



RASCALS FARM, SHIPLEY ROAD, SOUTHWATER

PHASE II SITE APPRAISAL
FOR
CATESBY ESTATES PLC

Project Ref:
P9249

Date:
September 2021

Prepared for:
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This report has been prepared in accordance with GRM's Accredited Quality Procedures

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Land Appraisal | Environmental | Geotechnical | Design | Mining | Inspections

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Site Appraisal for Rascals Farm, Shipley Road, Southwater

SUMMARY OF RECOMMENDATIONS

Where further assessment is required it is indicated with a "Y" in the right hand column.		
Proposed Development	Residential properties with associated gardens, soft landscaping and infrastructure.	
CONTAMINATION ASSESSMENT - REMEDIATION / WASTE DISPOSAL		
End Users	No remediation required. Removal of existing stockpiles.	
Site Workers	Asbestos survey of existing buildings.	Y
Construction Materials	Appropriate concrete specification. PE water supply pipes required (to be confirmed by water authority).	Y
Groundwater	No remediation required.	
Surface Water	No remediation required.	
Waste Disposal	Preliminary Waste Classification: Non-Hazardous for topsoil. Hazardous for made ground. Possible made ground below existing structures may require further investigations. Inert for natural strata. Will need to be confirmed by receiving landfill.	Y
GEOTECHNICAL ASSESSMENT – FOUNDATIONS		
Ground Treatment Required	None required. Temporary Drainage for standing water (if encountered at the time of construction), temporary haul roads.	Y
Main Bearing Strata	Cohesive Weald Clay Formation.	
Nett Allowable Bearing Pressure	110kN/m ² (Clay); 150 kN/m ² (Clayey gravel), >300kN/m ² (Rock) for trench fill foundations. To be confirmed by a specialist for piles.	Y
Rockhead	Not encountered.	
Tree Influence	Some, along site and field boundaries. Extent to be confirmed by a tree survey.	Y
Volume Change Potential	Medium to high; further testing suggested to reduce volume change potential to medium.	Y
Likely Foundation Types	90% Trench Fill, 10% Pile.	Y
Likely Foundation Depth Range	1.00m begl minimum, >2.50m begl maximum depths, Average 1.5m, (maximum depths to be confirmed following tree survey and final layout plans, piling depths to be confirmed by a specialist).	Y
Excavation Hazards	Sub-structures below existing buildings.	Y
Floor Slab Types	Beam and block & cast <i>in situ</i> suspended.	Y
Gas Protection Requirements Radon and / or Landfill	No gas protection measures required. To be confirmed when gas monitoring is complete. No radon protective measures required.	
GEOTECHNICAL ASSESSMENT - GENERAL		
Slope Stability Risk	Low.	
Soakaways Potential	Not suitable.	
New Access Roads	Observational CBRs 2% to 4% in cohesive soils.	Y
Buried Concrete Class	DS – 1; AC – 1s. GEN – 1 unreinforced, RC35 reinforced.	Y
Retaining Walls and Boundary Features	None existing or proposed at this stage.	

Further Assessment Targets	Completion of ground gas monitoring programme. Tree survey. Delineation of the soft ground around WS02 which may reduce the area for deepened foundations. Asbestos survey of existing buildings prior to demolition. Further investigation beneath existing buildings and within areas of the historic ponds. Further plasticity index testing to classify the site as medium volume change or reduce high volume change area. Plot specific foundation investigation (if required). <i>In situ</i> CBR testing immediately prior to road construction. Plot specific desiccation testing. Should the development proceed it is recommended that further testing is conducted for waste disposal characterisation.	Y
Other Comments	A flood risk assessment is required for this site as it is over 1ha in size.	Y

This summary is based on the full report that provides the detailed assessment of the ground risks affecting the development and how to manage them. It should not be used in isolation.

TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	PHASE I DESK STUDY SUMMARY.....	2
3	PHASE II GROUND INVESTIGATION	5
4	LABORATORY ANALYSES RATIONALE	10
5	QUANTITATIVE RISK ASSESSMENT – HUMAN HEALTH (SOIL)	11
6	QUANTITATIVE RISK ASSESSMENT – HUMAN HEALTH (GROUND GAS)	13
7	QUANTITATIVE RISK ASSESSMENT - CONTROLLED WATERS	15
8	PHASE II CONCEPTUAL SITE MODEL.....	16
9	REMEDATION.....	17
10	GEOTECHNICAL ASSESSMENT	20
11	FURTHER INVESTIGATION	28
12	CONCLUSIONS.....	28

APPENDICES

General Appraisal Comments and Standard Limitations	Appendix A
Proposed Development Plan	Appendix B
Site Location and Boundary Plan	Appendix C
Phase I Ground Hazard Diagram	Appendix D
Exploratory Hole Location Plan	Appendix E
Exploratory Hole Logs	Appendix F
Constraints Plan	Appendix G
Gas Monitoring Plan	Appendix H
Gas and Groundwater Monitoring Results	Appendix I
Chemical Analysis Results	Appendix J
Geotechnical Test Results	Appendix K
GRM Contaminant Screening Values	Appendix L
Hazwaste Online	Appendix M
Moisture Profile Graphs	Appendix N
Further Assessment Plan	Appendix O

1 INTRODUCTION

1.1 PREAMBLE

GRM Development Solutions Limited (GRM) has been appointed by Catesby Estates PLC to undertake a Phase II Site Appraisal. A previous desk study by GRM (Phase I Site Appraisal Ref. GRM/P9249/DS.1 Dated February 2020) formed Phase I of the assessment and allowed the geotechnical and geo-environmental setting of the site to be determined and the identification of areas of particular concern that required targeted investigation. The Phase II works reported within this document comprise the intrusive ground investigation, geotechnical testing and chemical analysis. The information gained from the Phase II works will be used to refine the conceptual model for the site and determine cost-effective development solutions.

This document is intended to provide information that will assist decision making by identifying and recommending solutions to ground engineering and contamination issues.

GRM Standard Limitations of Reporting are provided in Appendix A of this report.

The Client proposes to develop the southern portion of the site with residential properties with associated gardens, soft landscaping, drainage ponds, and infrastructure, as well as an area of public open space in the northern part of the site. The development layout provided by the Client, on which this report is based is presented in Appendix B. Retained woodland is located to the north of the development area.

1.2 OBJECTIVES OF THE SITE APPRAISAL

The principal aims of the Phase II Site Appraisal are as follows:

- a) Obtain information, from easily accessible sources, about the soil and groundwater conditions within the area of the site.
- b) Determine the possible ground-related geotechnical and contamination hazards within the site boundaries that may affect the proposed development.
- c) Provide preliminary development recommendations.
- d) Provide advice on further works required for the cost-effective reduction of risks to the development and procedures likely to satisfy regulators.

Whilst every effort has been made to pre-empt the likely requirements of the Local Authority and the Environment Agency, they are likely to have specific requirements that will need to be discussed and addressed at a later date.

2 PHASE I DESK STUDY SUMMARY

Project Name.	Rascals Farm, Shipley Road, Southwater.
Project Reference.	P9249.
Client.	Catesby Estates PLC.
Site Location (address).	Rascals Farm, Shipley Road, Southwater, West Sussex, RH13 9BG.
National Grid Reference.	TQ 515 125.
Site Area (Ha).	7.41 Ha.
Summary of Proposed Development.	Residential development, including areas of public open space and balancing ponds with associated infrastructure. Retained woodland is located to the north of the development area.
Client Supplied Information.	Site location plan, utilities and services appraisal, development plan.
Site Setting.	The site comprises Rascals Farm in the south, and woodland to the north of the development area. A Site Location and Boundary Plan is presented in Appendix C. An access track leads to an arrangement of buildings forming Rascals Farm, residence and stables, surrounded by horse paddocks to the south with an area of ancient woodland to the north.
Site History.	From earliest available mapping (1875), the site comprised three plots of agricultural land in the southern and central parts of the site and a plot of deciduous woodland, part of Rascals Wood, in the northern part of the site. By 1956-61 a small structure was noted in the centre of the site, with an track leading to Shipley Road. The site and surroundings remain substantially unchanged until 1975 when a small pond on the southern boundary of the site is no longer mapped, new structures and a pond is recorded in the centre of the site, an area to the east of these structures is shown as woodland and a track, later labelled as orchards, and the property is named as Rascals. By the early 2000's a new structure is developed on the site (2003), after which time little further change is mapped to the site or its surroundings.
Geology.	Limited thicknesses of made ground are anticipated associated with the infilled pond as well as the existing and historic farm buildings. No superficial deposits are recorded onsite. The Weald Clay Formation is recorded across the site. These strata are generally recorded to comprise dark grey thinly bedded mudstones which when weathered are generally recorded to be light brown in colour.

Hydrogeology.	The Environment Agency has classified the underlying strata (Weald Clay Formation) as unproductive strata. There are no recorded groundwater abstraction licenses within 500m of the site or potable abstractions within 2000m of the site, and the site is not recorded to be within a Groundwater Source Protection Zone.
Hydrology.	The nearest surface water features relate to records of inland rivers identified 70m south, and 133m east of the site at their nearest points. There are no nearby surface water abstraction licenses associated with these surface water features.
Flooding.	The Environment Agency indicates that the site is not within 50m of a Flood Zone 2 or 3 and is not within 250m of a recorded historical flood event, and that the risk of flooding from surface water and groundwater is negligible.
Mining and Quarrying.	The risk from coal mining is considered to be negligible. The site is in proximity to a large historical brick works which is now inactive, worked out and has been restored.
Environmental Information.	The following contamination risks have been identified: On-site - Existing structures which may contain asbestos containing materials. - Infilled pond with unknown fill materials close to the southern boundary. Off-site - Former brickwork excavations.
Potential Soil Contamination Sources.	The following contamination risks have been identified: - Potentially asbestos containing materials associated with stable roofing. - Potential highly localised TPH contamination associated with heating oil tank. - Potentially contaminated local areas of made ground associated with current development / fill associated with former pond / stacked materials / below ground sewage tank. The risk from contamination is considered to be very low.
Potential Ground Gas Sources (including Radon).	Small potentially infilled ponds both onsite and within a potentially influencing distance of the site. Former brickwork excavations 750m north east of the site. The risk from ground gas is considered to be low. The site is not within an area recorded to require radon protection measures.

The Phase I Ground Hazard Diagram is presented in Appendix D.

2.1 PHASE I CONCEPTUAL SITE MODEL

HUMAN HEALTH				
Source	Pathway	Receptor	Level of Risk	
Potentially contaminated local areas of made ground associated with current development / fill associated with former pond / stacked materials / below ground sewage tank.	Indoor and outdoor inhalation of soil dust, the ingestion of, and dermal contact with, contaminated soil and soil dust, ingestion of vegetables that have taken up contamination and contaminated soil attached to vegetables.	End users.	Very Low to Low.	
Above ground heating oil tank.		Construction and Maintenance Workers.		
Former brickwork excavations.	Inhalation of ground gas.	End users.	Low.	
Asbestos containing materials associated with buildings.	Inhalation of asbestos fibres.	Construction and Maintenance Workers.	Low.	
Made ground.	Water pipes.	End users.	Locally Very Low.	
CONTROLLED WATERS				
Potentially contaminated local areas of made ground associated with current development / fill associated with former pond / stacked materials / below ground sewage tank.	Leaching of contaminants and lateral migration to surface waters.	Nearby inland rivers.	Negligible.	
Above ground heating oil tank.				

3 PHASE II GROUND INVESTIGATION

3.1 FIELDWORK

The ground investigation has been designed in accordance with the general comments outlined in Appendix A (iv).

The ground investigation fieldwork was conducted between the 24th and the 26th August 2021 with groundwater / gas monitoring visits continuing after that period. A total of twenty five exploratory holes (ten trial pits, twelve window sampler boreholes and three hand dug trial pits) were progressed to depths ranging between 0.30m and 5.00m below existing ground level (begl). The exploratory hole location plan and exploratory hole logs are presented in Appendix E and Appendix F respectively.

The rationale for the positioning of the individual exploratory holes is illustrated in the table below:

LIST OF TARGETED EXPLORATORY HOLES	
Exploratory Hole	Reason for Location and Type
HTP02	Below ground sewage tank, and stables.
HTP03	Above ground heating oil tank.
HTP01	Stockpiled materials.
WS01 – WS11 and TP01 – TP08	Horse paddocks.
WS11	Parking area.
WS12 and TP09	Meadow.
WS03, WS09 and WS12	Desiccation testing.
WS08 - WS12	Ground gas and groundwater monitoring wells.
WS07 and WS11	Orchard.
WS09 and TP01	Historic Ponds.
TP = Trial Pit, WS = Window Sample Hole & HTP = Hand Dug Trial Pit.	

Areas not accessible at the time of the ground investigation included an area in the central part of the site (close to where a pile of building materials was located) due to various unmapped underground water pipes in this area. Furthermore, some northern and central parts of the site were not accessible (including areas in close proximity to the house, access tracks and stables with associated outbuildings), as these were currently occupied. Retained protected woodland is located to the north of the development area.

Small historic ponds have been recorded in the northern and southern parts of the site, it may be prudent to undertake further exploratory work to fully delineate these, when all stockpiled materials and buildings have been removed, and all buried services have been marked out, to fully determine the impact of these on the development. The areas where investigation was not possible are illustrated on the Constraints Plan presented in Appendix G.

Five gas and water monitoring standpipes were installed during the site works, the rationale for these works are discussed fully in Section 6. A Gas Monitoring Plan, illustrating the locations of the standpipes, is presented in Appendix H. The standpipes will need to remain in place until November 2021.

3.2 PROVEN GROUND

The following ground conditions were encountered during the investigation fieldwork:

- Topsoil.
- Made Ground.
- Weathered Weald Clay Formation.

3.2.1 Topsoil

Topsoil including subsoil was encountered as a dark brown clay with variable proportions of sand and gravel in twenty one of the twenty five exploratory holes completed, to depths ranging between 0.10m begl (in WS01) and 0.30m begl (in WS12, TP01, TP02, TP04, TP07 and TP09) with a typical thickness of 0.20m.

3.2.2 Made Ground

Limited made ground was recorded in four locations HTP01, HTP02, HTP03 and WS11 only across the site.

Made ground comprising topsoil with brick and terracotta fragments was identified in HTP02 and HTP03 (to 0.30m begl) which was associated with gardens and soft landscaping around the existing buildings.

Made ground was also encountered in WS11 to 0.15m begl, and comprised a light grey gravel of concrete, brick and mudstone which was used as surfacing for a small parking area.

HTP01 was excavated into a stockpile containing building materials (mostly wood and plastic) located in the central part of the site and comprised a slightly sandy gravel of brick, wood, concrete, limestone and mudstone. The stockpile measured approximately 1.00m high and 5.00m across.

Further made ground (of variable depth and composition) can also be anticipated associated with the existing farm buildings, associated hardstanding and access track.

3.2.3 Weathered Weald Clay Formation

The Weald Clay Formation is recorded across the site on available BGS mapping. The BGS records these strata to comprise dark grey thinly bedded mudstones, which when weathered are generally recorded to be light brown. Dark grey mudstones were not identified in any of the exploratory locations completed, and the natural strata is therefore considered to be representative of the weathered Weald Clay Formation.

The weathered Weald Clay Formation was encountered across the whole site beneath the near surface soils to the depths of the holes between 1.65m and 5m begl. The materials were noted as cohesive and gradually becoming more granular in recovery with depth with extremely weak weathered mudstone bands recorded at the base of WS02, WS10 – WS12, TP02a, TP03 – TP05, TP07 and TP08.

The shallowest material recorded directly below the made ground or topsoil to depths between 1.0m and 1.5m begl was encountered as yellowish brown and occasionally mottled grey slightly gravelly clay.

This gradually graded to a material which was typically recorded as a light yellowish brown friable gravelly clay, which was generally recorded from between 1.0m begl (in WS07, WS08, TP03 and TP06) and 2.0m begl (in WS10).

At depth these materials graded to a completely weathered mudstone recovered as a gravel of weak mudstone (which contained variable proportions of sand and clay). This was recorded from depths of between 1.10m begl (in TP05) and 3.50m begl (in WS10) and was most often encountered from depths of between 2.00m begl and 2.50m begl.

Beneath the cohesive and granular weathered Weald Clay Formation bands of extremely weathered mudstone of the Weald Clay Formation was encountered in WS01, WS03 – WS09, TP01, TP02, TP06 and TP09. In all other locations the mudstone of the Weald Clay Formation was not recovered although it is considered likely that WS10, WS11 and WS12 refused at the interface with the extremely weathered Weald Clay Formation. These strata generally comprised weak light yellowish brown bedded extremely weathered mudstone recovered as a slightly clayey and slightly sandy gravel, which was recorded from depths of between 1.65m in WS05 and 3.90m in WS03.

Standard Penetration Test N-values for the slightly gravelly clay varied between 11 and 24 at 1.0m. Hand shear vane (HSV) results varied between 55 and 110 kPa in the slightly gravelly clay.

Standard Penetration Test N-values for the gravelly clay varied between 4 (WS02 only) to 24 at 1.00m, 17 to 33 at 2.0m and 26 at 3.0m. HSV results varied between 85 and 110 kPa in the gravelly clay.

Standard Penetration Test N-values for the completely weathered mudstone recovered as a gravel varied between 26 and 31 at 2.0m, 28 and 59 at 3.00m begl, 37 and 56 at 4.00m begl, and 43 at 5.00m begl.

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All locations recorded SPT refusals ($N \geq 50$) in the extremely weathered mudstone.

For the cohesive weathered Weald Clay Formation strata utilising the empirical relationship formulated by Stroud (1974) where undrained shear strength is related to SPT N-values and a factor based on plasticity. The strength of the soils has been assessed below.

The shallow slightly gravelly clay are indicative of a medium to high strength in the shallower non friable soils.

For the deeper gravelly clay soils indicate a low (WS02 only) to high strength at 1.0m, a high strength at 2.0m begl, and a high strength at 3.0m begl. The lowest SPT of 4 was recorded in WS02 only, nearby boreholes and trial pits (WS01, TP05 and TP02) do not show any consistently lower SPT or HSV values, suggesting that an area of softer ground around is localised around WS02.

The completely weathered Weald Clay Formation (gravel) indicates medium dense to dense strata at 2.00m begl, medium dense to very dense strata at 3.00m begl, dense to very dense strata at 4.00m begl and dense at 5.00m begl.

3.3 CONTAMINATION OBSERVATIONS

No visual or olfactory evidence of potential contamination was encountered during the fieldwork and monitoring. In addition, there were no obvious signs of possible asbestos containing materials or other visible contaminants in either the stockpiles of building materials in the central part of the site, or the stockpiles of manure and building rubble in the southern part of the site.

Within the area of the above ground oil tank no visual or olfactory hydrocarbon contamination was observed in the materials of HTP03.

Due to the limited thickness of made ground it is not considered to be viable source of ground gas. No organic materials were recorded within the vicinity of the former pond to the south of the site (WS09). Therefore it is considered that a significant source of ground gas is not present beneath the site.

3.4 GROUNDWATER OBSERVATIONS

Groundwater seepage was not observed in any of the exploratory holes. However, the exploratory techniques used were rapid and may have masked small water seepages.

Two groundwater monitoring visits have been conducted at the time of writing, and no groundwater was recorded. The results of the monitoring are reported in Appendix I.

Long term monitoring of groundwater levels has not been conducted as part of this investigation and interpreted levels are approximate and may be dependent on seasonal variations.

Due to the lack of groundwater data for the site it has not been possible to accurately determine the groundwater flow direction beneath the site. However, the groundwater flow is considered to be to the south east following the local topography.

3.5 GROUND GAS AND VAPOURS

Ground gases are discussed in full in Section 6. In summary, the concentrations of ground gases recorded to date are presented in Appendix I and summarised below:

- Methane concentrations have not been detected above the instrument limit of detection (0.0% by volume (v/v)).
- Carbon dioxide concentrations were recorded between 1.00%v/v and 3.90%v/v.
- Oxygen concentrations ranged from 14.80%v/v to 20.10%v/v.

No flow has been noted during the monitoring completed to date.

3.6 SUMMARY OF FIELDWORK OBSERVATIONS

The fieldwork has revealed / confirmed the following:

Significant Features identified during fieldwork
Limited Made Ground – Potential source of contamination, limited extent. Existing stockpiles – Off-site disposal. Variable rockhead depth – Deepened foundations and potential localised excavation hazard. Ground Gas – Depleted oxygen concentrations, site workers risk. Cohesive strata – Deepened foundations within close proximity to trees. Variable strata – Potential requirement for deepened or reinforced foundations. Localised soft strata – Deepened foundations to competent strata.

4 LABORATORY ANALYSES RATIONALE

4.1 CHEMICAL LABORATORY ANALYSIS

Chemical laboratory analyses were selected to provide the parameters necessary to make an initial assessment of potentially contaminated soils, for the budgetary design of the development. The choice of contamination testing was based on the Phase I assessment, identified past uses of the site, site observations and comprised:

- Eleven samples (three of made ground and eight of topsoil) were analysed for a general suite of contaminants (metals, inorganics and speciated PAH).
- Three samples (three of made ground) have been screened for the presence of asbestos.

The chemical analysis results are presented in Appendix J.

Samples not used for testing will be stored for a month after issue of this report and then disposed of, unless the client requests in writing that they be kept.

4.2 GEOTECHNICAL LABORATORY TESTING

Geotechnical soils testing has been undertaken as part of the ground investigation including the following:

- Thirty six samples of the weathered Weald Clay Formation were tested for Natural Moisture Content.
- Eight samples of the weathered Weald Clay Formation underwent Atterberg Limits (PI) classification.
- Eleven samples (three of made ground and eight of the weathered Weald Clay Formation) underwent pH and water soluble sulphate testing.
- Six samples of the weathered Weald Clay Formation underwent swelling pressure testing.

Geotechnical tests were selected to provide the parameters necessary for the budgetary design of the development including foundations and infrastructure. The geotechnical test results are presented in Appendix K, and summarised in Section 10.2.

5 QUANTITATIVE RISK ASSESSMENT – HUMAN HEALTH (SOIL)

5.1 INTRODUCTION

The Client proposes to develop the site with residential properties with associated gardens, soft landscaping and infrastructure.

Various sources of contamination have been put forward in earlier text and summarised in the Phase I conceptual model. The material on site identified as being the most likely to be contaminated is the limited made ground and soils near to the existing buildings.

No visual or olfactory hydrocarbon contamination was observed within the materials in close proximity to the above ground oil tank. Therefore, further hydrocarbon contamination testing was not undertaken.

Representative samples of all strata and those considered to be potentially contaminated by virtue of the desk study and / or based on site observations were collected for further examination and/or potential testing.

The rationale for the end use specific Tier 1 Acceptance Criteria (TAC) used by GRM is outlined in Appendix A (vi) and for this site the chemical analysis results are being compared against the TAC for residential end use with plant uptake. In order to adopt a conservative approach a Soil Organic Matter (SOM) content of 1% has been used to assess the topsoil, made ground and natural strata, as this reflects the lowest SOM recorded in each material.

To provide an initial assessment, benzo(a)pyrene has been used as a surrogate marker compound for genotoxic PAHs with the exception of naphthalene. A copy of the thresholds used in this assessment is presented in Appendix L.

5.2 RISK TO END USERS

The chemical analysis results are presented in Appendix J.

Whilst the number of samples tested is considered sufficient to characterise the topsoil and made ground encountered it is not considered appropriate to carry out statistical analysis on this data set. Therefore, the results have been compared directly against the TAC depending on each sample location.

5.2.1 Analysis of Soil Contamination Data

GRM General Suite – Topsoil

When compared against GRM's TAC for residential with gardens, all contaminants are below their respective thresholds.

GRM General Suite – Made Ground

When compared against GRM's TAC for residential with gardens, all contaminants are below their respective thresholds, with the exception of the stockpile sample (HTP01 at 0.1m begl) which recorded lead with a concentration of 320mg/kg compared to the threshold of 200mg/kg. However, as this is stockpiled material it is considered likely that this material will be disposed of off-site and is not considered suitable for re-use in the proposed development.

Asbestos

The screening for asbestos did not reveal the presence of such contamination in the samples analysed. Furthermore, no visible evidence of any potentially asbestos containing materials was observed during the site investigation works. However, it is advised that an asbestos survey be undertaken on the existing buildings prior to demolition.

5.2.2 Water Supply Pipes

It is considered that, based on the UKWIR guidance, the concentrations of contaminants recorded to date such that PE water supply pipes should be suitable for the site. However, it is recommended that the local water supply company for the site be contacted to confirm their requirements with regard to pipe materials.

5.2.3 Summary of Risk to End Users

The risk to end users from soil contamination is considered to be negligible and no remedial works are required to protect them.

Stockpiles of various materials have been encountered on site (including one on the southern part of the site where the HTP01 sample was taken). It is considered that the stockpiled soils are not suitable for retention on site and should be disposed off-site to a suitable waste facility. It is recommended that further testing of the stockpiles is carried out for off-site disposal.

5.3 RISK TO SITE WORKERS

The investigation has not revealed any specific risk to site workers; however, the general comments outlined in Appendix A (vii) should be considered when site specific risk assessments are completed.

Depleted oxygen concentrations were recorded such that precautions should be implemented and included in the specific risk assessments during the construction phase for any confined space working to mitigate any risk to site workers.

6 QUANTITATIVE RISK ASSESSMENT – HUMAN HEALTH (GROUND GAS)

The gas risk assessment methodology used by GRM is outlined in Appendix A (v).

As the proposed land use is classed as high (residential with gardens); five 35mm diameter gas / water monitoring standpipes have been installed across the site (WS08, WS09, WS10, WS11 and WS12). The response zones have been targeted at the natural strata (due to the absence of significant thicknesses of made ground or organic materials), with monitoring wells positioned both to give general coverage across the site, and also positioned within the vicinity of historic pond (WS09) and historic offsite brickworks.

The monitoring well at WS12 was vandalised prior to the first gas monitoring visit before being reinstated and therefore only one monitoring visit has been completed at this location at this stage.

Based on BS8576:2013 *Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds*, the gas hazard is considered low (limited made ground, small historic ponds and offsite brickworks) and so the monitoring programme will comprise six visits over three months. To date two visits have been conducted; therefore, only an initial assessment of the local gas regime has been undertaken at this stage and further visits will be required to complete the monitoring program. A separate gas addendum letter report will be issued following the completion of the full monitoring program.

The gas monitoring results to date, are presented in Appendix I, and summarised in Section 3.5.

The gas monitoring has been undertaken using a LMSxi Multifunction Gas Analyser.

The primary guidance document to determine if protection measures are required is BS8485:2015+A1:2019 *Code of practice for the design of protective measures from methane and carbon dioxide ground gases for new buildings*. This uses hazardous gas flow rates (Q_{hg}), which are gas concentrations multiplied by borehole flow rates, to derive a Gas Screening Value (GSV) for the site. The gas regime is then determined based on the GSV and other limiting factors such as gas concentrations.

As both flow rate and methane concentrations have been consistently below the monitor's lower limit of detection a default flow rate of 0.1l/hr and a default methane concentration of 0.1%v/v have been used in the following assessment.

Using the default flow rate of 0.1l/hr and the default methane concentration of 0.1%v/v a Q_{hg} of 0.0001l/hr has been calculated for methane. Using the default flow rate of 0.1l/hr and the maximum carbon dioxide concentration of 3.90%v/v, a Q_{hg} of 0.0039l/hr has been calculated for carbon dioxide. On this basis the GSV for the site is determined as 0.0039l/hr.

Therefore, as the maximum concentration of methane is <1%v/v, the maximum concentration of carbon dioxide is <5%, and the GSV is <0.07l/hr, the site has been assessed as 'Characteristic Situation 1' as outlined in BS8485:2015+A1:2019, for which gas protection measures are not required.

No significant sources of ground gas have been identified and the available results are consistent with the sites conceptual model.

The desk study risk assessment determined that no radon protection measures are required.

6.1 SUMMARY OF RISK FROM GAS

The investigation has not revealed any specific risk to end users from ground gas, and therefore gas protection measures will not be required, subject to the completion of the ground gas monitoring programme.

Depleted oxygen concentrations have been recorded which may pose a risk to site workers during construction, that precautions should be implemented and included in the specific risk assessments for any confined space working to mitigate any risk to site workers.

7 QUANTITATIVE RISK ASSESSMENT - CONTROLLED WATERS

The methodology, rationale and guidance GRM have used to assess the risk to controlled waters is set out in Appendix A (viii).

The primary receptors for this site have been identified as nearby inland rivers. The primary pathways are surface run off and infiltration; however, the cohesive nature of the strata is likely to restrict infiltration. The Environment Agency has classified the underlying strata (Weald Clay Formation) as unproductive strata. There are no recorded groundwater abstraction licenses within 500m of the site, or potable abstractions within 2000m of the site and the site is not recorded to be within a Groundwater Source Protection Zone.

A potential significant source of contamination has not been identified at the site and, in the absence of a source, or sensitive receptor, there is considered to be no risk to controlled waters and therefore soil leachate / water analysis has not been undertaken.

7.1 SUMMARY OF RISK TO CONTROLLED WATERS

The risk to the aquifer below the site and the nearby surface waters is considered negligible.

8 PHASE II CONCEPTUAL SITE MODEL

HUMAN HEALTH			
Source	Pathway	Receptor	Remedial Solution
A source of contamination has not been identified.	Indoor and outdoor inhalation of soil/soil dust and asbestos fibres, ingestion of, and dermal contact with contaminated soil and soil dust, ingestion of vegetables that have taken up contamination and contaminated soil attached to vegetables.	End users.	No remediation required.
Stockpiled soils – elevated lead concentrations (HTP01).		Construction workers.	Off-site disposal.
Made ground, potentially infilled ponds, offsite brickworks.	Inhalation of carbon dioxide / methane.	End users.	No remediation required (to be confirmed following completion of the gas monitoring).
Potential asbestos containing materials associated with buildings.	Inhalation.	Construction workers.	Survey and removal by specialist contractor. Use of suitable PPE, and adoption of appropriate working protocols.
A source of contamination has not been identified.	Migration of contamination through leaks and joints, degradation of water pipe materials.	End Users.	PE water supply pipes and clean backfill required (to be confirmed by water supply company).
CONTROLLED WATERS			
A source of contamination has not been identified.	Leaching of contaminants and vertical migration to the groundwater.	Nearby inland rivers.	No remediation required.

9 REMEDIATION

9.1 RECOMMENDED REMEDIAL MEASURES AND VALIDATION REQUIREMENTS

9.1.1 Protection of End Users

Soil Contamination

A source of soil contamination has not been identified at the site and so remedial measures are not required to protect end users.

The existing topsoil has been shown to be uncontaminated and can be used as a growing medium in private gardens and soft landscaping. If there is insufficient topsoil to complete the proposed development, then some will need to be imported.

Any imported topsoil for use in constructing the growing medium will require chemical validation to confirm that it is chemically suitable for use. Samples of the topsoil will need to be analysed for a suite of contaminants including metals, inorganics, speciated PAHs and other contaminants such as, speciated hydrocarbons and asbestos depending on the source. The number of samples that require analysis will depend on the source of the materials. Typically, an analysis rate of one sample per two gardens and one sample per four gardens (minimum of three samples per source and material type) applies for generated and virgin soils respectively. It is also recommended that the topsoil be subjected to analysis to BS3882 to confirm that it conforms to this standard. A typical analysis rate of one sample per 5,000m³ is considered appropriate for this.

The stockpiled material on site should be removed as part of the site clearance works.

Should any material suspected of being significantly contaminated be encountered during the redevelopment of the site, GRM can be contacted to undertake additional investigation if necessary. The local Environmental Health Officer should be contacted and informed of any remedial work required.

Ground Gas

Gas protection measures are not required for the proposed development subject to the completion of the ground gas monitoring programme.

9.1.2 Protection of Site Workers

The risk to site workers from the identified soil contamination is negligible. However, an asbestos survey should be undertaken on the existing buildings prior to their demolition.

Depleted oxygen concentrations are present that may pose a risk to site workers that precautions should be implemented and included in the specific risk assessments during the construction phase for any confined space working to mitigate any risk to site workers.

9.1.3 Protection of Controlled Waters

The risk to controlled waters is negligible and no remedial measures are required.

9.1.4 Protection of Water Pipes

It is considered that, based on the UKWIR guidance, the concentrations of contaminants recorded to date are such that PE water supply pipes should be suitable for the site. However, it is recommended that the local water supply company for the site be contacted to confirm their requirements with regard to pipe materials.

9.2 REMEDIATION METHOD STATEMENT

A Remediation Method Statement and a Gas Protection Measures Design and Verification Plan is not required (subject to completion of ground gas monitoring program).

Following your review of this document, we would recommend that a copy of it be forwarded to the Local Authority for comment and approval, prior to commencing development of the site. The Local Authority may choose to include other consultees as part of the planning process (such as the Environment Agency).

Consultation should be undertaken at the earliest possible opportunity to avoid abortive or delayed works.

9.3 DISPOSAL AND CLASSIFICATION

The topsoil will be classified as Non-Hazardous Waste.

Based on the Waste Classification Report (Appendix M) it is considered that the stockpiled material to the south (HTP01) will be classed as Hazardous Waste, due to the elevated concentrations of zinc. However, early consultation with the relevant landfill sites over their particular acceptance criteria may produce cost savings. Reference should be made to the relevant notes presented in Appendix A (x).

The natural strata underlying the site is likely to be classified as Inert for disposal purposes, however, further testing will be required to confirm this. Natural soils may be suitable for re-use on-site as part of any capping layer and consideration should be given to retaining this material on-site. Alternatively, it may be sold as a commodity to off-set construction costs.

Care should be taken to keep natural arisings separate from the made ground and free from construction materials, as natural soils mixed with made ground and construction materials may attract additional disposal costs.

Although not identified during the site works, visible asbestos containing materials (ACMs) within soils will result in the soils being classified as Hazardous Waste. Visible ACMs should be removed, employing appropriate health and safety protocols and where possible should be undertaken prior to disposal.

It is recommended that any materials to be exported are stockpiled and tested to confirm disposal rates, as this may be more cost effective than using the results contained within this report.

Where site-won materials (i.e. made ground or contaminated natural soils) are to be re-used on site, or materials are to be imported, it is recommended that this should be carried out under a Materials Management Plan produced in accordance with the CL:AIRE Definition of Waste Code of Practice. This document should be approved by a CL:AIRE-registered Qualified Person prior to excavation of materials, and be maintained throughout the duration of the project. A Verification Report should be produced on completion of the project in order to confirm the control and recording of material movements around or between sites in accordance with current waste management legislation and guidance.

10 GEOTECHNICAL ASSESSMENT

10.1 INTRODUCTION

The Client proposes to develop the site with residential properties with associated gardens, soft landscaping and infrastructure. Finished floor levels and the levels of any underground engineering works have not been provided.

In addition to the site specific comments below reference should be made to the general comments relating to the Geotechnical Assessment listed in Appendix A (xi to xvi).

10.2 GEOTECHNICAL TESTING

Geotechnical testing has been carried out both on site and in the laboratory; the results of this testing are provided on the logs in Appendix F, and in Appendix K. These results are summarised in the tables below and overleaf:

In situ Testing Weathered Weald Clay Formation:

Test Parameter	Range of Results			
	Slightly gravelly CLAY	Gravelly CLAY	Clayey GRAVEL	MUDSTONE
SPT 'N' values	11 to 24 at 1m	4 to 24 at 1m 17 to 33 at 2m 26 at 3m	26 to 31 at 2m 28 to 59 at 3m 37 to 56 at 4m 43 at 5m	57 at 1.7m 61 at 2m 53 at 2.8m 54 to 63 at 3m 56 to 62 at 4m
Hand Shear Vane (kPa)	55 to 110 at 0.50 to 0.95m 60 to 110 at 1.0 to 1.40m	85 to 110 at 1.0 to 1.5m	-	-

It should be noted that SPT results in clay soils can give conservative test results. This can be seen above by comparing the N results against the shear vane testing which typically recorded high strength soils from depths of 1.0m begl.

Laboratory Testing Weathered Weald Clay Formation:

Test Parameter	Range of Results			
	Slightly gravelly CLAY	Gravelly CLAY	Clayey GRAVEL	MUDSTONE
Plasticity Index	31% to 40% (medium volume change potential)	29% to 47% (medium to high volume change potential)	15% to 33% (low to medium volume change potential)	-
Natural Moisture Content (%)	24% to 32%	8.9% to 28%	8.4% to 23%	13% to 16%
Swelling Pressure (kPa)	-	26kPa to 134kPa	28kPa	-

10.3 INITIAL DESSICATION TESTING

The desiccation works comprised of three window sample boreholes (WS03, WS09 and WS12) being undertaken across the site. Disturbed samples were taken at approximately 0.25m depth increments determine moisture profiles between a depth of 0.75m begl to a maximum depth of 4.0m begl. Samples at 1.0m intervals were also collected for swell tests.

WS03 was chosen as a 'control' location due to its distance from trees. WS09 and WS12 were chosen due to being located in areas potentially within the zone of influence of trees (including oak, willow and elm).

There are three ways that the desiccation of a soil can be assessed: moisture profile, swell testing and the Driscoll method (statistics). For this assessment we have used moisture content and swell to provide an initial desiccation assessment.

Samples were taken from each exploratory hole at 0.25m intervals, starting at 0.75m begl and finishing at 4.0m begl or at the depth of SPT N value refusal. These samples were subjected to a moisture content test to allow a moisture profile to be determined for each exploratory hole. Samples at 1.0m intervals between 1.5m and 2.5m were subjected to swell tests to ascertain whether the strata at appropriate depths swelled significantly upon the addition of water (simulating re-hydration), and the pressure exerted by the swelling sample was measured.

The theory of assessing the desiccation using moisture profiles is done by comparing potentially desiccated profiles with that of a control profile (not impacted by tree influence). Where a soil is desiccated the graphs will show a difference between the desiccated profile (low moisture) and the profile from the control holes (moisture at natural background levels).

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As the depth increases, the tree influence on the soil reduces, and the difference between the potentially desiccated sample and the control sample will become less. At the depth where there is no longer any tree influence, there will be little or no difference between the two samples.

The results of the moisture content testing have been plotted on moisture profile graphs, and each area of potential desiccation (WS09 and WS12) has been compared against control samples (WS03) which was not situated near trees. The moisture profile graphs are presented in Appendix N.

When the potentially desiccated moisture profiles of WS09 and WS12 are compared against the control data (WS03), they show slightly lower moisture contents to 1.75m begl, below which in WS09 and WS12 the moisture contents are relatively lower than the control location (WS03).

Whilst there is no definitive guide to an acceptable level of swell, GRM consider that swelling pressures which are equal to, or generally lower than those recorded within the associated control holes, and with consideration of the moisture content results, would not be overly concerning to warrant deepening traditional foundations.

Exploratory holes WS09 and WS12 within the influence of trees underwent swell testing and the control hole (WS03) also underwent swell testing to allow for a comparison between the potentially desiccated soils and the control locations.

The control hole recorded swelling pressures between 26kPa at 2.5m begl and 64kPa at 1.5m begl.

When looking at the swelling pressures, all test results from WS09 and WS12 were greater than the control location (WS03). Where the swelling pressures are greater than the control, further consideration is required as desiccation could be present and there is a chance the swelling could have an impact on the development.

Based on the encountered geology and taking into the account the moisture content profiles (and their limitations) in conjunction with the swelling pressures, it is considered that the underlying cohesive soils have been impacted by the trees and hedgerows recorded on the site.

The moisture content profile of WS09 indicates dessication to an approximate depth of 3.50m begl. The moisture content profile of WS12 is less clear but follows a similar trend to WS09 so potentially is dessicated to 3.00m begl where non shrinkable mudstone is encountered.

The swell test results from WS09, particularly from 2.50m begl also indicate the presence of deep dessication. The swell test results from WS12 indicate that dessication may not extend as deeply as in WS09, however this may be due to differences in tree types, heights and geology.

The clayey gravel transition zone between clay and mudstone i.e., completely weathered mudstone has been subjected to laboratory testing. This testing has shown it to have a low to medium volume change potential and to be capable of being dessicated i.e., recorded a swell when tested in WS12 at 2.50m begl.

As such whilst the weathered zone would appear to be granular when recovered during excavation, geotechnically *in situ* it acts as a clay and foundations should be deepened in it in accordance with NHBC Standards Chapter 4.2 rather than be considered non shrinkable.

Specialist design of foundations and of heave protection is required for traditional foundations that are deeper than 2.5m, and consultation with the heave protection manufacturer is recommended. Alternatively, piled foundations could be adopted.

10.4 ENGINEERING GROUND TREATMENT

Engineering ground treatment is not considered to be necessary.

The near surface soils were generally firm under foot during the intrusive investigation. It is therefore considered unlikely that pre-treatment of the surface soils will be required for any small plant / personnel movements.

However, areas of standing water and waterlogged ground were noted during the initial site walkover. It is therefore recommended that temporary haul roads are implemented until the main roads are constructed. Furthermore, a working platform will be required for any piling plant. It is recommended that the design of the working platform is carried out as soon as possible.

The working platform certificate requires signing by the Principal Contractor for the site. An allowance for this, and responsibility for the design of the platform (estimated at 400mm thick if constructed without reinforcement once any shallow softened material has been removed), should be made in tender packages and site programmes.

10.5 EXCAVATION CONDITIONS

Excavation of the materials encountered during the ground investigation should be easily achieved using conventional hydraulic excavation techniques. A breaker or similar plant may be required where hard standing or existing foundations are encountered.

From the ground investigation undertaken, it is likely that excavations will be generally stable in the short term. Some materials such as granular soils and made ground are liable to collapse without warning. This situation is likely to be exacerbated by water ingress. Therefore, instability may be experienced in the medium to long term.

It is considered unlikely that dewatering will be required for shallow short-term excavations. The observed groundwater conditions suggest that only simple dewatering techniques (e.g. sump pumping) will be needed to control water ingress. Care should be taken to ensure that dewatering does not lead to settlement of soils below existing structures or services on or off-site.

Waterlogged ground was observed during the site walkover; suggesting poor drainage onsite. Therefore, an allowance should be made for temporary drainage solutions; specifically, during winter months when inclement weather is more frequent.

10.6 EXISTING STRUCTURES / SUBSTRUCTURES

Existing structures on the site include the house and stables as well as the access road, buried and overhead utilities associated with the existing house and outbuildings.

There may also be remnant foundations or other buried structures and services, that have not been identified from this investigation.

10.7 FOUNDATIONS

The untreated limited made ground and localised soft natural strata (WS02) are considered unsuitable as a bearing stratum and all new foundations should be carried down through them to found on the more competent natural cohesive strata with an undrained shear strength of greater than 60kPa. This will result in typical foundation depths of between 1.0m and 2.0m begl.

The site is underlain by high volume change potential cohesive strata, which would typically require a minimum foundation depth of 1.0m begl for new foundations. However, as all results with the exception of WS11 at 1.85m and TP01 at 1.00m recorded medium volume change or lower, it is considered that further testing could potentially enable the site to be reduced to medium volume change or for the site to be zoned.

It is considered that plot specific desiccation testing may be worthwhile once final layouts are produced due to the variability shown in the moisture content and swell test results. This should only be done after a detailed tree survey is available, and could be combined with additional plasticity index testing to try and achieve cost savings.

There are trees along and within the site boundaries and any new foundations within the zone of influence of these trees will need to be deepened in line with guidance in NHBC Standards Chapter 4.2. Based on the trees tentatively identified on site and the most recent proposed development layout it is estimated that 30% of the site could be affected by trees depending on the final development layout. The resultant foundation depths can only be determined by a tree survey and tree influence drawing, but at this stage it is estimated that foundation depths of between 1m and >2.5m (engineer design depth) begl might be expected where consistent rock is not present.

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Based on the depth to rock head across the site, and the master plan with roads between trees, hedges and the plots it is possible that 5% to 10% of plots may have foundations in excess of 2.5m below ground level due to trees, depending on the final layout of the site.

Trench Fill

At this stage, and based on the above, it is considered likely that trench fill foundations, founded on the natural cohesive or rock strata will be suitable for approximately 90% of the proposed houses. Foundation depths of between 1.00m and 2.0m below existing ground level (EGL), with an average depth of 1.5m below EGL are anticipated.

The natural cohesive soils encountered, at anticipated foundation depths, were generally at least medium to high strength. It is anticipated that a net allowable bearing pressure of at least 110kN/m² should be available for conventional strip or trench fill footings on the high strength cohesive soils. This will allow line loads up to 49kN/m to be taken on footings 450mm wide and 66kN/m on footings 600mm wide. This should result in total settlements of not more than 20mm, keeping differential settlements within acceptable limits.

The weathered mudstone recovered as a clayey gravel was generally of high strength. It is anticipated that a net allowable bearing pressure of at least 150kN/m² should be available for conventional strip or trench fill footings on the clayey gravels. This will allow line loads up to 70kN/m to be taken on footings 450mm wide and 90kN/m on footings 600mm wide.

Foundations will need to be deepened through the softer soils (such as those encountered in WS02) onto high strength cohesive soils or the underlying clayey gravels subject to tree influence depths. Delineation of the softer area around WS02 may reduce the area where deepening of foundations is required.

A net allowable bearing pressure of at least 300kN/m² should be available for conventional strip or trench fill footings within the rock quality strata. This will allow line loads up to 135kN/m to be taken on footings 450mm wide and 180kN/m on footings 600mm wide.

Wider footings may be required for higher point / line loads such as at party walls etc. Should wider footings be required for higher point / line loads, GRM should be contacted for further advice.

The strata at the site are variable with depth and so an allowance should be made for the localised deepening of foundations to consistent strata or use of reinforcement.

Heave precautions will be required where the foundations lie within the heave zone of trees as defined in NHBC Standards Chapter 4.2. Foundations should be remote from the direct action of tree roots and should not be constructed so close to trees as to significantly damage their root systems.

Piles

Due to the influence of trees, it is possible that up to 10% of the plots could have foundations bearing at depths in excess of 2.50m due to trees. Targeted desiccation testing could be undertaken to determine a safe bearing depth for traditional foundations (must be undertaken in the summer months if trees are to remain or at any time once removed). However, until this is undertaken it would be prudent to allow for piling all plots within the engineer design zone.

A piling specialist will need to be approached to provide pile dimensions and safe pile capacities, and the information contained within this report should be provided to them for their design.

Consideration should be given to nearby structures and infrastructure and achieving sufficient penetration to resist heave, when choosing the appropriate pile type.

As rock quality strata is within 10m of the ground surface, it is recommended that CFA piling is adopted to ensure that design pile lengths are achieved.

Whilst piled foundations would end bear beneath the influence of trees, the piles and ring beams should be designed to resist potential heave, down-drag and negative skin friction.

A testing regime and objectives of the works will need agreeing with regulatory and warranting bodies prior to works. The pile design will need to be justified to the warranting bodies and the justification should be included within the piling contract.

10.8 FLOOR SLABS

Due to the localised influence of trees it is recommended that an allowance be made for 30% of the proposed structures to have beam and block floors. The remainder of structures should be suitable for cast *in situ* suspended floor slabs.

Old substructures should be removed to at least 0.5m below any new floor slabs to prevent the formation of 'hard spots'.

10.9 BURIED CONCRETE

Based on the recorded water soluble sulphate and pH levels in the soils below the site and assuming static groundwater conditions, in accordance with requirements of BRE Special Digest 1 (2005), 'Concrete in Aggressive Ground', the Design Sulphate Class for buried concrete at the site should be assumed as DS-1 and the ACEC Class as AC-1s.

For unreinforced trench fill foundations with a width of greater than 450mm, the classifications above equate to a concrete designated as GEN1 in BS8500 and RC35 for reinforced foundations.

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The results of the water soluble sulphate and pH testing of are presented in Appendix J.

10.10 SLOPE STABILITY AND RETAINING STRUCTURES

Gentle gradients are present across the site and the surrounding area. Therefore, it is considered there is very low risk of slope instability occurring on the site at present gradients.

Grading of the site, cut and fill operations, removal of trees / vegetation from existing slopes, interference with drainage around existing slopes or the cutting of the toe or surcharging of the crest of existing slopes may cause instability and failure to occur.

The present gradients on site are likely to be adjusted by minor earthworks. Future ground profiles may require earth retaining structures, for which further advice may be required when more information is available.

10.11 SOAKAWAY DRAINAGE

The strata encountered during the investigation are unlikely to be suitable for soakaway drainage and an alternative drainage system should be considered for the disposal of surface water.

If soakaway drainage is to be considered, please see Section XV in Appendix A.

It is recommended that the Local Authority and Environment Agency be consulted with regards to the use of soakaways.

10.12 NEW ACCESS ROADS

Site observations suggest that made ground will have CBR values of <2% and approximately 2% to 4% in the cohesive natural soils when suitably drained. Proof rolling and the improvement of soft spots may result in increased CBR values and the incorporation of a geotextile grid into sub-base layers may allow for reduced capping thickness.

It should be noted that poorer CBR values are likely during periods of inclement weather and the formation should be suitable managed and protected.

Site observations should be confirmed by *in situ* or laboratory testing in accordance with the adopting Local Authority's preference.

11 FURTHER INVESTIGATION

Further investigation, to determine more accurately the effect of some of the identified hazards on the development, is recommended. A plan showing the areas where further investigation could be considered is presented in Appendix O and is outlined below:

- Completion of ground gas monitoring programme.
- Plot specific desiccation testing.
- Pre-demolition asbestos survey of existing buildings
- Post-demolition site investigation beneath building footprints and in areas currently inaccessible (beneath stockpiles and historical ponds).
- Delineation of the softer area around WS02 may reduce the area where deepening of foundations is required.
- Arboricultural survey.
- Further plasticity index testing to attempt to classify the site as medium volume change or reduce high volume change area.
- Plot specific foundation investigation (if required).
- Flood risk assessment required as site > 1ha.
- *In situ* CBR testing immediately prior to road construction.
- Should the development proceed it is recommended that further testing is conducted for waste disposal characterisation.

A copy of this report should be submitted to the Planning Department of the Local Authority / Local Authority EHO for review, if planning conditions exist for this site. A copy should also be sent to the NHBC for their records.

12 CONCLUSIONS

Assuming compliance with all the recommendations contained within this report (for abridged version see 'Summary of Recommendations' table at the beginning of the report) the site is suitable for the proposed development.

Based on the evidence currently available the site is assessed as being of low risk for geotechnical hazards and very low risk for contamination hazards.



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GENERAL APPRAISAL COMMENTS

i INFORMATION SOURCES

Where available the following sources have been used for the identification and assessment of potential ground hazards:

- Relevant British Standards
- British Geological Survey (BGS) Geology Map Scale 1:10,000 for local area
- British Geological Survey (BGS) Geology Map Scale 1:50,000/1:63,320
- BGS Memoir
- BGS Borehole Records
- BGS online viewer: <http://www.bgs.ac.uk/data/mapViewers/home.html>
- Environment Agency Groundwater Vulnerability Maps
- Historical Ordnance Survey (OS) Maps
- Environmental Data Report
- Environment Agency Website: <http://www.environment-agency.gov.uk/>
- Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites, UKWIR, 2010.
- Coal Authority Records / Coal Mining Report
- DEFRA/Environment Agency Contaminated Land publications and DoE Industry Profiles
- BRE Guide BR211 (2015), 'Radon: Guidance on protective measures for new buildings'
- HPA-RPD-033 (2007), 'Indicative Atlas of Radon in England and Wales'
- PHE-CRCE-032 (PHE, 2017), Radon in Homes in England: 2016 Data Report
- CIRIA C665 'Assessing risks posed by hazardous ground gases to buildings'
- BS8485:2015, 'Code of Practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'
- Other technical references used throughout this document are detailed in the text.

ii CONTAMINANTS OF CONCERN

The DoE Industry Profiles are normally used to assess likely contaminants from past land use and potential nearby industrial sources. For land uses where no profile is available, likely contaminants of concern are selected by GRM based on past experience of similar sites, a general screening suite of contaminants covered by CLEA and common contaminants from the Industry Profiles.

- | | | |
|------------|-------------------|--|
| • Arsenic | • Copper | • Water soluble sulphate |
| • Cadmium | • Nickel | • PAH (polycyclic aromatic hydrocarbons) |
| • Chromium | • Zinc | |
| • Lead | • Phenols | |
| • Mercury | • cyanide (total) | |
| • Selenium | • pH | |

Asbestos and PCBs are listed in the vast majority of profiles. PCBs are listed as the profiles expect electricity substations and switch boxes on all industrial sites. There is the potential for asbestos containing material to be mixed up with made ground, following any demolition works.

iii CONCEPTUAL MODEL METHODOLOGY

The consideration of contamination is based upon the principles of risk assessment, using the 'source-pathway-receptor' model in order to establish the presence, or potential presence, of a pollutant linkage.

To create a risk, contamination must have the potential to cause harm to susceptible targets or receptors such as humans, the water environment or the built environment. The potential for harm to occur requires three conditions to be satisfied to form a pollutant linkage:

- The presence of substances that may cause harm (SOURCE).
- The presence of a target which may be harmed (RECEPTOR).
- The existence of a plausible migration route between the source and the receptor (PATHWAY).

In the absence of a plausible pollutant linkage there is no risk. Where a potential linkage is identified in order for it not to pose a risk to the identified receptor it must be broken.

iv INTRUSIVE INVESTIGATION SAMPLING METHODOLOGY

The ground investigation (including fieldwork, sampling, monitoring and laboratory analyses) has been designed to identify and assess potential ground related problems and to allow cost effective solutions to be advised. It has been planned on the basis of the desk study, site inspection and the proposed development layout (where available). All fieldwork and soil descriptions were carried out in general accordance with relevant British Standards.

The exploratory holes have been positioned and advanced to depths to determine the general ground/groundwater/gas conditions below the site. A general grid pattern has been adopted, where possible, to provide sufficient information based on the current proposed layout scheme. Some holes have been targeted at particular hazards identified in the Phase I assessment. The resultant exploratory hole density is considered to be commensurate with the complexity of the site conditions and detail of information required for this phase of the investigation.

v GROUND GAS RISK ASSESSMENT METHODOLOGY

Gas monitoring programmes undertaken by GRM are designed to broadly comply with the recommendations outlined in CIRIA Report C665 'Assessing risks posed by hazardous ground gas to buildings' (2007) and BS8576 'Guidance on Investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs) (2013).

To assess the risks posed by ground gases such as radon, carbon dioxide and methane, the relevant current guidance has been used. For radon the site has been assessed following the guidelines in 'Radon: guidance on protective measures for new dwellings (BR211: 2015)'. For methane and carbon dioxide the primary guidance document used to determine if protection measures are required is *BS8485:2015 Code of practice for the design of protective measures from methane and carbon dioxide ground gases for new buildings*. This uses hazardous gas flow rates (Q_{hg}), which are gas concentrations multiplied by borehole flow rates, to derive a Gas Flow Rate (GSV) for the site. The gas regime is then determined based on the GSV and other limiting factors such as gas concentrations.

Where flow is not recorded during the monitoring a default flow rate of 0.1l/hr will be used in the assessment to produce a positive result.

vi HUMAN HEALTH RISK ASSESSMENT METHODOLOGY

Guidance contained in the Environment Agency's CLEA Reports has been used to assess the risks posed to human health.

For residential developments that include domestic gardens the default Tier 1 Assessment Criteria (TAC) for 'residential land with plant uptake' are used, i.e. a female with a start age class of one and an end age class of six. All pathways are considered including the consumption of home-grown vegetables.

For residential developments that do not include domestic gardens the default Tier 1 Assessment Criteria (TAC) for 'residential land without plant uptake' are used, i.e. a female with a start age class of one and an end age class of six. All pathways are considered except the consumption of home-grown vegetables. For commercial/industrial developments the default Tier 1 Assessment Criteria (TAC) for 'commercial/industrial' are used, i.e. a female with a start age class of sixteen and an end age class of eighteen. All pathways are considered except the consumption of home-grown vegetables.

The TAC used by GRM include Category 4 Screening Levels (C4SLs) published by DEFRA, values calculated by GRM using the CLEA v1.071 risk assessment, and values and Suitable for Use Levels (S4UL) developed by LQM/CIEH. The TAC used in the assessment are selected based on the lowest site specific SOM values returned as part of the chemical analysis.

Where soil chemical analysis results are found to exceed the TAC, Site-Specific Risk Assessments may be undertaken using the CLEA v1.071 risk assessment software using the age classes and pathways described above.

vii RISK TO SITE WORKERS – GENERAL COMMENTS

The risks to site workers are similar to those posed to site end users, although likely to be less severe due to the site workers' shorter exposure to the identified contamination. However, site workers (particularly groundworkers) are more likely to come into direct contact with contaminated soils due to the nature of their work. On this basis ground and construction workers should be provided with basic Personal Protective Equipment based on the site's general health and safety risk assessment, but including as a minimum safety footwear, gloves and overalls.

A site specific risk assessment should be carried out for all hazards identified within the ground investigation in accordance with current health and safety legislation. This assessment should identify any measures required to further reduce risks i.e. providing further Personal Protective Equipment, welfare facilities and if necessary preventing access to certain areas.

Demolition and dismantling of existing structures on the site must be carried out to a safe and acceptable standard, in accordance with current UK guidance and best practice. Whilst not ground related, asbestos and hazardous substances surveys should be conducted prior to any demolition.

Any unusual colours, odours and suspicious ground should be reported immediately to site management and then GRM.

Whilst this appraisal has considered the long-term effects of contamination, GRM can also help during the formulation of Health and Safety documentation, if required.

viii CONTROLLED WATERS RISK ASSESSMENT METHODOLOGY

Where the desk study and fieldwork do not reveal a potential source of contamination no leachate or groundwater testing will be performed. Where a potential source is identified the testing will comprise leachate testing on the material considered most likely to pose a risk, groundwater testing will be undertaken if water is present at shallow depth.

The UK Drinking Water Standards (UKDWS) or Environmental Quality Standards (EQS) are usually adopted for comparison with the leachate/groundwater test results. When the most sensitive receptor is considered to be the aquifer (groundwater) UKDWS will be adopted as the Initial Tier 1 screening values. Where the most sensitive receptor is a surface water feature the EQS values will be used as Initial Tier 1 Screening values.

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ix CONSTRUCTION MATERIALS RISK ASSESSMENT METHODOLOGY

The 'screening levels' adopted for the assessment of risk to construction materials are taken from the following documents:

- UK Water Industry Research (UKWIR) Contamination thresholds for sub-surface water pipes, for the protection of buried pipes.
- Building Research Establishment (BRE) Special Digest SD1 (2005), 'Concrete in Aggressive Ground', for the protection of buried concrete.

x WASTE DISPOSAL, SITE WASTE MANAGEMENT PLANS AND MATERIAL MANAGEMENT PLANS

Under current Waste Management Regulations, waste soil materials produced from the site will require characterisation to enable it to be disposed of correctly.

The chemical analysis results included in this report should be provided to the relevant landfill operators to establish the characterisation of the waste, confirm its suitability for landfill disposal and provide estimated costings. If material is classified as hazardous, then the site will need to be registered with the Environment Agency prior to the movement of the waste. Depending on the receiving landfill's current permit, further chemical analysis, incorporating Waste Acceptance Criteria (WAC) leachate analysis, may be required.

All materials removed from the site will be classified as 'waste' and therefore must be removed by a suitably licensed carrier of waste. This applies whether or not the waste is contaminated. All waste removed to landfill will attract Landfill Tax.

The developer/builder is likely to be classed as the waste producer and therefore, has a duty of care to ensure that all waste is disposed of appropriately. This includes ensuring the waste carrier is licensed and disposes of the waste to a suitably licensed landfill site. They are also required to keep a paper trail from 'cradle to grave' including copies of the waste disposal tickets.

Efficient materials management on site is recommended as it can lead to significant cost savings when compared to the traditional side casting or single stockpile of arisings. GRM can assist in the production of Material Management Plans under the CL:AIRE Definition of Waste: Code of Practice. The DoWCoP enables:

- The direct transfer and re-use of clean naturally occurring soil materials between sites, and
- The re-use of both contaminated and uncontaminated materials on their site of origin and between sites within defined Cluster projects.

GRM can also undertake the role of Qualified Person and submit the DoW CoP project Declaration.

Likewise making the site as volume neutral as possible will reduce the costs of development. Whilst not a statutory requirement, Site Waste Management Plans allow better waste management practices, help to reduce the amount of waste produced and identify best environmental disposal options. Implementing a Site Waste Management Plan (SWMP) can reduce costs (increasing business profits) and maximise resource efficiency.

xi GEOTECHNICAL ASSESSMENT GENERAL COMMENTS

Where finished floor levels of proposed structures have not been provided by the Client, then for the purposes of initial assessment, GRM will assume that finished levels will not vary appreciably from the existing ground levels. If the depths of any underground engineering works (i.e. sewers, pumping stations

etc.) are unknown they will not be taken in to account in the assessment and it will be assumed that any such works will not compromise foundation or ground stability.

Should the development proposals or finished levels be different from these assumptions then the comments/recommendations in the Geotechnical Assessment may require revising.

It should be noted that the results of window sampling and/or cable percussive boreholes may not give a true indication of a soils actual engineering properties (i.e. stability, mass structure etc). GRM consider that that prior to development trial pitting should be undertaken to confirm the recommendations in the Geotechnical Assessment.

xii GEOTECHNICAL ASSESSMENT – ENGINEERING GROUND TREATMENT

Near surface soils have the potential to be disturbed by weathering and site traffic. Precautions should always be taken to avoid this, as excessive disturbance may leads to more onerous floor slab designs, road cap thickness and increased amounts of off-site disposal etc.

Near surface soils may need treatment or reinforcing to allow safe movement of construction plant and labour. An assessment by the contractor should be undertaken once the type of machinery/plant needed to complete the development is known.

xiii GEOTECHNICAL ASSESSMENT – EXCAVATIONS

Excavation instability (over-break) can result in damage to existing services or structures (e.g. foundations, roads or boundary walls/fences) both on and off-site, as well as increased foundation concrete costs. In order to minimise this, all excavations deeper than 1.2m deep (or any excavation within 1.5m of any existing structure or service) should be supported. Full support should be provided to the full depth of all near vertically sided excavations in made ground, soft and very soft clays and granular soils. A reduction to intermediate support should be acceptable within firm and stiffer natural clays.

Wherever possible, man entry into excavations should be prevented; however, where this is not possible, entry to, and time spent in, excavations should be kept to a minimum.

The build program should be tailored to reflect the impact that deep excavations through potentially unstable strata can have on adjacent properties, so that they are not undermined.

All excavations on site should be in accordance with HSE guidelines and stability should be practically maintained at all times. Reference should be made to HSE construction information sheet No. 8 (Revision 1) 'Safety in Excavations'.

Care should be taken to ensure that falls from excavation faces do not adversely affect the integrity of foundation concrete.

If contaminated water enters excavations it should be removed and transported to an appropriate treatment facility by a suitably licensed carrier before construction begins.

xiv GEOTECHNICAL ASSESSMENT – SUBSTRUCTURES

Where practicable, existing buried construction should be fully removed; however, if this is not practicable all new foundations should be carried down to fully penetrate it and it should be broken well away from all new structures.

There may be existing structures and/or infrastructure in close proximity to the proposed development. New build foundations may be constructed next to pavements with existing underground services beneath them, or excavations may be required near existing footings associated with adjacent properties. These potential hazards need to be taken into consideration when designing foundations and the groundworker needs to be made aware of their potential impact during the redevelopment works. Foundations close to existing underground services or buildings may require alternative foundation techniques (such as piling) to protect the integrity of these structures.

The contractor for the works should carry them out in such a fashion so as to not cause excessive overbreak, concrete usage or undermine existing buildings/roads/ services that are to be retained.

xv **GEOTECHNICAL ASSESSMENT – SOAKAWAYS**

Soakaway testing in trial pits by GRM is broadly carried out in accordance with BRE DG 365 (2016). The testing comprises the excavation of a test pit to a suitable depth, and the placement of water into the pit. The level of water present is then monitored over time. For borehole installations, the permeability testing (falling head/rising head) is undertaken in accordance with BS5930.

If it is decided to proceed with the use of soakaway drainage, then the following general points should be noted:

- Soakaways should not be placed so that water can be discharged through potentially contaminated made ground.
- The Environment Agency may require soakaways to be sealed systems such that only roof run off falls to soakaway.
- Interceptors are likely to be required for soakaways for highway drainage. The adopting authority for the highways should be consulted at the earliest opportunity regarding the use of soakaways for highways drainage.
- Consideration of site levels and slopes should be taken into account during the design.
- The construction of all soakaways should be in accordance with the current building regulations.
- Soakaways should not be placed within 5m of a proposed building.
- Placement of soakaways needs to be considered so as to avoid ponding of water down slope.
- The base of a soakaway should not be below the highest recorded water level.
- The Environment Agency prefer 1m of dry soil to be present between the base of a soakaway and the water table to provide attenuation for contamination.

xvi **GEOTECHNICAL ASSESSMENT – FOUNDATIONS**

If soft or hard spots are encountered during foundation excavation then they should be replaced with suitably compacted material or the footings deepened to suitable strata, to avoid differential settlement.

If strata of differing bearing character (e.g. sand and clay) are encountered at foundation levels within the excavations for a single plot then the excavation depths should be altered as appropriate to ensure the foundations rest on a single stratum, or strata that will not induce differential settlement. Where this is impractical then GRM should be contacted to assess a reinforced concrete detail or an alternative foundation solution (e.g. piles or vibro-replacement).

NOTES ON LIMITATIONS

General

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

GRM Development Solutions Limited accepts no responsibility or liability for:

- a) the consequences of this document being used for any purpose or project other than for which it was commissioned, and
- b) the consequences of this document being used by any third party with whom an agreement has not been executed.

Phase I Environmental Audits/ Desk Studies

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, GRM Development Solutions Limited reserves the right to review such information and as considered necessary and appropriate to modify the opinions accordingly. It should be noted that any risks identified in a Phase 1 report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase II Environmental Audits (Contamination Investigations)

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, ground and groundwater conditions to allow a reasonable risk assessment to be made. The objectives of the investigation have been limited to establishing the risks associated with potential human targets, building materials, and controlled waters.

The amount of exploratory work and chemical testing undertaken has necessarily been restricted by the short timescale available, and the locations of exploratory holes have been restricted to the areas unoccupied by the building(s) on the site and by buried services. A more comprehensive investigation may be required if the site is to be redeveloped as, in addition to risk assessment, a number of important engineering and environmental issues need to be resolved.

For these reasons if costs have been included in relation to site remediation these must be considered as provisional only and must, in any event, be confirmed by a commercial adviser.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site, can only provide a general indication of site conditions. Whilst exploratory testing is intended to gain an accurate representation of the site, the very nature of sampling and testing is such that it cannot ensure that all localised conditions are detected.

The risk assessment and opinions provided take in to consideration, inter alia, currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

Phase II Geo-environmental Investigations (Combined Geotechnical and Contamination Investigations)

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions to provide a reasonable assessment of the environment risks together with engineering and development implications. If costs have been included in relation to site development a commercial adviser must confirm these.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site, can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site for each of the exploratory holes. There may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.

The comments made on groundwater conditions are based on observations made at the time the site work was conducted. It should be noted that groundwater levels will vary owing to seasonal, tidal and weather related effects. The scope of the investigation was selected on the basis of the specific development proposed by the Client and may be inappropriate to another form of development or scheme.



The risk assessment and opinions provided take in to consideration, inter alia, currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.



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Approximate site boundary





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DO NOT SCALE

NOTES:



Approximate site location.



Approximate site boundary.



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Tel: 01283 551 249
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CLIENT:

Catesby Estates plc

PROJECT:

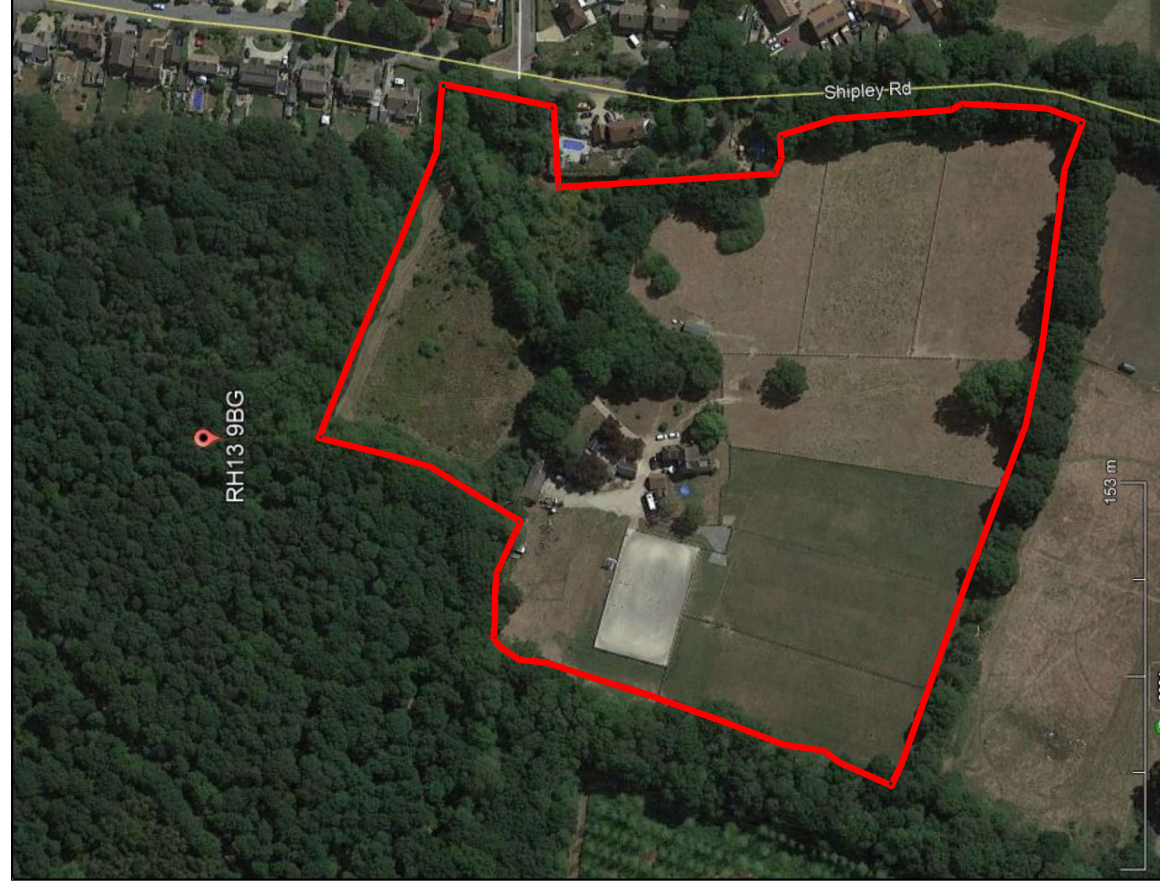
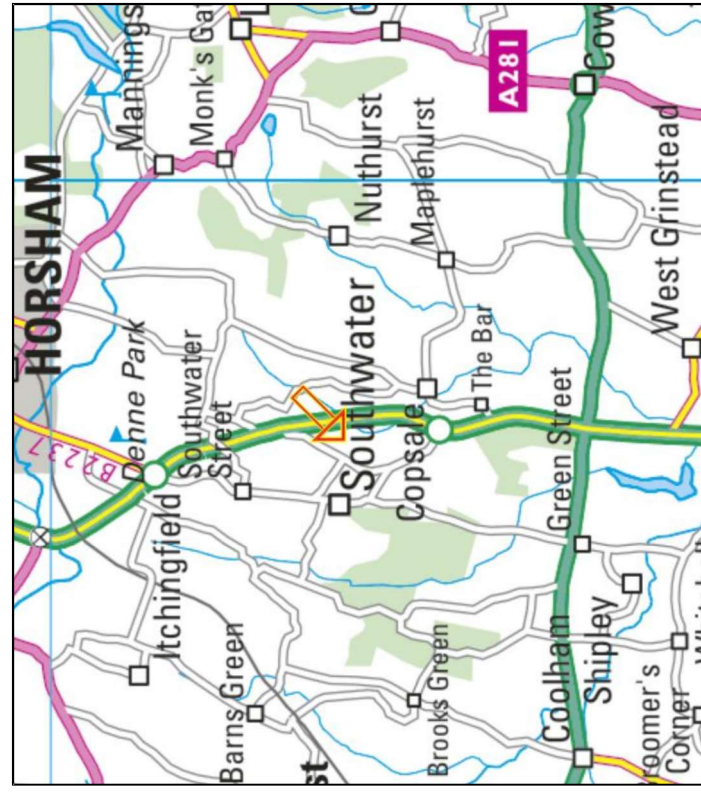
Rascals Farm, Southwater

TITLE:

**Site Location and Boundary
Plan**

SCALE@SIZE:	NTS	ISSUE:	FINAL
DESIGNED/DRAWN:	AT	DATE:	September 2021
PROJECT No:	P9249	DRAWING No:	2

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DO NOT SCALE

NOTES:



Approximate site boundary.



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CLIENT:

Catesby Estates plc

PROJECT:

Rascals Farm, Southwater

TITLE:

**Phase I Ground Hazard
Diagram**

SCALE@SIZE:

NTS

ISSUE:

FINAL

DESIGNED/DRAWN:

AT

DATE:

September 2021

PROJECT No:

P9249

DRAWING No:

3

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DO NOT SCALE

NOTES:

Approximate site boundary.

TP00

Approx. Location of Trial Pits / Hand Dug Trial Pits.

WS00

Approx. Location of Windowless Sampler Boreholes.

WS00

Approx. Location of Windowless Sampler Boreholes Installed as Monitoring Wells.

GRM

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Tel: 01283 551 249
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CLIENT:

Catesby Estates plc

PROJECT:

Rascals Farm, Southwater

TITLE:

Exploratory Hole Layout Plan

SCALE@SIZE:

NTS

ISSUE:

FINAL

DESIGN/DRAWN:

AT

DATE:

September 2021

PROJECT No:

P9249

DRAWING No:

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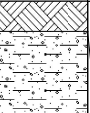
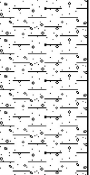
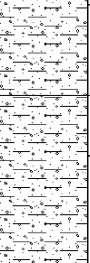
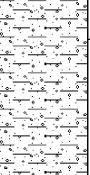
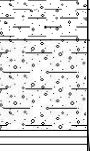


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		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS01 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515378 E 125295 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.05 0.05	D ES			0.10			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone.	
		0.40 0.40	D ES						TOPSOIL Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone.	
		1.00 1.00	D	N=21 (1,2/4,5,5,7)		1.30			WEATHERED WEALD CLAY FORMATION <i>becoming stiff from 1.00m depth.</i>	1
		2.00		N=32 (6,4/6,6,8,12)					<i>becoming friable from 1.50m depth.</i> <i>becoming very stiff from 2.00m depth.</i>	2
		2.50	D			2.60			<i>becoming very gravelly from 2.50m depth.</i>	
		3.00		N=54 (7,9/13,14,14,13)		2.90 3.00			WEATHERED WEALD CLAY FORMATION Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone including cobbles. Sand is fine to medium.	3
								WEATHERED WEALD CLAY FORMATION End of Borehole at 3.000m	4	

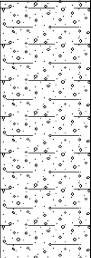
Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole: Borehole terminated on SPT refusal.					
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started:	24/08/2021	Hole Complete:	24/08/2021	Version:	FINAL
				Scale:	1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS02 Sheet 1 of 2		
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)		
Client: Catesby Estates plc					GRM Project Ref: P9249			Coordinates 515373 E 125245 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.10	D			0.15			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse and subrounded to subangular of mudstone.	
		0.10	ES							
							1.10		TOPSOIL	
		0.75	D							
		1.00		N=4 (1,0/1,2,1,0)				Soft, low strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone.	WEATHERED WEALD CLAY FORMATION	1
		1.60	D					Soft, low strength and locally firm, medium strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone.	WEATHERED WEALD CLAY FORMATION	
		2.00		N=22 (3,4/5,6,5,6)						
								becoming friable from 1.10m depth. with frequent gravels of ferruginous mudstone encountered from 1.50m depth.		
					2.40		becoming stiff, high strength from 2.00m depth. with a band of medium to coarse and angular weak mudstone encountered between 2.00m and 2.30m depth.		2	
								Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone, and ferruginous mudstone including rare cobbles. Sand is fine to medium.	WEATHERED WEALD CLAY FORMATION	3
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										
										

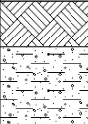
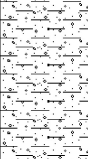
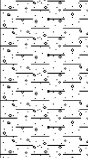
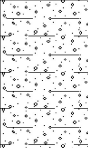
Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole: Borehole terminated on target depth.					
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started: 24/08/2021		Hole Complete: 24/08/2021		Version: FINAL	
				Scale: 1:25	

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole				Borehole No WS02 Sheet 2 of 2	
Site Name: Rascals Farm, Shipley Road, Southwater								Ground Level (mAOD)	
Client: Catesby Estates plc						GRM Project Ref: P9249		Coordinates 515373 E 125245 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		5.00		N=43 (5,9/8,10,10,15)		5.00		Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone, and ferruginous mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION <i>with a band of medium to coarse and angular weak mudstone encountered between 4.00m and 4.40m depth.</i> <i>with gravels of ferruginous mudstone becoming rare from 4.50m depth.</i> End of Borehole at 5.000m	5	
										6
										7
										8

Crew: Oakland Site Investigation Ltd			Logger: AT			Weather: Sunny.		
Equipment: Premier Tracker 110								
Reason for termination of borehole: Borehole terminated on target depth.								
Groundwater Remarks: No groundwater encountered during drilling.								
General Remarks:								
Hole Started: 24/08/2021		Hole Complete: 24/08/2021		Version: FINAL		Scale: 1:25		

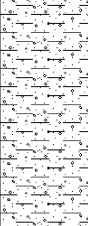
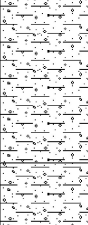
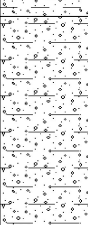
		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS03 Sheet 1 of 2	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515376 E 125196 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
						0.15			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse and subrounded to subangular of mudstone with rare flint. TOPSOIL	
		0.75	D						Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION	
		1.00	D	N=9 (1,0/1,2,3,3)					with frequent gravels of ferruginous mudstone encountered between 1.00m and 2.00m depth.	1
		1.00								
		1.25	D						Firm, medium strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION	
		1.50	D							
		1.75	D							
		2.00	D	N=22 (3,3/4,4,7,7)					becoming stiff, high strength from 2.00m depth.	2
		2.00								
		2.25	D							
		2.50	D							
		2.75	D							
		3.00	D	N=30 (4,5/5,7,9,9)					Dense light yellowish brown and light grey slightly clayey slightly sandy medium to coarse and angular to subangular GRAVEL of weak mudstone. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	3
		3.00								
		3.25	D							
3.50	D									
3.75	D									
						3.90				
						4.00			Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly	4

Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole:		Borehole terminated on SPT refusal.			
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					

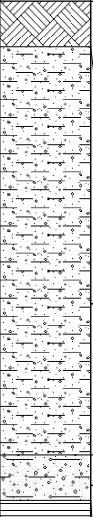
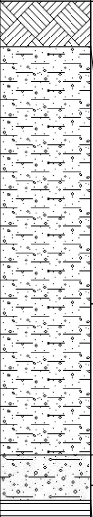
Hole Started:	24/08/2021	Hole Complete:	24/08/2021	Version:	FINAL	Scale:	1:25
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		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS04 Sheet 1 of 2	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515416 E 125190 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.05	D			0.20			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse and subrounded to subangular of mudstone with rare flint. TOPSOIL	
		0.05	ES							
		0.90	D			1.50			Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming stiff, high strength from 1.00m depth.</i>	1
		1.00		N=16 (1,3/4,3,4,5)						
		1.50	D			2.50			Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming very friable from 1.50m depth. with frequent gravels of ferruginous mudstone encountered between 2.00m and 3.00m depth.</i>	2
		2.00		N=17 (3,4/4,4,4,5)						
		2.50	D			3.80			Dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION <i>with frequent 0.05m to 0.30m pockets of clay encountered between 2.50m and 3.80m depth.</i>	3
		3.00		N=31 (2,3/7,6,7,11)						
		3.50	D			4.00			Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to	4
		4.00		N=59 (5,10/14,15,14,16)						

Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole: Borehole terminated on SPT refusal.					
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started:	24/08/2021	Hole Complete:	24/08/2021	Version:	FINAL
				Scale:	1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS05 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515580 E 125102 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.05	D			0.15			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse and subrounded to subangular of mudstone with rare flint. TOPSOIL Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming friable and stiff, high strength from 1.00m depth.</i>	1
		0.05	ES							
		0.80	D							
		1.00		N=17 (1,2/3,3,5,6)						
		1.20	D							
		1.70								
		1.80	D	N=57 (12,14/11,14,16,16)		1.65 1.70		Dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION <i>becoming friable and slightly clayey from 1.60m depth.</i> Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone and ferruginous mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION End of Borehole at 1.700m	2	
									3	
									4	

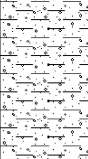
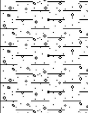
Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole: Borehole terminated on SPT refusal.					
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started: 24/08/2021		Hole Complete: 24/08/2021		Version: FINAL	
				Scale: 1:25	

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS06 Sheet 1 of 1		
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)		
Client: Catesby Estates plc					GRM Project Ref: P9249			Coordinates 515571 E 125205 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.10	D			0.20			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and subrounded to subangular of mudstone with rare flint.	1
		0.10	ES						TOPSOIL	
		0.75	D						Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone.	
		1.00		N=11 (1,1/2,2,3,4)					WEATHERED WEALD CLAY FORMATION	
		1.60	D						with frequent gravels of ferruginous mudstone encountered from 1.00m depth.	
		1.80							Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone.	
		2.00		N=26 (4,4/6,5,6,9)					WEATHERED WEALD CLAY FORMATION	
		2.20	D							
		2.50							Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone. Sand is fine to medium.	
		2.90							WEATHERED WEALD CLAY FORMATION	
3.00		N=63 (8,11/15,16,16,16)		3	3.00			Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone and ferruginous mudstone including rare cobbles. Sand is fine to medium.	4	
								WEATHERED WEALD CLAY FORMATION		
End of Borehole at 3.000m										

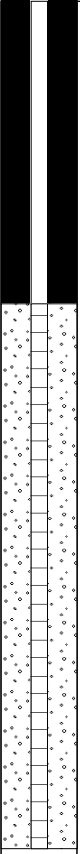
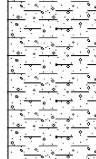
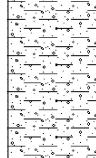
Crew: Oakland Site Investigation Ltd			Logger: AT			Weather: Sunny.		
Equipment: Premier Tracker 110								
Reason for termination of borehole: Borehole terminated on SPT refusal.								
Groundwater Remarks: No groundwater encountered during drilling.								
General Remarks:								
Hole Started: 24/08/2021			Hole Complete: 24/08/2021			Version: FINAL		Scale: 1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS07 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc				GRM Project Ref: P9249			Coordinates 515534 E 125260 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
						0.20			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and subrounded to subangular of mudstone with rare flint.	
									TOPSOIL	
		0.75	D						Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone.	
		1.00	D	N=14 (2,2/3,4,4,3)		1.00			WEATHERED WEALD CLAY FORMATION	1
		1.00								
		1.25	D						Firm, medium strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone.	
		1.50	D						WEATHERED WEALD CLAY FORMATION	
		1.75	D						becoming friable from 1.00m depth with frequent gravels of ferruginous mudstone encountered between 1.00m and 1.90m depth.	
		1.80								
		1.90								
					2.00			Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone. Sand is fine to medium.	2	
		2.00	D	N=61 (7,9/11,13,17,20)				WEATHERED WEALD CLAY FORMATION		
		2.00						Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone and ferruginous mudstone including rare cobbles. Sand is fine to medium.	3	
								WEATHERED WEALD CLAY FORMATION		
								End of Borehole at 2.000m	4	

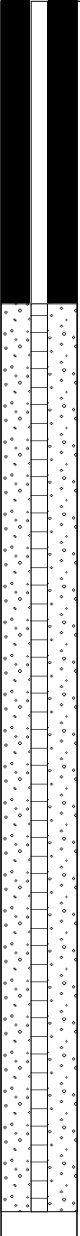
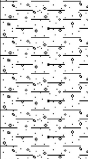
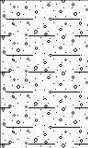
Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole: Borehole terminated on SPT refusal.					
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started:	24/08/2021	Hole Complete:	24/08/2021	Version:	FINAL
				Scale:	1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS08 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515415 E 125137 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.10	D			0.15		Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and subrounded to subangular of mudstone. TOPSOIL		
		0.10	ES							
		0.80	D			1.00		Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION	1	
		1.00	D	N=17 (0,1/3,3,5,6)						
		1.00								
		1.25	D							
		1.50	D							
		1.75	D			2.00		Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming friable from 1.30m depth, with frequent gravels of ferruginous mudstone encountered from 1.50m depth.</i>	2	
		2.00		N=31 (4,4/7,8,8,8)						
		2.25	D							
		2.50	D							
		2.75	D			2.70 2.80		Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone and ferruginous mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION End of Borehole at 2.800m	3	
	2.80		N=53 (4,14/14,13,12,14)							
									4	

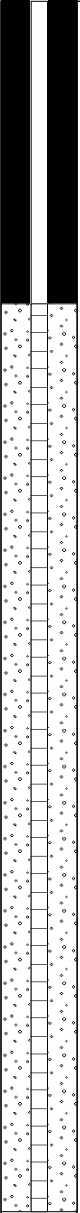
Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole:		Borehole terminated on SPT refusal.			
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started:	25/08/2021	Hole Complete:	25/08/2021	Version:	FINAL
				Scale:	1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS09 Sheet 1 of 2	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515496 E 125116 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.05 0.05	D ES			0.25			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and subrounded to subangular of mudstone.	
									TOPSOIL	
		0.75	D						Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone.	
		1.00 1.00	D	N=21 (1,2/3,4,6,8)					WEATHERED WEALD CLAY FORMATION	1
		1.25	D			1.20			Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone.	
		1.50	D						WEATHERED WEALD CLAY FORMATION	
		1.75	D						becoming friable from 1.20m depth.	
		2.00 2.00	D	N=33 (3,5/6,8,8,11)					becoming very stiff, very high strength from 2.00m depth.	2
		2.25	D							
		2.50	D							
		2.75	D							
		3.00 3.00	D	N=45 (11,15/14,8,10,13)		3.00			Dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone. Sand is fine to medium.	3
		3.25	D						WEATHERED WEALD CLAY FORMATION	
		3.50	D							
		3.75	D				3.80		Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to	4
	4.00 4.00	D	62 (9,15/62 for 225mm)		4.00					

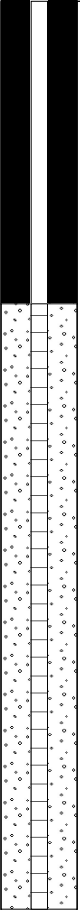
Crew: Premier Tracker 110		Logger: AT		Weather: Sunny.	
Equipment:					
Reason for termination of borehole:		Borehole terminated on SPT refusal.			
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started:	25/08/2021	Hole Complete:	25/08/2021	Version:	FINAL
				Scale:	1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS10 Sheet 1 of 1		
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)		
Client: Catesby Estates plc					GRM Project Ref: P9249			Coordinates 515526 E 125156 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.05 0.05	D ES			0.25		Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and subrounded to subangular of mudstone. TOPSOIL		
		0.90 1.00	D	N=13 (1,3/3,4,3,3)				Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>with rare 0.02m to 0.05m pockets of fine to medium sand encountered between 1.00m and 1.45m depth.</i>	1	
		1.65	D					<i>becoming friable and very gravelly from 1.50m depth. with frequent gravels of ferruginous mudstone encountered between 1.50m and 3.00m depth.</i>		
		2.00		N=22 (2,3/5,5,6,6)		2.00		Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION	2	
		3.00		N=26 (2,3/5,5,7,9)				<i>becoming slightly gravelly from 3.00m depth.</i>	3	
	4.00		N=54 (3,5/12,13,14,15)		4.00		Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION <i>becoming very dense from 3.95m depth. End of Borehole at 4.000m</i>	4		

Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole: Borehole terminated on SPT refusal.					
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started: 25/08/2021		Hole Complete: 25/08/2021		Version: FINAL	
				Scale: 1:25	

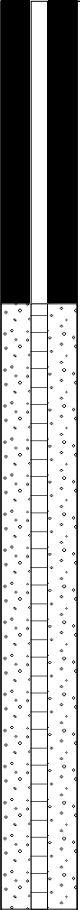
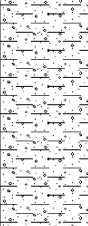
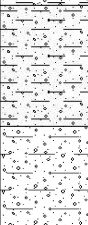
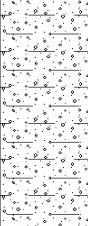
		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS11 Sheet 1 of 1		
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)		
Client: Catesby Estates plc					GRM Project Ref: P9249			Coordinates 515503 E 125232 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.10	D			0.15		Light grey slightly silty slightly sandy fine to coarse and angular GRAVEL of concrete, brick and mudstone. Sand is fine to coarse.	1	
		0.10	ES					MADE GROUND		
		0.85	ES			1.20		Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION		
		1.00		N=14 (1,1/3,3,3,5)				with rare gravels of ferruginous mudstone encountered from 1.10m depth.		
		1.65	ES			2.00		Firm, medium strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION		
		2.00		N=26 (3,3/5,5,7,9)				becoming friable from 1.20m depth.		
	2.50	ES			3.00		Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone with rare sandstone. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	2		
	3.00		N=55 (5,7/12,13,15,15)				becoming very dense from 2.95m depth.			
								End of Borehole at 3.000m	3	
									4	

Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole: Borehole terminated on SPT refusal.					
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					

Hole Started:	25/08/2021	Hole Complete:	25/08/2021	Version:	FINAL	Scale:	1:25
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		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Windowless Sample Borehole			Borehole No WS12 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515550 E 125338 N	

Installation/ Backfill	Water Strike	Samples/Tests			Dynamic Probing (Blows per 100mm)	Depth (m)	Level (m)	Legend	Stratum Description	
		Depth	Type	Result						
		0.10	D			0.30		Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and subrounded to subangular of mudstone with rare flint. TOPSOIL		
		0.10	ES							
		0.75	D	N=24 (1,2/5,5,6,8)	1.20		Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming stiff, high strength from 1.00m depth.</i>	1		
		1.00	D							
		1.00								
		1.25	D							
		1.50	D	N=27 (3,5/6,7,7,7)	1.60		Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming friable from 1.20m depth.</i>	2		
		1.75	D							
		2.00	D							
		2.00								
		2.25	D	59 (8,17/59 for 225mm)	3.00		Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION <i>becoming very dense from 2.95m depth.</i>	3		
		2.50	D							
		2.75	D							
		3.00	D							
		3.00						End of Borehole at 3.000m	4	

Crew: Oakland Site Investigation Ltd		Logger: AT		Weather: Sunny.	
Equipment: Premier Tracker 110					
Reason for termination of borehole: Borehole terminated on SPT refusal.					
Groundwater Remarks: No groundwater encountered during drilling.					
General Remarks:					
Hole Started: 25/08/2021		Hole Complete: 25/08/2021		Version: FINAL	
				Scale: 1:25	

Trial Pit Log

Trial Pit No

HTP02

Sheet 1 of 1

Site Name: Rascals Farm, Shipley Road, Southwater

Ground Level (mAOD)

Client: Catesby Estates plc

GRM Project Ref: P9249

Coordinates

515447 E
125273 N

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.20	ES		0.30		 Dark brown slightly sandy slightly gravelly silty CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone with rare terracotta fragments. RELAIID TOPSOIL	End of Pit at 0.30m

Date Excavated: 25/08/2021

Date Backfilled: 25/08/2021

Shoring: None.

Stability:	Remained stable.
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Plant Used: JCB 3CX

Logged by: AT

Groundwater Observations:

No groundwater encountered during excavation.

Trial Pit Dimensions (m):

0.60

0.45

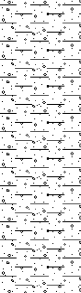
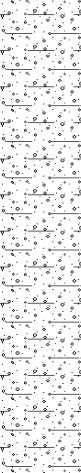
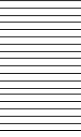
Reason for termination of Trial Pit:

Trial pit terminated on target depth.

General Remarks:	
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		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com			Trial Pit Log			Trial Pit No HTP03 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater								Ground Level (mAOD)	
Client: Catesby Estates plc						GRM Project Ref: P9249		Coordinates 515437 E 125252 N	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.30	ES		0.30			Dark brown slightly sandy slightly gravelly silty CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone with rare terracotta and brick fragments. RELAID TOPSOIL	End of Pit at 0.30m	
									1
									2
									3
									4
Date Excavated: 25/08/2021 Date Backfilled: 25/08/2021 Shoring: None. Stability: Remained stable. Plant Used: JCB 3CX Logged by: AT				Groundwater Observations: No groundwater encountered during excavation.					
				Trial Pit Dimensions (m): 0.60  0.45		Reason for termination of Trial Pit: Trial pit terminated on target depth.			
General Remarks:									
Relative density is approximate and determined by observation only.					Version: FINAL			Scale: 1:25	

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP01 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515405 E 125312 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 0.10	D ES		0.30		 Dark brown slightly sandy slightly gravelly silty CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL		
	0.90 0.90 0.90 1.00 1.20 1.20 1.20	D	HVP=60 HVP=65 HVP=70 HVP=70 HVP=75 HVP=80	1.35		 Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION becoming locally stiff from 1.20m depth. recovered with a friable texture from 1.25m depth.	1	
	1.70	D				 Medium dense light yellowish brown and light grey slightly clayey slightly sandy medium to coarse and angular to subangular GRAVEL of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION with rare 0.05m to 0.30m pockets of clay encountered between 1.35m and 2.50m depth. becoming slightly clayey from 1.60m depth. with frequent gravels of ferruginous mudstone encountered from 1.80m depth.	2	
				3.00		 Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	3	
				3.50		End of Pit at 3.50m	4	

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	
General Remarks:			

Relative density is approximate and determined by observation only.		Version: FINAL		Scale: 1:25	
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		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP02 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515422 E 125225 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.05 0.05	D ES		0.30			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL		
							Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION		
	0.80 0.80 0.80 1.00 1.00 1.00		HVP=60 HVP=70 HVP=75 HVP=90 HVP=90 HVP=90					becoming stiff from 1.00m depth.	1
								recovered with a friable texture from 1.20m depth.	
	1.30	D						becoming very gravelly from 1.50m depth.	
	2.00	D		2.00			Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	2	
				3.10			Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	3	
				3.60			End of Pit at 3.60m	4	

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	

Trial Pit Dimensions (m):
 0.60  2.50

General Remarks:

Relative density is approximate and determined by observation only.

Version: FINAL

Scale: 1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP02a Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515422 E 125222 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.25			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone.	
				0.50			Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone.	
							WEATHERED WEALD CLAY FORMATION	
							End of Pit at 0.50m	

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on buried pipe.	

Trial Pit Dimensions (m):
 0.60  1.00

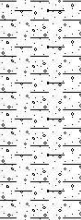
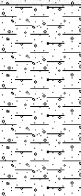
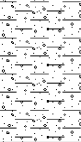
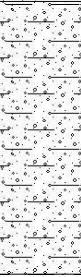
General Remarks:

Relative density is approximate and determined by observation only.

Version: FINAL

Scale: 1:25

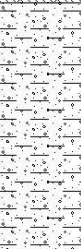
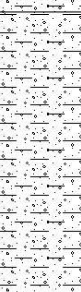
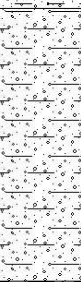
		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP03 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515379 E 125146 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.15 0.15	D ES		0.25			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL	
	0.90 0.95 0.95 0.95	D	HVP=100 HVP=100 HVP=100	1.00			Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>with a terracotta field drain encountered at 0.50m depth.</i> <i>becoming stiff from 0.90m depth.</i>	1
	1.30 1.30 1.30		HVP=110 HVP=110 HVP=90				Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>recovered with a friable texture from 1.60m depth.</i>	
	2.00	D		2.10			Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	2
				3.00			End of Pit at 3.00m	3
								4

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	
General Remarks:			

Relative density is approximate and determined by observation only.		Version: FINAL		Scale: 1:25	
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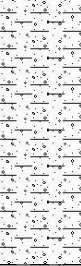
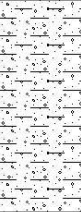
		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP04 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515340 E 125169 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 0.10	D ES		0.30			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL	
	0.60 0.60 0.60		HVP=80 HVP=90 HVP=90				Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming stiff from 0.60m depth.</i>	1
	1.20 1.30 1.30 1.30	D	HVP=100 HVP=100 HVP=90	1.15			Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>recovered with a friable texture from 1.50m depth.</i> <i>becoming increasingly grey in colour from 1.60m depth.</i>	2
	2.20	D		2.10			Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	
				3.00			End of Pit at 3.00m	3
								4

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	
General Remarks:			

Relative density is approximate and determined by observation only.		Version: FINAL		Scale: 1:25	
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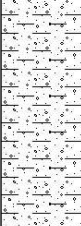
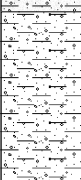
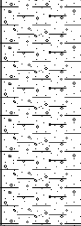
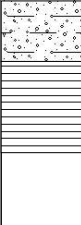
		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP05 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515359 E 125227 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 0.10	D ES		0.20			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL	
	0.70 0.70	D ES					Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming stiff from 0.90m depth.</i>	1
	0.90 0.90 0.90		HVP=100 HVP=100 HVP=110	1.10			Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>recovered with a friable texture from 1.10m depth.</i>	
	1.50	D		1.80			End of Pit at 1.80m	2
								3
								4

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	
General Remarks:			

Relative density is approximate and determined by observation only.		Version: FINAL		Scale: 1:25	
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		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP06 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515493 E 125169 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 0.10	D ES		0.20		 Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL		
	1.00 1.00 1.00 1.20	D	HVP=100 HVP=100 HVP=85	1.00		 Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION	1	
	1.40 1.40 1.40		HVP=100 HVP=100 HVP=110			 recovered with a friable texture from 1.50m depth.		
				2.30				
	2.60	D		2.50		 Medium dense light yellowish brown and light grey slightly clayey slightly sandy medium to coarse and angular to subangular GRAVEL of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION <i>with occasional 0.05m to 0.15m pockets of clay encountered between 2.30m and 2.50m depth.</i>	2	
				2.80		 Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone including frequent cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION End of Pit at 2.80m	3	
							4	

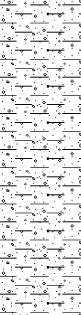
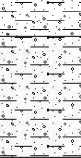
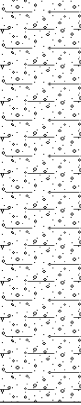
Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	

Trial Pit Dimensions (m):
 0.60  2.50

General Remarks:

Relative density is approximate and determined by observation only.
 Version: FINAL Scale: 1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP07 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515536 E 125112 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.15 0.15	D ES		0.30			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL	
	1.00 1.00 1.00 1.20	D	HVP=60 HVP=70 HVP=70	1.60			Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION	1
	1.40 1.40 1.40		HVP=90 HVP=90 HVP=90	2.00			Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>recovered with a friable texture from 1.60m depth.</i>	2
	3.00	D		3.40			Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	3
							End of Pit at 3.40m	4

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	

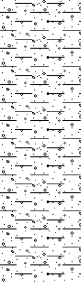
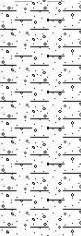
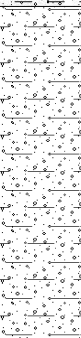
Trial Pit Dimensions (m):
 0.60  2.50

General Remarks:

Relative density is approximate and determined by observation only.

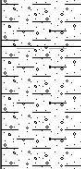
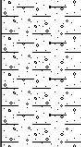
Version: FINAL Scale: 1:25

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP08 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515577 E 125153 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.20		 Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL		
	0.75 0.75 0.75		HVP=60 HVP=60 HVP=65			 Firm, medium strength yellowish brown and occasionally light grey mottled slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>with a terracotta field drain encountered at 0.60m depth.</i>	1	
	1.20 1.20 1.20 1.20	D	HVP=60 HVP=70 HVP=70	1.30		 Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>recovered with a friable texture from 1.30m depth.</i>	2	
	2.20	D		2.10		 Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	3	
				3.20		End of Pit at 3.20m	4	

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	
General Remarks:			

Relative density is approximate and determined by observation only.	Version: FINAL	Scale: 1:25
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		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		Trial Pit Log			Trial Pit No TP09 Sheet 1 of 1	
Site Name: Rascals Farm, Shipley Road, Southwater							Ground Level (mAOD)	
Client: Catesby Estates plc					GRM Project Ref: P9249		Coordinates 515468 E 125354 N	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES		0.30			Dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and subrounded to subangular of mudstone. TOPSOIL	1 2 3 4
	0.50	D	HVP=55					
	0.50		HVP=60					
	0.50		HVP=70					
	0.70							
	1.20	D		1.30			Stiff, high strength light yellowish brown and occasionally light grey mottled slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is medium to coarse and angular to subangular of mudstone. WEATHERED WEALD CLAY FORMATION <i>becoming friable from 1.60m depth.</i>	
	1.50							
	1.50			2.20			Medium dense light yellowish brown and light grey slightly sandy clayey medium to coarse and angular to subangular GRAVEL of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION <i>with rare 0.05m to 0.30m pockets of clay encountered between 2.20m and 3.20m depth.</i>	
	2.60	D						
				3.20			Weak light yellowish brown and light grey extremely weathered MUDSTONE recovered as a slightly clayey slightly sandy medium to coarse and angular to subangular gravel of weak mudstone including rare cobbles. Sand is fine to medium. WEATHERED WEALD CLAY FORMATION	
								End of Pit at 3.60m
			3.60					

Date Excavated: 26/08/2021		Groundwater Observations:	
Date Backfilled: 26/08/2021		No groundwater encountered during excavation.	
Shoring: None.			
Stability: Remained stable.			
Plant Used: JCB 3CX		Reason for termination of Trial Pit:	
Logged by: AT		Trial pit terminated on target depth.	
General Remarks:			

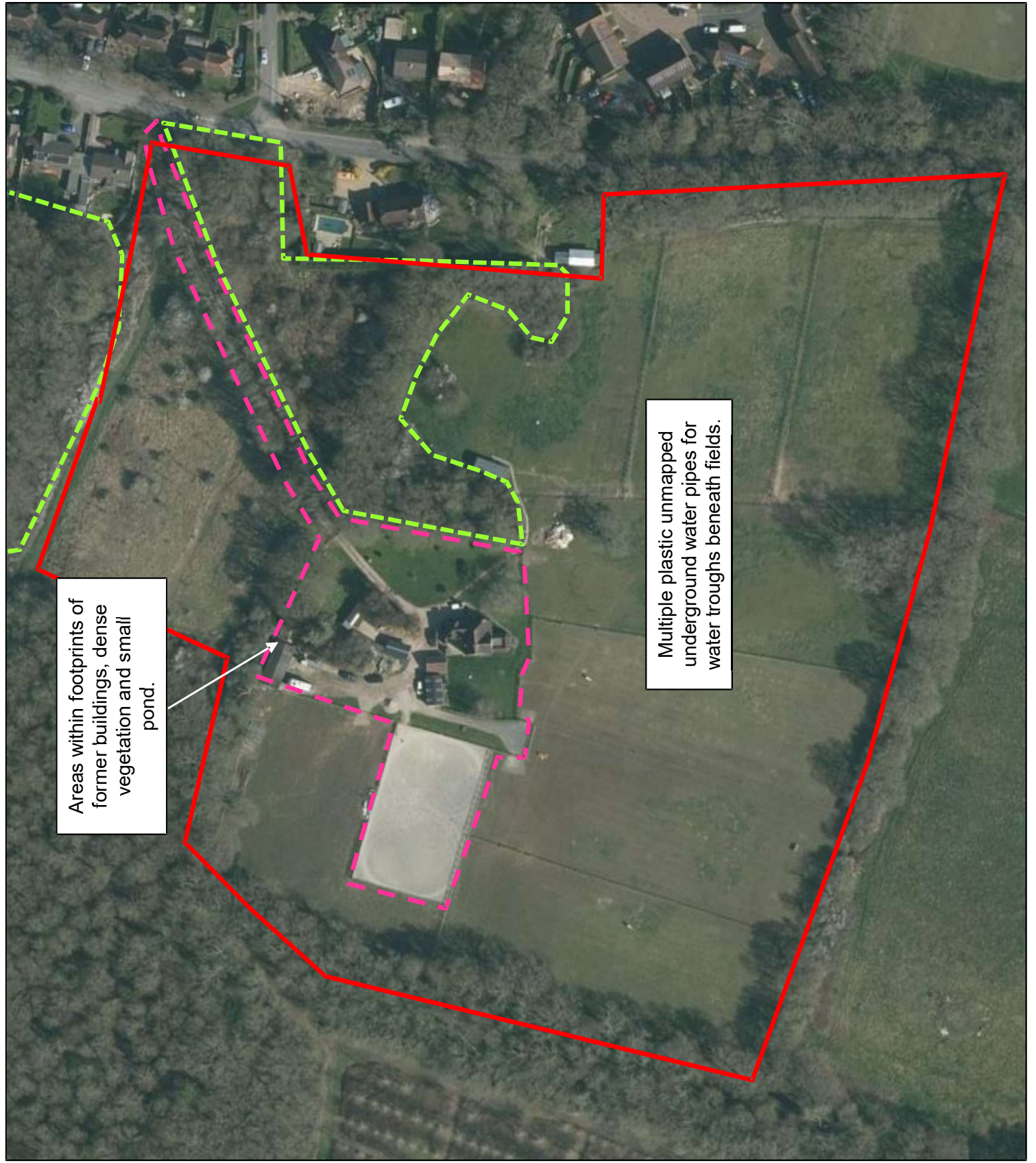
Relative density is approximate and determined by observation only.	Version: FINAL	Scale: 1:25
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DO NOT SCALE

NOTES:

Approximate site boundary.

Approximate extent of area where intrusive investigation was not permitted (in close proximity to existing buildings, pathways, and gardens).

Dense vegetation preventing access for intrusive investigation.

GRM

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Laurus House, First Ave, Centrum 100,
Burton-on-Trent, Staffordshire, DE14 2WH
Tel: 01283 551 249
info@grm-uk.com www.grm-uk.com

CLIENT:

Catesby Estates plc

PROJECT:

Rascals Farm, Southwater

TITLE:

Constraints Plan

SCALE@SIZE:	NTS	ISSUE:	FINAL
DESIGN/DRAWN:	AT	DATE:	September 2021
PROJECT No:	P9249	DRAWING No:	5



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DO NOT SCALE

NOTES:

Approximate site boundary.

WS00

Approx. Location of Windowless Sampler Boreholes Installed as Monitoring Wells.



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Tel: 01283 551 249
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CLIENT:

Catesby Estates plc

PROJECT:

Rascals Farm, Southwater

TITLE:

Monitoring Location Plan

SCALE@SIZE:	NTS	ISSUE:	FINAL
DESIGN/DRAWN:	AT	DATE:	September 2021
PROJECT No:	P9249	DRAWING No:	6

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In-Situ Gas Monitoring Results

Project Name Rascalls Farm, Southwater
 Project Number 9249
 Client Catesby Estates plc
 Date 09/09/2021
 Weather Cloudy
 Atmospheric Pressure (mb) 1009
 Pressure Trend Steady
 Equipment Gas Data LMSXi
 Operator James Wardle

Ground Gas																
Well ID	Response Zone			Methane %v/v			CO2 %v/v			Oxygen %v/v			Gas Flow l/h		PID Reading ppm	
	Top	Base	Strata	Peak	Steady		Peak	Steady	Low	Steady		Peak	Steady	Peak	Steady	
WS08	1.00	2.80	NS	0.00	0.00		2.00	2.00	16.70	16.70		0.00	0.00	0.00	Not Recorded	
WS09	1.00	4.00	NS	0.00	0.00		2.90	2.90	14.80	14.80		0.00	0.00	0.00	Not Recorded	
WS10	1.00	4.00	NS	0.00	0.00		1.70	1.70	19.40	19.40		0.00	0.00	0.00	Not Recorded	
WS11	1.00	3.00	NS	0.00	0.00		2.90	2.90	15.60	15.60		0.00	0.00	0.00	Not Recorded	
WS12	1.00	3.00	NS													

Groundwater	
Depth to Groundwater mbegl	Total Well Depth mbegl
Not Detected	3.30
Not Detected	3.90
Not Detected	4.18
Not Detected	3.26

Notes

Lower Explosive Limit (100% L.E.L. = 5% Flammable Gas)		Ground Material Key	
N.D.	Not Detected	a	Methane => 1% v/v
N.R.	Not Recorded	b	Carbon Dioxide =>5% v/v
PID	Photo-Ionising Detector	MG	Made Ground
%	By volume	NS	Natural Strata

Comments

landowner advised ws12 had been destroyed



In-Situ Gas Monitoring Results

Project Name Rascalls Farm, Southwater
 Project Number 9249
 Client Catesby Estates plc
 Date 22/09/2021
 Weather Sunny
 Atmospheric Pressure (mb) 1023
 Pressure Trend Steady
 Equipment Gas Data LMSXi
 Operator Brian Burgh

Ground Gas																
Well ID	Response Zone			Methane %v/v			CO2 %v/v			Oxygen %v/v			Gas Flow l/h		PID Reading ppm	
	Top	Base	Strata	Peak	Steady		Peak	Steady	Low	Steady		Peak	Steady	Peak	Steady	
WS08	1.00	2.80	NS	0.00	0.00		1.60	1.60	19.30	19.30		0.00	0.00	0.00	Not Recorded	
WS09	1.00	4.00	NS	0.00	0.00		1.00	1.00	20.00	20.00		0.00	0.00	0.00	Not Recorded	
WS10	1.00	4.00	NS	0.00	0.00		1.70	1.70	20.10	20.10		0.00	0.00	0.00	Not Recorded	
WS11	1.00	3.00	NS	0.00	0.00		3.90	3.90	18.20	18.20		0.00	0.00	0.00	Not Recorded	
WS12	1.00	3.00	NS	0.00	0.00		2.60	2.60	15.20	15.20		0.00	0.00	0.00	Not Recorded	

Groundwater	
Depth to Groundwater mbegl	Total Well Depth mbegl
Not Detected	3.24
Not Detected	3.80
Not Detected	4.20
Not Detected	3.20
Not Detected	3.02

Notes

Ground Material Key	
L.E.L.	Lower Explosive Limit (100% L.E.L. = 5% Flammable Gas)
N.D.	Not Detected
N.R.	Not Recorded
PID	Photo-Ionising Detector
%	By volume
Methane => 1% v/v	
a	Carbon Dioxide =>5% v/v
b	Made Ground
MG	Natural Strata
NS	Natural Strata

Comments

White Pipe Fitted



In-Situ Gas Monitoring Results

Project Name Rascalls Farm, Southwater
Project Number 9249
Client Catesby Estates plc

Pressure Range 1009mb-1023mb
Reading Below 1000 mb: 0

Summary of Results for period: 09/09/2021 to 22/09/2021

ID				Methane %v/v		CO2 %v/v		Oxygen %v/v		Gas Flow l/h		PID Reading ppm		Depth to Groundwater mbegl	
	Top	Base	Strata	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
WS08	1.00	2.80	NS	0.00	0.00	1.60	2.00	16.70	19.30	0.00	0.00			3.24	0.00
WS09	1.00	4.00	NS	0.00	0.00	1.00	2.90	14.80	20.00	0.00	0.00			3.80	0.00
WS10	1.00	4.00	NS	0.00	0.00	1.70	1.70	19.40	20.10	0.00	0.00			4.18	0.00
WS11	1.00	3.00	NS	0.00	0.00	2.90	3.90	15.60	18.20	0.00	0.00			3.20	0.00
WS12	1.00	3.00	NS	0.00	0.00	2.60	2.60	15.20	15.20	0.00	0.00			3.02	0.00

BS8485:2015 Suggested Worse Case Site Classification:

Notes

L.E.L.	Lower Explosive Limit (100% L.E.L. = 5% Flammable Gas)	Highlighted cell for following conditions
N.D.	Not Detected	a Methane => 1% v/v
N.R.	Not Recorded	b Carbon Dioxide => 5% v/v
PID	Photo-ionising Detector	MG Made Ground
%	By volume	NS Natural Strata

Site Summary:

	GSV (l/h)	Max Value
Methane		
CO2	0.0000	3.90
Maximum Flow (l/h)	0.00	



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Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

GRM Development Solutions

Laurus House
First Avenue
Centrum 100
Burton Upon Trent
DE14 2WH

Analytical Test Report: L21/03073/GRM - 21-20580

Your Project Reference: **P9249 Rascals Farm Southwater Sussex**

Your Order Number: P9249 Samples Received / Instructed: 27/08/2021 / 27/08/2021

Report Issue Number: 1 Sample Tested: 27/08 to 16/09/2021

Samples Analysed: 17 soil samples Report issued: 16/09/2021

Peter Swanston
Environmental Labs Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Moisture Content was determined in accordance with NC method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with NC method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Asbestos

Please note: Where further analysis is required samples identified as containing asbestos are screened and tested on an as received basis. No correction is made for moisture content and these results are not covered by our accreditation

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

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Date of Issue 10/12/2020

Owned by Emily Blissett - Customer Services Supervisor

Authorised by James Gane - Commercial Manager

L:\DATA\REPORTS\GRM495\L21-03073-GRM - 21-20580.XLSX\Sample Deviations

L21/03073/GRM - 21-20580

Project Reference - P9249 Rascals Farm Southwater Sussex

Analytical Test Results - Soil

NC Reference			186432	186433	186434	186435	186436	186437
Client Sample ID			WS01	WS02	WS04	WS05	WS06	WS08
Client Sample Location			-	-	-	-	-	-
Client Sample Type			-	-	-	-	-	-
Client Sample Number			-	-	-	-	-	-
Depth - Top (m)			0.05	0.10	0.05	0.05	0.10	0.10
Depth - Bottom (m)			0.50	0.10	0.05	0.05	0.10	0.10
Date of Sampling			24/08/2021	24/08/2021	24/08/2021	24/08/2021	24/08/2021	24/08/2021
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation						
Arsenic	(mg/kg)	MCERTS	15	14	13	12	10	< 10
Cadmium	(mg/kg)	MCERTS	1.1	0.8	0.6	0.6	0.6	0.5
Chromium (Total)	(mg/kg)	UKAS	20	21	21	19	20	18
Copper	(mg/kg)	MCERTS	21	15	12	13	15	11
Lead	(mg/kg)	MCERTS	44	35	29	29	34	24
Mercury	(mg/kg)	UKAS	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Nickel	(mg/kg)	MCERTS	13	11	12	12	11	9.5
Selenium	(mg/kg)	u	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
Zinc	(mg/kg)	MCERTS	110	56	46	54	52	42
Total Phenols	(mg/kg)	MCERTS	1.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyanide (Total)	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (Hexavalent)	(mg/kg)	u	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
pH	pH Units	MCERTS	6.6	6.5	6.7	6.2	6.9	7.5
Sulphate (Water soluble)	(mg/l)	u	11	19	< 10	16	< 10	< 10
Water Soluble Nitrite	(mgN/l)	u	-	-	-	-	-	-
Acenaphthene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Acenaphthylene	(mg/kg)	UKAS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Anthracene	(mg/kg)	UKAS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Benzo (a) anthracene	(mg/kg)	MCERTS	0.09	0.03	< 0.02	0.06	0.10	< 0.02
Benzo (a) pyrene	(mg/kg)	MCERTS	0.12	0.04	< 0.02	0.07	0.12	< 0.02
Benzo (b) fluoranthene	(mg/kg)	MCERTS	0.14	0.05	< 0.02	0.08	0.14	< 0.02
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	0.08	< 0.02	< 0.02	0.05	0.07	< 0.02
Benzo (k) fluoranthene	(mg/kg)	MCERTS	0.05	< 0.02	< 0.02	0.03	0.05	< 0.02
Chrysene	(mg/kg)	MCERTS	0.12	0.04	< 0.02	0.06	0.11	< 0.02
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Fluoranthene	(mg/kg)	MCERTS	0.20	0.07	< 0.02	0.12	0.24	0.04
Fluorene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Indeno (1, 2, 3,-cd) pyrene	(mg/kg)	MCERTS	0.08	< 0.02	< 0.02	0.04	0.08	< 0.02
Naphthalene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	(mg/kg)	MCERTS	0.08	< 0.02	< 0.02	0.04	0.08	< 0.02
Pyrene	(mg/kg)	MCERTS	0.20	0.07	< 0.02	0.10	0.20	0.04
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	1.3	0.58	< 0.32	0.79	1.4	0.39
SOM (via TOC)	(%)	UKAS	8.2	4.8	2.1	5.6	3.5	1.8
Asbestos	-	UKAS	-	-	-	-	-	-

L21/03073/GRM - 21-20580

Project Reference - P9249 Rascals Farm Southwater Sussex

Analytical Test Results - Soil

NC Reference			186438	186439	186440	186441	186442	186446
Client Sample ID			WS11	HTP01	HTP03	TP04	TP09	WS10
Client Sample Location			-	-	-	-	-	-
Client Sample Type			-	-	-	-	-	-
Client Sample Number			-	-	-	-	-	-
Depth - Top (m)			0.10	0.10	0.30	0.10	0.10	0.90
Depth - Bottom (m)			0.10	0.10	0.30	0.10	0.10	0.90
Date of Sampling			25/08/2021	25/08/2021	25/08/2021	26/08/2021	26/08/2021	25/08/2021
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Sand	Clay	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation						
Arsenic	(mg/kg)	MCERTS	11	34	10	12	16	-
Cadmium	(mg/kg)	MCERTS	1.0	1.6	0.6	0.7	0.7	-
Chromium (Total)	(mg/kg)	UKAS	23	24	21	23	25	-
Copper	(mg/kg)	MCERTS	36	51	15	14	14	-
Lead	(mg/kg)	MCERTS	100	320	27	27	30	-
Mercury	(mg/kg)	UKAS	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	-
Nickel	(mg/kg)	MCERTS	20	22	12	12	10	-
Selenium	(mg/kg)	u	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	-
Zinc	(mg/kg)	MCERTS	130	1000	48	54	48	-
Total Phenols	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-
Cyanide (Total)	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-
Chromium (Hexavalent)	(mg/kg)	u	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-
pH	pH Units	MCERTS	8.7	6.3	6.6	6.9	6.7	-
Sulphate (Water soluble)	(mg/l)	u	94	< 10	< 10	< 10	13	-
Water Soluble Nitrite	(mgN/l)	u	-	-	-	-	-	< 0.32
Acenaphthene	(mg/kg)	MCERTS	< 0.20	0.38	< 0.02	< 0.02	< 0.02	-
Acenaphthylene	(mg/kg)	UKAS	< 0.20	0.25	< 0.02	< 0.02	< 0.02	-
Anthracene	(mg/kg)	UKAS	0.35	1.5	< 0.02	< 0.02	< 0.02	-
Benzo (a) anthracene	(mg/kg)	MCERTS	1.3	3.7	< 0.02	< 0.02	< 0.02	-
Benzo (a) pyrene	(mg/kg)	MCERTS	1.7	3.6	< 0.02	< 0.02	< 0.02	-
Benzo (b) fluoranthene	(mg/kg)	MCERTS	2.2	4.8	0.03	< 0.02	< 0.02	-
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	1.2	2.5	< 0.02	< 0.02	< 0.02	-
Benzo (k) fluoranthene	(mg/kg)	MCERTS	0.62	1.7	< 0.02	< 0.02	< 0.02	-
Chrysene	(mg/kg)	MCERTS	1.6	4.1	0.02	< 0.02	< 0.02	-
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	0.29	0.59	< 0.02	< 0.02	< 0.02	-
Fluoranthene	(mg/kg)	MCERTS	2.6	9.8	0.05	< 0.02	0.04	-
Fluorene	(mg/kg)	MCERTS	< 0.20	0.41	< 0.02	< 0.02	< 0.02	-
Indeno (1, 2, 3,-cd) pyrene	(mg/kg)	MCERTS	1.3	2.7	< 0.02	< 0.02	< 0.02	-
Naphthalene	(mg/kg)	MCERTS	< 0.20	0.23	< 0.02	< 0.02	< 0.02	-
Phenanthrene	(mg/kg)	MCERTS	0.91	5.4	< 0.02	< 0.02	< 0.02	-
Pyrene	(mg/kg)	MCERTS	2.4	7.8	0.04	< 0.02	0.04	-
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	17	49	0.43	< 0.32	0.42	-
SOM (via TOC)	(%)	UKAS	2.9	13	3.1	2.5	2.9	-
Asbestos	-	UKAS	No asbestos detected	No asbestos detected	No asbestos detected	-	-	-

L21/03073/GRM - 21-20580

Project Reference - P9249 Rascals Farm Southwater Sussex

Analytical Test Results - Chemical Analysis

NC Reference			186443	186444	186445	186446	186447	186448
Client Sample ID			WS02	WS05	WS06	WS10	TP02	TP03
Client Sample Location			-	-	-	-	-	-
Client Sample Type			-	-	-	-	-	-
Client Sample Number			-	-	-	-	-	-
Depth - Top (m)			1.60	1.20	2.20	0.90	1.30	2.00
Depth - Bottom (m)			1.60	1.20	2.20	0.90	1.30	2.00
Date of Sampling			24/08/2021	24/08/2021	24/08/2021	25/08/2021	26/08/2021	26/08/2021
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation						
Water soluble sulphate	(mg/l)	u	47	51	360	18	33	52
pH Value	pH Units	MCERTS	5.5	8.0	7.8	5.2	8.0	8.1
Water Soluble Chloride	(mg/l)	u	-	-	-	31	-	-
Water Soluble Nitrate	(mg/l)	u	-	-	-	< 1.0	-	-

L21/03073/GRM - 21-20580

Project Reference - P9249 Rascals Farm Southwater Sussex

Sample Descriptions

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
186432	WS01	-	-	-	Dark brown slightly sandy silty clay with occasional organic matter rootlets	28	0.0	100
186433	WS02	-	-	-	Brown slightly sandy silty clay with rare rootlets	42	0.0	100
186434	WS04	-	-	-	Brown slightly sandy silty clay with rare rootlets	16	0.0	100
186435	WS05	-	-	-	Brown slightly sandy silty clay with occasional rootlets	29	0.0	100
186436	WS06	-	-	-	Brown slightly sandy silty clay with rare rootlets	27	0.0	100
186437	WS08	-	-	-	Brown slightly sandy silty clay with rare rootlets	19	0.0	100
186438	WS11	-	-	-	Brown gravelly silty sand with occasional rootlets brick fragments	7.1	54	46
186439	HTP01	-	-	-	Greyish brown slightly silty slightly gravelly sandy clay with rare rootlets brick fragments	8.6	23	42
186440	HTP03	-	-	-	Brown slightly sandy silty clay with rare rootlets	19	4.4	62
186441	TP04	-	-	-	Greyish brown slightly sandy silty clay with rare rootlets	17	1.7	100
186442	TP09	-	-	-	Dark greyish brown slightly sandy silty clay with rare rootlets	23	0.0	100
186443	WS02	-	-	-	Dark greyish brown slightly sandy silty clay	-	-	100
186444	WS05	-	-	-	Brown slightly sandy silty clay	-	-	100
186445	WS06	-	-	-	Mottled brown grey slightly sandy silty clay	-	-	100
186446	WS10	-	-	-	Mottled brown grey slightly sandy silty clay	-	-	100
186447	TP02	-	-	-	Greyish brown slightly sandy silty clay	-	-	100
186448	TP03	-	-	-	Brown slightly sandy silty clay	-	-	35

L21/03073/GRM - 21-20580

Project Reference - P9249 Rascals Farm Southwater Sussex

Sample Comments

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
186432	WS01	-	-	-	
186433	WS02	-	-	-	
186434	WS04	-	-	-	
186435	WS05	-	-	-	
186436	WS06	-	-	-	
186437	WS08	-	-	-	
186438	WS11	-	-	-	
186439	HTP01	-	-	-	
186440	HTP03	-	-	-	
186441	TP04	-	-	-	
186442	TP09	-	-	-	
186443	WS02	-	-	-	
186444	WS05	-	-	-	
186445	WS06	-	-	-	
186446	WS10	-	-	-	
186447	TP02	-	-	-	
186448	TP03	-	-	-	

L21/03073/GRM - 21-20580

Project Reference - P9249 Rascals Farm Southwater Sussex

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PAHASRDS	MS - CL - PAH (As Received)	As received	Passing 10mm test sieve	Determination of Polyaromatic hydrocarbons in soil via GC-MS
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
SKALARCNS	MS - CL - Cyanide by Skalar	As received	Passing 10mm test sieve	Determination of cyanide (total / free / complex) in soil using a Skalar segmented flow analyser
SKALARHCS	MS - CL - Hexavalent Chromium by Skalar	As received	Passing 10mm test sieve	Determination of hexavalent chromium in soil using Skalar segmented flow analyser
ICPMETS	MS - CL - ICP Metals	Air dried	Passing 10mm test sieve	Determination of metals in soils via ICP
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SKALARPHS	MS - CL - Phenols by Skalar	As received	Passing 10mm test sieve	Determination of total phenols in soil using Skalar segmented flow analyser
ASB	MS - AS - Asbestos	-	-	Fibre identification is in accordance with in house documented methods which are based on the procedure documented in the HSE Document HSG 248 "Asbestos: The analysts guide for sampling, analysis and clearance procedures"
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

L21/03073/GRM - 21-20580

Project Reference - P9249 Rascals Farm Southwater Sussex

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

KEY: A - No Date of Sampling Provided, C - Samples received in inappropriate containers, H - Samples contain headspace, R - Date of sampling to receipt was outside ideal timescales for analysis to be completed, Please note this is only a deviation if 'X' is also recorded against the sample, X - Exceeds sampling to extraction or analysis timescales, T - Temperature of samples on receipt exceeds storage temperature.

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
186432	WS01	-	-	-	MS - CL - PAH (As Received)	X
186432	WS01	-	-	-	MS - CL - pH in Soils	X
186433	WS02	-	-	-	MS - CL - PAH (As Received)	X
186433	WS02	-	-	-	MS - CL - pH in Soils	X
186434	WS04	-	-	-	MS - CL - PAH (As Received)	X
186434	WS04	-	-	-	MS - CL - pH in Soils	X
186435	WS05	-	-	-	MS - CL - PAH (As Received)	X
186435	WS05	-	-	-	MS - CL - pH in Soils	X
186436	WS06	-	-	-	MS - CL - PAH (As Received)	X
186436	WS06	-	-	-	MS - CL - pH in Soils	X
186437	WS08	-	-	-	MS - CL - PAH (As Received)	X
186437	WS08	-	-	-	MS - CL - pH in Soils	X
186438	WS11	-	-	-	MS - CL - PAH (As Received)	X
186438	WS11	-	-	-	MS - CL - pH in Soils	X
186439	HTP01	-	-	-	MS - CL - pH in Soils	X
186440	HTP03	-	-	-	MS - CL - pH in Soils	X
186441	TP04	-	-	-	MS - CL - pH in Soils	X
186442	TP09	-	-	-	MS - CL - pH in Soils	X
186443	WS02	-	-	-	MS - CL - pH in Soils	X
186444	WS05	-	-	-	MS - CL - pH in Soils	X
186445	WS06	-	-	-	MS - CL - pH in Soils	X
186446	WS10	-	-	-	MS - CL - pH in Soils	X
186447	TP02	-	-	-	MS - CL - pH in Soils	X
186448	TP03	-	-	-	MS - CL - pH in Soils	X



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Analytical Test Report: L21/03073/GRM - 21-20671

Your Project Reference: **P9249 Rascals Farm Southwater Sussex**

Your Order Number: P9249 Samples Received / Instructed: 02/09/2021 / 02/09/2021

Report Issue Number: 1 Sample Tested: 02/09 to 08/09/2021

Samples Analysed: 2 soil samples Report issued: 08/09/2021

Peter Swanston
Environmental Labs Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with NC method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Date of Issue 10/12/2020

Owned by Emily Blissett - Customer Services Supervisor

Authorised by James Gane - Commercial Manager

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L21/03073/GRM - 21-20671

Project Reference - P9249 Rascals Farm Southwater Sussex

Analytical Test Results - Chemical Analysis

NC Reference			186928	186929
Client Sample ID			TP05	TP09
Client Sample Location			-	-
Client Sample Type			-	-
Client Sample Number			-	-
Depth - Top (m)			0.70	0.70
Depth - Bottom (m)			0.70	0.70
Date of Sampling			26/08/2021	26/08/2021
Time of Sampling			-	-
Sample Matrix			Clay	Clay
Determinant	Units	Accreditation		
Water soluble sulphate	(mg/l)	u	24	56
pH Value	pH Units	MCERTS	6.5	6.7

L21/03073/GRM - 21-20671

Project Reference - P9249 Rascals Farm Southwater Sussex

Sample Descriptions

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
186928	TP05	-	-	-	Light brown slightly sandy silty clay with rare rootlets	-	-	28
186929	TP09	-	-	-	Light brown slightly sandy silty clay with rare rootlets	-	-	30

L21/03073/GRM - 21-20671

Project Reference - P9249 Rascals Farm Southwater Sussex

Sample Comments

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
186928	TP05	-	-	-	
186929	TP09	-	-	-	

L21/03073/GRM - 21-20671

Project Reference - P9249 Rascals Farm Southwater Sussex

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

L21/03073/GRM - 21-20671

Project Reference - P9249 Rascals Farm Southwater Sussex

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

KEY: A - No Date of Sampling Provided, C - Samples received in inappropriate containers, H - Samples contain headspace, R - Date of sampling to receipt was outside ideal timescales for analysis to be completed, Please note this is only a deviation if 'X' is also recorded against the sample, X - Exceeds sampling to extraction or analysis timescales, T - Temperature of samples on receipt exceeds storage temperature.

NC Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
186928	TP05	-	-	-	MS - CL - pH in Soils	RX
186929	TP09	-	-	-	MS - CL - pH in Soils	RX



A P P E N D I X K

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Analytical Test Report: L21/03073/GRM/21-20581

Your Project Reference:	P9249 Rascals Farm Southwater Sussex	Samples Received on:	27/08/2021
Your Order Number:	P9249 - 1	Testing Instruction Received:	27/08/2021
Report Issue Number:	1	Sample Tested:	27/08 to 08/09/2021
Samples Analysed:	7 soil samples	Report issued:	08/09/2021



Lee Harbottle
GCM Lab Manager
Nicholls Colton Group

Notes:

Samples will be retained for 14 days after issue of this report unless otherwise requested.
The results included within the report are representative of the samples submitted for analysis.
A certificate of sampling was not supplied
Samples were supplied by customer, results apply to the samples as received.
Within the report any information provided by the client is identified with a '#'

1377 Plasticity Index

Sample preparation was in accordance with BS1377:Part 1:2016.
Testing was in accordance with BS1377:Part 2:1990

1377 Moisture Content

Sample preparation was in accordance with BS1377:Part 1:2016.
Moisture content testing was in accordance with BS1377 : Part 2 :1990

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited

Date of Issue 10/12/2020

Owned by Emily Blissett - Commercial Reporting Supervisor

Authorised by Lee Harbottle - GCM Operations Manager

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L21/03073/GRM/21-20581

Project Reference - P9249 Rascals Farm Southwater Sussex

Analytical Test Results - Soil

NC Reference		186449	186450	186451	186452	186453	186454
Client Sample ID (#)		WS01	WS07	WS10	WS11	TP01	TP03
Client Sample Location (#)		WS01	WS07	WS10	WS11	TP01	TP03
Depth - (m) (#)		2.50	1.75	1.65	1.85	1.00	0.90
Date of Sampling (#)		24/08/2021	24/08/2021	25/08/2021	25/08/2021	25/08/2021	26/08/2021
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown slightly silty clay with occasional roots	Brown slightly silty clay with occasional roots	Brown silty clay	Brown slightly silty clay with occasional roots	Brown slightly silty clay with occasional roots	Brown slightly gravelly slightly silty clay with occasional roots
Determinant	Units						
Moisture Content	(%)	18	18	20	20	35	24
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.2 (medium)	3.2.3.2 (medium)
Fines passing 425µm test sieve	(%)	100	100	100	99	99	98
Liquid Limit	(%)	53	52	55	76	67	57
Plastic Limit	(%)	24	23	24	29	27	23
Plasticity Index	(%)	29	29	31	47	40	34
PI preparation	-	from its natural state	from its natural state	from its natural state	from its natural state	from its natural state	from its natural state
PI Test Method		clause 4.4 (one point)	clause 4.4 (one point)	clause 4.4 (one point)	clause 4.4 (one point)	clause 4.4 (one point)	clause 4.4 (one point)

L21/03073/GRM/21-20581

Project Reference - P9249 Rascals Fa

Analytical Test Results - Soil

NC Reference			186455
Client Sample ID (#)		TP04	
Client Sample Location (#)		TP04	
Depth - (m) (#)		2.20	
Date of Sampling (#)		26/08/2021	
Sample type		Disturbed	
Sample Description		Brown silty clay with occasional roots	
Determinant	Units		
Moisture Content	(%)	10	
Moisture Content Prep	-	3.2.3.1 (fine)	
Fines passing 425µm test sieve	(%)	100	
Liquid Limit	(%)	32	
Plastic Limit	(%)	17	
Plasticity Index	(%)	15	
PI preparation	-	f from its natural state	
PI Test Method		c clause 4.4 (one point)	



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Analytical Test Report: L21/03073/GRM - 21-20672

Your Project Reference:	P9249 Rascals Farm Southwater Sussex	Samples Received on:	02/09/2021
Your Order Number:	P9249-1	Testing Instruction Received:	02/09/2021
Report Issue Number:	1	Sample Tested:	02/09 to 09/09/2021
Samples Analysed:	1 soil sample	Report issued:	09/09/2021



Lee Harbottle
GCM Operations Manager
Nicholls Colton Group

Notes:

Samples will be retained for 14 days after issue of this report unless otherwise requested.
The results included within the report are representative of the samples submitted for analysis.
A certificate of sampling was not supplied
Samples were supplied by customer, results apply to the samples as received.
Within the report any information provided by the client is identified with a '#'

1377 Plasticity Index

Sample preparation was in accordance with BS1377:Part 1:2016.
Testing was in accordance with BS1377:Part 2:1990

1377 Moisture Content

Sample preparation was in accordance with BS1377:Part 1:2016.
Moisture content testing was in accordance with BS1377 : Part 2 :1990

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited

Date of Issue 10/12/2020

Owned by Emily Blissett - Commercial Reporting Supervisor

Authorised by Lee Harbottle - GCM Operations Manager

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L21/03073/GRM - 21-20672

Project Reference - P9249 Rascals Farm Southwater Sussex

Analytical Test Results - Soil

NC Reference			186930
Client Sample ID (#)			TP08
Client Sample Location (#)			TP08
Depth - Top (m) (#)			2.20
Depth - Bottom (m) (#)			2.20
Date of Sampling (#)			26/08/2021
Sample type			Disturbed
Sample Description			Brown slightly silty clay with occasional roots.
Determinant	Units		
Moisture Content	(%)		18
Moisture Content Prep	-	3.2.3.1 (fine)	
Fines passing 425µm test sieve	(%)		100
Liquid Limit	(%)		58
Plastic Limit	(%)		25
Plasticity Index	(%)		33
PI preparation	-	from its natural state	
PI Test Method		clause 4.4 (one point)	



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Analytical Test Report: L21/03144/GRM - 21-20674

Your Project Reference:	P9249-2 Rascals Farm Southwater Sussex	Samples Received on:	02/09/2021
Your Order Number:	P9249-2	Testing Instruction Received:	02/09/2021
Report Issue Number:	1	Sample Tested:	02/09 to 14/09/2021
Samples Analysed:	42 soil samples	Report issued:	14/09/2021



Lee Harbottle
GCM Operations Manager
Nicholls Colton Group

Notes:

Samples will be retained for 14 days after issue of this report unless otherwise requested.

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

A certificate of sampling was not supplied

Samples were supplied by customer, results apply to the samples as received.

Within the report any information provided by the client is identified with a '#'

1377 Moisture Content

Sample preparation was in accordance with BS1377:Part 1:2016.

Moisture content testing was in accordance with BS1377 : Part 2 :1990

1377 Consolidation Swell

Sample preparation was in accordance with BS1377:Part 1:1990 Clause 8.6.

Testing was in accordance with BS 1377 : Part 5 : 1990 Clause 4, the measurement of swelling & swelling pressure.

The testing was carried out at a laboratory temperature range of 20°C.

The particle density was assumed.

Samples were remoulded at client's request using a 2.5kg rammer.

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited

Date of Issue 10/12/2020

Owned by Emily Blissett - Commercial Reporting Supervisor

Authorised by Lee Harbottle - GCM Operations Manager

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L21/03144/GRM - 21-20674

Project Reference - P9249-2 Rascals Farm Southwater Sussex

Analytical Test Results - Soil

NC Reference		187048	187049	187050	187052	187053	187054
Client Sample ID (#)		WS03	WS03	WS03	WS03	WS03	WS03
Depth - (m) (#)		0.75	1.00	1.25	1.75	2.00	2.25
Date of Sampling (#)		24/08/2021	24/08/2021	24/08/2021	24/08/2021	24/08/2021	24/08/2021
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown silty clay with occasional roots	Brown/grey silty clay with occasional roots	Brown/grey silty clay with occasional roots	Brown silty clay with mudstone	Brown silty clay with mudstone	Brown silty clay
Determinant	Units						
Moisture Content	(%)	25	32	28	20	16	16
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)

L21/03144/GRM - 21-20674

Project Reference - P9249-2 Rascals

Analytical Test Results - Soil

NC Reference	187056	187057	187058	187059	187060	187061
Client Sample ID (#)	WS03	WS03	WS03	WS03	WS03	WS03
Depth - (m) (#)	2.75	3.00	3.25	3.50	3.75	4.00
Date of Sampling (#)	24/08/2021	24/08/2021	24/08/2021	24/08/2021	24/08/2021	24/08/2021
Sample type	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description	Brown/grey silty clay with mudstone	Brown/grey silty clay	Brown silty clay	Brown silty clay with mudstone	Brown silty clay with mudstone	Brown silty clay with mudstone
Determinant	Units					
Moisture Content	(%)	20	23	19	12	15
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)

L21/03144/GRM - 21-20674

Project Reference - P9249-2 Rascals

Analytical Test Results - Soil

NC Reference		187062	187063	187064	187065	187066	187067
Client Sample ID (#)		WS08	WS08	WS08	WS08	WS09	WS09
Depth - (m) (#)		1.00	1.50	2.00	2.50	0.75	1.00
Date of Sampling (#)		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown silty clay with mudstone	Brown silty clay with mudstone	Brown silty clay with mudstone	Brown silty clay with mudstone	Brown silty clay	Brown silty clay
Determinant	Units						
Moisture Content	(%)	24	20	17	13	25	24
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)

L21/03144/GRM - 21-20674

Project Reference - P9249-2 Rascals

Analytical Test Results - Soil

NC Reference		187068	187070	187071	187072	187074	187075
Client Sample ID (#)		WS09	WS09	WS09	WS09	WS09	WS09
Depth - (m) (#)		1.25	1.75	2.00	2.25	2.75	3.00
Date of Sampling (#)		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown silty clay	Brown silty clay	Brown silty clay	Brown silty clay	Brown silty clay	Brown silty clay
Determinant	Units						
Moisture Content	(%)	18	15	21	21	8.9	8.4
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)

L21/03144/GRM - 21-20674

Project Reference - P9249-2 Rascals

Analytical Test Results - Soil

NC Reference		187076	187077	187078	187079	187080	187081
Client Sample ID (#)		WS09	WS09	WS09	WS09	WS12	WS12
Depth - (m) (#)		3.25	3.50	3.75	4.00	0.75	1.00
Date of Sampling (#)		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown slightly gravelly silty clay	Brown silty clay	Brown silty clay	Brown silty clay	Brown slightly silty clay with occasional roots	Brown slightly silty clay with occasional roots
Determinant	Units						
Moisture Content	(%)	12	16	19	16	32	26
Moisture Content Prep	-	3.2.3.2 (medium)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)

L21/03144/GRM - 21-20674

Project Reference - P9249-2 Rascals

Analytical Test Results - Soil

NC Reference		187082	187083	187084	187085	187086	187087
Client Sample ID (#)		WS12	WS12	WS12	WS12	WS12	WS12
Depth - (m) (#)		1.25	1.74	2.00	2.25	2.75	3.00
Date of Sampling (#)		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown/grey silty clay	Brown silty clay	Brown/grey silty clay with mudstone	Brown silty clay	Brown silty clay with mudstone	Brown silty clay with mudstone
Determinant	Units						
Moisture Content	(%)	19	18	19	18	9.6	11
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)

L21/03144/GRM - 21-20674

Project Reference - P9249-2 Rascals Farm Southwater Sussex

Analytical Test Results - 1377 Swell test

NC Reference		187051	187055	187069	187073	187083	187087
Client Sample ID (#)		WS03	WS03	WS09	WS09	WS12	WS12
Depth - (m) (#)		1.50	2.50	1.50	2.50	1.50	2.50
Date of Sampling (#)		24/08/2021	24/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown slightly gravelly silty clay	Brown slightly silty clay	Brown silty clay	Brown slightly gravelly silty clay	Brown silty clay with mudstone	Brown silty clay with mudstone
Determinant	Units						
Initial Sample Height	(mm)	15.40	15.50	16.03	16.16	15.40	15.50
Initial Sample Diameter	(mm)	76.07	76.20	75.02	76.06	76.07	76.20
Initial Bulk Density	(Mg/m ³)	1.97	1.94	2.04	1.88	2.05	1.84
Initial Dry Density	(Mg/m ³)	1.62	1.60	1.75	1.58	1.57	1.56
Initial Moisture Content	(%)	22	21	17	19	30	18
Particle Density	(Mg/m ³)	2.65	2.65	2.65	2.65	2.65	2.65
Swelling Pressure	(kPa)	64	26	78	134	84	28



A P P E N D I X L

Land Appraisal | Environmental | Geotechnical | Design | Mining | Inspections

GRM Development Solutions Limited, Laurus House, First Avenue, Centrum 100, Burton upon Trent, Staffs DE14 2WH
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	GRM TIER 1 ASSESSMENT CRITERIA		
LAND USE	Residential with Plant Uptake		
CONTAMINANT	1%	2.50%	6%
^a Arsenic	37	37	37
^a Cadmium	22	22	22
^b Chromium III	910	910	910
^a Chromium VI	21	21	21
^a Lead	200	200	200
^{b/c} Mercury	40	40	40
^b Selenium	250	250	250
^b Nickel	180	180	180
^b Phenols	280	550	1100
^b Copper	2400	2400	2400
^b Zinc	3700	3700	3700
^d Cyanide	34	34	34
^a Benzene	0.20	0.33	0.87
^b Toluene	130	290	660
^b Ethylbenzene	47	110	260
^b <i>o</i> - xylene	60	140	330
^b <i>m</i> - xylene	59	140	320
^b <i>p</i> - xylene	56	130	310
Non Genotoxic PAHs			
^b Acenaphthene	210	510	1100
^b Acenaphthylene	170	420	920
^b Anthracene	2400	5400	11000
^b Fluoranthene	280	560	890
^b Fluorene	170	400	860
^b Naphthalene	2.3	5.6	13
^b Phenanthrene	95	220	440
^b Pyrene	620	1200	2000
Genotoxic PAHs			
^{a/e} Benzo(a)pyrene	5	5	5
ALIPHATIC HYDROCARBONS			
^b C5-C6	42	78	160
^b C6-C8	100	230	530
^b C8-C10	27	65	150
^b C10-C12	130	330	760
^b C12-C16	1100	2400	4300
^b C16-35	65000	92000	110000
AROMATIC HYDROCARBONS			
^b C5-7 (benzene)	70	140	300
^b C7-8 (toluene)	130	290	660
^b C8-C10	34	83	190
^b C10-C12	74	180	380
^b C12-C16	140	330	660
^b C16-C21	260	540	930
^b C21-C35	1100	1500	1700

Notes

- a C4SL - SP1010 (2014) - Benzene and Benzo(a)pyrene values for 1% and 2.5% SOM have been calculated using default C4SL parameters in CLEA v1.07
- b LQM/CIEH S4UL values (2015).
- c S4UL for inorganic Hg used.
- d Atkins ATRISKsoil Value
- e Benzo(a)pyrene is a surrogate marker for the 8 genotoxic PAHs (Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(ghi)perylene, Benzo(k)fluoranthene, Chrysene, Dibenzo(ah)anthracene, Ideno(1,2,3-cd)pyrene)

GRM TAC 11-2016



A P P E N D I X M

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Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



4DNPK-9V7CR-3L9OK

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Job name

P9249 Southwater

Description/Comments

Data obtained from a human health risk assessment.

Project

P9249

Site

Rascals Farm, Southwater

Classified by

Name:
George Salloway

Company:
GRM Development Solutions Ltd

Date:
23 Sep 2021 14:51 GMT
Telephone:
01283 551 249

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

CERTIFIED

Course
Hazardous Waste Classification

Date
06 Dec 2018

Next 3 year Refresher due by Dec 2021

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS01	0.05	Non Hazardous		3
2	WS02	0.1	Non Hazardous		5
3	WS04	0.05	Non Hazardous		7
4	WS05	0.05	Non Hazardous		9
5	WS06	0.1	Non Hazardous		11
6	WS08	0.1	Non Hazardous		13
7	WS11	0.1	Non Hazardous		15
8	HTP01	0.1	Hazardous	HP 14	17
9	HTP03	0.3	Non Hazardous		19
10	TP04	0.1	Non Hazardous		21
11	TP09	0.1	Non Hazardous		23
12	WS01[2]	0.05	Non Hazardous		25
13	WS02[2]	0.1	Non Hazardous		27
14	WS04[2]	0.05	Non Hazardous		29
15	WS05[2]	0.05	Non Hazardous		31
16	WS06[2]	0.1	Non Hazardous		33
17	WS08[2]	0.1	Non Hazardous		35
18	WS11[2]	0.1	Non Hazardous		37
19	HTP01[2]	0.1	Hazardous	HP 14	39
20	HTP03[2]	0.3	Non Hazardous		41
21	TP04[2]	0.1	Non Hazardous		43
22	TP09[2]	0.1	Non Hazardous		45

Related documents

#	Name	Description
1	GRM Standard Suite - incl TPH	waste stream template used to create this Job

Report

Created by: George Salloway

Created date: 23 Sep 2021 14:51 GMT



Appendices	Page
Appendix A: Classifier defined and non CLP determinands	47
Appendix B: Rationale for selection of metal species	48
Appendix C: Version	48

Classification of sample: WS01

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

Sample details

Sample name:	LoW Code:
WS01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.05 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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	19.805 mg/kg	0.00198 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	1.1 mg/kg	1.285	1.414 mg/kg	0.00011 %	✓		
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide (worst case) }				20 mg/kg	1.462	29.231 mg/kg	0.00292 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				21 mg/kg	1.126	23.644 mg/kg	0.00236 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	44 mg/kg		44 mg/kg	0.0044 %	✓		
	082-001-00-6										
6	mercury { mercury dichloride }				<2.5 mg/kg	1.353	<3.384 mg/kg	<0.000338 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				13 mg/kg	1.579	20.533 mg/kg	0.00205 %	✓		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8 mg/kg	1.405	<11.24 mg/kg	<0.00112 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				110 mg/kg	4.398	483.772 mg/kg	0.0484 %	✓		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	phenol				1.7 mg/kg		1.7 mg/kg	0.00017 %	✓		
	604-001-00-2	203-632-7	108-95-2								
11	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
	006-007-00-5										
12	pH				6.6 pH		6.6 pH	6.6 pH			
			PH								
13	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-469-6	83-32-9								
14	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-917-1	208-96-8								

#	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	anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7									
16	benzo[a]anthracene				0.09	mg/kg		0.09	mg/kg	0.000009 %	✓	
	601-033-00-9	200-280-6	56-55-3									
17	benzo[a]pyrene; benzo[def]chrysene				0.12	mg/kg		0.12	mg/kg	0.000012 %	✓	
	601-032-00-3	200-028-5	50-32-8									
18	benzo[b]fluoranthene				0.14	mg/kg		0.14	mg/kg	0.000014 %	✓	
	601-034-00-4	205-911-9	205-99-2									
19	benzo[ghi]perylene				0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
		205-883-8	191-24-2									
20	benzo[k]fluoranthene				0.05	mg/kg		0.05	mg/kg	0.000005 %	✓	
	601-036-00-5	205-916-6	207-08-9									
21	chrysene				0.12	mg/kg		0.12	mg/kg	0.000012 %	✓	
	601-048-00-0	205-923-4	218-01-9									
22	dibenz[a,h]anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
23	fluoranthene				0.2	mg/kg		0.2	mg/kg	0.00002 %	✓	
		205-912-4	206-44-0									
24	fluorene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7									
25	indeno[123-cd]pyrene				0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
		205-893-2	193-39-5									
26	naphthalene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
27	phenanthrene				0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
		201-581-5	85-01-8									
28	pyrene				0.2	mg/kg		0.2	mg/kg	0.00002 %	✓	
		204-927-3	129-00-0									
Total:										0.0642 %		

Key

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

Classification of sample: WS02

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

Sample details

Sample name:	LoW Code:
WS02	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	14	mg/kg	1.32	18.485	mg/kg	0.00185 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.8	mg/kg	1.285	1.028	mg/kg	0.00008 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }			1	21	mg/kg	1.462	30.693	mg/kg	0.00307 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide ; copper (I) oxide }			1	15	mg/kg	1.126	16.888	mg/kg	0.00169 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	35	mg/kg		35	mg/kg	0.0035 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }			1	<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }			1	11	mg/kg	1.579	17.374	mg/kg	0.00174 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }			1	<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }			1	56	mg/kg	4.398	246.284	mg/kg	0.0246 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol			1	<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }			1	<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH			1	6.5	pH		6.5	pH	6.5 pH		
				PH									
13		acenaphthene			1	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene			1	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene	204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
16	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.03	mg/kg		0.03	mg/kg	0.000003 %	✓	
17	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
18	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.05	mg/kg		0.05	mg/kg	0.000005 %	✓	
19	benzo[ghi]perylene	205-883-8	191-24-2		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
20	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
21	chrysene	601-048-00-0	205-923-4	218-01-9	0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
23	fluoranthene	205-912-4	206-44-0		0.07	mg/kg		0.07	mg/kg	0.000007 %	✓	
24	fluorene	201-695-5	86-73-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
26	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
27	phenanthrene	201-581-5	85-01-8		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
28	pyrene	204-927-3	129-00-0		0.07	mg/kg		0.07	mg/kg	0.000007 %	✓	
Total:										0.0384 %		

Key

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

Classification of sample: WS04

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

Sample details

Sample name:	LoW Code:
WS04	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.05 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	13	mg/kg	1.32	17.164	mg/kg	0.00172 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				21	mg/kg	1.462	30.693	mg/kg	0.00307 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				12	mg/kg	1.126	13.511	mg/kg	0.00135 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	29	mg/kg		29	mg/kg	0.0029 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				46	mg/kg	4.398	202.305	mg/kg	0.0202 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.7	pH		6.7	pH	6.7 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
28	pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-927-3	129-00-0								
Total:									0.033 %		

Key

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

Classification of sample: WS05

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

Sample details

Sample name:	LoW Code:
WS05	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.05 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	12	mg/kg	1.32	15.844	mg/kg	0.00158 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				19	mg/kg	1.462	27.77	mg/kg	0.00278 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				13	mg/kg	1.126	14.637	mg/kg	0.00146 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	29	mg/kg		29	mg/kg	0.0029 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				54	mg/kg	4.398	237.488	mg/kg	0.0237 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.2	pH		6.2	pH	6.2 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene	204-371-1	120-12-7		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
16	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.06 mg/kg		0.06 mg/kg	0.000006 %	✓		
17	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.07 mg/kg		0.07 mg/kg	0.000007 %	✓		
18	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.08 mg/kg		0.08 mg/kg	0.000008 %	✓		
19	benzo[ghi]perylene	205-883-8	191-24-2		0.05 mg/kg		0.05 mg/kg	0.000005 %	✓		
20	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.03 mg/kg		0.03 mg/kg	0.000003 %	✓		
21	chrysene	601-048-00-0	205-923-4	218-01-9	0.06 mg/kg		0.06 mg/kg	0.000006 %	✓		
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
23	fluoranthene	205-912-4	206-44-0		0.12 mg/kg		0.12 mg/kg	0.000012 %	✓		
24	fluorene	201-695-5	86-73-7		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.04 mg/kg		0.04 mg/kg	0.000004 %	✓		
26	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
27	phenanthrene	201-581-5	85-01-8		0.04 mg/kg		0.04 mg/kg	0.000004 %	✓		
28	pyrene	204-927-3	129-00-0		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
Total:									0.0363 %		

Key

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

Classification of sample: WS06

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

Sample details

Sample name:	LoW Code:
WS06	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	10	mg/kg	1.32	13.203	mg/kg	0.00132 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				20	mg/kg	1.462	29.231	mg/kg	0.00292 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				15	mg/kg	1.126	16.888	mg/kg	0.00169 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	34	mg/kg		34	mg/kg	0.0034 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				11	mg/kg	1.579	17.374	mg/kg	0.00174 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				52	mg/kg	4.398	228.692	mg/kg	0.0229 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.9	pH		6.9	pH	6.9 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7									
16	benzo[a]anthracene				0.1	mg/kg		0.1	mg/kg	0.00001 %	✓	
	601-033-00-9	200-280-6	56-55-3									
17	benzo[a]pyrene; benzo[def]chrysene				0.12	mg/kg		0.12	mg/kg	0.000012 %	✓	
	601-032-00-3	200-028-5	50-32-8									
18	benzo[b]fluoranthene				0.14	mg/kg		0.14	mg/kg	0.000014 %	✓	
	601-034-00-4	205-911-9	205-99-2									
19	benzo[ghi]perylene				0.07	mg/kg		0.07	mg/kg	0.000007 %	✓	
		205-883-8	191-24-2									
20	benzo[k]fluoranthene				0.05	mg/kg		0.05	mg/kg	0.000005 %	✓	
	601-036-00-5	205-916-6	207-08-9									
21	chrysene				0.11	mg/kg		0.11	mg/kg	0.000011 %	✓	
	601-048-00-0	205-923-4	218-01-9									
22	dibenz[a,h]anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
23	fluoranthene				0.24	mg/kg		0.24	mg/kg	0.000024 %	✓	
		205-912-4	206-44-0									
24	fluorene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7									
25	indeno[123-cd]pyrene				0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
		205-893-2	193-39-5									
26	naphthalene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
27	phenanthrene				0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
		201-581-5	85-01-8									
28	pyrene				0.2	mg/kg		0.2	mg/kg	0.00002 %	✓	
		204-927-3	129-00-0									
Total:										0.0359 %		

Key

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

Classification of sample: WS08

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

Sample details

Sample name:	LoW Code:
WS08	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }	033-003-00-0	215-481-4	1327-53-3	<10 mg/kg	1.32	<13.203 mg/kg	<0.00132 %			<LOD
2	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.5 mg/kg	1.285	0.643 mg/kg	0.00005 %	✓		
3	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		18 mg/kg	1.462	26.308 mg/kg	0.00263 %	✓		
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	11 mg/kg	1.126	12.385 mg/kg	0.00124 %	✓		
5	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			24 mg/kg		24 mg/kg	0.0024 %	✓		
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<2.5 mg/kg	1.353	<3.384 mg/kg	<0.000338 %			<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	9.5 mg/kg	1.579	15.005 mg/kg	0.0015 %	✓		
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			<8 mg/kg	1.405	<11.24 mg/kg	<0.00112 %			<LOD
9	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]	42 mg/kg	4.398	184.713 mg/kg	0.0185 %	✓		
10	phenol	604-001-00-2	203-632-7	108-95-2	<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
11	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			<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
12	pH		PH		7.5 pH		7.5 pH	7.5 pH			
13	acenaphthene	201-469-6	83-32-9		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
14	acenaphthylene	205-917-1	208-96-8		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				0.04 mg/kg		0.04 mg/kg	0.000004 %		✓	
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
28	pyrene				0.04 mg/kg		0.04 mg/kg	0.000004 %		✓	
		204-927-3	129-00-0								
Total:									0.0294 %		

Key

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

Classification of sample: WS11

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

Sample details

Sample name:	LoW Code:
WS11	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

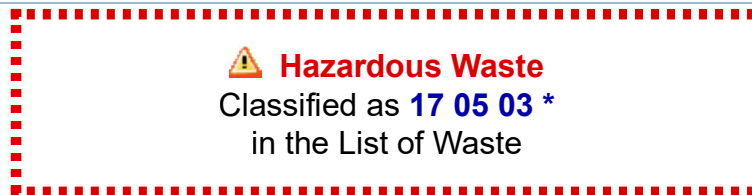
#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	11	mg/kg	1.32	14.524	mg/kg	0.00145 %	✓
2	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	mg/kg	1.285	1.285	mg/kg	0.0001 %	✓
3	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		23	mg/kg	1.462	33.616	mg/kg	0.00336 %	✓
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	36	mg/kg	1.126	40.532	mg/kg	0.00405 %	✓
5	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	100	mg/kg	100	mg/kg	0.01 %	✓
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %	<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	20	mg/kg	1.579	31.59	mg/kg	0.00316 %	✓
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %	<LOD
9	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]	130	mg/kg	4.398	571.73	mg/kg	0.0572 %	✓
10	phenol	604-001-00-2	203-632-7	108-95-2	<1	mg/kg		<1	mg/kg	<0.0001 %	<LOD
11	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			<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %	<LOD
12	pH		PH		8.7	pH		8.7	pH	8.7 pH	
13	acenaphthene	201-469-6	83-32-9		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %	<LOD
14	acenaphthylene	205-917-1	208-96-8		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %	<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	anthracene	204-371-1	120-12-7		0.35 mg/kg		0.35 mg/kg	0.000035 %	✓	
16	benzo[a]anthracene	601-033-00-9	200-280-6		1.3 mg/kg		1.3 mg/kg	0.00013 %	✓	
17	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		1.7 mg/kg		1.7 mg/kg	0.00017 %	✓	
18	benzo[b]fluoranthene	601-034-00-4	205-911-9		2.2 mg/kg		2.2 mg/kg	0.00022 %	✓	
19	benzo[ghi]perylene	205-883-8	191-24-2		1.2 mg/kg		1.2 mg/kg	0.00012 %	✓	
20	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.62 mg/kg		0.62 mg/kg	0.000062 %	✓	
21	chrysene	601-048-00-0	205-923-4		1.6 mg/kg		1.6 mg/kg	0.00016 %	✓	
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.29 mg/kg		0.29 mg/kg	0.000029 %	✓	
23	fluoranthene	205-912-4	206-44-0		2.6 mg/kg		2.6 mg/kg	0.00026 %	✓	
24	fluorene	201-695-5	86-73-7		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		1.3 mg/kg		1.3 mg/kg	0.00013 %	✓	
26	naphthalene	601-052-00-2	202-049-5		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
27	phenanthrene	201-581-5	85-01-8		0.91 mg/kg		0.91 mg/kg	0.000091 %	✓	
28	pyrene	204-927-3	129-00-0		2.4 mg/kg		2.4 mg/kg	0.00024 %	✓	
Total:								0.0828 %		

Key

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

Classification of sample: HTP01



Sample details

Sample name:	LoW Code:
HTP01	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
0.1 m	

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2]: (compound conc.: 0.44%)

Determinands

Moisture content: 0% Dry 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 }	033-003-00-0	215-481-4	1327-53-3	34	mg/kg	1.32	44.891	mg/kg	0.00449 %	✓	
2	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1.6	mg/kg	1.285	2.056	mg/kg	0.00016 %	✓	
3	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		24	mg/kg	1.462	35.077	mg/kg	0.00351 %	✓	
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	51	mg/kg	1.126	57.42	mg/kg	0.00574 %	✓	
5	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			320	mg/kg		320	mg/kg	0.032 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	22	mg/kg	1.579	34.749	mg/kg	0.00347 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
9	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]	1000	mg/kg	4.398	4397.926	mg/kg	0.44 %	✓	
10	phenol	604-001-00-2	203-632-7	108-95-2	<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
11	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			<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
12	pH			PH	6.3	pH		6.3	pH	6.3 pH		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
13	acenaphthene	201-469-6	83-32-9		0.38 mg/kg		0.38 mg/kg	0.000038 %	✓	
14	acenaphthylene	205-917-1	208-96-8		0.25 mg/kg		0.25 mg/kg	0.000025 %	✓	
15	anthracene	204-371-1	120-12-7		1.5 mg/kg		1.5 mg/kg	0.00015 %	✓	
16	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	3.7 mg/kg		3.7 mg/kg	0.00037 %	✓	
17	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	3.6 mg/kg		3.6 mg/kg	0.00036 %	✓	
18	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	4.8 mg/kg		4.8 mg/kg	0.00048 %	✓	
19	benzo[ghi]perylene	205-883-8	191-24-2		2.5 mg/kg		2.5 mg/kg	0.00025 %	✓	
20	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	1.7 mg/kg		1.7 mg/kg	0.00017 %	✓	
21	chrysene	601-048-00-0	205-923-4	218-01-9	4.1 mg/kg		4.1 mg/kg	0.00041 %	✓	
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.59 mg/kg		0.59 mg/kg	0.000059 %	✓	
23	fluoranthene	205-912-4	206-44-0		9.8 mg/kg		9.8 mg/kg	0.00098 %	✓	
24	fluorene	201-695-5	86-73-7		0.41 mg/kg		0.41 mg/kg	0.000041 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		2.7 mg/kg		2.7 mg/kg	0.00027 %	✓	
26	naphthalene	601-052-00-2	202-049-5	91-20-3	0.23 mg/kg		0.23 mg/kg	0.000023 %	✓	
27	phenanthrene	201-581-5	85-01-8		5.4 mg/kg		5.4 mg/kg	0.00054 %	✓	
28	pyrene	204-927-3	129-00-0		7.8 mg/kg		7.8 mg/kg	0.00078 %	✓	
Total:								0.496 %		

Key

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

Classification of sample: HTP03

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

Sample details

Sample name:	LoW Code:
HTP03	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	10	mg/kg	1.32	13.203	mg/kg	0.00132 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				21	mg/kg	1.462	30.693	mg/kg	0.00307 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				15	mg/kg	1.126	16.888	mg/kg	0.00169 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	27	mg/kg		27	mg/kg	0.0027 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				48	mg/kg	4.398	211.1	mg/kg	0.0211 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.6	pH		6.6	pH	6.6 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				0.03 mg/kg		0.03 mg/kg	0.000003 %		✓	
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				0.02 mg/kg		0.02 mg/kg	0.000002 %		✓	
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				0.05 mg/kg		0.05 mg/kg	0.000005 %		✓	
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
28	pyrene				0.04 mg/kg		0.04 mg/kg	0.000004 %		✓	
		204-927-3	129-00-0								
Total:									0.0336 %		

Key

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

Classification of sample: TP04

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

Sample details

Sample name:	LoW Code:
TP04	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	12 mg/kg	1.32	15.844	mg/kg	0.00158 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	0.7 mg/kg	1.285	0.9	mg/kg	0.00007 %	✓	
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide (worst case) }			1	23 mg/kg	1.462	33.616	mg/kg	0.00336 %	✓	
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }			1	14 mg/kg	1.126	15.762	mg/kg	0.00158 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	27 mg/kg		27	mg/kg	0.0027 %	✓	
	082-001-00-6										
6	mercury { mercury dichloride }			1	<2.5 mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }			1	12 mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }			1	<8 mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
	034-002-00-8										
9	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }			1	54 mg/kg	4.398	237.488	mg/kg	0.0237 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	phenol			1	<1 mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
11	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 }			1	<1 mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
	006-007-00-5										
12	pH			1	6.9 pH		6.9	pH	6.9 pH		
			PH								
13	acenaphthene			1	<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9								
14	acenaphthylene			1	<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8								

#	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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
28	pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-927-3	129-00-0								
Total:									0.0367 %		

Key

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

Classification of sample: TP09

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

Sample details

Sample name:	LoW Code:
TP09	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	16	mg/kg	1.32	21.125	mg/kg	0.00211 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.7	mg/kg	1.285	0.9	mg/kg	0.00007 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium {  chromium(III) oxide (worst case) }				25	mg/kg	1.462	36.539	mg/kg	0.00365 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				14	mg/kg	1.126	15.762	mg/kg	0.00158 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead {  lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	30	mg/kg		30	mg/kg	0.003 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				10	mg/kg	1.579	15.795	mg/kg	0.00158 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				48	mg/kg	4.398	211.1	mg/kg	0.0211 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.7	pH		6.7	pH	6.7 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				0.04 mg/kg		0.04 mg/kg	0.000004 %		✓	
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
28	pyrene				0.04 mg/kg		0.04 mg/kg	0.000004 %		✓	
		204-927-3	129-00-0								
Total:									0.0349 %		

Key

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

Classification of sample: WS01[2]

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

Sample details

Sample name:	LoW Code:
WS01[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.05 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	15	mg/kg	1.32	19.805	mg/kg	0.00198 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	1.1	mg/kg	1.285	1.414	mg/kg	0.00011 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				20	mg/kg	1.462	29.231	mg/kg	0.00292 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				21	mg/kg	1.126	23.644	mg/kg	0.00236 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	44	mg/kg		44	mg/kg	0.0044 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				13	mg/kg	1.579	20.533	mg/kg	0.00205 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				110	mg/kg	4.398	483.772	mg/kg	0.0484 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				1.7	mg/kg		1.7	mg/kg	0.00017 %	✓	
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.6	pH		6.6	pH	6.6 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene	204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
16	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.09	mg/kg		0.09	mg/kg	0.000009 %	✓	
17	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.12	mg/kg		0.12	mg/kg	0.000012 %	✓	
18	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.14	mg/kg		0.14	mg/kg	0.000014 %	✓	
19	benzo[ghi]perylene	205-883-8	191-24-2		0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
20	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.05	mg/kg		0.05	mg/kg	0.000005 %	✓	
21	chrysene	601-048-00-0	205-923-4	218-01-9	0.12	mg/kg		0.12	mg/kg	0.000012 %	✓	
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
23	fluoranthene	205-912-4	206-44-0		0.2	mg/kg		0.2	mg/kg	0.00002 %	✓	
24	fluorene	201-695-5	86-73-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
26	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
27	phenanthrene	201-581-5	85-01-8		0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
28	pyrene	204-927-3	129-00-0		0.2	mg/kg		0.2	mg/kg	0.00002 %	✓	
Total:										0.0642 %		

Key

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

Classification of sample: WS02[2]

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

Sample details

Sample name:	LoW Code:
WS02[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }				14 mg/kg	1.32	18.485 mg/kg	0.00185 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	0.8 mg/kg	1.285	1.028 mg/kg	0.00008 %	✓		
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide (worst case) }				21 mg/kg	1.462	30.693 mg/kg	0.00307 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				15 mg/kg	1.126	16.888 mg/kg	0.00169 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	35 mg/kg		35 mg/kg	0.0035 %	✓		
	082-001-00-6										
6	mercury { mercury dichloride }				<2.5 mg/kg	1.353	<3.384 mg/kg	<0.000338 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				11 mg/kg	1.579	17.374 mg/kg	0.00174 %	✓		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8 mg/kg	1.405	<11.24 mg/kg	<0.00112 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				56 mg/kg	4.398	246.284 mg/kg	0.0246 %	✓		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
11	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
	006-007-00-5										
12	pH				6.5 pH		6.5 pH	6.5 pH			
			PH								
13	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-469-6	83-32-9								
14	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-917-1	208-96-8								

#	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	anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7									
16	benzo[a]anthracene				0.03	mg/kg		0.03	mg/kg	0.000003 %	✓	
		601-033-00-9	200-280-6									
			56-55-3									
17	benzo[a]pyrene; benzo[def]chrysene				0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
		601-032-00-3	200-028-5									
			50-32-8									
18	benzo[b]fluoranthene				0.05	mg/kg		0.05	mg/kg	0.000005 %	✓	
		601-034-00-4	205-911-9									
			205-99-2									
19	benzo[ghi]perylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-883-8	191-24-2									
20	benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6									
			207-08-9									
21	chrysene				0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
		601-048-00-0	205-923-4									
			218-01-9									
22	dibenz[a,h]anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-041-00-2	200-181-8									
			53-70-3									
23	fluoranthene				0.07	mg/kg		0.07	mg/kg	0.000007 %	✓	
		205-912-4	206-44-0									
24	fluorene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7									
25	indeno[123-cd]pyrene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5									
26	naphthalene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-052-00-2	202-049-5									
			91-20-3									
27	phenanthrene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8									
28	pyrene				0.07	mg/kg		0.07	mg/kg	0.000007 %	✓	
		204-927-3	129-00-0									
Total:										0.0384 %		

Key

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

Classification of sample: WS04[2]

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

Sample details

Sample name:	LoW Code:
WS04[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.05 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	13	mg/kg	1.32	17.164	mg/kg	0.00172 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				21	mg/kg	1.462	30.693	mg/kg	0.00307 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				12	mg/kg	1.126	13.511	mg/kg	0.00135 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	29	mg/kg		29	mg/kg	0.0029 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				46	mg/kg	4.398	202.305	mg/kg	0.0202 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.7	pH		6.7	pH	6.7 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
28	pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-927-3	129-00-0								
Total:									0.033 %		

Key

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

Classification of sample: WS05[2]

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

Sample details

Sample name:	LoW Code:
WS05[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.05 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	12	mg/kg	1.32	15.844	mg/kg	0.00158 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				19	mg/kg	1.462	27.77	mg/kg	0.00278 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				13	mg/kg	1.126	14.637	mg/kg	0.00146 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	29	mg/kg		29	mg/kg	0.0029 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				54	mg/kg	4.398	237.488	mg/kg	0.0237 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.2	pH		6.2	pH	6.2 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7									
16	benzo[a]anthracene				0.06	mg/kg		0.06	mg/kg	0.000006 %	✓	
		601-033-00-9	200-280-6									
17	benzo[a]pyrene; benzo[def]chrysene				0.07	mg/kg		0.07	mg/kg	0.000007 %	✓	
		601-032-00-3	200-028-5									
18	benzo[b]fluoranthene				0.08	mg/kg		0.08	mg/kg	0.000008 %	✓	
		601-034-00-4	205-911-9									
19	benzo[ghi]perylene				0.05	mg/kg		0.05	mg/kg	0.000005 %	✓	
		205-883-8	191-24-2									
20	benzo[k]fluoranthene				0.03	mg/kg		0.03	mg/kg	0.000003 %	✓	
		601-036-00-5	205-916-6									
21	chrysene				0.06	mg/kg		0.06	mg/kg	0.000006 %	✓	
		601-048-00-0	205-923-4									
22	dibenz[a,h]anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-041-00-2	200-181-8									
23	fluoranthene				0.12	mg/kg		0.12	mg/kg	0.000012 %	✓	
		205-912-4	206-44-0									
24	fluorene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7									
25	indeno[123-cd]pyrene				0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
		205-893-2	193-39-5									
26	naphthalene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-052-00-2	202-049-5									
27	phenanthrene				0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
		201-581-5	85-01-8									
28	pyrene				0.1	mg/kg		0.1	mg/kg	0.00001 %	✓	
		204-927-3	129-00-0									
Total:										0.0363 %		

Key

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

Classification of sample: WS06[2]

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

Sample details

Sample name:	LoW Code:
WS06[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	10	mg/kg	1.32	13.203	mg/kg	0.00132 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				20	mg/kg	1.462	29.231	mg/kg	0.00292 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide ; copper (I) oxide }				15	mg/kg	1.126	16.888	mg/kg	0.00169 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	34	mg/kg		34	mg/kg	0.0034 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				11	mg/kg	1.579	17.374	mg/kg	0.00174 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				52	mg/kg	4.398	228.692	mg/kg	0.0229 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.9	pH		6.9	pH	6.9 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				0.12 mg/kg		0.12 mg/kg	0.000012 %		✓	
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				0.14 mg/kg		0.14 mg/kg	0.000014 %		✓	
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				0.07 mg/kg		0.07 mg/kg	0.000007 %		✓	
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				0.05 mg/kg		0.05 mg/kg	0.000005 %		✓	
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				0.11 mg/kg		0.11 mg/kg	0.000011 %		✓	
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				0.24 mg/kg		0.24 mg/kg	0.000024 %		✓	
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				0.08 mg/kg		0.08 mg/kg	0.000008 %		✓	
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				0.08 mg/kg		0.08 mg/kg	0.000008 %		✓	
		201-581-5	85-01-8								
28	pyrene				0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
		204-927-3	129-00-0								
Total:									0.0359 %		

Key

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

Classification of sample: WS08[2]

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

Sample details

Sample name:	LoW Code:
WS08[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }	033-003-00-0	215-481-4	1327-53-3	1	<10	mg/kg	1.32	<13.203	mg/kg	<0.00132 %	<LOD
2	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6		0.5	mg/kg	1.285	0.643	mg/kg	0.00005 %	✓
3	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9			18	mg/kg	1.462	26.308	mg/kg	0.00263 %	✓
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		11	mg/kg	1.126	12.385	mg/kg	0.00124 %	✓
5	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	24	mg/kg		24	mg/kg	0.0024 %	✓
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %	<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		9.5	mg/kg	1.579	15.005	mg/kg	0.0015 %	✓
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %	<LOD
9	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		42	mg/kg	4.398	184.713	mg/kg	0.0185 %	✓
10	phenol	604-001-00-2	203-632-7	108-95-2		<1	mg/kg		<1	mg/kg	<0.0001 %	<LOD
11	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				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %	<LOD
12	pH		PH			7.5	pH		7.5	pH	7.5 pH	
13	acenaphthene	201-469-6	83-32-9			<0.02	mg/kg		<0.02	mg/kg	<0.000002 %	<LOD
14	acenaphthylene	205-917-1	208-96-8			<0.02	mg/kg		<0.02	mg/kg	<0.000002 %	<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	anthracene	204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
16	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
17	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
18	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
19	benzo[ghi]perylene	205-883-8	191-24-2		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
20	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
21	chrysene	601-048-00-0	205-923-4	218-01-9	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
23	fluoranthene	205-912-4	206-44-0		0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
24	fluorene	201-695-5	86-73-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
26	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
27	phenanthrene	201-581-5	85-01-8		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
28	pyrene	204-927-3	129-00-0		0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
Total:										0.0294 %		

Key

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

Classification of sample: WS11[2]

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

Sample details

Sample name:	LoW Code:
WS11[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

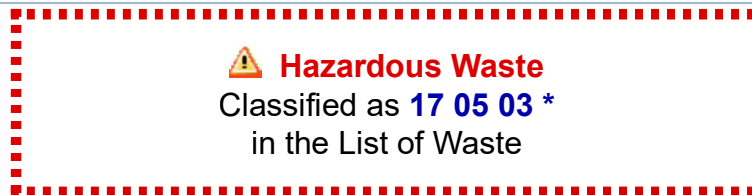
#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }			1	11	mg/kg	1.32	14.524	mg/kg	0.00145 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	1	mg/kg	1.285	1.285	mg/kg	0.0001 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				23	mg/kg	1.462	33.616	mg/kg	0.00336 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				36	mg/kg	1.126	40.532	mg/kg	0.00405 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	100	mg/kg		100	mg/kg	0.01 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				20	mg/kg	1.579	31.59	mg/kg	0.00316 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				130	mg/kg	4.398	571.73	mg/kg	0.0572 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				8.7	pH		8.7	pH	8.7 pH		
				PH									
13		acenaphthene				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene	204-371-1	120-12-7		0.35 mg/kg		0.35 mg/kg	0.000035 %	✓	
16	benzo[a]anthracene	601-033-00-9	200-280-6		1.3 mg/kg		1.3 mg/kg	0.00013 %	✓	
17	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		1.7 mg/kg		1.7 mg/kg	0.00017 %	✓	
18	benzo[b]fluoranthene	601-034-00-4	205-911-9		2.2 mg/kg		2.2 mg/kg	0.00022 %	✓	
19	benzo[ghi]perylene	205-883-8	191-24-2		1.2 mg/kg		1.2 mg/kg	0.00012 %	✓	
20	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.62 mg/kg		0.62 mg/kg	0.000062 %	✓	
21	chrysene	601-048-00-0	205-923-4		1.6 mg/kg		1.6 mg/kg	0.00016 %	✓	
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.29 mg/kg		0.29 mg/kg	0.000029 %	✓	
23	fluoranthene	205-912-4	206-44-0		2.6 mg/kg		2.6 mg/kg	0.00026 %	✓	
24	fluorene	201-695-5	86-73-7		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		1.3 mg/kg		1.3 mg/kg	0.00013 %	✓	
26	naphthalene	601-052-00-2	202-049-5		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
27	phenanthrene	201-581-5	85-01-8		0.91 mg/kg		0.91 mg/kg	0.000091 %	✓	
28	pyrene	204-927-3	129-00-0		2.4 mg/kg		2.4 mg/kg	0.00024 %	✓	
Total:								0.0828 %		

Key

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

Classification of sample: HTP01[2]



Sample details

Sample name:	LoW Code:
HTP01[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2]: (compound conc.: 0.44%)

Determinands

Moisture content: 0% Dry 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 }	033-003-00-0	215-481-4	1327-53-3	34	mg/kg	1.32	44.891	mg/kg	0.00449 %	✓	
2	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1.6	mg/kg	1.285	2.056	mg/kg	0.00016 %	✓	
3	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		24	mg/kg	1.462	35.077	mg/kg	0.00351 %	✓	
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	51	mg/kg	1.126	57.42	mg/kg	0.00574 %	✓	
5	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			320	mg/kg		320	mg/kg	0.032 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	22	mg/kg	1.579	34.749	mg/kg	0.00347 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
9	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]	1000	mg/kg	4.398	4397.926	mg/kg	0.44 %	✓	
10	phenol	604-001-00-2	203-632-7	108-95-2	<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
11	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			<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
12	pH			PH	6.3	pH		6.3	pH	6.3 pH		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
13	acenaphthene	201-469-6	83-32-9		0.38 mg/kg		0.38 mg/kg	0.000038 %	✓	
14	acenaphthylene	205-917-1	208-96-8		0.25 mg/kg		0.25 mg/kg	0.000025 %	✓	
15	anthracene	204-371-1	120-12-7		1.5 mg/kg		1.5 mg/kg	0.00015 %	✓	
16	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	3.7 mg/kg		3.7 mg/kg	0.00037 %	✓	
17	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	3.6 mg/kg		3.6 mg/kg	0.00036 %	✓	
18	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	4.8 mg/kg		4.8 mg/kg	0.00048 %	✓	
19	benzo[ghi]perylene	205-883-8	191-24-2		2.5 mg/kg		2.5 mg/kg	0.00025 %	✓	
20	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	1.7 mg/kg		1.7 mg/kg	0.00017 %	✓	
21	chrysene	601-048-00-0	205-923-4	218-01-9	4.1 mg/kg		4.1 mg/kg	0.00041 %	✓	
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.59 mg/kg		0.59 mg/kg	0.000059 %	✓	
23	fluoranthene	205-912-4	206-44-0		9.8 mg/kg		9.8 mg/kg	0.00098 %	✓	
24	fluorene	201-695-5	86-73-7		0.41 mg/kg		0.41 mg/kg	0.000041 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		2.7 mg/kg		2.7 mg/kg	0.00027 %	✓	
26	naphthalene	601-052-00-2	202-049-5	91-20-3	0.23 mg/kg		0.23 mg/kg	0.000023 %	✓	
27	phenanthrene	201-581-5	85-01-8		5.4 mg/kg		5.4 mg/kg	0.00054 %	✓	
28	pyrene	204-927-3	129-00-0		7.8 mg/kg		7.8 mg/kg	0.00078 %	✓	
Total:								0.496 %		

Key

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

Classification of sample: HTP03[2]

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

Sample details

Sample name:	LoW Code:
HTP03[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	10	mg/kg	1.32	13.203	mg/kg	0.00132 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				21	mg/kg	1.462	30.693	mg/kg	0.00307 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				15	mg/kg	1.126	16.888	mg/kg	0.00169 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	27	mg/kg		27	mg/kg	0.0027 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				48	mg/kg	4.398	211.1	mg/kg	0.0211 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.6	pH		6.6	pH	6.6 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				0.03 mg/kg		0.03 mg/kg	0.000003 %		✓	
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				0.02 mg/kg		0.02 mg/kg	0.000002 %		✓	
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				0.05 mg/kg		0.05 mg/kg	0.000005 %		✓	
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
28	pyrene				0.04 mg/kg		0.04 mg/kg	0.000004 %		✓	
		204-927-3	129-00-0								
Total:									0.0336 %		

Key

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

Classification of sample: TP04[2]

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

Sample details

Sample name:	LoW Code:
TP04[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	12	mg/kg	1.32	15.844	mg/kg	0.00158 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.7	mg/kg	1.285	0.9	mg/kg	0.00007 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				23	mg/kg	1.462	33.616	mg/kg	0.00336 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				14	mg/kg	1.126	15.762	mg/kg	0.00158 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	27	mg/kg		27	mg/kg	0.0027 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				54	mg/kg	4.398	237.488	mg/kg	0.0237 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.9	pH		6.9	pH	6.9 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
16	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
17	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
18	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
19	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
20	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
21	chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
22	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-912-4	206-44-0								
24	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
25	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
26	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
27	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
28	pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-927-3	129-00-0								
Total:									0.0367 %		

Key

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

Classification of sample: TP09[2]

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

Sample details

Sample name:	LoW Code:
TP09[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry 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 }			1	16	mg/kg	1.32	21.125	mg/kg	0.00211 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	0.7	mg/kg	1.285	0.9	mg/kg	0.00007 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide (worst case) }				25	mg/kg	1.462	36.539	mg/kg	0.00365 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				14	mg/kg	1.126	15.762	mg/kg	0.00158 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	30	mg/kg		30	mg/kg	0.003 %	✓	
		082-001-00-6											
6		mercury { mercury dichloride }				<2.5	mg/kg	1.353	<3.384	mg/kg	<0.000338 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				10	mg/kg	1.579	15.795	mg/kg	0.00158 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<8	mg/kg	1.405	<11.24	mg/kg	<0.00112 %		<LOD
		034-002-00-8											
9		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				48	mg/kg	4.398	211.1	mg/kg	0.0211 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
11		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 }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
12		pH				6.7	pH		6.7	pH	6.7 pH		
				PH									
13		acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			201-469-6	83-32-9									
14		acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			205-917-1	208-96-8									

#	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	anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7									
16	benzo[a]anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-033-00-9	200-280-6	56-55-3									
17	benzo[a]pyrene; benzo[def]chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8									
18	benzo[b]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2									
19	benzo[ghi]perylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-883-8	191-24-2									
20	benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-036-00-5	205-916-6	207-08-9									
21	chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-048-00-0	205-923-4	218-01-9									
22	dibenz[a,h]anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
23	fluoranthene				0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
		205-912-4	206-44-0									
24	fluorene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7									
25	indeno[123-cd]pyrene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5									
26	naphthalene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
27	phenanthrene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8									
28	pyrene				0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
		204-927-3	129-00-0									
Total:										0.0349 %		

Key

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

■ **lead compounds with the exception of those specified elsewhere in this Annex (worst case)**

CLP index number: 082-001-00-6

Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following CLP protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A

Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)

Additional Hazard Statement(s): Carc. 1A H350

Reason for additional Hazards Statement(s):

03 Jun 2015 - Carc. 1A H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

■ **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

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

■ **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

■ **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

■ **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

■ **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

■ **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

■ **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

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

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

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

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

■ **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

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on risk phrases

cadmium {cadmium sulfide}

Worst case species based on risk phrases

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

No hexavalent chromium recorded above the laboratory level of detection in any sample tested.

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

No hexavalent chromium recorded above the laboratory level of detection in any sample tested.

mercury {mercury dichloride}

Worst case species based on risk phrases

nickel {nickel dihydroxide}

Worst case species based on risk phrases

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

Worst case species based on risk phrases

zinc {zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2]}

No hexavalent chromium recorded above the laboratory level of detection in any sample tested.

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}

Worst case species

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2021.246.4869.9247 (05 Sep 2021)
HazWasteOnline Database: 2021.246.4869.9247 (05 Sep 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

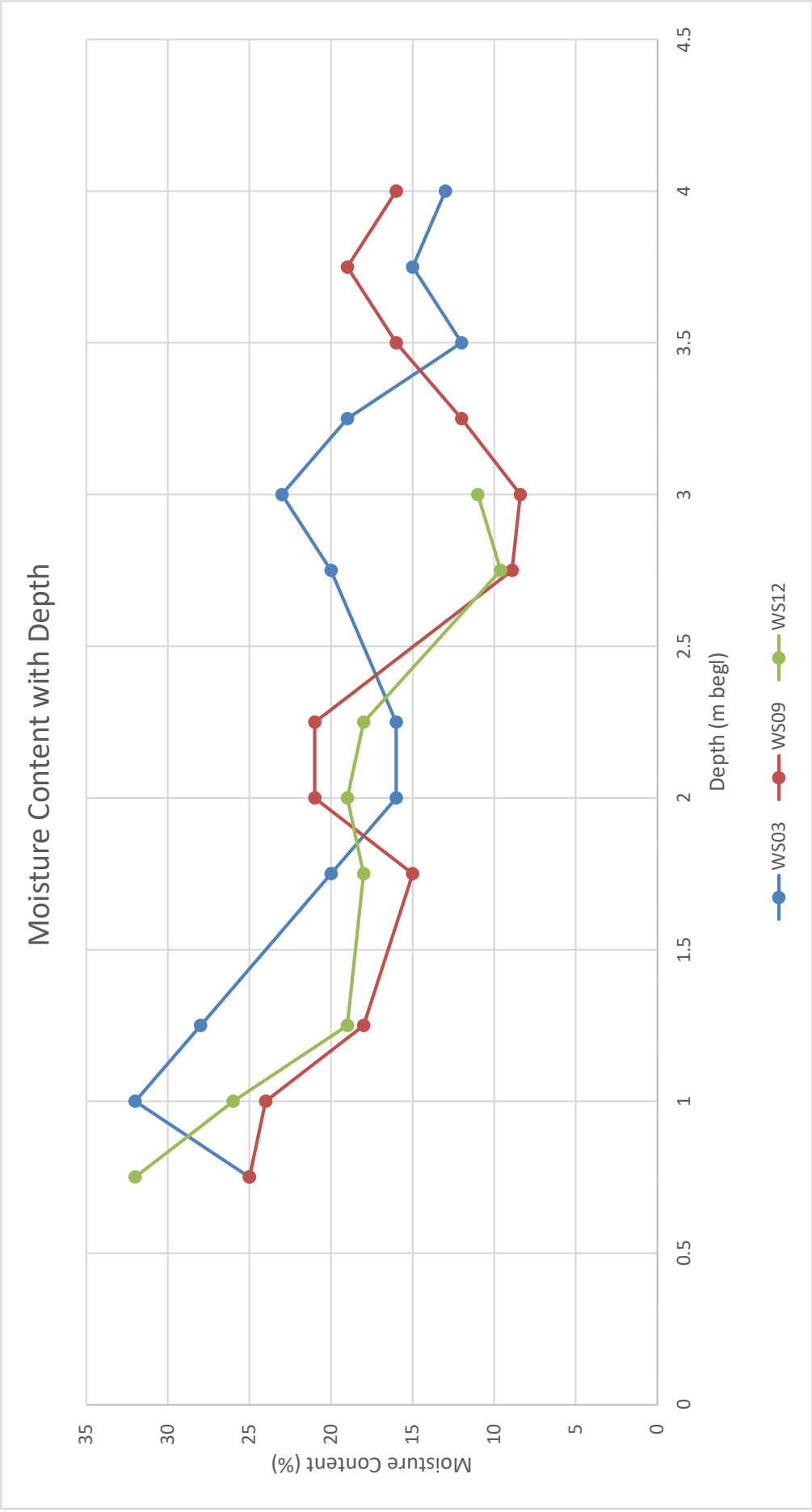
POPs Regulation 2019 - Regulation (EU) 2019/1021 of 20 June 2019



A P P E N D I X N

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DO NOT SCALE

NOTES:



Approximate site boundary.



Further assessment targets.



Areas within footprints of former buildings, dense vegetation and small pond.

Area of softer ground around WS02.

Area of historic pond (no longer present).



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CLIENT:

Catesby Estates plc

PROJECT:

Rascals Farm, Southwater

TITLE:

Further Assessment Plan

SCALE@SIZE:	NTS	ISSUE:	FINAL
DESIGN/DRAWN:	AT	DATE:	September 2021
PROJECT No:	P9249	DRAWING No:	7

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