

Phase 3b & 8, Berewood, Waterlooville

Ground Investigation Report



Report for:

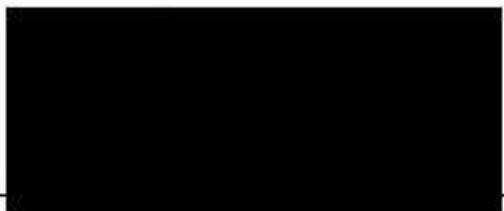
White Young Green PLC

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EXECUTIVE SUMMARY

Project Information	
Project details	This Ground Investigation report has been prepared by T&P Regeneration Ltd (T&P) on behalf of White Young Green PLC for Phases 3b & 8 of the Berewood development – postcode PO7 5ST / NGR: 467618, 109017.
Site description and current land use	The site comprises an irregularly shaped area comprising 2N° parcels - Phase 3b to the north & Phase 8 to the south, measuring approximately 6.14 and 4.07 hectares (Ha) respectively. The site is currently predominantly rough pasture with a public pathway transecting both the Phase 3b and Phase 8 parcels. A recently installed electrical substation is located between the two parcels associated with the recent residential development in the surrounding area. A temporary construction yard is present to the north-west which was inaccessible during the walkover. The site has an elevation ranging between 41 and 59 metres Above Ordnance Datum (mAOD). Phase 3b is generally level with elevations of between 41 and 51mAOD, sloping slightly towards the south. Phase 8 has an elevation range of between 51 and 59mAOD with a steep incline noted in the topography towards the south-western boundary.
Proposed development	It is understood the development comprises the construction of traditional two storey residential dwellings with associated areas of communal and private soft landscaping, with hard landscaped access and parking.
Previous reports	This report has been prepared with reference to a Phase 1 Desk Study previously issued by T&P Regeneration in September 2018 (Ref:2018Sep_BER1808G_DS_AD).
Site Setting	
Environmental setting	Superficial deposits underlying the site are indicated to be absent and it is indicated to be entirely underlain by the Palaeogene Age London Clay Formation. The London Clay Formation is classified as an Unproductive Stratum. There are no licensed abstractions within 500m of the site. The site is shown to be within an Inner Source Protection Zone (SPZ 1) which is understood to be associated with abstraction from the deep Chalk Aquifer. The nearest surface water feature is a dry drainage ditch that runs along the north-eastern boundary of Phase 3b. The site is located within an Environment Agency Flood Risk Zone 1. However, as the site is over 1 hectare in size, a flood risk assessment will be required. The site is not located within an environmentally sensitive area.
Site history	From the time of the earliest maps in the late 1800s, the site is shown to be undeveloped comprising a mixture of agricultural land and rough pasture. No significant changes were noted across the site up to present day, with the exception of the pathway that divides the two parcels shown on the more recent maps. The immediate area off-site was dominated by agrarian processes since the time of the earliest available map with the town of Waterlooville centred approximately 0.5km to the east of the site. The Portsdown & Horndean Light Railway was can be seen to run adjacent to the eastern boundary of the Phase 8 parcel from 1933 to 1962. A saw mill was noted to be present approximately 20m from the south-eastern boundary of Phase 8 from 1870 to 1962. Development of the surrounding area intensified in the 1970's with an industrial estate seen to the north of the site from the 1990s. The residential Berewood development manifested in the late 2000s.
Areas of potential concern	On-site: - Potential made ground of unknown composition associated with former site development. - Potential agricultural pest/weed control associated with former agricultural practices.

Phase 2 Ground Investigation	
Scope of works	An intrusive ground investigation was undertaken by T&P across the site between 25th and 27th July 2018, comprising the following:: • Excavation of 32N° trial pits; • Infiltration testing within 5N° trial pits; • <i>In situ</i> vehicle mounted California Bearing Ratio (CBR) tests in 5N° locations; • Logging of ground conditions in accordance with BS5930¹; and, • Soil sampling.
Ground conditions	Made ground was encountered to the southern extent of parcel 8 and sporadically across parcel 3b. It was found to depth of 0.9m in the vicinity of TP19 but generally only up to 0.50m. The made ground was found to comprise slightly sandy gravelly friable CLAY/clayey SAND, which included red brick, glass, ceramic, asphalt and concrete. Topsoil was encountered in the majority of exploratory locations with a typical thickness ranging between 0.20 and 0.40m. In general, the topsoil was found to comprise light brown slightly gravelly SAND/silty CLAY. The Head deposits generally comprised a sandy CLAY/clayey SAND. The base of this unit was not proven. The deposits of the London Clay Formation were encountered across Phase 3b and characterised by a firm to stiff bluish grey /orangish brown silty CLAY No visible or olfactory evidence of significant contamination was encountered during the ground investigation.
Groundwater	Groundwater was encountered at the base of TP01, 02 and 09 at a depth of between 2.20 – 2.40mbgl within the Superficial Head Deposits. The groundwater ingress was generally noted to be slow.
Principal Findings and Conclusions	
Human health	All soil concentrations in topsoil, natural soils and made ground were recorded below adopted screening levels for residential use with vegetable uptake.
Controlled waters	With consideration of the ground investigation findings which did not identify any significant on-site sources of contamination, and the low sensitivity of the Controlled Waters environment, the risk to Controlled Waters is considered to be low.
Gas protection	Radon protection measures are not considered necessary for the proposed development. In consideration of the conceptual model, the site is assessed to have low ground gas generating potential. On-site made ground was found to be <0.9m in thickness with no evidence of significant putrescible or organic content. Further to this, the potential for lateral migration from off-site sources is considered limited by the low permeability nature of the underlying geology. It is considered that ground gases present a low risk to future residents
Plant growth and buried potable supply pipework	Made ground and natural soils are not considered to pose a significant risk to the existing and proposed flora. However, with consideration of the physical composition of on-site made ground, which includes glass, ceramic and asphalt. This may be unsuitable to remain within areas of soft landscaping. As such, a suitable topsoil should be provided as a growth medium in areas of proposed planting. With only one marginal exceedance of benzo(a)pyrene in the soil and because buried mains will be installed in the natural soils below the topsoil, it is considered that upgraded water supply pipework is unlikely to be required by the local water authority.
Waste	The made ground, natural soils and made ground are likely to be classified as non-hazardous waste. Based on the chemical data the soils should be treated as inert or stable non-reactive. Further Waste Acceptance Criteria (WAC) testing may be required by the receiving site.

¹ BS5930, Code of Practice for Ground Investigations, 2015.

Infiltration testing	Based upon calculated infiltration rates results, soakaways are unlikely to offer a viable method of surface water drainage.
Engineering design	The cohesive soils have shown to be of high volume change potential and as a result will be susceptible to the influence of trees. Based on the test results a design CBR value of <2.5% is recommended subject to the cohesive soils of the Head Deposits or London Clay being encountered at formation level. Higher CBR values of up to 5% may be adopted in areas where the granular head deposits are encountered at formation level within Parcel 8. However, the distribution of these deposits across the site indicate no discernible spatial distribution and therefore zoning the site into these areas may prove problematic. Sulphate testing of selected soil samples indicates that a suitable design mix for concrete for buried structures is likely to be DS1-AC-1.
Considerations and Recommendations for Further Work	
Considerations	- The site is over 1 hectare in size. As such, a Flood Risk Assessment will be required to support future development. - In-situ testing has not been undertaken to classify the density of the granular Head Deposits.
Recommendations	<u>Plant growth and potable water supply pipework</u> - No significantly elevated phytotoxic contaminant compounds were detected in soils, and it was noted that existing vegetation was generally healthy. It should however be noted that the site is partially covered by made ground which may be physically unsuitable, it would be prudent to allow for the installation of a suitable thickness of a topsoil growth medium in any areas of intended specialist planting. This should be reviewed upon finalisation of the development landscaping plan and consultation with the project landscaping advisor. - With respect to the UKWIR guidelines it is considered that standard water supply pipework will be suitable for any services installed across both Parcel 3b & 8. <u>Engineering</u> - Testing highlighted that soakaways are unlikely to be a viable mechanism for surface water management on site. - In regard to Phase 8, further investigation into the geotechnical parameters of the granular superficial Head Deposits is recommended to characterise the density of the strata and subsequently deliver a suitable founding recommendation for the proposed dwellings. The most feasible options to deliver these parameters are likely to be either dynamic probe testing or dynamic windowless sample boreholes. - Based upon the recorded pH levels revealed on site when considered against the assessment levels in BRE Special Digest 1 (2005) a DS1-AC1 design mix concrete should be suitable for buried structures placed within the Head Deposits or London Clay Formation. - Should groundwater level be significantly shallower during excavation of foundations than that found during the trial pitting exercise then formation of foundation trenches may prove problematic. - Should any exceptionally soft spots or oversized material be noted during construction, they should be removed and replaced with compacted granular fill for road construction.

Recommendations	<u>General</u> • Consult the statutory water provider should be consulted regarding suitable water supply pipework requirements. • Discussions should be held with local landfill/soil waste treatment facilities to agree material classification/pre-treatment required for any soils to be disposed off-site as a result of proposed construction works. • Ground workers should remain vigilant for visible and olfactory signs of contamination following demolition of on-site buildings. • Given the high risk of unexploded ordnance devices on site any intrusive ground works should be undertaken under supervision of a suitably qualified Explosive Ordnance Clearance specialist. • A site-specific health and safety plan should be prepared to inform on risks posed from the previous site use and mitigations for ground workers developing the site e.g. requirements for appropriate PPE, hygiene practices, environmental monitoring and requirements for mitigation measures during construction works. • A copy of this report should be provided to the relevant regulatory authorities and the NHBC to confirm that they are in agreement with the report findings.
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CONTENTS

1	INTRODUCTION.....	1
1.1	CONTRACT DETAILS	1
1.2	PROPOSED DEVELOPMENT	1
1.3	OBJECTIVES	1
1.4	PREVIOUS REPORTS	1
1.5	SCOPE OF WORKS	1
1.6	REPORT LIMITATIONS	2
2	SITE INFORMATION	3
2.1	SITE LOCATION	3
2.2	SITE DESCRIPTION	3
3	ENVIRONMENTAL SETTING	5
3.1	OVERVIEW	5
4	PRELIMINARY CONCEPTUAL SITE MODEL	7
4.1	BACKGROUND	7
4.2	PRELIMINARY QUALITATIVE RISK ASSESSMENT	7
5	SCOPE OF WORK	9
5.1	SUMMARY OF FIELDWORK	9
5.2	EXPLORATORY LOCATIONS AND ACCESS RESTRICTIONS	9
5.3	TRIAL PITS	9
5.4	DYNAMIC WINDOWLESS SAMPLER BOREHOLES.	9
5.5	<i>IN SITU</i> CBR TESTING	10
5.6	INFILTRATION TESTING	10
6	SUMMARY OF GROUND CONDITIONS	11
6.1	RECORDED GROUND CONDITIONS	11
6.2	GROUNDWATER	12
7	SUMMARY OF LABORATORY ANALYSES	13
8	HUMAN HEALTH RISK ASSESSMENT	14
8.1	INTRODUCTION	14
8.2	DETERMINATION OF AVERAGING AREAS/ZONES	14
8.3	SCREENING ASSESSMENT	14
8.4	DISCUSSION	14
9	CONTROLLED WATERS RISK ASSESSMENT	15
9.1	OVERVIEW OF HYDROGEOLOGICAL SETTING	15
9.2	RISK EVALUATION	15
10	GAS/VAPOUR RISK ASSESSMENT	16
10.1	OVERVIEW OF CONCEPTUAL MODEL	16
10.2	DISCUSSION AND RISK EVALUATION	16
11	PLANT GROWTH AND POTABLE SUPPLY PIPEWORK RISK ASSESSMENT	17
11.1	PHYTOTOXIC RISK ESTIMATION	17
11.2	POTABLE WATER SUPPLY PIPEWORK RISK ESTIMATION	18
12	REFINED CONCEPTUAL SITE MODEL	19
12.1	OVERVIEW	19
12.2	SOURCES	19
12.3	RISK EVALUATION	19
13	WASTE CLASSIFICATION	22

13.1	LANDFILL ACCEPTANCE CRITERIA	22
13.2	LIST OF WASTE (LoW) CODE	22
13.3	SOIL CLASSIFICATION	22
13.4	WASTE ACCEPTANCE CRITERIA	22
13.5	LANDFILL TAX	22
13.6	DISCUSSION	23
14	INFILTRATION TESTING	24
14.1	SUMMARY OF FIELD TESTING	24
14.2	SOIL INFILTRATION RATE CALCULATIONS	24
14.3	DISCUSSION	24
15	COMMENTS ON ENGINEERING DESIGN	25
15.1	GENERAL	25
15.2	SUMMARY OF GEOTECHNICAL PARAMETERS	25
15.3	CONSTRUCTION CONSIDERATIONS	27
15.4	PRELIMINARY FOUNDATION RECOMMENDATIONS	30
16	CONSIDERATIONS AND RECOMMENDATIONS	31
16.1	CONSIDERATIONS	31
16.2	RECOMMENDATIONS	31

APPENDICES

A	DRAWINGS
B	PHOTOGRAPHS
C	EXPLORATORY LOGS
D	GEOTECHNICAL RESULTS
E	CHEMICAL RESULTS
F	HAZWASTE REPORT
G	INFILTRATION TEST RESULTS
H	CBR RESULTS

1 INTRODUCTION

1.1 Contract Details

Following instruction from White Young Green PLC – ‘the client’, this report presents the results of a Ground Investigation undertaken for a proposed residential development at Berewood, Waterloooville - ‘the site’.

1.2 Proposed Development

Information presented to T&P Regeneration Ltd (T&P) indicates that the proposed development is intended to comprise the construction of traditional two storey residential dwellings with associated areas of communal and private soft landscaping, with hard landscaped access and parking. At this stage, development master planning is not finalised.

1.3 Objectives

The purpose of the assessment is to establish the environmental and geotechnical conditions of the site to support a future planning application. A development layout plan is included in Appendix A although it is understood this may be subject to change following completion of master planning.

This report also considers the likely foundation options appropriate to the proposed development, along with requirements for any related ground improvement works and/or remediation considered necessary to mitigate potentially unacceptable risks resulting from current and/or or historical land uses.

1.4 Previous Reports

A Phase 1 Desk Study was previously completed for the site by a T&P Regeneration². Pertinent information from this report has been considered within this assessment and is summarised where relevant. Where possible, copies of this report should be made available to the reader.

1.5 Scope of Works

The scope of works to fulfil the purpose of the assessment has included the following:

- Review of previous desk study report;
- Presentation of a preliminary site conceptual model and environmental risk assessment based on third party desk study information;
- Intrusive ground investigation comprising trial pitting and dynamic windowless sampling;
- Infiltration testing within trial pits to allow assessment of drainage characteristics;
- Collection of soil samples for chemical and geotechnical laboratory analysis;
- Assessment of chemical and geotechnical test results;
- Interrogation of preliminary conceptual site model and update to environmental risk assessment; and,
- Presentation of geotechnical information to assist with foundation design.

² Desk Study: T&P Regeneration, September 2018.

1.6 Report Limitations

The recommendations, interpretations and conclusions of this report are based on the historical and current site conditions reported by database and mapping sources as supplemented with information gathered during on-site visits. No responsibility can be accepted for the accuracy of third-party information including reference data contained within site specific database reports. Due to the inherent variability of the ground conditions between exploratory hole positions interpretations are accurate only for the date of the investigation works.

2 SITE INFORMATION

2.1 Site Location

Site location information is summarised in Table 2.1. A Site Location Plan is presented within Appendix A.

Table 2.1 Site Location Information

Information	Description
Full postal address	Land off London Road, Waterlooville, PO7 5ST (Closest Postcode)
National Grid Reference (NGR)	467618, 109017

2.2 Site Description

A site walkover was undertaken by T&P on 25th July 2018. A summary of pertinent site information gathered during the survey is provided in Table 2.2. A selection of photographs is provided within Appendix B.

Table 2.2 Summary of Site Information

Information	Description
Site description including current site use and dimensions/area (ha)	The site comprises an irregularly shaped area comprising 2N° parcels - Phase 3b & Phase 8, measuring approximately 6.14 and 4.07 hectares (Ha) respectively. The site is currently predominantly rough pasture with a public pathway transecting the two parcels with Phase 3b to the north and Phase 8 to the south. An electrical substation was identified adjacent to the pathway that divides the two land parcels. The feature was noted to be recently installed as part of the recent development work. A temporary construction yard associated with the surrounding ongoing residential developments was located in the north-west corner of the Phase 3b parcel at the time of the walkover. The area was inaccessible during the ground investigation/walkover.
Surrounding land uses	North Residential homes dominate the setting to the north. Further afield Brambles Business Park is present.
	South Rough pasture land beyond which residential properties are present.
	East Residential homes dominate the setting to the east.
	West Construction work associated with the ongoing residential development in the surrounding area is present to the west.
Site access	The site was accessed via a temporary construction roadway that ran from Milk Lane to the south-west of the site.
Ground cover (%)	The site ground cover comprises: - Soft landscaping (grass/planting) (85%) - Hard landscaping – gravel hardcore pathway (10%) - Temporary construction compound – ground cover unknown as access not possible (5%)
Site elevation and topography	The site elevation ranges between 41 and 59 metres Above Ordnance Datum (mAOD). Phase 3b is generally level with elevations of between 41 and 51 mAOD, with a gentle drop in gradient towards the south. Phase 8 has an elevation range of between 51 and 59mAOD with a steep incline noted in the topography towards the south-western boundary. A drainage ditch is present along the north-eastern boundary of Phase 3b, the base of which is at an approximate elevation of 41mAOD. The drainage ditch was noted to be dry at the time of the walkover.
Site boundaries	North Laxton Leaze bounds the sites northern extent.
	South There is no physical boundary between the southern site area and the adjacent rough pasture land.

Information	Description	
	East	A hedgerow approximately 2m in height traverses the eastern boundary of the site.
	West	A pathway and an adjacent hedgerow bound the parcels western boundary.
Services	Below ground low voltage electrical services run adjacent to the pathway that transects the two land parcels. Overhead electrical services traverse the central area of Phase 3b running from south-west to north-east.	
Other significant on-site features	No further significant features of note.	

3 ENVIRONMENTAL SETTING

3.1 Overview

Pertinent environmental information within the available previous T&P Desk Study report has been reviewed and is summarised in Table 3.1.

Table 3.1 Summary of Site Setting from Desk Study Information

Information	Description
Site history	From the time of the earliest maps in the late 1800s, the site is shown to be undeveloped comprising a mixture of agricultural land and rough pasture. No significant changes were noted across the site up to present day, with the exception of the pathway that divides the two parcels shown on the more recent maps. The immediate area off-site was dominated by agrarian processes since the time of the earliest available map with the town of Waterlooville centred approximately 0.5km to the east of the site. The Portsdown & Horndean Light Railway was can be seen to run adjacent to the eastern boundary of the Phase 8 parcel from 1933 to 1962. A saw mill was noted to be present approximately 20m from the south-eastern boundary of Phase 8 from 1870 to 1962. Development of the surrounding area intensified in the 1970s with an industrial estate seen to the north of the site from the 1990s. The residential Berewood development manifested in the late 2000s.
Geology	Superficial deposits are not indicated to be present beneath the site. The site is indicated to be entirely underlain by Palaeogene Age deposits of the London Clay Formation, which is understood to comprise 'Bioturbated or poorly laminated, blue-grey or grey-brown, slightly calcareous, silty to very silty clay'. Based on nearby available borehole records the London Clay Formation is likely to extend to a depth of approximately 50m below existing ground level.
Mining and geotechnical hazards	• Possible made ground of unknown composition which may be present on-site; • Attack of buried concrete by aggressive ground conditions (sulphate rich clay soils); and, • Although classified as low risk in the environmental database report, on-site clay soils are considered likely to exhibit volume change potential and may be influenced by existing and proposed planting.
Hydrology and hydrogeology	The Environment Agency classifies the underlying London Clay as an Unproductive Stratum. The site is located within an Inner Source Protection Zone (SPZ 1). According to the Environment Agency the SPZ 1 is associated with the underlying Chalk Formation that underlies the London Clay Formation at significant depth. Based on the anticipated thickness and low permeability of the London Clay Formation this has not been considered as a sensitive receptor further within this assessment. Groundwater vulnerability is classified by the Environment Agency as low. The nearest surface water feature is a drainage ditch that encroaches upon Parcel 3b's eastern boundary running from south to north. The drainage ditch is interconnected with a surrounding artificial network which is understood to be associated with the recent development in the surrounding area, and which is assumed to ultimately discharge to Southwick Park Lake approximately 4.5km north west of the site.
Environmental designations	There are no designated environmentally sensitive areas recorded within a 250m radius of the site.
Radon	No radon protection measures are required.
Background soil geochemistry	The site is not located within an area of naturally elevated metalliferous elements.
Flood risk	The site is located within an Environment Agency Flood Risk Zone 1. However, as the site is over 1 hectare in size a Flood Risk Assessment will be required to support a future planning application for the proposed development.

Information	Description
Areas of Potential Concern	<u>On-site:</u> - Potential made ground of unknown composition associated with previous onsite development. - Potential pest/weed control associated with former agricultural practices
Principal recommendations	- A ground investigation should be undertaken to establish the ground conditions at the site and determine geotechnical parameters in support of building/foundation design. Furthermore, the ground investigation should enable collection of environmental information to enable interrogation of plausible contaminant linkages identified which may present an unacceptable risk to sensitive receptors. - A Flood Risk Assessment should be completed in support of future redevelopment of the site. - A copy of the ground investigation report should be provided to the relevant regulatory authorities to confirm that they are in agreement with the report findings.

4 PRELIMINARY CONCEPTUAL SITE MODEL

4.1 Background

A risk assessment has been carried out under the governing terms set by Part 2A of the Environmental Protection Act 1990, statutory guidance entitled 'Contaminated Land Statutory Guidance (April 2012)' and in accordance with UK's risk assessment framework³.

The conceptual site model for the site has been developed with consideration of national guidance⁴ which provides a framework for risk estimation and evaluation of plausible source-pathway-receptor linkages identified in the context of a proposed residential development.

4.2 Preliminary Qualitative Risk Assessment

A preliminary conceptual site model was developed previously, based on T&P Desk Study information. Table 4.1 summarises those source-pathway-receptor relationships or "contaminant linkages" that may potentially be active in consideration of both the site's current use and proposed future use. Those contaminant linkages previously assessed as low or very low risk at this stage do not require further consideration and have correspondingly been excluded from Table 4.1. Reference should be made to the previous report for further detail.

³ CLR 11. Model Procedures for the Management of Contaminated Land. Defra & Environment Agency. 2004.

⁴ Annex 4 - Guidance for the Safe Development of Housing on land Affected by Contamination R&D66. NHBC. 2008

Table 4.1 - Summary of Source-Pathway-Receptor Relationships

APC N°	Source	Pathway (s)	Receptor	Consequence	Probability	Risk*	Comment
1	<u>On-site</u> Potential made ground of unknown composition associated with previous on-site development.	Oral ingestion	Future residents and maintenance workers	Medium	Low likelihood	Moderate/Low	-
		Vegetable uptake	Future residents	Medium	Low likelihood	Moderate/Low	-
		Dermal contact	Future residents and maintenance workers	Medium	Low likelihood	Moderate/Low	-
		Dust migration/inhalation	Future residents, maintenance workers and off-site residents/workers	Medium	Low likelihood	Moderate/Low	-
		Permeation into drinking water supplies	Future residents	Medium	Low likelihood	Moderate/Low	-
		Direct contact	Buildings	Medium	Low likelihood	Moderate/Low	-
		Uptake via root system	On-site flora	Medium	Low likelihood	Moderate/Low	-
2	<u>On-site</u> Potential agricultural pest/weed control associated with former agricultural practices.	Oral ingestion	Future residents and maintenance workers	Medium	Low likelihood	Moderate/Low	-
		Vegetable uptake	Future residents	Medium	Low likelihood	Moderate/Low	-
		Dermal contact	Future residents and maintenance workers	Medium	Low likelihood	Moderate/Low	-
		Dust inhalation	Future residents, maintenance workers and off-site residents/workers	Medium	Low likelihood	Moderate/Low	-

*Where multiple receptors exist the risk classification is based on most sensitive receptor for conservatism.

5 SCOPE OF WORK

5.1 Summary of Fieldwork

An intrusive ground investigation was undertaken by T&P across the site between 25th and 27th July 2018, comprising the following:

- Excavation of 32N° trial pits;
- Infiltration testing within 5N° trial pits;
- *In situ* vehicle mounted California Bearing Ratio (CBR) tests in 5N° locations;
- Logging of ground conditions in accordance with BS5930⁵; and,
- Soil sampling.

A supplementary investigation was undertaken on 27th November 2018 comprising the following:

- Drilling of 3N°. dynamic windowless sampler boreholes with associated sampling and in situ testing

An exploratory hole location plan is presented within Appendix A and the exploratory hole logs are presented as Appendix C.

5.2 Exploratory Locations and Access Restrictions

A summary of exploratory locations with supporting rationale is provided in Table 5.1.

Table 5.1 Rationale for Exploratory Locations

Exploratory location(s)	Rationale/justification
TP01 – TP04	Infiltration testing
TP05 – TP33	General coverage
WS01 – WS03	Targeting areas of previously identified granular soils
CBR01 – 05	General coverage for road pavement design

5.3 Trial Pits

T&P supervised the excavation of 32N° trial pits (TP01 – TP33) using a 9 tonne 360° slew excavator. The trial pits were terminated at depths ranging between 2.20 and 2.80 metres below ground level (mbgl) as directed by the T&P engineer.

5.4 Dynamic Windowless Sampler Boreholes.

T&P supervised the drilling of 3N° dynamic windowless sampler boreholes using a Terrier rig. The boreholes were terminated at 4.0m within the London Clay Formation. SPTs were taken at 1.0m intervals within the borehole to obtain data on the relative density of the granular Head Deposits which overlie the London Clay Formation.

⁵ BS5930. *Code of Practice for Ground Investigations*. 2015.

5.5 *In situ* CBR Testing

T&P supervised the completion of 4N^o vehicle mounted California Bearing Ratio (CBR) tests using the plunger method in accordance with BS1377⁶ to assist with carriageway design. A summary of geolocation data is presented in Table 5.2.

Table 5.2 Summary of CBR Test Coordinates

Location	Easting (m)	Northing (m)
CBR01	467668	108951
CBR02	467670	108897
CBR03	467601	108898
CBR04	467644	109253
CBR05	467567	109085

*metres Above Ordnance Datum (mAOD)

5.6 Infiltration Testing

T&P supervised infiltration testing within 5N^o trial pits (TP01 – 05) at approximate invert level of proposed drainage.

⁶ BS1377-Part 9: 1990. *Methods of Tests for Soils for Civil Engineering Purposes – Part 9. In Situ Tests.*

6 SUMMARY OF GROUND CONDITIONS

6.1 Recorded Ground Conditions

The geological sequence encountered during the ground investigation is summarised in Table 6.1 and described further in the following sub-sections. Ground conditions were found to differ from published geological information whereby superficial deposits were encountered across the majority of Parcel 8. Exploratory logs are included in Appendix C.

Table 6.1 Summary of Ground Conditions

Top depth range (mbgl)	Base depth range (mbgl)	Exploratory holes	Area of site	General description/comments
GL	0.20 – 0.90	Parcel 8: TP11, 12, 14, 16 – Parcel 3b: TP20, 22, 23, 29	Southern extent of Parcel 8.	Slightly sandy gravelly friable CLAY/clayey SAND. (Made Ground)
GL	0.20 – 0.40	Parcel 8: TP01 – 10, 13, 15, WS01 – WS03 Parcel 3b: TP21, 24 – 32.	Site wide with the exception of the southern area of Parcel 8	Light greyish brown slightly gravelly SAND. (Topsoil)
0.30 – 2.20	0.70 – 2.80	Parcel 8: TP02 – 08, 10, 12, 13, 15, 17, 18, WS01 – WS03 Parcel 3b: TP20, 21.	Parcel 8, southern extent of Parcel 3b	Firm orangish brown slightly sandy CLAY. Locally soft to firm in TP10 (Head Deposits)
0.70 -1.60	1.30 - 2.30	Parcel 8: TP02, 08, 10, 12, 14, 16, 17, 19, WS02, WS03 Parcel 3b: TP25 & 29.	Southern extent of parcel 3b and across parcel 8.	Orangish brown mottled grey clayey SAND. (Head Deposits)
0.20 – 2.10	2.00 -2.60 (Base not proven)	Parcel 3b: TP05, 22 – 24, 27 – 32.	Parcel 3b	Firm to stiff bluish grey/orangish brown silty CLAY. (London Clay Formation)

6.1.1 Made ground

Made ground was encountered to the southern extent of parcel 8 and sporadically across parcel 3b. The made ground was found to depth of 0.9m in the vicinity of TP19 but was generally only up to 0.50m in thickness. The made ground was found to comprise slightly sandy gravelly friable CLAY/clayey SAND, which included red brick, glass, ceramic, asphalt and concrete.

6.1.2 Topsoil

Topsoil was encountered in the majority of exploratory locations with a typical thickness ranging between 0.20 and 0.40m. In general, the topsoil was found to comprise light brown slightly gravelly SAND within Parcel 8 and brown (friable) slightly gravelly silty CLAY within 3b to the north. Given the agricultural setting of the site and the constituents identified within the strata such as brick and concrete, the strata is likely to have been reworked through ploughing and crop cultivation.

6.1.3 *Superficial Geology – Head Deposits*

During the investigation sandy CLAY/clayey SAND deposits were unexpectedly encountered and are thought to represent Superficial Head Deposits which are not shown extending onto the site on the published geological maps. The superficial deposits were identified across the entirety of Parcel 8 and the southern extent of Phase 3b. The superficial deposits were found to be generally represented by either a slightly sandy CLAY or a clayey SAND. The cohesive and granular deposits showed no obvious spatial distribution across parcel 8 and were proven to a maximum depth of 2.80mbgl.

6.1.4 *Solid Geology – London Clay Formation*

The solid geology of the London Clay Formation was encountered across Phase 3b and underlying the head deposits on Phase 8, and characterised by a firm to stiff bluish grey/orangish brown silty CLAY. The London Clay was encountered to a maximum depth of 4.00mbgl. The majority of the exploratory holes were terminated as directed by the T&P engineer.

6.1.5 *Evidence of Contamination*

With the exception of the physical constituents identified within the onsite made ground such as glass, asphalt, and brick, no significant visible or olfactory evidence of any contamination was noted during the ground investigation.

6.1.6 *Below Ground Structures and Obstructions*

No below ground structures or obstructions were encountered during the ground investigation.

6.2 **Groundwater**

Groundwater was encountered at the base of TP01, 02 and 09 at a depth of between 2.20 – 2.40mbgl within the Superficial Head Deposits. The groundwater ingress was generally noted to be slow and likely to be representative of perched water within bands of granular material.

7 SUMMARY OF LABORATORY ANALYSES

7.1.1 Geotechnical Testing

The geotechnical testing deemed necessary to adequately characterise the site from a geotechnical perspective in the context of the proposed development is summarised in Table 7.1.

Samples from the investigation were forwarded to South West Geotechnical Ltd, a UKAS accredited laboratory. Complete results are provided in Appendix D.

Table 7.1 Summary of Geotechnical Testing

Test	Notes	Quantity
Moisture content	-	11
Atterberg limits	-	11
Particle size distribution (wet sieve)	-	2
Remoulded CBR	-	3
Geochemical analysis BRE SD1 Suite	pH, Sulphur, Chloride, Nitrate, 2:1 water soluble Sulphate, Magnesium, Total Sulphate	11

7.1.2 Chemical Testing – Soil

The soil testing deemed necessary to adequately characterise the site from a contamination perspective in the context of the conceptual site model and proposed development is summarised in Table 7.2.

Samples from the investigation were forwarded to The Environmental Laboratory Ltd, a UKAS and MCERTS accredited laboratory. Complete chemical results are provided in Appendix E.

Table 7.2 Summary of Chemical Testing

Test type	Quantity
<i>Soils</i>	
Arsenic, Boron, Cadmium, Chromium, Lead, Mercury, Nickel, Copper, Zinc, Selenium, Phenols and US EPA 16 Polycyclic Aromatic Hydrocarbons.	14 soils
Pesticide / herbicide screen	3 soils

8 HUMAN HEALTH RISK ASSESSMENT

8.1 Introduction

A human health generic quantitative risk assessment (GQRA) has been undertaken in accordance with the UK regulatory framework and current guidance on assessment of risks presented by land affected by contamination⁷.

8.2 Determination of Averaging Areas/Zones

For the purposes of investigation and assessment a site can be divided into zones based on historical uses or proposed end use. These zones can be further divided into averaging areas, which can be used to assess different soil types or different potential exposure pathways etc. for the purposes of risk evaluation. Each averaging area can be considered independently for human health exposure assessment.

Based upon the proposed end use of the site and the findings of the ground investigation it is proposed that a single zone with two averaging areas is appropriate for the site as follows:

- Site wide – topsoil/natural soils.
- Site wide – made ground.

8.3 Screening Assessment

For each zone/averaging area, the analytical data has been evaluated directly against adopted screening levels⁸ for a 'residential with consumption of home-grown produce' end use.

8.4 Discussion

A review of soil data has not identified any contaminants soil concentrations to be elevated against adopted human health screening levels for a 'residential with homegrown produce' end use.

In consideration of the outcome of the generic quantitative risk assessment, it is concluded that there are no unacceptable risks presented to human health associated with on-site soils via direct contact/ingestion/inhalation pathways. Potential risks associated with ground gas/vapours and permeation via drinking water supplies are considered later in this report.

⁷ Environmental Protection Act 1990.

Contaminated Land Statutory Guidance (April 2012).

CLR11 – Model procedures for the management of land contamination. DEFRA/Environment Agency. 2004.

⁸ The LQM/CIEH S4ULs for Human Health Risk Assessment. 2015.

SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. CL:AIRE. 2013.

9 CONTROLLED WATERS RISK ASSESSMENT

9.1 Overview of Hydrogeological Setting

The underlying Head Deposits are designated as a Secondary Undifferentiated Aquifer and the London Clay Formation is classified as an Unproductive Stratum. The site is located within an Inner Source Protection Zone (SPZ 1).

There are no licensed abstractions recorded within a 500m radius. According to the Environment Agency the SPZ, is associated with the geology underlying the London Clay Formation. Based on the anticipated thickness and low permeability of the London Clay Formation this has not been considered as a sensitive receptor further within this assessment.

The nearest surface water feature to the site is a currently dry drainage ditch that traverses the eastern boundary of Phase 3b flows from south to north, the drainage network is noted to be an artificial network recently installed and associated with the recent development in the local area.

9.2 Risk Evaluation

Results of the intrusive investigation at the site have identified the soils to have a significant cohesive component which are of low relative permeability, as supported by the infiltration testing discussed in Section 14. Although groundwater was recorded at the base of TP01, 02 & 09 to the west of parcel 8, this is considered to represent laterally discontinuous perched water and not deemed to be vertically or laterally continuous with any nearby surface water features. Further to this the identified surface water receptors have been deemed to be of low relative sensitivity as a result of their artificial/ephemeral nature.

On the basis of the above the risk to controlled water receptors on site is considered to be low.

10 GAS/VAPOUR RISK ASSESSMENT

10.1 Overview of Conceptual Model

Through the development of the preliminary conceptual model potential, no significant sources of ground gas/vapour have been identified.

The ground investigation supported the above through the limited made ground encountered during the investigation. The made ground generally had a thickness of <0.3m in thickness across the site with localised deeper areas <0.90m identified to the south of parcel 8. No significant organic or putrescible material was encountered within the made ground. In consideration of the ground investigation findings, no additional potentially significant sources of ground gas have been identified on-site.

10.2 Discussion and Risk Evaluation

In consideration of the conceptual model, the site is assessed to have low ground gas generating potential. On-site made ground was found to be <0.9m in thickness with no evidence of significant putrescible or organic content. Further to this, the potential for lateral migration from off-site sources is considered limited by the low permeability nature of the underlying geology. It is considered that ground gases present a low risk to future residents.

In addition, the site is in a low risk radon area. Therefore, radon protection measures are not considered necessary for any new development.

11 PLANT GROWTH AND POTABLE SUPPLY PIPEWORK RISK ASSESSMENT

11.1 Phytotoxic Risk Estimation

When considering phytotoxic risks, contaminants selected are those listed within Annex 3 of 'Guidance for the Safe Development of Housing on Land Affected by Contamination. R&D66: 2008 Volume 2' as being 'phytotoxic'.

Where available, assessment values have been chosen based on the criteria within (in priority order) SGV Documents, ICRCL 59/83 phytotoxic threshold levels, Dutch RIVM Serious Risk Concentrations (SRC) for ecological receptors (amended for a UK soil of 10% clay and 2% soil organic matter) and US EPA Soil Screening Levels for plants.

A summary of soil concentrations compared with adopted screening levels is provided in Table 11.1.

Table 11.1 Summary of Phytotoxic Soil Screening

Determinant	Adopted screening level (mg/kg)	Min (mg/kg)	Max (mg/kg)	Nº of exceedances	Calculated 95 th UCL (mg/kg)
Selenium	10	<1.0	<1.0	0 of 15	-
Boron	3	<0.5	0.9	0 of 15	-
Copper	130	10.1	27	0 of 15	-
Nickel	70	<5.0	17.3	0 of 15	-
Zinc	300	34.7	72	0 of 15	-
Cadmium	8	<0.5	<0.5	0 of 15	-
Chromium	154	15.3	50.8	0 of 15	-
Mercury	28	<0.5	<0.5	0 of 15	-

As indicated by Table 11.1, concentrations for all the determinants were found to be below the adopted screening levels in all soil samples. As such, made ground and natural soils are not considered to pose a significant risk to the existing and proposed flora.

However, with consideration of the physical composition of on-site made ground, which includes glass, ceramic and asphalt. This may be unsuitable to remain within areas of soft landscaping. As such, a suitable topsoil should be provided as a growth medium in areas of proposed planting in accordance with recommendations from a specialist landscaping consultant. It is considered that on-site made ground may be suitable for re-use within areas of shared soft landscaping or beneath hard landscaping. In the event that on-site re-use of soils is planned, a Materials Management Plan (MMP) may be required, in line with the CL:AIRE Definition of Waste Code of Practice.

11.2 Potable Water Supply Pipework Risk Estimation

Water industry guidance⁹ states that only organic contaminants pose a potential risk to plastic pipe materials. The UKWIR report provides threshold values for polyethylene (PE) and polyvinyl chloride (PVC) pipes for the organic contaminants of concern. The results are summarised in Table 11.24 with exceedances against are highlighted in **bold**.

Table 11.2 Summary of Soil Screening Against UKWIR Criteria

Determinant	Pipe material Generic Assessment Criteria (mg/kg)		Min (mg/kg)	Max (mg/kg)
	PE	PVC		
Extended VOC suite ²	0.5	0.125	<0.1	0.2
BTEX + MTBE ¹	0.1	0.03	-	-
SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C ₅ -C ₁₀)	2	1.4	-	-
Phenols ¹	2	0.4	-	-
Cresols and chlorinated phenols ^{1 3}	2	0.04	-	-
Mineral oil C ₁₁ -C ₂₀ ¹	10	Suitable	-	-
Mineral oil C ₂₁ – C ₄₀ ¹	500	Suitable	-	-
Corrosive (conductivity, redox and pH)	Suitable	Suitable	-	-

1. Determinant not tested.

2. Based upon recorded BaP concentrations.

3. Total Monohydric Phenols – Limit of Detection (LOD) is 5.0mg/kg. All speciated phenols are below LOD of 1.0mg/kg.

Given no evidence of visual or olfactory evidence of hydrocarbon or solvent based contamination was encountered on-site during the ground investigation, and the greenfield history of the site, most of the determinants of concern in relation to water supply pipework were not tested.

However, an elevated soil concentration of benzo(a)pyrene (BaP) was recorded within the topsoil in TP22 (0.00-0.30mbgl) at 0.2mg/kg. Given this result is only marginally greater than the 0.125mg/kg screening level, is an isolated result and no on-site evidence of significant contamination has been noted, this result is not considered to present a significant risk. Furthermore, as water supply pipework will be installed in the natural soils below the topsoil, it is considered that normal PE water supply pipework is likely to be suitable.

⁹ Guidance for the selection of water supply pipes to be used in brownfield sites (UK Water Industry Research Limited (UKWIR) - Ref: 10/WM/03/21) - 2010

12 REFINED CONCEPTUAL SITE MODEL

12.1 Overview

Following completion of the ground investigation, collection and interrogation of site data with consideration of the outcome of generic quantitative risk assessment discussed in preceding sections of this report, the conceptual site model has been revised.

12.2 Sources

Further to completion of ground investigation, the sources identified within the preliminary conceptual model to require further consideration include:

- Potential made ground of unknown composition associated with previous on-site development.
- Potential agricultural pest/weed control associated with former agricultural practices.

No further potential sources of impact were identified during the subsequent ground investigation works.

12.3 Risk Evaluation

Those SPRs identified within as presenting a moderate/low or moderate risk have been further interrogated in accordance with UK national guidance and regulatory framework¹⁰ following completion of ground investigation and risk assessment. Table 12.1 presents the revised SPR's with associated classification of risk as appropriate following re-evaluation of risks.

¹⁰ Annex 4 - Guidance for the Safe Development of Housing on land Affected by Contamination R&D66: 2008.
CLR11, Model Procedures for the Management of Land Contamination. Defra & EA. 2004.

Table 12.1 Revised Source-Pathway-Receptor Relationships

APC N°	Source	Pathway (s)	Receptor	Consequence	Probability	Risk*	Comment
1	<u>On-site</u> Potential made ground of unknown composition associated with previous on-site development.	Oral ingestion	Future residents and maintenance workers	Medium	Low likelihood	Low	A review of soil data has not identified any contaminants soil concentrations to be elevated against adopted human health screening levels for a 'residential with homegrown produce' end use.
		Vegetable uptake	Future residents	Medium	Low likelihood	Low	
		Dermal contact	Future residents and maintenance workers	Medium	Low likelihood	Low	
		Dust migration/inhalation	Future residents, maintenance workers and off-site residents/workers	Medium	Low likelihood	Low	
		Permeation into drinking water supplies	Future residents	Medium	Low likelihood	Low	The utilisation of standard pipework will be suitable within any future development on site.
		Direct contact	Buildings	Medium	Low likelihood	Low	A DS1 -AC1 Concrete design mix should be adopted for buried structures placed in either the Head Deposits or London Clay.
		Uptake via root system	On-site flora	Medium	Low likelihood	Low	No exceedances identified when screened against phytotoxic screening criteria. Made ground identified with constituents such as glass and asphalt will be unable to remain in-situ in areas of proposed residential gardens.

APC N°	Source	Pathway (s)	Receptor	Consequence	Probability	Risk*	Comment
2	On-site Potential agricultural pest/weed control associated with former agricultural practices.	Oral ingestion	Future residents and maintenance workers	Medium	Low likelihood	Low	A review of soil data has not identified any contaminants soil concentrations to be elevated against adopted human health screening levels for a 'residential with homegrown produce' end use.
		Vegetable uptake	Future residents	Medium	Low likelihood	Low	
		Dermal contact	Future residents and maintenance workers	Medium	Low likelihood	Low	
		Dust inhalation	Future residents, maintenance workers and off-site residents/workers	Medium	Low likelihood	Low	

*Where multiple receptors exist the risk classification is based on most sensitive receptor for conservatism.

13 WASTE CLASSIFICATION

13.1 Landfill Acceptance Criteria

When waste is intended for disposal at a suitably licensed landfill site it is necessary for the producer (i.e. the developer or consultant on their behalf) to identify, among other general information, the following:

- The List of Waste (LoW) code for the waste.
- The relevant hazardous property (HP1 to HP15).
- The landfill class where the waste may be accepted.
- Waste Acceptance Criteria (WAC) testing results.

Relevant information on the above can be found in WM3¹¹.

13.2 List of Waste (LoW) code

Based on the available chemical results for the soils, it is anticipated that the most suitable LoW codes for the site will be:

- **17 05 03** (soils and stones containing hazardous substances).
- **17 05 04** (soils and stones other than those mentioned in 17 05 03).

13.3 Soil Classification

For the determination of whether the soils revealed on the site are hazardous, the chemical analysis results obtained have been assessed using the Hazwaste program. A copy of the HazWaste report is included in Appendix F.

13.4 Waste Acceptance Criteria

Following the implementation of the Landfill Regulations 2002, the use of Waste Acceptance Criteria (WAC) testing for waste classification was introduced on 16th July 2005.

WAC testing is intended to supplement the waste identification and classification methods above and is often required by landfills to assist in the determination of whether a waste can reliably be classified as 'inert' or 'stable non-reactive' as well as 'hazardous' or 'non-hazardous' and therefore whether the lower or higher rates of landfill tax apply.

13.5 Landfill Tax

Following the termination of the landfill tax exemption scheme by the government in November 2008 any material leaving site that is classed as non-hazardous or hazardous waste will be liable to the landfill tax levy, which is currently set at £88.95/tonne (2018/2019)¹² unless it can be proven to be inactive waste through WAC testing.

¹¹ EA 'Guidance on the classification and assessment of waste (1st Edition 2015) - Technical Guidance WM3'

¹² Details on landfill tax rates can be found at: <https://www.gov.uk/government/publications/landfill-tax-increase-in-rates/landfill-tax-increase-in-rates>

13.6 Discussion

Based on the HazWaste assessment the topsoil, natural ground and made ground is classified as non-hazardous waste. The chemical data indicates the soil will likely be treated as inert or stable non-reactive waste, avoiding the higher rate of landfill tax. However, this is not guaranteed and will need to be confirmed through discussions with the receiving tip/waste soils treatment facility who may require WAC testing.

14 INFILTRATION TESTING

14.1 Summary of Field Testing

Infiltration testing was undertaken within 5N° trial pits (TP01 - 05) at approximate assumed deep soakaway invert level (i.e. 2m below existing levels) to assess the viability of using traditional soakaway drainage within the proposed redevelopment. Graphical representations of the data are contained within Appendix G.

The trial pits were positioned as per the exploratory hole location plan contained within Appendix A. Infiltration tests were not completed in areas of the site where deeper made ground was encountered.

Ideally, to fully comply with the BRE methodology, soakaway tests should be repeated a minimum of three times. However, due to the slow infiltration rates encountered, it was not possible to complete the repeat testing within the available time period. Therefore, the results for these tests should be considered as preliminary only and further testing may be required for final drainage design. However, given the relatively impermeable nature of the soils observed across the site this is however considered unlikely.

14.2 Soil Infiltration Rate Calculations

The infiltration rates (F) have been calculated in accordance with BRE Digest DG-365 (2016). A summary of the results of the infiltration tests and calculated infiltration rates is provided in Table 14.1.

Table 14.1 Summary of Calculated Infiltration Rates

Exploratory Location	Date	Total Measured water level change (m)	Time Period (mins)	Calculated infiltration rate (m/s)
TP01-01	25/07/2018	0.06	278	Non-calculable
TP02-01	25/07/2018	0.18	256	Non-calculable
TP03-01	25/07/2018	0.11	113	Non-calculable
TP04-01	25/07/2018	0.06	200	Non-calculable
TP05-01	25/07/2018	0	200	Non-calculable

14.3 Discussion

The site was found to be underlain by Superficial Head deposits to the south and the London Clay Formation to the north. Testing undertaken within both strata indicates soakaways will not offer a viable drainage solution which is reflective of the cohesive element identified within the deposits.

15 COMMENTS ON ENGINEERING DESIGN

15.1 General

Eurocode 7 (Section 2)¹³ advocates the use of geotechnical categorisation of the proposed structures to establish the design requirements. Information presented to T&P indicates that the proposed development is to comprise the construction of traditional two storey residential dwellings with associated areas of communal and private soft landscaping and hard landscaped access and parking. It has been assumed that the dwellings will be of masonry construction with line loads of between 50-70kN/m.

In consideration of the available information on the development proposals, for the purposes of this investigation the proposed structures have been classified as follows:

- Geotechnical category 1: Small and relatively simple buildings (houses) with strip or piled foundations, roads, pavements, car parks, retaining walls below 2m, small excavations for drainage works, with the proposed housing development considered to be within this category.

The site is known to comprise an area of infilled ground to the south and south east of Parcel 8 which may affect foundation choice and design as part of the final development.

15.2 Summary of Geotechnical Parameters

Stratum thicknesses and geotechnical parameters for the strata encountered in the investigation are summarised in the following sections. The level of confidence in the derived parameters is provided in Table 15.1.

Table 15.1 Confidence Levels

Key	Description
value	High level of confidence - based on information from investigation.
value	Medium level of confidence - based on published data.
value	Low level of confidence – more data required if parameter to be used in design.

15.2.1 Made ground

The thickness of the made ground is described in Table 15.2

Table 15.2 Summary of Geotechnical Parameters – Made Ground

Parameter	Units	Min	Max	Design	Comments
Top Depth	mbgl	GL	GL	GL	
Base Depth	mbgl	0.20	0.90	0.50	
Thickness	m	0.20	0.90	0.50	
pH	-	6.5	7.7	7	
Water soluble sulphate (SO ₄ ²⁻)	mg/l	<0.02	0.02	0.02	
Note: The variability of the Made Ground strata is such that derivation of geotechnical parameters is considered to be generally inappropriate and potentially misleading.					

¹³ BS EN 1997 – Part 2: Geotechnical Design.

The site was found to comprise an area of deeper made ground to the south and south east of Parcel 8 which may affect foundation choice and design as part of the final development.

15.2.2 Head Deposits

The design thicknesses and geotechnical parameters for use in the Superficial Head Deposits are described in Table 15.3.

Table 15.3 Summary of Geotechnical Parameters – Head Deposits

Parameter	Units	Min	Max	Design	Comments
Top Depth	mbgl	0.30	0.90	0.50	-
Base Depth	mbgl	1.00	2.80	2.50	Base not proven
Thickness	m	1.30	2.50	2.00	Thickness not proven
Moisture Content	%	9.8	33	25	-
Liquid Limit	%	25	56	45	-
Plastic Limit	%	11	21	18	-
Plasticity Index	-	14	41	30	-
% passing 425µm sieve	%	95	100	100	-
Modified Plasticity Index	-	16	41	41	Based on the NHBC guidance (2017), results are indicative of soils of a high volume change potential.
Gravel/cobbles	%	-	-	-	Indicative of a material consisting of a clayey silty SAND. The grading test is broadly reflective of the engineering logs.
Sand	%	70.7	-	70.7	
Fines	%	29.3	-	29.3	
Standard Penetration Resistance	N Value	7	15	7	Values of 7 at 1.0m, minimum value at 2.0m = 12
Water soluble sulphate (SO ₄ ²⁻)	mg/l	<0.02	0.03	0.03	
Acid soluble sulphate (SO ₄ ²⁻)	%	0.03	0.04	0.14	
Total Sulphur	%	<0.01	0.01	0.01	
Total Potential Sulphate	%	0.03	0.03	0.03	

15.2.3 London Clay Formation

The design thicknesses and geotechnical parameters for use in the London Clay Formation are described in Table 15.4.

Table 15.4 Summary of Geotechnical Parameters – London Clay Formation

Parameter	Units	Min	Max	Design	Comments
Top Depth	mbgl	0.20	2.10	0.50	-
Base Depth	mbgl	2	2.60	2.20	Base not proven
Thickness	m	2.00	2.60	2.00	Thickness not proven
Moisture Content	%	24	32	30	-
Liquid Limit	%	63	73	70	-
Plastic Limit	%	20	25	22	-

Parameter	Units	Min	Max	Design	Comments
Plasticity Index	-	40	50	47	-
% passing 425µm sieve	%	100	-	100	-
Modified Plasticity Index	-	40	50	>40	Based on the NHBC guidance (2017), results are indicative of soils of a high-volume change potential
Gravel	%	-	-	-	Indicative of a material consisting of a slightly sandy silty CLAY. The grading tests are broadly reflective of the engineering logs.
Sand	%	6.9	-	6.9	
Fines	%	93.1	-	93.1	
Undrained shear Strength	kPa	60	93	75	Determined from hand shear vanes testing. Indicative of clay of medium to high strength
Standard Penetration Resistance	N Value	15	18	15	
Skempton Consolidation Factor μ	-	1	1	1	Worst case value so should provide a conservative design.
pH	-	7.9	8.0	8.0	
Water soluble sulphate (SO_4^{2-})	mg/l	<0.02	0.04	0.04	Design value should be worst case if less than 5 samples. If between 5 and 9 samples – the mean of the highest 2 should be used for design. If 10 or more results – mean of the highest 20% of the results should be used (rounded to nearest 100mg/l). (Ref = BRE Special Digest 1).
Acid soluble sulphate (SO_4^{2-})	%	0.03	0.14	0.14	Rationale as above
Total Sulphur	%	<0.01	0.02	0.02	
Total Potential Sulphate	%	0.03	0.06	0.06	

15.3 Construction Considerations

15.3.1 Subsurface Concrete

Based on the pH values, water soluble sulphate and SD1 suite concentrations recorded by the chemical and geotechnical laboratory analysis a DS1-AC1 design mix concrete should be suitable for buried structures placed within the Head Deposits or the London Clay Formation when compared against the BRE¹⁴ assessment levels.

15.3.2 Floor Slabs

The results of the investigation indicate that the cohesive soils of the Head Deposits and London clay Formation have been classified as having high-volume change potential. As such,

¹⁴ BRE Special Digest 1:2005 – Third edition – Concrete in aggressive ground.

proprietary suspended ground floor slabs should be designed with a minimum 300mm void based upon NHBC guidance.

15.3.3 *Building Near Trees*

The cohesive soils found beneath the site have been found to be of high volume change potential. Based upon the volume change potential and in accordance with NHBC guidelines the minimum founding depth of traditional foundations placed within the superficial Head Deposits and London Clay would be 1.0m.

At this stage due to the high-volume change potential of the London Clay, provision should be made across the site for the use of void formers if shallow strip foundations are to be placed at a depth greater than 1.50mbgl due to the influence of trees. The impact of any new planting associated with future potential development of the site should take into account the volume change potential of the soils.

Due to the high volume change potential of the soils, foundations will be susceptible to the influence of trees. It is recommended the findings of this report are considered in conjunction with an arboricultural survey and the recommendations given by the NHBC regarding the over deepening of foundations in the vicinity of trees.

15.3.4 *Deep Excavations*

Deposits across both parcels were generally found to be stable during the intrusive ground investigation. Man entry into any excavations should be avoided where possible. However, if entry into excavations is required, the excavation sides should be adequately shored and supported or battered back to a safe angle in accordance with appropriate temporary works design.

15.3.5 *Groundwater*

Groundwater was encountered during the ground investigation at depths ranging between 2.20 and 2.40 mbgl, as outlined in Section 6.2. It is considered that this is likely to be representative of shallow laterally discontinuous perched groundwater. As such, it is considered likely that groundwater ingress into excavations to <2.0m depth within Parcel 8 will be relatively slow and should be adequately dealt with via sump pumping. Should more rapid ingress be encountered the advice of specialist dewatering contractors may be sought.

15.3.6 *Buried Utilities*

Utility service plans indicate a below ground low voltage electrical service runs adjacent to the pathway that transects the two land parcels. Further to this, overhead electrical services traverse the central area of Phase 3b running from south-west to north-east.

It is recommended that live services are accurately located by careful hand digging and liaison undertaken with the utility companies with regard any required works in these areas. The services should be clearly marked and taken into account in the development design and construction process.

Excavation in close proximity to live services will need to ensure that the excavation walls are stable or appropriately battered to a safe angle. Temporary slope stability works and pumping of groundwater may be required in deeper excavations within Parcel 8.

15.3.7 *Earthworks and Material Handling*

Currently it is unknown whether site levels will be changed to accommodate the future development. In the event that site levels are to be reprofiled, it is likely that re-use of existing

soils will be required. Should earthworks be necessary an earthworks specification should be produced to ensure the appropriate management and reuse of the existing soils.

In the event that on-site re-use of soils is planned, a Materials Management Plan (MMP) may be required, in line with the CL:AIRE Definition of Waste Code of Practice.

15.3.8 Road Construction

In total 5N^o vehicle mounted CBR tests (CBR01 – CBR05), were carried out along the proposed roadways across the site. The results of the CBR tests are shown in Appendix H. In addition, 2N^o laboratory remoulded CBR tests were undertaken on a sample at assumed approximate formation level within natural soils. A copy of the test report can be found in Appendix D. Recorded CBR values of <1% - 11% were recorded by the remoulded testing reflecting the moisture content of the shallow cohesive material and the higher sand content at depth within the Head Deposits in Parcel 8.

The *in-situ* vehicle mounted CBR test results recorded across the site range from 2% - 18% at assumed formation level. The higher CBR values were recorded where tests were carried out on the natural soils with higher granular content. Based on the test results a design CBR value of <2.5% is recommended subject to the cohesive soils of the Head Deposits or London Clay being encountered at formation level.

Where revealed the clay soils are highly moisture sensitive and will be prone to rapid deterioration to give lower CBR values if left exposed during periods of wet weather. In such circumstances the use of geotextile at the base of construction may be prudent to reduce the potential loss of granular sub-base if placed during periods of inclement weather.

Higher CBR values of up to 5% may be adopted in areas where the granular head deposits are encountered at formation level within Parcel 8. However, the distribution of these deposits across the site indicate no discernible spatial distribution and therefore zoning the site into these areas may prove problematic.

Typical adoptable road construction thicknesses for a CBR of 2.5% are given below based on current guidance¹⁵:

- Foundation Class 1 – 550mm capping.
- Foundation Class 2 – 450mm sub-base.
- Foundation Class 3 – 340mm sub-base.
- 350mm Foundation Class 2 sub-base with 250mm Foundation Class 1 capping.
- 290mm Foundation Class 3 sub-base with 250mm Foundation Class 1 capping.

The thicknesses given above may be reduced subject to surface modulus performance testing following placement of the materials.

Made ground was locally revealed traversing the southern boundary of parcel 8 up to 0.90m thick. This material would not be suitable to remain beneath adoptable roads. Where it is observed at formation it should be excavated and replaced with compacted granular fill.

¹⁵ Interim Advice Note 73/06 Revision 1 (2009)

15.4 Preliminary Foundation Recommendations

The proposed development is to comprise the construction of traditional two storey residential dwellings of masonry construction with assumed line loads of between 50-70kN/m.

15.4.1 Overview of Ground Conditions

The ground conditions across the site were variable, with made ground encountered to a maximum depth of 0.9mbgl to the south of parcel 8. Competent strata were generally encountered at the base of the made ground.

Head deposits were encountered across Parcel 8 with no discernible spatial distribution in regard to the granular or cohesive nature of the deposits with a clayey SAND/sandy CLAY encountered at founding level across the parcel. The London Clay formation was encountered across Parcel 3b at founding level.

15.4.2 Parcel 3b – Founding Recommendations

Engineer's observations and *in situ* testing within the London Clay Formation indicate an undrained shear strength of between 60 and 90kPa. Therefore, a typical value of 75kPa has been used for preliminary design purposes.

Based on the above and taking into account the NHBC guidance it is considered that traditional shallow strip foundations placed at the minimum depth of 1.0mbgl within the firm clay be designed for an allowable bearing capacity of 115kPa for acceptable settlement. Higher bearing capacities may be achieved by taking foundations into the stiff clay from approximately 2.0mbgl.

15.4.3 Parcel 8 – Founding Recommendations

In situ testing within the cohesive Head Deposits indicate an undrained shear strength of between 38 and 78kPa, the lower shear strength reflects the granular content noted within the clay. Therefore, a typical value of 50kPa has been used for preliminary design purposes.

Based on the above and in accordance with NHBC guidance 2016 it is considered that foundations placed at the minimum foundation depth of 1.00mbgl in the cohesive deposits of the Superficial Head Deposits may be designed for an allowable bearing capacity of 75kPa for acceptable settlement reflecting the less favourable settlement characteristics of the Head Deposits.

In situ standard penetration testing within the granular head deposits at 1.0m resulted in N values of between 7 and 15 indicating loose to medium dense material. For the purpose of this assessment the lower bound value of 7 has been used which corresponds to an angle of internal friction, ϕ , of approximately 29°. As such, foundations placed at 1.0m bgl within the granular head deposits may be designed for an allowable bearing capacity of 100kPa for acceptable settlement.

In practice, given the vertical and lateral variability of the cohesive and granular head deposits, foundations are likely to span between granular and cohesive material. As such, all foundations should utilise mesh reinforcement to minimise the possibility of differential settlement and be designed based on an allowable bearing capacity of 75kPa.

Should higher bearing capacities be required foundations should be taken to greater depth.

16 CONSIDERATIONS AND RECOMMENDATIONS

16.1 Considerations

The following uncertainties/data gaps have been identified which may require further consideration:

- The site is over 1 hectare in size. As such, a Flood Risk Assessment will be required to support future development.

16.2 Recommendations

Recommendations are outlined in the following sections.

16.2.1 *Plant Growth*

- No significantly elevated phytotoxic contaminant compounds were detected in soils, and it was noted that existing vegetation was generally healthy. It should however be noted that the site is partially covered by made ground which may be physically unsuitable and it would be prudent to allow for the installation of a suitable thickness of a topsoil growth medium in any areas of intended specialist planting. This should be reviewed upon finalisation of the development landscaping plan and consultation with the project landscaping advisor.

16.2.2 *Potable Water Supply Pipework*

- With respect to the UKWIR guidelines it is considered that standard water supply pipework will be suitable for any services installed across both Parcel 3b & 8.

16.2.3 *Engineering*

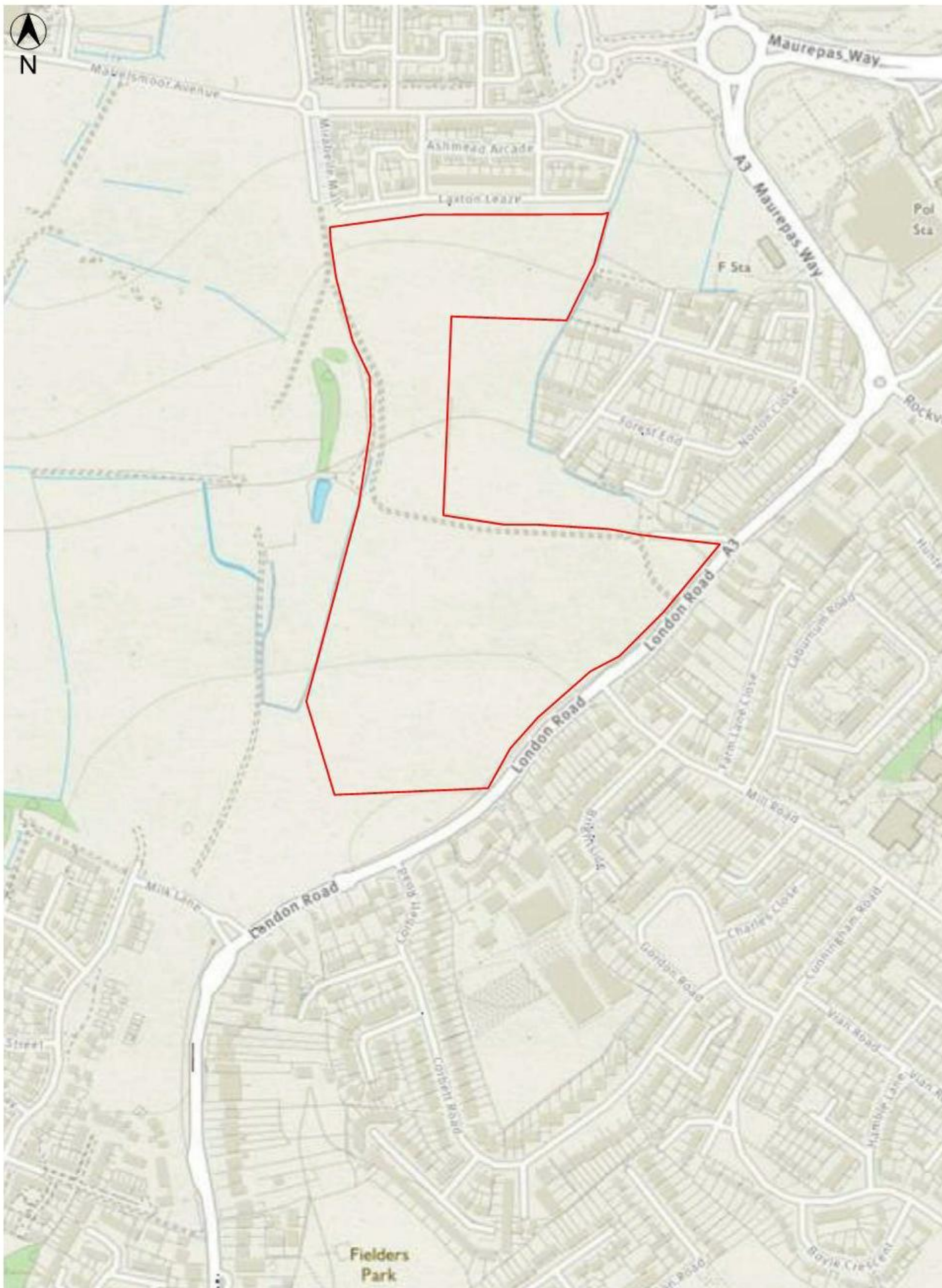
- Infiltration testing highlighted that soakaways are unlikely to be a viable mechanism for surface water management on site.
- Due to poor ground conditions during the fieldwork leading to access restrictions the number and distribution of windowless sampler boreholes was limited. As such, it may be prudent to carry out further testing following finalisation of the development plan.
- Based upon the recorded pH levels revealed on site when considered against the assessment levels in BRE Special Digest 1 (2005) a DS1-AC1 design mix concrete should be suitable for buried structures placed within the Head Deposits or London Clay Formation.
- Should groundwater level be significantly shallower during excavation of foundations than that found during the trial pitting exercise then formation of foundation trenches may prove problematic.
- Should any exceptionally soft spots or oversized material be noted during construction, they should be removed and replaced with compacted granular fill for road construction.

16.2.4 *General*

- The statutory water provider should be consulted regarding suitable water supply pipework requirements.
- Discussions should be held with local landfill/soil waste treatment facilities to agree material classification/pre-treatment required for any soils to be disposed off-site as a result of proposed construction works.
- Ground workers should remain vigilant for visible and olfactory signs of contamination following demolition of on-site buildings.

- Given the high risk of unexploded ordnance devices on site any intrusive ground works should be undertaken under supervision of a suitably qualified Explosive Ordnance Clearance specialist.
- A site-specific health and safety plan should be prepared to inform on risks posed from the previous site use and mitigations for ground workers developing the site e.g. requirements for appropriate PPE, hygiene practices, environmental monitoring and requirements for mitigation measures during construction works.
- A copy of this report should be provided to the relevant regulatory authorities and the NHBC to confirm that they are in agreement with the report findings.

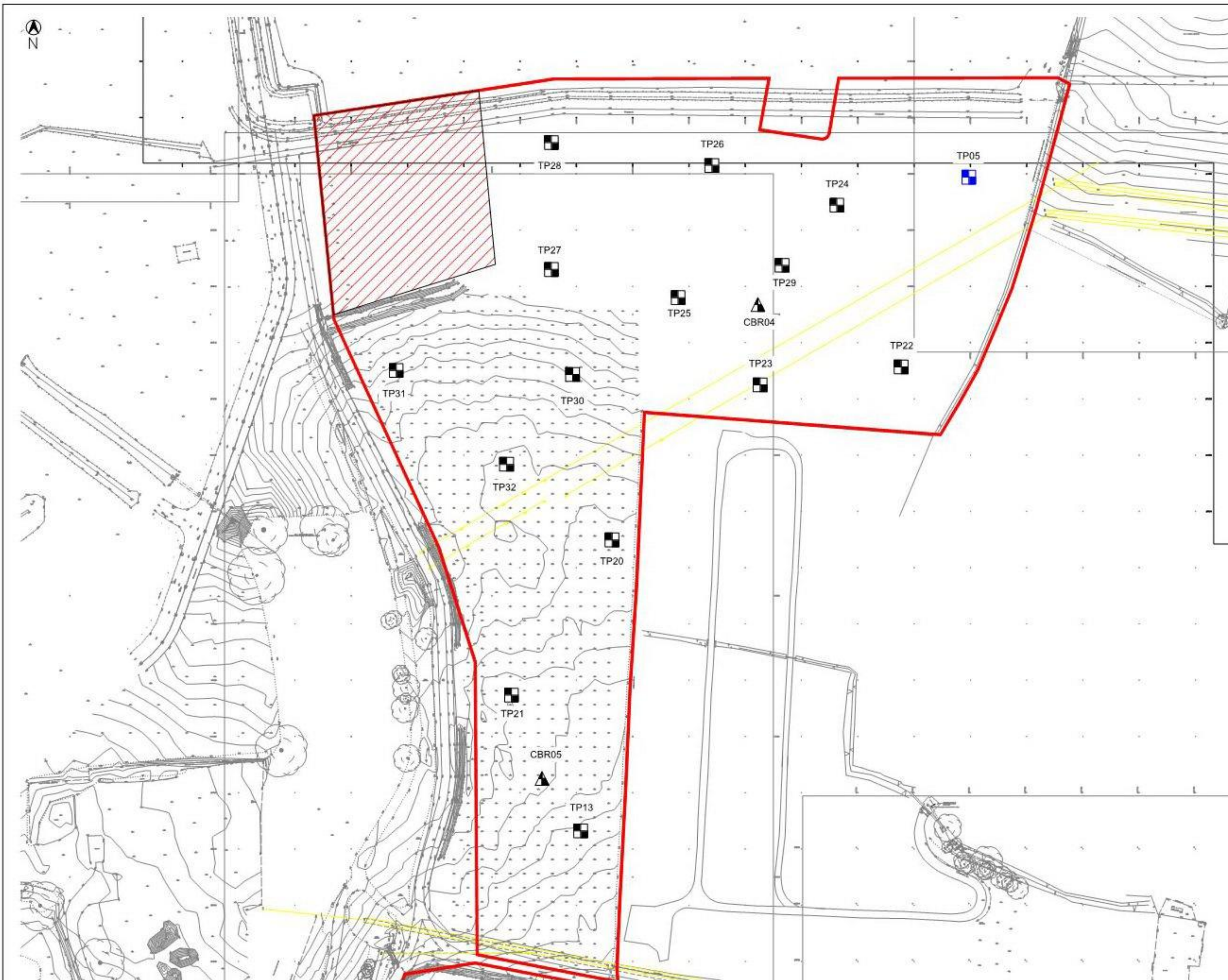
Appendix A – Drawings



		Project Name		Client	
		Phase 3B and 8, Berewood, Waterlooville			
		Drawing Title		Drawn by: CT Checked by: - Date: 17/07/18 Scale: NTS	
		Site Location Plan		Drawing No.: BER1808G_01_002 Rev: -	
Rev.	Date	Amendment	Drawn	Checked	



T&P
 Regen
 Unit 4 Brunel Lock Development,
 Smeaton Road, Bristol, BS1 6SE
 Tel: 0117 927 7756 Fax: 0117 927 6309



Key:

-  Trial Pit Locations
-  Infiltration Test Locations
-  CBR Test Locations

Notes
• Exploratory hole positions indicative only/Exploratory hole positions based upon GPS Co-ordinates collected during ground investigation on 30/07/18

Rev.	Date	Amendment	Drawn	Checked



**Unit 4 Brunel Lock Development,
Smeaton Road, Bristol, BS1 6SE
Tel: 0117 927 7756**

Project Name
**Phase 3b, Berewood,
Waterlooville**

Drawing Title
Exploratory Hole Location Plan

Client
WYG PLC

Drawn by AD	Checked by JD	Date 03/08/18	Scale NTS
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Drawing No. BER1808G_02-002	Rev. -
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Key:

- Trial Pit Locations
- Infiltration Test Locations
- CBR Test Locations
- Window Sample Locations

Notes
 • Exploratory hole positions indicative only/Exploratory hole positions based upon GPS Co-ordinates collected during ground investigation on 30/07/18 & 27/11/18

Rev.	Date	Amendment	Drawn	Checked



**Unit 4 Brunel Lock Development,
 Smeaton Road, Bristol, BS1 6SE
 Tel: 0117 927 7756**

Project Name
 Phase 8 Berewood, Waterloooville

Drawing Title
 Exploratory Hole Location Plan

Client
 WYG PLC

Drawn by AD **Checked by** JD **Date** 11/12/18 **Scale** NTS

Drawing No. BER1808G.1_02-001 **Rev.** A

Appendix B – Photographs



PLATE 01 – Overview of Phase 8 orientated south to north.



PLATE 02 – Overview of Phase 8 orientated east to west.



PLATE 03 – Overview of Phase 3b from southern boundary orientated south to north.



PLATE 04 – Overview Phase 3b northern area orientated east to west.



PLATE 05 – Overview of TP10 in parcel 3b.



PLATE 06 – Overview of TP19 in Parcel 8.



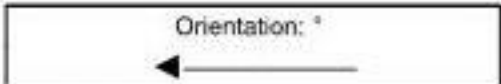
PLATE 07 – Overview of TP25 In parcel 3b.

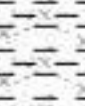
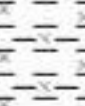
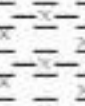


PLATE 08 – Overview of TP22 in parcel 3b.

Appendix C – Exploratory Logs

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC			Trial Pit ID: TP01			
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1			
Trial Pit Log		Easting: 467553	Northing: 108997	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25			
Weather: Sunny			Termination: Specified depth reached			Stability: Stable				
Samples & In Situ Testing			Strata Details					Water	Backfill	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				
0.00 - 0.20	ES1					MADE GROUND: Yellowish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of red brick, concrete and chert.				
0.20 - 0.60	ES2			0.20		Soft to firm orangish brown mottled dark brown silty CLAY. (HEAD DEPOSITS)				
				(0.40)						
		0.60		Firm orangish brown silty CLAY. (HEAD DEPOSITS)						
0.80 - 1.00	D3	HV 1.00m, 62 / 21kPa					1			
1.20 - 1.40	D4	HV 1.50m, 66 / 28kPa								
				(1.80)						2
1.80 - 2.00	D5									3
				2.40	End of Trial Pit at 2.40m		4			
							5			
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water										
Remarks: Groundwater seepage at base.					Dimensions:					
					Length: 2.00m		Orientation: °			
					Width: 0.70m					
					Groundwater Details					
Depth encountered (m)		Remarks								
2.40		Seepage at base of pit.								
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016										

 www.landpregeneration.co.uk	Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC			Trial Pit ID: TP02					
	Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1					
Trial Pit Log		Easting: 467528	Northing: 108952	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25				
Weather: Sunny			Termination: Specified depth reached			Stability: Stable					
Samples & In Situ Testing				Strata Details			Water	Backfill			
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description					
0.00 - 0.30	ES1	HV 0.50m, 18 / 12kPa		(0.30)		MADE GROUND: Greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of concrete, chert and ceramic.	1				
0.30 - 0.60	ES2			0.30		Soft (friable) orangish brown mottled grey sandy CLAY. (HEAD DEPOSITS)					
0.60 - 0.80	ES3			(0.90)		Below 0.60m: Becomes firm.					
0.80 - 1.00	D4	HV 0.80m, 36 / 24kPa		(0.90)					2		
1.20 - 1.40	D5			1.20						(0.30)	Orangish brown clayey SAND. (HEAD DEPOSITS)
1.50 - 1.70	D6			1.50						(0.70)	Firm orangish brown mottled grey sandy silty CLAY. (HEAD DEPOSITS)
				2.20	End of Trial Pit at 2.20m		3				
								4			
							5				
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water											
Remarks: Moderate groundwater ingress at 2.00mbgl.					Dimensions: Length: 1.60m Width: 0.60m Orientation: 						
					Groundwater Details Depth encountered (m): 2.20 Remarks: Moderate ingress.						
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016											

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP03		
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467514	Northing: 108893	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Sheet 1 of 1 Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing				Strata Details				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.00 - 0.30	ES1	HV 0.60m, 35 / 11kPa		(0.30)		MADE GROUND: Light brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of red brick, concrete and chert.		
0.30 - 0.60	ES2			0.30		Firm orangish brown mottled grey sandy silty CLAY. (HEAD DEPOSITS)		
0.60 - 0.80 0.60 - 0.80	B4 D3			0.60		Firm orangish brown mottled grey silty CLAY. (HEAD DEPOSITS)		
0.90 - 1.10	D5	(0.60)						
1.20 - 1.40	D6	1.20			Firm orangish brown mottled grey to black sandy CLAY. (HEAD DEPOSITS)			
		HV 1.50m, 38 / 12kPa		(1.00)			1	
		HV 2.00m, 40 / 20kPa		2.20		End of Trial Pit at 2.20m	2	
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions: Length: 2.10m Width: 0.70m Orientation: ° 		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP04 Sheet 1 of 1 Scale: 1:25		
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: CT	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467768	Northing: 108917	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018		
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1	HV 2.00m, 32 / 18kPa		(0.30)		Light greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to medium of chert. (TOPSOIL)	1	
				0.30		Firm to stiff orangish brown sandy silty CLAY. (HEAD DEPOSITS)		
0.70 - 0.90	ES2			(0.90)				
				1.20		Firm orangish brown mottled light greyish brown sandy CLAY. (HEAD DEPOSITS)		
				(1.20)				
2.20 - 2.40	B4						2	
2.20 - 2.40	D3			2.40		Between 2.20m and 2.40m: Black carbonaceous smearing.		
						End of Trial Pit at 2.40m	3	
							4	
							5	

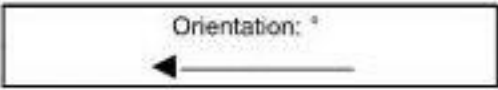
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

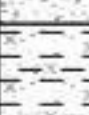
Remarks: Groundwater not encountered.

Dimensions:
Length: 2.00m
Width: 0.65m
Orientation: °

Groundwater Details

T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016

 www.landpregeneration.co.uk	Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC			Trial Pit ID: TP05		
	Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1		
	Easting: 467574	Northing: 108937	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25		
Trial Pit Log		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1			(0.30)		Light greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert. (TOPSOIL)		
0.30 - 0.70	ES2			0.30		Firm to stiff orangish brown slightly sandy CLAY. (HEAD DEPOSITS)		
				(0.40)				
0.90 - 1.10	D3			0.70		Stiff orangish brown silty CLAY. (LONDON CLAY)	1	
				(1.40)				
1.50 - 1.70	D4							
1.90 - 2.10	D5			2.10		End of Trial Pit at 2.10m	2	
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions: Length: 2.20m Width: 0.65m Orientation: ° 		
						Groundwater Details		
						Depth encountered (m)	Remarks	
						T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016		

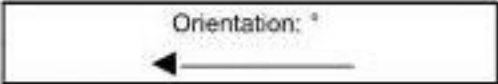
 www.landpregeneration.co.uk	Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC			Trial Pit ID: TP06		
	Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1		
Trial Pit Log		Easting: 467574	Northing: 108937	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25	
Weather: Sunny			Termination: Specified depth reached			Stability: Stable		
Samples & In Situ Testing				Strata Details			Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1	HV 0.60m, 30 / 8kPa		(0.30)		MADE GROUND: Light greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of red brick, concrete and chert.	1	
0.30 - 0.60	ES2			0.30		Light brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert. (HEAD DEPOSITS)		
0.60 - 0.80 0.60 - 0.80	D4 ES3			0.60		Firm orangish brown mottled grey sandy silty CLAY. (HEAD DEPOSITS)		
1.50 - 1.70	D5	HV 1.00m, 42 / 12kPa	(1.60)			2		
2.30 - 2.50	D6	HV 1.50m, 45 / 18kPa		2.20		Firm grey sandy CLAY. (HEAD DEPOSITS)	3	
				(0.30)				
		HV 2.50m, 50 / 25kPa		2.50		End of Trial Pit at 2.50m	4	
				(0.30)				
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.					Dimensions: Length: Orientation: ° Width:			
					Groundwater Details			
					Depth encountered (m) Remarks			
					T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016			

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP07		
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467628	Northing: 108975	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Sheet 1 of 1 Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1	HV 1.00m, 42 / 12kPa		(0.30)		MADE GROUND: Light greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of red brick, concrete and chert.		
0.30 - 0.60	ES2			0.30		Light brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert. (HEAD DEPOSITS)		
				0.60		Firm orangish brown mottled light greyish brown sandy CLAY. (HEAD DEPOSITS)		
		HV 1.50m, 48 / 16kPa		(1.70)			1	
							2	
							3	
							4	
							5	
				2.30	End of Trial Pit at 2.30m			
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.					Dimensions:			
					Length:		Orientation: °	
					Width:			
					Groundwater Details			
Depth encountered (m)		Remarks						
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landpregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP08 Sheet 1 of 1 Scale: 1:25		
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: CT	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467693	Northing: 108973	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018		
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1			(0.30)		MADE GROUND: Light greyish brown in places stained black slightly clayey gravelly SAND. Gravel is angular to subangular fine to medium of chert and sandstone.	1	
0.30 - 0.50	ES2			0.30		Light brown sandy silty CLAY with occasional subrounded fine to coarse chert gravel. (HEAD DEPOSITS)		
0.50 - 0.70	ES3			0.50		Firm (friable) orangish brown sandy CLAY. (HEAD DEPOSITS)		
1.20 - 1.40	D4			(0.90)				
2.00 - 2.20	D5			1.40		Orangish brown mottled greyish brown slightly clayey SAND. (HEAD DEPOSITS)	2	
				(0.80)				
				2.20		End of Trial Pit at 2.20m	3	
							4	
							5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

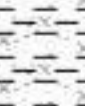
Remarks: Groundwater not encountered.

Dimensions:
 Length: 2.00m
 Width: 0.70m
 Orientation: 

Groundwater Details

Depth encountered (m)	Remarks

T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP09	
		Contract Number: BER1808G	Date Started: 26/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1
Trial Pit Log		Easting: 467574	Northing: 108887	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable	
Samples & In Situ Testing				Strata Details			
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water
0.00 - 0.30	ES1	HV 0.70m, 46 / 28kPa		(0.30)		MADE GROUND: Light greyish brown in places stained black slightly clayey gravelly SAND. Gravel is angular to subangular fine to medium of chert and sandstone.	
0.30 - 0.60	ES2			0.30		Greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert. (HEAD DEPOSITS)	
0.60 - 0.80	D3			0.60		Firm orangish brown mottled grey slightly sandy silty CLAY. (HEAD DEPOSITS)	
0.80 - 1.00			(0.60)				
1.00 - 1.20				1.20		Firm orangish brown slightly sandy silty CLAY. (HEAD DEPOSITS)	1
1.20 - 1.50							
1.50 - 1.70	D4	HV 1.50m, 64 / 32kPa		(1.10)			2
1.70 - 2.00							
2.00 - 2.30				2.30		End of Trial Pit at 2.30m	3
2.30 - 2.60							4
2.60 - 2.90							5
2.90 - 3.20							
3.20 - 3.50							
3.50 - 3.80							
3.80 - 4.10							
4.10 - 4.40							
4.40 - 4.70							
4.70 - 5.00							
5.00 - 5.30							
5.30 - 5.60							
5.60 - 5.90							
5.90 - 6.20							
6.20 - 6.50							
6.50 - 6.80							
6.80 - 7.10							
7.10 - 7.40							
7.40 - 7.70							
7.70 - 8.00							
8.00 - 8.30							
8.30 - 8.60							
8.60 - 8.90							
8.90 - 9.20							
9.20 - 9.50							
9.50 - 9.80							
9.80 - 10.10							
10.10 - 10.40							
10.40 - 10.70							
10.70 - 11.00							
11.00 - 11.30							
11.30 - 11.60							
11.60 - 11.90							
11.90 - 12.20							
12.20 - 12.50							
12.50 - 12.80							
12.80 - 13.10							
13.10 - 13.40							
13.40 - 13.70							
13.70 - 14.00							
14.00 - 14.30							
14.30 - 14.60							
14.60 - 14.90							
14.90 - 15.20							
15.20 - 15.50							
15.50 - 15.80							
15.80 - 16.10							
16.10 - 16.40							
16.40 - 16.70							
16.70 - 17.00							
17.00 - 17.30							
17.30 - 17.60							
17.60 - 17.90							
17.90 - 18.20							
18.20 - 18.50							
18.50 - 18.80							
18.80 - 19.10							
19.10 - 19.40							
19.40 - 19.70							
19.70 - 20.00							
20.00 - 20.30							
20.30 - 20.60							
20.60 - 20.90							
20.90 - 21.20							
21.20 - 21.50							
21.50 - 21.80							
21.80 - 22.10							
22.10 - 22.40							
22.40 - 22.70							
22.70 - 23.00							
23.00 - 23.30							
23.30 - 23.60							
23.60 - 23.90							
23.90 - 24.20							
24.20 - 24.50							
24.50 - 24.80							
24.80 - 25.10							
25.10 - 25.40							
25.40 - 25.70							
25.70 - 26.00							
26.00 - 26.30							
26.30 - 26.60							
26.60 - 26.90							
26.90 - 27.20							
27.20 - 27.50							
27.50 - 27.80							
27.80 - 28.10							
28.10 - 28.40							
28.40 - 28.70							
28.70 - 29.00							
29.00 - 29.30							
29.30 - 29.60							
29.60 - 29.90							
29.90 - 30.20							
30.20 - 30.50							
30.50 - 30.80							
30.80 - 31.10							
31.10 - 31.40							
31.40 - 31.70							
31.70 - 32.00							
32.00 - 32.30							
32.30 - 32.60							
32.60 - 32.90							
32.90 - 33.20							
33.20 - 33.50							
33.50 - 33.80							
33.80 - 34.10							
34.10 - 34.40							
34.40 - 34.70							
34.70 - 35.00							
35.00 - 35.30							
35.30 - 35.60							
35.60 - 35.90							
35.90 - 36.20							
36.20 - 36.50							
36.50 - 36.80							
36.80 - 37.10							
37.10 - 37.40							
37.40 - 37.70							
37.70 - 38.00							
38.00 - 38.30							
38.30 - 38.60							
38.60 - 38.90							
38.90 - 39.20							
39.20 - 39.50							
39.50 - 39.80							
39.80 - 40.10							
40.10 - 40.40							
40.40 - 40.70							
40.70 - 41.00							
41.00 - 41.30							
41.30 - 41.60							
41.60 - 41.90							
41.90 - 42.20							
42.20 - 42.50							
42.50 - 42.80							
42.80 - 43.10							
43.10 - 43.40							
43.40 - 43.70							
43.70 - 44.00							
44.00 - 44.30							
44.30 - 44.60							
44.60 - 44.90							
44.90 - 45.20							
45.20 - 45.50							
45.50 - 45.80							
45.80 - 46.10							
46.10 - 46.40							
46.40 - 46.70							
46.70 - 47.00							
47.00 - 47.30							
47.30 - 47.60							
47.60 - 47.90							
47.90 - 48.20							
48.20 - 48.50							
48.50 - 48.80							
48.80 - 49.10							
49.10 - 49.40							
49.40 - 49.70							
49.70 - 50.00							
50.00 - 50.30							
50.30 - 50.60							
50.60 - 50.90							
50.90 - 51.20							
51.20 - 51.50							
51.50 - 51.80							
51.80 - 52.10							
52.10 - 52.40							
52.40 - 52.70							
52.70 - 53.00							
53.00 - 53.30							
53.30 - 53.60							
53.60 - 53.90							
53.90 - 54.20							
54.20 - 54.50							
54.50 - 54.80							
54.80 - 55.10							
55.10 - 55.40							
55.40 - 55.70							
55.70 - 56.00							
56.00 - 56.30							
56.30 - 56.60							
56.60 - 56.90							
56.90 - 57.20							
57.20 - 57.50							

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP10		
		Contract Number: BER1808G	Date Started: 26/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1	
Trial Pit Log		Easting: 467616	Northing: 108920	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1	HV 1.50m, 38 / 14kPa		(0.30)		Greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert and concrete. (TOPSOIL)	1	
0.30 - 0.70	ES2			0.30		Greyish brown slightly gravelly SAND. Gravel is subrounded fine to coarse of chert. (HEAD DEPOSITS)		
0.70 - 0.90	B5			0.70		Orangish brown mottled grey very clayey SAND. (HEAD DEPOSITS)		
0.70 - 0.90	D4							
0.70 - 0.90	ES3			(0.50)				
1.20 - 1.40	D6			1.20		Soft to firm grey mottled orangish brown sandy CLAY (HEAD DEPOSITS)	2	
						Below 1.50m: Becomes slightly silty.		
				(1.20)				
				2.40	End of Trial Pit at 2.40m		3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.					Dimensions:			
					Length:			
					Width:			
					Orientation: °			
					Groundwater Details			
					Depth encountered (m)	Remarks		
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP11	
		Contract Number: BER1808G	Date Started: 26/07/2018	Logged By: AD	Checked By: JA		
Trial Pit Log		Easting: 467668	Northing: 108818	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Sheet 1 of 1 Scale: 1:25
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable	
Samples & In Situ Testing				Strata Details			
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water
0.00 - 0.20	ES1					MADE GROUND: Light greyish brown slightly clayey slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert and concrete.	
0.20 - 0.40	ES2			0.20		MADE GROUND: Firm (friable) greyish brown sandy CLAY.	
0.40 - 0.60	ES3			0.40		Firm (friable) orangish brown mottled grey slightly sandy silty CLAY. (HEAD DEPOSITS)	
0.60 - 0.80	D4						
		HV 1.00m, 48 / 24kPa					1
1.20 - 1.50	D5						
		HV 1.50m, 58 / 36kPa		(2.30)			2
2.30 - 2.50	D6						
		HV 2.50m, 50 / 20kPa		2.70		End of Trial Pit at 2.70m	3
							4
							5
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water							
Remarks: Groundwater not encountered.						Dimensions:	
						Length:	
						Width:	
						Orientation: °	
						Groundwater Details	
						Depth encountered (m)	Remarks
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016							

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP12 Sheet 1 of 1 Scale: 1:25		
		Contract Number: BER1808G	Date Started: 26/07/2018	Logged By: CT	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467722	Northing: 108890	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018		
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.20	ES1	HV 1.00m, 59 / 38kPa				MADE GROUND: Light greyish brown gravelly silty CLAY. Gravel is subangular fine to medium of red brick, blue ceramic, chert and chalk.		
0.20 - 0.50	ES2			0.20 (0.30)		Firm (friable) light brown silty CLAY with rootlets and occasional fine gravel of chert. (HEAD DEPOSITS)		
0.50 - 0.70	ES3			0.50		Firm orangish brown slightly sandy CLAY. (HEAD DEPOSITS)		
0.70 - 0.90	D4			(0.40)				
1.00 - 1.20	D5			0.90 (0.70)		Orangish brown clayey SAND. (HEAD DEPOSITS)	1	
2.00 - 2.20	D6			1.60 (0.90)		Orangish brown mottled light grey slightly clayey SAND. (HEAD DEPOSITS)	2	
				2.50		End of Trial Pit at 2.50m	3	
							4	
							5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks: Groundwater not encountered.

Dimensions:

Length: 1.80m

Orientation: °

 Width: 0.60m

Groundwater Details	
Depth encountered (m)	Remarks

T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP13 Sheet 1 of 1 Scale: 1:25		
		Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467577	Northing: 109094	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018		
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1			(0.30)		MADE GROUND: Greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of concrete and chalk.		
0.30 - 0.60	ES2			0.30		Firm orangish brown slightly sandy CLAY. (HEAD DEPOSITS)		
0.80 - 1.00	D3	HV 1.00m, 43 / 10kPa		(2.00)			1	
1.50 - 1.70	D4	HV 1.50m, 42 / 18kPa						
		HV 2.00m, 54 / 20kPa					2	
				2.30		End of Trial Pit at 2.30m		
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: Orientation: °		
						Width:		
						Groundwater Details		
Depth encountered (m)		Remarks						
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP14		
		Contract Number: BER1808G	Date Started: 26/07/2018	Logged By: CT	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467645	Northing: 108863	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Sheet 1 of 1 Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.20	ES1					MADE GROUND: Light greyish brown and white gravelly silty CLAY. Gravel is angular fine to coarse of chert, chalk and sandstone.		
0.20 - 0.50	ES2			0.20 (0.30)		MADE GROUND: Firm light brown silty CLAY with low cobble content. Cobbles are angular of chalk.		
0.50 - 0.70	D3			0.50 (0.30)		Firm orangish brown mottled brown silty CLAY. (HEAD DEPOSITS)		
0.80 - 1.00	D4			0.80		Orangish brown clayey SAND. (HEAD DEPOSITS)	1	
				(1.50)			2	
2.30 - 2.50	D5			2.30		Light yellowish grey SAND. (HEAD DEPOSITS)		
				2.50		End of Trial Pit at 2.50m	3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.					Dimensions:			
					Length: 1.90m Width: 0.65m			
					Orientation: °			
					Groundwater Details			
					Depth encountered (m)			
					Remarks			
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP15 Sheet 1 of 1		
		Contract Number: BER1808G	Date Started: 26/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467683	Northing: 108967	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing				Strata Details			Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.20	ES1					MADE GROUND: Firm (friable) light greyish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of chalk, chert and sandstone.		
0.20 - 0.40	D2			0.20		Firm (friable) greyish brown slightly gravelly sandy CLAY. Gravel is subangular to subrounded fine to coarse of chert.		
				0.40		(HEAD DEPOSITS)		
0.60 - 0.80	D3	HV 0.60m, 46 / 20kPa				Firm orangish brown mottled grey slightly sandy silty CLAY with organic black carbonaceous specks.		
						(HEAD DEPOSITS)		
1.00 - 1.20	D4	HV 1.00m, 42 / 20kPa					1	
				(2.20)		Below 1.50m: Becomes stiff.		
						Below 1.60m: Laminations present.		
2.00 - 2.20	D5					Below 2.00m: Red oxidised staining.	2	
				2.60		End of Trial Pit at 2.60m	3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: Orientation: °		
						Width:		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

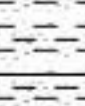
 www.landpregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP16	
		Contract Number: BER1808G	Date Started: 26/07/2018	Logged By: AD	Checked By: JA		
Trial Pit Log		Easting: 467573	Northing: 108788	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Sheet 1 of 1 Scale: 1:25
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.20	ES1					MADE GROUND: Light greyish brown gravelly silty CLAY. Gravel is angular fine to coarse of chert, chalk and sandstone.		
0.20 - 0.80	ES2			0.20		MADE GROUND: Light brown slightly clayey gravelly SAND. Gravel is angular to subangular fine to coarse of red brick.		
				(0.60)				
0.80 - 1.20	D4			0.80		Orangish brown slightly clayey SAND. (HEAD DEPOSITS)	1	
0.80 - 1.20	ES3							
				(1.40)			2	
2.20 - 2.40	D5			2.20		Orangish greyish brown SAND. (HEAD DEPOSITS)		
				2.40		End of Trial Pit at 2.40m		
							3	
							4	
							5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks: Groundwater not encountered.	Dimensions: Length: Orientation: ° Width: 	
	Groundwater Details	
	Depth encountered (m)	Remarks
	T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016	

 www.landpregeneration.co.uk	Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC			Trial Pit ID: TP17		
	Contract Number: BER1808G	Date Started: 26/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1		
	Easting: 467605	Northing: 108776	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25		
Trial Pit Log		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1	HV 1.00m, 78 / 40kPa		(0.30)		MADE GROUND: Firm (friable) light greyish brown slightly sandy gravelly CLAY. Gravel is subangular to subrounded fine to coarse of chalk, chert and sandstone.	1	
0.30 - 0.70	ES2			0.30		Firm (friable) greyish brown slightly gravelly slightly sandy CLAY. Gravel is subangular to subrounded fine to coarse of chert. (HEAD DEPOSITS)		
0.50 - 0.70	D3			(0.40)		Firm to stiff orangish brown mottled grey silty CLAY. (HEAD DEPOSITS)		
0.80 - 1.00	D4			0.70		Orangish brown mottled grey slightly clayey SAND. (HEAD DEPOSITS)		
1.50 - 1.70	D5			1.10		Orangish brown mottled grey clayey SAND. (HEAD DEPOSITS)		
				1.30		Orangish brown mottled grey clayey SAND. (HEAD DEPOSITS)		
2.30 - 2.60	D6	(1.00)		2				
		2.30				Dark brown mottled grey SAND. (HEAD DEPOSITS)		
		(0.30)				End of Trial Pit at 2.60m		
				2.60			3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.					Dimensions:			
					Length: Orientation: °			
					Width:			
					Groundwater Details			
					Depth encountered (m)		Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landpregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP18 Sheet 1 of 1		
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467504	Northing: 108810	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1	HV 0.80m, 42 / 22kPa		(0.30)		MADE GROUND: Firm (friable) slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of asphalt, concrete, ceramic and chert.	1	
0.30 - 0.80	ES2			0.30		Firm orangish brown mottled grey slightly sandy CLAY. (HEAD DEPOSITS)		
0.60 - 0.80	D3			(0.50)				
1.00 - 1.20	D4			0.80		Stiff dark orangish brown slightly sandy CLAY. (HEAD DEPOSITS)		
2.00 - 2.20	D5			(1.60)				
				2.40		End of Trial Pit at 2.40m	2	
							3	
							4	
							5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks:
Groundwater not encountered.

Dimensions:

Length:
Width:

Orientation: °

Groundwater Details

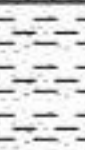
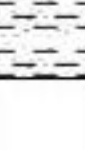
Depth encountered (m)

Remarks

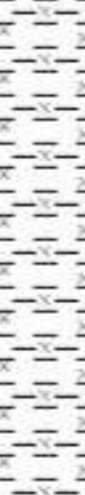
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016

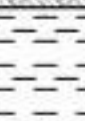
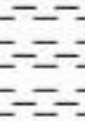
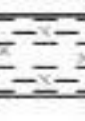
 www.landpregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP19		
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467515	Northing: 108770	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Sheet 1 of 1 Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1			(0.30)		MADE GROUND: Firm (friable) slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of asphalt, concrete, ceramic and chert.	1	
0.30 - 0.70	ES2			0.30 (0.40)		MADE GROUND: Firm (friable) slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of concrete, ceramic and chert.		
0.70 - 0.90	ES3			0.70		MADE GROUND: Firm (friable) dark brown slightly sandy CLAY.		
0.90 - 1.10	ES4			0.90		Firm orangish brown mottled grey sandy silty CLAY. (HEAD DEPOSITS)		
0.90 - 1.20	D5			(0.50)				
1.40 - 1.60	D6			1.40		Orangish brown clayey SAND. (HEAD DEPOSITS)	2	
2.00 - 2.30	D7			(1.40)				
				2.80				
						End of Trial Pit at 2.80m	3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: Orientation: °		
						Width:		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

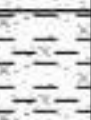
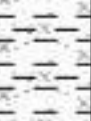
 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP20		
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467540	Northing: 108805	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Sheet 1 of 1 Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing				Strata Details				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.00 - 0.40	ES1			(0.40)		MADE GROUND: Firm (friable) slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of plastic, concrete, ceramic, glass and chert.		
0.40 - 0.60	ES2			0.40		Firm orangish brown sandy CLAY. (HEAD DEPOSITS)		
0.50 - 0.70	D3			(0.60)				
1.00 - 1.20	B5	HV 1.00m, 50 / 26kPa		1.00		Firm orangish brown mottled grey slightly sandy CLAY. (HEAD DEPOSITS)	1	
1.00 - 1.20	D4			(1.20)				
		HV 1.50m, 52 / 24kPa		2.20		End of Trial Pit at 2.20m	2	
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: Orientation: ° 		
						Width:		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP21 Sheet 1 of 1 Scale: 1:25		
		Contract Number: BER1808G	Date Started: 25/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467543	Northing: 108832	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018		
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.40	ES1	HV 1.00m, 40 / 12kPa		(0.40)		MADE GROUND: Firm (friable) slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of asphalt, concrete, ceramic and chert.	1	
0.40 - 0.60	ES2			0.40		Firm orangish brown slightly sandy CLAY. (HEAD DEPOSITS)		
0.80 - 1.00	D3			(0.60)		Firm orangish brown mottled reddish brown and black sandy CLAY. (HEAD DEPOSITS)		
1.50 - 1.70	B5	HV 1.50m, 52 / 24kPa		1.00			2	
1.50 - 1.70	D4			(0.70)				
				1.70		End of Trial Pit at 1.70m	3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: Orientation: °		
						Width:		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP22 Sheet 1 of 1		
		Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467692	Northing: 109222	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1			(0.30)		MADE GROUND: Greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of concrete, glass and chalk.		
0.30 - 0.50	ES2			0.30		Firm (friable) light brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine to coarse of chert.		
0.50 - 0.80	D3	HV 0.50m, 80 / 40kPa		0.50		(HEAD DEPOSITS) Stiff to very stiff brown silty CLAY. (LONDON CLAY)		
1.20 - 1.50	D4	HV 1.00m, 78 / 30kPa					1	
		HV 1.50m, 82 / 38kPa		(1.80)		Below 1.50m: Occasional black carbonaceous smearing.		
1.80 - 2.20	D5	HV 2.00m, 82 / 30kPa					2	
				2.30		End of Trial Pit at 2.30m		
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: Orientation: ° Width:		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landpregeneration.co.uk	Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC			Trial Pit ID: TP23		
	Contract Number: BER1808G	Date Started: 27/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1		
Trial Pit Log	Easting: 467655	Northing: 109217	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25		
	Weather: Sunny		Termination: Specified depth reached			Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.20	ES1	HV 1.80m, 93 / 38kPa				MADE GROUND: Light greyish brown slightly gravelly silty CLAY. Gravel is subangular fine to medium of chalk, sandstone and glass with rootlets.	1	
0.20 - 0.40	ES2			0.20		Firm greyish brown silty CLAY. (LONDON CLAY)		
0.40 - 0.60	D3			0.40		Firm orangish brown mottled greyish brown silty CLAY. (LONDON CLAY)		
1.20 - 1.40	D4			(1.40)				
1.80 - 2.00	D5			1.80		Stiff (friable) light greyish brown silty CLAY. (LONDON CLAY)		
				(0.60)			2	
				2.40		End of Trial Pit at 2.40m	3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: Orientation: °		
						Width:		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP24		
		Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467659	Northing: 109302	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
				(0.30)		Brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert and mudstone. (TOPSOIL)		
				0.30		Firm to stiff (friable) orangish brown CLAY. (LONDON CLAY)		
		HV 1.00m, 62 / 30kPa					1	
				(1.80)		At 1.20m: Carbonaceous black staining on clay faces.		
		HV 1.50m, 68 / 42kPa					2	
				2.10		Stiff orangish brown mottled grey silty CLAY. (LONDON CLAY)		
				2.30		End of Trial Pit at 2.30m		
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length:		
						Width:		
						Orientation: °		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landpregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP25 Sheet 1 of 1 Scale: 1:25		
		Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467572	Northing: 109307	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018		
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1			(0.30)		Brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert and mudstone. (TOPSOIL)	1	
0.30 - 0.60	ES2			0.30		Stiff (friable) orangish brown CLAY. (HEAD DEPOSITS)		
0.60 - 0.80	D3	HV 0.60m, 60 / 30kPa		(1.20)			2	
1.20 - 1.50	B6	HV 1.00m, 80 / 36kPa		1.50				
1.50 - 1.70	D4			(0.30)		Orangish brown slightly clayey SAND. (HEAD DEPOSITS)	3	
1.80 - 2.00	D5			1.80		Stiff slightly sandy silty CLAY. (HEAD DEPOSITS)		
				(0.60)			4	
				2.40				
						End of Trial Pit at 2.40m	5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: Orientation: °		
						Width:		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP26 Sheet 1 of 1 Scale: 1:25		
		Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: AD	Checked By: JA			Status: FINAL
Trial Pit Log		Easting: 467513	Northing: 109218	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018		
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.30	ES1			(0.30)		Brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of chert and mudstone. (TOPSOIL)		
0.30 - 0.50	ES2			0.30		Orangish brown slightly sandy silty CLAY. (HEAD DEPOSITS)		
				0.50		Orangish brown mottled grey slightly sandy silty CLAY. (HEAD DEPOSITS)		
0.70 - 1.00	D3	HV 0.70m, 70 / 28kPa						
1.00 - 1.30	D4	HV 1.00m, 48 / 22kPa		(1.20)			1	
		HV 1.50m, 60 / 25kPa						
1.70 - 1.90	D5			1.70		Firm orangish brown silty CLAY. (HEAD DEPOSITS)	2	
				(0.60)				
				2.30		End of Trial Pit at 2.30m		
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length: 		
						Width: 		
						Orientation: ° 		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP27			
		Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: CT	Checked By: JA			Status: FINAL	
Trial Pit Log		Easting: 467572	Northing: 109266	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Sheet 1 of 1 Scale: 1:25		
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable			
Samples & In Situ Testing				Strata Details			Water	Backfill	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			
0.00 - 0.20	ES1	HV 1.20m, 70 / 40kPa		0.20		MADE GROUND: Firm (friable) slightly gravelly silty CLAY. Gravel is angular and fine of chalk and red brick.	1		
0.20 - 0.60	ES2					Firm orangish brown silty CLAY. (LONDON CLAY)			
0.80 - 1.00	D4								
1.80 - 2.00	D3					Between 1.10m and 2.00m: Becomes mottled greyish brown.			2
						Between 2.00m and 2.20m: Becomes yellowish brown.			
		At 2.10m: Rounded claystone cobble recovered.							
		2.20	Stiff (friable) orangish brown CLAY. (LONDON CLAY)	3					
		2.40	End of Trial Pit at 2.40m						
				4					
				5					

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks:
Groundwater seepage at base.

Dimensions:
Length: 1.90m
Width: 0.70m

Orientation: °


Groundwater Details

Depth encountered (m)	Remarks
2.40	Seepage at base of pit.

T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016

Contract Name:

Phase 3b & Phase 8, Berewood

Client:

White Young Green PLC

Trial Pit ID:

TP28

Contract Number:

BER1808G

Date Started:

28/07/2018

Logged By:

AD

Checked By:	
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JA

Status:

FINAL

Sheet 1 of 1

Scale:

1-25

Trial Pit Log

Easting:

467572

Northing:

109307

Ground Level:

Plant Used:

8T Tracked

Print Date:

25/09/2018

Weather: Sunny

Termination: Specified depth reached

Stability:	Stable
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Samples & In Situ Testing			Strata Details						Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				
0.00 - 0.20	ES1					MADE GROUND: Firm (friable) slightly gravelly silty CLAY. Gravel is angular and fine of chalk and red brick.				
0.20 - 0.50	ES2			0.20		Firm orangish brown silty CLAY. (LONDON CLAY)				
				(0.30)						
				0.50		Stiff (friable) orangish brown silty CLAY. (LONDON CLAY)				
0.70 - 0.90	D3	HV 1.00m, 60 / 30kPa							1	
				(1.60)						
1.50 - 1.70	D4	HV 1.50m, 64 / 30kPa								
									2	
2.10 - 2.30	D5			2.10		Firm (friable) orangish brown silty CLAY. (LONDON CLAY)				
				2.30		End of Trial Pit at 2.30m				
									3	
									4	
									5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks:

Groundwater not encountered

Dimensions:

Length:

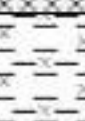
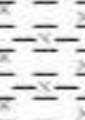
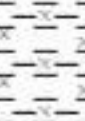
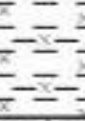
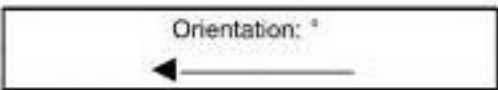
Orientation: ^a

Width:

Groundwater Details

Depth encountered (m)

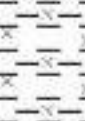
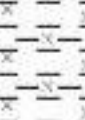
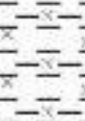
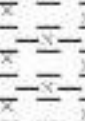
Remarks

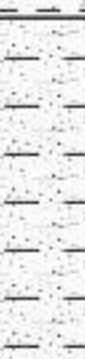
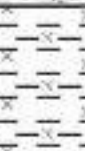
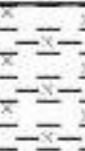
 www.landpregeneration.co.uk	Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC			Trial Pit ID: TP29		
	Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: CT	Checked By: JA	Status: FINAL	Sheet 1 of 1		
	Easting: 467654	Northing: 109257	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25		
Trial Pit Log		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details					
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.00 - 0.20	ES1	HV 0.80m, 76 / 36kPa		(0.35)		MADE GROUND: Greyish brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of concrete, glass and chalk.		
0.40 - 0.60	ES2			0.35		Stiff (friable) brown silty CLAY. (HEAD DEPOSITS)		
0.80 - 1.00	D4			(1.15)		Between 1.10m and 1.50m: Becomes mottled orangish brown and sandy.		
1.10 - 1.20	D3							
1.50 - 1.70	D5			1.50		Light orangish brown slightly clayey SAND. (HEAD DEPOSITS)		
		(0.60)		2.10	Stiff (friable) orangish brown mottled grey silty CLAY. (LONDON CLAY)			
		(0.50)		2.60	End of Trial Pit at 2.60m			
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions: Length: 1.80m Width: 0.60m Orientation: ° 		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template						Issue Number: 1		Issue Date: June 2016

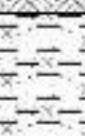
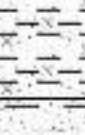
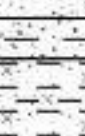
 www.landregeneration.co.uk	Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC			Trial Pit ID: TP30		
	Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: AD	Checked By: JA	Status: FINAL	Sheet 1 of 1		
	Easting: 467562	Northing: 109198	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	Scale: 1:25		
Trial Pit Log		Weather: Sunny		Termination: Specified depth reached		Stability: Stable		
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.00 - 0.20	ES1					MADE GROUND: Firm (friable) slightly gravelly silty CLAY. Gravel is angular and fine of chalk and red brick.	1	
0.20 - 0.60	ES2			0.20		Firm orangish brown silty CLAY.		
				(0.40)				
0.60 - 0.80	D3	0.60		Stiff (friable) orangish brown silty CLAY. (LONDON CLAY)	2			
1.00 - 1.20	D4							
		(1.90)						
2.00 - 2.20	D5	HV 2.00m, 90 / 40kPa		2.50		End of Trial Pit at 2.50m	3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length:	Orientation: °	
						Width:		
						Groundwater Details		
Depth encountered (m)			Remarks					
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP31 Sheet 1 of 1 Scale: 1:25			
		Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: AD	Checked By: JA			Status: FINAL	
Trial Pit Log		Easting: 467516	Northing: 109226	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018			
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable			
Samples & In Situ Testing				Strata Details			Water	Backfill	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			
0.00 - 0.25	ES1	HV 0.60m, 64 / 30kPa				MADE GROUND: Firm (friable) slightly gravelly silty CLAY. Gravel is angular and fine of chalk and red brick.	1		
0.25 - 0.60	ES2			0.25		Firm orangish brown silty CLAY. (LONDON CLAY)			
0.50 - 0.70	D3			0.50		Stiff (friable) orangish brown silty CLAY. (LONDON CLAY)			
1.00 - 1.40	D4	HV 1.00m, 78 / 36kPa	(1.50)			2			
1.70 - 2.00	D5								
							3		
							4		
							5		
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water									
Remarks: Groundwater not encountered.						Dimensions:			
						Length: Orientation: °			
						Width:			
						Groundwater Details			
Depth encountered (m)						Remarks			
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016									

 www.landpregeneration.co.uk		Contract Name: Phase 3b & Phase 8, Berewood		Client: White Young Green PLC		Trial Pit ID: TP32 Sheet 1 of 1 Scale: 1:25	
		Contract Number: BER1808G	Date Started: 28/07/2018	Logged By: AD	Checked By: JA		
Trial Pit Log		Easting: 467583	Northing: 109139	Ground Level:	Plant Used: 8T Tracked	Print Date: 25/09/2018	
		Weather: Sunny		Termination: Specified depth reached		Stability: Stable	
Samples & In Situ Testing				Strata Details			
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water
0.00 - 0.40	ES1			(0.40)		MADE GROUND: Firm (friable) slightly gravelly silty CLAY. Gravel is angular and fine of chalk and red brick.	
0.40 - 0.60	ES2			0.40 (0.30)		Firm orangish brown silty CLAY. (LONDON CLAY)	
0.70 - 0.90	D3			0.70		Stiff (friable) orangish brown silty CLAY. (LONDON CLAY)	
		HV 1.00m, 78 / 36kPa		(1.30)			1
1.50 - 1.70	D4			2.00			
		HV 1.50m, 76 / 32kPa					
						End of Trial Pit at 2.00m	2
							3
							4
							5
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water							
Remarks: Groundwater not encountered.						Dimensions:	
						Length: Width:	
						Orientation: °	
						Groundwater Details	
Depth encountered (m)						Remarks	
T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016							

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8 - Berewood		Client: WYG			Borehole ID: WS01	
		Contract Number: BER1808G.1	Date Started: 27/11/2018	Logged By: JA	Checked By:	Status: DRAFT	Sheet 1 of 1	
Windowless Sample Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Competitor Dart	Print Date: 03/12/2018	Scale: 1:25	
Weather: Rain			Termination: Scheduled depth reached			SPT Hammer: N/R, Energy Ratio: N/R		
Samples & In Situ Testing				Strata Details				Groundwater
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike
		0.00 - 1.00 = 100%			(0.30)		Firm brown silty CLAY. (TOPSOIL)	
		1.00 - 2.00 = 100%	SPT(S) 1.00m, N=7 (1,1/1,2,2,2)		0.30		Firm orangish brown mottled grey silty slightly sandy CLAY. Sand is fine to medium. (HEAD DEPOSITS)	1
		2.00 - 3.00 = 100%	SPT(S) 2.00m, N=12 (2,2/3,3,3,3)		(2.50)			2
		3.00 - 4.00 = 100%	SPT(S) 3.00m, N=15 (2,3/3,4,4,4)		2.80		Stiff bluish grey silty CLAY. (LONDON CLAY FORMATION)	3
			SPT(S) 4.00m, N=17 (2,3/4,4,4,5)		(1.20)			4
					4.00		End of Borehole at 4.00m	5
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Start & End of Shift Observations					Borehole Diameter		Casing Diameter	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth	Dia (mm)
Water Strikes					Installation			
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type Dia (mm)
Remarks: Groundwater not encountered.								
T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016								

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8 - Berewood		Client: WYG		Borehole ID: WS02			
		Contract Number: BER1808G.1	Date Started: 27/11/2018	Logged By: JA	Checked By:	Status: DRAFT	Sheet 1 of 1		
Windowless Sample Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Competitor Dart	Print Date: 03/12/2018	Scale: 1:25		
Weather: Rain			Termination: Scheduled depth reached			SPT Hammer: N/R, Energy Ratio: N/R			
Samples & In Situ Testing				Strata Details			Groundwater		
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation
0.40 - 0.50	B1	0.00 - 1.00 = 100%	SPT(S) 1.00m, N=12 (2,2/3,3,3,3)		(0.40)		Firm brown silty CLAY. (TOPSOIL)	1	
		0.40				Firm orangish brown slightly sandy silty CLAY. (HEAD DEPOSITS)			
		(0.30)				Medium dense orangish brown mottled grey very clayey SAND. Sand is fine to medium. (HEAD DEPOSITS)			
		0.70							
		(1.60)							
	2.00 - 3.00 = 100%	SPT(S) 2.00m, N=15 (2,2/3,2,4,6)		2.30		Orangish brown mottled grey silty CLAY. (HEAD DEPOSITS)	2		
	3.00 - 4.00 = 95%	SPT(S) 3.00m, N=15 (3,4/3,4,4,4)		3.00		Stiff bluish grey silty CLAY. (LONDON CLAY FORMATION)	3		
			SPT(S) 4.00m, N=18 (4,4/4,5,5,4)		4.00		End of Borehole at 4.00m	4	
								5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water									
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks: Groundwater not encountered.
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth	Dia (mm)	
Water Strikes					Installation				
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type	
T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016									

 www.landregeneration.co.uk		Contract Name: Phase 3b & Phase 8 - Berewood		Client: WYG		Borehole ID: WS03				
		Contract Number: BER1808G.1	Date Started: 27/11/2018	Logged By: JA	Checked By:	Status: DRAFT	Sheet 1 of 1			
Windowless Sample Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Competitor Dart	Print Date: 03/12/2018	Scale: 1:25			
		Weather: Rain		Termination: Scheduled depth reached		SPT Hammer: N/R, Energy Ratio: N/R				
Samples & In Situ Testing				Strata Details			Groundwater			
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation	
0.40 - 0.50	B1	0.00 - 1.00 = 95%	SPT(S) 1.00m, N=7 (1,1/1,2,2,2)		(0.35)		Firm brown silty CLAY. (TOPSOIL)	1		
		0.35				Firm orangish brown slightly sandy silty CLAY. (HEAD DEPOSITS)				
		(0.55)								
		0.90				Loose orangish brown mottled grey very clayey SAND. Sand is fine to medium. (HEAD DEPOSITS)				
		(0.80)								
		1.00 - 2.00 = 85%	SPT(S) 2.00m, N=15 (2,3/3,4,4,4)		1.70		Reddish brown mottled orangish brown very clayey sandy GRAVEL. Gravel is angular to subangular fine to coarse of mudstone. (HEAD DEPOSITS)	2		
		2.00 - 3.00 = 100%				1.80				Firm orangish brown mottled grey sandy silty CLAY. (HEAD DEPOSITS)
		(1.00)								
		3.00 - 4.00 = 50%	SPT(S) 3.00m, N=15 (3,3/4,4,3,4)		2.80		Stiff bluish grey silty CLAY. (LONDON CLAY FORMATION)	3		
		(1.20)								
			SPT(S) 4.00m, N=18 (4,4/4,5,4,5)		4.00		End of Borehole at 4.00m	4		
								5		
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water										
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks: Groundwater not encountered.	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth	Dia (mm)		
Water Strikes					Installation					
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type		Dia (mm)
T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016										

Appendix D – Geotechnical Results



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618
Facsimile: (01424) 729911
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 18-19163

Issue: 1

Date of Issue: 23/08/2018

Contact: James Phaure

Customer Details: K4 Soils Laboratory Ltd
Unit 8
Watford
Hertfordshire
WD18 9RU

Quotation No: Q16-00568

Order No: Not Supplied

Customer Reference: 25012

Date Received: 21/08/2018

Date Approved: 23/08/2018

Details: Phase 6 & Local Centre, Berewood

Approved by: 

John Wilson, Operations Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

Sample Summary

Report No.: 18-19163

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
147322	TP04 D 2.20	25/07/2018	21/08/2018	Silty clayey loam	
147323	TP05 D 0.90	25/07/2018	21/08/2018	Silty clayey loam	
147324	TP10 D 0.70	26/07/2018	21/08/2018	Sandy clayey loam	
147325	TP16 D 0.80	26/07/2018	21/08/2018	Sandy clayey loam	
147326	TP16 D 2.20	26/07/2018	21/08/2018	Silty clayey loam	
147327	TP17 D 0.80	26/07/2018	21/08/2018	Sandy clayey loam	
147328	TP18 D 2.00	26/07/2018	21/08/2018	Silty clayey loam	
147329	TP25 D 0.60	27/07/2018	21/08/2018	Silty clayey loam	
147330	TP25 D 1.20	27/07/2018	21/08/2018	Silty clayey loam	
147331	TP30 D 1.00	27/07/2018	21/08/2018	Clayey loam	
147332	TP30 D 2.00	27/07/2018	21/08/2018	Silty loam	
147333	TP32 D 0.70	Not Provided	21/08/2018	Silty clayey loam	a

Results Summary

Report No.: 18-19163

ELAB Reference	147322	147323	147324	147325	147326	147327
Customer Reference	D	D	D	D	D	D
Sample ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	TP04	TP05	TP10	TP16	TP16	TP17
Sample Depth (m)	2.20	0.90	0.70	0.80	2.20	0.80
Sampling Date	25/07/2018	25/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018

Determinand	Codes	Units	LOD						
Anions									
Water Soluble Sulphate	M	g/l	0.02	< 0.02	0.03	< 0.02	< 0.02	< 0.02	< 0.02
Inorganics									
Total Sulphur	N	%	0.01	0.01	0.01	< 0.01	< 0.01	0.01	< 0.01
Acid Soluble Sulphate (SO ₄)	U	%	0.02	0.04	< 0.02	0.02	0.04	0.04	0.03
Miscellaneous									
pH	M	pH units	0.1	7.6	7.6	7.2	7.6	7.4	7.6

Results Summary

Report No.: 18-19163

ELAB Reference	147328	147329	147330	147331	147332	147333
Customer Reference	D	D	D	D	D	D
Sample ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	TP18	TP25	TP25	TP30	TP30	TP32
Sample Depth (m)	2.00	0.60	1.20	1.00	2.00	0.70
Sampling Date	26/07/2018	27/07/2018	27/07/2018	27/07/2018	27/07/2018	Not Provided

Determinand	Codes	Units	LOD						
Anions									
Water Soluble Sulphate	M	g/l	0.02	0.02	< 0.02	< 0.02	< 0.02	0.04	< 0.02
Inorganics									
Total Sulphur	N	%	0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acid Soluble Sulphate (SO ₄)	U	%	0.02	0.08	0.03	0.03	0.05	0.06	0.14
Miscellaneous									
pH	M	pH units	0.1	7.6	8.0	8.0	7.9	8.0	8.0

Method Summary

Report No.: 18-19163

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
pH	M	Air dried sample	23/08/2018	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	23/08/2018	115	Ion Chromatography
Water soluble anions	M	Air dried sample	22/08/2018	172	Ion Chromatography
Total organic carbon/Total sulphur	N	Air dried sample	23/08/2018	216	IR

Tests marked N are not UKAS accredited

Report Information

Report No.: 18-19163

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

Soil sample results are expressed on an air dried basis (dried at < 30°C)

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage



Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results

Job No. 25012	Project Name Phase 6 & Local Centre, Berewood	Programme	
		Samples received	03/08/2018
		Schedule received	07/08/2018
Project No. BER1808G	Client T&P Regeneration Ltd	Project started	08/08/2018
		Testing Started	26/08/2018

Hole No.	Sample				Soil Description	NMC %	Passing 425µm %	LL %	PL %	PI %	Remarks
	Ref	Top m	Base m	Type							
TP05	-	0.90	1.10	D	Orangish brown slightly mottled grey slightly sandy silty CLAY	33	100	62	21	41	
TP06	-	0.60	0.80	D	Orangish brown mottled grey slightly gravelly sandy silty CLAY with traces of fine rootlets (gravel is fm and sub-angular to rounded)	7.8	95	31	14	17	
TP09	-	1.50	1.70	D	Orangish brown slightly mottled grey sandy silty CLAY	33	100	50	21	29	
TP12	-	0.70	0.90	D	Orangish brown slightly mottled brown silty sandy CLAY	8.0	100	25	11	14	
TP13	-	0.80	1.00	D	Orangish brown slightly mottled grey slightly sandy silty CLAY with numerous fine rootlets and traces of fine chalk fragments	19	99	56	19	37	
TP17	-	0.80	1.00	D	Orangish brown slightly mottled grey sandy silty CLAY with traces of fine rootlets	25	100	48	17	31	
TP23	-	1.10	1.20	D	Greyish brown silty CLAY	32	100	64	24	40	
TP24	-	0.70	1.00	D	Brown mottled bluish grey silty CLAY	32	100	73	23	50	
TP25	-	1.20	1.50	D	Brown mottled bluish grey slightly sandy silty CLAY	30	100	67	25	42	
TP28	-	1.50	1.70	D	Orangish brown slightly mottled grey slightly sandy silty CLAY with traces of fine rootlets	30	100	67	23	44	
TP30	-	1.00	1.20	D	Orangish brown slightly mottled grey slightly sandy silty CLAY with traces of fine rootlets	24	100	63	20	43	
CBR01	-	0.40	-	D	Brown slightly gravelly slightly fine sandy silty CLAY with numerous rootlets and dry plant fragments (gravel is fm and rounded to angular)	5.6					

 UKAS TESTING	Test Methods: BS1377: Part 2: 1990; Natural Moisture Content : clause 3.2 Atterberg Limits: clause 4.3 and 5.0	Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU Tel: 01923 711 288 Email: James@k4soils.com	Checked and Approved Initials J.P Date: 01/09/2018
	2519 Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)		MSF-5-R1(b)



Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results

Job No.	Project Name	Programme	
25012	Phase 6 & Local Centre, Berewood	Samples received	03/08/2018
		Schedule received	07/08/2018
Project No.	Client	Project started	08/08/2018
BER1808G	T&P Regeneration Ltd	Testing Started	26/08/2018

[illegible]

Test Methods: BS1377: Part 2: 1990:
Natural Moisture Content : clause 3.2
Ruerberg Limits: clause 4.3 and 5.0

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

Tel: 01923 711 288
Email: James@k4soils.com

Checked and
Approved

Initials J.P

Date: 01/09/2018



PARTICLE SIZE DISTRIBUTION

Job Ref 25012

Borehole/Pit No. TP25

Site Name Phase 6 & Local Centre, Berewood

Sample No. -

Project No. BER1808G Client T&P Regeneration Ltd

Depth Top 1.20 m

Soil Description Brown mottled bluish grey slightly sandy silty CLAY

Depth Base 1.50 m

Sample Type D

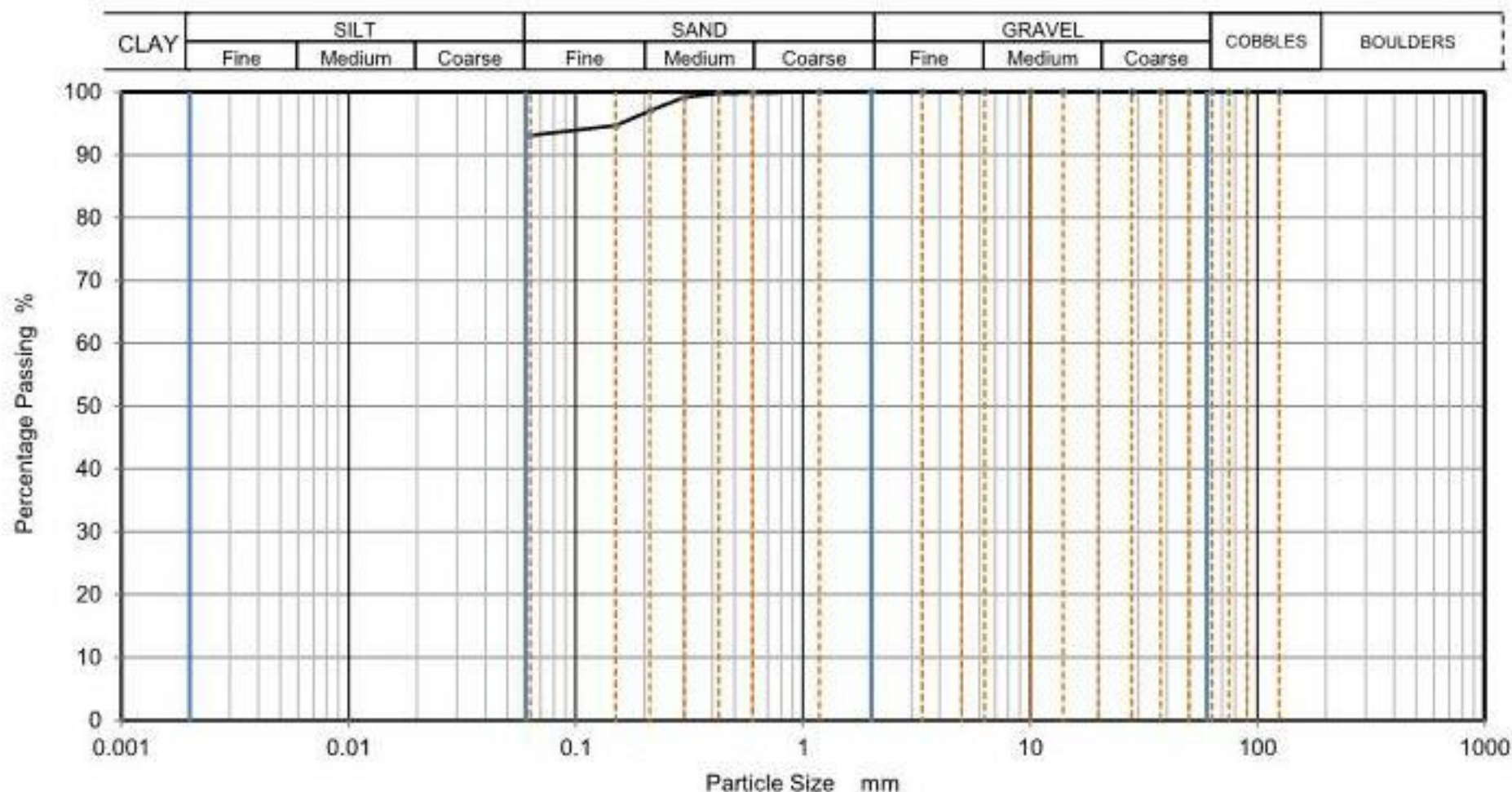
Samples received 03/08/2018

Schedules received 07/08/2018

Test Method BS1377:Part 2: 1990, clause 9.0

Project started 08/08/2018

Date tested 30/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	97		
0.15	95		
0.063	93		

Dry Mass of sample, g 18

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	6.9
Fines <0.063mm	93.1

Grading Analysis	
D100 mm	
D60 mm	
D30 mm	
D10 mm	
Uniformity Coefficient	
Curvature Coefficient	

Remarks
Preparation and testing in accordance with BS1377 unless noted below



2519

K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

Email: james@k4soils.com

Tel: 01923 711288

Checked and Approved

Initials: J.P

Date: 01/09/2018

MSF-5-R3

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)



PARTICLE SIZE DISTRIBUTION

Job Ref 25012

Borehole/Pit No. TP10

Site Name BER1808G - Phase 3 & 8

Sample No. -

Project No. BER1808G Client T&P Regeneration Ltd

Depth Top 0.70 m

Soil Description Light brown clayey silty SAND with rare fine rootlets

Depth Base 1.00 m

Sample Type D

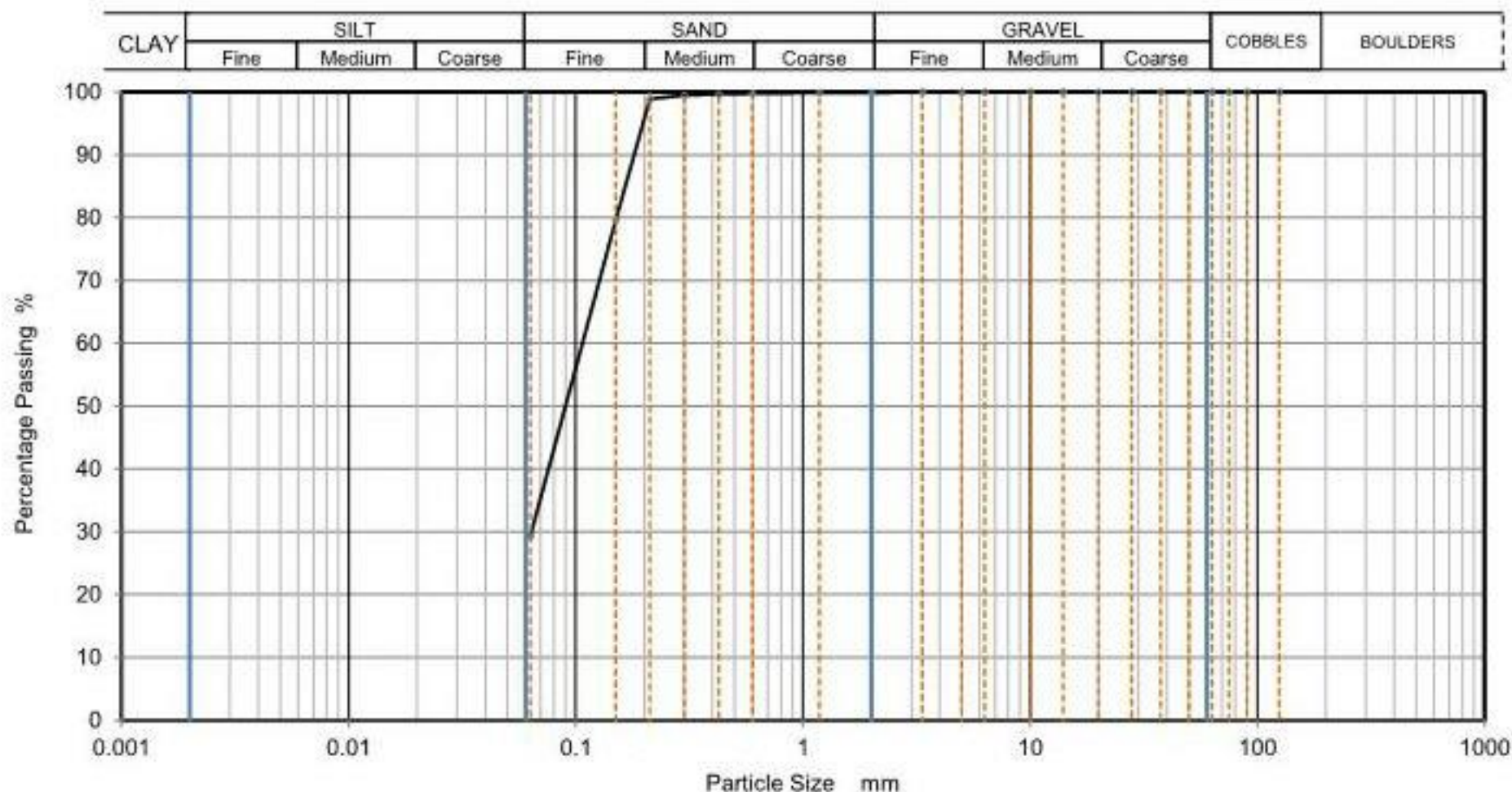
Samples received 03/08/2018

Schedules received 07/08/2018

Test Method BS1377:Part 2: 1990, clause 9.0

Project started 08/08/2018

Date tested 04/09/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	99		
0.15	80		
0.063	29		

Dry Mass of sample, g 454

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	70.7
Fines <0.063mm	29.3

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	
Curvature Coefficient	

Remarks
Preparation and testing in accordance with BS1377 unless noted below


2519

K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

Email: james@k4soils.com

Tel: 01923 711288

Checked and Approved

Initials: J.P

Date: 06/09/2018

MSF-5-R3

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)



PARTICLE SIZE DISTRIBUTION

Job Ref 25012

Borehole/Pit No. TP25

Site Name BER1808G - Phase 3 & 8

Sample No. -

Project No. BER1808G Client T&P Regeneration Ltd

Depth Top 1.20 m

Soil Description Brown mottled bluish grey slightly sandy silty CLAY

Depth Base 1.50 m

Sample Type D

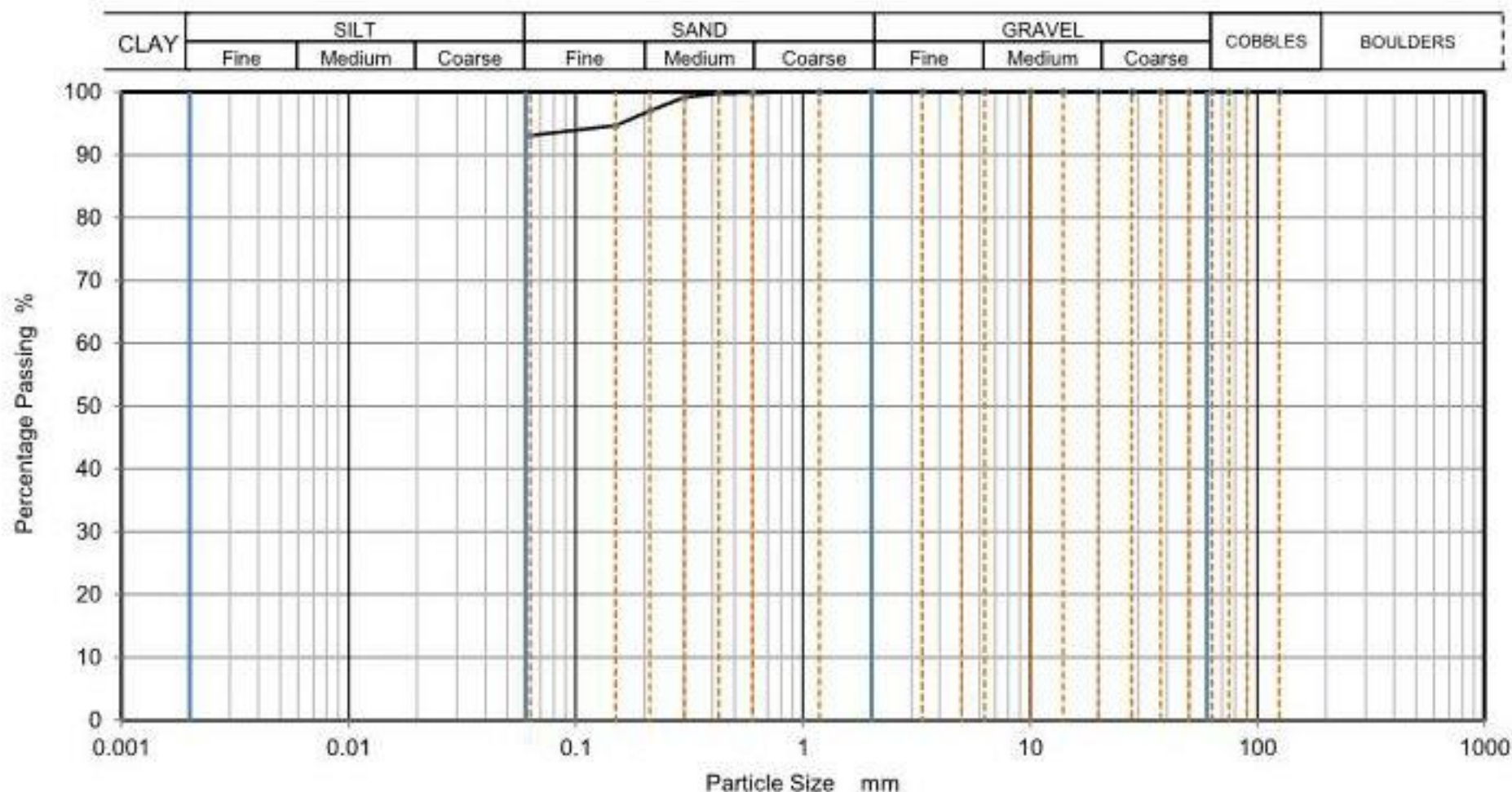
Samples received 03/08/2018

Schedules received 07/08/2018

Test Method BS1377:Part 2: 1990, clause 9.0

Project started 08/08/2018

Date tested 04/09/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	97		
0.15	95		
0.063	93		

Dry Mass of sample, g 18

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	6.9
Fines <0.063mm	93.1

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	
Curvature Coefficient	

Remarks
Preparation and testing in accordance with BS1377 unless noted below



2519

K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

Email: james@k4soils.com

Tel: 01923 711288

Checked and Approved

Initials: J.P

Date: 06/09/2018

MSF-5-R3

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)



California Bearing Ratio (CBR)

Job Ref 25012

Borehole/Pit No. TP10

Site Name BER1808G - Phase 3 & 8

Sample No. -

Project No. BER1808G Client T&P Regeneration Ltd

Depth Top 0.70 m

Soil Description Light brown clayey silty SAND with rare fine rootlets

Depth Base 1.00 m

Sample Type D

Samples received 03/08/2018

Schedules received 07/08/2018

Test Method BS1377 : Part 4 : 1990, clause 7

Project Started 08/08/2018

Date Tested 31/08/2018

Specimen Preparation

Condition REMOULDED

Details Recompacted with specified standard effort using 2.5kg rammer

Soaking details

Period of soaking 4 days

Time to surface 2 days

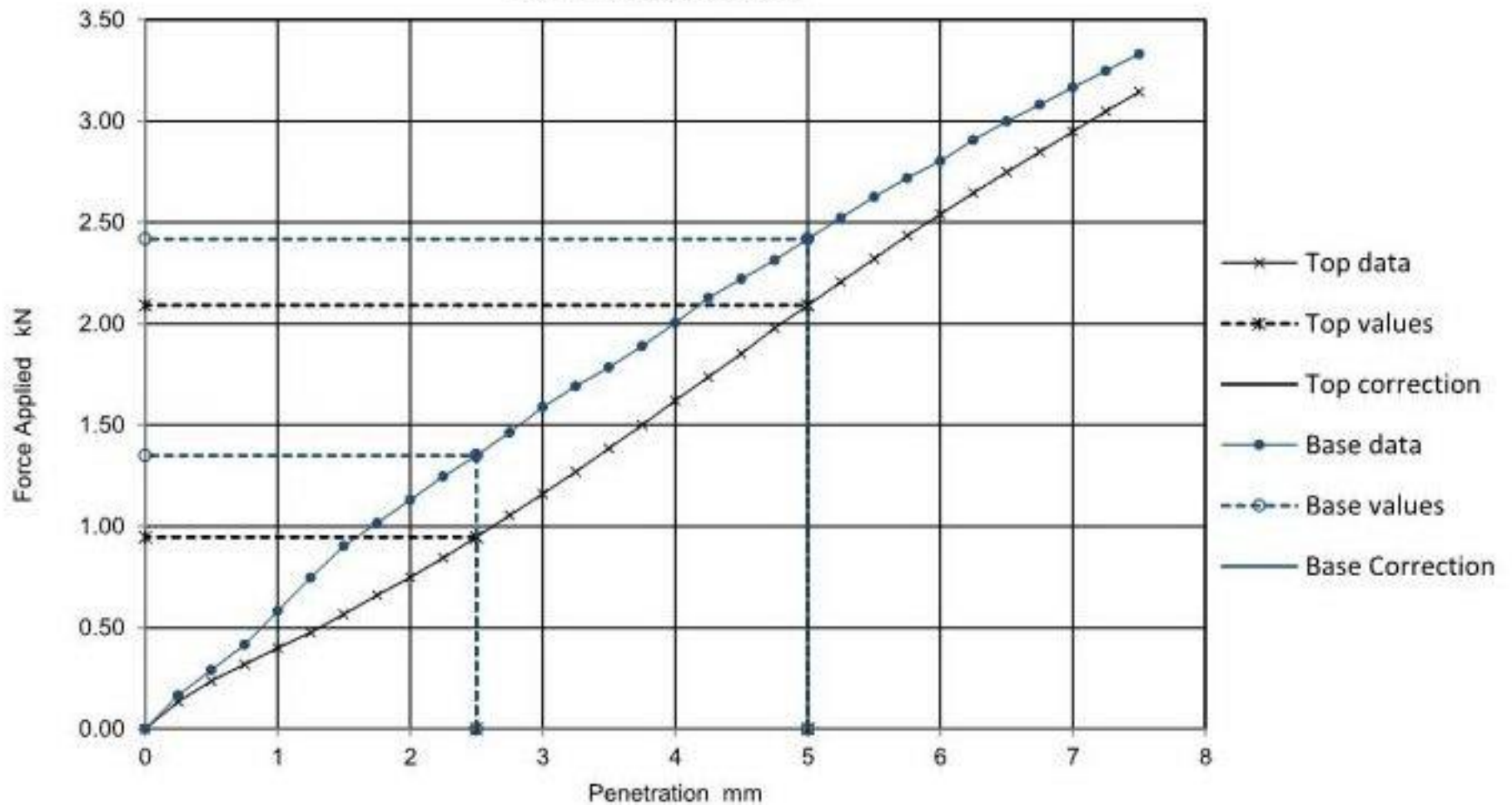
Amount of swell recorded 0.20 mm

Material retained on 20mm sieve removed 0.0 %

Initial Specimen details
Bulk density 2.02 Mg/m³
Dry density 1.73 Mg/m³
Moisture content 17 %

Surcharge applied 6 kg
4 kPa

Force v Penetration Plots



Results

TOP
BASE

Curve correction applied	CBR Values, %			
	2.5mm	5mm	Highest	Average
No	7.2	10	10	11
No	10	12	12	

Moisture Content %
19
17

Remarks

1



Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

Tel: 01923 711 288
Email: James@k4soils.com

Checked and Approved

Initials: J.P

Date: 06/09/2018

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

MSF-5-R16

	California Bearing Ratio (CBR) BS1377 : Part 4 : 1990, clause 7		Project No.	10882		
			Borehole/Pit No.	WS02		
Project Name	BER1808G1		Sample No.	-		
Soil Description	Brown slightly gravelly slightly sandy clayey SILT		Depth m	0.40	- 0.50	
Client Job No.	BER1808G1	Specimen Depth	-	m	Sample Type	B
Client	T&P Regeneration		KeyLAB ID	SWG12018113013		

Specimen Preparation in accordance with BS1377:Part 1:1990 CL7.6.5

Condition	REMOULDED
Details	Recompacted with specified standard effort using 2.5kg rammer

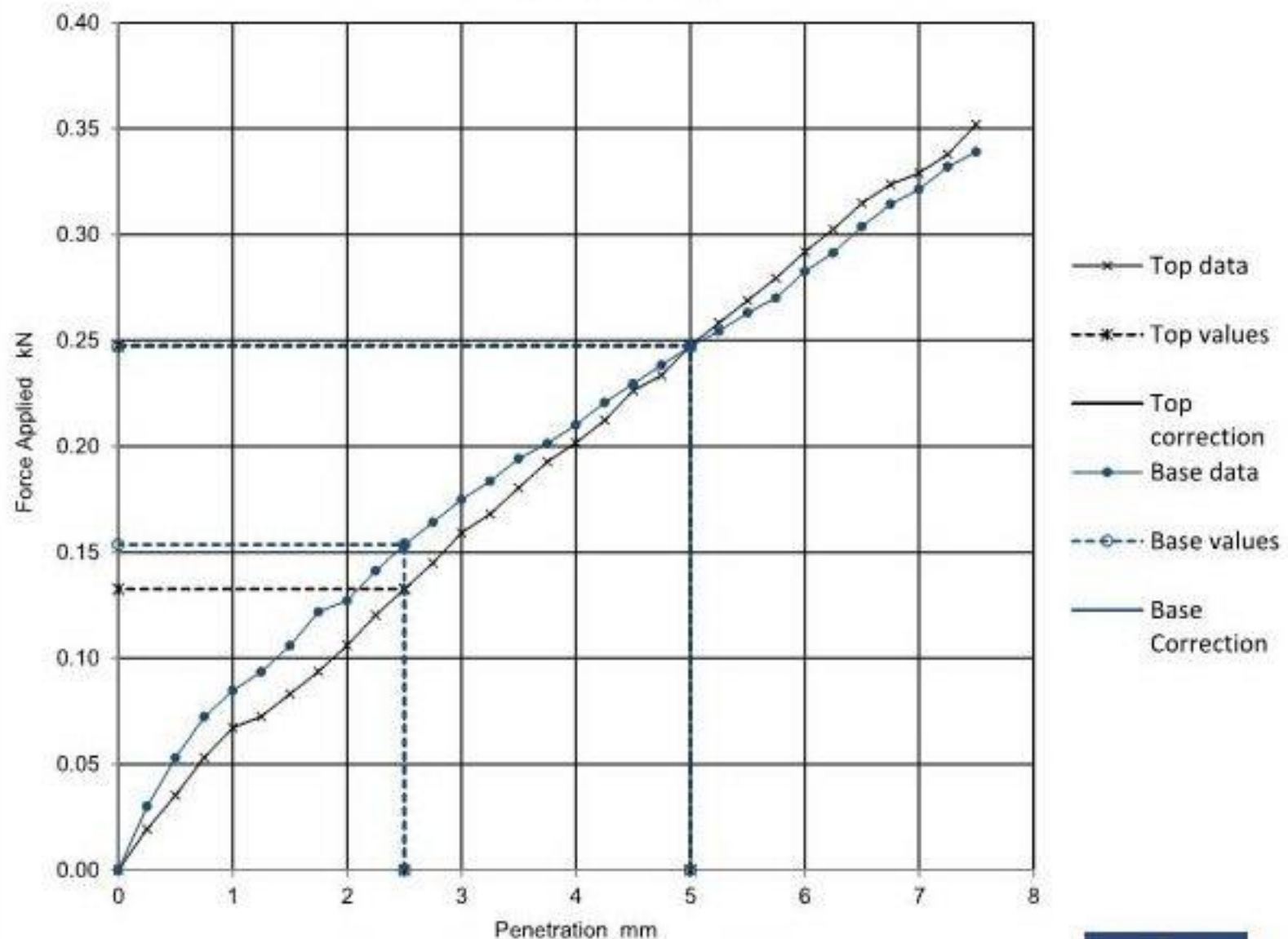
Soaking details	
Period of soaking	5 days
Time to surface	5 days
Amount of swell recorded	0.00 mm
Dry density after soaking	1.66 Mg/m ³

Material retained on 20mm sieve removed (%)	1
--	---

Initial Specimen details	Bulk density	2.00	Mg/m ³
	Dry density	1.66	Mg/m ³
	Moisture content	20	%

Surcharge applied	6	kg
	4	kPa

Force v Penetration Plots



	Curve correction applied	CBR Values, %			
		2.5mm	5mm	Highest	Average
TOP	No	1.0	1.2	1.2	1.2
BASE	No	1.2	1.2	1.2	

Moisture Content	%
21	
20	



Accredited to
ISO/IEC 17025:2005

Test specific remarks	Date	Approved	Lab Sheet Reference	Page No.
	12/12/18	Nick W-W - QM	KL010R CBR	1

	California Bearing Ratio (CBR) BS1377 : Part 4 : 1990, clause 7		Project No.	10882		
			Borehole/Pit No.	WS03		
Project Name	BER1808G1		Sample No.	-		
Soil Description	Brown slightly gravelly slightly sandy clayey SILT		Depth m	0.40	- 0.50	
Client Job No.	BER1808G1	Specimen Depth	-	m	Sample Type	B
Client	T&P Regeneration		KeyLAB ID	SWG12018113014		

Specimen Preparation in accordance with BS1377:Part 1:1990 CL7.6.5

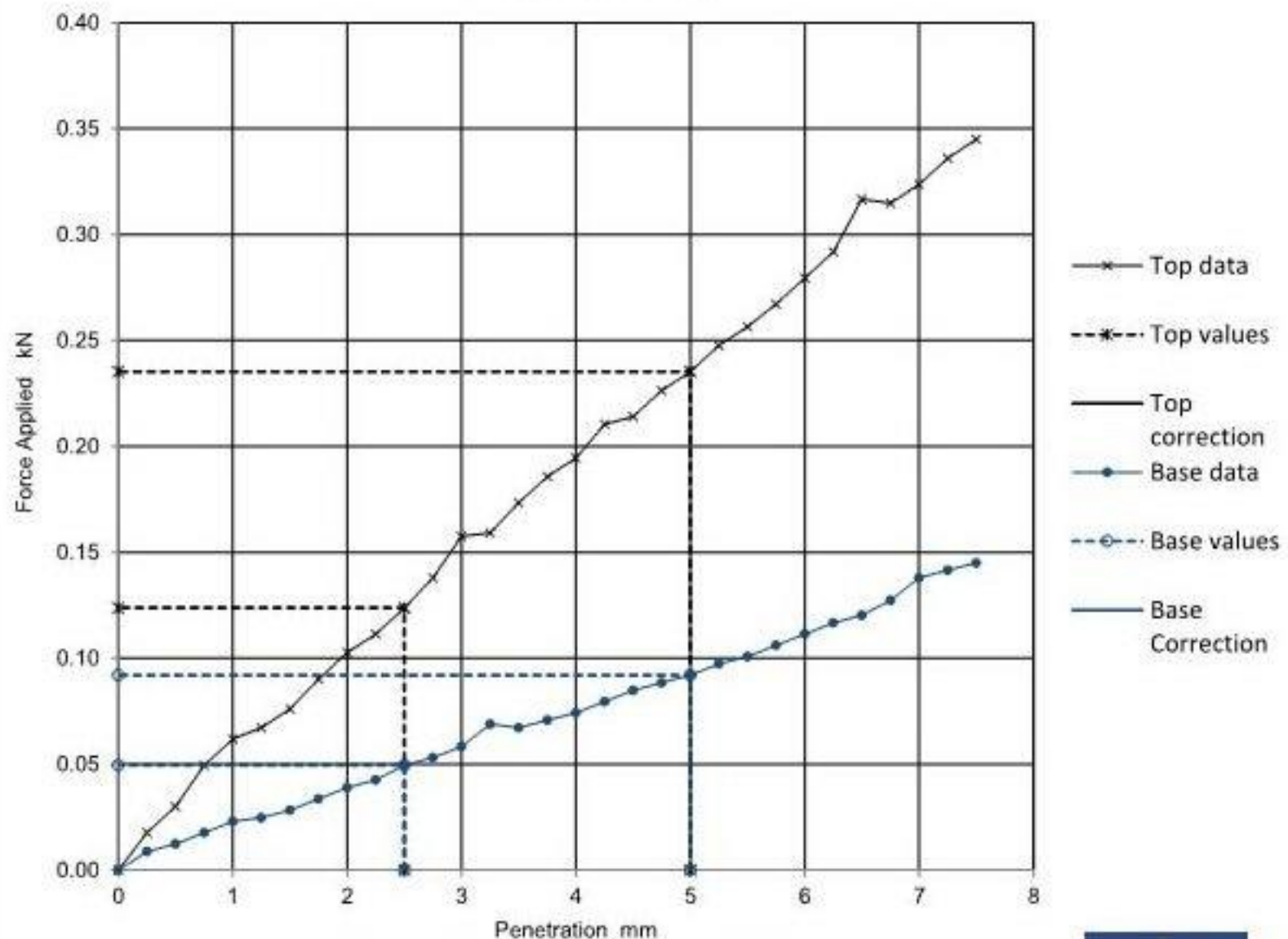
Condition	REMOULDED
Details	Recompacted with specified standard effort using 2.5kg rammer

Soaking details	
Period of soaking	5 days
Time to surface	5 days
Amount of swell recorded	0.00 mm
Dry density after soaking	1.72 Mg/m ³

Material retained on 20mm sieve removed (%)	2
--	---

Initial Specimen details	Bulk density	2.04	Mg/m ³
	Dry density	1.72	Mg/m ³
	Moisture content	18	%

Surcharge applied	6 kg
	4 kPa

Force v Penetration Plots


	Curve correction applied	CBR Values, %			
		2.5mm	5mm	Highest	Average
TOP	No	0.94	1.2	1.2	
BASE	No	0.38	0.46	0.46	

Moisture Content	%
18	
18	


 Accredited to
 ISO/IEC 17025:2005

Test specific remarks	Date	Approved	Lab Sheet Reference	Page No.
	12/12/18	Nick W-W - QM	KL010R CBR	2

Appendix E – Chemical Results



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY

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Facsimile: (01424) 729911

info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 18-18883

Issue: 1

Date of Issue: 08/08/2018

Contact: Alessandro Dunne

Customer Details: T & P Regeneration Ltd (Smeaton Road)
Unit 4
Brunel Lock Development
Bristol

BS1 6SE

Quotation No: Q15-00390

Order No: 4680-BER1808G

Customer Reference: BER1808G

Date Received: 31/07/2018

Date Approved: 08/08/2018

Details: Berewood, Phase 3B + Phase 8

Approved by:



John Wilson, Operations Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

Sample Summary

Report No.: 18-18883

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
145407	TP01 0.00 - 0.20	25/07/2018	03/08/2018		
145408	TP01 0.20 - 0.60	25/07/2018	03/08/2018		
145409	TP02 0.00 - 0.30	25/07/2018	03/08/2018		
145410	TP02 0.30 - 0.60	25/07/2018	03/08/2018		
145411	TP02 0.60 - 0.80	25/07/2018	03/08/2018		
145412	TP03 0.00 - 0.30	25/07/2018	03/08/2018		
145413	TP03 0.30 - 0.60	25/07/2018	03/08/2018		
145414	TP04 0.00 - 0.30	25/07/2018	03/08/2018	Silty loam	
145415	TP04 0.70 - 0.90	25/07/2018	03/08/2018		
145416	TP05 0.00 - 0.30	25/07/2018	03/08/2018	Silty loam	
145417	TP05 0.30 - 0.70	25/07/2018	03/08/2018		
145418	TP06 0.00 - 0.30	25/07/2018	03/08/2018	Silty loam	
145419	TP06 0.30 - 0.60	25/07/2018	03/08/2018	Silty loam	
145420	TP06 0.60 - 0.80	25/07/2018	03/08/2018		
145421	TP07 0.00 - 0.30	25/07/2018	03/08/2018	Silty loam	
145422	TP07 0.30 - 0.60	25/07/2018	03/08/2018		
145423	TP08 0.00 - 0.30	26/07/2018	03/08/2018		
145424	TP08 0.30 - 0.50	26/07/2018	03/08/2018		
145425	TP09 0.00 - 0.30	26/07/2018	03/08/2018		
145426	TP09 0.30 - 0.60	26/07/2018	03/08/2018		
145427	TP10 0.00 - 0.30	26/07/2018	03/08/2018		
145428	TP10 0.30 - 0.70	26/07/2018	03/08/2018		
145429	TP11 0.00 - 0.20	26/07/2018	03/08/2018	Silty loam	
145430	TP11 0.20 - 0.40	26/07/2018	03/08/2018		
145431	TP11 0.40 - 0.60	26/07/2018	03/08/2018		
145432	TP12 0.00 - 0.20	26/07/2018	03/08/2018		
145433	TP12 0.20 - 0.50	26/07/2018	03/08/2018		
145434	TP12 0.50 - 0.70	26/07/2018	03/08/2018		
145435	TP13 0.00 - 0.30	26/07/2018	03/08/2018	Silty loam	
145436	TP13 0.30 - 0.60	26/07/2018	03/08/2018		
145437	TP14 0.00 - 0.20	26/07/2018	03/08/2018	Silty loam	
145438	TP14 0.20 - 0.50	26/07/2018	03/08/2018		
145439	TP15 0.00 - 0.20	26/07/2018	03/08/2018	Silty loam	
145440	TP15 0.20 - 0.40	26/07/2018	03/08/2018		
145441	TP16 0.00 - 0.20	26/07/2018	03/08/2018		
145442	TP16 0.20 - 0.80	26/07/2018	03/08/2018		
145443	TP16 0.80 - 1.00	26/07/2018	03/08/2018		
145444	TP17 0.00 - 0.30	26/07/2018	03/08/2018	Silty loam	
145445	TP17 0.30 - 0.70	26/07/2018	03/08/2018	Sandy clayey loam	
145446	TP18 0.00 - 0.30	26/07/2018	03/08/2018		
145447	TP18 0.30 - 0.60	26/07/2018	03/08/2018		
145448	TP19 0.00 - 0.30	26/07/2018	03/08/2018		
145449	TP19 0.30 - 0.70	26/07/2018	03/08/2018		
145450	TP19 0.70 - 0.90	26/07/2018	03/08/2018		
145451	TP19 0.90 - 1.10	26/07/2018	03/08/2018		
145452	TP20 0.00 - 0.40	26/07/2018	03/08/2018		
145453	TP20 0.40 - 0.60	26/07/2018	03/08/2018		
145454	TP21 0.00 - 0.40	26/07/2018	03/08/2018		
145455	TP21 0.40 - 0.60	26/07/2018	03/08/2018		
145456	TP22 0.00 - 0.30	27/07/2018	03/08/2018	Silty loam	
145457	TP22 0.30 - 0.50	27/07/2018	03/08/2018		
145458	TP23 0.00 - 0.20	27/07/2018	03/08/2018		
145459	TP23 0.40 - 0.60	27/07/2018	03/08/2018		
145460	TP24 0.00 - 0.30	27/07/2018	03/08/2018	Silty loam	
145461	TP25 0.00 - 0.30	27/07/2018	03/08/2018		
145462	TP25 0.30 - 0.60	27/07/2018	03/08/2018		
145463	TP26 0.00 - 0.30	27/07/2018	03/08/2018	Silty loam	
145464	TP26 0.30 - 0.50	27/07/2018	03/08/2018		
145465	TP27 0.00 - 0.20	27/07/2018	03/08/2018		
145466	TP27 0.20 - 0.60	27/07/2018	03/08/2018		
145467	TP28 0.00 - 0.20	27/07/2018	03/08/2018	Silty loam	
145468	TP28 0.20 - 0.50	27/07/2018	03/08/2018	Silty loam	
145469	TP29 0.00 - 0.20	27/07/2018	03/08/2018		
145470	TP29 0.20 - 0.50	27/07/2018	03/08/2018	Silty clayey loam	

Sample Summary

Report No.: 18-18883

Elab No.	Client's Ref.	Date Sampled	Date Schedulec	Description	Deviations
145471	TP30 0.00 - 0.20	27/07/2018	03/08/2018		
145472	TP30 0.20 - 0.60	27/07/2018	03/08/2018		
145473	TP31 0.00 - 0.25	27/07/2018	03/08/2018		
145474	TP31 0.25 - 0.60	27/07/2018	03/08/2018		
145475	TP32 0.00 - 0.40	27/07/2018	03/08/2018		
145476	TP32 0.40 - 0.60	27/07/2018	03/08/2018		
145477	TP33 0.00 - 0.20	27/07/2018	03/08/2018		
145478	TP33 0.20 - 0.50	27/07/2018	03/08/2018		
145479	TP04 1.20 - 1.40	25/07/2018	03/08/2018		
145480	TP08 0.50 - 0.70	26/07/2018	03/08/2018		
145481	TP10 0.70 - 0.90	26/07/2018	03/08/2018		
145482	TP14 0.50 - 0.70	26/07/2018	03/08/2018		
145483	TP22 0.00 - 0.20	27/07/2018	03/08/2018		
145484	TP22 0.20 - 0.40	27/07/2018	03/08/2018		
145485	TP24 0.30 - 0.60	27/07/2018	03/08/2018		

Results Summary

Report No.: 18-18883

2683

ELAB Reference	145414	145416	145418	145419	145421	145429
Customer Reference						
Sample ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	TP04	TP05	TP06	TP06	TP07	TP11
Sample Depth (m)	0.00 - 0.30	0.00 - 0.30	0.00 - 0.30	0.30 - 0.60	0.00 - 0.30	0.00 - 0.20
Sampling Date	25/07/2018	25/07/2018	25/07/2018	25/07/2018	25/07/2018	26/07/2018

Determinand	Codes	Units	LOD						
Metals									
Arsenic	M	mg/kg	1	9.0	12.7	9.8	8.7	10.6	7.8
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	21.4	30.1	22.2	20.2	21.6	19.4
Copper	M	mg/kg	5	27.0	13.3	13.3	11.3	14.2	24.6
Lead	M	mg/kg	5	29.3	23.0	21.6	20.1	22.4	20.9
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	9.9	9.8	7.2	6.4	8.4	5.2
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	72.0	47.3	46.3	41.8	48.0	37.9
Anions									
Water Soluble Sulphate	M	g/l	0.02	0.06	0.03	< 0.02	< 0.02	< 0.02	< 0.02
Inorganics									
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Water Soluble Boron	N	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Miscellaneous									
pH	M	pH units	0.1	7.3	6.5	6.5	6.5	6.3	6.4
Total Organic Carbon	N	%	0.01	1.1	0.95	0.65	0.72	0.41	0.93
Phenols									
Phenol	M	mg/kg	1	< 1	< 1	< 1	< 1	< 1	< 1
M,P-Cresol	N	mg/kg	1	< 1	< 1	< 1	< 1	< 1	< 1
O-Cresol	N	mg/kg	1	< 1	< 1	< 1	< 1	< 1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1	< 1	< 1	< 1	< 1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1	< 1	< 1	< 1	< 1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1	< 1	< 1	< 1	< 1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5	< 5	< 5	< 5	< 5
Polyaromatic hydrocarbons									
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Pyrene	M	mg/kg	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1
Benzo (b) fluoranthene	M	mg/kg	0.1	0.2	< 0.1	< 0.1	< 0.1	0.1	0.2
Benzo(k)fluoranthene	M	mg/kg	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1
Benzo (a) pyrene	M	mg/kg	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	0.1	0.1	< 0.1	0.2	< 0.1	0.2
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	M	mg/kg	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Total PAH(16)	M	mg/kg	0.4	1.2	0.4	0.7	0.9	0.8	1.4

Results Summary

Report No.: 18-18883

ELAB Reference	145414	145416	145418	145419	145421	145429
Customer Reference						
Sample ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	TP04	TP05	TP06	TP06	TP07	TP11
Sample Depth (m)	0.00 - 0.30	0.00 - 0.30	0.00 - 0.30	0.30 - 0.60	0.00 - 0.30	0.00 - 0.20
Sampling Date	25/07/2018	25/07/2018	25/07/2018	25/07/2018	25/07/2018	26/07/2018

Determinand	Codes	Units	LOD						
OrganoChlorine Pesticides									
alpha-HCH	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
beta-HCH	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
gamma-HCH	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
delta-HCH	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Heptachlor	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Aldrin	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Heptachlor expoxide	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
trans-Chlordane	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
alpha cis-Chlordane	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
p,p-DDE	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Dieldrin	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endrin	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
p,p-DDD	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endosulfan II	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endrin aldehyde	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
p,p-DDT	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endosulphan sulphate	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Methoxychlor	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endrin ketone	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
OrganoPhosphorus Pesticides									
Acephate	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Aziniphos-methyl	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Chlorpyrifos	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Demeton-s-methyl	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Dichlorvos	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Dimethoate	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Ethion	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Malathion	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Mathidathion	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Methamidophos	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Omethoate	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Pirimifos-methyl	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Profenofos	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Pyrazophos	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Tokuthion	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t
Tolclofos-methyl	N	ug/kg	100	n/t	n/t	n/t	n/t	n/t	n/t

Results Summary

Report No.: 18-18883

2683

ELAB Reference	145435	145437	145439	145444	145445	145456
Customer Reference						
Sample ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	TP13	TP14	TP15	TP17	TP17	TP22
Sample Depth (m)	0.00 - 0.30	0.00 - 0.20	0.00 - 0.20	0.00 - 0.30	0.30 - 0.70	0.00 - 0.30
Sampling Date	26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018	27/07/2018

Determinand	Codes	Units	LOD						
Metals									
Arsenic	M	mg/kg	1	12.5	7.2	n/t	9.3	9.0	15.0
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	n/t	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	34.9	15.3	n/t	20.2	26.9	38.6
Copper	M	mg/kg	5	11.9	14.8	n/t	23.2	10.1	14.5
Lead	M	mg/kg	5	16.8	19.9	n/t	20.7	9.0	23.1
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	n/t	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	8.4	< 5.0	n/t	< 5.0	6.8	13.9
Selenium	M	mg/kg	1	< 1.0	< 1.0	n/t	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	45.9	34.7	n/t	47.3	36.6	58.7
Anions									
Water Soluble Sulphate	M	g/l	0.02	< 0.02	< 0.02	n/t	< 0.02	< 0.02	< 0.02
Inorganics									
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	n/t	< 0.8	< 0.8	< 0.8
Water Soluble Boron	N	mg/kg	0.5	< 0.5	< 0.5	n/t	< 0.5	< 0.5	0.5
Miscellaneous									
pH	M	pH units	0.1	7.7	7.1	n/t	6.8	7.5	7.4
Total Organic Carbon	N	%	0.01	0.59	0.84	n/t	0.90	0.20	1.3
Phenols									
Phenol	M	mg/kg	1	< 1	< 1	n/t	< 1	< 1	< 1
M,P-Cresol	N	mg/kg	1	< 1	< 1	n/t	< 1	< 1	< 1
O-Cresol	N	mg/kg	1	< 1	< 1	n/t	< 1	< 1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1	< 1	n/t	< 1	< 1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1	< 1	n/t	< 1	< 1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1	< 1	n/t	< 1	< 1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5	n/t	< 5	< 5	< 5
Polyaromatic hydrocarbons									
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	n/t	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	n/t	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	n/t	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	n/t	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	0.1	n/t	< 0.1	< 0.1	0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	n/t	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.1	0.2	n/t	0.1	0.1	0.2
Pyrene	M	mg/kg	0.1	< 0.1	0.2	n/t	0.1	< 0.1	0.2
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	n/t	< 0.1	< 0.1	0.1
Chrysene	M	mg/kg	0.1	< 0.1	0.1	n/t	0.1	< 0.1	0.2
Benzo (b) fluoranthene	M	mg/kg	0.1	< 0.1	0.1	n/t	0.1	0.1	0.2
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	0.2	n/t	0.1	< 0.1	0.2
Benzo (a) pyrene	M	mg/kg	0.1	< 0.1	0.1	n/t	0.1	< 0.1	0.2
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	< 0.1	0.1	n/t	0.1	0.1	0.2
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	n/t	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	M	mg/kg	0.1	< 0.1	< 0.1	n/t	< 0.1	< 0.1	0.1
Total PAH(16)	M	mg/kg	0.4	0.7	1.4	n/t	1.1	0.9	1.9

Results Summary

Report No.: 18-18883

ELAB Reference	145435	145437	145439	145444	145445	145456
Customer Reference						
Sample ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	TP13	TP14	TP15	TP17	TP17	TP22
Sample Depth (m)	0.00 - 0.30	0.00 - 0.20	0.00 - 0.20	0.00 - 0.30	0.30 - 0.70	0.00 - 0.30
Sampling Date	26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018	27/07/2018

Determinand	Codes	Units	LOD						
OrganoChlorine Pesticides									
alpha-HCH	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
beta-HCH	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
gamma-HCH	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
delta-HCH	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Heptachlor	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Aldrin	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Heptachlor epoxide	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
trans-Chlordane	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
alpha cis-Chlordane	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
p,p-DDE	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Dieldrin	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Endrin	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
p,p-DDD	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Endosulfan II	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Endrin aldehyde	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
p,p-DDT	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Endosulphan sulphate	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Methoxychlor	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
Endrin ketone	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t
OrganoPhosphorus Pesticides									
Acephate	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Azinphos-methyl	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Chlorpyrifos	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Demeton-s-methyl	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Dichlorvos	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Dimethoate	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Ethion	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Malathion	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Mathidathion	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Methamidophos	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Omethoate	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Pyrimifos-methyl	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Profenofos	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Pyrazophos	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Tokuthion	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t
Tolclofos-methyl	N	ug/kg	100	n/t	n/t	< 100	n/t	n/t	n/t

Results Summary

Report No.: 18-18883

2683

ELAB Reference	145460	145463	145467	145468	145470
Customer Reference					
Sample ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	TP24	TP26	TP28	TP28	TP29
Sample Depth (m)	0.00 - 0.30	0.00 - 0.30	0.00 - 0.20	0.20 - 0.50	0.20 - 0.50
Sampling Date	27/07/2018	27/07/2018	27/07/2018	27/07/2018	27/07/2018

Determinand	Codes	Units	LOD					
Metals								
Arsenic	M	mg/kg	1	n/t	16.5	15.0	12.8	18.8
Cadmium	M	mg/kg	0.5	n/t	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	n/t	35.0	38.5	34.1	50.8
Copper	M	mg/kg	5	n/t	15.5	16.7	12.0	17.5
Lead	M	mg/kg	5	n/t	24.9	30.0	19.5	16.2
Mercury	M	mg/kg	0.5	n/t	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	n/t	11.5	13.4	12.9	17.3
Selenium	M	mg/kg	1	n/t	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	n/t	54.3	62.8	46.3	53.7
Anions								
Water Soluble Sulphate	M	g/l	0.02	n/t	< 0.02	< 0.02	< 0.02	< 0.02
Inorganics								
Hexavalent Chromium	N	mg/kg	0.8	n/t	< 0.8	< 0.8	< 0.8	< 0.8
Water Soluble Boron	N	mg/kg	0.5	n/t	0.9	0.5	< 0.5	< 0.5
Miscellaneous								
pH	M	pH units	0.1	n/t	7.0	7.4	7.9	8.0
Total Organic Carbon	N	%	0.01	n/t	1.7	1.7	0.67	0.50
Phenols								
Phenol	M	mg/kg	1	n/t	< 1	< 1	< 1	< 1
M,P-Cresol	N	mg/kg	1	n/t	< 1	< 1	< 1	< 1
O-Cresol	N	mg/kg	1	n/t	< 1	< 1	< 1	< 1
3,4-Dimethylphenol	N	mg/kg	1	n/t	< 1	< 1	< 1	< 1
2,3-Dimethylphenol	M	mg/kg	1	n/t	< 1	< 1	< 1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	n/t	< 1	< 1	< 1	< 1
Total Monohydric Phenols	N	mg/kg	5	n/t	< 5	< 5	< 5	< 5
Polyaromatic hydrocarbons								
Naphthalene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	n/t	0.1	< 0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Benzo (b) fluoranthene	M	mg/kg	0.1	n/t	0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Benzo (a) pyrene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	n/t	0.8	< 0.4	< 0.4	< 0.4

Results Summary

Report No.: 18-18883

ELAB Reference	145460	145463	145467	145468	145470
Customer Reference					
Sample ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	TP24	TP26	TP28	TP28	TP29
Sample Depth (m)	0.00 - 0.30	0.00 - 0.30	0.00 - 0.20	0.20 - 0.50	0.20 - 0.50
Sampling Date	27/07/2018	27/07/2018	27/07/2018	27/07/2018	27/07/2018

Determinand	Codes	Units	LOD					
OrganoChlorine Pesticides								
alpha-HCH	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
beta-HCH	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
gamma-HCH	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
delta-HCH	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Heptachlor	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Aldrin	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Heptachlor epoxide	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
trans-Chlordane	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
alpha cis-Chlordane	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
p,p-DDE	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Dieldrin	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Endrin	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
p,p-DDD	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Endosulfan II	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Endrin aldehyde	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
p,p-DDT	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Endosulphan sulphate	M	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Methoxychlor	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
Endrin ketone	N	ug/kg	10	< 10	n/t	n/t	n/t	n/t
OrganoPhosphorus Pesticides								
Acephate	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Azinphos-methyl	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Chlorpyrifos	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Demeton-s-methyl	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Dichlorvos	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Dimethoate	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Ethion	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Malathion	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Mathidathion	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Methamidophos	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Omethoate	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Pyrimifos-methyl	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Profenofos	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Pyrazophos	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Tokuthion	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t
Tolclofos-methyl	N	ug/kg	100	< 100	n/t	n/t	n/t	n/t



Results Summary

Report No.: 18-18883

ELAB Reference	145439	145460
Customer Reference		
Sample ID		
Sample Type	SOIL	SOIL
Sample Location	TP15	TP24
Sample Depth (m)	0.00 - 0.20	0.00 - 0.30
Sampling Date	26/07/2018	27/07/2018

Determinand	Codes	Units	LOD		
SVOCTIC					
Acid herbicides	N	mg/kg	0.01	None Detected	None Detected

Method Summary

Report No.: 18-18883

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	06/08/2018	110	Colorimetry
pH	M	Air dried sample	07/08/2018	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	06/08/2018	118	ICPMS
Phenols in solids	M	As submitted sample	06/08/2018	121	HPLC
PAH (GC-FID)	M	As submitted sample	06/08/2018	133	GC-FID
SVOC in solids	N	As submitted sample	06/08/2018	167	GC-MS
Water soluble anions	M	Air dried sample	06/08/2018	172	Ion Chromatography
Organochlorine Pesticides in solids	M	As submitted sample	06/08/2018	173	GC-MS
Organophosphorus Pesticides in solids	N	As submitted sample	06/08/2018	173	GC-MS
Water soluble boron	N	Air dried sample	06/08/2018	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	07/08/2018	210	IR

Tests marked N are not UKAS accredited

Report Information

Report No.: 18-18883

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

Soil sample results are expressed on an air dried basis (dried at < 30°C)

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Appendix F – HazWaste Report

Waste Classification Report



GQSW2-RSM9E-Y35MW

Job name

Phase 3b & 8 - Berewood, Waterloooville

Description/Comments

Project

BER1808G

Site

Waste Stream Template

T&P 2 Standard

Classified by

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Report

Created by: Alessandro Dunne

Created date: 27 Sep 2018 13:47 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	TP04	0.00 - 0.30	Non Hazardous		3
2	TP05	0.00 - 0.30	Non Hazardous		5
3	TP06	0.00 - 0.30	Non Hazardous		7
4	TP06[1]	0.30 - 0.60	Non Hazardous		9
5	TP07	0.00 - 0.30	Non Hazardous		11
6	TP11	0.00 - 0.20	Non Hazardous		13
7	TP13	0.00 - 0.30	Non Hazardous		15
8	TP14	0.00 - 0.20	Non Hazardous		17
9	TP15	0.00 - 0.20	Non Hazardous		19
10	TP17	0.00 - 0.30	Non Hazardous		20
11	TP17[1]	0.30 - 0.70	Non Hazardous		22
12	TP22	0.00 - 0.30	Non Hazardous		24
13	TP24	0.00 - 0.30	Non Hazardous		26
14	TP26	0.00 - 0.30	Non Hazardous		27
15	TP28	0.00 - 0.20	Non Hazardous		29
16	TP28[1]	0.20 - 0.50	Non Hazardous		31

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
17	TP29	0.20 - 0.50	Non Hazardous		33

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	35
Appendix B: Rationale for selection of metal species	36
Appendix C: Version	36

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:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.00 - 0.30 m		

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 }				9 mg/kg	1.32	11.883	mg/kg	0.00119 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643	mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				21.4 mg/kg	1.462	31.277	mg/kg	0.00313 %	✓	
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				27 mg/kg	1.126	30.399	mg/kg	0.00304 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	29.3 mg/kg		29.3	mg/kg	0.00293 %	✓	
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				9.9 mg/kg	1.579	15.637	mg/kg	0.00156 %	✓	
	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 selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				72 mg/kg	2.469	177.789	mg/kg	0.0178 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5 mg/kg	13.43	<6.715	mg/kg	<0.000672 %		<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				7.3 pH		7.3	pH	7.3 pH		
			PH								
12	phenol				<1 mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19	fluoranthene	205-912-4	206-44-0		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓	
20	pyrene	204-927-3	129-00-0		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	chrysene	601-048-00-0	205-923-4		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓	
Total:								0.031 %		

Key

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

Classification of sample: TP05

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

Sample details

Sample Name:	TP05	LoW Code:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.00 - 0.30 m	Chapter:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
		Entry:	

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 }				12.7	mg/kg	1.32	16.768	mg/kg	0.00168 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	cadmium { cadmium sulfide }			1	<0.5	mg/kg	1.285	<0.643	mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6									
3	chromium { chromium(III) oxide }				30.1	mg/kg	1.462	43.993	mg/kg	0.0044 %	✓	
		215-160-9	1308-38-9									
4	copper { dicopper oxide; copper (I) oxide }				13.3	mg/kg	1.126	14.974	mg/kg	0.0015 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	23	mg/kg		23	mg/kg	0.0023 %	✓	
	082-001-00-6											
6	mercury { mercury dichloride }				<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel dihydroxide }				9.8	mg/kg	1.579	15.479	mg/kg	0.00155 %	✓	
	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 selenosulfide and those specified elsewhere in this Annex }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	034-002-00-8											
9	zinc { zinc sulphate }				47.3	mg/kg	2.469	116.798	mg/kg	0.0117 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5	mg/kg	13.43	<6.715	mg/kg	<0.000672 %		<LOD
			10294-33-4, 10294-34-5, 7637-07-2									
11	pH				6.5	pH		6.5	pH	6.5 pH		
			PH									
12	phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2									
13	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19	fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓	
Total:								0.0244 %		

Key

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

Classification of sample: TP06

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

Sample details

Sample Name:	TP06	LoW Code:	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.00 - 0.30 m	Entry:		17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% 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 }				9.8 mg/kg	1.32	12.939 mg/kg	0.00129 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				22.2 mg/kg	1.462	32.447 mg/kg	0.00324 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				13.3 mg/kg	1.126	14.974 mg/kg	0.0015 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	21.6 mg/kg		21.6 mg/kg	0.00216 %	✓		
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				7.2 mg/kg	1.579	11.372 mg/kg	0.00114 %	✓		
	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 selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				46.3 mg/kg	2.469	114.328 mg/kg	0.0114 %	✓		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5 mg/kg	13.43	<6.715 mg/kg	<0.000672 %			<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				6.5 pH		6.5 pH	6.5 pH			
			PH								
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	81-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	• acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	• acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	• fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	• phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
18	• anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	• fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	• pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	• indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	• benzo[ghi]perylene	205-883-8	191-24-2		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
Total:									0.0221 %		

Key

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

Classification of sample: TP06[1]

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

Sample details

Sample Name:	LoW Code:	
TP06[1]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.30 - 0.60 m		

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 }				8.7 mg/kg	1.32	11.487 mg/kg	0.00115 %		✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				20.2 mg/kg	1.462	29.523 mg/kg	0.00295 %		✓	
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				11.3 mg/kg	1.126	12.723 mg/kg	0.00127 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	20.1 mg/kg		20.1 mg/kg	0.00201 %		✓	
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				6.4 mg/kg	1.579	10.109 mg/kg	0.00101 %		✓	
	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 selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				41.8 mg/kg	2.469	103.217 mg/kg	0.0103 %		✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5 mg/kg	13.43	<6.715 mg/kg	<0.000672 %			<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				6.5 pH		6.5 pH	6.5 pH			
			PH								
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	81-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
Total:									0.02 %		

Key

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

Classification of sample: TP07

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

Sample details

Sample Name:	LoW Code:	
TP07	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.00 - 0.30 m		

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 }				10.6 mg/kg	1.32	13.995 mg/kg	0.0014 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				21.6 mg/kg	1.462	31.57 mg/kg	0.00316 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				14.2 mg/kg	1.126	15.988 mg/kg	0.0016 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	22.4 mg/kg		22.4 mg/kg	0.00224 %	✓		
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				8.4 mg/kg	1.579	13.268 mg/kg	0.00133 %	✓		
	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 selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				48 mg/kg	2.469	118.526 mg/kg	0.0119 %	✓		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5 mg/kg	13.43	<6.715 mg/kg	<0.000672 %			<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				6.3 pH		6.3 pH	6.3 pH			
			PH								
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
Total:									0.0229 %		

Key

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

Classification of sample: TP11

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

Sample details

Sample Name:	TP11	LoW Code:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.00 - 0.20 m	Chapter:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
		Entry:	

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 }				7.8 mg/kg	1.32	10.299 mg/kg	0.00103 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				19.4 mg/kg	1.462	28.354 mg/kg	0.00284 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				24.6 mg/kg	1.126	27.697 mg/kg	0.00277 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	20.9 mg/kg		20.9 mg/kg	0.00209 %	✓		
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				5.2 mg/kg	1.579	8.213 mg/kg	0.000821 %	✓		
	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 selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				37.9 mg/kg	2.469	93.586 mg/kg	0.00936 %	✓		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5 mg/kg	13.43	<6.715 mg/kg	<0.000672 %			<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				6.4 pH		6.4 pH	6.4 pH			
			PH								
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	fluoranthene	205-912-4	206-44-0		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
20	pyrene	204-927-3	129-00-0		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
Total:									0.0203 %		

Key

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

Classification of sample: TP13

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

Sample details

Sample Name:	TP13	LoW Code:	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.00 - 0.30 m	Entry:		17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% 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 }				12.5 mg/kg	1.32	16.504 mg/kg	0.00165 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				34.9 mg/kg	1.462	51.008 mg/kg	0.0051 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				11.9 mg/kg	1.126	13.398 mg/kg	0.00134 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	16.8 mg/kg		16.8 mg/kg	0.00168 %	✓		
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				8.4 mg/kg	1.579	13.268 mg/kg	0.00133 %	✓		
	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 selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				45.9 mg/kg	2.469	113.341 mg/kg	0.0113 %	✓		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5 mg/kg	13.43	<6.715 mg/kg	<0.000672 %			<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				7.7 pH		7.7 pH	7.7 pH			
			PH								
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	fluoranthene	205-912-4	206-44-0		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
20	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0237 %		

Key

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

Classification of sample: TP14

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

Sample details

Sample Name:	LoW Code:	
TP14	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.00 - 0.20 m		

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 }				7.2 mg/kg	1.32	9.506	mg/kg	0.000951 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643	mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				15.3 mg/kg	1.462	22.362	mg/kg	0.00224 %	✓	
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				14.8 mg/kg	1.126	16.663	mg/kg	0.00167 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	19.9 mg/kg		19.9	mg/kg	0.00199 %	✓	
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				<5 mg/kg	1.579	<7.897	mg/kg	<0.00079 %		<LOD
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				34.7 mg/kg	2.469	85.685	mg/kg	0.00857 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5 mg/kg	13.43	<6.715	mg/kg	<0.000672 %		<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				7.1 pH		7.1	pH	7.1 pH		
			PH								
12	phenol				<1 mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	81-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	phenanthrene	201-681-5	85-01-8		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	fluoranthene	205-912-4	206-44-0		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
20	pyrene	204-927-3	129-00-0		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0175 %		

Key

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

Classification of sample: TP15

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

Sample details

Sample Name:	LoW Code:	
TP15	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.00 - 0.20 m		

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							
Total:								0%		

Key

User supplied data

Classification of sample: TP17

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

Sample details

Sample Name:	TP17	LoW Code:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.00 - 0.30 m	Chapter:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
		Entry:	

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 }				9.3	mg/kg	1.32	12.279	mg/kg	0.00123 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	cadmium { cadmium sulfide }			1	<0.5	mg/kg	1.285	<0.643	mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6									
3	chromium { chromium(III) oxide }				20.2	mg/kg	1.462	29.523	mg/kg	0.00295 %	✓	
		215-160-9	1308-38-9									
4	copper { dicopper oxide; copper (I) oxide }				23.2	mg/kg	1.126	26.121	mg/kg	0.00261 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	20.7	mg/kg		20.7	mg/kg	0.00207 %	✓	
	082-001-00-6											
6	mercury { mercury dichloride }				<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel dihydroxide }				<5	mg/kg	1.579	<7.897	mg/kg	<0.00079 %		<LOD
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	034-002-00-8											
9	zinc { zinc sulphate }				47.3	mg/kg	2.469	116.798	mg/kg	0.0117 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5	mg/kg	13.43	<6.715	mg/kg	<0.000672 %		<LOD
			10294-33-4, 10294-34-5, 7637-07-2									
11	pH				6.8	pH		6.8	pH	6.8 pH		
12	phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	004-001-00-2	203-632-7	108-95-2									
13	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	001-052-00-2	202-049-5	91-20-3									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	• acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	• acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	• fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	• phenanthrene	201-581-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
18	• anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	• fluoranthene	205-912-4	206-44-0		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
20	• pyrene	204-927-3	129-00-0		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.1 mg/kg		0.1 mg/kg	0.00001 %		✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0226 %		

Key

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

Classification of sample: TP17[1]

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

Sample details

Sample Name:	LoW Code:	
TP17[1]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.30 - 0.70 m		

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 }				9	mg/kg	1.32	11.883	mg/kg	0.00119 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	cadmium { cadmium sulfide }			1	<0.5	mg/kg	1.285	<0.643	mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6									
3	chromium { chromium(III) oxide }				26.9	mg/kg	1.462	39.316	mg/kg	0.00393 %	✓	
		215-160-9	1308-38-9									
4	copper { dicopper oxide; copper (I) oxide }				10.1	mg/kg	1.126	11.371	mg/kg	0.00114 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	9	mg/kg		9	mg/kg	0.0009 %	✓	
	082-001-00-6											
6	mercury { mercury dichloride }				<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel dihydroxide }				6.8	mg/kg	1.579	10.741	mg/kg	0.00107 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	034-002-00-8											
9	zinc { zinc sulphate }				36.6	mg/kg	2.469	90.376	mg/kg	0.00904 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5	mg/kg	13.43	<6.715	mg/kg	<0.000672 %		<LOD
			10294-33-4, 10294-34-5, 7637-07-2									
11	pH				7.5	pH		7.5	pH	7.5 pH		
			pH									
12	phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	004-001-00-2	203-632-7	108-95-2									
13	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	001-052-00-2	202-049-5	91-20-3									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	• acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	• acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	• fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
17	• phenanthrene	201-581-5	85-01-8		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
18	• anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
19	• fluoranthene	205-912-4	206-44-0		0.1 mg/kg		0.1	mg/kg	0.00001 %	✓	
20	• pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.1 mg/kg		0.1	mg/kg	0.00001 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26	• indeno[123-cd]pyrene	205-893-2	193-39-5		0.1 mg/kg		0.1	mg/kg	0.00001 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28	• benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
Total:									0.0186 %		

Key

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

Classification of sample: TP22

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

Sample details

Sample Name:	TP22	LoW Code:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.00 - 0.30 m	Chapter:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Entry:			

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	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				38.6 mg/kg	1.462	56.416 mg/kg	0.00564 %		✓	
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				14.5 mg/kg	1.126	16.325 mg/kg	0.00163 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	23.1 mg/kg		23.1 mg/kg	0.00231 %		✓	
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				13.9 mg/kg	1.579	21.955 mg/kg	0.0022 %		✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				58.7 mg/kg	2.469	144.948 mg/kg	0.0145 %		✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				0.5 mg/kg	13.43	6.715 mg/kg	0.000672 %		✓	
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				7.4 pH		7.4 pH	7.4 pH			
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	004-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	001-052-00-2	202-049-5	91-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	• acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	• acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	• fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	• phenanthrene	201-581-5	85-01-8		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
18	• anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	• fluoranthene	205-912-4	206-44-0		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
20	• pyrene	204-927-3	129-00-0		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
22	chrysene	601-048-00-0	205-923-4	218-01-9	0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
26	• indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	• benzo[ghi]perylene	205-883-8	191-24-2		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
Total:									0.0296 %		

Key

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

Classification of sample: TP24

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

Sample details

Sample Name:	LoW Code:	
TP24	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.00 - 0.30 m		

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							
Total:								0%		

Key

User supplied data

Classification of sample: TP26

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

Sample details

Sample Name:	TP26	LoW Code:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.00 - 0.30 m	Chapter:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
		Entry:	

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 }				16.5 mg/kg	1.32	21.785 mg/kg	0.00218 %		✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				35 mg/kg	1.462	51.154 mg/kg	0.00512 %		✓	
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				15.5 mg/kg	1.126	17.451 mg/kg	0.00175 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	24.9 mg/kg		24.9 mg/kg	0.00249 %		✓	
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				11.5 mg/kg	1.579	18.164 mg/kg	0.00182 %		✓	
	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 selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				54.3 mg/kg	2.469	134.083 mg/kg	0.0134 %		✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				0.9 mg/kg	13.43	12.087 mg/kg	0.00121 %		✓	
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				7 pH		7 pH	7pH			
			PH								
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	81-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	fluoranthene	205-912-4	206-44-0		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
20	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.1 mg/kg		0.1 mg/kg	0.00001 %	✓		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0286 %		

Key

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

Classification of sample: TP28

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

Sample details

Sample Name:	TP28	LoW Code:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.00 - 0.20 m	Chapter:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
		Entry:	

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	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				38.5 mg/kg	1.462	56.27 mg/kg	0.00563 %		✓	
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				16.7 mg/kg	1.126	18.802 mg/kg	0.00188 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	30 mg/kg		30 mg/kg	0.003 %		✓	
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				13.4 mg/kg	1.579	21.165 mg/kg	0.00212 %		✓	
	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 selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				62.8 mg/kg	2.469	155.072 mg/kg	0.0155 %		✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				0.5 mg/kg	13.43	6.715 mg/kg	0.000672 %		✓	
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				7.4 pH		7.4 pH	7.4 pH			
			PH								
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19	fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
Total:								0.0314 %		

Key

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

Classification of sample: TP28[1]

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

Sample details

Sample Name:	TP28[1]	LoW Code:	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.20 - 0.50 m	Entry:		17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% 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 }				12.8	mg/kg	1.32	16.9	mg/kg	0.00169 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	cadmium { cadmium sulfide }			1	<0.5	mg/kg	1.285	<0.643	mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6									
3	chromium { chromium(III) oxide }				34.1	mg/kg	1.462	49.839	mg/kg	0.00498 %	✓	
		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 }			1	19.5	mg/kg		19.5	mg/kg	0.00195 %	✓	
	082-001-00-6											
6	mercury { mercury dichloride }				<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel dihydroxide }				12.9	mg/kg	1.579	20.376	mg/kg	0.00204 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	034-002-00-8											
9	zinc { zinc sulphate }				46.3	mg/kg	2.469	114.328	mg/kg	0.0114 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5	mg/kg	13.43	<6.715	mg/kg	<0.000672 %		<LOD
			10294-33-4, 10294-34-5, 7637-07-2									
11	pH				7.9	pH		7.9	pH	7.9 pH		
			PH									
12	phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2									
13	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19	fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
Total:								0.0247 %		

Key

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

Classification of sample: TP29

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

Sample details

Sample Name:	TP29	LoW Code:	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.20 - 0.50 m	Entry:		17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% 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 }				18.8 mg/kg	1.32	24.822 mg/kg	0.00248 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium sulfide }			1	<0.5 mg/kg	1.285	<0.643 mg/kg	<0.00005 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }				50.8 mg/kg	1.462	74.247 mg/kg	0.00742 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				17.5 mg/kg	1.126	19.703 mg/kg	0.00197 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	16.2 mg/kg		16.2 mg/kg	0.00162 %	✓		
	082-001-00-6										
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel dihydroxide }				17.3 mg/kg	1.579	27.325 mg/kg	0.00273 %	✓		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc sulphate }				53.7 mg/kg	2.469	132.601 mg/kg	0.0133 %	✓		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.5 mg/kg	13.43	<6.715 mg/kg	<0.000672 %			<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
11	pH				8 pH		8 pH	8pH			
			PH								
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
13	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	acenaphthylene	205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	phenanthrene	201-681-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19	fluoranthene	205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
Total:								0.0308 %		

Key

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

Appendix A: Classifier defined and non CLP determinands

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

Conversion factor: 1.462

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Repr. 1B H360FD , Skin Sens. 1 H317 , Resp. Sens. 1 H334 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302 , Acute Tox. 4 H332

* **lead compounds with the exception of those specified elsewhere in this Annex**

CLP index number: 082-001-00-6

Description/Comments: Least-worst case: Lead REACH Consortium considers some lead compounds Carcinogenic category 2B

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

Additional Hazard Statement(s): Carc. 2 H351

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

03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

* **boron tribromide/trichloride/trifluoride (combined)** (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)

Conversion factor: 13.43

Description/Comments: Combines the hazard statements and the average of the conversion factors for boron tribromide, boron trichloride and boron trifluoride

Data source: N/A

Data source date: 06 Aug 2015

Hazard Statements: Skin Corr. 1B H314 , Skin Corr. 1A H314 , Acute Tox. 2 H300 , Acute Tox. 2 H330 , EUH014

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

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302

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

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

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

Data source date: 21 Aug 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2 H351

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

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

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

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

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}

Total Chromium excluding Chromium VI

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Chromium VI below detection

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}

Chromium VI below detection levels so insufficient to form compound zinc chromate

boron {boron tribromide/trichloride/trifluoride (combined)}

Worst case species based on risk phrases

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2018.247.3619.7425 (04 Sep 2018)

HazWasteOnline Database: 2018.247.3619.7425 (04 Sep 2018)

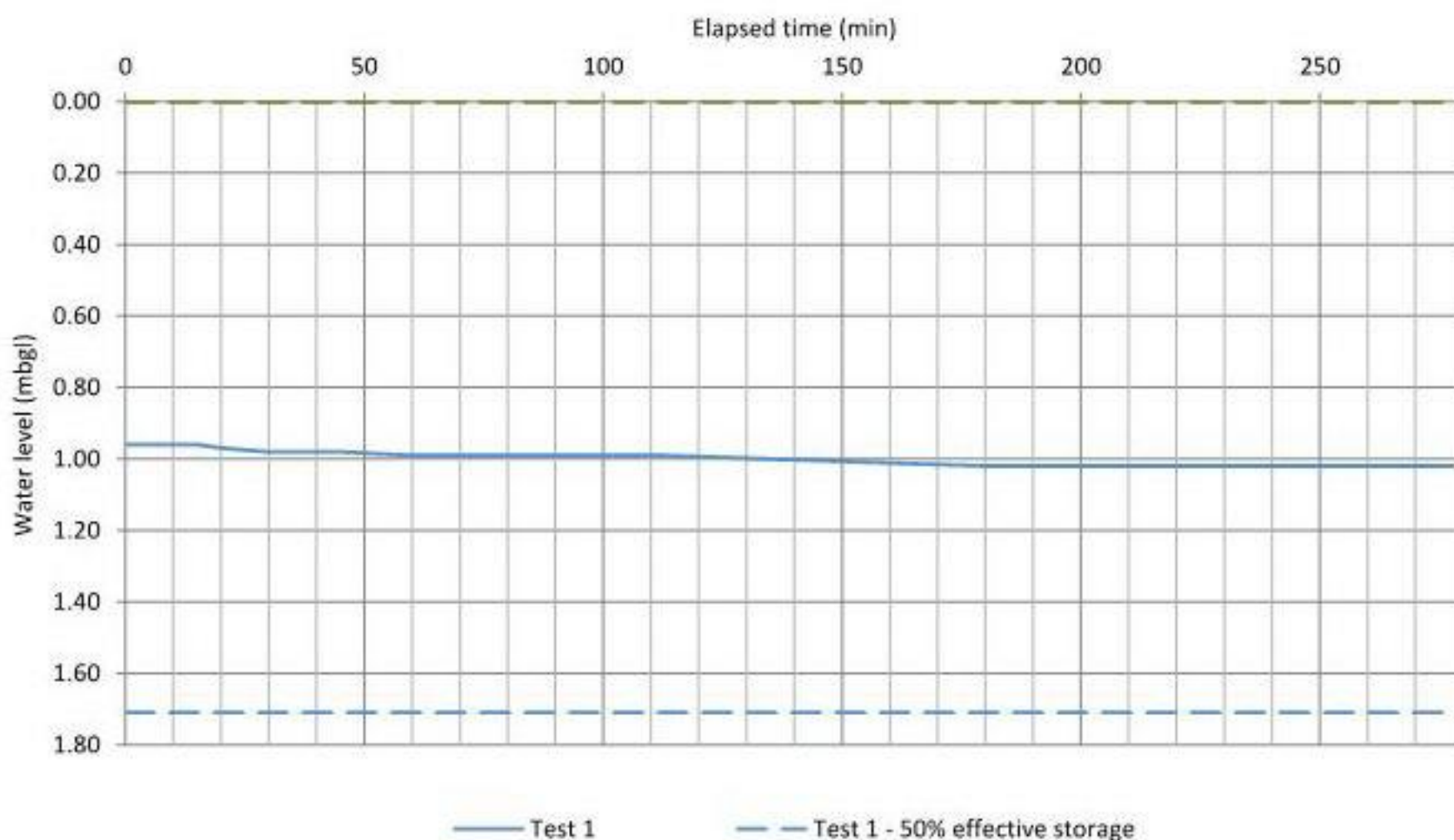
This classification utilises the following guidance and legislation:

WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Appendix G – Infiltration Test Results

Infiltration Test Results in Accordance with BRE Digest 365:2016

Project Name:						Phase 3b & Phase 8, Berewood						Project ID:		BER1808G						
Client:						WYG PLC														
Hole ID:						TP01			Test Date:		25/07/2018		Logged:		CT		Checked:		JA	
Test 1		Test 2		Test 3		Soakaway Dimensions:										Length (m)		2.00		
Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)											Width (m)		0.70		
0	0.96	0		0												Test 1 - Depth (m)		2.46		
1	0.96	1		1												Test 2 - Depth (m)				
2	0.96	2		2												Test 3 - Depth (m)				
3	0.96	3		3				Test 1		Test 2		Test 3								
4	0.96	4		4		Depth to water at start of test (m)		0.96												
5	0.96	5		5		Depth to water at end of test (m)		1.02												
10	0.96	10		10		Total head drop (m)		0.06												
15	0.96	15		15		Depth to water at 75% level (m)		1.34												
20	0.97	20		20		Depth to water at 50% level (m)		1.71												
30	0.98	30		30		Depth to water at 25% level (m)		2.09												
45	0.98	45		45		Base area of pit (m ²)		1.40												
60	0.99	60		60		Computed Internal Surface Area A _{p50} (m ²)		5.45												
113	0.99	120		120		Effective Storage Volume V _{p75-25} (m ³)		1.05												
180	1.02	180		180																
240	1.02	240		240		Elapsed time at 75% level (mins)		1125												
278	1.02	300		300		Elapsed time at 25% level (mins)		3375												
		360		360																
		420		420		50% discharge in 24 Hours		No												
						Soil infiltration rate <i>f</i> (m/s)		n/a												
						Design soil infiltration rate <i>f</i> (m/s)		Insufficient infiltration												

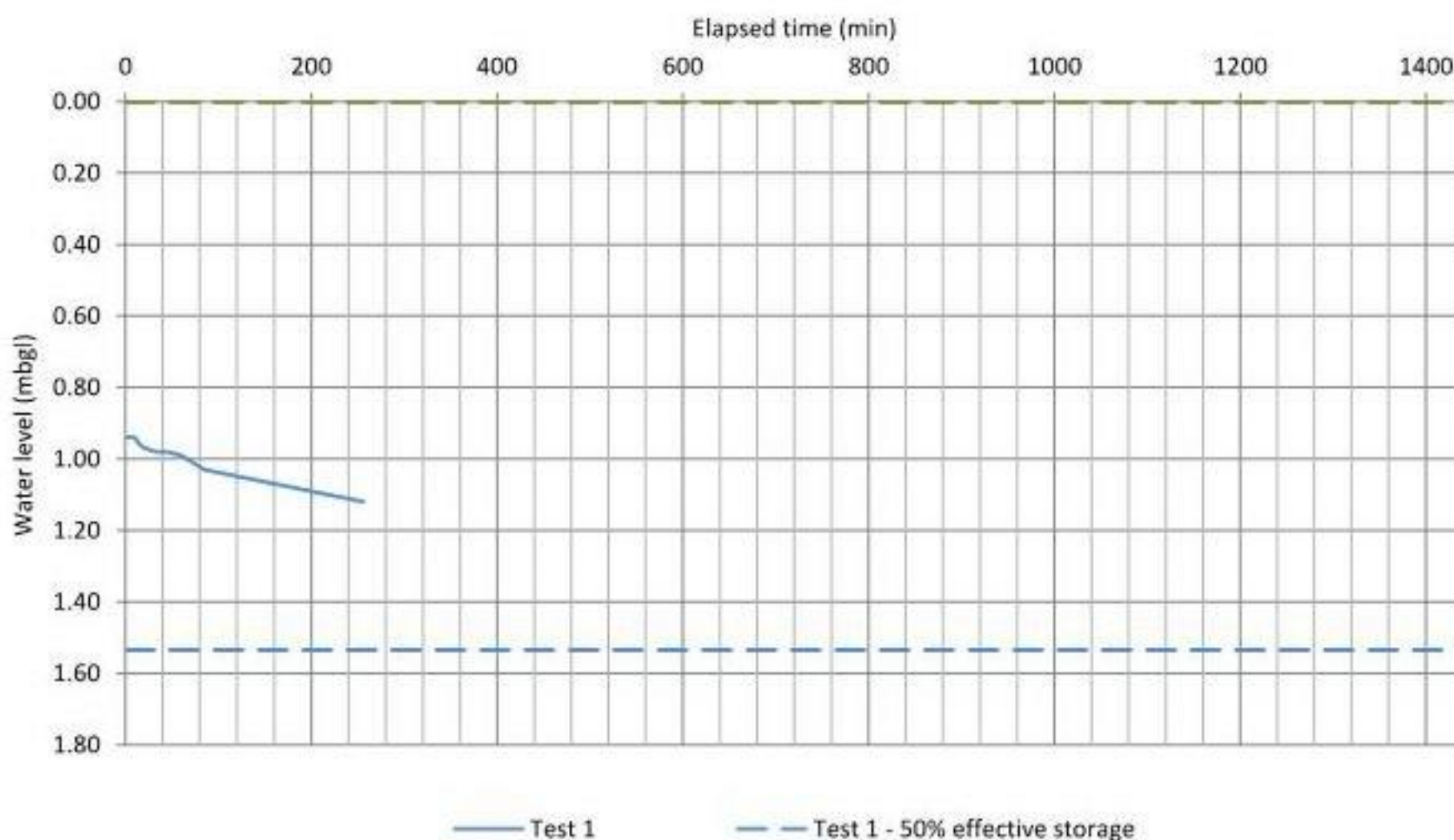


Remarks:

Where highlighted in red, calculations have been inferred from the graph.

Infiltration Test Results in Accordance with BRE Digest 365:2016

Project Name:						Phase 3b & Phase 8, Berewood						Project ID:		BER1808G					
Client:						WYG PLC													
Hole ID:						TP02		Test Date:		25/07/2018		Logged:		CT		Checked:		JA	
Test 1		Test 2		Test 3		Soakaway Dimensions:										Length (m)		1.60	
Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)											Width (m)		0.60	
																Test 1 - Depth (m)		2.13	
																Test 2 - Depth (m)			
																Test 3 - Depth (m)			
0	0.94	0		0				Test 1		Test 2		Test 3							
1	0.94	1		1		Depth to water at start of test (m)		0.94											
2	0.94	2		2		Depth to water at end of test (m)		1.12											
3	0.94	3		3		Total head drop (m)		0.18											
4	0.94	4		4		Depth to water at 75% level (m)		1.24											
5	0.94	5		5		Depth to water at 50% level (m)		1.54											
10	0.94	10		10		Depth to water at 25% level (m)		1.83											
15	0.96	15		15															
20	0.97	20		20															
33	0.98	30		30															
45	0.98	45		45		Base area of pit (m ²)		0.96											
60	0.99	60		60		Computed Internal Surface Area A _{p50} (m ²)		3.58											
85	1.03	120		120		Effective Storage Volume V _{p75-25} (m ³)		0.57											
256	1.12	180		180															
		240		240		Elapsed time at 75% level (mins)		423											
		300		300		Elapsed time at 25% level (mins)		1269											
		360		360															
		420		420		50% discharge in 24 Hours		No											
						Soil infiltration rate <i>f</i> (m/s)		n/a											
						Design soil infiltration rate <i>f</i> (m/s)		Insufficient infiltration											

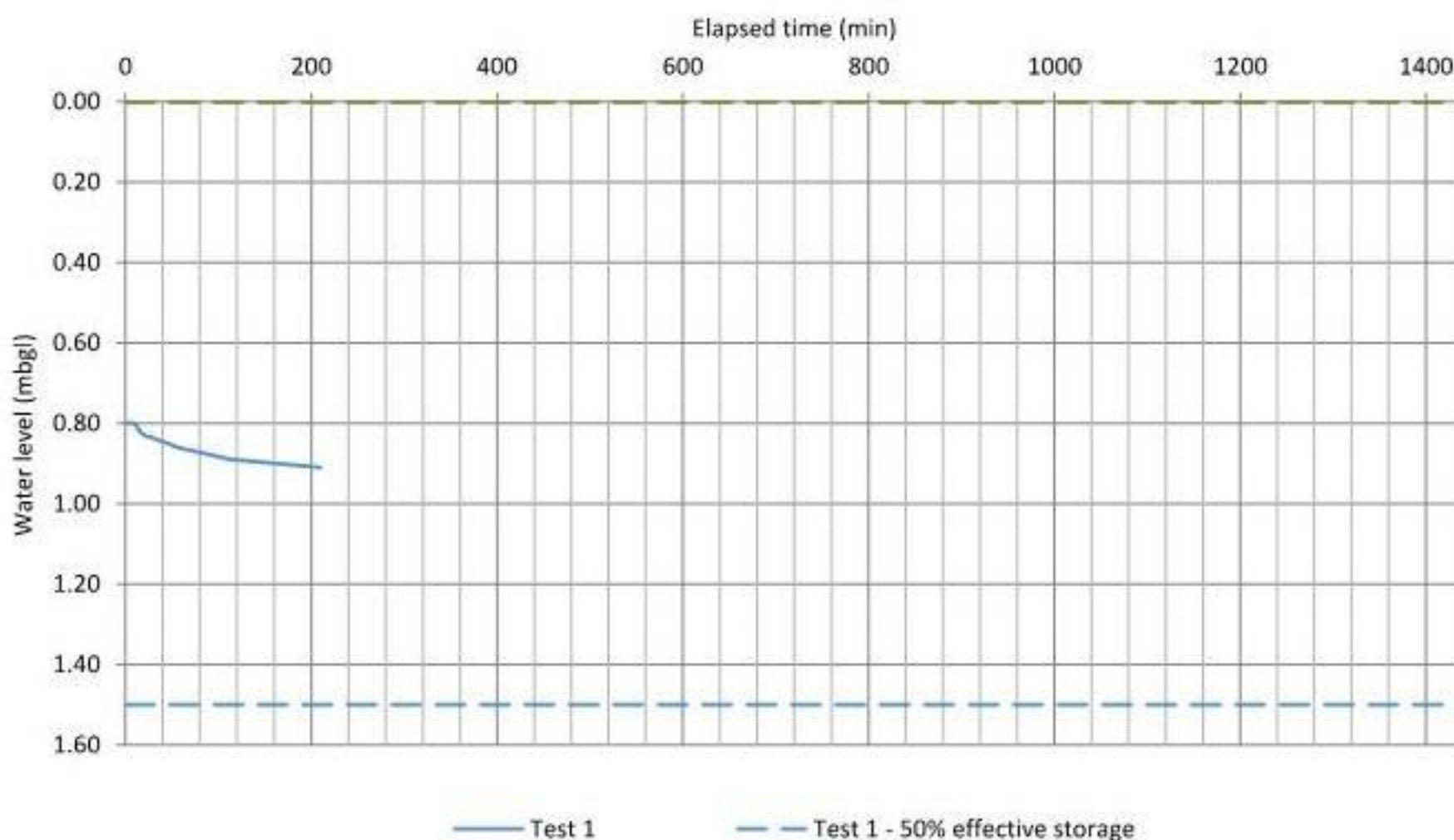


Remarks:

Where highlighted in red, calculations have been inferred from the graph.

Infiltration Test Results in Accordance with BRE Digest 365:2016

Project Name:						Phase 3b & Phase 8, Berewood						Project ID:		BER1808G					
Client:						WYG PLC													
Hole ID:						TP03		Test Date:		25/07/2018		Logged:		CT		Checked:		JA	
Test 1		Test 2		Test 3		Soakaway Dimensions:										Length (m)		2.10	
Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)											Width (m)		0.70	
0	0.80	0		0												Test 1 - Depth (m)		2.20	
1	0.80	1		1												Test 2 - Depth (m)			
2	0.80	2		2												Test 3 - Depth (m)			
3	0.80	3		3				Test 1		Test 2		Test 3							
4	0.80	4		4		Depth to water at start of test (m)		0.80											
5	0.80	5		5		Depth to water at end of test (m)		0.91											
10	0.80	10		10		Total head drop (m)		0.11											
15	0.82	15		15		Depth to water at 75% level (m)		1.15											
20	0.83	20		20		Depth to water at 50% level (m)		1.50											
33	0.84	30		30		Depth to water at 25% level (m)		1.85											
45	0.85	45		45		Base area of pit (m ²)		1.47											
56	0.86	60		60		Computed Internal Surface Area A _{p50} (m ²)		5.39											
113	0.89	120		120		Effective Storage Volume V _{p75-25} (m ³)		1.03											
210	0.91	180		180															
		240		240		Elapsed time at 75% level (mins)		668											
		300		300		Elapsed time at 25% level (mins)		2005											
		360		360															
		420		420		50% discharge in 24 Hours		No											
						Soil infiltration rate <i>f</i> (m/s)		n/a											
						Design soil infiltration rate <i>f</i> (m/s)		Insufficient Infiltration											

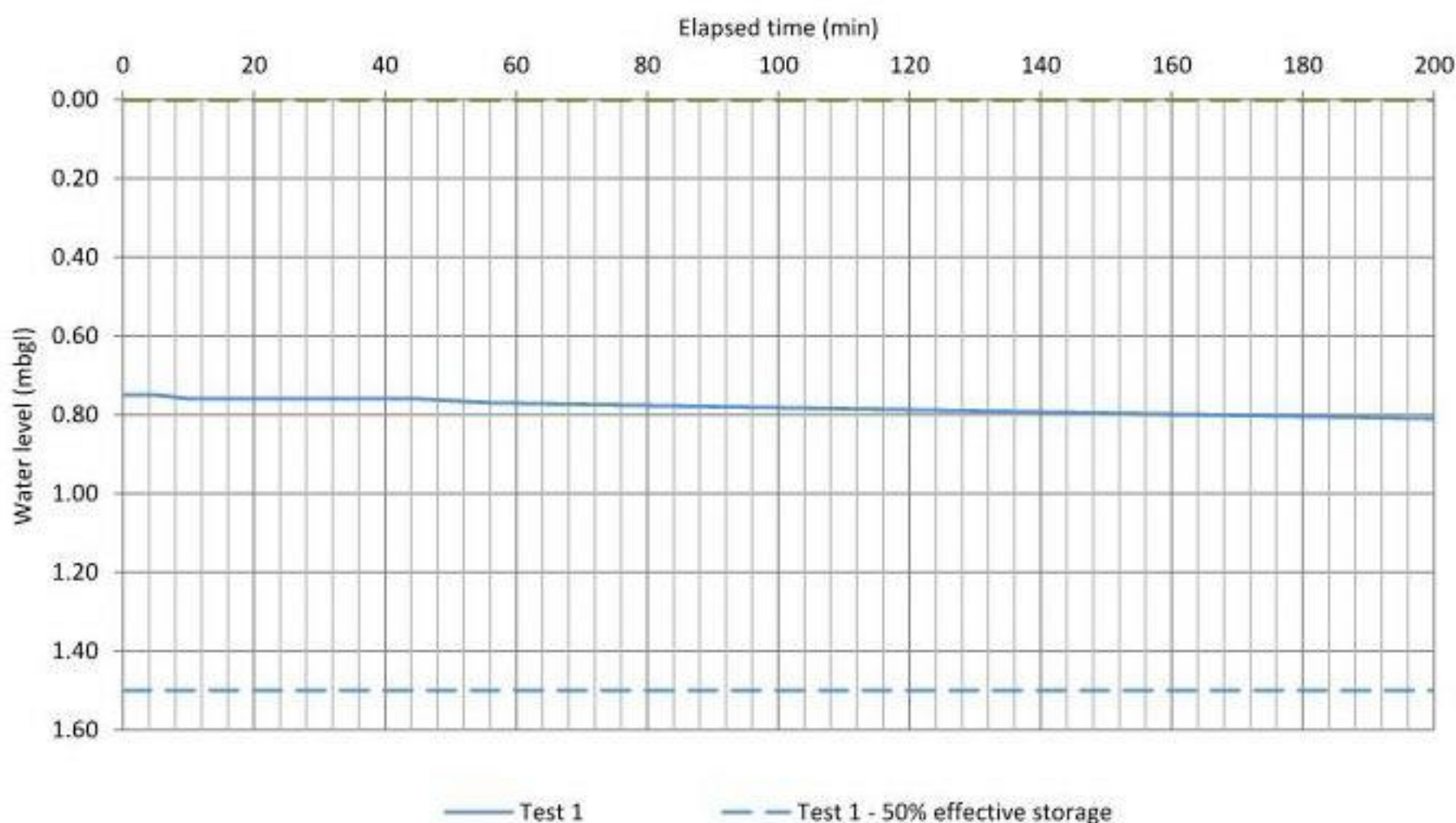


Remarks:

Where highlighted in red, calculations have been inferred from the graph.

Infiltration Test Results in Accordance with BRE Digest 365:2016

Project Name:						Phase 3b & Phase 8, Berewood						Project ID:		BER1808G					
Client:						WYG PLC													
Hole ID:						TP04		Test Date:		25/07/2018		Logged:		CT		Checked:		JA	
Test 1		Test 2		Test 3		Soakaway Dimensions:										Length (m)		2.00	
Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)											Width (m)		0.65	
																Test 1 - Depth (m)		2.25	
																Test 2 - Depth (m)			
																Test 3 - Depth (m)			
0	0.75	0		0				Test 1		Test 2		Test 3							
1	0.75	1		1		Depth to water at start of test (m)		0.75											
2	0.75	2		2		Depth to water at end of test (m)		0.81											
3	0.75	3		3		Total head drop (m)		0.06											
4	0.75	4		4		Depth to water at 75% level (m)		1.13											
5	0.75	5		5		Depth to water at 50% level (m)		1.50											
10	0.76	10		10		Depth to water at 25% level (m)		1.88											
15	0.76	15		15															
20	0.76	20		20		Base area of pit (m ²)		1.30											
30	0.76	30		30		Computed Internal Surface Area A _{p50} (m ²)		5.28											
45	0.76	45		45		Effective Storage Volume V _{p75-25} (m ³)		0.98											
56	0.77	60		60															
200	0.81	120		120															
		180		180															
		240		240		Elapsed time at 75% level (mins)		1250											
		300		300		Elapsed time at 25% level (mins)		3750											
		360		360															
		420		420		50% discharge in 24 Hours		No											
						Soil infiltration rate <i>f</i> (m/s)		n/a											
						Design soil infiltration rate <i>f</i> (m/s)		Insufficient infiltration											

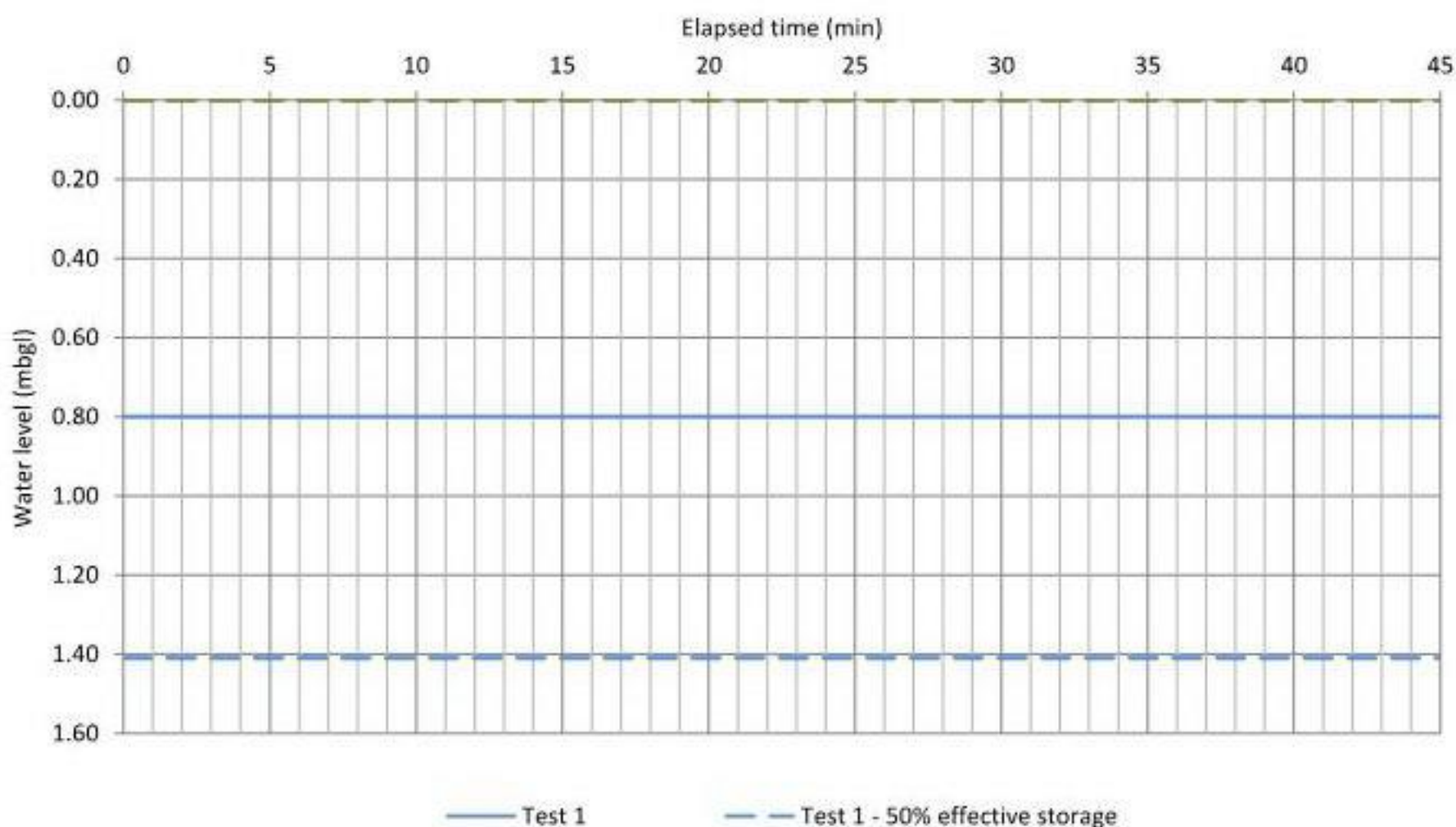


Remarks:

Where highlighted in red, calculations have been inferred from the graph.

Infiltration Test Results in Accordance with BRE Digest 365:2016

Project Name:						Phase 3b & Phase 8, Berewood						Project ID:		BER1808G													
Client:						WYG PLC																					
Hole ID:						TP04		Test Date:		25/07/2018		Logged:		CT		Checked:		JA									
Test 1		Test 2		Test 3		Soakaway Dimensions:										Length (m)		2.20									
Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)											Width (m)		0.65									
																Test 1 - Depth (m)		2.02									
																Test 2 - Depth (m)											
																Test 3 - Depth (m)											
0	0.80	0		0				Test 1		Test 2		Test 3															
1	0.80	1		1		Depth to water at start of test (m)		0.80																			
2	0.80	2		2		Depth to water at end of test (m)		0.80																			
3	0.80	3		3		Total head drop (m)		0.00																			
4	0.80	4		4		Depth to water at 75% level (m)		1.11																			
5	0.80	5		5		Depth to water at 50% level (m)		1.41																			
10	0.80	10		10		Depth to water at 25% level (m)		1.72																			
15	0.80	15		15		Base area of pit (m ²)						1.43															
20	0.80	20		20								Computed Internal Surface Area A _{p50} (m ²)						4.91									
30	0.80	30		30														Effective Storage Volume V _{p75-25} (m ³)						0.87			
45	0.80	45		45																							
200	0.80	60		60																							
		120		120																							
		180		180																							
		240		240		Elapsed time at 75% level (mins)		n/a																			
		300		300		Elapsed time at 25% level (mins)		n/a																			
		360		360																							
		420		420		50% discharge in 24 Hours		n/a																			
						Soil infiltration rate <i>f</i> (m/s)		n/a																			
						Design soil infiltration rate <i>f</i> (m/s)		Insufficient Infiltration																			



Remarks:

Where highlighted in red, calculations have been inferred from the graph.

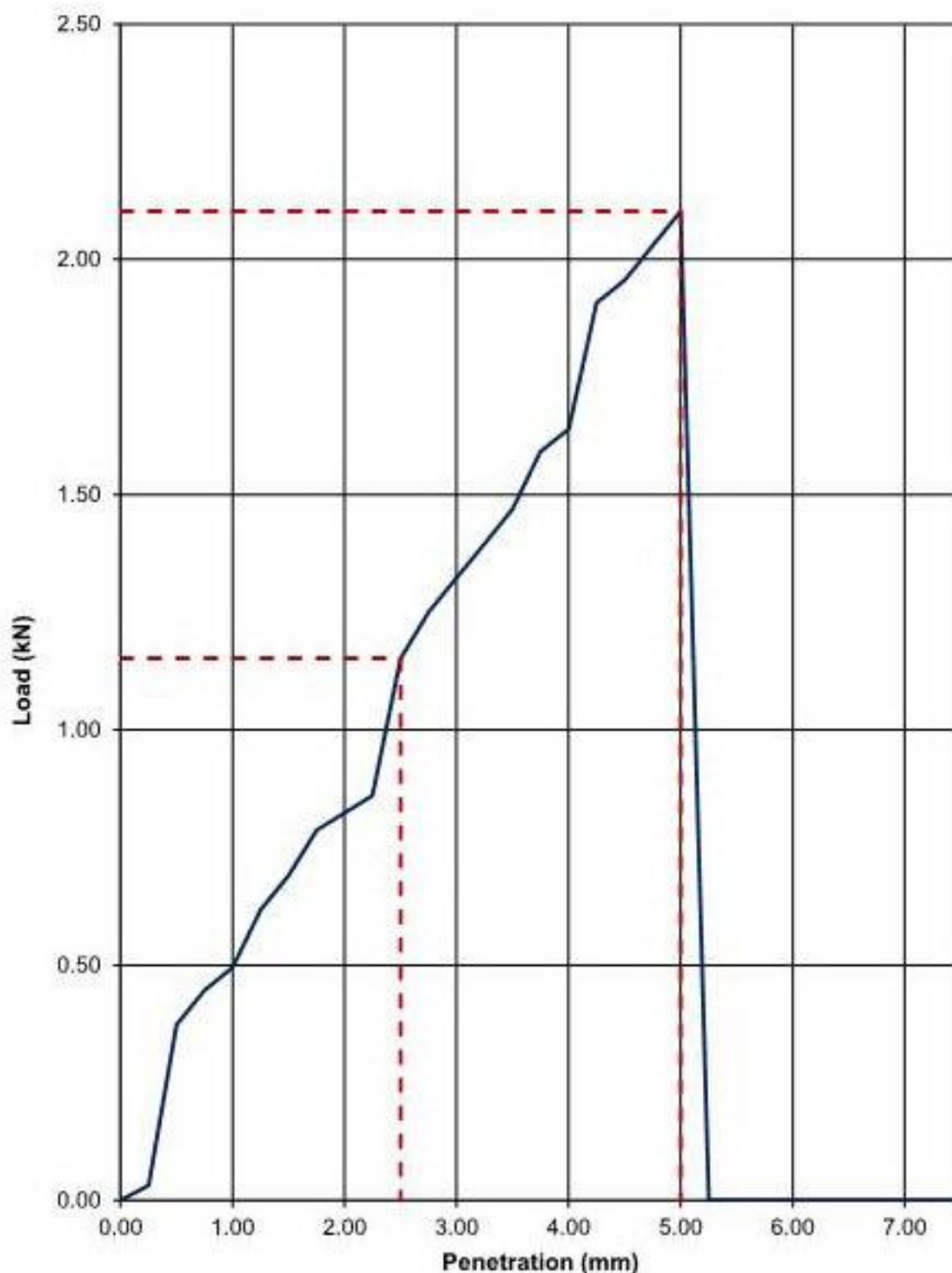
Appendix H – CBR Test Results



In Situ California Bearing Ratio (CBR) Test In Accordance With BS 1377:1990 - Part 9

Project Name:	Phase 3b and Phase 8, Berewood				Project ID:	BER1808G	
Client:	WYG PLC				Test Date:	26/07/2018	
Test ID:	CBR01	Depth (m):	0.40	Operator:	CT/AD	Checked:	
Coordinates:	467731 108929			Elevation:			
Soil Description: Friable brown sandy silty CLAY.				Weather		Sunny	
				Seating Reading		0.010	
				Seating Load (kN)		0.25	
				Mass of Surcharge (kg)			

Penetration (mm)	Dial Reading	Load (kN)
0.00	0.000	0.00
0.25	0.001	0.03
0.50	0.015	0.37
0.75	0.018	0.45
1.00	0.020	0.50
1.25	0.025	0.62
1.50	0.028	0.69
1.75	0.032	0.79
2.00	0.034	#N/A
2.25	0.035	0.86
2.50	0.047	1.15
2.75	0.051	1.25
3.00	0.054	1.32
3.25	0.057	1.40
3.50	0.060	1.47
3.75	0.065	1.59
4.00	0.067	1.64
4.25	0.078	1.91
4.50	0.080	1.96
4.75	0.083	2.03
5.00	0.086	2.10
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		



Moisture Content (%)	Penetration (mm)	Load (kN)	CBR (%)
13%	2.5	1.15	8.7%
	5.0	2.10	10.5%
Design CBR Value			9.6%

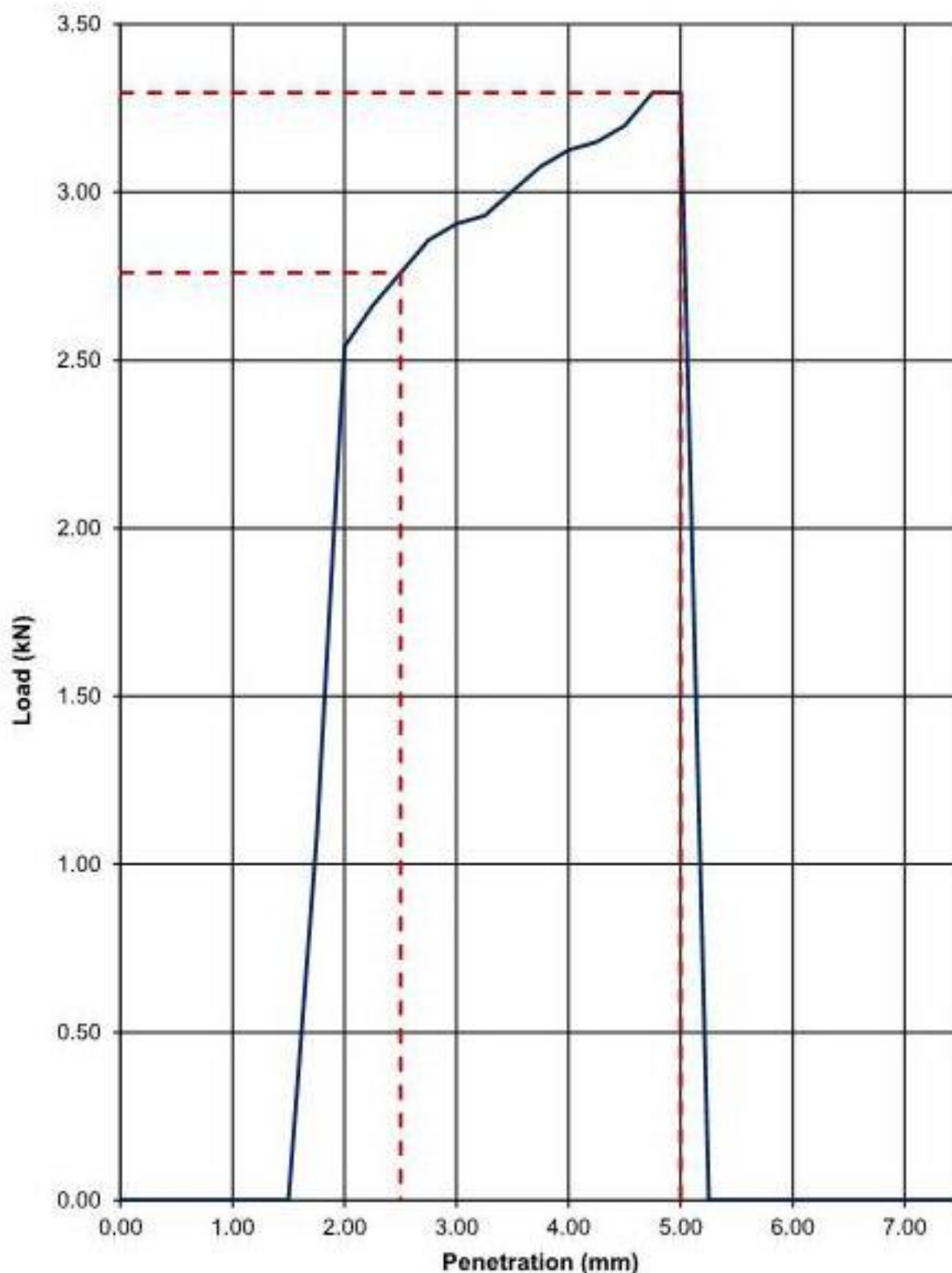
Remarks:

Penetration and force readings zeroed after seating load. Particle size below plunger <20mm. Loading applied at a rate of 1.0mm/min.

In Situ California Bearing Ratio (CBR) Test In Accordance With BS 1377:1990 - Part 9

Project Name:	Phase 3b and Phase 8, Berewood				Project ID:	BER1808G	
Client:	WYG PLC				Test Date:	26/07/2018	
Test ID:	CBR02	Depth (m):	0.40	Operator:	CT/AD	Checked:	
Coordinates:	467651 108985			Elevation:			
Soil Description: Friable brown sandy silty CLAY.				Weather		Sunny	
				Seating Reading		0.027	
				Seating Load (kN)		0.67	
				Mass of Surcharge (kg)			

Penetration (mm)	Dial Reading	Load (kN)
0.00		0.00
0.25		
0.50		
0.75		
1.00		
1.25		
1.50		
1.75	0.044	1.08
2.00	0.104	2.54
2.25	0.109	2.66
2.50	0.113	2.76
2.75	0.117	2.86
3.00	0.119	2.91
3.25	0.120	2.93
3.50	0.123	3.00
3.75	0.126	3.08
4.00	0.128	3.13
4.25	0.129	3.15
4.50	0.131	3.20
4.75	0.135	3.30
5.00	0.135	3.30
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		



Moisture Content (%)	Penetration (mm)	Load (kN)	CBR (%)
13%	2.5	2.76	20.9%
	5.0	3.30	16.5%
Design CBR Value			18.7%

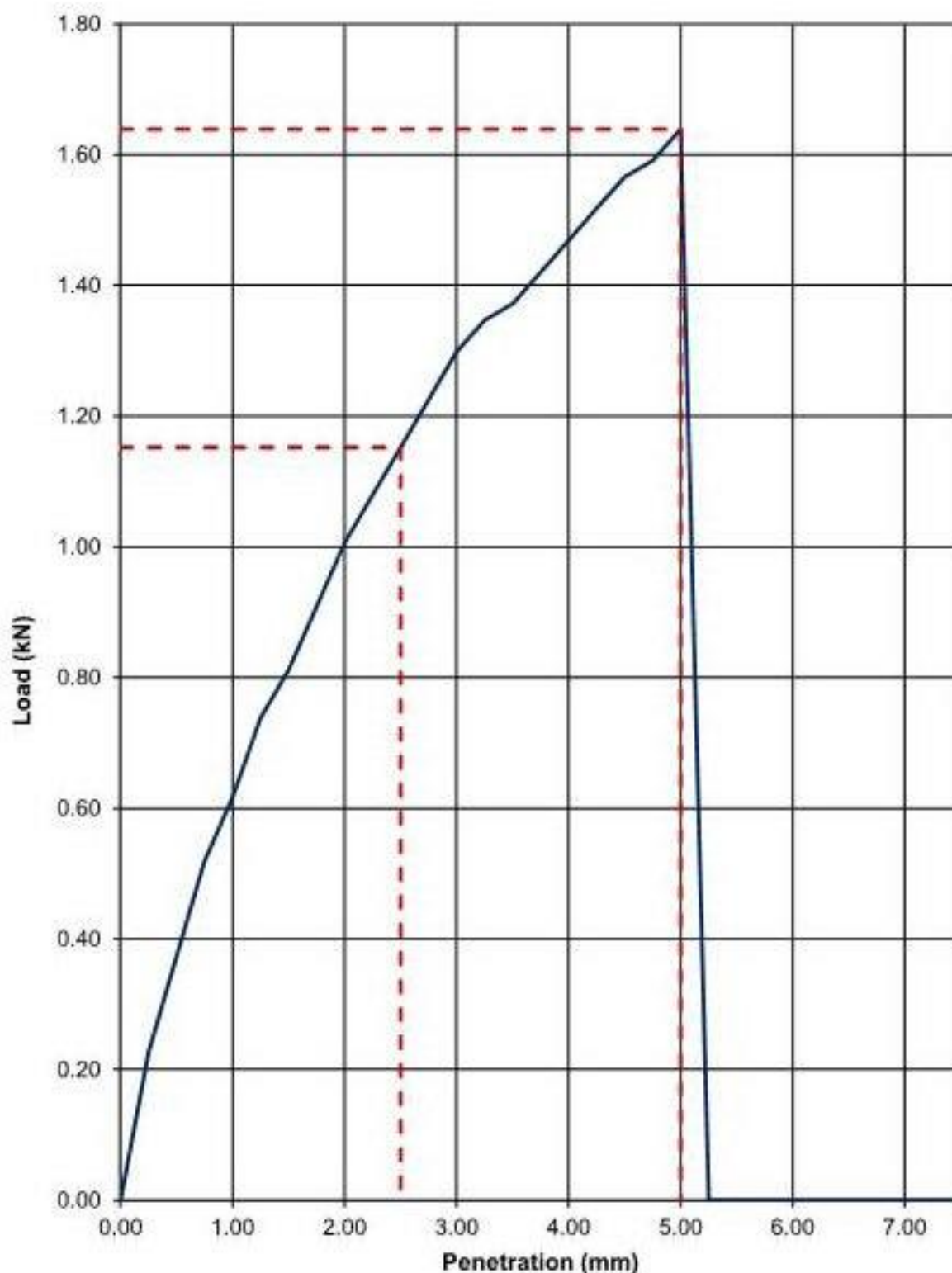
Remarks:

Penetration and force readings zeroed after seating load. Particle size below plunger <20mm. Loading applied at a rate of 1.0mm/min.

In Situ California Bearing Ratio (CBR) Test In Accordance With BS 1377:1990 - Part 9

Project Name:	Phase 3b and Phase 8, Berewood				Project ID:	BER1808G	
Client:	WYG PLC				Test Date:	26/07/2018	
Test ID:	CBR03	Depth (m):	0.40	Operator:	CT/AD	Checked:	
Coordinates:	467600 10936			Elevation:			
Soil Description: Friable brown silty CLAY.				Weather		Sunny	
				Seating Reading		0.036	
				Seating Load (kN)		0.88	
				Mass of Surcharge (kg)			

Penetration (mm)	Dial Reading	Load (kN)
0.00	0.000	0.00
0.25	0.009	0.23
0.50	0.015	0.37
0.75	0.021	0.52
1.00	0.025	0.62
1.25	0.030	0.74
1.50	0.033	0.81
1.75	0.037	0.91
2.00	0.041	1.01
2.25	0.044	1.08
2.50	0.047	1.15
2.75	0.050	1.23
3.00	0.053	1.30
3.25	0.055	1.35
3.50	0.056	1.37
3.75	0.058	1.42
4.00	0.060	1.47
4.25	0.062	1.52
4.50	0.064	1.57
4.75	0.065	1.59
5.00	0.067	1.64
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		



Moisture Content (%)	Penetration (mm)	Load (kN)	CBR (%)
13%	2.5	1.15	8.7%
	5.0	1.64	8.2%
Design CBR Value			8.5%

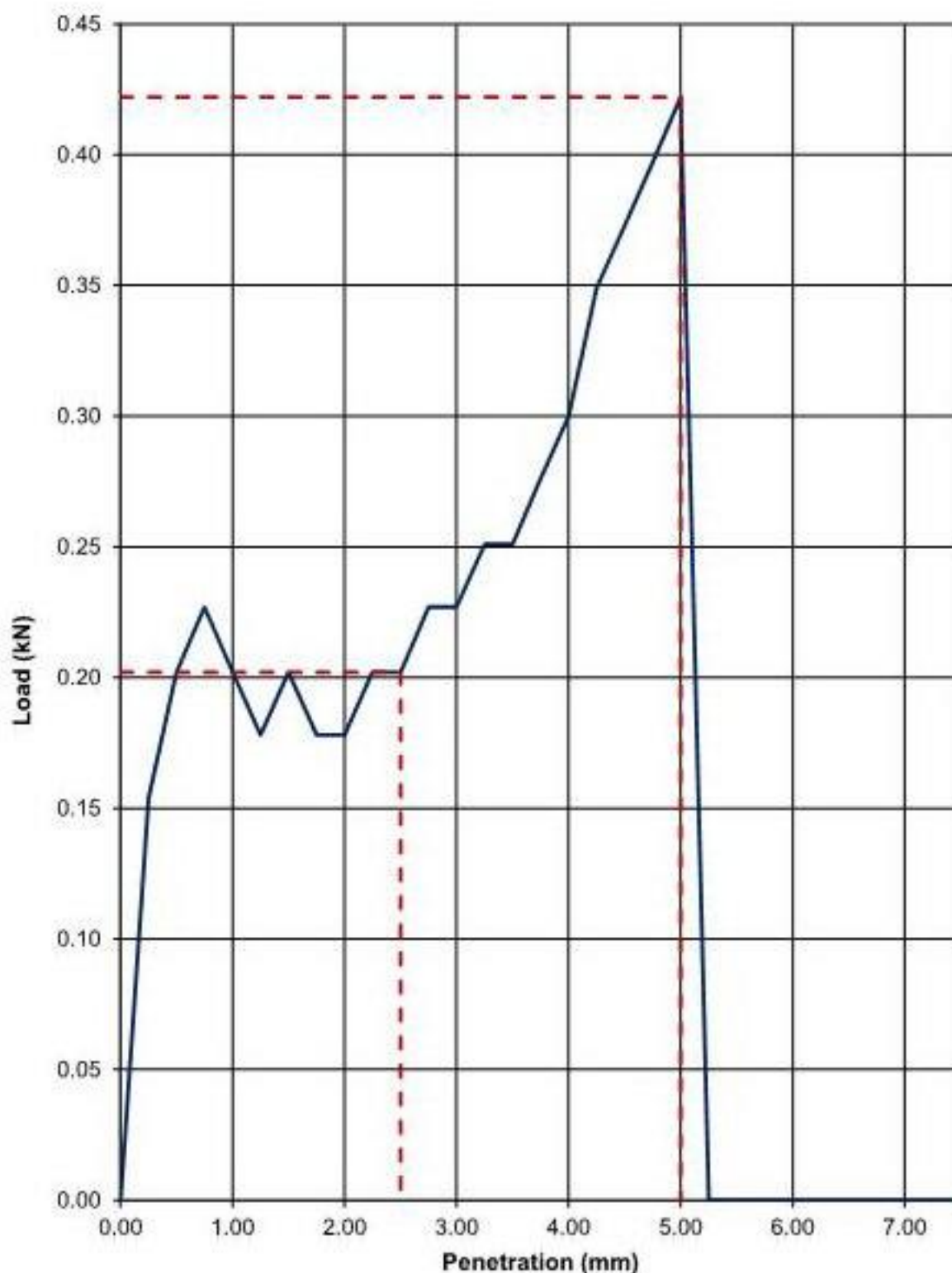
Remarks:

Penetration and force readings zeroed after seating load. Particle size below plunger <20mm. Loading applied at a rate of 1.0mm/min.

In Situ California Bearing Ratio (CBR) Test In Accordance With BS 1377:1990 - Part 9

Project Name:	Phase 3b and Phase 8, Berewood			Project ID:	BER1808G
Client:	WYG PLC			Test Date:	26/07/2018
Test ID:	CBR04	Depth (m):	0.40	Operator:	CT/AD
Coordinates:	467654 109257	Elevation:			
Soil Description: Friable brown silty CLAY.				Weather	Sunny
				Seating Reading	0.026
				Seating Load (kN)	0.64
				Mass of Surcharge (kg)	

Penetration (mm)	Dial Reading	Load (kN)
0.00	0.000	0.00
0.25	0.006	0.15
0.50	0.008	0.20
0.75	0.009	0.23
1.00	0.008	0.20
1.25	0.007	0.18
1.50	0.008	0.20
1.75	0.007	0.18
2.00	0.007	0.18
2.25	0.008	0.20
2.50	0.008	0.20
2.75	0.009	0.23
3.00	0.009	0.23
3.25	0.010	0.25
3.50	0.010	0.25
3.75	0.011	0.28
4.00	0.012	0.30
4.25	0.014	0.35
4.50	0.015	0.37
4.75	0.016	0.40
5.00	0.017	0.42
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		



Moisture Content (%)	Penetration (mm)	Load (kN)	CBR (%)
13%	2.5	0.20	1.5%
	5.0	0.42	2.1%
Design CBR Value			1.8%

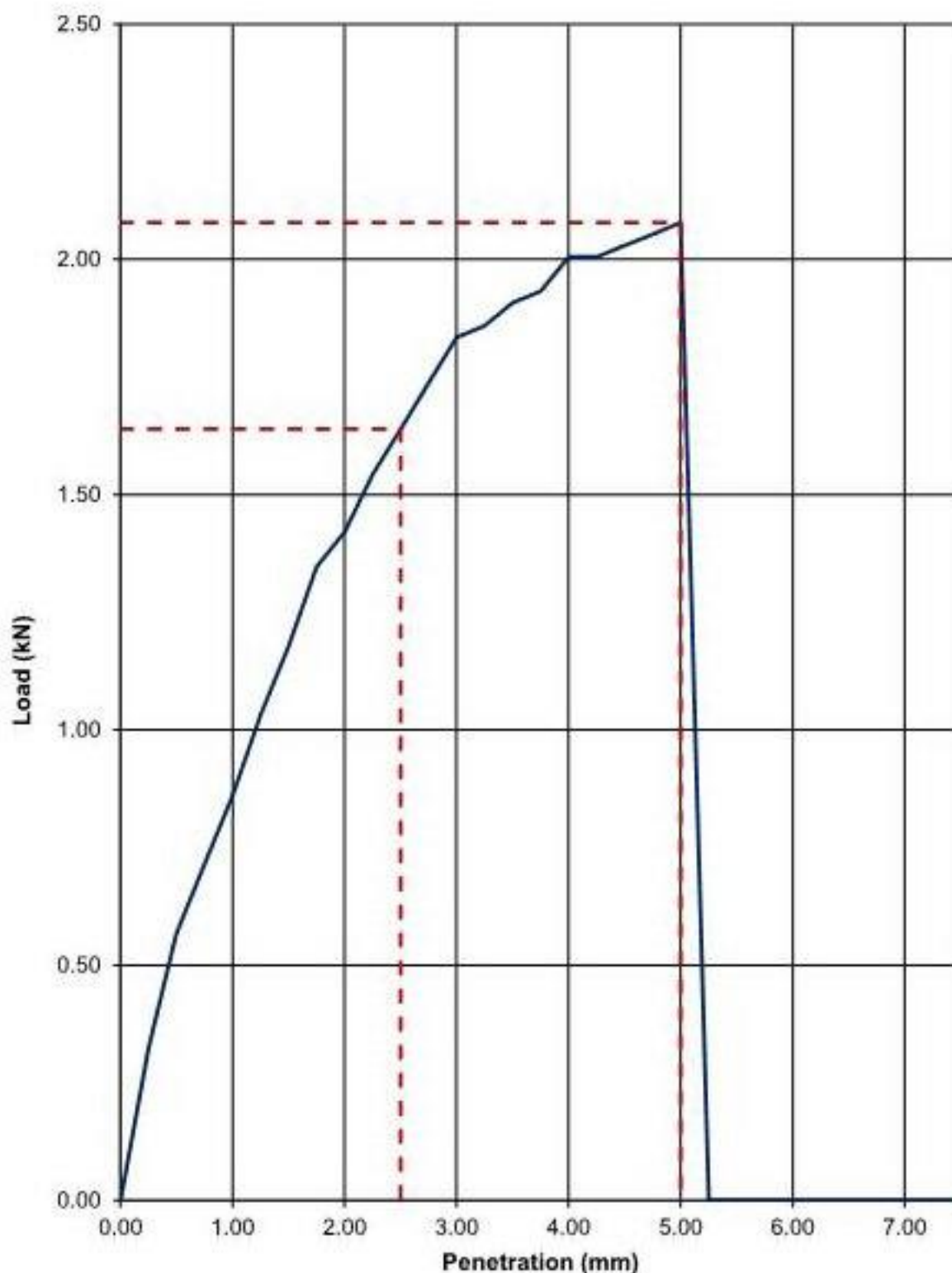
Remarks:

Penetration and force readings zeroed after seating load. Particle size below plunger <20mm. Loading applied at a rate of 1.0mm/min.

In Situ California Bearing Ratio (CBR) Test In Accordance With BS 1377:1990 - Part 9

Project Name:	Phase 3b and Phase 8, Berewood				Project ID:	BER1808G	
Client:	WYG PLC				Test Date:	26/07/2018	
Test ID:	CBR05	Depth (m):	0.40	Operator:	CT/AD	Checked:	
Coordinates:	467554 109100			Elevation:			
Soil Description: Friable brown silty CLAY.				Weather		Sunny	
				Seating Reading		0.070	
				Seating Load (kN)		1.71	
				Mass of Surcharge (kg)			

Penetration (mm)	Dial Reading	Load (kN)
0.00	0.000	0.00
0.25	0.013	0.32
0.50	0.023	0.57
0.75	0.029	0.71
1.00	0.035	0.86
1.25	0.042	1.03
1.50	0.048	1.18
1.75	0.055	1.35
2.00	0.058	1.42
2.25	0.063	1.54
2.50	0.067	1.64
2.75	0.071	1.74
3.00	0.075	1.83
3.25	0.076	1.86
3.50	0.078	1.91
3.75	0.079	1.93
4.00	0.082	2.01
4.25	0.082	2.01
4.50	0.083	2.03
4.75	0.084	2.05
5.00	0.085	2.08
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		



Moisture Content (%)	Penetration (mm)	Load (kN)	CBR (%)
13%	2.5	1.64	12.4%
	5.0	2.08	10.4%
Design CBR Value			11.4%

Remarks:

Penetration and force readings zeroed after seating load. Particle size below plunger <20mm. Loading applied at a rate of 1.0mm/min.

