21)	92,000 (21) f ,sol	270,000 f	1,700,000 f	250,000 f	480,000 f	LQM S4UL
	Aliphatic								
	EC 5-6	6%	160	160	3,900	12,000 (1,150) sol	600,000	180,000 (1,150)	LQM S4UL
	EC>6-8	6%	530	530	13,000	40,000 (736) sol	620,000	320,000 (736) sol	LQM S4UL
	EC>8-10	6%	150	150	1,700	11,000 (451) vap	13,000	21,000 (451) vap	LQM S4UL
	EC>10-12	6%	760 (283) vap	760 (283) vap	7,300	47,000 (283) vap	13,000	24,000 (283) vap	LQM S4UL
	EC>12-16	6%	4,300 (142) sol	4,400 (142) sol	13,000	90,000 (142) sol	13,000	26,000 (142) sol	LQM S4UL
	EC>16-35	6%	110,000f	110,000f	270,000 f	1,800,000f	250,000 f	490,000 f	LQM S4UL
	EC>35-44	6%	110,000f	110,000f	270,000 f	1,800,000f	250,000 f	490,000 f	LQM S4UL
	Aromatic								
	EC5-7(benzene as non-	1%	70	370	13	26,000 (1,220) sol	56,000	76,000 (1,220) sol	LQM S4UL
	EC>7-8(toluene)	1%	130	860	22	56,000 (869) vap	56,000	87,000 (869) vap	LQM S4UL
	EC>8-10	1%	34	47	8.6	3,500 (613) vap	5,000	7,200 (613) vap	LQM S4UL
	EC>10-12	1%	74	250	13	16,000 (364) sol	5,000	9,200 (364) sol	LQM S4UL
	EC>12-16	1%	140	1,800	23	36,000 (169)sol	5,100	10,000	LQM S4UL
	EC>16-21	1%	260 f	1,900 f	46 f	28,000 f	3,800 f	7,600 f	LQM S4UL
	EC>21-35	1%	1,100 f	1,900 f	370 f	28,000 f	3,800 f	7,800 f	LQM S4UL
	EC>35-44	1%	1,100 f	1,900 f	370f	28,000 f	3,800 f	7,800 f	LQM S4UL
	Aromatic								
	EC5-7(benzene as non-	2.5%	140	690	27	46,000 (2,260) sol	56,000	84,000 (2,260) sol	LQM S4UL
	EC>7-8(toluene)	2.5%	290	1,800	51	110,000 (1,920) sol	56,000	95,000 (1,920) sol	LQM S4UL
	EC>8-10	2.5%	83	110	21	8,100 (1,500) vap	5,000	8,500 (1,500) vap	LQM S4UL
	EC>10-12	2.5%	180	590	31	28,000 (899) sol	5,000	9,700 (899) sol	LQM S4UL
	EC>12-16	2.5%	330	2,300 (419) sol	57	37,000	5,100	10,000	LQM S4UL
	EC>16-21	2.5%	540 f	1,900 f	110 f	28,000 f	3,800 f	7,700 f	LQM S4UL
	EC>21-35	2.5%	1,500 f	1,900 f	820 f	28,000 f	3,800 f	7,800 f	LQM S4UL
	EC>35-44	2.5%	1,500 f	1,900 f	820 f	28,000 f	3,800 f	7,800 f	LQM S4UL
	Aromatic								
	EC5-7(benzene as non-	6%	300	1,400	57	86,000 (4,710) sol	56,000	92,000 (4,710) sol	LQM S4UL
	EC>7-8(toluene)	6%	660	3,900	120	180,000 (4,360)vap	56,000	100,000 (4,360)	LQM S4UL
	EC>8-10	6%	190	270	51	17,000 (3,580) vap	5,000	9,300 (3,580) vap	LQM S4UL
	EC>10-12	6%	380	1,200	4	34,000 (2,150) sol	5,000	10,000	LQM S4UL
	EC>12-16	6%	660	2,500	130	38,000	5,100	10,000	LQM S4UL
	EC>16-21	6%	930f	1,900 f	260 f	28,000 f	3,800 f	7,800 f	LQM S4UL
	EC>21-35	6%	1,700 f	1,900 f	1,600 f	28,000 f	3,800 f	7,900 f	LQM S4UL
	EC>35-44	6%	1,700 f	1,900 f	1,600 f	28,000 f	3,800 f	7,900 f	LQM S4UL
	Aliphatic +Aromatic >EC44	1%	1,600 f	1,900 f	1,200 f	28,000 f	3,800 f	7,800 f	LQM S4UL
		2.5%	1,800 f	1,900 f	2,100 f	28,000 f	3,800 f	7,800 f	LQM S4UL
		6%	1,900 f	1,900 f	3,000 f	28,000 f	3,800 f	7,900 f	LQM S4UL

	Contaminant	SOM	Res +	Res -	Allot.	Comm.	POSresi	POSpark	Source
Chloalkanes and Alkenes & Explosives	1,2 Dichloroethane (DCA)	1%	0.0071	0.0092	0.0046	0.67	29	21	LQM S4UL
		2.5%	0.0110	0.0130	0.0083	0.97	29	24	LQM S4UL
		6%	0.0190	0.0230	0.0160	1.7	29	28	LQM S4UL
	1,1,1 Trichloroethane (TCA)	1%	8.8	9.0	48	660	140,000	57,000 (1,425) vap	LQM S4UL
		2.5%	18	18	110	1,300	140,000	76,000 (2,915) vap	LQM S4UL
		6%	39	40	240	3,000	140,000	100,000 (6,392)	LQM S4UL
	1,1,2,2-Tetrachloroethanes (PCA)	1%	1.6	3.9	0.41	270	1,400	1,800	LQM S4UL
		2.5%	3.4	8.0	0.89	550	1,400	2,100	LQM S4UL
		6%	7.5	17	2.0	1,100	1,400	2,300	LQM S4UL
	1,1,1,2-Tetrachloroethanes (PCA)	1%	1.2	1.5	0.79	110	1,400	1,500	LQM S4UL
		2.5%	2.8	3.5	1.9	250	1,400	1,800	LQM S4UL
		6%	6.4	8.2	4.4	560	1,400	2,100	LQM S4UL
	Tetrachloroethene (PCE)	1%	0.31	0.32	2.00	24	3,200	1400	DEFRA C4SL
		2.5%	0.70	0.71	4.8	55	3,300	1900	DEFRA C4SL
		6%	1.60	1.60	11.0	130	3,400	2,500	DEFRA C4SL
	Tetrachloromethane (carbon tetrachloride)	1%	0.03	0.03	0.45	2.9	890	190	LQM S4UL
		2.5%	0.06	0.06	1.0	6.3	920	270	LQM S4UL
		6%	0.13	0.13	2.4	14	950	400	LQM S4UL
	Trichloroethene (TCE)	1%	0.009	0.010	0.032	0.7	76.0	41.0	DEFRA C4SL
		2.5%	0.020	0.020	0.072	1.5	78.0	51.0	DEFRA C4SL
		6%	0.043	0.045	0.160	3.4	79.0	69.0	DEFRA C4SL
	cis 1,2-dichloroethene	1%	0.46	0.50	0.890	38	3,800	2,000	DEFRA C4SL
		2.5%	0.78	0.84	1.70	64	3,800	2,400	DEFRA C4SL
		6%	1.50	1.60	3.60	120	3,900	3,100	DEFRA C4SL
	Trichloromethane (chloroform)	1%	0.91	1.2	0.42	99	2,500	2,600	LQM S4UL
		2.5%	1.7	2.1	0.83	170	2,500	2,800	LQM S4UL
		6%	3.4	4.2	1.7	350	2,500	3,100	LQM S4UL
	Trans-1,2 Dichloroethene	1%	0.9	0.9	3.7	69	13,000	5,600	DEFRA C4SL
		2.5%	1.6	1.7	7.5	120	13,000	7,000	DEFRA C4SL
		6%	3.3	3.4	16.0	260	13,000	9,100	DEFRA C4SL
	Chloroethene (vinyl chloride)	1%	0.006	0.015	0.0017	1.1E+00	7.8	18.0	DEFRA C4SL
		2.5%	0.010	0.019	0.0031	1.4E+00	7.8	19.0	DEFRA C4SL
		6%	0.017	0.029	0.0058	2.20	7.8	19.0	DEFRA C4SL
	2,4,6-Trinitritoluene (TNT)	1%	1.6	65	0.24	1,000	130	260	LQM S4UL
		2.5%	3.7	66	0.58	1,000	130	270	LQM S4UL
		6%	8.1	66	1.4	1,000	130	270	LQM S4UL
	RDX	1%	120	13,000	17	210,000	26,000	49,000 (18.7) sol	LQM S4UL
		2.5%	250	13,000	38	210,000	26,000	51,000	LQM S4UL
		6%	540	13,000	85	210,000	27,000	53,000	LQM S4UL
	HMX	1%	5.7	6,700	0.86	110,000	13,000	23,000 (0.35) vap	LQM S4UL
		2.5%	13	6,700	1.9	110,000	13,000	23,000 (0.39) vap	LQM S4UL
		6%	26	6,700	3.9	110,000	13,000	24,000 (0.48) vap	LQM S4UL
Pesticides	Aldrin	1%	5.7	7.3	3.2	170	18	30	LQM S4UL
		2.5%	6.6	7.4	6.1	170	18	31	LQM S4UL
		6%	7.1	7.5	9.8	170	18	31	LQM S4UL
	Dieldrin	1%	0.97	7.0	0.17	170	18	30	LQM S4UL
		2.5%	2.0	7.3	0.41	170	18	30	LQM S4UL
		6%	3.5	7.4	0.96	170	18	31	LQM S4UL
	Atrazine	1%	3.3	610	0.5	9,300	1,200	2,300	LQM S4UL
		2.5%	7.8	620	1.2	9,400	1,200	2,400	LQM S4UL
		6%	17.4	620	2.7	9,400	1,200	2,400	LQM S4UL
	Dichlorvos	1%	3.2E-02	6.4	4.9E-03	140	16	26	LQM S4UL
		2.5%	6.6E-02	6.5	1.0E-02	140	16	26	LQM S4UL
		6%	0.14	6.6	2.2E-02	140	16	27	LQM S4UL
	Endosulfanns (2 isomers)	1%	7.4	160 (3.0E-03) vap	1.2	5,600 (3.0E-03) vap	1,200	2,300	LQM S4UL
		2.5%	18	280 (7.0E-03) vap	2.9	7,400 (7.0E-03) vap	1,200	2,400	LQM S4UL
		6%	41	410 (1.6E-02) vap	6.8	8,400 (1.6E-02) vap	1,200	2,500	LQM S4UL
	Hexachlorocyclohexane (3 isomers), inc Lindane	1%	8.5E-02	3.7	1.3E-02	65	8.1	15	LQM S4UL
		2.5%	0.2	3.8	3.2E-02	65	8.1	15	LQM S4UL
		6%	0.46	3.8	7.7E-02	65	8.1	16	LQM S4UL
Chlorobenzenes	Chlorobenzene	1%	0.46	0.46	5.9	56	11,000	1,300 (675) sol	LQM S4UL
		2.5%	1.0	1.0	14	130	13,000	2,000 (1,520) sol	LQM S4UL
		6%	2.4	2.4	32	290	14,000	2,900	LQM S4UL
	Dichlorobenzenes (3 isomers)	1%	23	24	94	2,000 (571) sol	90,000	24,000 (571) sol	LQM S4UL
		2.5%	55	57	230	4,800 (1,370) sol	95,000	36,000 (1,370) sol	LQM S4UL
		6%	130	130	540	11,000 (3,240) sol	98,000	51,000 (3,270) sol	LQM S4UL
	Trichlorobenzenes (3 isomers)	1%	2.6	2.6	55	220	15,000	1,700 (318) vap	LQM S4UL
		2.5%	6.4	6.4	140	530	17,000	2,600 (786) vap	LQM S4UL
		6%	15	15	320	1,300	19,000	4,000 (1,880) vap	LQM S4UL
	Tetrachlorobenzenes (3 isomers)	1%	0.66	0.75	0.38	49 (39.4) vap	78	110 (39) vap	LQM S4UL
		2.5%	1.6	1.9	0.90	120 (98.1) vap	79	120	LQM S4UL
		6%	3.7	4.3	2.2	240 (235) vap	79	130	LQM S4UL
	Pentachlorobenzene	1%	5.8	19	1.2	640 (43.0) sol	100	190	LQM S4UL
		2.5%	12	30	3.1	770 (107) sol	100	190	LQM S4UL
		6%	22	38	7.0	830	100	190	LQM S4UL
	Hexachlorobenzene	1%	1.8 (0.20) vap	4.1 (0.20) vap	0.47	110 (0.20) vap	16	30	LQM S4UL
		2.5%	3.3 (0.50) vap	5.7 (0.50) vap	1.1	120	16	30	LQM S4UL
		6%	4.9	6.7 (1.2) vap	2.5	120	16	30	LQM S4UL

Generic Assessment Criteria Values

	Contaminant	SOM	Res +	Res -	Allot.	Comm.	POSresi	POSpark	Source
Chlorophenol	Chlorophenols (4 congeners)	1%	0.87 [g]	94	0.13 [g]	3,500	620	1,100	LQM S4UL
		2.5%	2.0	150	0.30	4,000	620	1,100	LQM S4UL
		6%	4.5	210	0.70	4,300	620	1,100	LQM S4UL
	Pentachlorophenol	1%	0.22	27 (16.4) [vap]	3.0E-02	400	60	110	LQM S4UL
		2.5%	0.52	29	8.0E-02	400	60	120	LQM S4UL
		6%	1.2	31	0.19	400	60	120	LQM S4UL
Others	Carbon Disulphide	1%	0.14	0.14	4.8	11	11,000	1,300	LQM S4UL
		2.5%	0.29	0.29	10	22	11,000	1,900	LQM S4UL
		6%	0.62	0.62	23	47	11,000	2,700	LQM S4UL
	Hexachlorobutadiene	1%	0.29	0.32	0.25	31	25	48	LQM S4UL
		2.5%	0.7	0.78	0.61	66	25	50	LQM S4UL
		6%	1.6	1.8	1.4	120	25	51	LQM S4UL
	Phenol	1%	120	440 (460)	23	440 [dir] (26,000)	440 [dir] (10,000)	440 [dir] (7,600)	LQM S4UL
		2.5%	200	690	42	690 [dir] (30,000)	690 [dir] (10,000)	690 [dir] (8,300)	LQM S4UL
		6%	380	1,200	83	1,300 [dir] (34,000)	1,300 [dir] (10,000)	1,300 [dir] (9,300)	LQM S4UL

sol/vap = solubility/vapour limit (potenitally use if free product identified, although highly conservative)
*=naphthalene C4SL exceeds the CLEA calculated soil saturation concentration (76 mg kg-1 for 1% SOM,
183 mg kg-1 for 2.5% SOM and 432 mg kg-1 for 6% SOM)
f = oral, dermal and inhalation exposures compared to oral HCV
dir = S4ULs based on threshold protective of direct skin contact with phenol)brackets long term exposure for illustration purposes)
g = derived based on 2,3,4-tetrachlorophenol

Appendix F – HazWaste Online Assessment

Waste Classification Report

DJWXB-CTDZA-AZPNN

Job name

LKC 20 1909[2]

Description/Comments

Project

LKC 20 1909

Site

Carr Top Lane, Golcar

Related Documents

#	Name	Description
1	HWOL_21-00375-20210119 064236.hwol	.hwol file used to create the Job
2	HWOL_21-00368-20210122 142811.hwol	.hwol file used to create the Job

Waste Stream Template

Example waste stream template for contaminated soils

Classified by

Name:
Colin Crompton
Date:
28 Jan 2021 09:03 GMT
Telephone:
0161 763 7200

Company:
LK Group
Unit 29, Eton Business Park
Eton Hill Rd, Radcliffe
Greater Manchester
M26 2ZS

HazWasteOnline™ Training Record:

Course	Date
Hazardous Waste Classification	07 Oct 2020
Advanced Hazardous Waste Classification	08 Oct 2020

Report

Created by: Colin Crompton
Created date: 28 Jan 2021 09:03 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	WS101-07/01/2021-0.20	0.20-0.50	Non Hazardous		3
2	WS102-07/01/2021-0.00	0.00-0.50	Non Hazardous		5
3	WS103-07/01/2021-0.00	0.00-0.50	Non Hazardous		7
4	WS104-07/01/2021-0.00	0.00-0.50	Non Hazardous		9
5	WS104-07/01/2021-0.50	0.50-1.00	Non Hazardous		11
6	WS105-07/01/2021-0.00	0.00-0.30	Non Hazardous		12
7	-TP101-07/01/2021-0.0	0.0-0.3	Non Hazardous		14
8	-TP101-07/01/2021-0.8	0.8-1.5	Non Hazardous		16
9	-TP102-07/01/2021-0.0	0.0-0.3	Non Hazardous		17
10	-TP103-07/01/2021-0.3	0.3-1.0	Non Hazardous		19
11	-TP104-07/01/2021-0.5	0.5-1.5	Non Hazardous		21

Classification of sample: WS101-07/01/2021-0.20

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

Sample details

Sample Name:
WS101-07/01/2021-0.20
Sample Depth:
0.20-0.50 m
Moisture content:
21%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 21% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.1	mg/kg	1.32	3.233	mg/kg	0.000323 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.1	mg/kg	1.142	0.0902	mg/kg	0.00000902 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13	mg/kg	1.462	15.01	mg/kg	0.0015 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		6.5	mg/kg	1.126	5.781	mg/kg	0.000578 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	16	mg/kg	1.56	19.716	mg/kg	0.00126 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<**LOD**
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		10	mg/kg	2.976	23.512	mg/kg	0.00235 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.2	mg/kg	2.554	0.404	mg/kg	0.0000404 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		39	mg/kg	2.774	85.471	mg/kg	0.00855 %	✓	
11	pH			PH		6.2	pH		6.2	pH	6.2 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				15	mg/kg	1.785	21.154	mg/kg	0.00212 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.017 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS102-07/01/2021-0.00

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

Sample details

Sample Name:
WS102-07/01/2021-0.00
Sample Depth:
0.00-0.50 m
Moisture content:
16%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 16% Wet Weight Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		1.9	mg/kg	1.32	2.107	mg/kg	0.000211 %	✓	
2		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1	mg/kg	1.142	<0.114	mg/kg	<0.0000114 %		<**LOD**
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		6.3	mg/kg	1.462	7.735	mg/kg	0.000773 %	✓	
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
5		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		4	mg/kg	1.126	3.783	mg/kg	0.000378 %	✓	
6		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	10	mg/kg	1.56	13.102	mg/kg	0.00084 %	✓	
7		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<**LOD**
8		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		5	mg/kg	2.976	12.5	mg/kg	0.00125 %	✓	
9		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<**LOD**
10		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		22	mg/kg	2.774	51.266	mg/kg	0.00513 %	✓	
11		pH			PH		6.3	pH		6.3	pH	6.3 pH		
12		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
13		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
14		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				8.8	mg/kg	1.785	13.196	mg/kg	0.00132 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0102 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS103-07/01/2021-0.00

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

Sample details

Sample Name:
WS103-07/01/2021-0.00
Sample Depth:
0.00-0.50 m
Moisture content:
16%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 16% Wet Weight Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4	mg/kg	1.32	4.436	mg/kg	0.000444 %	✓	
2		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1	mg/kg	1.142	<0.114	mg/kg	<0.0000114 %		<**LOD**
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13	mg/kg	1.462	15.96	mg/kg	0.0016 %	✓	
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
5		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		8.3	mg/kg	1.126	7.85	mg/kg	0.000785 %	✓	
6		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	19	mg/kg	1.56	24.895	mg/kg	0.0016 %	✓	
7		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<**LOD**
8		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		12	mg/kg	2.976	30.001	mg/kg	0.003 %	✓	
9		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<**LOD**
10		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		49	mg/kg	2.774	114.184	mg/kg	0.0114 %	✓	
11		pH			PH		6.3	pH		6.3	pH	6.3 pH		
12		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
13		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
14		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				15	mg/kg	1.785	22.493	mg/kg	0.00225 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0214 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS104-07/01/2021-0.00

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

Sample details

Sample Name:
WS104-07/01/2021-0.00
Sample Depth:
0.00-0.50 m
Moisture content:
22%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 22% Wet Weight 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 { arsenic trioxide }		15 mg/kg	1.32	15.448 mg/kg	0.00154 %	✓	
		033-003-00-0 / 215-481-4 / 1327-53-3							
2		cadmium { cadmium oxide }		0.81 mg/kg	1.142	0.722 mg/kg	0.0000722 %	✓	
		048-002-00-0 / 215-146-2 / 1306-19-0							
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		28 mg/kg	1.462	31.92 mg/kg	0.00319 %	✓	
		/ 215-160-9 / 1308-38-9							
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<**LOD**
		024-017-00-8 / /							
5		copper { dicopper oxide; copper (I) oxide }		35 mg/kg	1.126	30.737 mg/kg	0.00307 %	✓	
		029-002-00-X / 215-270-7 / 1317-39-1							
6		lead { lead chromate }	1	83 mg/kg	1.56	100.982 mg/kg	0.00647 %	✓	
		082-004-00-2 / 231-846-0 / 7758-97-6							
7		mercury { mercury dichloride }		0.15 mg/kg	1.353	0.158 mg/kg	0.0000158 %	✓	
		080-010-00-X / 231-299-8 / 7487-94-7							
8		nickel { nickel chromate }		15 mg/kg	2.976	34.822 mg/kg	0.00348 %	✓	
		028-035-00-7 / 238-766-5 / 14721-18-7							
9		selenium { nickel selenate }		0.36 mg/kg	2.554	0.717 mg/kg	0.0000717 %	✓	
		028-031-00-5 / 239-125-2 / 15060-62-5							
10		zinc { zinc chromate }		84 mg/kg	2.774	181.762 mg/kg	0.0182 %	✓	
		024-007-00-3 / 236-878-9 / 13530-65-9							
11		pH		8.3 pH		8.3 pH	8.3 pH		
		/ / PH							
12		naphthalene		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
		601-052-00-2 / 202-049-5 / 91-20-3							
13		acenaphthylene		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
		/ 205-917-1 / 208-96-8							
14		acenaphthene		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
		/ 201-469-6 / 83-32-9							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
16		phenanthrene				1.8	mg/kg		1.404	mg/kg	0.00014 %	✓	
			201-581-5	85-01-8									
17		anthracene				0.27	mg/kg		0.211	mg/kg	0.0000211 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				1.9	mg/kg		1.482	mg/kg	0.000148 %	✓	
			205-912-4	206-44-0									
19		pyrene				1.5	mg/kg		1.17	mg/kg	0.000117 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				0.69	mg/kg		0.538	mg/kg	0.0000538 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				0.73	mg/kg		0.569	mg/kg	0.0000569 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				0.79	mg/kg		0.616	mg/kg	0.0000616 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				0.36	mg/kg		0.281	mg/kg	0.0000281 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				0.69	mg/kg		0.538	mg/kg	0.0000538 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				44	mg/kg	1.785	61.268	mg/kg	0.00613 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
29		asbestos				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0441 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS104-07/01/2021-0.50

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

Sample details

Sample Name:
WS104-07/01/2021-0.50
Sample Depth:
0.50-1.00 m
Moisture content:
22%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 22% Wet Weight 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		pH		PH		6.8 pH		6.8 pH	6.8 pH		
								Total:	0%		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: WS105-07/01/2021-0.00

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

Sample details

Sample Name:
WS105-07/01/2021-0.00
Sample Depth:
0.00-0.30 m
Moisture content:
22%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 22% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		27	mg/kg	1.32	27.806	mg/kg	0.00278 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.17	mg/kg	1.142	0.151	mg/kg	0.0000151 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26	mg/kg	1.462	29.64	mg/kg	0.00296 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		59	mg/kg	1.126	51.813	mg/kg	0.00518 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	120	mg/kg	1.56	145.999	mg/kg	0.00936 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.26	mg/kg	1.353	0.274	mg/kg	0.0000274 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		13	mg/kg	2.976	30.179	mg/kg	0.00302 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.76	mg/kg	2.554	1.514	mg/kg	0.000151 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		57	mg/kg	2.774	123.339	mg/kg	0.0123 %	✓	
11	pH			PH		6.7	pH		6.7	pH	6.7 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
16		phenanthrene				0.22	mg/kg		0.172	mg/kg	0.0000172 %	✓	
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
18		fluoranthene				0.45	mg/kg		0.351	mg/kg	0.0000351 %	✓	
			205-912-4	206-44-0									
19		pyrene				0.41	mg/kg		0.32	mg/kg	0.000032 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				0.26	mg/kg		0.203	mg/kg	0.0000203 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				0.3	mg/kg		0.234	mg/kg	0.0000234 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				30	mg/kg	1.785	41.773	mg/kg	0.00418 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0404 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: -TP101-07/01/2021-0.0

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

Sample details

Sample Name:
-TP101-07/01/2021-0.0
Sample Depth:
0.0-0.3 m
Moisture content:
22%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 22% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		26	mg/kg	1.32	26.776	mg/kg	0.00268 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.24	mg/kg	1.142	0.214	mg/kg	0.0000214 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		29	mg/kg	1.462	33.06	mg/kg	0.00331 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		47	mg/kg	1.126	41.275	mg/kg	0.00413 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	140	mg/kg	1.56	170.332	mg/kg	0.0109 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.84	mg/kg	1.353	0.887	mg/kg	0.0000887 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		14	mg/kg	2.976	32.501	mg/kg	0.00325 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.51	mg/kg	2.554	1.016	mg/kg	0.000102 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		91	mg/kg	2.774	196.909	mg/kg	0.0197 %	✓	
11	pH			PH		6.3	pH		6.3	pH	6.3 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
16		phenanthrene				1.1	mg/kg		0.858	mg/kg	0.0000858 %	✓	
			201-581-5	85-01-8									
17		anthracene				0.26	mg/kg		0.203	mg/kg	0.0000203 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				1.9	mg/kg		1.482	mg/kg	0.000148 %	✓	
			205-912-4	206-44-0									
19		pyrene				1.5	mg/kg		1.17	mg/kg	0.000117 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				0.82	mg/kg		0.64	mg/kg	0.000064 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				0.95	mg/kg		0.741	mg/kg	0.0000741 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				1.1	mg/kg		0.858	mg/kg	0.0000858 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				0.5	mg/kg		0.39	mg/kg	0.000039 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				0.95	mg/kg		0.741	mg/kg	0.0000741 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				0.63	mg/kg		0.491	mg/kg	0.0000491 %	✓	
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				0.23	mg/kg		0.179	mg/kg	0.0000179 %	✓	
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				0.58	mg/kg		0.452	mg/kg	0.0000452 %	✓	
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				28	mg/kg	1.785	38.988	mg/kg	0.0039 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0491 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: -TP101-07/01/2021-0.8

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

Sample details

Sample Name:
-TP101-07/01/2021-0.8
Sample Depth:
0.8-1.5 m
Moisture content:
13%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 13% Wet Weight 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	●	pH		PH		6.9 pH		6.9 pH	6.9 pH		
								Total:	0%		

Key

	User supplied data
●	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: -TP102-07/01/2021-0.0

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

Sample details

Sample Name:
-TP102-07/01/2021-0.0
Sample Depth:
0.0-0.3 m
Moisture content:
22%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 22% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		17 mg/kg	1.32	17.508 mg/kg	0.00175 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.178 mg/kg	0.0000178 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30 mg/kg	1.462	34.2 mg/kg	0.00342 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		43 mg/kg	1.126	37.762 mg/kg	0.00378 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	93 mg/kg	1.56	113.149 mg/kg	0.00725 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.49 mg/kg	1.353	0.517 mg/kg	0.0000517 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22 mg/kg	2.976	51.073 mg/kg	0.00511 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.28 mg/kg	2.554	0.558 mg/kg	0.0000558 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		78 mg/kg	2.774	168.779 mg/kg	0.0169 %	✓	
11	pH			PH		5.8 pH		5.8 pH	5.8 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
13	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
16		phenanthrene				0.19	mg/kg		0.148	mg/kg	0.0000148 %	✓	
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
18		fluoranthene				0.53	mg/kg		0.413	mg/kg	0.0000413 %	✓	
			205-912-4	206-44-0									
19		pyrene				0.42	mg/kg		0.328	mg/kg	0.0000328 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				0.27	mg/kg		0.211	mg/kg	0.0000211 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				0.33	mg/kg		0.257	mg/kg	0.0000257 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				0.39	mg/kg		0.304	mg/kg	0.0000304 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				0.14	mg/kg		0.109	mg/kg	0.0000109 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				0.32	mg/kg		0.25	mg/kg	0.000025 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				31	mg/kg	1.785	43.166	mg/kg	0.00432 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.043 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: -TP103-07/01/2021-0.3

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

Sample details

Sample Name:
-TP103-07/01/2021-0.3
Sample Depth:
0.3-1.0 m
Moisture content:
17%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 17% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.2 mg/kg	1.32	3.507 mg/kg	0.000351 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		12 mg/kg	1.462	14.557 mg/kg	0.00146 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		7.2 mg/kg	1.126	6.728 mg/kg	0.000673 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	9.8 mg/kg	1.56	12.688 mg/kg	0.000813 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		7.7 mg/kg	2.976	19.021 mg/kg	0.0019 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.3 mg/kg	2.554	0.636 mg/kg	0.0000636 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		29 mg/kg	2.774	66.774 mg/kg	0.00668 %	✓	
11	pH			PH		5.3 pH		5.3 pH	5.3 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				16	mg/kg	1.785	23.707	mg/kg	0.00237 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0146 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: -TP104-07/01/2021-0.5

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

Sample details

Sample Name:
-TP104-07/01/2021-0.5
Sample Depth:
0.5-1.5 m
Moisture content:
17%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 17% Wet Weight 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 { arsenic trioxide }		4.8 mg/kg	1.32	5.26 mg/kg	0.000526 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
2	boron { diboron trioxide; boric oxide }		<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8 / 215-125-8 / 1303-86-2							
3	cadmium { cadmium oxide }		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		18 mg/kg	1.462	21.836 mg/kg	0.00218 %	✓	
	/ 215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
	024-017-00-8 / /							
6	copper { dicopper oxide; copper (I) oxide }		9.3 mg/kg	1.126	8.691 mg/kg	0.000869 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	11 mg/kg	1.56	14.241 mg/kg	0.000913 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X / 231-299-8 / 7487-94-7							
9	nickel { nickel chromate }		12 mg/kg	2.976	29.644 mg/kg	0.00296 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
10	selenium { nickel selenate }		0.34 mg/kg	2.554	0.721 mg/kg	0.0000721 %	✓	
	028-031-00-5 / 239-125-2 / 15060-62-5							
11	zinc { zinc chromate }		51 mg/kg	2.774	117.43 mg/kg	0.0117 %	✓	
	024-007-00-3 / 236-878-9 / 13530-65-9							
12	TPH (C6 to C40) petroleum group		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
	/ / TPH							
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
14	benzene		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
16		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
17		xylene	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]		<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
19		pH			PH		6.1	pH		6.1	pH	6.1 pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
21		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
23		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
24		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
25		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		pyrene		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
32		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
33		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
34		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
35		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
36		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		22	mg/kg	1.785	32.597	mg/kg	0.00326 %	✓	
37		monohydric phenols			P1186		<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
											Total:	0.0241 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: -TP105-07/01/2021-0.5

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

Sample details

Sample Name:
-TP105-07/01/2021-0.5
Sample Depth:
0.5-1.5 m
Moisture content:
14%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 14% Wet Weight 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	●	pH		PH		5.9 pH		5.9 pH	5.9 pH		
								Total:	0%		

Key

	User supplied data
●	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: -TP106-07/01/2021-0.3

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

Sample details

Sample Name:
-TP106-07/01/2021-0.3
Sample Depth:
0.3-1.0 m
Moisture content:
18%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 18% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11 mg/kg	1.32	11.909 mg/kg	0.00119 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<**LOD**
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25 mg/kg	1.462	29.962 mg/kg	0.003 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		29 mg/kg	1.126	26.774 mg/kg	0.00268 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	18 mg/kg	1.56	23.023 mg/kg	0.00148 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21 mg/kg	2.976	51.251 mg/kg	0.00513 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.45 mg/kg	2.554	0.942 mg/kg	0.0000942 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		40 mg/kg	2.774	90.992 mg/kg	0.0091 %	✓	
11	pH			PH		5.7 pH		5.7 pH	5.7 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
13	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				25	mg/kg	1.785	36.596	mg/kg	0.00366 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0266 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: -TP107-07/01/2021-0.0

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

Sample details

Sample Name:
-TP107-07/01/2021-0.0
Sample Depth:
0.0-0.2 m
Moisture content:
24%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 24% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		21 mg/kg	1.32	21.072 mg/kg	0.00211 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.16 mg/kg	1.142	0.139 mg/kg	0.0000139 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		31 mg/kg	1.462	34.434 mg/kg	0.00344 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		41 mg/kg	1.126	35.083 mg/kg	0.00351 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	100 mg/kg	1.56	118.546 mg/kg	0.0076 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.41 mg/kg	1.353	0.422 mg/kg	0.0000422 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		17 mg/kg	2.976	38.453 mg/kg	0.00385 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.54 mg/kg	2.554	1.048 mg/kg	0.000105 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		53 mg/kg	2.774	111.743 mg/kg	0.0112 %	✓	
11	pH			PH		5.6 pH		5.6 pH	5.6 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		1.4 mg/kg		1.064 mg/kg	0.000106 %	✓	
13	acenaphthylene		205-917-1	208-96-8		0.13 mg/kg		0.0988 mg/kg	0.00000988 %	✓	
14	acenaphthene		201-469-6	83-32-9		0.97 mg/kg		0.737 mg/kg	0.0000737 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				0.81	mg/kg		0.616	mg/kg	0.0000616 %	✓	
			201-695-5	86-73-7									
16		phenanthrene				8	mg/kg		6.08	mg/kg	0.000608 %	✓	
			201-581-5	85-01-8									
17		anthracene				1.8	mg/kg		1.368	mg/kg	0.000137 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				8.5	mg/kg		6.46	mg/kg	0.000646 %	✓	
			205-912-4	206-44-0									
19		pyrene				7	mg/kg		5.32	mg/kg	0.000532 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				3.3	mg/kg		2.508	mg/kg	0.000251 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				3.2	mg/kg		2.432	mg/kg	0.000243 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				3.5	mg/kg		2.66	mg/kg	0.000266 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				1.3	mg/kg		0.988	mg/kg	0.0000988 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				3.1	mg/kg		2.356	mg/kg	0.000236 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				1.8	mg/kg		1.368	mg/kg	0.000137 %	✓	
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				0.37	mg/kg		0.281	mg/kg	0.0000281 %	✓	
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				1.5	mg/kg		1.14	mg/kg	0.000114 %	✓	
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				27	mg/kg	1.785	36.632	mg/kg	0.00366 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0392 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: -TP107-07/01/2021-0.5

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

Sample details

Sample Name:
-TP107-07/01/2021-0.5
Sample Depth:
0.5-1.0 m
Moisture content:
18%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 18% Wet Weight 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		pH		PH		6.3 pH		6.3 pH	6.3 pH		
								Total:	0%		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: -TP108-07/01/2021-0.0

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

Sample details

Sample Name:
-TP108-07/01/2021-0.0
Sample Depth:
0.0-0.2 m
Moisture content:
17%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 17% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.9	mg/kg	1.32	4.274	mg/kg	0.000427 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1	mg/kg	1.142	<0.114	mg/kg	<0.0000114 %		<**LOD**
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		12	mg/kg	1.462	14.557	mg/kg	0.00146 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		9.7	mg/kg	1.126	9.065	mg/kg	0.000906 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	18	mg/kg	1.56	23.304	mg/kg	0.00149 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<**LOD**
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		8.2	mg/kg	2.976	20.256	mg/kg	0.00203 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<**LOD**
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		38	mg/kg	2.774	87.497	mg/kg	0.00875 %	✓	
11	pH			PH		5.7	pH		5.7	pH	5.7 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
16		phenanthrene				0.12	mg/kg		0.0996	mg/kg	0.00000996 %	✓	
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
18		fluoranthene				0.23	mg/kg		0.191	mg/kg	0.0000191 %	✓	
			205-912-4	206-44-0									
19		pyrene				0.18	mg/kg		0.149	mg/kg	0.0000149 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				0.15	mg/kg		0.125	mg/kg	0.0000124 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				0.14	mg/kg		0.116	mg/kg	0.0000116 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				14	mg/kg	1.785	20.744	mg/kg	0.00207 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0175 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non CLP determinands

- **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H332 , Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 1B H360FD , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **pH** (CAS Number: PH)

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

- **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: Acute Tox. 4 H302 , Acute Tox. 1 H330 , Acute Tox. 1 H310 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315

- **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: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Aquatic Chronic 2 H411

- **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 Acute 1 H400 , Aquatic Chronic 1 H410

- **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: Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Carc. 2 H351 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Skin Irrit. 2 H315

- **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: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **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: Acute Tox. 4 H302 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

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

- **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

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 Acute 1 H400 , Aquatic Chronic 1 H410

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: Flam. Liq. 3 H226 , Asp. Tox. 1 H304 , STOT RE 2 H373 , Muta. 1B H340 , Carc. 1B H350 , Repr. 2 H361d , Aquatic Chronic 2 H411

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

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

CLP index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

monohydric phenols (CAS Number: P1186)

Description/Comments: Combined hazards statements from harmonised entries in CLP for phenol, cresols and xylenols (604-001-00-2, 604-004-00-9, 604-006-00-X)
Data source: CLP combined data
Data source date: 26 Mar 2019
Hazard Statements: Acute Tox. 3 H301 , Acute Tox. 3 H311 , Acute Tox. 3 H331 , Skin Corr. 1B H314 , Skin Corr. 1B H314 >= 3 %, Skin Irrit. 2 H315 1 £ conc. < 3 %, Eye Irrit. 2 H319 1 £ conc. < 3 %, Muta. 2 H341 , STOT RE 2 H373 , Aquatic Chronic 2 H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

vanadium {divanadium pentaoxide; vanadium pentoxide}

worst case/most likely scenario

boron {diboron trioxide; boric oxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass (edit as required)

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2021.22.4616.8916 (22 Jan 2021)
HazWasteOnline Database: 2021.22.4616.8916 (22 Jan 2021)

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 Waste 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
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2019 - UK: 2019 No. 720 of 27th March 2019
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
POPs Regulation 2019 - Regulation (EU) 2019/1021 of 20 June 2019

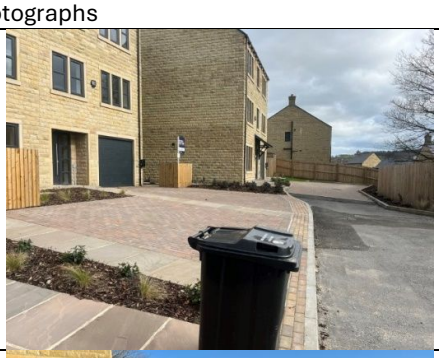
Appendix G – Additional Investigation

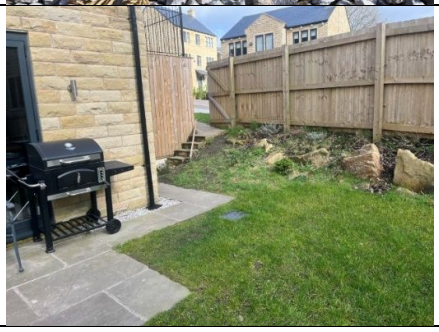
Photographs

Profile Logs

Laboratory Data

Site Photographs 25th March 2025

General Site Photographs	
	
	
	

Evidence of Airbricks	
	
	

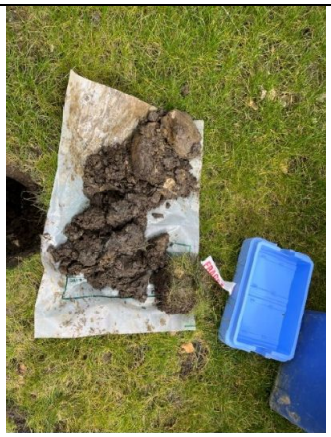
Excavated soils from individual plots	
 Plot 1	 Plot 2
 Plot 3	 Plot 4
 Plot 5	 Plot 6

Plot 7

Plot 8

Plot 9

Plot 10



Plot 11

Plot 12

 Plot 13	

Profile Logs Hand Dug Pits – Carr Top Road, Golcar

Ref: LKC201909

Date of Investigation: 25th March

Location	Depth (mbgl)	Description	Sample Ref.
HD Plot 01 (rear garden)	0.00-0.30	Topsoil: Soft to firm consistency dark brown slightly sandy SILT with rare plastic and ceramic. Gravel predominantly sandstone.	ES16
	0.30-0.45	Firm consistency light brown slightly gravelly slightly sandy silty CLAY. Gravel predominantly sandstone.	ES17
HD Plot 02 (rear garden)	0.00-0.50	Topsoil: Soft to firm consistency dark brown slightly gravelly slightly sandy SILT with rare brick fragments. Gravel predominantly sandstone.	ES15
HD Plot 3 (rear garden)	0.00-0.25	Topsoil: Soft to firm consistency dark brown slghtly gravelly slightly sandy SILT with rare brick fragments	ES13
	0.25-0.45	Light brown slightly gravelly silty clayey SAND. Gravel predominantly sandstone.	ES14
HD Plot 4 (rear garden)	0.00-0.25	Topsoil: Soft to firm consistency dark brown slightly gravelly slightly sandy slightly clayey SILT. Gravel predominantly sandstone.	ES11
	0.25-0.40	Firm consistency dark brown with light brown inclusions gravelly slightly sandy silty CALY. Gravel predominantly sandstone.	ES12
HD Plot 5 (rear garden)	0.00-0.25	Topsoil: Soft to firm consistency dark brown gravelly sandy clayey SILT with rare brick, coal and ceramic fragments. Gravel predominantly sandstone.	ES9
	0.25-0.50	Soft to firm consistency light brown slightly gravelly slightly sandy silty CLAY. Gravel predominantly sandstone.	ES10
HD Plot 6 (rear garden)	0.00-0.20	Topsoil: Soft consistency dark brown gravelly slightly sandy clayey SILT. Gravel predominantly sandstone.	ES8
	0.20+	Sandstone	-
HD Plot 7 (front garden)	0.00-0.20	Topsoil: Soft consistency dark brown gravelly slightly sandy clayey SILT. Gravel predominantly sandstone. Rare ceramic at surface.	ES7
	0.20+	Gravel layer (MOT type 1)	-
HD Plot 8 (front garden)	0.00-0.20	Topsoil: Soft consistency dark brown gravelly slightly sandy clayey SILT. Gravel predominantly sandstone.	ES6
	0.20+	Gravel layer (MOT type 1)	-

Location	Depth (mbgl)	Description	Sample Ref.
HD Plot 9 (front garden)	0.00-0.30	Topsoil: Soft consistency dark brown gravelly slightly sandy clayey SILT. Gravel predominantly sandstone.	ES5
	0.30+	Gravel layer (MOT type 1)	-
HD Plot 10 (front garden)	0.00-0.25	Topsoil: Soft consistency dark brown gravelly slightly sandy clayey SILT. Gravel predominantly sandstone.	ES4
	0.25+	Gravel layer (MOT type 1)	-
HD Plot 11 (rear garden)	0.00-0.10	Topsoil: Soft dark brown slightly gravelly slightly sandy SILT with frequent rootlets and rare timber. Gravel predominantly sandstone.	ES2
	0.10-0.40	Soft consistency dark brown very gravelly slightly sandy silty CLAY. Gravel predominantly sandstone and mudstone.	ES3
HD Plot 12 (rear garden)	0.00-0.50	Soft to firm dark brown to light brown slightly gravelly sandy silty CLAY. Gravel predominantly sandstone and mudstone.	ES1
HD Plot 13 (rear garden)	0.00-0.30	Soft to firm consistency dark brown slightly gravelly slightly sandy SILT with rare ceramics and brick fragments. Gravel predominantly sandstone.	ES18
	0.30-0.40	Firm consistency light brown slightly gravelly slightly sandy silty CLAY. Gravel predominantly sandstone.	ES19

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Catherine Baranek
LK Consult Limited
Unit 29 Eton Business Park
Eton Hill Road
Manchester
M26 2ZS

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 25-03459

Site Reference:	Carr Top Road, Golcar
Project / Job Ref:	LKC 20 1909
Order No:	PO-C001124
Sample Receipt Date:	27/03/2025
Sample Scheduled Date:	27/03/2025
Report Issue Number:	1
Reporting Date:	02/04/2025

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	25/03/25
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES1 (Plot 12)	ES2 (Plot 11)	ES3 (Plot 11)	ES4 (Plot 10)	ES5 (Plot 9)
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	ES
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.50	0.00 - 0.10	0.10 - 0.40	0.00 - 0.25	0.00 - 0.30
Reporting Date: 02/04/2025	**DETS Sample No**	770703	770704	770705	770706	770707

Determinand	Unit	RL	Accreditation				(n)	
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.4	7.2	7.3	6.8	7.0
Total Cyanide	mg/kg	< 1	NONE	< 1				
Free Cyanide	mg/kg	< 1	NONE	< 1				
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	27	51	25	23	33
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.03	0.05	0.02	0.02	0.03
Organic Matter (SOM)	%	< 0.1	MCERTS	2	6.8	4.8	11.4	11.9
Arsenic (As)	mg/kg	< 2	MCERTS	8	28	37	39	23
W/S Boron	mg/kg	< 1	NONE	< 1				
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	0.4	0.6	0.6	0.5
Chromium (Cr)	mg/kg	< 2	MCERTS	22	27	27	31	17
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	30	48	50	58	58
Lead (Pb)	mg/kg	< 3	MCERTS	33	72	59	125	124
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	19	21	26	20	14
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	24	45	40	57	29
Zinc (Zn)	mg/kg	< 3	MCERTS	58	68	71	80	97
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2				

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	25/03/25
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES6 (Plot 8)	ES7 (Plot 7)	ES8 (Plot 6)	ES9 (Plot 5)	ES10 (Plot 5)
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	ES
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.20	0.00 - 0.20	0.00 - 0.20	0.00 - 0.25	0.25 - 0.50
Reporting Date: 02/04/2025	**DETS Sample No**	770708	770709	770710	770711	770712

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	6.9	7.7	7.4	7.5	7.3
Total Cyanide	mg/kg	< 1	NONE			< 1	< 1	
Free Cyanide	mg/kg	< 1	NONE			< 1	< 1	
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	15	49	20	11	< 10
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.02	0.05	0.02	0.01	< 0.01
Organic Matter (SOM)	%	< 0.1	MCERTS	14.3	4.6	9.4	12	2.8
Arsenic (As)	mg/kg	< 2	MCERTS	31	12	34	34	11
W/S Boron	mg/kg	< 1	NONE			< 1	< 1	
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.5	0.2	0.4	0.5	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	20	18	29	28	23
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	63	31	56	92	31
Lead (Pb)	mg/kg	< 3	MCERTS	114	65	87	199	64
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	15	14	20	19	21
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	36	21	53	43	25
Zinc (Zn)	mg/kg	< 3	MCERTS	90	59	74	138	86
Total Phenols (monohydric)	mg/kg	< 2	NONE			< 2	< 2	

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	25/03/25
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES11 (Plot 4)	ES12 (Plot 4)	ES13 (Plot 3)	ES14 (Plot 3)	ES15 (Plot 2)
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	ES
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.25	0.25 - 0.40	0.00 - 0.25	0.25 - 0.45	0.00 - 0.50
Reporting Date: 02/04/2025	**DETS Sample No**	770713	770714	770715	770716	770717

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.2	7.2	6.8	5.5	5.2
Total Cyanide	mg/kg	< 1	NONE					< 1
Free Cyanide	mg/kg	< 1	NONE					< 1
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	66	28	12	24	59
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.07	0.03	0.01	0.02	0.06
Organic Matter (SOM)	%	< 0.1	MCERTS	4.1	8.7	7.5	3.5	14.8
Arsenic (As)	mg/kg	< 2	MCERTS	18	27	16	9	29
W/S Boron	mg/kg	< 1	NONE					< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.3	0.4	0.2	< 0.2	0.4
Chromium (Cr)	mg/kg	< 2	MCERTS	25	23	18	9	33
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	72	66	40	18	71
Lead (Pb)	mg/kg	< 3	MCERTS	45	136	100	43	172
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	18	16	8	4	13
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	29	38	18	13	31
Zinc (Zn)	mg/kg	< 3	MCERTS	48	100	46	22	48
Total Phenols (monohydric)	mg/kg	< 2	NONE					< 2

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES16 (Plot 1)	ES17 (Plot 1)	ES18 (Plot 13)	ES19 (Plot 13)	
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.30	0.30 - 0.45	0.00 - 0.30	0.30 - 0.40	
Reporting Date: 02/04/2025	**DETS Sample No**	770718	770719	770720	770721	

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	
pH	pH Units	N/a	MCERTS	6.7	7.6	7.0	7.0	
Total Cyanide	mg/kg	< 1	NONE					
Free Cyanide	mg/kg	< 1	NONE					
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	47	21	51	34	
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.05	0.02	0.05	0.03	
Organic Matter (SOM)	%	< 0.1	MCERTS	2.6	10.1	9.2	4.1	
Arsenic (As)	mg/kg	< 2	MCERTS	9	22	22	10	
W/S Boron	mg/kg	< 1	NONE					
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	0.4	0.4	< 0.2	
Chromium (Cr)	mg/kg	< 2	MCERTS	18	26	21	19	
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	
Copper (Cu)	mg/kg	< 4	MCERTS	28	60	60	26	
Lead (Pb)	mg/kg	< 3	MCERTS	35	148	106	51	
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	
Nickel (Ni)	mg/kg	< 3	MCERTS	11	12	13	15	
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Vanadium (V)	mg/kg	< 1	MCERTS	18	28	36	20	
Zinc (Zn)	mg/kg	< 3	MCERTS	34	75	76	44	
Total Phenols (monohydric)	mg/kg	< 2	NONE					

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	25/03/25
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES1 (Plot 12)	ES2 (Plot 11)	ES3 (Plot 11)	ES4 (Plot 10)	ES5 (Plot 9)
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	ES
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.50	0.00 - 0.10	0.10 - 0.40	0.00 - 0.25	0.00 - 0.30
Reporting Date: 02/04/2025	**DETS Sample No**	770703	770704	770705	770706	770707

Determinand	Unit	RL	Accreditation				(n)	
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.83	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.22	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.16	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	0.13	< 0.1	0.89	0.67
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.26	< 0.1	0.54	1.08
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.22	< 0.1	0.45	1.02
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.15	0.38
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	0.13	< 0.1	0.17	0.44
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.38
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.29
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.17
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	3.4	4.4

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	25/03/25
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES6 (Plot 8)	ES7 (Plot 7)	ES8 (Plot 6)	ES9 (Plot 5)	ES10 (Plot 5)
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	ES
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.20	0.00 - 0.20	0.00 - 0.20	0.00 - 0.25	0.25 - 0.50
Reporting Date: 02/04/2025	**DETS Sample No**	770708	770709	770710	770711	770712

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.76	2.54
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	1.47	0.97
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	1.15	0.61
Phenanthrene	mg/kg	< 0.1	MCERTS	0.24	0.21	< 0.1	10.80	5.98
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	2.20	0.84
Fluoranthene	mg/kg	< 0.1	MCERTS	0.59	0.46	0.13	10.30	5.63
Pyrene	mg/kg	< 0.1	MCERTS	0.54	0.45	< 0.1	8.90	4.79
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.24	0.19	< 0.1	3.26	1.46
Chrysene	mg/kg	< 0.1	MCERTS	0.27	0.25	< 0.1	2.95	1.74
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.21	0.24	< 0.1	2.32	1.23
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.91	0.46
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.16	0.18	< 0.1	1.95	1.04
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.92	0.50
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.25	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.79	0.43
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	2.3	2	< 1.6	49	28.2

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	25/03/25
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES11 (Plot 4)	ES12 (Plot 4)	ES13 (Plot 3)	ES14 (Plot 3)	ES15 (Plot 2)
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	ES
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.25	0.25 - 0.40	0.00 - 0.25	0.25 - 0.45	0.00 - 0.50
Reporting Date: 02/04/2025	**DETS Sample No**	770713	770714	770715	770716	770717

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	0.35	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	0.41	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	0.31	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	2.98	< 0.1	0.17	< 0.1	0.42
Anthracene	mg/kg	< 0.1	MCERTS	0.49	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	3.05	< 0.1	0.26	< 0.1	0.64
Pyrene	mg/kg	< 0.1	MCERTS	2.67	< 0.1	0.26	< 0.1	0.60
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.93	< 0.1	< 0.1	< 0.1	0.28
Chrysene	mg/kg	< 0.1	MCERTS	1.05	< 0.1	0.14	< 0.1	0.39
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.87	< 0.1	< 0.1	< 0.1	0.36
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.22	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.68	< 0.1	< 0.1	< 0.1	0.24
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.36	< 0.1	< 0.1	< 0.1	0.20
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.29	< 0.1	< 0.1	< 0.1	0.17
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	14.6	< 1.6	< 1.6	< 1.6	3.3

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-03459	~Date Sampled	25/03/25	25/03/25	25/03/25	25/03/25	
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Carr Top Road, Golcar	~TP / BH No	ES16 (Plot 1)	ES17 (Plot 1)	ES18 (Plot 13)	ES19 (Plot 13)	
~Project / Job Ref: LKC 20 1909	~Additional Refs	ES	ES	ES	ES	
~Order No: PO-C001124	~Depth (m)	0.00 - 0.30	0.30 - 0.45	0.00 - 0.30	0.30 - 0.40	
Reporting Date: 02/04/2025	DETS Sample No	770718	770719	770720	770721	

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.51	< 0.1	
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.52	< 0.1	
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.42	< 0.1	
Phenanthrene	mg/kg	< 0.1	MCERTS	0.33	0.75	3.49	0.18	
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	0.18	0.75	< 0.1	
Fluoranthene	mg/kg	< 0.1	MCERTS	0.55	1.04	3.63	0.31	
Pyrene	mg/kg	< 0.1	MCERTS	0.52	0.95	3.18	0.28	
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.22	0.44	1.29	0.14	
Chrysene	mg/kg	< 0.1	MCERTS	0.27	0.44	1.29	0.15	
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.27	0.39	1.14	0.15	
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.36	< 0.1	
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.20	0.29	0.90	< 0.1	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.12	0.19	0.48	< 0.1	
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	0.18	0.40	< 0.1	
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	2.5	4.8	18.4	< 1.6	

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Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	25/03/25
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES1 (Plot 12)	ES6 (Plot 8)	ES8 (Plot 6)	ES9 (Plot 5)	ES15 (Plot 2)
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	ES
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.50	0.00 - 0.20	0.00 - 0.20	0.00 - 0.25	0.00 - 0.50
Reporting Date: 02/04/2025	**DETS Sample No**	770703	770708	770710	770711	770717

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01		< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05		< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2		< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2		< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3		< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3		< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10		< 10	< 10	< 10
Aliphatic >C34 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10		< 10	< 10	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21		< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01		< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05		< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2		< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2		< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2		< 2	6	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3		< 3	37	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10		< 10	13	< 10
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10		< 10	< 10	< 10
Aromatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21		< 21	56	< 21
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 42	NONE	< 42		< 42	56	< 42

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Rose Lane
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Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25	25/03/25	
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES1 (Plot 12)	ES8 (Plot 6)	ES9 (Plot 5)	ES15 (Plot 2)	
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES	ES	
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.50	0.00 - 0.20	0.00 - 0.25	0.00 - 0.50	
Reporting Date: 02/04/2025	**DETS Sample No**	770703	770710	770711	770717	

Determinand	Unit	RL	Accreditation					
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	7	< 5	< 5	
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	

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Soil Analysis Certificate - Organochlorine Pesticides						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25		
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied		
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES1 (Plot 12)	ES6 (Plot 8)	ES15 (Plot 2)		
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES		
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.50	0.00 - 0.20	0.00 - 0.50		
Reporting Date: 02/04/2025	**DETS Sample No**	770703	770708	770717		

Determinand	Unit	RL	Accreditation					
Aldrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
alpha-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
beta-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
cis-chlordane	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
delta-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Dieldrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Endosulfan A	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Endosulfan B	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Endrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
gamma-HCH (Lindane)	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Heptachlor	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Heptachlor epoxide	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Hexachlorobenzene (HCB)	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Isodrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Methoxychlor	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
o,p' - DDD	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
o,p' - DDE	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
o,p' - DDT	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
p,p' - DDD	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
p,p' - DDE	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
p,p' - DDT	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
trans-chlordane	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		
Trifluralin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02		

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Organophosphorus Pesticides						
DETS Report No: 25-03459	**~Date Sampled**	25/03/25	25/03/25	25/03/25		
LK Consult Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied		
~Site Reference: Carr Top Road, Golcar	**~TP / BH No**	ES1 (Plot 12)	ES6 (Plot 8)	ES15 (Plot 2)		
~Project / Job Ref: LKC 20 1909	**~Additional Refs**	ES	ES	ES		
~Order No: PO-C001124	**~Depth (m)**	0.00 - 0.50	0.00 - 0.20	0.00 - 0.50		
Reporting Date: 02/04/2025	**DETS Sample No**	770703	770708	770717		

Determinand	Unit	RL	Accreditation					
Azinphos-methyl	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Chlorfenvinphos, alpha	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Chlorfenvinphos, beta	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Chlorpyriphos-methyl	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Diazinon	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dichlorvos	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dimethoate	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Fenitrothion	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Fenthion	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Malathion	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Mevinphos, (E)	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Mevinphos, (Z)	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Parathion-ethyl	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Parathion-methyl	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Phorate	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		

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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 25-03459	
LK Consult Limited	
~Site Reference: Carr Top Road, Golcar	
~Project / Job Ref: LKC 20 1909	
~Order No: PO-C001124	
Reporting Date: 02/04/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
770703	ES1 (Plot 12)	ES	0.00 - 0.50	20.6	Brown clay
770704	ES2 (Plot 11)	ES	0.00 - 0.10	17.7	Brown sandy loam with vegetation
770705	ES3 (Plot 11)	ES	0.10 - 0.40	22	Brown sandy loam with stones
770706	ES4 (Plot 10)	ES	0.00 - 0.25	31.4	Brown clay with stones
770707	ES5 (Plot 9)	ES	0.00 - 0.30	34.4	Brown sandy loam with stones and vegetation
770708	ES6 (Plot 8)	ES	0.00 - 0.20	29.9	Brown sandy loam with stones
770709	ES7 (Plot 7)	ES	0.00 - 0.20	20	Brown sandy loam with stones
770710	ES8 (Plot 6)	ES	0.00 - 0.20	25.4	Brown sandy clay with stones and vegetation
770711	ES9 (Plot 5)	ES	0.00 - 0.25	24	Brown sandy loam with stones
770712	ES10 (Plot 5)	ES	0.25 - 0.50	16.5	Brown sandy clay with stones
770713	ES11 (Plot 4)	ES	0.00 - 0.25	16.4	Brown loamy clay
770714	ES12 (Plot 4)	ES	0.25 - 0.40	20.5	Brown sandy loam with stones
770715	ES13 (Plot 3)	ES	0.00 - 0.25	27.7	Brown sandy loam
770716	ES14 (Plot 3)	ES	0.25 - 0.45	17.3	Brown sandy clay with stones
770717	ES15 (Plot 2)	ES	0.00 - 0.50	28.6	Black loamy sand with vegetation
770718	ES16 (Plot 1)	ES	0.00 - 0.30	18.7	Brown sandy clay
770719	ES17 (Plot 1)	ES	0.30 - 0.45	31.6	Brown loamy sand
770720	ES18 (Plot 13)	ES	0.00 - 0.30	25.4	Brown loamy sand
770721	ES19 (Plot 13)	ES	0.30 - 0.40	21.7	Brown loamy clay

Moisture content is part of procedure E003 & is not an accredited test

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Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-03459
LK Consult Limited
~Site Reference: Carr Top Road, Golcar
~Project / Job Ref: LKC 20 1909
~Order No: PO-C001124
Reporting Date: 02/04/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

List of HWOL Acronyms and Operators
DETS Report No: 25-03459
LK Consult Limited
~Site Reference: Carr Top Road, Golcar
~Project / Job Ref: LKC 20 1909
~Order No: PO-C001124
Reporting Date: 02/04/2025

Acronym	**Description**
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH - Aliphatic >C34 - C44 - raw data - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C34 - C44 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C35 - C44 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
n	Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

Appendix H – References

[1] Defra (2002). “Potential Contaminants for the Assessment of Land”. R&D Publication CLR 8.

[2] EA (2008). “Updated Technical Background to the CLEA Model”. Science Report – SC050021/SR3.

[3] Environment Agency, October 2020, "Land contamination risk management (LCRM). How to assess and manage the risks from land contamination".

[4] CIRIA, January 2001, "Contaminated land risk assessment. A guide to good practice", C552.

[5] British Standard (2017). “Investigation of Potentially Contaminated Sites – Code of Practice.” BS10175:2017.

[6] British Standards (2002) Geotechnical investigation and testing – Identification and Classification of Soil. Part 1: Identification and description. BS EN ISO 14688-1:2002.

[7] British Standard (2015). “Code of Practice for Ground Investigations”. BS5930:2015.

[8] CIRIA (2007). “Assessing Risks Posed by Hazardous Ground Gases to Buildings.” CIRIA C665.

[9] CIRIA (2007). “Assessing Risks Posed by Hazardous Ground Gases to Buildings.” CIRIA C665.

[10] CIRIA (2007). “Assessing Risks Posed by Hazardous Ground Gases to Buildings.” CIRIA C665.

[11] Eurocode 7: Geotechnical design - Part 1: General rules. EN 1997-1:2004.

[12] CIRIA Report 97 – Trenching Practice – Second Edition (2001 revision)

[13] Environment Agency, October 2020, "Land contamination risk management (LCRM). How to assess and manage the risks from land contamination".

[14] DEFRA, December 2014, "Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination", SP1010, Policy Companion Document.

[15] CL:AIRE, September 2014, "Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination", SP1010, Final Project Report (Revision 2).

[16] Environment Agency, January 2009, "Updated technical background to the CLEA model", Science Report SC050021/SR3.

[17] Environment Agency, January 2009, "Human health toxicological assessment of contaminants in soil", Science Report - Final SC050021/SR2.

[18] Environment Agency, January 2009, "A review of body weight and height data used within the Contaminated Land Exposure Assessment model (CLEA)", Project SC050021/Final Technical Review 1.

[19] Environment Agency, November 2008, "Compilation of data for priority organic pollutants for derivation of Soil Guideline Values", Science Report SC050021/SR7.

[20] CL:AIRE, January 2010, "Soil Generic Assessment Criteria for Human Health Risk Assessment".

[21] Environment Agency, September 2009, "CLEA Software (Version 1.05) Handbook", Science Report SC050021/SR4.

[22] Environment Agency, April 2002, "Contaminants in soils: collation of toxicological data and intake values for humans. Benzo(a)pyrene", TOX2.

[23] U.S. Environmental Protection Agency, September 1984, "Health Effects Assessment for Polycyclic Aromatic Hydrocarbons (PAHs)", EPA/540/1-86/013.

[24] Environment Agency, September 2003, "Review of the Fate and Transport of Selected Contaminants in the Soil Environment", Draft Technical Report P5-079/TR1.

[25] CL:AIRE, September 2014, "Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination", SP1010, Final Project Report (Revision 2).

[26] Public Health England, September 2017, "Contaminated land information sheet: risk assessment approaches for polycyclic aromatic hydrocarbons (PAHs)".

[27] Culp S.J., Gaylor D.W., Sheldon W.G., Goldstein L.S., Beland F.A. , January 1998, "A comparison of the tumors induced by coal tar and benzo[a]pyrene in a 2-year bioassay", Carcinogenesis, Volume 19, P117-124.

[28] UKWIR (2010). Guidance for the Selection of Water Supply Pipes to be Used in Brownfield Suites.” Report ref: 10/WM/03/21.

[29] CIRIA, January 2001, "Contaminated land risk assessment. A guide to good practice", C552.

Based across the UK with offices in Manchester, Liverpool, Swindon and Glasgow.

Manchester (Head Office)
Unit 29
Eton Business Park
Eton Hill Rd, Radcliffe
M26 2ZS

t: 0161 763 7200
e: info@thelkgroup.com

Swindon
39 Bowman House Business Centre
Bowman Court
Whitehill Lane
Royal Wootton Bassett
Swindon
SN4 7DB

t : 01793 987 390
e : info@thelkgroup.com

Glasgow
Wright Business Centre
1 Lonmay Road
Glasgow
G33 4EL

t: 0141 773 6269
e: info@thelkgroup.com

Liverpool
Unit 10
12 Jordan Street
Baltic Triangle
Liverpool
L1 0BP

t: 0161 763 7200
e: info@thelkgroup.com

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