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GEO ENVIRONMENTAL



Land North of Normandy Way, Hinckley – Phase 1

Phase II Ground Investigation
November 2023

Report Ref: 28047-GEO-0402 Rev A

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1.0 INTRODUCTION

- 1.1 MEC, has been commissioned by Richborough Ltd (hereafter referred to as 'the Client') to undertake a Phase II Ground Investigation for Phase 1 of a proposed residential development on land north of Normandy Way, Hinckley, Leicestershire, LE10 3EA. A site location plan is provided in **Appendix A**.

Proposals

- 1.2 An illustrative Masterplan is provided in **Appendix A**. The proposed development is to comprise traditional residential properties with private gardens and driveways and associated roads, pathways, infrastructure, and utilities.

Existing Relevant Site Information

- 1.3 The investigation has been completed according to the general principles of BS: 5930:2015 'Code of practice for ground investigations,' BS10175:2011 (+A2:2017) 'Investigation of Potentially Contaminated Sites, Code of Practice and Environment Agency 'Land Contamination: Risk Management (LC:RM). The results of the investigation have been used to refine the conceptual site model and initial recommendations outlined in a previous Phase I Geo-Environmental Assessment, detailed as follows:

- 'Richborough Estates, Hinckley North, Hinckley – Phase 1 Geo-Environmental Assessment', report ref. HIN-BWB-ZZ-XX-RP-YE-001_Ph1 dated January 2022.

Objectives

- 1.4 The objectives of this investigation are:
- To undertake intrusive works to confirm the ground conditions and establish the extent of contamination, if any, within the shallow soils;
 - To determine the geotechnical properties of the near surface strata to assist in civil engineering design;
 - To confirm the ground gas regime and provide recommendations to mitigate the associated risk where relevant; and
 - To present an updated Conceptual Site Model (CSM) based on the results of the investigation.
- 1.5 This report presents the factual data obtained from the current programme of fieldwork, monitoring, and laboratory testing, together with an assessment of near surface soils.

Disclaimer

- 1.6 MEC has completed this report for the benefit of the Client and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this report unless explicit written approval has been gained from MEC.

- 1.7 MEC does not accept responsibility or liability for:
- a) The consequence of this documentation being used for any purpose or project other than that for which it was commissioned;
 - b) The issue of this document to any third party with whom approval for use has not been agreed.
- 1.8 This report should be read in its entirety, including all associated drawings and appendices. MEC cannot be held responsible for any misinterpretations arising from the use of extracts of this report that are taken out of context.
- 1.9 The findings and opinions conveyed as part of the previous geo-environmental assessment and referenced in this report are based on information obtained from external sources, as detailed within this report, which MEC believes are reliable. All reasonable care and skill have been applied in examining the information obtained, nevertheless MEC cannot and does not guarantee the authenticity or reliability of the information it has relied upon from external sources.
- 1.10 Recommendations made or opinions expressed in this report are based on the exploratory hole records and the results of in-situ testing undertaken during the ground investigation. Liability cannot be accepted for conditions not revealed by the exploratory holes, particularly between positions. Whilst every effort is made to ensure accuracy of data supplied, any opinion expressed as to the possible configuration of strata between or below investigation locations is for guidance only and responsibility is not accepted as to its accuracy.
- 1.11 The comments on ground gas and groundwater are based on observations made at the time of the investigation. It should be noted, however, that ground gas and groundwater levels may vary from those reported due to seasonal or other effects.

2.0 SUMMARY OF PREVIOUS INFORMATION

- 2.1 To follow is a summary, which should not be read in isolation, of the findings of the previous Phase I geo-environmental assessment. For full details, reference should be made to the report outlined in Section 1.3 above.

Site Description and Setting	The site comprises an irregular shaped parcel of land, located to the north of Normandy Way, Hinckley. The site is separated into two areas by Stoke Road, which is orientated in a north-west to south-east direction. The smaller area to the west of Stoke Road comprises a single agricultural field and the larger area to the east comprises five agricultural fields. A disused farmyard with associated concrete surfacing and stockpiles of building rubble is located in the west of the larger area. Mature trees and hedgerows are situated around the edges of the fields and around ponds located in the north and south of the western part of the larger area. A watercourse runs in a south to north direction along the eastern boundary of the site. Site levels fall from a hill in the central area by approximately 14m to the west towards Stoke Road and 13m to the east/north-east towards the watercourse. The site was bordered to the south by commercial and residential properties, to the north, west and east by predominantly agricultural land. A farm was also located to the north, which comprised a barn with potential asbestos containing corrugated roof adjacent to the northern boundary.
Site History	Historical mapping from the late 19th Century indicates that the site was predominantly agricultural with farm buildings labelled as Neale's Farm, which included an associated pump, recorded in the west of the larger area, at the approximate location of the disused farmyard identified during the site walkover. The two ponds in the central west of the site were mapped by this time. The site remained relatively unchanged over the course of the 20th Century, although Neale's Farm was no longer recorded by aerial imagery from 1999 and was likely demolished by this time.
Off-site History	The earliest mapping reviewed from the latter part of the 19th Century indicates that the surrounding area was predominantly agricultural, with Hinckley Fields Farm located adjacent to the northern site boundary and the watercourse along the eastern boundary. The surrounding area remained relatively unchanged over the first half of the 20th Century, although residential development of Hinckley to the south occurred over a period between 1950 and 2001.
Published Geology, Hydrogeology and Hydrology	British Geological Survey (BGS) mapping indicates that the site is underlain by superficial deposits of the Bosworth Clay Member in the west and south-east,

	Wolston Sand and Gravel and Oadby Member in the centre and Alluvium along the eastern boundary associated with the watercourse. The underlying bedrock strata comprises the Mercia Mudstone Group. The Environment Agency classifies the Bosworth Clay Member as unproductive strata, the Alluvium and Wolston Sand and Gravel as Secondary A Aquifers, the Oadby Member as a Secondary Undifferentiated Aquifer and the Mercia Mudstone as a Secondary B Aquifer. An historical groundwater abstraction was recorded on site for general farming and domestic use. The nearest surface water feature is the watercourse along the eastern site boundary.
Environmental Appraisal	The risk to human health was assessed to be low to moderate and the following potential contaminant sources were identified: • Buildings associated with the disused Neale's Farm; • Agricultural activities; • Neighbouring development and agricultural land uses; • Potential asbestos containing materials associated with a farm building along the northern site boundary; and • Ground gas generated from the Alluvium along the eastern site boundary.

Conceptual Site Model

- 2.2 The pollutant linkages pertaining to the site and their assessed significance, as identified by the desk study, are summarised in the Conceptual Site Model (Table 2.1) below.

Table 2.1: Conceptual Site Model

Source	Pathway	Receptor	Pollutant Linkage Risk
Potential contamination in shallow soils on site	Direct contact and accidental ingestion/inhalation of contaminated soils and dust.	Construction Workers.	Low: Further investigation was recommended to confirm if contaminant concentrations within the shallow soils pose a risk to human health receptors.
		Future Site Users.	
	Vertical and lateral migration through shallow soils or via surface and groundwater.	Nearby Controlled Waters:	Low: Shallow contamination, if present, may migrate vertically and laterally and impact the underlying aquifers and laterally via groundwater to impact nearby surface water features. Further investigation was recommended to confirm the risk to controlled waters and third-party property.
		Underlying Aquifers.	
		Third party property.	
	Direct contact/soil leaching.	Buried utilities	Low: Standard utility pipes may be appropriate; however, further investigation was recommended to confirm the risk to buried utilities and the required pipe specification.
		Concrete	Low: Pyritic deposits are not anticipated; however, further investigation was recommended to confirm the risk to concrete foundations.
Asbestos Containing Materials (ACMs)	Incidental inhalation of asbestos fibres	Construction Workers.	Moderate: It was recommended that the risk from ACMs be assessed as part of an intrusive investigation.
		Future Site Users.	
Off-site contamination sources	Lateral migration onto site via shallow soils and groundwater.	Construction Workers.	Low: Contamination, if present, may migrate to the site from off-site sources. Further investigation was recommended to confirm if off-site contamination is migrating beneath the site.
		Future Site users.	
		Buried utilities and concrete structures	

Source	Pathway	Receptor	Pollutant Linkage Risk
Ground gas generation on and off site.	Migration through porous soils and accumulation in confined spaces.	Construction Workers	Low to Moderate: Potential ground gas sources have been identified both on and off-site. Further investigation was recommended to determine if ground gas protection measures are required for the proposed development. Less than 1% of properties in the area are estimated to exceed the Radon Action Level. Accordingly, Radon protection measures will not be required for the proposed development.
		Future Site Users	

Preliminary CSM and Environmental Risk Assessment

2.3 The significance of the potential source-pathway-receptor linkages identified in the conceptual site model should be assessed using the following criteria:

- **Very High** – There is a high probability that severe harm could arise to a designated receptor from an identified hazard, or there is evidence that severe harm to a designated receptor is currently happening. Investigation and remedial measures are required.
- **High** – Harm is likely to arise to a designated receptor from an identified hazard. Investigation and remedial measures are required.
- **Moderate** – It is possible that harm could arise to a designated receptor from an identified hazard. Investigation and remedial measures may be required.
- **Low** – It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild. Remedial measures are not normally required.

3.0 GROUND INVESTIGATION

Site Works

- 3.1 An intrusive ground investigation was undertaken by MEC in September 2023, considering the findings of the previous geo-environmental assessment, under full time supervision by a suitably qualified MEC engineer.
- 3.2 The following scope of works was commissioned as part of this investigation:
- Service clearance of exploratory hole locations using radio detection techniques;
 - Eighteen dynamic windowless sampler borehole locations (WS01-WS18) to depths of up to 5.00m bgl;
 - Twenty-four mechanically excavated trial pit locations (TP01-TP24) to depths of up to 3.50m bgl;
 - Four boreholes advanced by cable percussive techniques to depths of up to 15.00m bgl;
 - Dynamic Cone Penetrometer (DCP) testing at selected locations to inform CBR design;
 - Installation of eight groundwater and ground gas monitoring wells; and
 - Logging of soil analysis to BS 5930:2015 and collection of soil samples for laboratory environmental and geotechnical analysis.
- 3.3 An Exploratory Hole Location and Foundation Zoning Plan is presented as 28047_04_140_01 in **Appendix A** and the exploratory hole logs and SPT calibration certificate are provided in **Appendix B**.

Laboratory Analysis

- 3.4 A summary of the laboratory analysis scheduled on the environmental and geotechnical samples is provided in Table 3.1 below.

Table 3.1: Summary of Environmental and Geotechnical Laboratory Test Schedules

Environmental Analysis	Geotechnical Analysis
• Heavy Metals; • Total, free, and complex cyanide; • pH and water-soluble sulphate; • Total Phenols; • Soil Organic Matter; • Polycyclic Aromatic Hydrocarbons (PAH's); • Total Petroleum Hydrocarbons to the Criteria Working Group (TPH-CWG); and • Asbestos screen and quantification.	• Atterberg Limits; • Moisture Content; • Particle size distribution; • Multi-stage triaxial compression strength; • One dimensional oedometer consolidation; and • BRE Suite B.

- 3.5 The geotechnical and environmental laboratory testing reports are provided in **Appendices C and D** respectively.

Groundwater and Ground Gas Monitoring

- 3.6 Six groundwater and ground gas monitoring visits have been completed at nominal weekly intervals between 13th September and 19th October 2023.
- 3.7 Monitoring included the measurement of methane, carbon dioxide, oxygen, hydrogen sulphide, carbon monoxide, gas flow and barometric pressure in accordance with BS8485, to support a ground gas risk assessment. Groundwater levels were also measured during each visit.
- 3.8 The results of the gas and groundwater monitoring are presented in **Appendix F**.

In-situ DCP Testing

- 3.9 In-situ dynamic cone penetrometer (DCP) testing was carried out from ground level at forty-nine locations to derive equivalent CBR values. The results are presented in **Appendix G**.

4.0 RECORDED GROUND CONDITIONS

Soil Profile

- 4.1 The ground conditions generally comprised Topsoil and localised Made Ground overlying interbedded deposits of the Oadby Member and Wolston Sand and Gravel Deposits. The Bosworth Clay Member was locally encountered in the east and west of the site. Superficial alluvial soils were not encountered.

Topsoil

- 4.2 Topsoil was encountered to an average depth of 0.30m bgl and generally comprised dark brown, silty, sandy, gravelly clay or slightly clayey, silty, slightly gravelly sand. The gravel comprised sub-angular to rounded, fine to coarse, chert, sandstone, and quartzite.

Made Ground

- 4.3 Reworked topsoil was encountered in eight locations (TP05, TP07, TP10, TP11, WS01, WS14, BH03 and BH04) and generally comprised topsoil as previously described with anthropogenic fragments including concrete, brick, tile, bituminous material, and pottery.
- 4.4 Made Ground was encountered around the disused farm area and comprised dark brown, slightly sandy, silty clay topsoil with gravel sized fragments of sub-angular to rounded, fine to coarse chert, sandstone, quartzite, tile and concrete and cobble sized fragments of brick, tile, and concrete. This material was encountered to depths of up to 0.90m bgl.
- 4.5 Localised Made Ground was encountered in WS01, BH03 and BH04 to depths between 0.75m and 1.90m bgl and generally comprised firm, brown, silty, sandy clay with gravel sized fragments of brick, ceramic, and charcoal. This material likely represents reworked natural cohesive material.

Bosworth Clay Member

- 4.6 Deposits of the Bosworth Clay Member were limited to the west (WS07-WS08, TP10-TP12, TP22 and BH01) and east (TP01 and WS01) and generally comprised firm, locally soft, very soft and firm to stiff, light brown and grey, slightly sandy, slightly gravelly silty clay with gravel comprising sub-angular to rounded, fine to coarse flint, sandstone, and quartzite. The Bosworth Clay Member was recorded to depths of up to 2.00m bgl but generally less than 1.00m bgl.

Wolston Sand and Gravel

- 4.7 The Wolston Sand and Gravel deposits were encountered across the eastern half of the site, typically interbedded with the Oadby Member deposits, and comprised medium dense, locally dense, reddish brown, silty, gravelly fine to coarse sand or sandy fine to coarse gravel. Gravel comprised fine to coarse, subrounded to rounded quartzite, chert, and flint.

Oadby Member

- 4.8 Strata of the Oadby Member were encountered underlying the Bosworth Clay Member and interbedded with the Wolston Sand and Gravel, and generally comprised firm and stiffer, locally soft and soft to firm, grey and

brown, silty, sandy, slightly gravelly clay. Gravel comprised sub-angular to sub-rounded, fine to coarse sandstone, siltstone, chalk, and quartzite.

- 4.9 Localised soft and soft to firm materials were encountered within the Bosworth Clay and Oadby Member in areas in the west and to the north and south of the former farm to depths ranging between 1.60 and 2.50m bgl. The approximate extent of these areas is illustrated by the Exploratory Hole Location and Foundation Zoning Plan in **Appendix A**.

Material Properties, Strength Profile and Consolidation Characteristics

Laboratory Classification Testing

- 4.10 Laboratory plasticity index testing was undertaken on samples of the Bosworth Clay and Oadby Members. The results are summarised in Table 4.1 below.

Table 4.1 Summary of Plasticity Testing Results (%)

Location ID	Depth (m bgl)	Plasticity Index	% Passing 425µm Sieve	Modified Plasticity Index
Bosworth Clay Member				
WS01	0.90	43	100	43.00
TP22	0.90	46	99	45.54
Oadby Member				
WS07	2.40	33	100	33.00
WS08	1.40	36	100	36.00
WS09	2.10	29	100	29.00
WS11	0.80	20	93	18.60
WS12	1.10	24	94	22.56
WS14	1.80	31	100	31.00
WS15	1.80	26	100	26.00
TP09	0.70	18	90	16.20
TP24	2.00	33	100	33.00
BH01	6.50-6.95	30	100	30.00
BH02	2.50-2.60	12	100	12.00
BH02	8.00-8.45	27	100	27.00
BH03	5.6	17	90	15.30
BH04	4.5	18	93	16.74

- 4.11 The results indicate that the Oadby Member and Bosworth Clay Member are of low-medium and high volume change potential respectively.

- 4.12 Particle size distribution testing was undertaken on the Wolston Sand and Gravel Deposits and the results are summarised in Table 4.2 below.

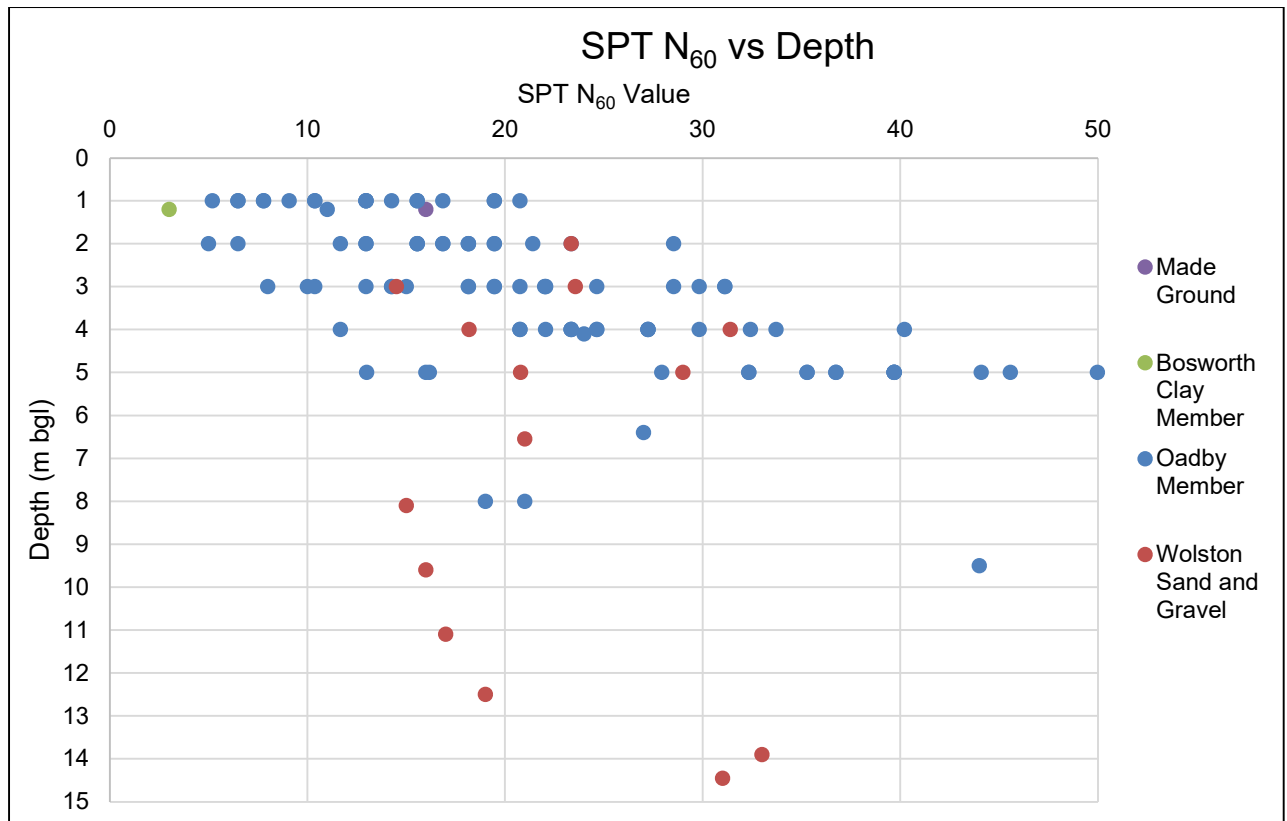
Table 4.2 Summary of Particle Size Distribution Testing Results (%)

Location ID	Depth (m bgl)	Silt/Clay	Sand	Gravel	Cobbles
BH03	8.10-8.60	12	85.5	2.5	0
BH03	14.45	11.1	74.8	14.1	0

- 4.13 The results confirm that the Wolston Sand and Gravel Deposits include silty, gravelly, fine to coarse sands.

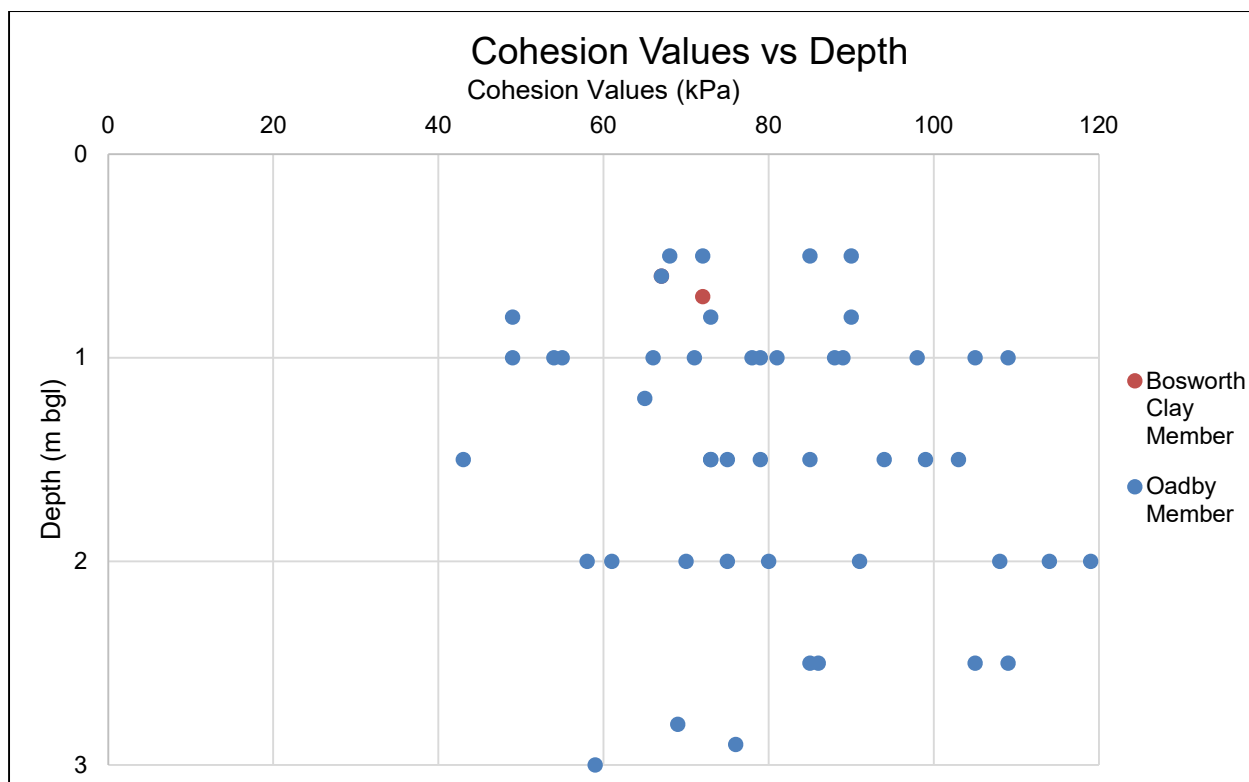
Strength Profile

- 4.14 The strength profile of the near surface soils has been assessed by reference to the results of Standard Penetration Tests (SPT's) within the boreholes. N values from SPT's have been corrected to derive N_{60} values, considering the energy loss induced by the hammer and transmitted by the drive rods and overburden effects.
- 4.15 N_{60} values within the Oadby Member were recorded to consistently increase with depth, ranging from values of 5 to 23 at 1m bgl and increasing to values between 10 and 50+ at depths in excess of 3m bgl. These values generally correlate with a soft and soft to firm, clay, becoming firm and stiff with depth, and medium dense sand. N values of less than 10 were generally restricted to the areas of 'softer' shallow clay layers encountered within the Bosworth Clay and Oadby Member as identified by the Exploratory Hole Location and Foundation Zoning Plan in **Appendix A**.
- 4.16 N_{60} values within the Wolston Sand and Gravel were consistently recorded between 14 and 33, indicating a medium dense to dense profile, generally increasing in density with depth.
- 4.17 A graph showing N_{60} values plotted against depth is presented below.



4.18 Hand shear vane tests were undertaken on the cohesive fraction of the Bosworth Clay and Oadby Member within the trial pits. Reported apparent cohesion values within the Oadby Member ranged between 40 and 119 kPa, indicating generally firm and stiffer, locally soft to firm consistency. Apparent cohesion values within the Bosworth Clay of 72 kPa and 67 kPa were recorded at 0.70m bgl in TP01 and 0.60m bgl in TP22 respectively, indicating firm consistency.

4.19 A graph showing Cu values derived from vane tests against depth is plotted below.



Laboratory Strength Testing

- 4.20 Ten samples of the Oadby Member were scheduled for multi-stage triaxial strength testing and the results are summarised in Table 4.3 below.

Table 4.3: Summary of Triaxial Compression Strength Testing Results within the Oadby Member

Location ID	Depth (m)	C _u (kN/m ²)	ϕ (degrees)
BH01	2.00-2.45	70	7.69
BH01	4.00-4.45	150	2.75
BH01	9.50-9.95	280	0.87
BH02	4.00-4.45	45	6.82
BH02	6.50-6.95	120	0.94
BH02	9.50-9.95	70	1.80
BH03	3.00	115	6.06
BH03	5.10	100	4.13
BH04	5.10	105	2.58
BH04	8.00	145	3.37

- | | |
|------|---|
| 4.21 | The results indicate apparent cohesion (C_u) below 2m within the firm and stiffer range in the Oadby Member. |
| | Consolidation Characteristics |
| 4.22 | Five undisturbed samples of Oadby Member were submitted for one dimensional oedometer consolidation testing to enable calculation of settlements under imposed loading. These results have been used initially to |

calculate the co-efficient of volume compressibility (Mv) at depths ranging between 2.00m and 4.00m bgl based on an assumed increase in loading of 100kPa above overburden pressure. Results within the Oadby Member ranged between 0.11 and 0.18 m²/MN indicating medium compressibility.

pH and Water-Soluble Sulphate Testing

- 4.23 Thirty-one soil samples have been scheduled for pH and water-soluble sulphate testing. The results are summarised in Table 4.4 below.

Table 4.4: Summary of pH and Water-Soluble Sulphate Testing

	pH	Water-Soluble Sulphate Testing (mg/l)	Total Potential Sulphate (%)
Made Ground/Topsoil			
Minimum	6.3	<10	N/A
Maximum	8.6	370	N/A
BRE SD1 Value	6.3	197.33	N/A
Bosworth Clay Member			
Minimum	7.3	61	0.09
Maximum	7.3	61	0.09
BRE SD1 Value	7.3	61	0.09
Oadby Member (shallower than 1.50m bgl)			
Minimum	6.7	12	0.06
Maximum	8.0	354	0.06
BRE SD1 Value	7.1	230	0.06
Oadby Member (depths in excess of 1.50m bgl)			
Minimum	8.1	58	0.60
Maximum	8.5	380	2.22
BRE SD1 Value	8.1	285	2.10
Wolston Sand and Gravel Deposits			
Minimum	7.8	36	0.36
Maximum	8.9	173	0.90
BRE SD1 Value	7.8	173	0.90

In-situ DCP Testing

- 4.24 The results of the in-situ DCP testing indicate that average CBR values are generally between 2.2% and 32.4%.

Groundwater

- 4.25 During the intrusive investigation, groundwater was encountered at depths of between 1.50m and 3.40m bgl, generally in the east of the site at locations close to the watercourse. Groundwater was also encountered within the exploratory locations advanced around the former farmyard area and the ponds in the north and south at depths of between 1.20m and 6.40m bgl.
- 4.26 A moderate inflow of groundwater was encountered within BH03, positioned close to the pond in the south, at a depth of 6.40m bgl and was recorded to rise to 4.00m bgl within 20 minutes. Groundwater was also encountered within BH02, positioned close to the pond in the north, at a depth of 1.70m bgl rising to 1.60m bgl after 20 minutes, indicating a slow ingress of water.

4.27 Groundwater entries within the trial pits were generally observed as slow seepages; however moderate and fast seepages were encountered in TP01 (2.50m bgl) and TP14 (2.50m bgl) respectively. Both locations were in the east of the site close to the watercourse. Where groundwater was encountered, the trial pit excavations became unstable.

4.28 The results of the subsequent groundwater monitoring programme are summarised in Table 4.5 below.

Table 4.5: Summary of Groundwater Monitoring Programme

Location ID	Depth to Groundwater (m bgl)
WS01, WS10 and WS11 (close to eastern watercourse)	0.68 – 2.70
WS03 (close to southern pond)	4.21 - 4.70
WS16 (close to northern pond)	1.25 – 3.00
WS07	2.23 – 3.14
WS12	Dry
WS17	1.44 – 1.79

Visual or Olfactory Contamination

4.29 Visual or olfactory evidence of contamination and Asbestos Containing Materials (ACM's) were not observed during the intrusive investigation.

Obstructions

4.30 Buried anthropogenic obstructions were not encountered during the investigation.

5.0 CONTAMINATION ASSESSMENT

MEC Approach to Risk Assessment

- 5.1 The UK approach to the assessment of contaminated land is based upon the principles of risk assessment, which is founded on the use of a 'source-pathway-receptor' model to establish the potential presence of 'pollutant linkage.'
- 5.2 MEC adopts a tiered approach to risk assessment in accordance with current UK guidance and good practice. The initial step of this process, known as Tier 1 or Generic Quantitative Risk Assessment (GQRA), is the comparison of site-derived data with relevant guideline levels. Should the adopted criteria be exceeded, then two courses of action are available. The first is to break the pollutant linkage by undertaking remedial works such as removing or treating the contaminated soil. Alternatively, a more detailed risk assessment (DQRA) can be carried out to determine whether a contamination risk exists.

Generic Quantitative Risk Assessment

- 5.3 The assessment involves the screening of the reported concentrations of contaminants within the soils sampled during the ground investigation against published generic assessment criteria (GAC) values, which are representative of a minimal or tolerable human health risk. MEC have adopted assessment criteria (Suitable for Use Levels-S4UL's) produced by the Chartered Institute of Environmental Health (CIEH), in association with LQM, published November 2015. Where no S4UL is available, reference is made to other relevant standards as appropriate.
- 5.4 In undertaking this GQRA, a Soil Organic Matter (SOM) content of 2.5% has been used based on the average SOM recorded. For the purposes of this investigation under the CL:AIRE environmental guidelines, the 'residential with consumption of homegrown produce' scenario has been used.
- 5.5 A summary of laboratory environmental results is included in **Appendix E**.

Metals, Metalloids and Non-metals

- 5.6 Sixteen soil samples were analysed for concentrations of metals, non-metals, and metalloids. Concentrations of Chromium VI, Mercury, and Selenium were all reported below the laboratory method detection limit.
- 5.7 The results of the analysis indicate that contaminant concentrations were recorded below the adopted GAC.

Polycyclic Aromatic Hydrocarbons (PAH)

- 5.8 Sixteen soil samples were assessed for concentrations of the US EPA 16 priority PAH compounds. PAH concentrations were recorded below the laboratory method detection limit within ten samples.
- 5.9 The results of the analysis from the remaining samples indicate that contaminant concentrations were recorded below the adopted GAC.

Asbestos

- 5.10 Six samples of the Topsoil and Made Ground were analysed for asbestos fibres by optical microscopy. Asbestos was not detected.

Total Petroleum Hydrocarbons

- 5.11 Six soil samples were analysed for speciated TPH, benzene, toluene, ethylbenzene, and xylene (BTEX) and methyl tertiary butyl ether (MTBE).
- 5.12 The results of the analysis indicate that concentrations of TPH, BTEX and MTBE compounds were recorded below the adopted GAC.

Soil Contamination Summary

- 5.13 The results of the GQRA indicate that contaminant concentrations were recorded below the adopted GAC. On this basis, remedial measures will not be required for the proposed development.

Controlled Waters Risk Assessment

- 5.14 Given that elevated contaminant concentrations have not been recorded across the site, it is considered that the risk to controlled waters is low and further assessment is not required in this respect.
- 5.15 Careful management of site drainage and material stockpiling will be required to minimise the potential sediment run-off to the southern and northern ponds and the watercourse in the east of the site.

Utilities

- 5.16 The results of the laboratory analysis indicate that standard utility pipes may be appropriate for the proposed development; however, further testing may be requested by the utility providers to confirm this assessment.

6.0 GROUND GAS RISK ASSESSMENT

Gas Monitoring Results

6.1 The results of the ground gas monitoring are summarised in Table 6.1 below.

Table 6.1: Summary of Maximum Steady State Ground Gas Monitoring Concentrations (%)

Location	Methane Concentrations (% v/v)	Carbon Dioxide Concentrations (% v/v)	Flow Rates (l/hr)	Maximum Gas Screening Value (GSV l/hr)
WS01	<0.1	3.1	<0.1	0.0052
WS03	<0.1	2.6	<0.1	
WS07	<0.1	0.9	0.1	
WS10	<0.1	3.7	<0.1	
WS11	<0.1	2.9	<0.1	
WS12	<0.1	4.2	<0.1	
WS16	<0.1	5.2	<0.1	
WS17	<0.1	1.7	<0.1	

6.2 Four visits were undertaken when atmospheric pressure was recorded above 1000mb and under rising and static conditions. Two visits were undertaken when atmospheric pressure was below 1000mb and under falling conditions. Generally, ground gas emissions tend to increase when atmospheric pressure falls, particularly below 1000mb. On this basis, it is considered that the worst-case gassing scenario has been captured.

6.3 Hydrogen sulphide and carbon monoxide concentrations were not recorded above the limit of detection of the monitoring equipment used. Volatile vapour concentrations were recorded close to or below the equipment detection limit.

Risk Assessment

6.4 A maximum Gas Screening Value (GSV) of 0.0052l/hr has been calculated in accordance with BS8485:2015+A1:2019, based on the highest carbon dioxide concentration and flow rate recorded. This places the site within Characteristic Situation 1, indicating that ground gas protection measures will not be required for the proposed development.

6.5 A carbon dioxide concentration of 5.2% v/v was recorded in WS16 during one monitoring visit. BS8485 recommends that where carbon dioxide concentrations exceed 5.0% v/v, consideration should be given to an increase to CS2. Given that this threshold was only exceeded on one occasion and that flow rates were consistently at or below the limit of detection of the equipment, it is considered that an increase to CS2 would be overly conservative and that the CS1 classification is appropriate for the site.

6.6 The site lies in an area where less than 1% of properties are estimated to exceed the Radon Action Level. Accordingly, Radon protection measures are not required.

7.0 GEOTECHNICAL ASSESSMENT

Introduction

- 7.1 The finalised site levels and foundation loadings were not available at the time of reporting. The preliminary geotechnical assessment is presented based on the illustrative layout provided in **Appendix A**.

Foundation Design

- 7.2 Based on the soil profile encountered, it is considered that traditional strip/trench fill foundations will be appropriate for plots outside of the area of softer shallow clays, founding within the Oadby Member deposits and granular Wolston Sand and Gravel, ensuring full penetration of any Made Ground, Bosworth Clay Member, shallow 'soft' Oadby Member around the farmyard area and any 'bedding' materials encountered at the two pond locations.
- 7.3 Table 7.1 provides a summary of the minimum foundation depths required outside the area of softer shallow clays within the Bosworth Clay and Oadby Member.

Table 7.1: Summary of Minimum Foundation Depths

Geological Unit Founding Within	Volume Change Potential	Minimum Foundation Depths (m bgl)
Oadby Member	Low to Medium	0.90
Wolston Sand and Gravel	-	0.75

- 7.4 On this basis, an allowable net bearing pressure of at least 100kN/m² should be achievable, assuming a 600mm wide strip, limiting total settlements to 25mm and maintaining differential settlements within acceptable limits.
- 7.5 Traditional foundations will require deepening to up to 2.50m bgl, within the areas of shallow softer ground identified. Foundation depths in this area should be confirmed on a plot specific basis and foundation excavations supervised by a suitably qualified geotechnical engineer. Alternatively, a piled foundation solution can be adopted, terminating within more competent strata at depth. If a piled foundation solution is adopted, the results of this investigation should be provided to the proposed piling contractor to enable formulation of detailed designs.
- 7.6 The extent of the area requiring deepened or piled foundations is shown on the Exploratory Hole Location and Foundation Zoning Plan in Appendix A.
- 7.7 Where traditional strip/trench fill foundations span across varying cohesive and granular strata, it is recommended that suitable longitudinal reinforcement is incorporated to accommodate differential rates of settlement. Based on the existing information, this is likely to be required primarily across parts of the two eastern fields where cohesive and granular soils are interlayered.

Floor Slab Design

- 7.8 Suspended floor slabs will be required for plots where the thickness of sub-slab fill exceeds 600mm, including upon completion of any earthworks required for the site. Ground-bearing floor slabs are likely to be appropriate for plots outside of these areas and outside the significant influence of trees.

Earthworks

- 7.9 Given that levels slope from the centre of the site towards the west and east/north-east, it is considered that reprofiling will be required to facilitate development on suitable platforms.
- 7.10 A cut and fill analysis of earthworks volumes should be carried out with reference to finished slab levels to enable an earthworks specification to be prepared.

Building Near Trees

- 7.11 Given the primarily cohesive nature of the Bosworth Clay and Oadby Members, adjustments to foundation and floor slab design will be required, considering the influence of trees, either existing or proposed. A detailed assessment should be completed based on a tree survey to identify heights and species to confirm the impact on foundation and floor slab design for the finalised planning layout. Piled foundations may be considered as an alternative for plots within significant influence of trees.
- 7.12 Across parts of the two north-eastern fields, the impact of trees may be locally reduced by the presence of granular soils which are interbedded and frequently underlie the cohesive soils. This area will require a more detailed plot specific assessment considering the distribution of the granular soils relative to the trees.

Concrete Classification

- 7.13 Based on the results of the pH and water-soluble sulphate testing, it is recommended that buried concrete within the Made Ground, Topsoil, Bosworth Clay Member and Oadby Member at depths shallower than 1.50m bgl should adopt a Design Sulphate Class of DS-1 and an Aggressive Chemical Environment for Concrete (ACEC) classification of AC-1s.
- 7.14 Where the Wolston Sand and Gravel has been encountered, the classification should be increased to DS-3/AC-3 with a further increase to DS-4/AC-3s for buried concrete within the Oadby Member at depths greater than 1.50m bgl.
- 7.15 It should be noted that the classification for concrete within the Wolston Sand and Gravel has been based on a relatively small dataset and further testing of this material may allow a reduced concrete classification to be adopted. Groundwater sampling will also be required to confirm the classification, given that mobile groundwater conditions are anticipated within these granular deposits.

Excavations

- 7.16 Excavation of the topsoil, Made Ground and underlying natural soils should generally be readily achievable using conventional hydraulic excavation techniques. A higher specification of plant may be required to penetrate any localised concrete associated with the former farmyard area.
- 7.17 Based on the soil profile encountered, it is considered likely that shallow excavations across the site will generally remain stable over short periods within natural soils. Where groundwater has been encountered, the stability of the excavations has been noted to be compromised and it is therefore recommended that excavations deepened below the groundwater are avoided, where possible, particularly within granular soils.
- 7.18 Groundwater has generally been observed at depths in excess of 2.50m bgl, therefore, it is considered unlikely that seepages will be encountered in shallow excavations. Any localised seepages at shallow depths would likely be readily dealt with using traditional methods of dewatering such as sumping and pumping. Excavations deeper than 2.50m bgl through granular soils are likely to require sheet piling to maintain stability and control groundwater entries.
- 7.19 It is recommended that excavations should not be entered without appropriate support and a full risk assessment should be completed prior to entry.

Pavement Design

- 7.20 Based on the results of the in-situ DCP testing, it is considered that the CBR Design value is likely to be in excess of 4% although, lower values may be present in localised areas, particularly around the former farmyard and where softer shallow clays have been encountered. Testing has been carried out from existing ground level and it is recommended that a reassessment of the equivalent CBR value is undertaken once proposed formation levels have been established, supported by in-situ testing.
- 7.21 Made Ground encountered locally at pavement formation level, should preferably be removed to a depth of at least 500mm from beneath pavement areas and replaced with fully compacted suitable granular material to provide a CBR Design value within the range 2-5%.

Soakaways

- 7.22 Soil infiltration rate testing has not been undertaken as part of this investigation. Soakaways may locally be feasible within the predominantly granular Wolston Sand and Gravel Formation across parts of the two eastern fields, however, shallow groundwater has been encountered in the east which will dictate the viability of soakaways. Soil infiltration rate testing in accordance with the requirements of BRE Digest; 365 will be required if soakaways are considered for this area.

8.0 UPDATED CONCEPTUAL SITE MODEL

Introduction

- 8.1 Based on the findings of the ground investigation, the conceptual site model developed within the previous report has been revised and is presented in Table 8.1 below to reflect the increased level of data available.

Table 8.1: Updated Conceptual Site Model

Source	Pathway	Receptor	Pollutant Linkage Risk
Potential contamination in shallow soils on site	Direct contact and accidental ingestion/inhalation of contaminated soils and dust.	Construction workers.	Low: The results of the GQRA indicate that contaminant concentrations were recorded below the adopted GAC. On this basis, remedial measures will not be required for the proposed development.
	Consumption of Homegrown Produce	Future site users.	
	Vertical and lateral migration through shallow soils or via groundwater.	Nearby surface water features	Low: Given that elevated contaminant concentrations have not been recorded across the site, it is considered that the risk to controlled waters is low.
		Underlying Aquifer	
		Third party property.	
	Direct contact/soil leaching.	Buried utilities	Low: Standard PE pipes may be appropriate for the proposed development; however, further testing may be requested by the utility providers to confirm this assessment
		Concrete	Moderate: Soil chemical analysis results classify the Made Ground, Topsoil, Bosworth Clay Member and Oadby Member at depths shallower than 3.00m bgl beneath the site as DS-1 and AC-1s. Where deposits of the Wolston Sand and Gravel have been encountered, the classification should be increased to DS-3/AC-3 with a further increase to DS-4/AC-3s for buried concrete within the Oadby Member. Further soil testing of the Wolston Sand and Gravel and groundwater testing will be required to refine the concrete classification.

Asbestos Containing Materials	Incidental inhalation of asbestos fibres	Construction Workers	Low: Asbestos fibres were not detected in laboratory analysis of samples, and ACMs were not observed during the ground investigation.
		Future Site Users	
Ground gas generation and migration	Migration through porous soils and accumulation in confined spaces.	Construction workers and future site users.	Low: The results of the ground gas monitoring indicate that CS1 conditions prevail at the site and ground gas protection measures will not be required. The site lies in an area where it is estimated that less than 1% of properties exceed the Radon Action Level. Accordingly, Radon protection measures are not required.

9.0 REMEDIATION STATEMENT

Soil Remediation

- 9.1 The results of the GQRA indicate that contaminant concentrations that could pose a potential risk to human health receptors have not been recorded. On this basis, remedial measures will not be required for the proposed development.
- 9.2 If previously unidentified contamination is encountered during construction works, a qualified geo-environmental engineer should be consulted and the Contaminated Land/Environmental Health Officer at the Local Authority should be informed of mitigation proposals for the area of concern. The remedial approach will require their approval. Further investigation may be required to confirm the extent of any such contamination.

Utilities

- 9.3 The results of the laboratory analysis indicate that standard utility pipes may be appropriate for the proposed development; however, further testing may be requested by the utility providers to confirm this assessment.

Waste Disposal

- 9.4 Any materials which the developer intends to discard as part of the construction of the development would be classed as wastes and must be appropriately handled in accordance with current Waste Legislation. The developer should be aware of and utilise the waste hierarchy where possible. Where materials cannot be retained on site and disposal is the only option the waste should be classified and sent to an appropriate waste receiving facility. Waste classification (in accordance with EA technical guidance note WM3) and subsequent Waste Acceptance Criteria (WAC) testing would be required by the waste receiving facility prior to disposal. If any materials are to be reused or removed from site, this should be undertaken in accordance with the appropriate waste management regulations.

Controlled Waters

- 9.5 The results of the investigation indicate that remedial measures will not be required with respect to controlled waters.
- 9.6 Careful management of site drainage and material stockpiling will be required to minimise the potential sediment run-off to the existing ponds and the watercourse in the east of the site.

Gas Protection Measures

- 9.7 The results of the monitoring indicate that gas protection measures will not be required for the proposed development.

10.0 CONCLUSIONS

10.1 Based on the findings of the ground investigation, the following works are recommended:

- Plot specific assessment of foundation depth requirements within the area of the shallow softer cohesive deposits by a suitably qualified geotechnical engineer if deepened trench fill foundations are proposed;
- Completion of a cut and fill analysis to inform earthworks, foundation, and floor slab design;
- Further pH and sulphate testing of the Wolston Sand and Gravel deposits and groundwater testing to refine the concrete classification for these deposits;
- In-situ CBR testing at proposed formation levels to confirm CBR Design values;
- Classification of waste soils in accordance with EA Technical Guidance Note WM3, and WAC testing if landfill disposal is the preferred option.

10.2 This report should be submitted to the local authority for comment and approval.



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APPENDICES



APPENDIX A

M-EC
The Old Chapel
Station Road
Hugglescote
Leicestershire
LE67 2GB



SITE LOCATION PLAN

Project: Land at Normandy Way, Hinckley, Leicestershire

File Ref: 28047 – Parcel A

O.S. Grid Ref: 442138, 295722

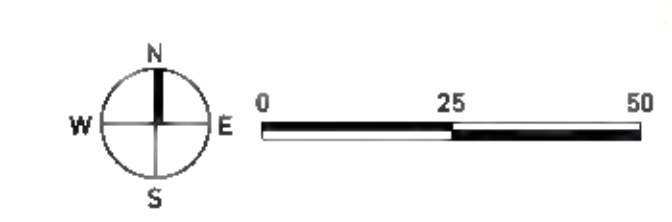
Postcode: LE10 3EA

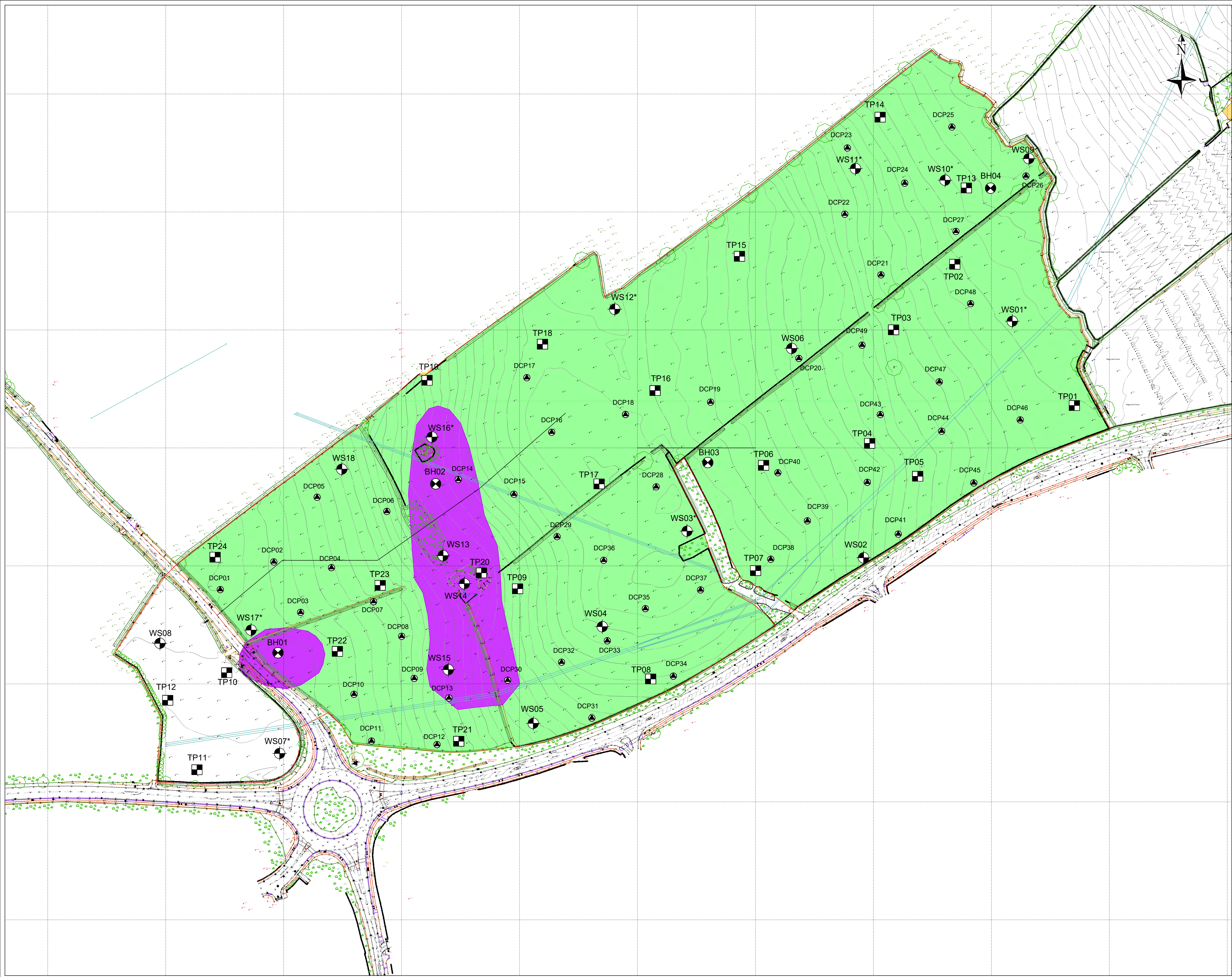




- KEY**
- SITE LOCATION**
25.39 HECTARES / 62.74 ACRES
 - PROPOSED RESIDENTIAL DEVELOPMENT**
 - PROPOSED 1 HECTARE FOR 1 FORM ENTRY SCHOOL + 1 HECTARE SAFE GUARDED LAND**
 - PUBLIC OPEN SPACE (INCLUDING SuDS) - 8.08 HA / 19.97 ACRES**
 - RETAINED EXISTING LANDSCAPE**
 - ADDITIONAL/ REINSTATED VEGETATION**
 - PRIMARY STREET / AVENUE**
 - KEY FOCAL JUNCTION**
 - SECONDARY STREET**
 - SIDE STREET / SHARED SURFACE**
 - PRIVATE LANES**
 - RETAINED PUBLIC OF RIGHT OF WAY**
 - KEY PEDESTRIAN MOVEMENT WITHIN SITE**
 - SUSTAINABLE URBAN DRAINAGE**
 - NEIGHBOURHOOD EQUIPPED AREA OF PLAY**
 - LOCALLY EQUIPPED AREA OF PLAY**
 - LOCAL AREA OF PLAY/ NATURAL PLAY SPACE**
 - KEY VISUAL CORRIDORS**

- KEY PRINCIPLES**
1. PROPOSED NEW ACCESS VIA HIGHWAYS IMPROVEMENTS TO STOKE ROAD;
 2. PRIMARY STREET PROVIDING VEHICULAR, PEDESTRIAN AND CYCLE MOVEMENT;
 3. SECONDARY MOVEMENT ROUTES PROVIDING A LOOPED INFRASTRUCTURE TO PRIMARY MOVEMENT ROUTES;
 4. SHARED SURFACE ROUTES SERVING CLUSTERS OF DEVELOPMENT;
 5. PRIVATE LANES SERVING OUTWARD FACING DEVELOPMENT PROVIDING PASSIVE SURVEILLANCE OVER NEWLY CREATED OPEN SPACE;
 6. HIGHWAYS IMPROVEMENTS ALONG NORMANDY ROAD PROVIDING DEDICATED CROSSING POINTS TO EXISTING DEVELOPMENT;
 7. RETAINED PUBLIC RIGHT OF WAY RUNNING NORTH-SOUTH THROUGH DEVELOPMENT, PICKING UP KEY EAST-WEST MOVEMENT ROUTES;
 8. KEY PEDESTRIAN MOVEMENT ROUTES RUNNING IN A NORTH-SOUTH AND EAST-WEST MOVEMENT ROUTES OFFERING FULL PEDESTRIAN PERMEABILITY;
 9. KEY MEETING POINT AT HIGHEST POINT OF DEVELOPMENT PROVIDING KEY VISUAL CORRIDORS TO SURROUNDING CONTEXT;
 10. KEY PLAY SPACES ALONG PEDESTRIAN MOVEMENT ROUTES SERVING MAXIMUM RESIDENTS
 11. MAXIMUM RETENTION OF EXISTING FIELD BOUNDARIES AND WOODED AREAS;
 12. CREATION OF COMMUNITY SPACES IN THE FORM OF COMMUNITY ORCHARDS AND INFORMAL KICK ABOUT AREAS;
 13. CREATION OF A SERIES OF GREENWAYS PROVIDING A KEY WILDLIFE NETWORK THROUGHOUT DEVELOPMENT;
 14. PROPOSED ADDITIONAL PLANTING TO THE NORTHERN EDGE TO AID BIO-DIVERSITY AND WILDLIFE OPPORTUNITIES;
 15. POTENTIAL SCHOOL SITE WITH SAFE GUARDED LAND FOR FUTURE SCHOOL EXPANSION;
 16. KEY (PEDESTRIAN MEETING POINTS PROVIDING RESIDENTS OPPORTUNITIES WITH SOCIAL INCLUSION;
 17. SITE LOW POINTS UTILISED FOR SUSTAINABLE URBAN DRAINAGE AIDING WETLAND HABITATS ALONG EXISTING WATERCOURSES;
 18. MAXIMUM CONTINUOUS FRONTAGE ALONG DEVELOPMENT ABUTTING NORMANDY WAY TO REDUCE IMPACT OF ACOUSTIC INTERFERENCE TO REAR GARDEN SPACES;
 19. STREETS AND DEVELOPMENT ORIENTATED TO RUN WITH CONTOURS REDUCING IMPACT OF RETAINING STRUCTURES ON STREET SCENE;
 20. 2M HIGH PLANTED BUND TO REDUCE ANY POTENTIAL ACOUSTIC DISTURBANCE; AND
 21. POTENTIAL ACCESS POINT FOR FUTURE DEVELOPMENT.





- GENERAL NOTES**
- DO NOT SCALE THIS DRAWING.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALIST DESIGN DRAWINGS AND DETAILS.
 - ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 - THIS DRAWING IS FOR STRATEGY PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.
- KEY**
- CABLE PERCUSSION BOREHOLE LOCATION
 - TRIAL PIT LOCATION
 - WINDOW SAMPLE LOCATION (*GROUND GAS MONITORING INSTALLATION)
 - DYNAMIC CONE PENETROMETER LOCATION
 - AREA SUITABLE FOR TRADITIONAL STRIP FOUNDATIONS AT 0.90M BGL WITHIN COHESIVE DEPOSITS (OUTSIDE TREE INFLUENCE) AND 0.75M BGL WITHIN GRANULAR DEPOSITS
 - AREA REQUIRING TRENCH FILL FOUNDATIONS TO DEPTHS OF UP TO 2.50M BGL OR A PILED FOUNDATION SOLUTION
 - APPROXIMATE SITE BOUNDARY

A	UPDATED WITH CABLE PERCUSSION BOREHOLES AND DCP LOCATIONS AND FOUNDATION ZONATION DETAILS		DW	CW	DT	27.11.23
REV	FIRST ISSUE		DW	CW	DT	15.09.23
REV	AMENDMENTS:		DRN	CHK	APP	DATE:
PROJECT: LAND NORTH OF NORMANDY WAY, HINCKLEY PHASE 1						
DRAWING TITLE: EXPLORATORY HOLE LOCATION PLAN AND FOUNDATION ZONING PLAN						
CLIENT: RICHBOROUGH ESTATES LTD						
DRAWING NUMBER: 28047_04_140_01						
REVISION: A		SHEET SIZE: A1		SCALE: 1:1,500		
STATUS: FOR INFORMATION / APPROVAL						
 Consulting Development Engineers				Telephone: 01530 264 753 Email: group@m·ec.co.uk Website: www.m·ec.co.uk ORDNANCE SURVEY © CROWN COPYRIGHT 2015. ALL RIGHTS RESERVED. LICENCE NUMBER 100055865		

File Location: S:\M·EC Job Book\28047\Drawings\04 series - environmental\28047_04_140_01 exploratory hole location plan.dwg
Printed: 27.11.2023



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APPENDICES



APPENDIX B

Project:	Land North of Normandy Way	Project No. 28047	Start Date: 04/09/2023	End Date: 04/09/2023	Plant Used:
Location:	Hinckley, Leicestershire	Logged By: JM			360 Excavator
Client:	Richborough Estates Ltd	Approved By: DT	Easting and Northing Co-ordinates: 442470.37 295735.98		Elevation (m AOD): 111.11

Strata Description	Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
				Type	Depth		
Crop stubble over dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse chert and quartzite.		0.25	110.86	ES	0.10	HSV=72kPa	2.50 ▼
Firm, greyish brown, slightly sandy, silty CLAY. BOSWORTH CLAY MEMBER		0.70 0.80		D			
Orangish brown, slightly clayey, sandy, sub-rounded to rounded, fine to coarse GRAVEL with low cobble content. Gravels and cobbles comprise quartzite and flint. WOLSTON SAND AND GRAVEL DEPOSITS		1.00	110.11	D	1.00		
Orangish brown, clayey, slightly gravelly SAND. Gravel comprises sub-rounded to rounded, fine to coarse chert. WOLSTON SAND AND GRAVEL DEPOSITS		1.80	109.31				
End of Trial Pit		2.60	108.51				

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
A moderate ingress of groundwater was encountered at 2.50m bgl.
Visual or olfactory evidence of contamination was not observed.
Hole collapsing from 1.00m to 2.60m bgl.

Stability: Unstable

Dimensions:

Length: 2.50m

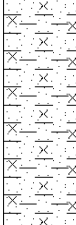
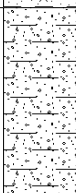
Width: 0.50m

Depth: 2.60m

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
HSV - Hand Shear Vane Reading

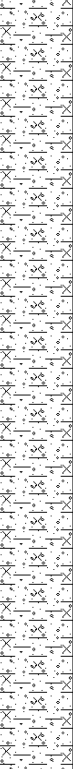
 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP02 Sheet 1 of 1														
Project: Land North of Normandy Way		Project No. 28047	Start Date: 04/09/2023		End Date: 04/09/2023	Plant Used: 360 Excavator													
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 442368.99 295855.73			Elevation (m AOD): 111.13													
Client: Richborough Estates Ltd		Approved By: DT																	
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)											
					Type	Depth													
Dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse chert and quartzite. Orangish brown, clayey, slightly gravelly SAND. Gravel comprises sub-rounded to rounded, fine to coarse chert. WOLSTON SAND AND GRAVEL DEPOSITS Firm, greyish brown, slightly sandy, silty CLAY. OADBY MEMBER			0.25	110.88	D	0.80	HSV=49kPa												
									0.40	110.73	D	1.00	HSV=65.3kPa						
															1.20	HSV=58.3kPa			
																		1.50	
End of Trial Pit			3.00	108.13															
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.					Dimensions: Width: 0.50m Length: 2.50m Depth: 3.00m		Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading												
Stability: Stable																			

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP03 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 04/09/2023		End Date: 04/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 442317.07 295800.15			Elevation (m AOD): 113.39		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type	Depth		
Dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse chert and quartzite. Orangish brown, clayey, slightly gravelly SAND. Gravel comprises sub-rounded to rounded, fine to coarse chert. WOLSTON SAND AND GRAVEL DEPOSITS			0.20	113.19	ES	0.40		
Soft to firm, becoming firm, greyish brown, slightly sandy, silty CLAY. OADBY MEMBER			1.40	111.99	D	1.50	HSV=42.6kPa	
						1.60		
Dark reddish brown, slightly clayey, slightly gravelly SAND. Gravel comprises sub-angular, fine quartzite and sandstone. WOLSTON SAND AND GRAVEL DEPOSITS			2.30	111.09		2.00	HSV=60.6kPa	
End of Trial Pit			3.00	110.39				
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								

Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed. Hole collapsed from 3.00m to 1.90m bgl.		Dimensions: Width: 0.50m Length: 2.50m Depth: 3.00m		Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading	
Stability: Unstable					

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP04 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 04/09/2023		End Date: 04/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 442296.84 295703.92			Elevation (m AOD): 115.62		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type	Depth		
Dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse chert and quartzite.			0.30	115.32	D	0.70	HSV=54.6kPa	1.50 ▼
Dark grey, clayey SAND. OADBY MEMBER			0.50	115.12				
Firm, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel comprises sub-angular to sub-rounded, fine to coarse sandstone and quartzite. OADBY MEMBER								
Orangish brown, clayey, slightly gravelly SAND. Gravel comprises sub-rounded to rounded, fine to medium sandstone and quartzite. WOLSTON SAND AND GRAVEL DEPOSITS			1.50	114.12				
Firm, grey slightly sandy, silty CLAY. OADBY MEMBER					D	1.80	HSV=68.6kPa	
			2.50	113.12				
End of Trial Pit			3.10	112.52				
</								

Project:	Land North of Normandy Way	Project No. 28047	Start Date: 04/09/2023	End Date: 04/09/2023	Plant Used: 360 Excavator
Location:	Hinckley, Leicestershire	Logged By: JM			
Client:	Richborough Estates Ltd	Approved By: DT	Easting and Northing Co-ordinates: 442206.91 295685.29		Elevation (m AOD): 118.47

Strata Description	Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
				Type	Depth		
Dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse chert, sandstone and quartzite.		0.30	118.17				
Firm to stiff, greyish brown, slightly sandy, gravelly, silty CLAY. Gravel comprises sub-angular to rounded, fine to coarse, quartzite, sandstone and siltstone. OADBY MEMBER				ES	0.50		
				D	0.90		
End of Trial Pit		3.20	115.27				

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was not encountered.
Co-ordinates and elevations estimated from the topographical survey.

Stability: Stable

Dimensions:

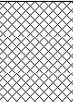
Length:
2.50m

Width:
0.50m

Depth:
3.20m

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
HSV - Hand Shear Vane Reading

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP07 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 04/09/2023		End Date: 04/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 442200.12 295596.00			Elevation (m AOD): 119.70		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type	Depth		
MADE GROUND: Dark brown, slightly sandy, silty clay topsoil with gravel sized fragments of sub-angular to rounded, fine to coarse chert, sandstone, quartzite, and rare bituminous material.			0.40	119.30	ES	0.30		
Firm, brown, slightly sandy, gravelly, silty CLAY. Gravel comprises sub-angular to rounded, fine to coarse quartzite and sandstone. OADBY MEMBER					D	1.00		
Light brown, slightly clayey, gravelly SAND. Gravel comprises sub-angular to rounded, fine to coarse sandstone, chert and quartzite. WOLSTON SAND AND GRAVEL DEPOSITS			2.40	117.30	D	3.00		
End of Trial Pit			3.20	116.50				
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.					Dimensions: Width: 0.50m Length: 2.50m Depth: 3.20m		Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading	
Stability: Stable								

Project:	Land North of Normandy Way	Project No. 28047	Start Date: 04/09/2023	End Date: 04/09/2023	Plant Used: 360 Excavator
Location:	Hinckley, Leicestershire	Logged By: JM			
Client:	Richborough Estates Ltd	Approved By: DT	Easting and Northing Co-ordinates: 442124.75 295499.78		Elevation (m AOD): 118.23

Strata Description	Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
				Type	Depth		
Dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse chert, sandstone and quartzite.		0.20	118.03				
Light brown, slightly clayey, gravelly SAND. Gravel comprises sub-angular to rounded, fine to coarse sandstone and quartzite. OADBY MEMBER		0.60	117.63	D	0.40		
Firm, reddish brown mottled light grey, slightly sandy, slightly gravelly, silty CLAY. Gravel comprises sub-angular to sub-rounded, fine to coarse quartzite, sandstone, rare chalk and pockets of black coal. OADBY MEMBER				D	1.00		
End of Trial Pit		3.10	115.13				

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was not encountered.
Visual or olfactory evidence of contamination was not observed.

Stability: Stable

Dimensions:

Length: 2.50m

Width: 0.50m

Depth: 3.10m

Key:	
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B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
HSV - Hand Shear Vane Reading

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP09 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 04/09/2023		End Date: 04/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 441998.41 295580.68			Elevation (m AOD): 116.84		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type	Depth		
Dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse sandstone and quartzite.			0.30	116.54	ES	0.10	HSV=79.6kPa	
Firm, brown, sandy, slightly gravelly, silty CLAY. Gravel comprises sub-rounded to rounded, fine to coarse quartzite, chert and sandstone. OADBY MEMBER					D	0.70		
Orangish brown, clayey, slightly gravelly SAND. Gravel comprises sub-rounded to rounded, fine to coarse quartzite and sandstone. WOLSTON SAND AND GRAVEL DEPOSITS			1.20	115.64	D	1.00		
Firm, greyish brown, slightly sandy, silty CLAY. OADBY MEMBER			1.60	115.24		2.00		
End of Trial Pit			3.10	113.74				
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.					Dimensions: Length: 2.50m Width: 0.50m Depth: 3.10m		Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading	
Stability: Stable								

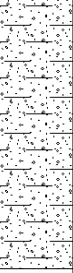
 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP10 Sheet 1 of 1		
Project: Land North of Normandy Way		Project No. 28047	Start Date: 04/09/2023		End Date: 04/09/2023	Plant Used: 360 Excavator	
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 441751.78 295509.53			Elevation (m AOD): 107.16	
Client: Richborough Estates Ltd		Approved By: DT					
Strata Description	Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
				Type	Depth		
MADE GROUND: Dark brown, slightly sandy, silty clay topsoil with gravel sized fragments of sub-angular to rounded, fine to coarse chert, sandstone, quartzite, rare tile and pottery.		0.30	106.86	ES	0.20	HSV=78kPa	
Firm, greyish brown, slightly sandy, slightly gravelly, silty CLAY. Gravel comprises sub-angular to rounded, fine to coarse sandstone and quartzite. BOSWORTH CLAY MEMBER		0.80	106.36	D	0.90		
Firm, brownish grey, slightly sandy, silty CLAY. OADBY MEMBER				D	1.00		
				D	1.20		
					1.50	HSV=84.6kPa	
					2.00	HSV=91.3kPa	
End of Trial Pit		3.10	104.06				
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.				Dimensions: Length: 2.50m Width: 0.50m Depth: 3.10m		Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading	
Stability: Stable							

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 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP12 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 04/09/2023		End Date: 04/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates:			Elevation (m AOD):		
Client: Richborough Estates Ltd		Approved By: DT	441701.75		295486.14	107.47		
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type		Depth	
Dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse sandstone and quartzite.			0.20	107.27				
Firm, brown, slightly sandy, gravelly, silty CLAY. Gravel comprises sub-angular to rounded, fine to coarse quartzite and sandstone.			0.50	106.97				
BOSWORTH CLAY MEMBER					D		0.70	HSV=73.3kPa
Firm to stiff, greyish brown, slightly sandy, silty CLAY. OADBY MEMBER					D		0.80	
					D		1.00	
					D		1.50	HSV=94kPa
					D		1.50	
Pockets of orangish brown, clayey SAND at 1.80m bgl.							2.50	HSV=105.3kPa
								
								
								
								
								
End of Trial Pit			3.10	104.37				
								
								
								
								
								
								
								
								
								
								
								
Remarks:					Dimensions:		Key:	
Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.					Length: 2.50m		B - Bulk Sample	
Descriptions based on visual inspection by a Geo-environmental engineer.					Width: 0.50m		D - Disturbed Sample	
Groundwater was not encountered.					Depth: 3.10m		ES - Environmental Sample	
Visual or olfactory evidence of contamination was not observed.							W - Water Sample	
							PID - PID Reading	
							HSV - Hand Shear Vane Reading	
Stability: Stable								

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP13 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 05/09/2023		End Date: 05/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 442378.80 295920.42			Elevation (m AOD): 110.38		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type	Depth		
Dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse chert and quartzite. Orangish brown, slightly clayey, gravelly SAND. Gravel comprises sub-angular to rounded, fine to coarse sandstone and quartzite. WOLSTON SAND AND GRAVEL DEPOSITS		<						

Project:	Land North of Normandy Way	Project No. 28047	Start Date: 05/09/2023	End Date: 05/09/2023	Plant Used:
Location:	Hinckley, Leicestershire	Logged By: JM			360 Excavator
Client:	Richborough Estates Ltd	Approved By: DT	Easting and Northing Co-ordinates: 442305.70 295980.39		Elevation (m AOD): 111.25

Strata Description	Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
				Type	Depth		
Grass over dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse quartzite and sandstone.		0.30	110.95				
Firm to stiff, orangish brown, sandy, slightly gravelly, silty CLAY. Gravel comprises sub-angular to sub-rounded, fine to coarse chert, quartzite and sandstone. OADBY MEMBER				ES	0.50 0.50	HSV=71.6kPa	
				D	0.90 1.00	HSV=89.3kPa	
					1.50	HSV=75.3kPa	
Orangish brown, slightly clayey, slightly gravelly SAND. Gravel comprises sub-angular to rounded, fine to coarse sandstone and quartzite. WOLSTON SAND AND GRAVEL DEPOSITS		2.00	109.25				
							2.50 ▼
End of Trial Pit		3.00	108.25				

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. A fast ingress of groundwater was encountered at 2.50m bgl. Visual or olfactory evidence of contamination was not observed. Hole collapsed to 2.60m bgl and pit was unstable after 2.00m bgl.

Stability: Unstable

Dimensions:

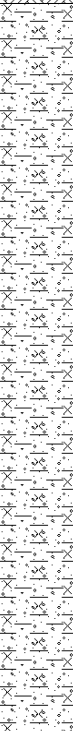
Length:
2.50m

Width:
0.50m

Depth:
3.00m

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
HSV - Hand Shear Vane Reading

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP15 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 05/09/2023		End Date: 05/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 442186.48 295862.47			Elevation (m AOD): 118.32		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type	Depth		
Grass over dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse quartzite, chert and sandstone.			0.30	118.02	D	0.50	HSV=84.6kPa	
Firm to stiff, orangish brown, slightly sandy, slightly gravelly, silty CLAY. Gravel comprises sub-angular to rounded, fine to coarse quartzite, chert, sandstone, rare coal and chalk. Rare angular cobbles of chert. OADBY MEMBER						0.70		
						1.00		
						1.00		
Becoming stiff from 2.00m bgl.					D	2.00	HSV=125.3kPa	
End of Trial Pit		3.00	115.32					
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.					Dimensions: Width: 0.50m Length: 2.50m Depth: 3.00m		Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading	
Stability: Stable								

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP16 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 05/09/2023		End Date: 05/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 442114.93 295748.69			Elevation (m AOD): 120.02		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type	Depth		
Grass over dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse quartzite, chert and sandstone. Orangish brown, slightly clayey, gravelly SAND. Gravel comprises sub-angular to rounded, fine to coarse sandstone and quartzite. OADBY MEMBER			0.20	119.82	ES	0.50 0.60		
Firm, orangish brown and reddish brown, sandy, slightly gravelly, silty CLAY. Gravel comprises sub-angular to rounded, fine to coarse chert, quartzite, rare coal, chalk and sandstone. OADBY MEMBER			0.90	119.12	D	1.00 1.50 2.00	HSV=54.3kPa HSV=70kPa	
Reddish brown, clayey, slightly gravelly SAND. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and sandstone. WOLSTON SAND AND GRAVEL DEPOSITS			3.00	117.02				
End of Trial Pit			3.50	116.52				
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.					Dimensions:		Key:	
					Length: 2.50m Width: 0.50m Depth: 3.50m		B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading	
Stability: Stable								

Project:	Land North of Normandy Way	Project No. 28047	Start Date: 05/09/2023	End Date: 05/09/2023	Plant Used: 360 Excavator
Location:	Hinckley, Leicestershire	Logged By: JM			
Client:	Richborough Estates Ltd	Approved By: DT	Easting and Northing Co-ordinates: 442067.46 295669.54		Elevation (m AOD): 121.19

Strata Description	Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
				Type	Depth		
Grass over dark brown, slightly sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse quartzite, chert and sandstone.							
Firm to stiff, greyish brown, slightly sandy, gravelly, silty CLAY. Gravel comprises sub-angular to rounded, fine to coarse, quartzite, chert, sandstone and siltstone. Rare cobbles of sandstone and chert. Pockets of orangish brown sand. OADBY MEMBER		0.40	120.79	ES	0.60		
				D	1.00 1.00	HSV=66.3kPa	
					1.50	HSV=79.3kPa	
					2.00	HSV=114kPa	
End of Trial Pit		3.00	118.19				

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was not encountered.
Visual or olfactory evidence of contamination was not observed.

Stability: Stable

Dimensions:

Length:
2.50m

Width:
0.50m

Depth:
3.00m

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
HSV - Hand Shear Vane Reading

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP18 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 05/09/2023		End Date: 05/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 442019.48 295787.94			Elevation (m AOD): 120.40		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type Depth			
Grass over dark brown, sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to rounded, fine to coarse quartzite, chert and sandstone. Orangish brown, slightly clayey, gravelly SAND. Gravel comprises sub-angular to rounded, fine to coarse sandstone, chert and quartzite. OADBY MEMBER			0.20	120.20			HSV=81.3kPa	
Firm, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel comprises sub-angular to sub-rounded, fine to coarse sandstone, coal and quartzite. OADBY MEMBER			0.70	119.70	D 0.80 D 1.00 1.00			
Lens of greyish brown, clayey SAND from 1.30m -1.80m bgl.								
					2.00		HSV=74.6kPa	
					2.50		HSV=86kPa	
End of Trial Pit			3.00	117.40				
								
								
								
								
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.					Dimensions: Length: 3.00m Width: 0.50m Depth: 3.00m		Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading	
Stability: Stable								

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP19 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047	Start Date: 05/09/2023		End Date: 05/09/2023	Plant Used: 360 Excavator		
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 441921.60 295757.37			Elevation (m AOD): 115.48		
Client: Richborough Estates Ltd		Approved By: DT						
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)
					Type	Depth		
Grass over dark brown, sandy, silty clay TOPSOIL.			0.20	115.28	ES	0.10	HSV=79.3kPa	
Orangish brown, slightly sandy, gravelly, silty CLAY. Gravel comprises sub-angular to rounded, fine to coarse quartzite, sandstone and chert. OADBY MEMBER			0.75	114.73	D	0.80		
Firm to stiff, grey mottled brown, slightly sandy, slightly gravelly, silty CLAY. Gravel comprises sub-angular to sub-rounded, fine to coarse siltstone. OADBY MEMBER					D	1.00		
					1.00			
					1.50	HSV=98.6kPa		
					2.50	HSV=109.3kPa		
End of Trial Pit			3.00	112.48				

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Project:	Land North of Normandy Way	Project No. 28047	Start Date: 05/09/2023	End Date: 05/09/2023	Plant Used: 360 Excavator
Location:	Hinckley, Leicestershire	Logged By: JM			
Client:	Richborough Estates Ltd	Approved By: DT	Easting and Northing Co-ordinates: 441845.65 295527.59		Elevation (m AOD): 112.57

[illegible]

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was not encountered.
Visual or olfactory evidence of contamination was not observed.
Hole collapsed from 3.10m to 2.70m from side walls.

Stability: Unstable

Dimensions:

Length:
3.00m

Width:
0.50m

Depth:
3.10m

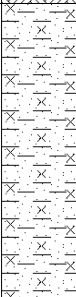
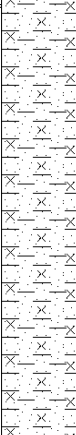
Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
HSV - Hand Shear Vane Reading



TP22
Sheet 1 of 1

Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.	Dimensions: Width: Length:	Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading
Stability: Stable	Depth: 3.00m	

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		TP23 Sheet 1 of 1				
Project: Land North of Normandy Way		Project No. 28047	Start Date: 05/09/2023		End Date: 05/09/2023	Plant Used: 360 Excavator			
Location: Hinckley, Leicestershire		Logged By: JM	Easting and Northing Co-ordinates: 441741.94 295607.46			Elevation (m AOD): 110.77			
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Legend	Depth (m)	Level (m AOD)	Samples		Tests	Groundwater (m)	
					Type		Depth		
Grass over dark brown, sandy, slightly gravelly, silty clay TOPSOIL. Gravel comprises sub-angular to sub-rounded, fine to coarse quartzite and sandstone.			0.30	110.47	ES		0.40	HSV=105.3kPa	
Firm to stiff, light brown, slightly sandy, silty CLAY. OADBY MEMBER					D		1.00 1.00		
Becoming light brownish and light grey from 1.40m bgl.					D		2.00 2.00	HSV=118.6kPa	
End of Trial Pit			3.00	107.77					
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.				Dimensions: Width: 0.50m Length: 2.50m Depth: 3.20m		Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading HSV - Hand Shear Vane Reading			
Stability: Stable									



B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
HSV - Hand Shear Vane Reading



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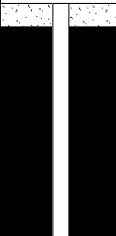
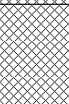
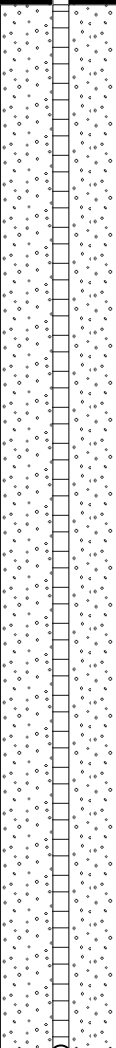
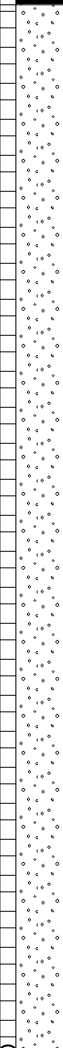
Mewies Engineering Consultants Ltd
The Old Chapel, Station Road
Hugglescote, Leicestershire
LE67 2GB

Exploratory
Hole ID:

WS01

Sheet 1 of 1

Project:	Land North of Normandy Way	Project No.	28047	Start Date:	04/09/2023	End Date:	04/09/2023	Plant Used:	Premier 110
Location:	Hinckley, Leicestershire	Logged By:	DW	Easting and Northing Co-ordinates:		Elevation (m AOD):		110.83	
Client:	Richborough Estates Ltd	Approved By:	DT						

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill	
				Type	Depth				
MADE GROUND: Brown, silty, slightly sandy, clay topsoil with roots and gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.	0.30	110.53		ES	0.15	N60=13			
MADE GROUND: Firm, brown, silty, slightly sandy clay with gravel sized fragments of sub-angular to sub-rounded, fine to medium ceramic and quartzite.				ES	0.50				
Firm, brown mottled blueish grey, silty CLAY. BOSWORTH CLAY MEMBER	0.75	110.08		D	0.90				
Firm, brown mottled blueish grey, silty, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium siltstone. OADBY MEMBER	1.00	109.83							
Firm, brown mottled blueish grey, silty, sandy CLAY. OADBY MEMBER	1.10	109.73		D	3.90	N60=13	2.50 		
						N60=13			
						N60=22			
						N60=27			
						N60=44			
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
Borehole terminated at 5.45m	5.45	105.38							

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was encountered at 2.50m bgl.
Visual or olfactory evidence of contamination was not observed.

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
G - Gas Monitoring Point



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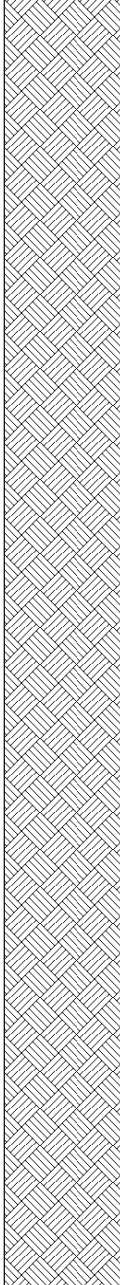
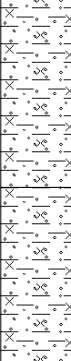
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The Old Chapel, Station Road
Hugglescote, Leicestershire
LE67 2GB

Exploratory
Hole ID:

WS02

Sheet 1 of 1

Project:	Land North of Normandy Way	Project No.	28047	Start Date:	04/09/2023	End Date:	04/09/2023	Plant Used:	Premier 110
Location:	Hinckley, Leicestershire	Logged By:	DW	Easting and Northing Co-ordinates:		Elevation (m AOD):		116.20	
Client:	Richborough Estates Ltd	Approved By:	DT						

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill		
				Type	Depth					
Brown, silty, slightly sandy, clay TOPSOIL with gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.	0.30	115.90		ES	0.10	N60=17				
Firm, reddish brown, silty, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium sandstone, quartzite and flint. OADBY MEMBER				D	0.70					
Firm to stiff, grey and reddish brown, silty, slightly gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium sandstone. OADBY MEMBER	1.10	115.10		D	2.40					
<i>Becoming sandy from 1.80m bgl.</i>										
Medium dense, reddish brown, very silty, fine to medium SAND. WOLSTON SAND AND GRAVEL DEPOSITS										
Reddish brown, clayey SILT. OADBY MEMBER	2.70	113.50		D	3.10				N60=18	
Firm to stiff, grey, silty CLAY. OADBY MEMBER	2.90	113.30								
<i>Becoming stiff from 4.00m bgl.</i>										
	5.45	110.75							N60=23	
Borehole terminated at 5.45m						N60=40				

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was not encountered.
Visual or olfactory evidence of contamination was not observed.

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
G - Gas Monitoring Point



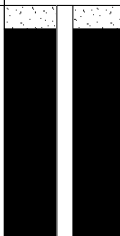
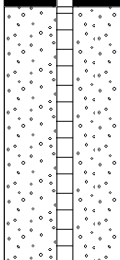
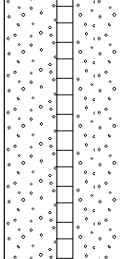
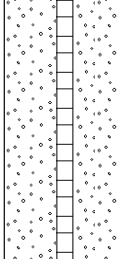
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The Old Chapel, Station Road
Hugglescote, Leicestershire
LE67 2GB

Exploratory
Hole ID:

WS03

Sheet 1 of 1

Project:	Land North of Normandy Way	Project No. 28047		Start Date: 04/09/2023		End Date: 04/09/2023		Plant Used: Premier 110		
Location:	Hinckley, Leicestershire	Logged By: DW		Easting and Northing Co-ordinates: 442141.96 295629.43				Elevation (m AOD): 120.17		
Client:	Richborough Estates Ltd	Approved By: DT								
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill	
					Type	Depth				
Brown, silty, slightly sandy, clay TOPSOIL with gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.		0.30	119.87		ES	0.20	N60=19			
Firm to stiff, brown, silty, slightly sandy, gravelly CLAY. Gravel comprises angular to sub-rounded, fine to medium flint and quartzite. OADBY MEMBER					D	0.60				
Firm to stiff, brown and grey, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium chalk and quartzite. OADBY MEMBER		1.00	119.17		D	1.40	N60=19			
Reddish brown, silty, slightly gravelly, fine to medium SAND. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite. OADBY MEMBER		1.30	118.87							
Firm to stiff, grey, silty, gravelly CLAY. Gravel comprises sub-rounded, fine to medium chalk and quartzite. OADBY MEMBER		1.50	118.67							
Stiff, grey, silty, slightly gravelly CLAY. Gravel comprises sub-rounded, fine to medium quartzite and chalk. OADBY MEMBER		2.90	117.27		D	3.00	N60=31			
							N60=40			
							N60=37			
Borehole terminated at 5.45m		5.45	114.72					5.45		

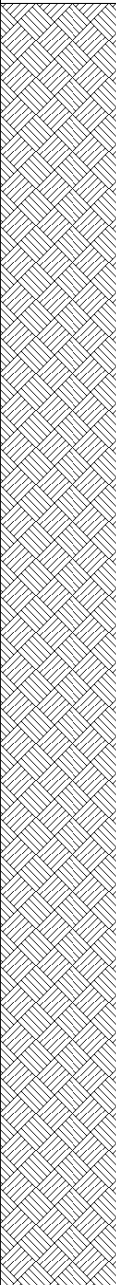
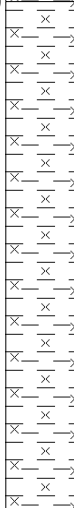
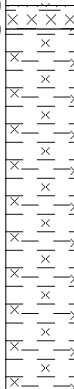
Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was encountered at 5.45m bgl.
Visual or olfactory evidence of contamination was not observed.

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
G - Gas Monitoring Point

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		WS04 Sheet 1 of 1				
Project: Land North of Normandy Way		Project No. 28047		Start Date: 04/09/2023		End Date: 04/09/2023		Plant Used: Premier 110	
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 442070.15 295548.49				Elevation (m AOD): 119.99	
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, silty, slightly sandy, clay TOPSOIL with gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.		0.30	119.69		ES	0.15	N60=14		
Firm to stiff, brown becoming grey, silty, gravelly CLAY. Gravel comprises angular to sub-rounded, fine to medium chalk, siltstone, quartzite, flint and ironstone. OADBY MEMBER					D	0.75			
					D	1.50			
Becoming stiff from 2.00m bgl.					D	4.00	N60=29		
							N60=30		
							N60=34		
Stiff, grey, silty, slightly gravelly CLAY. Gravel comprises sub-rounded, fine quartzite and chalk. OADBY MEMBER		3.70	116.29				N60=50		
Borehole terminated at 5.45m		5.45	114.54						
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.							Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point		

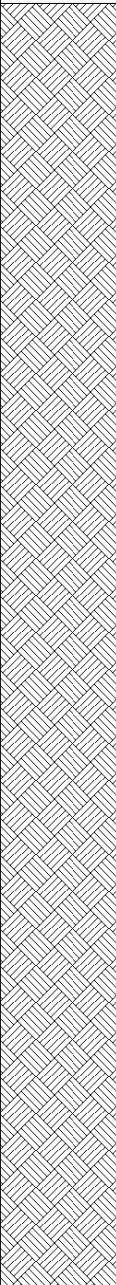
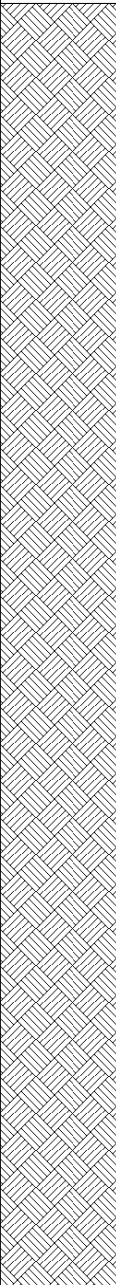
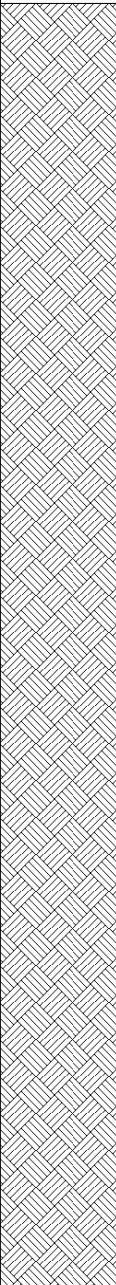
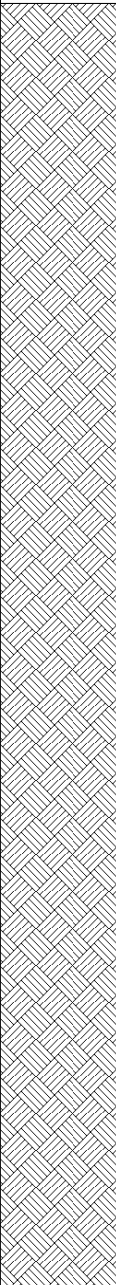
Project:	Land North of Normandy Way	Project No. 28047		Start Date: 04/09/2023		End Date: 04/09/2023		Plant Used: Premier 110	
Location:	Hinckley, Leicestershire	Logged By: DW		Easting and Northing Co-ordinates: 442011.64 295466.54				Elevation (m AOD): 115.80	
Client:	Richborough Estates Ltd	Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, silty, slightly sandy, clay TOPSOIL with gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.		0.30	115.50		ES	0.20	N60=16		
Firm, brown mottled grey, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-rounded, fine to medium siltstone, flint and quartzite. OADBY MEMBER					D	0.60			
Firm to stiff, brown mottled grey, silty, slightly gravelly CLAY. Gravel comprises sub-rounded, fine to medium siltstone. OADBY MEMBER		1.00	114.80		D	2.00	N60=16		
Firm to stiff, brown mottled grey, silty CLAY. OADBY MEMBER		1.60	114.20						
Becoming stiff from 3.00m bgl.					D	2.00	N60=21		
Brown, clayey SILT. OADBY MEMBER		3.80	112.00		D	2.00	N60=25		
Stiff, brown mottled grey, silty CLAY. OADBY MEMBER		3.90	111.90						
Borehole terminated at 5.45m		5.45	110.35		D	2.00	N60=32		

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was encountered at 4.1m bgl.
Visual or olfactory evidence of contamination was not observed.

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
G - Gas Monitoring Point

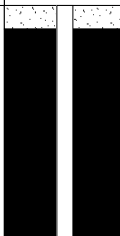
Project:	Land North of Normandy Way	Project No. 28047		Start Date: 04/09/2023		End Date: 04/09/2023		Plant Used: Premier 110	
Location:	Hinckley, Leicestershire	Logged By: DW		Easting and Northing Co-ordinates: 442230.74 295784.33				Elevation (m AOD): 116.95	
Client:	Richborough Estates Ltd	Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, silty, slightly sandy, clay TOPSOIL with gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.		0.35	116.60		ES	0.10	N60=21	3.40 	
Firm, grey mottled brown, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium ironstone flint and quartzite. OADBY MEMBER					D	1.00			
<i>Becoming stiff from 1.00m bgl.</i>									
		1.70	115.25		D	2.70	N60=21	3.40 	
Stiff, reddish brown, silty, gravelly CLAY. Gravel comprises angular to sub-rounded, fine to medium quartzite, flint, sandstone and siltstone. OADBY MEMBER									
Stiff, reddish brown, silty, slightly sandy, gravelly CLAY. Gravel comprises angular to sub-rounded, fine quartzite, flint, sandstone and siltstone. OADBY MEMBER		3.00	113.95		D	2.70	N60=25	3.40 	
		5.20	111.75				N60=22		
Reddish brown, silty, fine to coarse SAND. WOLSTON SAND AND GRAVEL DEPOSITS									
Borehole terminated at 5.45m		5.45	111.50				N60=29	3.40 	

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was encountered at 3.40m bgl.
Visual or olfactory evidence of contamination was not observed.

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
G - Gas Monitoring Point

 MEC Development Technical Consultants		Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB		Exploratory Hole ID:		WS07 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047		Start Date: 05/09/2023		End Date: 05/09/2023		Plant Used: Premier 110	
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 441796.65 295441.04				Elevation (m AOD): 107.61	
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, silty, slightly sandy, clay TOPSOIL with gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.		0.35	107.26		ES	0.15	N60=16		
Firm, brown and grey, silty CLAY. BOSWORTH CLAY MEMBER									
Firm, orangish brown, silty, sandy, gravelly CLAY. Gravel comprises angular to sub-rounded, fine to medium quartzite and flint. OADBY MEMBER		0.75 0.85	106.86 106.76		D	0.80			
Firm to stiff, brown mottled grey, silty CLAY. OADBY MEMBER									
			</						



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Hugglescote, Leicestershire
LE67 2GB

Exploratory
Hole ID:

WS08

Sheet 1 of 1

Project:	Land North of Normandy Way	Project No.	28047	Start Date:	05/09/2023	End Date:	05/09/2023	Plant Used:	Premier 110
Location:	Hinckley, Leicestershire	Logged By:	DW	Easting and Northing Co-ordinates:		Elevation (m AOD):			
Client:	Richborough Estates Ltd	Approved By:	DT						

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
				Type	Depth			
Brown, silty, slightly sandy, clay TOPSOIL with gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.	0.35	106.56		ES	0.20	N60=10		
Soft to firm, grey mottled brown, silty CLAY. BOSWORTH CLAY MEMBER				ES	0.50			
Soft to firm, grey mottled brown, silty, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint. OADBY MEMBER	0.85	106.06		D	1.20			
Firm, grey mottled brown, slightly gravelly, silty CLAY. Gravel comprises sub-rounded, fine siltstone. OADBY MEMBER	0.95	105.96		D	1.40			
Firm to stiff, brown and grey, silty CLAY. OADBY MEMBER	1.80	105.10		D	3.20	N60=17		
Becoming brown from 3.00m bgl.						N60=19		
Becoming stiff from 4.00m bgl.						N60=32		
Pockets of soft, brown, silty CLAY from 4.55m to 4.60m bgl.						N60=40		
Borehole terminated at 5.45m	5.45	101.46						

Remarks:

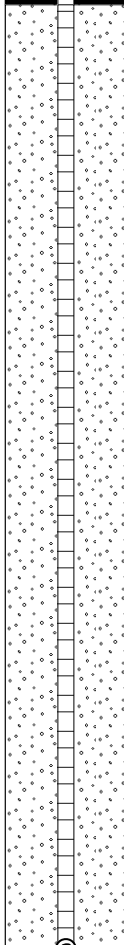
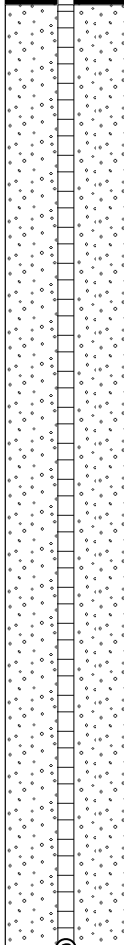
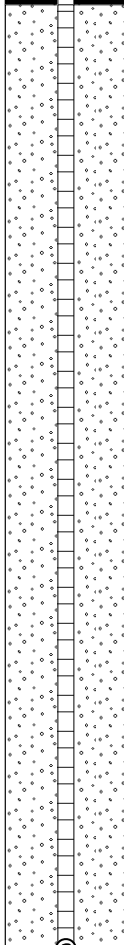
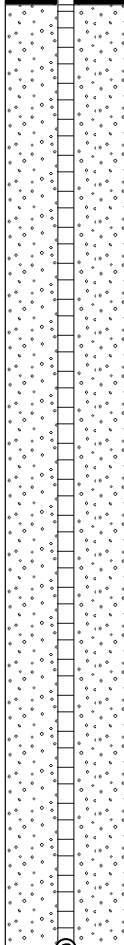
Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was not encountered.
Visual or olfactory evidence of contamination was not observed.

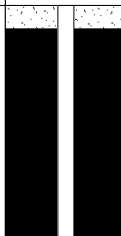
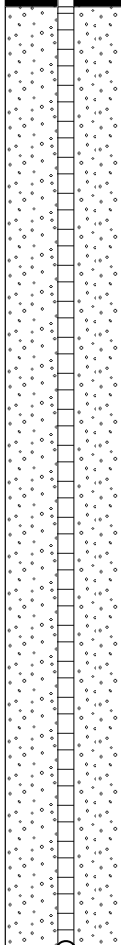
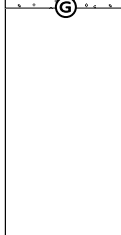
Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
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B - Bulk Sample
D - Disturbed Sample
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N60 - Corrected SPT N Value
G - Gas Monitoring Point

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		WS10 Sheet 1 of 1				
Project: Land North of Normandy Way		Project No. 28047		Start Date: 05/09/2023		End Date: 05/09/2023		Plant Used: Premier 110	
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 442360.75 295926.90				Elevation (m AOD): 110.67	
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, silty, slightly gravelly sand TOPSOIL with gravel sized fragments of sub-rounded, fine to medium quartzite.		0.30	110.37		ES	0.10	N60=8		
Brown and light brown, silty, slightly clayey, slightly gravelly, fine to coarse SAND. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint. WOLSTON SAND AND GRAVEL DEPOSITS					D	1.00			
Soft to firm, reddish brown, silty, sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium, quartzite, flint, siltstone, mudstone and charcoal. OADBY MEMBER		1.20	109.47		D	1.60	N60=12		
Becoming firm from 2.00m bgl.									
							N60=22		
Becoming firm to stiff from 3.00m bgl.									
							N60=21		
Stiff, brown, silty CLAY. OADBY MEMBER		3.80	106.87						
Borehole terminated at 5.00m		5.00	105.67				N60=28		
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.							Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point		

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		WS11 Sheet 1 of 1				
Project: Land North of Normandy Way		Project No. 28047		Start Date: 05/09/2023		End Date: 05/09/2023		Plant Used: Premier 110	
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 442284.78 295936.75				Elevation (m AOD): 113.51	
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, silty, clayey, gravelly sand TOPSOIL with gravel sized fragments of angular to sub-rounded, fine to medium quartzite and flint.		0.30	113.21		D	0.20	N60=13		
Firm, reddish brown, silty, sandy, gravelly CLAY. Gravel comprises angular to sub-rounded, fine to medium sandstone, quartzite, siltstone and flint with charcoal fragments. OADBY MEMBER					D	0.80			
		2.20	111.31		D	2.00	N60=19		
Firm, brown, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-rounded, fine to medium quartzite, flint and siltstone. OADBY MEMBER					D	3.30	N60=14		
							N60=30		
Becoming very stiff from 4.00m bgl.									
		5.00	108.51				N60=37		
Borehole terminated at 5.00m									
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.							Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point		



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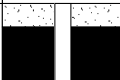
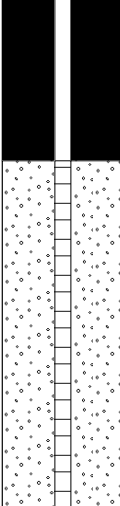
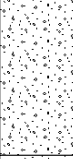
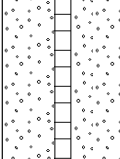
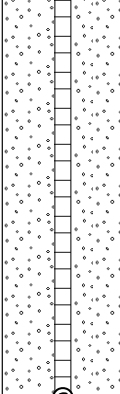
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The Old Chapel, Station Road
Hugglescote, Leicestershire
LE67 2GB

Exploratory
Hole ID:

WS12

Sheet 1 of 1

Project:	Land North of Normandy Way	Project No.	28047	Start Date:	05/09/2023	End Date:	05/09/2023	Plant Used:	Premier 110
Location:	Hinckley, Leicestershire	Logged By:	DW	Easting and Northing Co-ordinates:		Elevation (m AOD):		120.82	
Client:	Richborough Estates Ltd	Approved By:	DT						

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
				Type	Depth			
Brown, silty, slightly clayey, gravelly sand TOPSOIL with gravel sized fragments of sub-rounded, fine to medium quartzite.	0.30	120.52		ES	0.20			
Firm, reddish brown, silty, slightly sandy, gravelly CLAY. Gravel comprises angular to sub-rounded, fine to medium siltstone, quartzite and charcoal fragments. OADBY MEMBER				D	1.10	N60=10		
Soft, reddish brown, very silty, sandy CLAY. OADBY MEMBER	2.50	118.32		D	2.80	N60=13		
Medium dense, reddish brown, slightly gravelly, fine to coarse SAND with charcoal fragments. Gravel comprises sub-rounded, fine quartzite. WOLSTON SAND AND GRAVEL DEPOSITS	2.60	118.22				N60=14		
Medium dense, reddish brown, fine to coarse SAND. WOLSTON SAND AND GRAVEL DEPOSITS	3.30	117.52				N60=18		
Borehole terminated at 5.00m	5.00	115.82				N60=21		

Remarks:

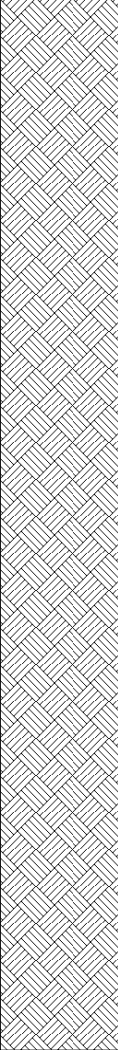
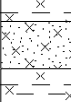
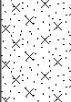
Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was not encountered.
Visual or olfactory evidence of contamination was not observed.

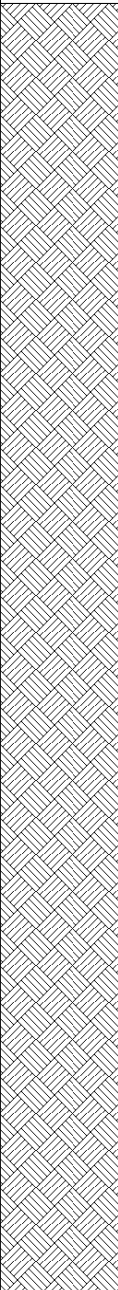
Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
G - Gas Monitoring Point



B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
G - Gas Monitoring Point

MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		WS14 Sheet 1 of 1									
Project: Land North of Normandy Way		Project No. 28047		Start Date: 06/09/2023		End Date: 06/09/2023		Plant Used: Premier 110						
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 441953.25 295584.93				Elevation (m AOD): 113.50						
Client: Richborough Estates Ltd		Approved By: DT												
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill					
					Type	Depth								
MADE GROUND: Brown, silty, sand topsoil with roots and gravel sized fragments of angular, fine to coarse concrete, and brick.		0.45	113.05		ES	0.30	N60=5	1.20 ▼						
Firm, grey mottled brown, silty, slightly sandy, CLAY. OADBY MEMBER					ES	0.50								
		D	1.00											
Loose grey and brown, slightly clayey, very silty SAND. OADBY MEMBER		1.20	112.30		D	1.80	N60=21							
Soft brownish, grey, silty CLAY. OADBY MEMBER										1.40	112.10			
Reddish brown, very silty, fine to medium SAND. OADBY MEMBER		1.90	111.60		D	3.00								
Stiff brownish, grey, silty CLAY. OADBY MEMBER										2.10	111.40			
Medium dense reddish brown, very silty, fine SAND. WOLSTON SAND AND GRAVEL DEPOSITS		2.90	110.60		D	3.00	N60=24							
							N60=31							
Very stiff, grey, silty CLAY. OADBY MEMBER		4.25	109.25		D	3.00	N60=31							
Borehole terminated at 4.45m		4.45	109.05											
						</								

 MEC Development Technical Consultants		Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB		Exploratory Hole ID:		WS15 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047		Start Date: 06/09/2023		End Date: 06/09/2023		Plant Used: Premier 110	
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 441939.65 295512.06				Elevation (m AOD): 112.66	
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, silty, slightly gravelly, clay TOPSOIL with gravel sized fragments of sub-rounded, fine to medium quartzite and flint.		0.30	112.36		ES	0.15	N60=6		
Firm, brown mottled grey, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-rounded, fine to medium siltstone. OADBY MEMBER					ES	0.40			
Soft to firm, reddish brown, silty, sandy CLAY. OADBY MEMBER		0.90	111.76		D	1.80	N60=16		
Soft, brown mottled grey, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-rounded, fine to medium siltstone. OADBY MEMBER		0.95	111.71						
Soft, reddish brown, silty, sandy CLAY. OADBY MEMBER		1.25	111.41		D	4.00	N60=25		
Firm to stiff, brown mottled grey, silty CLAY with pockets of silty, sandy clay. OADBY MEMBER		1.60	111.06						
Firm to stiff, brown, silty CLAY. OADBY MEMBER		2.95	109.71		D	4.00	N60=35		
Stiff, brown, silty CLAY. OADBY MEMBER		3.30	109.36						
Becoming stiff from 4.00m bgl.					D	4.00	N60=35		
Becoming very stiff from 5.00m bgl.									
Borehole terminated at 5.45m		5.45	107.21						
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.							Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point		



MEC
Development Technical
Consultants

Mewies Engineering Consultants Ltd
The Old Chapel, Station Road
Hugglescote, Leicestershire
LE67 2GB

Exploratory
Hole ID:

WS16

Sheet 1 of 1

Project:	Land North of Normandy Way	Project No.	28047	Start Date:	06/09/2023	End Date:	06/09/2023	Plant Used:	Premier 110
Location:	Hinckley, Leicestershire	Logged By:	DW	Easting and Northing Co-ordinates:		Elevation (m AOD):		115.66	
Client:	Richborough Estates Ltd	Approved By:	DT						

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
				Type	Depth			
Brown, silty, slightly clayey, slightly gravelly, fine to medium sand TOPSOIL with gravel sized fragments of sub-rounded, fine to medium quartzite.	0.35	115.31		D	0.80	N60=8		
Brown, silty, sandy, slightly gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint. OADBY MEMBER	0.60	115.06						
Reddish brown, silty, clayey SAND. OADBY MEMBER	1.00	114.66						
Soft to firm, orangish and light brown, silty, sandy CLAY. OADBY MEMBER	1.50	114.16						
Firm, grey, silty CLAY. OADBY MEMBER				D	2.10	N60=6		
Becoming soft from 2.00m bgl.								
Becoming firm from 3.00m bgl.				D	2.70	N60=13		
						N60=12		
						N60=16		
Borehole terminated at 5.00m	5.00	110.66						

Remarks:

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was not encountered.
Visual or olfactory evidence of contamination was not observed.

Key:

B - Bulk Sample
D - Disturbed Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
G - Gas Monitoring Point



Exploratory
Hole ID:

Sheet 1 of 1

Project No.
28047

Start Date:
06/09/2023

End Date:
06/09/2023

Plant Used:
Premier 110

Location: Hinckley, Leicestershire

Logged By:
DW

Easting and Northing Co-ordinates:

Elevation (m AOD):	
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Client: Richborough Estates Ltd

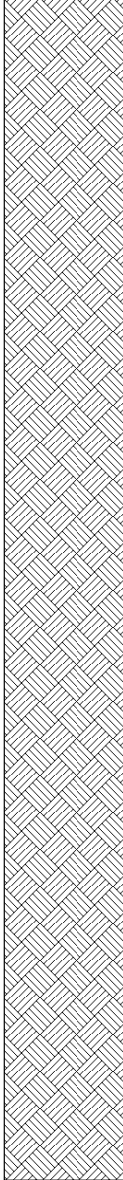
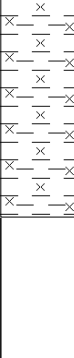
Approved By:
DT

441772.44

295545.60

107.69

Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was encountered at 4.30m bgl. Visual or olfactory evidence of contamination was not observed.	Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point
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 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		WS18 Sheet 1 of 1				
Project: Land North of Normandy Way		Project No. 28047	Start Date: 06/09/2023		End Date: 06/09/2023	Plant Used: Premier 110			
Location: Hinckley, Leicestershire		Logged By: DW	Easting and Northing Co-ordinates: 441849.37 295681.98			Elevation (m AOD): 110.64			
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, silty, sandy slightly gravelly, clay TOPSOIL with roots and gravel sized fragments of sub-angular to sub-rounded, fine to medium quartzite.		0.35	110.29		ES	0.10	N60=13		
Firm, grey and brown, silty CLAY. OADBY MEMBER									
Firm, brown and grey, silty, slightly gravelly CLAY. Gravel comprises sub-rounded, fine siltstone. OADBY MEMBER		1.00	109.64		D	0.90	N60=17		
Firm to stiff, brown mottled grey, silty CLAY. OADBY MEMBER									
Firm, brown, silty CLAY. OADBY MEMBER		2.80	107.84		D	2.60	N60=14		
Becoming stiff from 4.00m bgl.							N60=23		
Borehole terminated at 5.00m		5.00	105.64				N60=40		
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed.							Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point		



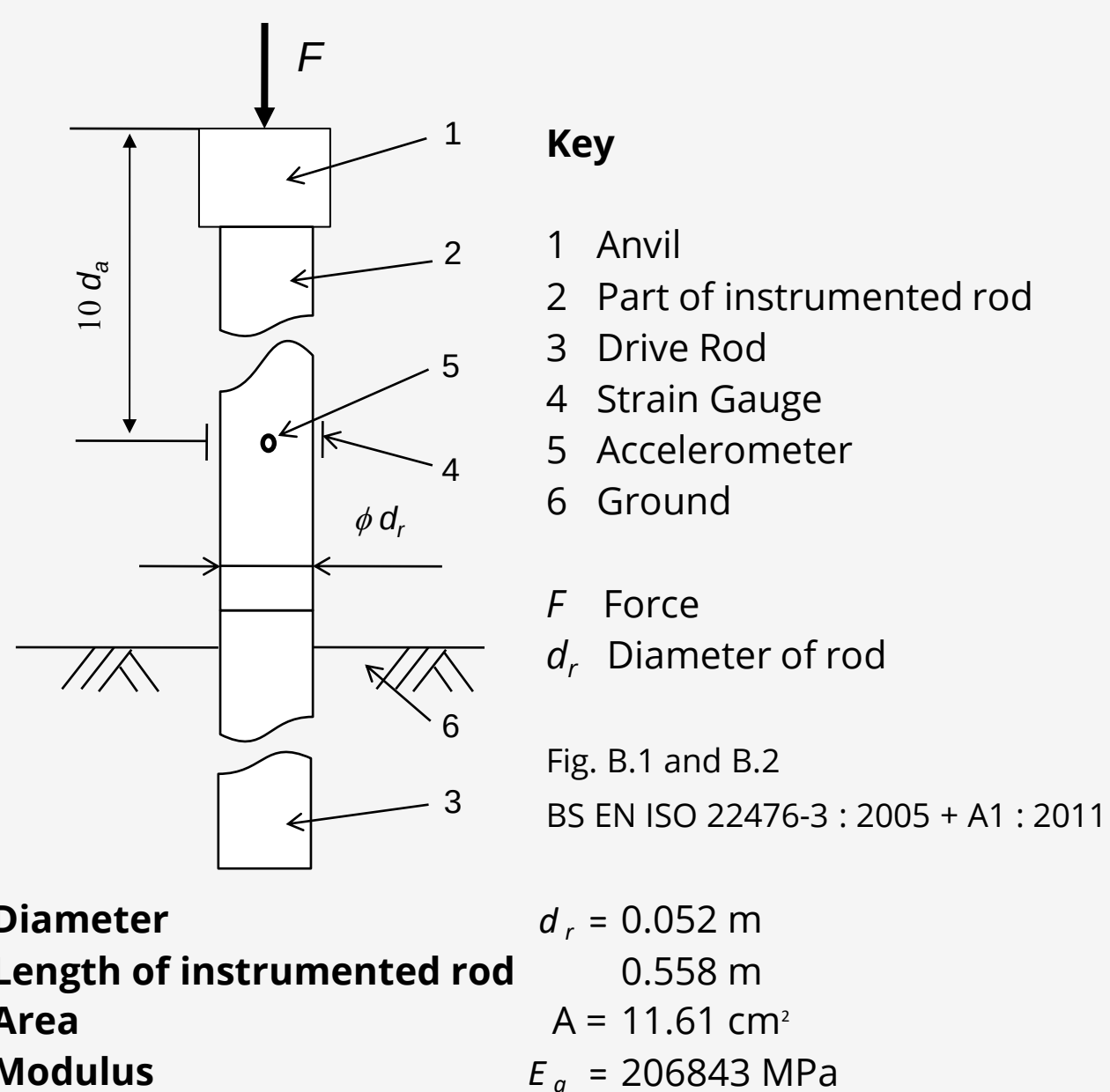
SPT Calibration Report

Hammer Energy Measurement Report

Type of Hammer PREMIER
Test No EQU2023_122
Client MEC

Test Depth (m) 9.70
Mass of hammer $m = 63.5\text{kg}$
Falling height $h = 0.76\text{m}$
 $E_{\text{theor}} = m \times g \times h = 473\text{J}$

Characteristics of the instrumented rod



DATE OF TEST VALID UNTIL HAMMER ID

17/07/2023

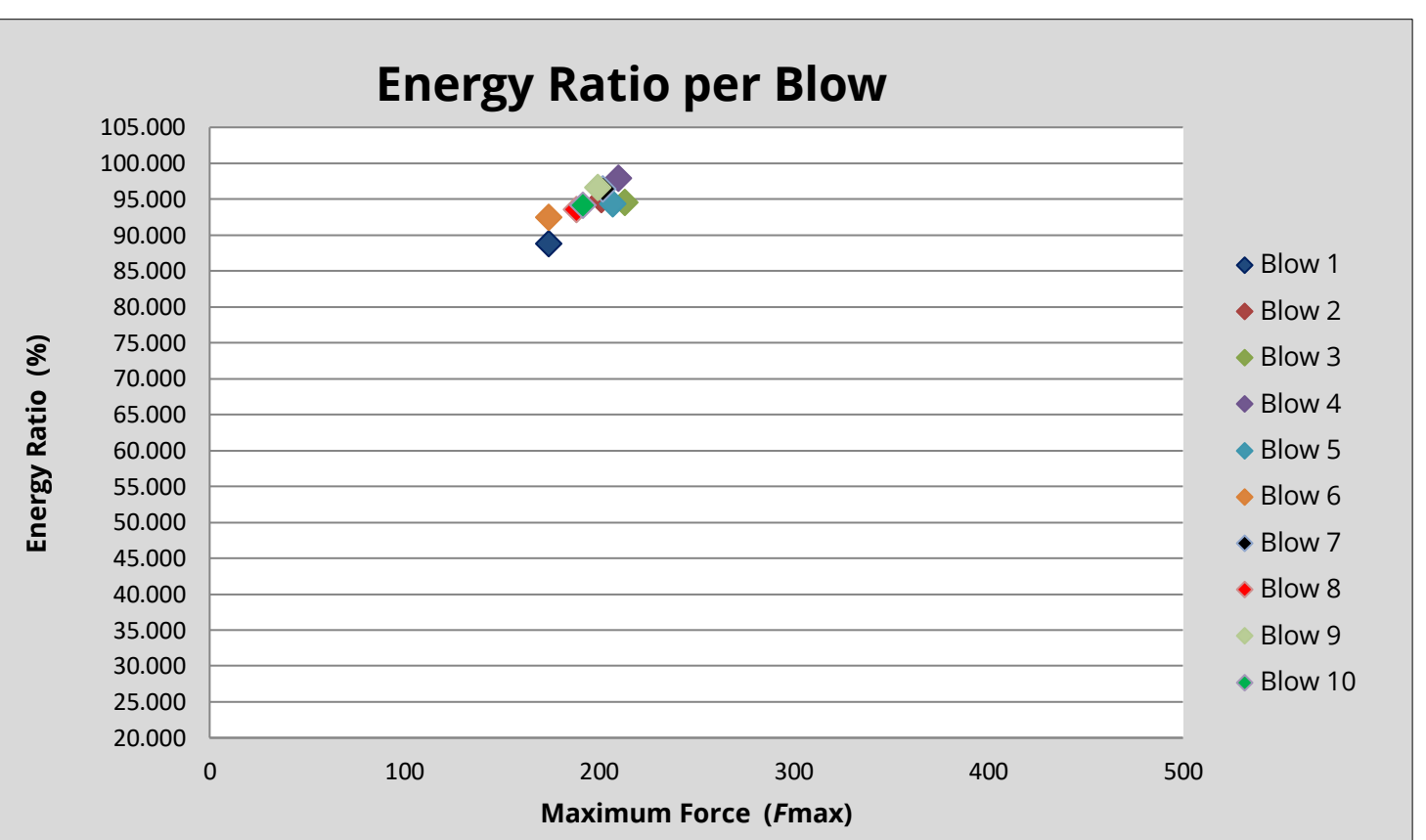
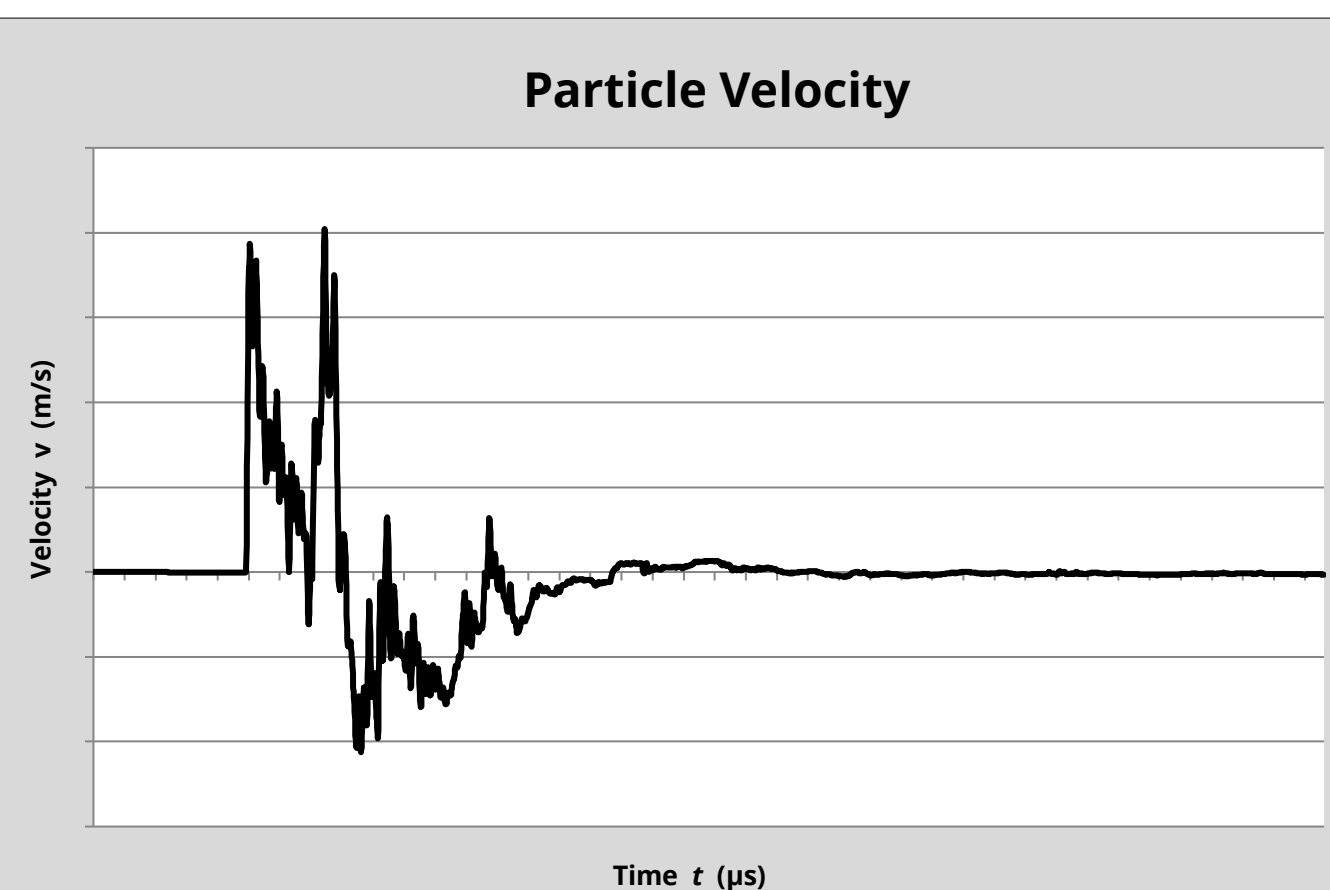
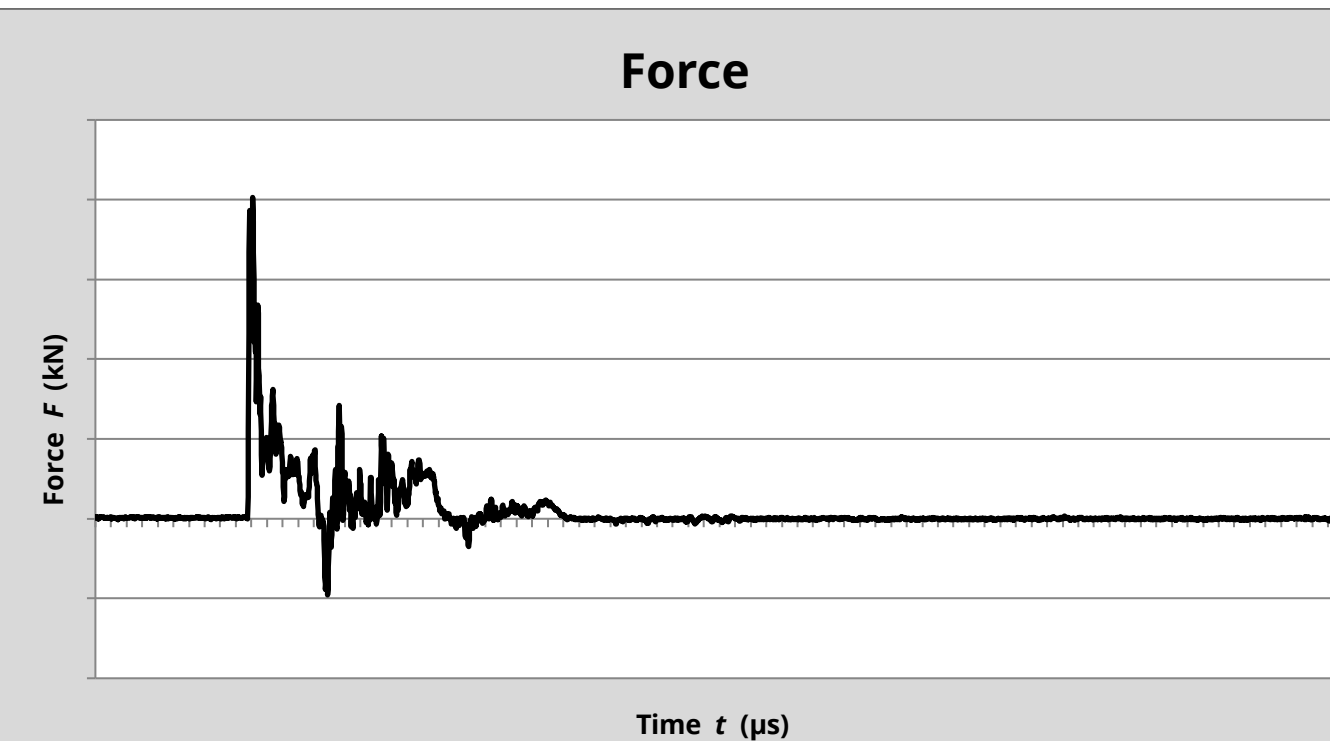
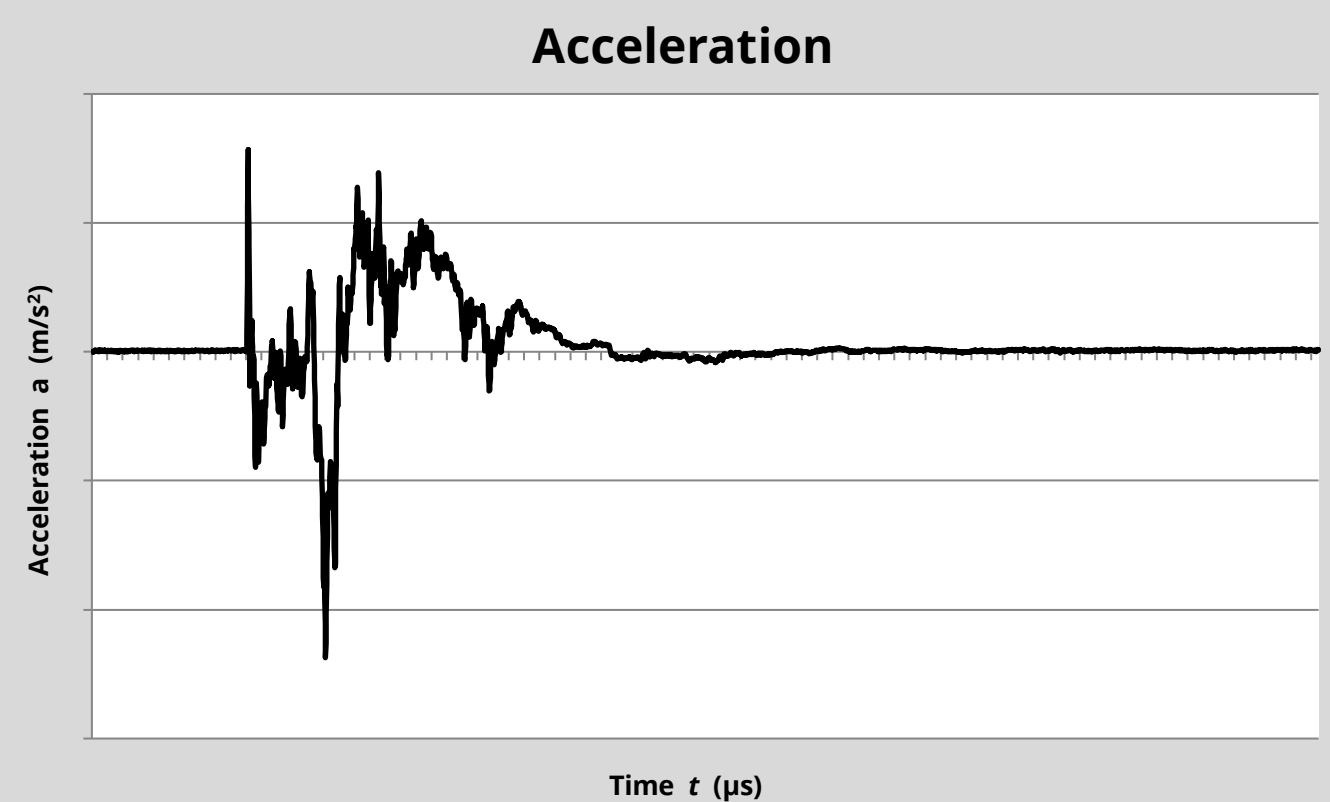
16/07/2024

110 111

$E_{\text{meas}} = 0.441\text{ kN-m}$

$E_{\text{theor}} = 0.473\text{ kN-m}$

Comments



Energy Ratio (Er) = $\frac{E_{\text{meas}}}{E_{\text{theor}}}$

93.16%

Equipe SPT Analyzer Operator

KS

Certificate prepared by

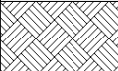
[Signature]

Certificate checked by

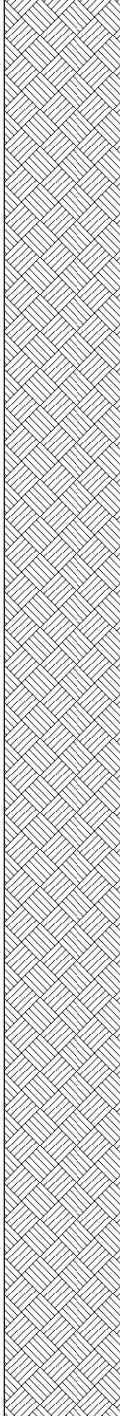
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Certificate date

01/08/2023

 MEC Development Technical Consultants		Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB		Exploratory Hole ID:		BH01 Sheet 1 of 1							
Project: Land North of Normandy Way		Project No. 28047		Start Date: 11/09/2023		End Date: 11/09/2023		Plant Used: Cable Percussion Rig					
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 441795.20 295526.32				Elevation (m AOD): 105.62					
Client: Richborough Estates Ltd		Approved By: DT											
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill				
					Type	Depth							
Brown, slightly clayey, silty, slightly gravelly, sand TOPSOIL. Gravel is sub-rounded, fine to medium quartzite and flint.		0.50	105.12		B	0.10	N60=3						
Firm locally very soft and soft, brown mottled grey and light brown, silty, slightly sandy, gravelly CLAY. Gravel is sub-rounded, fine to medium quartzite and flint. BOSWORTH CLAY MEMBER					D	0.50							
					D	1.20							
					B	1.25							
Firm, brown, silty CLAY. OADBY MEMBER		2.00	103.62		U	2.00	Ublow= 22						
					D	3.00	N60=8						
Becoming very stiff from 4.00m bgl.					U	4.00	Ublow= 45						
					D	5.00	N60=16						
Becoming firm to stiff from 5.00m bgl					B	6.00	Ublow= 72						
					U	6.50							
					D	8.00	N60=21						
Becoming stiff from 8.00m bgl.					U	9.50	Ublow= 83						
Becoming very stiff from 9.50m bgl.					D	10.00							
Borehole terminated at 10.00m					10.00	95.62							
Remarks:					Key:								
Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.					B - Bulk Sample								
Descriptions based on visual inspection by a Geo-environmental engineer.					D - Disturbed Sample								
Groundwater was not encountered.					ES - Environmental Sample								
Visual or olfactory evidence of contamination was not observed.					W - Water Sample								
Co-ordinates and elevations estimated from the topographical survey.					PID - PID Reading								
		N60 - Corrected SPT N Value											
		G - Gas Monitoring Point											

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB			Exploratory Hole ID:		BH02 Sheet 1 of 1				
Project: Land North of Normandy Way		Project No. 28047		Start Date: 11/09/2023		End Date: 11/09/2023		Plant Used: Cable Percussion Rig	
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 441928.90 295669.51				Elevation (m AOD): 114.14	
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
Brown, slightly clayey, silty, slightly gravelly, sand TOPSOIL. Gravel is sub-rounded, fine to medium quartzite and flint.		0.50	113.64		B	0.10	Ublow= 25	1.70 	
Soft to firm, brown mottled grey and light brown, silty, slightly sandy, slightly gravelly CLAY. Gravel is sub-rounded, fine to medium siltstone. OADBY MEMBER					D	0.50			
					B	0.70			
Soft, brown and grey, silty, slightly gravelly CLAY. Gravel is sub-rounded, fine siltstone. OADBY MEMBER		1.50	112.64		UF	1.20	N60=5		
			D		1.70				
			D		2.00				
Firm, reddish brown and grey, very silty CLAY. OADBY MEMBER		2.50	111.64		D	2.50	N60=10		
			B		3.00				
			D		3.20				
Firm to stiff, reddish brown and buff brown, silty CLAY. OADBY MEMBER		3.50	110.64		D	3.50	Ublow= 45		
			U		4.00				
			D		4.50				
Becoming firm from 5.00m bgl.					D	5.00	N60=13		
					D	6.00			
					U	6.50			
Becoming stiff from 6.50m bgl.					D	7.00	Ublow= 59		
					D	8.00			
					D	9.00			
Becoming firm to stiff from 8.00m bgl.					U	9.50	Ublow= 80		
					D	10.00			
Borehole terminated at 10.00m					10.00	104.14			
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was encountered at 1.70m and rose to 1.60m bgl after 20 minutes. Visual or olfactory evidence of contamination was not observed. Co-ordinates and elevations estimated from the topographical survey.							Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point		

 MEC Development Technical Consultants		Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB		Exploratory Hole ID:		BH03 Sheet 1 of 2			
Project: Land North of Normandy Way		Project No. 28047		Start Date: 11/09/2023		End Date: 11/09/2023		Plant Used: Cable Percussion Rig	
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 442159.59 295687.55				Elevation (m AOD): 117.46	
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
MADE GROUND: Brown, slightly clayey, silty, slightly gravelly, sand topsoil. Gravel is sub-rounded, fine to medium quartzite and flint.		0.50	116.96		B	0.50	N60=16		
MADE GROUND: Firm, reddish brown and brown, silty, slightly sandy, slightly gravelly clay with brick and charcoal fragments. Gravel is sub-rounded, fine to medium quartzite and charcoal.					D	0.70			
		B	1.20						
		D	1.20						
Firm to stiff, reddish brown and brown, silty, slightly sandy, gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to medium quartzite, flint and siltstone. OADBY MEMBER		1.90	115.56	D	1.90				
				D	2.90	Ublow= 80			
				U	3.00				
				D	3.50				
				D	4.10	N60=24			
				U	5.10	Ublow= 70			
				D	5.60				
				D	6.00				
		6.40	111.06	D	6.40	N60=21	6.40		
				D	6.55				
Medium dense, reddish brown, silty, slightly gravelly, fine to medium SAND. WOLSTON SAND AND GRAVEL DEPOSITS				D	7.50				
				B	8.10	N60=15			
				D	8.10				
				D	9.00				
				D	9.60	N60=16			
				D	10.50				
				D	11.10	N60=17			
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Fast ingress of groundwater was encountered at 6.40m and rose to 4.00m bgl after 20 minutes.. Visual or olfactory evidence of contamination was not observed. Co-ordinates and elevations estimated from the topographical survey.									Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point



Exploratory
Hole ID:

BH03

Sheet 2 of 2

Project: Land North of Normandy Way

Project No.
28047

Start Date:

11/09/2023

End Date:

11/09/2023

Plant Used:

Cable Percussion Rig

Location: Hinckley, Leicestershire

Logged By:
DW

Easting and Northing Co-ordinates:

Elevation (m AOD):	
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Client: Richborough Estates Ltd

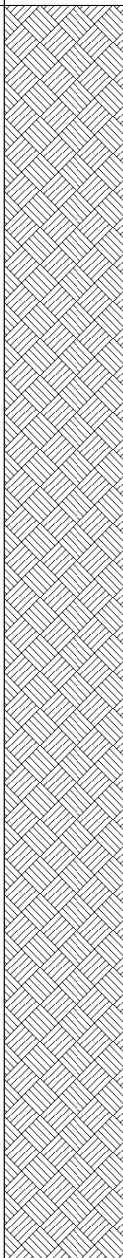
Approved By:
DT

442159.59

295687.55

117.46

Remarks:	Key:
Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.	B - Bulk Sample
Descriptions based on visual inspection by a Geo-environmental engineer.	D - Disturbed Sample
Fast ingress of groundwater was encountered at 6.40m and rose to 4.00m bgl after 20 minutes..	ES - Environmental Sample
Visual or olfactory evidence of contamination was not observed.	W - Water Sample
Co-ordinates and elevations estimated from the topographical survey.	PID - PID Reading
	N60 - Corrected SPT N Value
	G - Gas Monitoring Point

 MEC Development Technical Consultants Mewies Engineering Consultants Ltd The Old Chapel, Station Road Hugglescote, Leicestershire LE67 2GB				Exploratory Hole ID:		BH04 Sheet 1 of 1			
Project: Land North of Normandy Way		Project No. 28047		Start Date: 11/09/2023		End Date: 11/09/2023		Plant Used: Cable Percussion Rig	
Location: Hinckley, Leicestershire		Logged By: DW		Easting and Northing Co-ordinates: 442399.32 295920.16				Elevation (m AOD): 107.79	
Client: Richborough Estates Ltd		Approved By: DT							
Strata Description		Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
					Type	Depth			
MADE GROUND: Brown, slightly clayey, silty, slightly gravelly, sand topsoil. Gravel is sub-rounded, fine to medium quartzite and flint.		0.30	107.49		B	0.30	N60=11		
MADE GROUND: Soft to firm, brown mottled grey, silty, sandy, gravelly clay with brick fragments. Gravel is sub-angular to sub-rounded, fine to medium quartzite and flint.		1.20	106.59		D	1.20			
Firm, reddish brown, silty, slightly sandy, gravelly CLAY. Gravel is angular to sub-rounded, fine quartzite, flint and siltstone. OADBY MEMBER					D	1.80	Ublow= 80		
					U	2.00			
					B	2.50	N60=15		
					D	2.50			
					D	3.00	Ublow= 65		
					D	3.60			
					U	4.00			
					D	4.50	Ublow= 70		
					D	5.00			
					U	5.10			
					D	5.60	N60=27		
					D	6.00			
					B	6.40	Ublow= 75		
					D	6.40			
					D	7.50	N60=44		
					U	8.00			
					D	8.50			
					D	9.00			
					D	9.50			
Borehole terminated at 10.00m		10.00	97.79						
Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was not encountered. Visual or olfactory evidence of contamination was not observed. Co-ordinates and elevations estimated from the topographical survey.							Key: B - Bulk Sample D - Disturbed Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value G - Gas Monitoring Point		



MEC

Development Technical
Consultants

APPENDICES



APPENDIX C

GEOLABS Limited
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Granby Avenue
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12 October 2023

Report No : GEO/38867/02

Page 1 of 1

For the attention of Mr C Wall / Mr D Webb

	Date samples received	18/09/2023
	Date written instructions received	19/09/2023
Our ref GEO / 38867	Date testing commenced	20/09/2023
Your Ref 28047	Date of sample disposal	03/11/2023

Project **LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	~	Geotechnical Test Summary
~	26	Water Content
2	16	Liquid & Plastic Limits
3	2	Particle Size Distribution
4	~	Geochemical Test Summary
~	8	BRE SD1 Suite B - Natural ground + pyrite
5	5	Incremental Loading Oedometer
5	10	Unconsolidated Undrained Multistage Triaxial Compression

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**



J A Reynolds
Director



SUMMARY OF GEOTECHNICAL TESTING

Sample details					Classification Tests					Density Tests		Undrained Triaxial Compression				Chemical Tests			Other tests and comments
Location	Depth (m)	Sample Ref	Type	Description	WC	LL	PL	PI	<425 µm	Bulk	Dry	Condition	Cell Pressure	Deviator Stress	Mean Shear Stress	pH	2:1 W/S SO4	W/S Mg	
					%	%	%	%	%	Mg/m³	Mg/m³		kPa	kPa	kPa		g/L	mg/L	
BH01	2.00-2.45		U	Firm brown CLAY.	25.6					2.02	1.61	Undisturbed	40 80 160	151 188 187	88				One Dimensional Consolidation
BH01	4.00-4.45		U	Firm brown CLAY.	22.7					2.06	1.68	Undisturbed	80 160 320	308 321 331	160				
BH01	5.00	D8	D													8.1	0.058		
BH01	6.50-6.95		U	Dark brown slightly sandy CLAY.	19.9	49	19	30	100										
BH01	9.50-9.95		U	Firm brown CLAY	19.7					2.12	1.77	Undisturbed	190 380 700	571 583 584	290				
BH01	10.00	D13	D													8.1	0.38		
BH02	2.50	D4	D	Brown mottled grey sandy CLAY.	25.5	27	15	12	100										
BH02	4.00-4.45		U	Firm brown sandy CLAY.	24.6					2.02	1.62	Undisturbed	80 160 320	97 104 161	60				One Dimensional Consolidation
BH02	4.50	D7	D													8.3	0.19		
BH02	6.50-6.95		U	Firm brown CLAY.	22.1					2.08	1.70	Undisturbed	130 260 520	251 257 263	128				

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by



J A Reynolds - Director
12/10/2023

Project Number:

GEO / 38867

Project Name:

LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047



SUMMARY OF GEOTECHNICAL TESTING

Sample details					Classification Tests					Density Tests		Undrained Triaxial Compression				Chemical Tests			Other tests and comments
Location	Depth (m)	Sample Ref	Type	Description	WC	LL	PL	PI	<425 µm	Bulk	Dry	Condition	Cell Pressure	Deviator Stress	Mean Shear Stress	pH	2:1 W/S SO4	W/S Mg	
					%	%	%	%	%	Mg/m³	Mg/m³		kPa	kPa	kPa		g/L	mg/L	
BH02	7.00	D10	D													8.3	0.16		
BH02	8.00	D11	D	Dark brown mottled brown sandy CLAY.	23.9	46	19	27	100										
BH02	9.50-9.95		U	Firm brown sandy CLAY.	22.0					2.04	1.68	Undisturbed	190 380 700	150 165 181	83				
BH03	3.00	U1	U	Firm brown sandy CLAY with some fine to coarse gravel.	13.9					2.19	1.92	Undisturbed	60 120 240	240 265 283	131				One Dimensional Consolidation
BH03	5.10	U2	U	Firm brown sandy CLAY with some fine to coarse gravel.	13.1					2.15	1.90	Undisturbed	100 200 400	228 261 274	127				
BH03	5.60	P8	D	Dark brown mottled grey very sandy CLAY with some fine to medium gravel.	13.1	29	12	17	90										
BH03	8.10-8.60	B4	B	Brown clayey SAND with rare fine to medium gravel.															Particle Size Distribution
BH03	10.50	P16	D													8.8	0.057		
BH03	13.50	P20	D													8.9	0.036		
BH03	14.55	P22	D	Brown clayey SAND with some fine to medium gravel.															Particle Size Distribution

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by  J A Reynolds - Director 12/10/2023	Project Number:	GEO / 38867	
	Project Name:	LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE 28047	

SUMMARY OF GEOTECHNICAL TESTING

Sample details					Classification Tests					Density Tests		Undrained Triaxial Compression				Chemical Tests			Other tests and comments
Location	Depth (m)	Sample Ref	Type	Description	WC	LL	PL	PI	<425 µm	Bulk	Dry	Condition	Cell Pressure	Deviator Stress	Mean Shear Stress	pH	2:1 W/S SO4	W/S Mg	
					%	%	%	%	%	Mg/m³	Mg/m³		kPa	kPa	kPa		g/L	mg/L	
BH04	2.00	U1	U	Soft to firm brown very sandy CLAY with some fine to medium gravel.															One Dimensional Consolidation
BH04	4.00	U2	U	Firm to stiff brown sandy CLAY with some fine to medium gravel.															One Dimensional Consolidation
BH04	4.50	P6	D	Dark brown mottled grey very sandy CLAY with some fine gravel.	16.5	31	13	18	93										
BH04	5.10	U3	U	Firm brown sandy CLAY with some fine to coarse gravel.	13.2					2.23	1.97	Undisturbed	100 200 400	227 239 256	120				
BH04	5.60	P8	D													8.5	0.062		
BH04	8.00	U4	U	Firm brown CLAY.	19.8					2.11	1.76	Undisturbed	160 320 640	324 353 380	176				
BH04	8.50	P12	D													8.5	0.13		
TP09	0.70		D	Brown mottled dark brown and orangish brown very sandy CLAY with some fine to medium gravel.	18.5	34	16	18	90										
TP22	0.90		D	Greyish brown mottled grey CLAY with rare fine gravel.	24.5	68	22	46	99										
TP24	2.00		D	Dark brown mottled greyish brown and grey slightly sandy CLAY.	22.8	53	20	33	100										

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by  J A Reynolds - Director 12/10/2023	Project Number:	GEO / 38867 LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE 28047	
	Project Name:		

SUMMARY OF GEOTECHNICAL TESTING

Sample details					Classification Tests					Density Tests		Undrained Triaxial Compression				Chemical Tests			Other tests and comments
Location	Depth (m)	Sample Ref	Type	Description	WC	LL	PL	PI	<425 µm	Bulk	Dry	Condition	Cell Pressure	Deviator Stress	Mean Shear Stress	pH	2:1 W/S SO4	W/S Mg	
					%	%	%	%	%	Mg/m³	Mg/m³		kPa	kPa	kPa		g/L	mg/L	
WS01	0.90		D	Greyish brown mottled grey CLAY.	23.9	65	22	43	100										
WS07	2.40		D	Multicoloured slightly sandy CLAY.	23.3	53	20	33	100										
WS08	1.40		D	Dark brown mottled brown and grey slightly sandy CLAY.	25.6	57	21	36	100										
WS09	2.10		D	Dark brown mottled grey CLAY.	23.6	49	20	29	100										
WS11	0.80		D	Reddish brown very sandy CLAY with some fine to medium gravel.	15.6	34	14	20	93										
WS12	1.10		D	Dark brown mottled reddish brown and brownish grey sandy CLAY with some fine gravel.	18.0	38	14	24	94										
WS14	1.80		D	Dark brown mottled grey and orangish brown slightly sandy CLAY.	28.7	51	20	31	100										
WS15	1.80		D	Dark brown and brown mottled grey sandy CLAY.	23.0	45	19	26	100										

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by  J A Reynolds - Director 12/10/2023	Project Number:	GEO / 38867	
	Project Name:	LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE 28047	
			

LIQUID AND PLASTIC LIMITS

Location BH01
Depth (m) 6.50
Sample Type U

Description:

Dark brown slightly sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 19.9 %

Estimated percentage passing 425µm sieve : 100 %

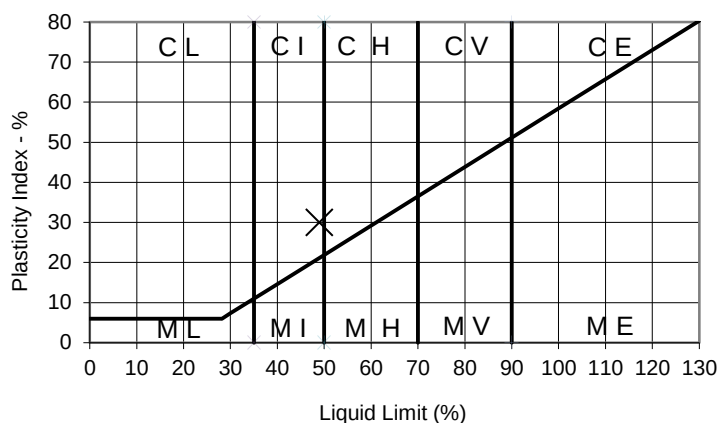
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 49 %

Plastic Limit : 19 %

Plasticity Index : 30 %

Equivalent Water Content of material passing 425µm sieve : 19.9 %

Liquidity Index : 0.03

***One point liquid limit test readings**

Cone penetration 20.5 mm

Water content 49.3 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.993

Tested by AD
Checked and Approved by

J A Reynolds - Director
06/10/2023

Project Number:

GEO / 38867

Project Name:

LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047



LIQUID AND PLASTIC LIMITS

Location BH02
 Sample Ref D4
 Depth (m) 2.50
 Sample Type D

Description:

Brown mottled grey sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 25.5 %

Estimated percentage passing 425µm sieve : 100 %

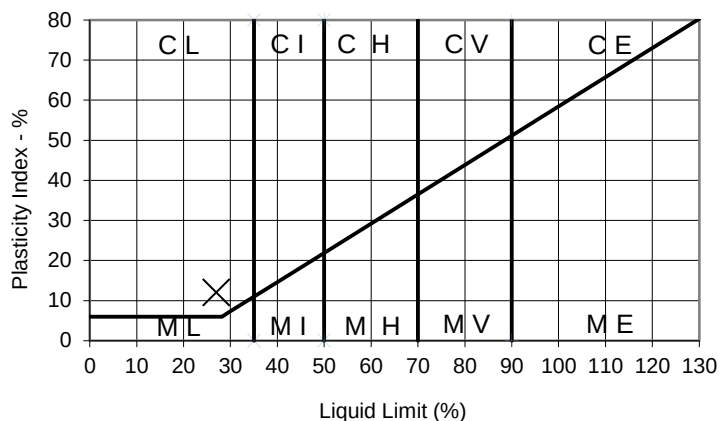
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 27 %

Plastic Limit : 15 %

Plasticity Index : 12 %

Equivalent Water Content of material passing 425µm sieve : 25.5 %

Liquidity Index : 0.88

***One point liquid limit test readings**

Cone penetration 20.2 mm

Water content 27.5 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.996

Tested by AD
 Checked and Approved by

J A Reynolds - Director
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LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047



LIQUID AND PLASTIC LIMITS

Location BH02
 Sample Ref D11
 Depth (m) 8.00
 Sample Type D

Description:

Dark brown mottled brown sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 23.9 %

Estimated percentage passing 425µm sieve : 100 %

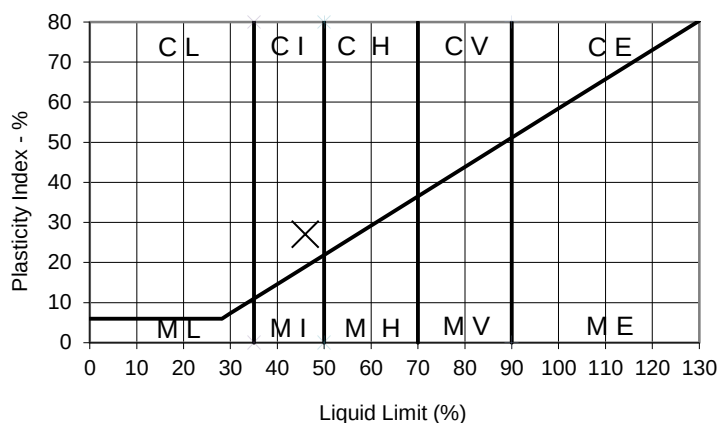
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 46 %

Plastic Limit : 19 %

Plasticity Index : 27 %

Equivalent Water Content of material passing 425µm sieve : 23.9 %

Liquidity Index : 0.18

***One point liquid limit test readings**

Cone penetration 20.4 mm

Water content 46.5 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.995

Tested by AD
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LIQUID AND PLASTIC LIMITS

Location BH03
 Sample Ref P8
 Depth (m) 5.60
 Sample Type D

Description:

Dark brown mottled grey very sandy CLAY with some fine to medium gravel.

Preparation : Particles >425µm removed by wet sieving and air drying.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 13.1 %

Measured percentage passing 425µm sieve : 90 %

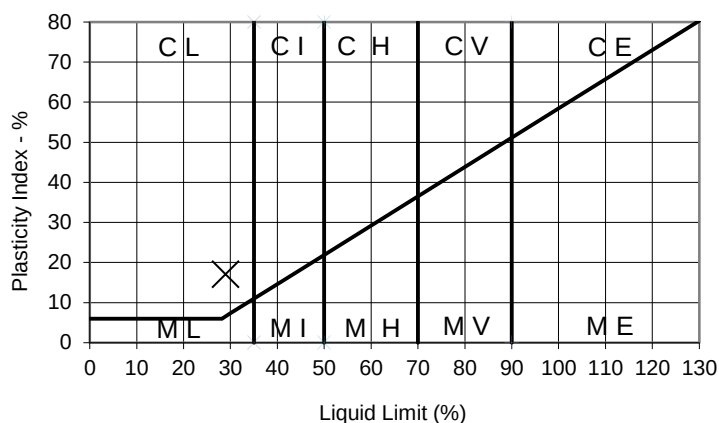
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 29 %

Plastic Limit : 12 %

Plasticity Index : 17 %

Equivalent Water Content of material passing 425µm sieve : 14.6 %

Liquidity Index : 0.15

***One point liquid limit test readings**

Cone penetration 20.6 mm

Water content 29.1 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.991

Tested by AD
 Checked and Approved by

J A Reynolds

J A Reynolds - Director
 06/10/2023

Project Number:

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Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



LIQUID AND PLASTIC LIMITS

Location BH04
 Sample Ref P6
 Depth (m) 4.50
 Sample Type D

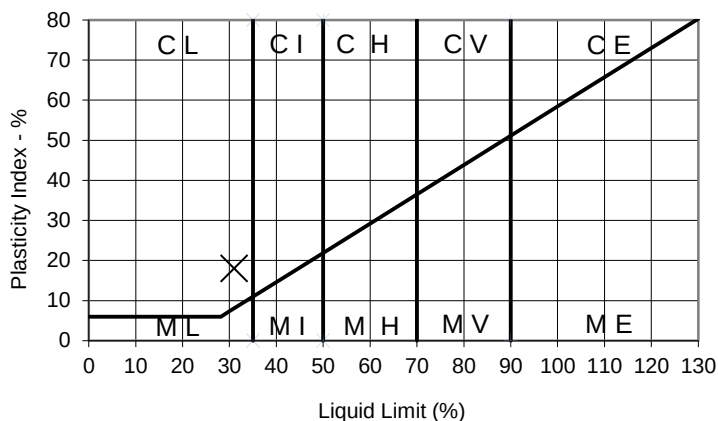
Description:

Dark brown mottled grey very sandy CLAY with some fine gravel.

Preparation : Particles >425µm removed by wet sieving and air drying.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 16.5 %
 Measured percentage passing 425µm sieve : 93 %
 *Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 31 %
 Plastic Limit : 13 %
 Plasticity Index : 18 %

Equivalent Water Content of material passing 425µm sieve : 17.7 %
 Liquidity Index : 0.26

***One point liquid limit test readings**

Cone penetration 19.6 mm
 Water content 31.0 %
 One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 1.005

Tested by AD
 Checked and Approved by

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J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



LIQUID AND PLASTIC LIMITS

Location TP09
Depth (m) 0.70
Sample Type D

Description:

Brown mottled dark brown and orangish brown very sandy
CLAY with some fine to medium gravel.

Preparation : Particles >425µm removed by wet sieving and air drying.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 18.5 %

Measured percentage passing 425µm sieve : 90 %

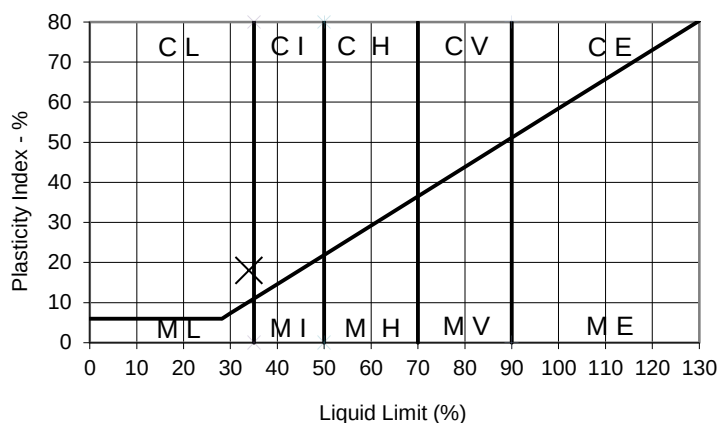
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 34 %

Plastic Limit : 16 %

Plasticity Index : 18 %

Equivalent Water Content of material passing 425µm sieve : 20.5 %

Liquidity Index : 0.25

***One point liquid limit test readings**

Cone penetration 20.4 mm

Water content 34.2 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.994

Tested by AD
Checked and Approved by

J A Reynolds

J A Reynolds - Director
06/10/2023

Project Number:

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**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047**



LIQUID AND PLASTIC LIMITS

Location TP22
Depth (m) 0.90
Sample Type D

Description:

Greyish brown mottled grey CLAY with rare fine gravel.

Preparation : Sample as received with discrete coarse particles removed by hand.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 24.5 %

Estimated percentage passing 425µm sieve : 99 %

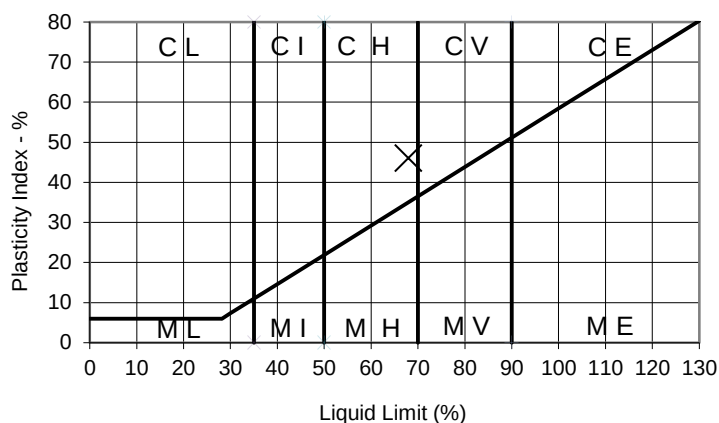
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 68 %

Plastic Limit : 22 %

Plasticity Index : 46 %

Equivalent Water Content of material passing 425µm sieve : 24.8 %

Liquidity Index : 0.06

***One point liquid limit test readings**

Cone penetration 19.5 mm

Water content 67.4 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 1.010

Tested by AD
Checked and Approved by

J A Reynolds

J A Reynolds - Director
06/10/2023

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**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047**



LIQUID AND PLASTIC LIMITS

Location TP24
Depth (m) 2.00
Sample Type D

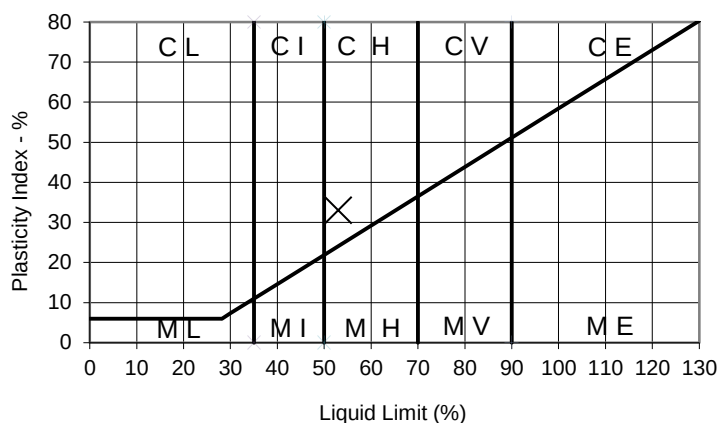
Description:

Dark brown mottled greyish brown and grey slightly sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 22.8 %
 Estimated percentage passing 425µm sieve : 100 %
 *Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 53 %
 Plastic Limit : 20 %
 Plasticity Index : 33 %

Equivalent Water Content of material passing 425µm sieve : 22.8 %
 Liquidity Index : 0.08

***One point liquid limit test readings**

Cone penetration 20.6 mm
 Water content 53.4 %
 One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.991

Tested by AD
 Checked and Approved by

J A Reynolds

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



LIQUID AND PLASTIC LIMITS

Location WS01
Depth (m) 0.90
Sample Type D

Description:

Greyish brown mottled grey CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 23.9 %

Estimated percentage passing 425µm sieve : 100 %

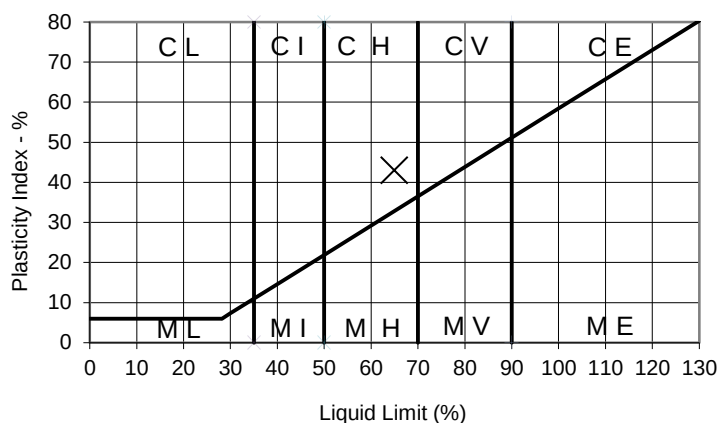
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 65 %

Plastic Limit : 22 %

Plasticity Index : 43 %

Equivalent Water Content of material passing 425µm sieve : 23.9 %

Liquidity Index : 0.04

***One point liquid limit test readings**

Cone penetration 20.0 mm

Water content 65.2 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 1.002

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06/10/2023

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LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047



LIQUID AND PLASTIC LIMITS

Location WS07
 Depth (m) 2.40
 Sample Type D

Description:

Multicoloured slightly sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 23.3 %

Estimated percentage passing 425µm sieve : 100 %

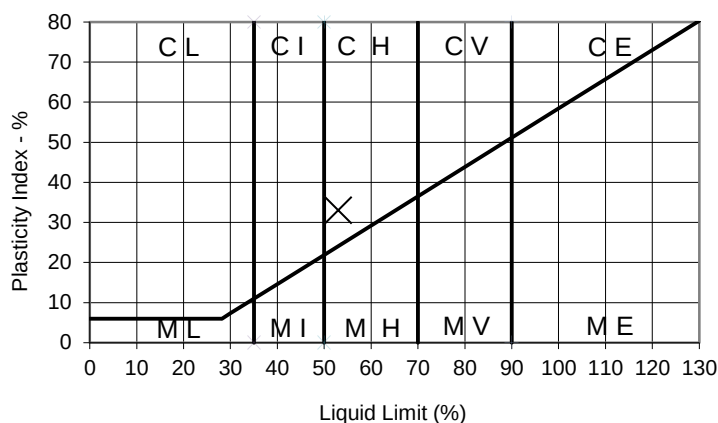
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 53 %

Plastic Limit : 20 %

Plasticity Index : 33 %

Equivalent Water Content of material passing 425µm sieve : 23.3 %

Liquidity Index : 0.10

***One point liquid limit test readings**

Cone penetration 20.6 mm

Water content 53.7 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.992

Tested by AD
 Checked and Approved by

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28047



LIQUID AND PLASTIC LIMITS

Location WS08
Depth (m) 1.40
Sample Type D

Description:

Dark brown mottled brown and grey slightly sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 25.6 %

Estimated percentage passing 425µm sieve : 100 %

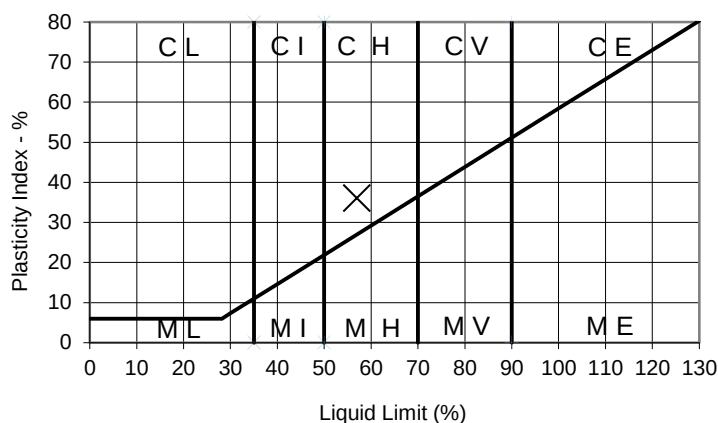
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 57 %

Plastic Limit : 21 %

Plasticity Index : 36 %

Equivalent Water Content of material passing 425µm sieve : 25.6 %

Liquidity Index : 0.13

***One point liquid limit test readings**

Cone penetration 20.4 mm

Water content 57.4 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.995

Tested by AD
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28047



LIQUID AND PLASTIC LIMITS

Location WS09
 Depth (m) 2.10
 Sample Type D

Description:

Dark brown mottled grey CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 23.6 %

Estimated percentage passing 425µm sieve : 100 %

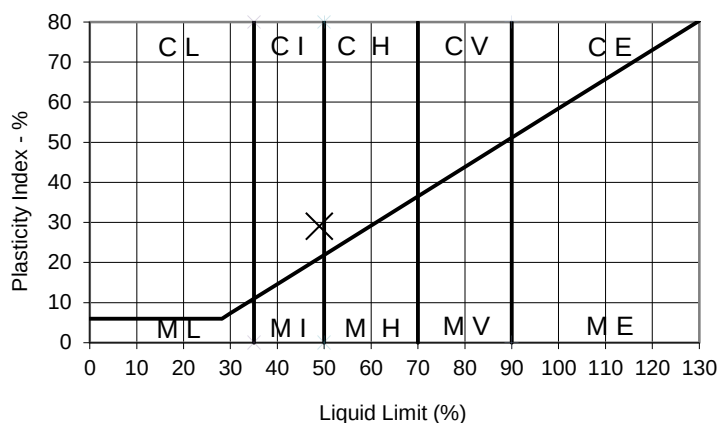
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 49 %

Plastic Limit : 20 %

Plasticity Index : 29 %

Equivalent Water Content of material passing 425µm sieve : 23.6 %

Liquidity Index : 0.12

***One point liquid limit test readings**

Cone penetration 20.8 mm

Water content 49.3 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.987

Tested by AD
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LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047



LIQUID AND PLASTIC LIMITS

Location WS11
 Depth (m) 0.80
 Sample Type D

Description:

Reddish brown very sandy CLAY with some fine to medium gravel.

Preparation : Particles >425µm removed by wet sieving and air drying.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 15.6 %

Measured percentage passing 425µm sieve : 93 %

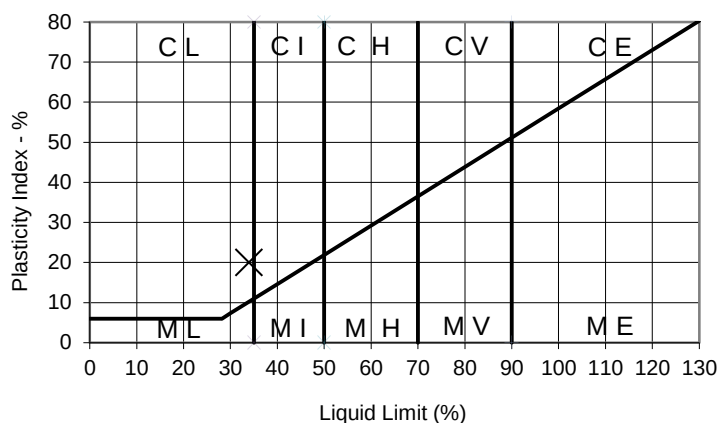
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 34 %

Plastic Limit : 14 %

Plasticity Index : 20 %

Equivalent Water Content of material passing 425µm sieve : 16.7 %

Liquidity Index : 0.14

***One point liquid limit test readings**

Cone penetration 19.6 mm

Water content 34.1 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 1.006

Tested by AD
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J A Reynolds

J A Reynolds - Director
 06/10/2023

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**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



LIQUID AND PLASTIC LIMITS

Location WS12
 Depth (m) 1.10
 Sample Type D

Description:

Dark brown mottled reddish brown and brownish grey sandy
 CLAY with some fine gravel.

Preparation : Particles >425µm removed by wet sieving and air drying.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 18.0 %

Measured percentage passing 425µm sieve : 94 %

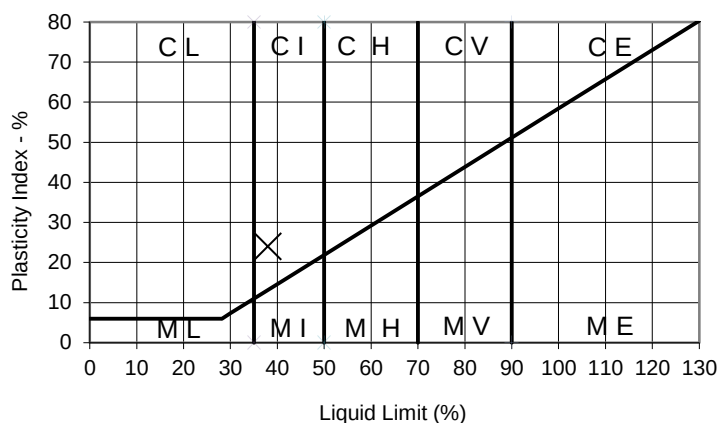
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 38 %

Plastic Limit : 14 %

Plasticity Index : 24 %

Equivalent Water Content of material passing 425µm sieve : 19.1 %

Liquidity Index : 0.21

***One point liquid limit test readings**

Cone penetration 20.2 mm

Water content 37.8 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.997

Tested by AD
 Checked and Approved by

J A Reynolds

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



LIQUID AND PLASTIC LIMITS

Location WS14
 Depth (m) 1.80
 Sample Type D

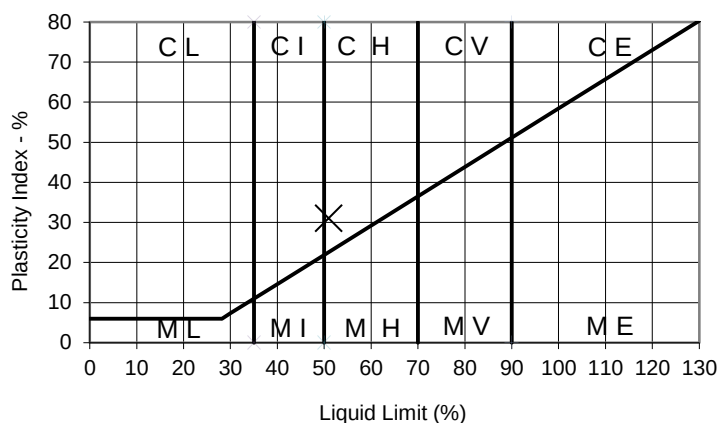
Description:

Dark brown mottled grey and orangish brown slightly sandy
 CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 28.7 %
 Estimated percentage passing 425µm sieve : 100 %
 *Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 51 %
 Plastic Limit : 20 %
 Plasticity Index : 31 %

Equivalent Water Content of material passing 425µm sieve : 28.7 %
 Liquidity Index : 0.28

***One point liquid limit test readings**

Cone penetration 20.1 mm
 Water content 51.4 %
 One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 0.999

Tested by AD
 Checked and Approved by

J A Reynolds

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

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**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



LIQUID AND PLASTIC LIMITS

Location WS15
 Depth (m) 1.80
 Sample Type D

Description:

Dark brown and brown mottled grey sandy CLAY.

Preparation : Sample as received.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 23.0 %

Estimated percentage passing 425µm sieve : 100 %

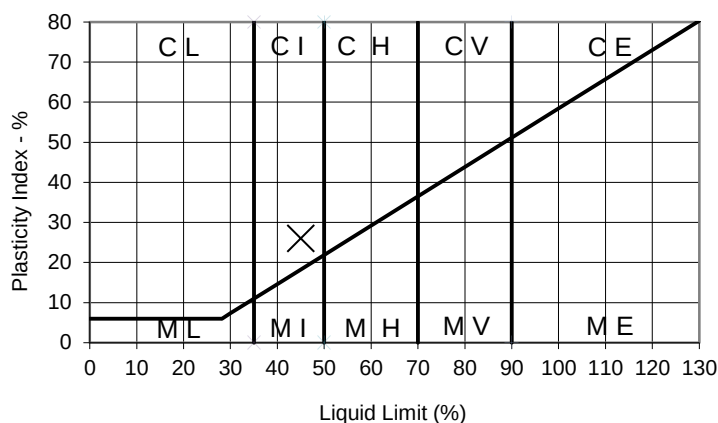
*Liquid Limit - Fall Cone 1 point Method (cone angle 30°) : 45 %

Plastic Limit : 19 %

Plasticity Index : 26 %

Equivalent Water Content of material passing 425µm sieve : 23.0 %

Liquidity Index : 0.15

***One point liquid limit test readings**

Cone penetration 20.0 mm

Water content 44.7 %

One point method correlation factor : BS 1377-2 : 2022 : 5.3.2 1.002

Tested by AD
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 28047**



SUMMARY OF CHEMICAL TESTS ON SOIL

Location	Depth m	Sample Ref	Sample Type	pH Value	Total Acid Soluble Sulphate as SO ₄ %	Water Soluble Sulphate as SO ₄ 2:1 Water:Soil Extract g/l	Total Sulphur %	Water Soluble Chloride g/l	Water Soluble Nitrate g/l	Magnesium g/l	Organic Content %	Mass Loss on Ignition %	Carbonate Content %
BH01	5.00	D8	D	8.1	0.10	0.058	0.66	-	-	-	-	-	-
BH01	10.00	D13	D	8.1	0.14	0.38	0.74	-	-	-	-	-	-
BH02	4.50	D7	D	8.3	0.069	0.19	0.41	-	-	-	-	-	-
BH02	7.00	D10	D	8.3	0.059	0.16	0.44	-	-	-	-	-	-
BH03	10.50	P16	D	8.8	0.035	0.057	0.12	-	-	-	-	-	-
BH03	13.50	P20	D	8.9	0.030	0.036	0.30	-	-	-	-	-	-
BH04	5.60	P8	D	8.5	0.071	0.062	0.20	-	-	-	-	-	-
BH04	8.50	P12	D	8.5	0.047	0.13	0.61	-	-	-	-	-	-

Tested by Eurofins Chemtest Ltd : MCERTS / UKAS No 2183

Checked and Approved by:



J A Reynolds - Director
06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047**



PARTICLE SIZE DISTRIBUTION

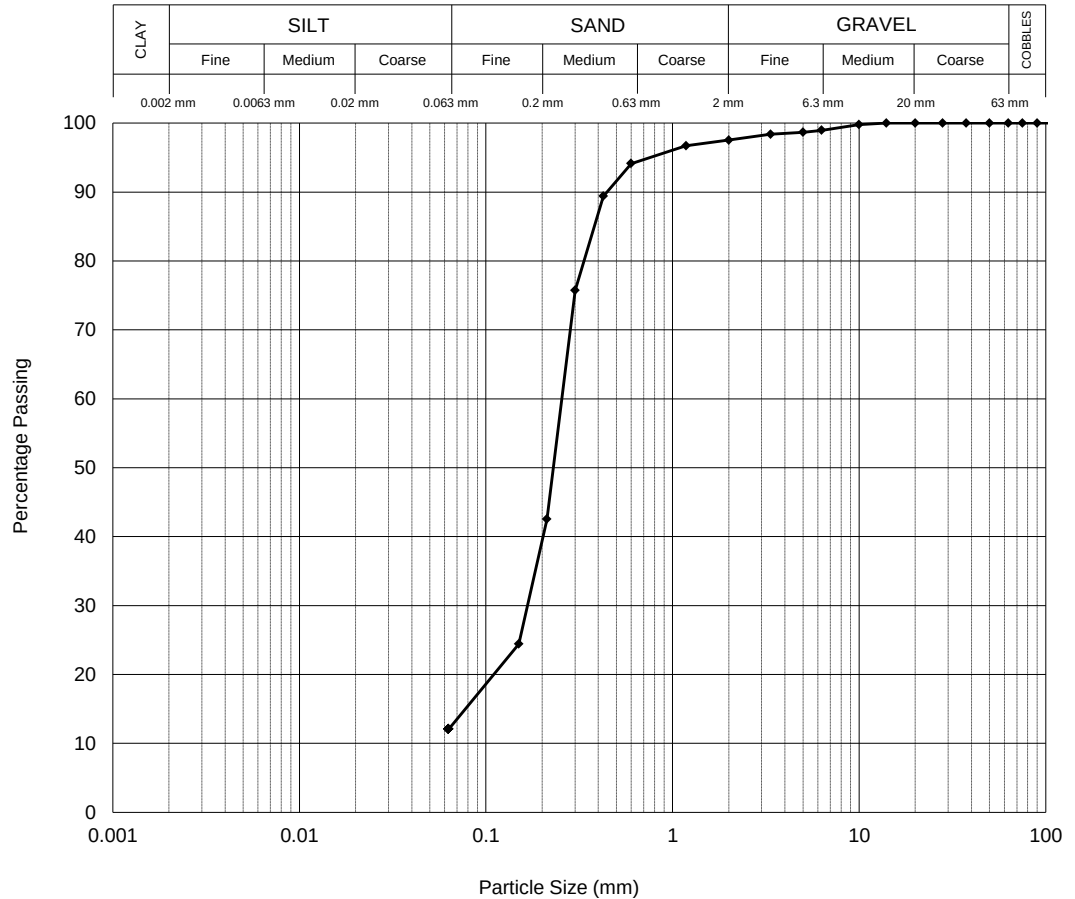
Location BH03
 Sample Ref B4
 Depth (m) 8.10-8.60
 Sample Type B

Description

Brown clayey SAND with rare fine to medium gravel.

BS EN ISO 17892-4 : 2016 : Clause 5.2 - Wet Sieve

Sieve	
Size	% Pass
200.0 mm	100
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	100
28.0 mm	100
20.0 mm	100
14.0 mm	100
10.0 mm	100
6.30 mm	99
5.00 mm	99
3.35 mm	98
2.00 mm	98
1.18 mm	97
600 µm	94
425 µm	89
300 µm	76
212 µm	43
150 µm	24
63 µm	12



Particle Proportions	
Cobbles	0.0
Gravel	2.5
Sand	85.5
Silt & Clay	12.0

Tested by PK
 Checked and Approved by

J A Reynolds

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



PARTICLE SIZE DISTRIBUTION

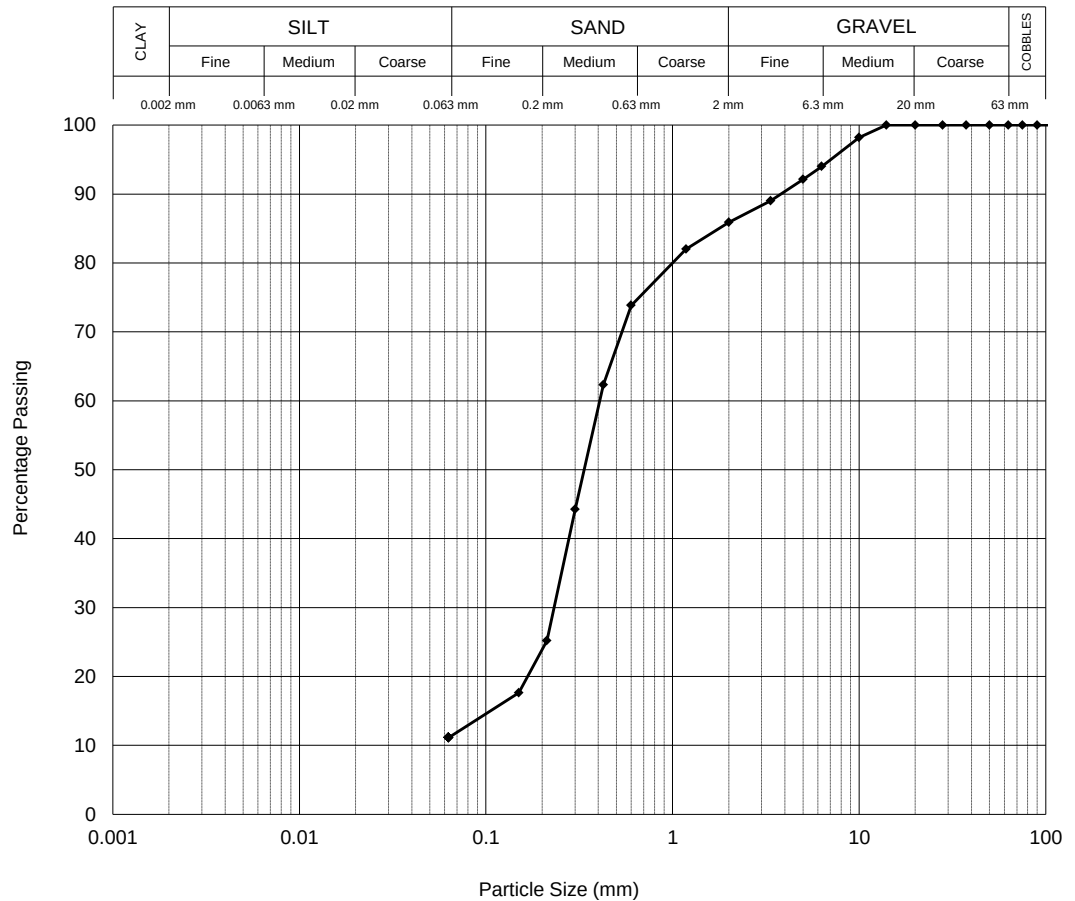
Location BH03
 Sample Ref P22
 Depth (m) 14.55
 Sample Type D

Description

Brown clayey SAND with some fine to medium gravel.

BS EN ISO 17892-4 : 2016 : Clause 5.2 - Wet Sieve

Sieve	
Size	% Pass
200.0 mm	100
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	100
28.0 mm	100
20.0 mm	100
14.0 mm	100
10.0 mm	98
6.30 mm	94
5.00 mm	92
3.35 mm	89
2.00 mm	86
1.18 mm	82
600 µm	74
425 µm	62
300 µm	44
212 µm	25
150 µm	18
63 µm	11



Particle Proportions	
Cobbles	0.0
Gravel	14.1
Sand	74.8
Silt & Clay	11.1

Tested by PK
 Checked and Approved by

J A Reynolds

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**

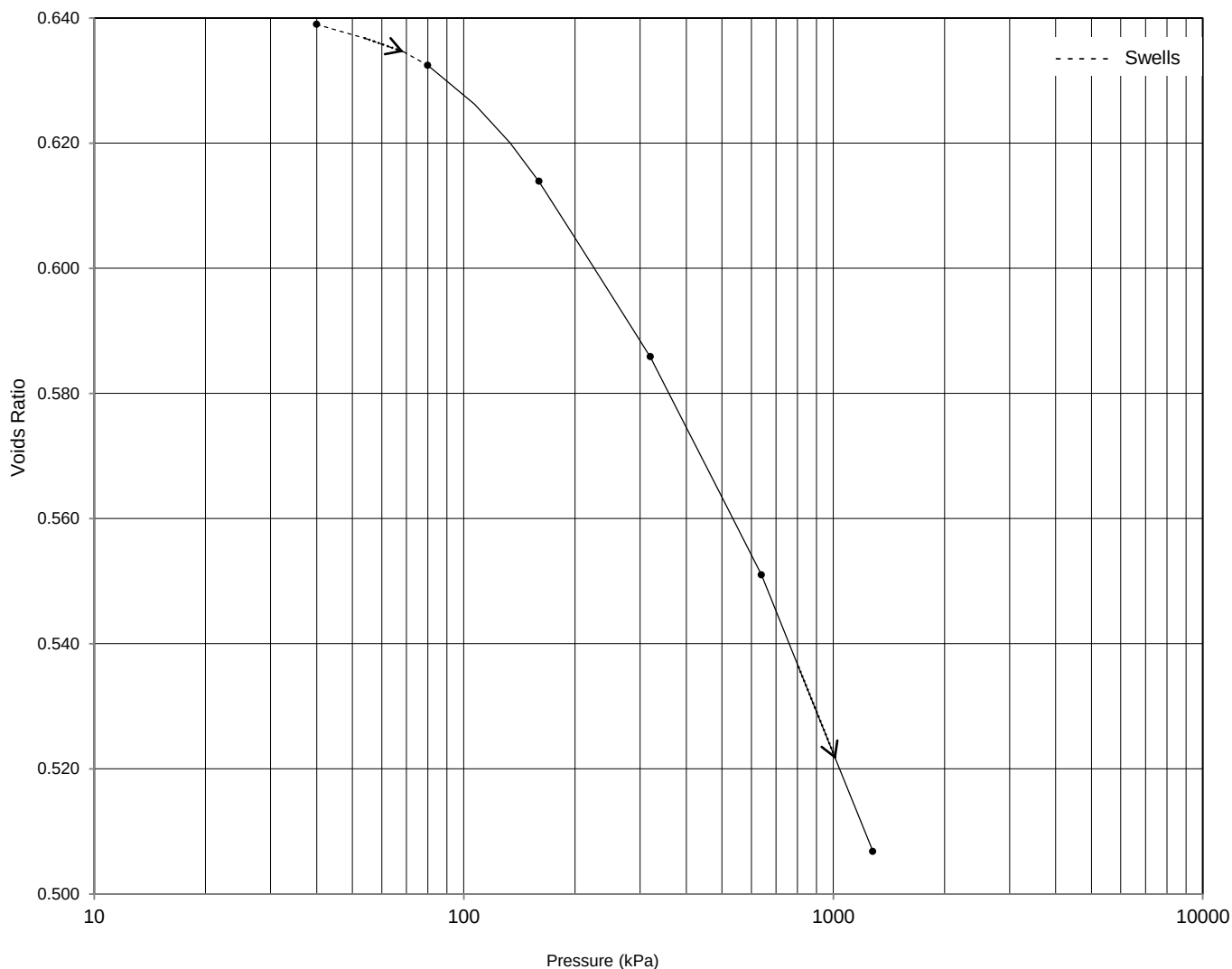


INCREMENTAL LOADING OEDOMETER TEST

Location BH01
 Depth (m) 2.00-2.45
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Firm brown mottled grey CLAY.



Initial Conditions:

Height	(mm)	18.93	Water Content	(%)	24.3	(from trimmings)
Diameter	(mm)	69.78	Voids Ratio		0.643	
Area	(mm ²)	3824	Bulk Density	(Mg/m ³)	2.04	
Volume	(cm ³)	72.39	Dry Density	(Mg/m ³)	1.64	
Laboratory Temperature	(°C)	21.0	Particle density	(Mg/m ³)	2.70 (Assumed)	
			Degree of Saturation	(%)	100.0	

Results have been corrected for equipment deformation

Checked and Approved by

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047

GEOLABS

INCREMENTAL LOADING OEDOMETER TEST

Location BH01
 Depth (m) 2.00-2.45
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Firm brown mottled grey CLAY.

Pressure Range (kPa)	m_v (m ² /MN)	c_v (m ² /year)	Time Fitting		Voids Ratio
			Method	minutes	
0 - 40	-	Specimen swelled	-	-	0.639
40 - 80	0.100	64	t90	0.612	0.632
80 - 160	0.14	0.56	t50	16.3	0.614
160 - 320	0.11	0.53	t50	16.6	0.586
320 - 640	0.069	0.54	t50	15.9	0.551
640 - 1280	0.044	0.65	t50	12.4	0.507

Checked and Approved by



J A Reynolds - Director
06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY,
LEICESTERSHIRE**

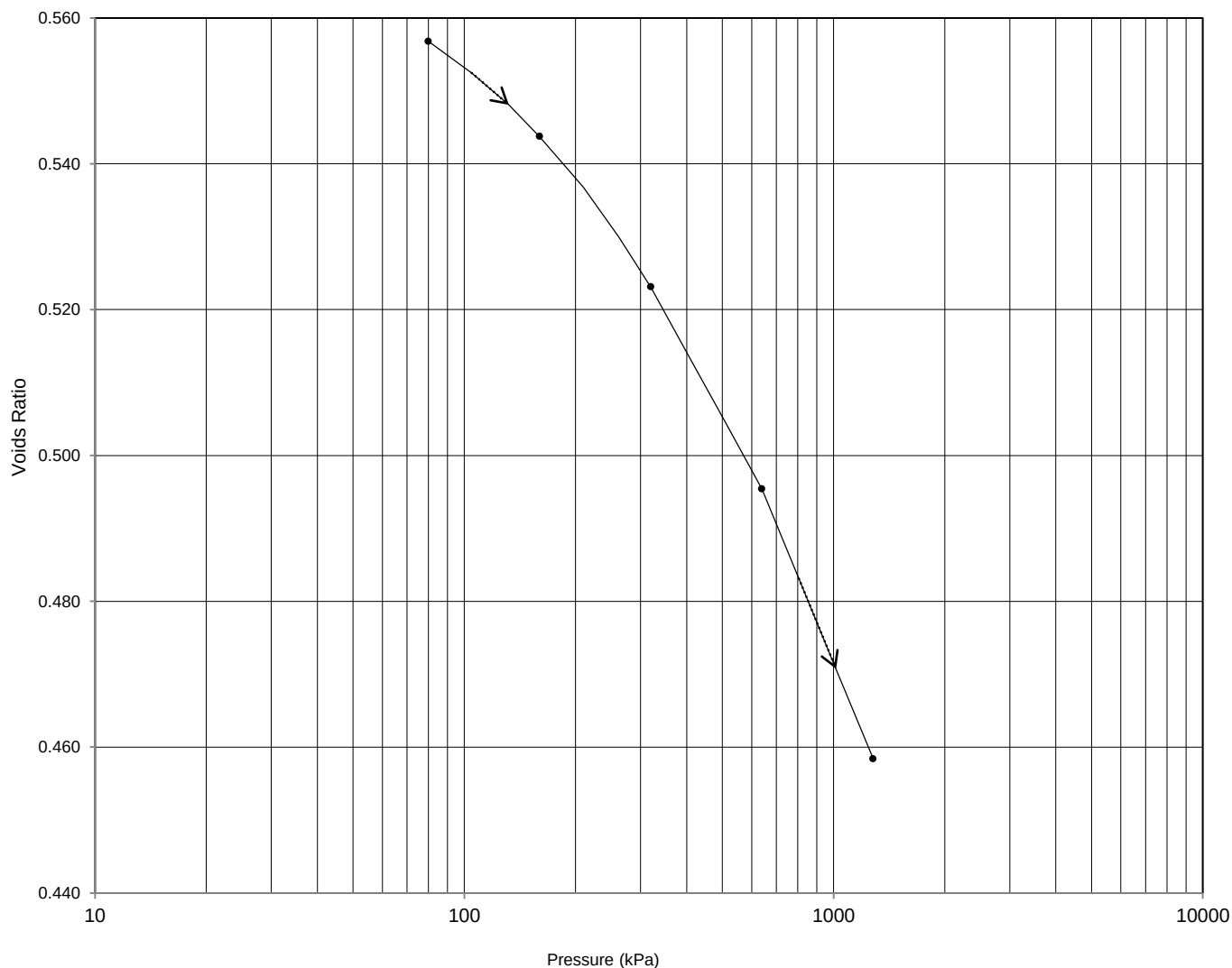
GEOLABS

INCREMENTAL LOADING OEDOMETER TEST

Location BH02
 Depth (m) 4.00-4.45
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Firm brown CLAY.



Initial Conditions:

Height	(mm)	19.01	Water Content	(%)	21.7	(from trimmings)
Diameter	(mm)	69.82	Voids Ratio		0.564	
Area	(mm ²)	3829	Bulk Density	(Mg/m ³)	2.10	
Volume	(cm ³)	72.78	Dry Density	(Mg/m ³)	1.73	
Laboratory Temperature	(°C)	21.0	Particle density	(Mg/m ³)	2.70 (Assumed)	
			Degree of Saturation	(%)	100.0	

Results have been corrected for equipment deformation

Checked and Approved by

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047



INCREMENTAL LOADING OEDOMETER TEST

Location BH02
 Depth (m) 4.00-4.45
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Firm brown CLAY.

Pressure Range (kPa)	m_v (m ² /MN)	c_v (m ² /year)	Time Fitting		Voids Ratio
			Method	minutes	
0 - 80	0.054	281	t90	0.142	0.557
80 - 160	0.10	1.4	t50	6.78	0.544
160 - 320	0.083	1.9	t50	4.88	0.523
320 - 640	0.057	1.5	t50	6.01	0.495
640 - 1280	0.039	1.3	t50	6.69	0.458

Checked and Approved by



J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY,
 LEICESTERSHIRE**

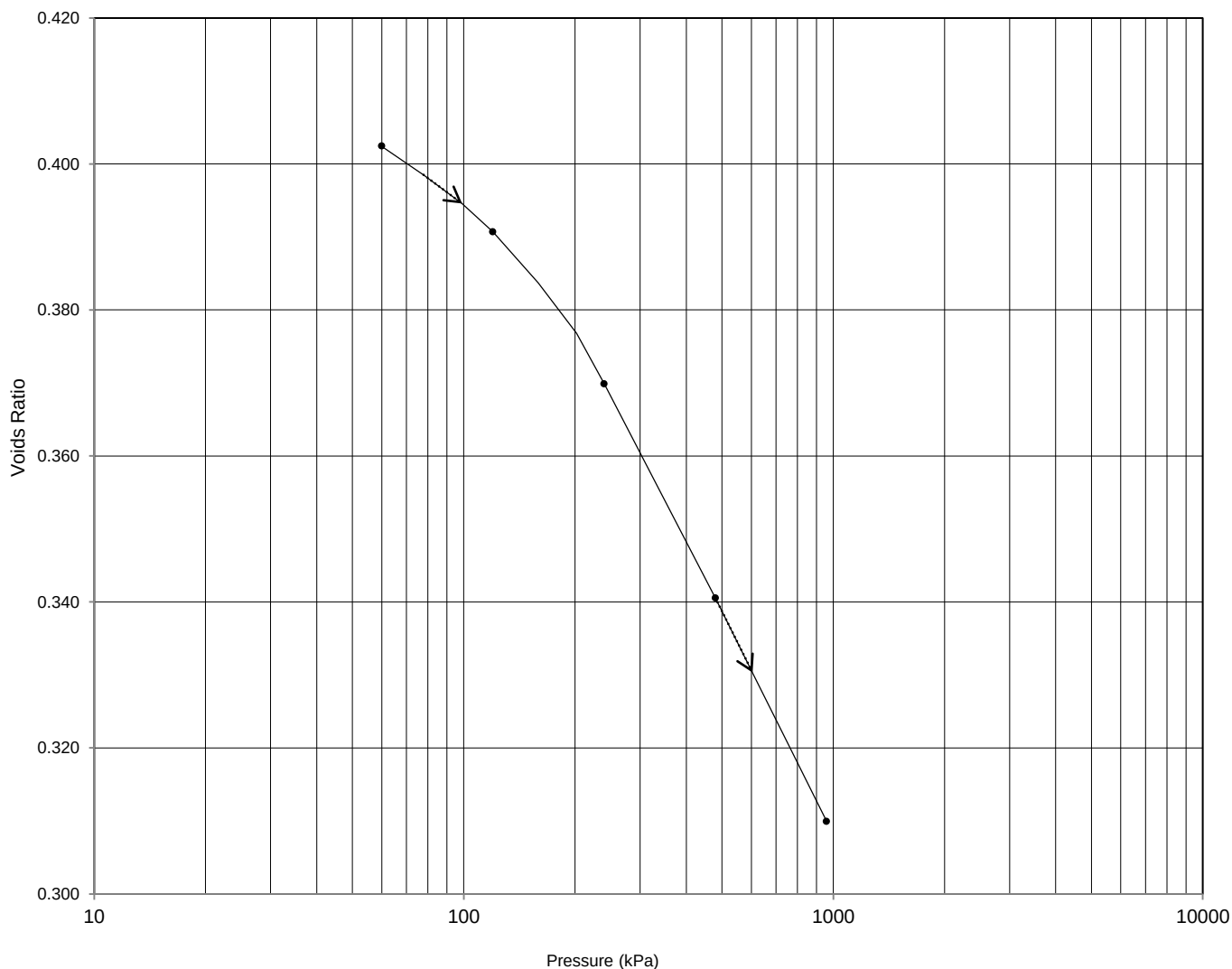
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INCREMENTAL LOADING OEDOMETER TEST

Location BH03
 Sample Ref. U1
 Depth (m) 3.00
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Firm brown sandy CLAY with some fine to coarse gravel.



Initial Conditions:

Height	(mm)	18.88	Water Content	(%)	14.2	(from trimmings)
Diameter	(mm)	69.80	Voids Ratio		0.415	
Area	(mm ²)	3826	Bulk Density	(Mg/m ³)	2.16	
Volume	(cm ³)	72.24	Dry Density	(Mg/m ³)	1.89	
Laboratory Temperature	(°C)	21.0	Particle density	(Mg/m ³)	2.68 (Assumed)	
			Degree of Saturation	(%)	91.9	

Results have been corrected for equipment deformation

Checked and Approved by

J A Reynolds

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



INCREMENTAL LOADING OEDOMETER TEST

Location BH03
 Sample Ref. U1
 Depth (m) 3.00
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Firm brown sandy CLAY with some fine to coarse gravel.

Pressure Range (kPa)	m_v (m ² /MN)	c_v (m ² /year)	Time Fitting		Voids Ratio
			Method	minutes	
0 - 60	0.14	22	t50	0.416	0.402
60 - 120	0.14	2.7	t50	3.32	0.391
120 - 240	0.12	1.8	t50	4.92	0.370
240 - 480	0.089	1.4	t50	6.17	0.341
480 - 960	0.048	1.6	t50	5.10	0.310

Checked and Approved by



J A Reynolds - Director
06/10/2023

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**LAND NORTH OF NORMANDY WAY, HINCKLEY,
LEICESTERSHIRE**

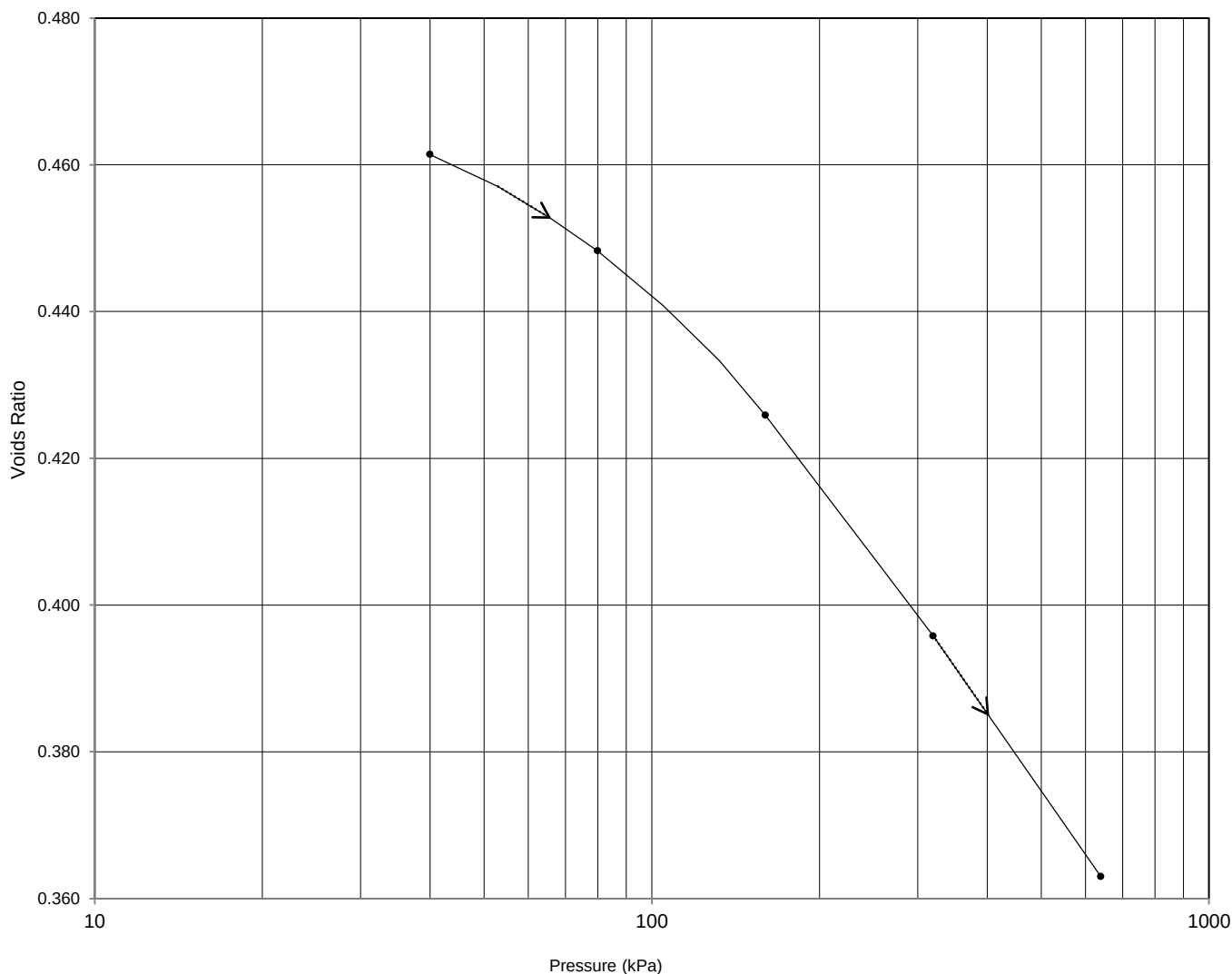
GEOLABS

INCREMENTAL LOADING OEDOMETER TEST

Location BH04
 Sample Ref. U1
 Depth (m) 2.00
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Soft to firm brown very sandy CLAY with some fine to medium gravel.



Initial Conditions:

Height	(mm)	20.06	Water Content	(%)	17.8	(from trimmings)
Diameter	(mm)	74.99	Voids Ratio		0.472	
Area	(mm ²)	4417	Bulk Density	(Mg/m ³)	2.12	
Volume	(cm ³)	88.60	Dry Density	(Mg/m ³)	1.80	
Laboratory Temperature	(°C)	21.0	Particle density	(Mg/m ³)	2.65 (Assumed)	
			Degree of Saturation	(%)	100.0	

Results have been corrected for equipment deformation

Checked and Approved by

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



INCREMENTAL LOADING OEDOMETER TEST

Location BH04
 Sample Ref. U1
 Depth (m) 2.00
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Soft to firm brown very sandy CLAY with some fine to medium gravel.

Pressure Range (kPa)	m_v (m ² /MN)	c_v (m ² /year)	Time Fitting		Voids Ratio
			Method	minutes	
0 - 40	0.18	9.7	t50	1.07	0.461
40 - 80	0.22	1.5	t50	6.76	0.448
80 - 160	0.19	1.3	t50	7.92	0.426
160 - 320	0.13	1.2	t50	7.79	0.396
320 - 640	0.073	1.4	t50	6.62	0.363

Checked and Approved by



J A Reynolds - Director
06/10/2023

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28047**

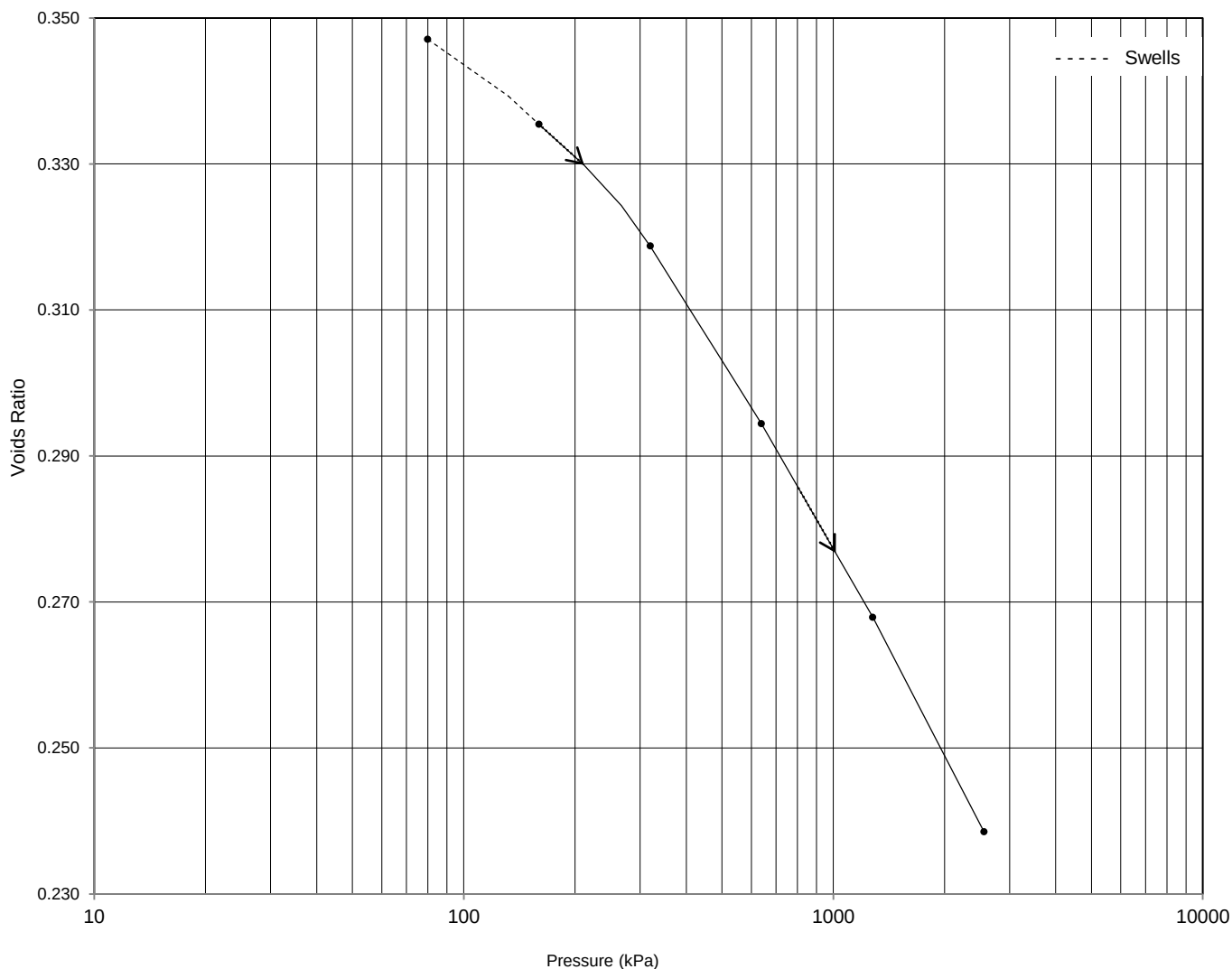
GEOLABS

INCREMENTAL LOADING OEDOMETER TEST

Location BH04
 Sample Ref. U2
 Depth (m) 4.00
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Firm to stiff brown sandy CLAY with some fine to medium gravel.



Initial Conditions:

Height	(mm)	20.03	Water Content	(%)	12.9	(from trimmings)
Diameter	(mm)	74.83	Voids Ratio		0.354	
Area	(mm ²)	4398	Bulk Density	(Mg/m ³)	2.21	
Volume	(cm ³)	88.09	Dry Density	(Mg/m ³)	1.96	
Laboratory Temperature	(°C)	21.0	Particle density	(Mg/m ³)	2.65 (Assumed)	
			Degree of Saturation	(%)	96.3	

Results have been corrected for equipment deformation

Checked and Approved by

J A Reynolds

J A Reynolds - Director
06/10/2023

Project Number:

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Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047**

GEOLABS



INCREMENTAL LOADING OEDOMETER TEST

Location BH04
 Sample Ref. U2
 Depth (m) 4.00
 Sample Type U
 Orientation within original Vertical
 Specimen preparation Undisturbed

Description:

Firm to stiff brown sandy CLAY with some fine to medium gravel.

Pressure Range (kPa)	m_v (m ² /MN)	c_v (m ² /year)	Time Fitting		Voids Ratio
			Method	minutes	
0 - 80	-	Specimen swelled	-	-	0.347
80 - 160	0.11	582	t90	0.0751	0.335
160 - 320	0.078	6.4	t50	1.56	0.319
320 - 640	0.058	3.4	t50	2.83	0.294
640 - 1280	0.032	2.3	t50	4.11	0.268
1280 - 2560	0.018	2.2	t50	4.04	0.238

Checked and Approved by



J A Reynolds - Director
06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY,
LEICESTERSHIRE**

GEOLABS

UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION

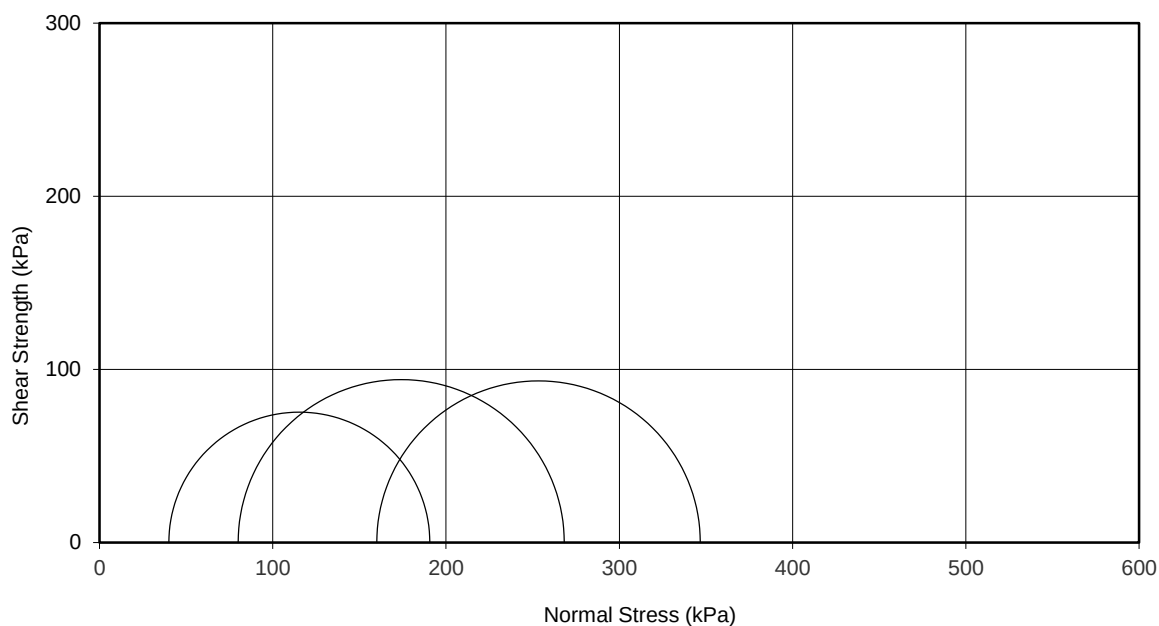
Location BH01
 Depth (m) 2.00-2.45
 Sample Type U

Description:

Firm brown CLAY.

Remarks : Insufficient sample for multistage test.

Orientation of the sample	Vertical	Vertical	Vertical
Distance from top of tube mm	72	72	72
Specimen conditions	Undisturbed	Undisturbed	Undisturbed
Length (mm)	75.4	75.6	75.5
Diameter (mm)	37.8	37.6	37.6
Moisture Content (%)	25.2	25.4	25.6
Bulk Density (Mg/m ³)	2.02	2.02	2.00
Dry Density (Mg/m ³)	1.62	1.61	1.59
Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Membrane correction (kPa)	1.7	2.0	2.6
Axial displacement rate (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	40	80	160
Strain at failure (%)	9.3	11.3	16.6
Maximum deviator stress (kPa)	151	188	187
Shear stress Cu (kPa)	75	94	93
Mode of failure			



Checked and Approved by:



J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047



UNCONSOLIDATED UNDRAINED MULTISTAGE TRIAXIAL COMPRESSION

Location BH01
Depth (m) 4.00-4.45
Sample Type U

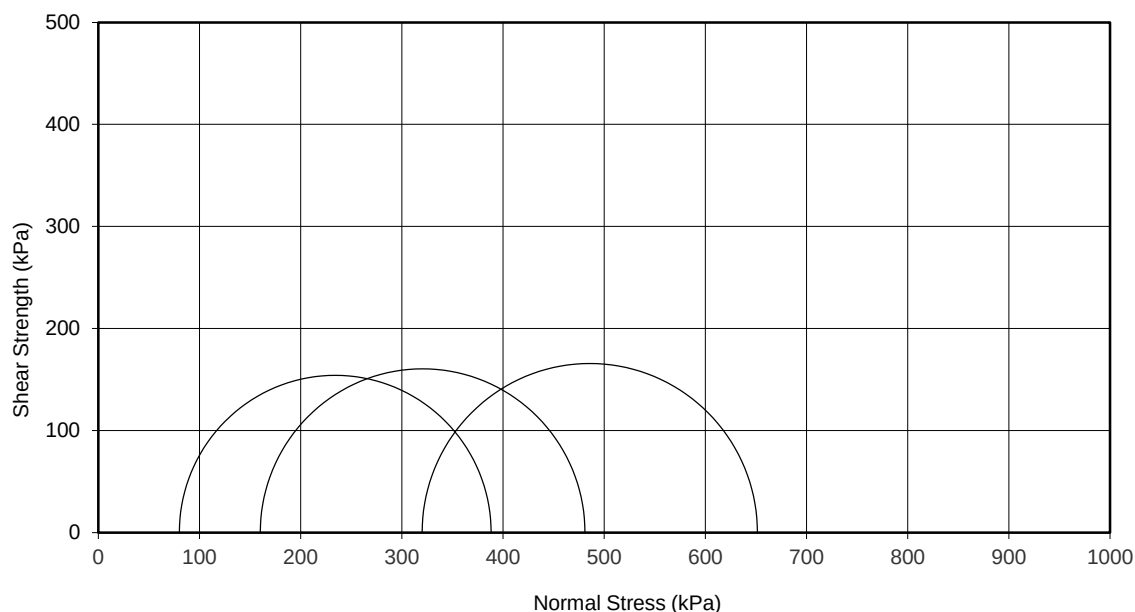
Description:
Firm brown CLAY.

Specimen Details

Specimen conditions	Undisturbed			
Length (mm)	202.3			
Diameter (mm)	102.6			
Water content (%)	22.7			
Bulk density (Mg/m ³)	2.06			
Dry density (Mg/m ³)	1.68			
Test Details	1	2	3	
Latex membrane thickness (mm)	0.3	0.3	0.3	
Specimen height prior to shearing (mm)	202.2	-	-	
Membrane correction (kPa)	0.6	0.7	0.9	
Mean rate of shear (%/min)	2.0	2.0	2.0	
Cell pressure (kPa)	80	160	320	
Strain at failure (%)	9.4	11.4	14.3	
Maximum deviator stress (kPa)	308	321	331	
Shear Stress Cu (kPa)	154	160	166	

Mode of failure

Orientation of the sample	Vertical
Distance from top of tube mm	80



Tested by DF
Checked and Approved by

J A Reynolds

J A Reynolds - Director
06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047**



UNCONSOLIDATED UNDRAINED MULTISTAGE TRIAXIAL COMPRESSION

Location BH01
Depth (m) 9.50-9.95
Sample Type U

Description:

Firm brown CLAY

Specimen Details

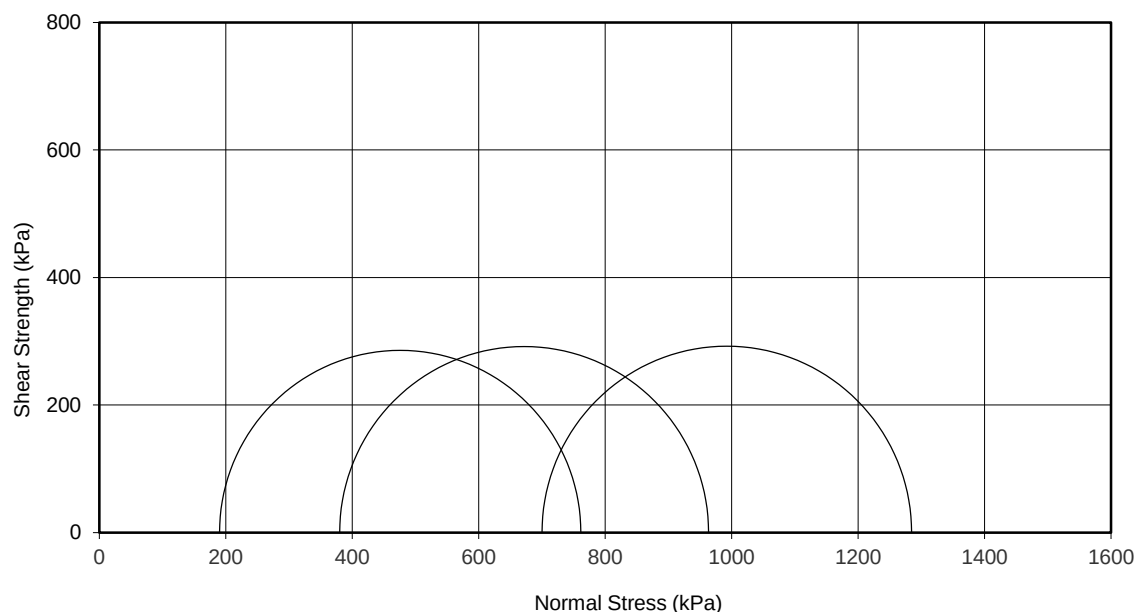
Specimen conditions	Undisturbed		
Length (mm)	202.2		
Diameter (mm)	102.9		
Water content (%)	19.7		
Bulk density (Mg/m ³)	2.12		
Dry density (Mg/m ³)	1.77		
Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Specimen height prior to shearing (mm)	202.2	-	-
Membrane correction (kPa)	0.8	0.8	1.0
Mean rate of shear (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	190	380	700
Strain at failure (%)	11.9	13.8	16.3
Maximum deviator stress (kPa)	571	583	584
Shear Stress Cu (kPa)	286	292	292

Mode of failure

Orientation of the sample

Vertical

Distance from top of tube mm



Tested by DF
Checked and Approved by

J A Reynolds - Director
06/10/2023

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28047**



UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION

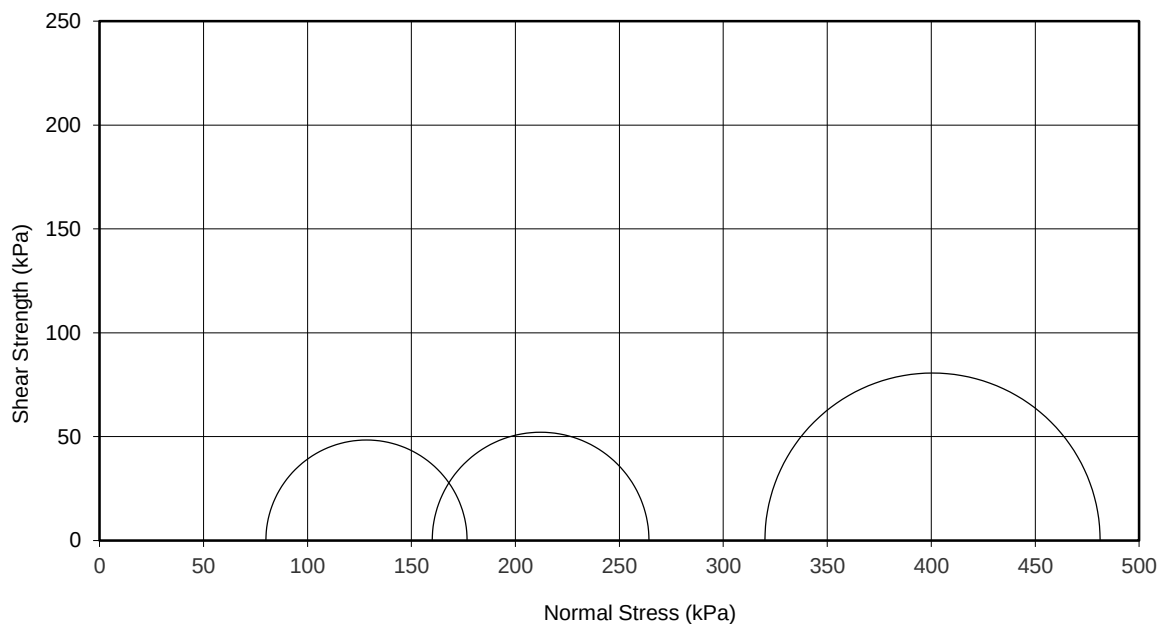
Location BH02
 Depth (m) 4.00-4.45
 Sample Type U

Description:

Firm brown sandy CLAY.

Remarks : Insufficient samples for multistage test.

Orientation of the sample	Vertical	Vertical	Vertical
Distance from top of tube mm	42	42	42
Specimen conditions	Undisturbed	Undisturbed	Undisturbed
Length (mm)	75.4	75.7	75.3
Diameter (mm)	38.0	38.0	37.7
Moisture Content (%)	24.8	25.6	24.6
Bulk Density (Mg/m ³)	2.02	2.01	2.02
Dry Density (Mg/m ³)	1.62	1.60	1.62
Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Membrane correction (kPa)	3.1	2.6	2.6
Axial displacement rate (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	80	160	320
Strain at failure (%)	20.5	16.6	16.6
Maximum deviator stress (kPa)	97	104	161
Shear stress Cu (kPa)	48	52	81
Mode of failure			



Checked and Approved by:



J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



UNCONSOLIDATED UNDRAINED MULTISTAGE TRIAXIAL COMPRESSION

Location BH02
Depth (m) 6.50-6.95
Sample Type U

Description:

Firm brown CLAY.

Specimen Details

Specimen conditions	Undisturbed		
Length (mm)	202.1		
Diameter (mm)	102.9		
Water content (%)	22.1		
Bulk density (Mg/m ³)	2.08		
Dry density (Mg/m ³)	1.70		
Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Specimen height prior to shearing (mm)	202.1	-	-
Membrane correction (kPa)	0.7	0.8	0.8
Mean rate of shear (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	130	260	520
Strain at failure (%)	10.4	11.9	13.9
Maximum deviator stress (kPa)	251	257	263
Shear Stress Cu (kPa)	125	128	132

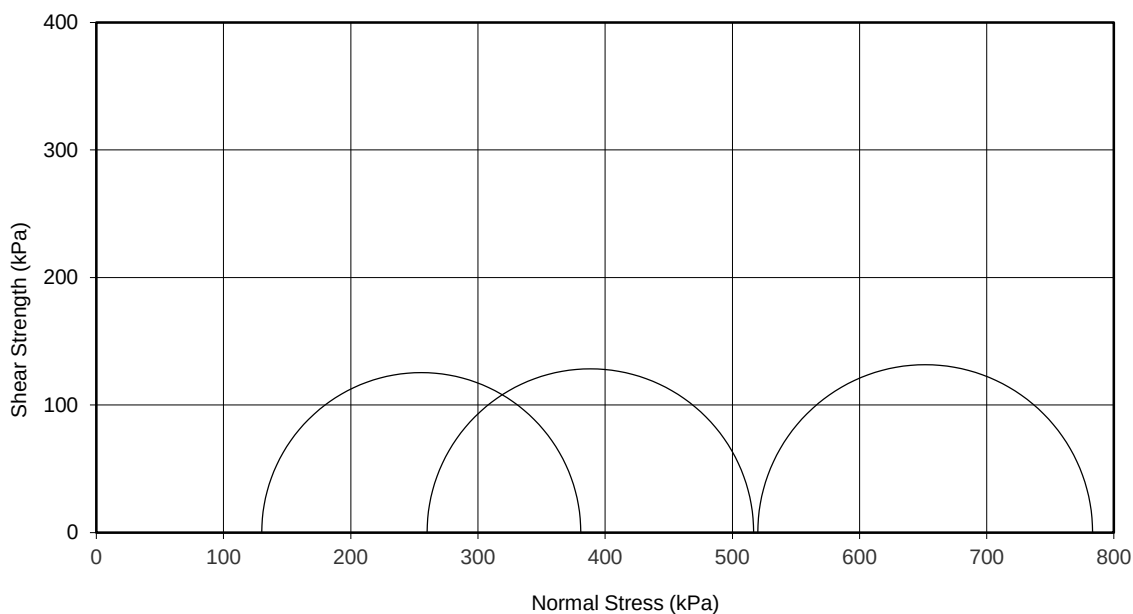
Mode of failure

Orientation of the sample

Vertical

Distance from top of tube mm

60



Tested by DF
Checked and Approved by

J A Reynolds - Director
06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
28047**



UNCONSOLIDATED UNDRAINED MULTISTAGE TRIAXIAL COMPRESSION

Location BH02
Depth (m) 9.50-9.95
Sample Type U

Description:

Firm brown sandy CLAY.

Specimen Details

Specimen conditions	Undisturbed		
Length (mm)	202.4		
Diameter (mm)	103.5		
Water content (%)	22.0		
Bulk density (Mg/m ³)	2.04		
Dry density (Mg/m ³)	1.68		
Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Specimen height prior to shearing (mm)	202.3	-	-
Membrane correction (kPa)	0.7	0.7	1.1
Mean rate of shear (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	190	380	700
Strain at failure (%)	10.4	11.9	19.8
Maximum deviator stress (kPa)	150	165	181
Shear Stress Cu (kPa)	75	83	91

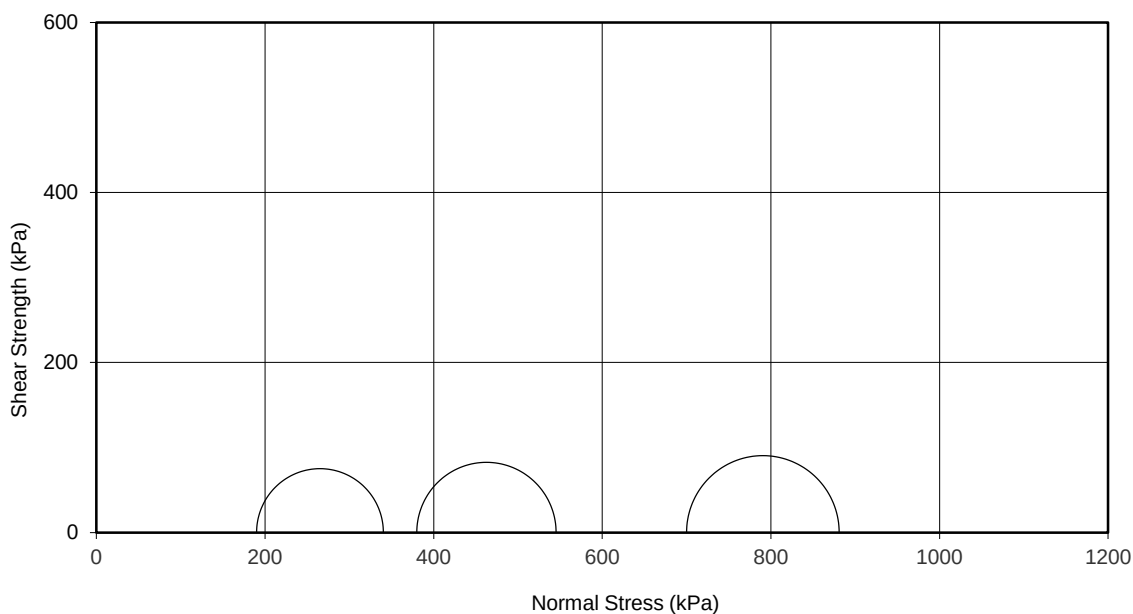
Mode of failure

Orientation of the sample

Vertical

Distance from top of tube mm

70



Tested by DF
Checked and Approved by

J A Reynolds - Director
12/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
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UNCONSOLIDATED UNDRAINED MULTISTAGE TRIAXIAL COMPRESSION

Location BH03
 Sample Ref U1
 Depth (m) 3.00
 Sample Type U

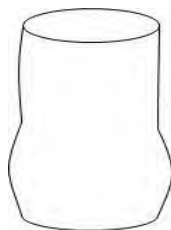
Description:

Firm brown sandy CLAY with some fine to coarse gravel.

Specimen Details

Specimen conditions	Undisturbed
Length (mm)	202.5
Diameter (mm)	102.6
Water content (%)	13.9
Bulk density (Mg/m ³)	2.19
Dry density (Mg/m ³)	1.92

Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Specimen height prior to shearing (mm)	202.4	-	-
Membrane correction (kPa)	0.8	1.0	1.1
Mean rate of shear (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	60	120	240
Strain at failure (%)	11.9	16.3	19.8
Maximum deviator stress (kPa)	240	265	283
Shear Stress Cu (kPa)	120	133	142

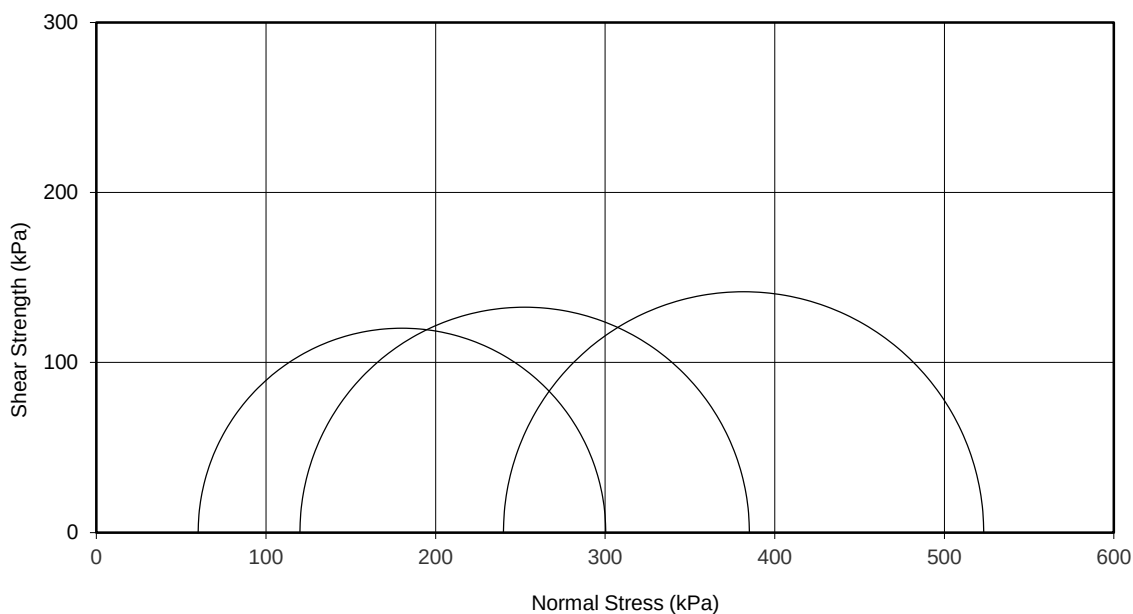
Mode of failure

Orientation of the sample

Vertical

Distance from top of tube mm

120



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 06/10/2023

Project Number:

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Project Name:

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UNCONSOLIDATED UNDRAINED MULTISTAGE TRIAXIAL COMPRESSION

Location BH03
 Sample Ref U2
 Depth (m) 5.10
 Sample Type U

Description:

Firm brown sandy CLAY with some fine to coarse gravel.

Specimen Details

Specimen conditions	Undisturbed
Length (mm)	202.3
Diameter (mm)	102.5
Water content (%)	13.1
Bulk density (Mg/m ³)	2.15
Dry density (Mg/m ³)	1.90

Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Specimen height prior to shearing (mm)	202.3	-	-
Membrane correction (kPa)	0.8	1.0	1.1
Mean rate of shear (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	100	200	400
Strain at failure (%)	11.9	17.3	19.8
Maximum deviator stress (kPa)	228	261	274
Shear Stress Cu (kPa)	114	131	137

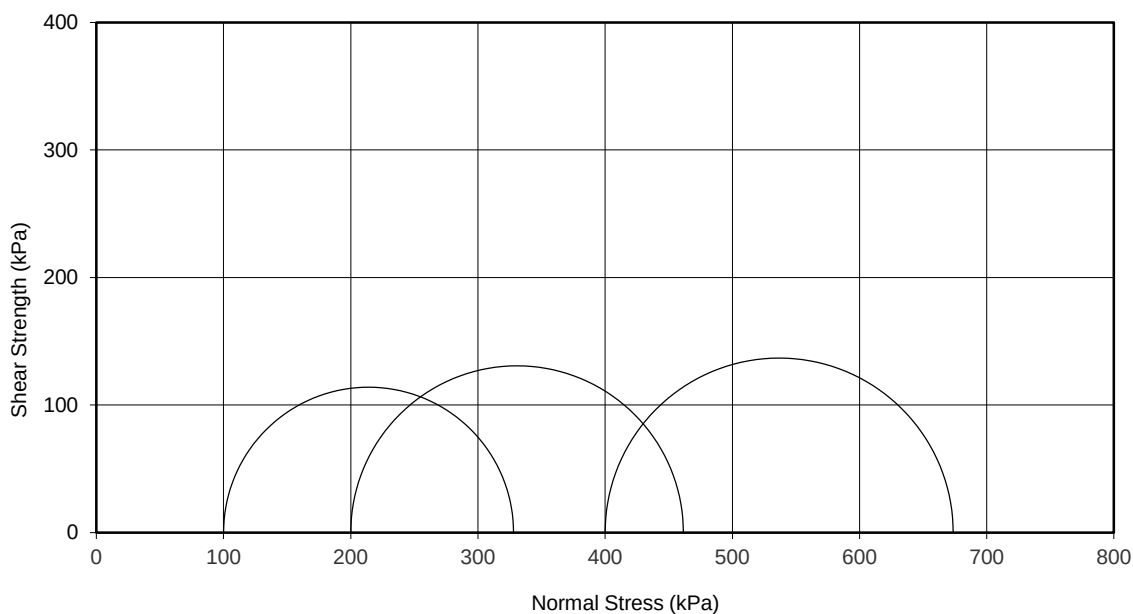
Mode of failure

Orientation of the sample

Vertical

Distance from top of tube mm

40



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J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



UNCONSOLIDATED UNDRAINED MULTISTAGE TRIAXIAL COMPRESSION

Location BH04
 Sample Ref U3
 Depth (m) 5.10
 Sample Type U

Description:

Firm brown sandy CLAY with some fine to coarse gravel.

Specimen Details

Specimen conditions	Undisturbed
Length (mm)	202.4
Diameter (mm)	102.4
Water content (%)	13.2
Bulk density (Mg/m ³)	2.23
Dry density (Mg/m ³)	1.97

Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Specimen height prior to shearing (mm)	202.4	-	-
Membrane correction (kPa)	0.9	1.0	1.1
Mean rate of shear (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	100	200	400
Strain at failure (%)	15.8	17.8	19.8
Maximum deviator stress (kPa)	227	239	256
Shear Stress Cu (kPa)	114	120	128

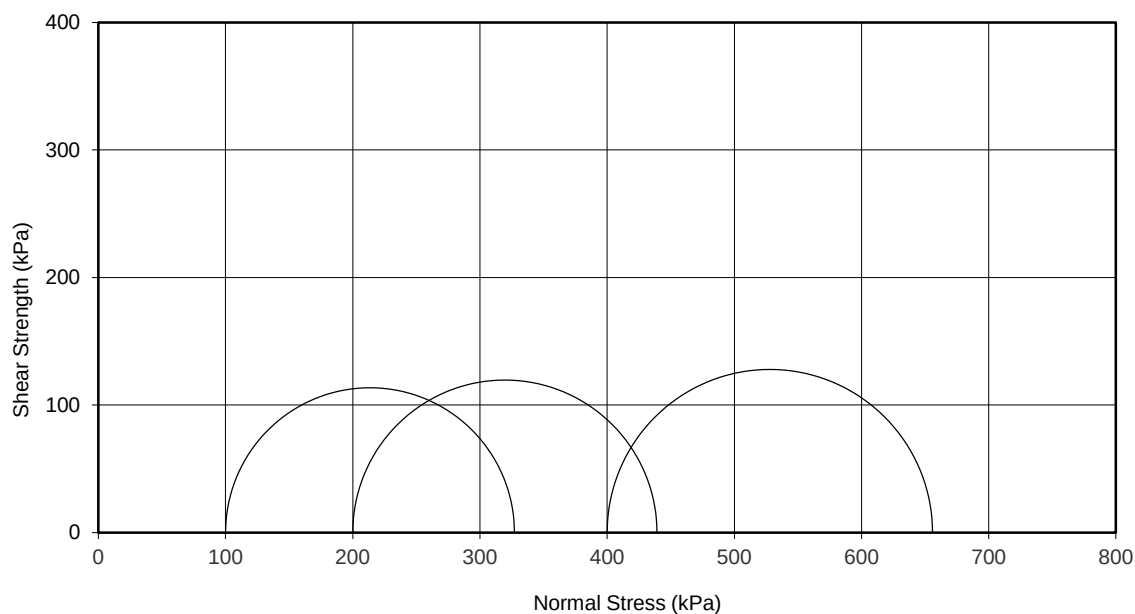
Mode of failure

Orientation of the sample

Vertical

Distance from top of tube mm

54



Tested by DF
 Checked and Approved by

J A Reynolds

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**



UNCONSOLIDATED UNDRAINED MULTISTAGE TRIAXIAL COMPRESSION

Location BH04
 Sample Ref U4
 Depth (m) 8.00
 Sample Type U

Description:

Firm brown CLAY.

Specimen Details

Specimen conditions	Undisturbed
Length (mm)	202.2
Diameter (mm)	102.9
Water content (%)	19.8
Bulk density (Mg/m ³)	2.11
Dry density (Mg/m ³)	1.76

Test Details	1	2	3
Latex membrane thickness (mm)	0.3	0.3	0.3
Specimen height prior to shearing (mm)	202.2	-	-
Membrane correction (kPa)	0.8	0.9	1.1
Mean rate of shear (%/min)	2.0	2.0	2.0
Cell pressure (kPa)	160	320	640
Strain at failure (%)	12.4	15.8	19.8
Maximum deviator stress (kPa)	324	353	380
Shear Stress Cu (kPa)	162	176	190

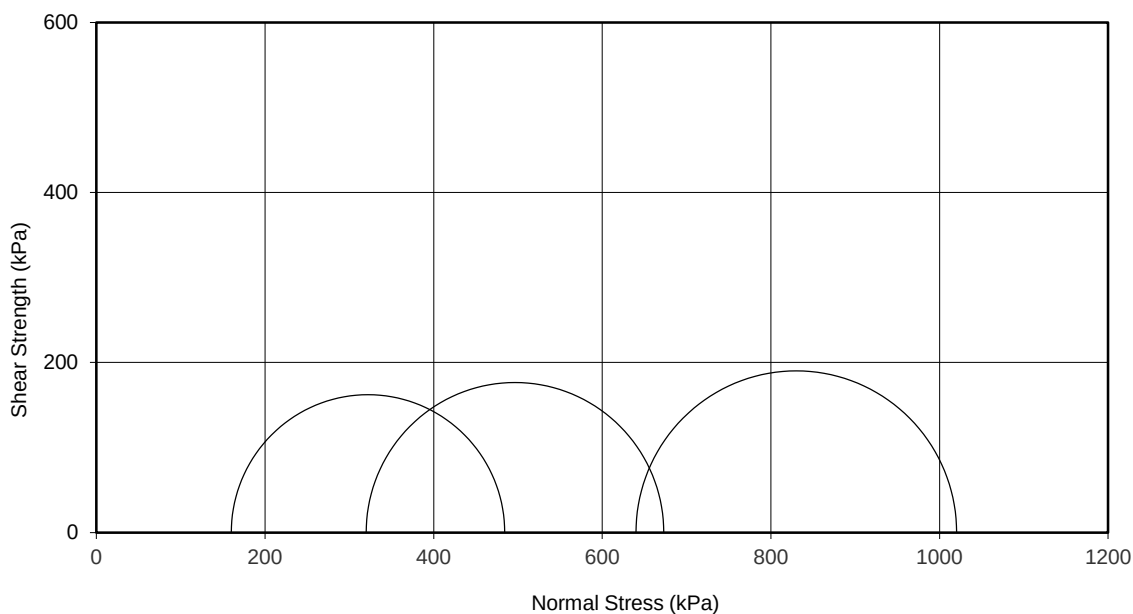
Mode of failure

Orientation of the sample

Vertical

Distance from top of tube mm

42



Tested by DF
 Checked and Approved by

J A Reynolds - Director
 06/10/2023

Project Number:

GEO / 38867

Project Name:

**LAND NORTH OF NORMANDY WAY, HINCKLEY, LEICESTERSHIRE
 28047**





MEC

Development Technical
Consultants

APPENDICES



APPENDIX D



Chris Wall
Mewies Engineering Consultants
The Old Chapel
Station Road
Hogglescote
Leicestershire
LE67 2GB



Derwentside Environmental Testing Services Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 23-11510

Site Reference: Land North of Normandy Way, Hinkley

Project / Job Ref: 28047

Order No: POP006482

Sample Receipt Date: 07/09/2023

Sample Scheduled Date: 12/09/2023

Report Issue Number: 1

Reporting Date: 19/09/2023

Authorised by:

Dave Ashworth
Technical Manager

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

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Soil Analysis Certificate						
DETS Report No: 23-11510	Date Sampled	04/09/23	04/09/23	04/09/23	04/09/23	04/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	WS01	WS01	WS03	WS05	WS06
Project / Job Ref: 28047	Additional Refs	ES	ES	ES	ES	ES
Order No: POP006482	Depth (m)	0.15	0.50	0.20	0.20	0.10
Reporting Date: 19/09/2023	DETS Sample No	674420	674421	674422	674423	674424

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected				
pH	pH Units	N/a	MCERTS	6.3	6.8	6.3	6.6	6.9
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS					
Total Sulphate as SO ₄	%	< 0.02	MCERTS					
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	13	12	< 10	16	< 10
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.01	0.01	< 0.01	0.02	< 0.01
Total Sulphur	%	< 0.02	NONE					
Organic Matter (SOM)	%	< 0.1	MCERTS	6.4	1.7	2.8	3.4	4.5
Arsenic (As)	mg/kg	< 2	MCERTS	10	6	12	7	11
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.3	< 0.2	0.3	0.2	0.3
Chromium (Cr)	mg/kg	< 2	MCERTS	17	18	16	12	17
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	15	10	18	16	23
Lead (Pb)	mg/kg	< 3	MCERTS	47	18	30	31	33
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	13	12	16	11	15
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	27	25	29	20	29
Zinc (Zn)	mg/kg	< 3	MCERTS	57	42	69	58	67
Total Phenols (monohydric)	mg/kg	< 2	NONE	2.8	< 2	< 2	< 2	2.2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



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Soil Analysis Certificate						
DETS Report No: 23-11510	Date Sampled	04/09/23	05/09/23	05/09/23	05/09/23	05/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	WS07	WS07	WS08	WS09	WS10
Project / Job Ref: 28047	Additional Refs	ES	D	ES	ES	ES
Order No: POP006482	Depth (m)	0.15	0.80	0.20	0.20	0.10
Reporting Date: 19/09/2023	DETS Sample No	674425	674426	674427	674428	674429

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025					
pH	pH Units	N/a	MCERTS	7.0	7.7	6.8	7.1	6.3
Total Cyanide	mg/kg	< 1	NONE	< 1		1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1		1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1		< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS		447			
Total Sulphate as SO ₄	%	< 0.02	MCERTS		0.04			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	29	106	16	< 10	11
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.03	0.11	0.02	< 0.01	0.01
Total Sulphur	%	< 0.02	NONE		< 0.02			
Organic Matter (SOM)	%	< 0.1	MCERTS	4.8		5.1	3.6	2.9
Arsenic (As)	mg/kg	< 2	MCERTS	10		12	11	7
W/S Boron	mg/kg	< 1	NONE	< 1		1.2	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.3		0.3	0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	18		24	24	14
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	21		24	18	13
Lead (Pb)	mg/kg	< 3	MCERTS	54		46	29	32
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1		< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	15		19	18	11
Selenium (Se)	mg/kg	< 2	MCERTS	< 2		< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	30		38	39	21
Zinc (Zn)	mg/kg	< 3	MCERTS	62		80	72	48
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		2.2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)



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Soil Analysis Certificate						
DETS Report No: 23-11510	Date Sampled	06/09/23	06/09/23	04/09/23	04/09/23	04/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	WS14	WS14	TP01	TP04	TP06
Project / Job Ref: 28047	Additional Refs	ES	ES	D1	D2	D1
Order No: POP006482	Depth (m)	0.30	0.50	0.80	1.80	0.90
Reporting Date: 19/09/2023	DETS Sample No	674430	674431	674433	674434	674435

Determinand	Unit	RL	Accreditation	(n)				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected				
pH	pH Units	N/a	MCERTS	8.6	8.0	7.3	7.8	8.0
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1			
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS			570	1248	448
Total Sulphate as SO ₄	%	< 0.02	MCERTS			0.06	0.12	0.04
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	370	354	61	173	26
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.37	0.35	0.06	0.17	0.03
Total Sulphur	%	< 0.02	NONE			0.03	0.28	0.02
Organic Matter (SOM)	%	< 0.1	MCERTS	4.9	0.9			
Arsenic (As)	mg/kg	< 2	MCERTS	13	13			
W/S Boron	mg/kg	< 1	NONE	< 1	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.4	< 0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS	11	17			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	18	10			
Lead (Pb)	mg/kg	< 3	MCERTS	21	14			
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	16	21			
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2			
Vanadium (V)	mg/kg	< 1	MCERTS	24	25			
Zinc (Zn)	mg/kg	< 3	MCERTS	78	46			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



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Soil Analysis Certificate						
DETS Report No: 23-11510	Date Sampled	04/09/23	04/09/23	04/09/23	05/09/23	05/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	TP07	TP09	TP10	TP16	TP17
Project / Job Ref: 28047	Additional Refs	ES101	D1	ES101	D1	D1
Order No: POP006482	Depth (m)	0.30	1.00	0.20	0.60	1.00
Reporting Date: 19/09/2023	DETS Sample No	674436	674437	674438	674439	674440

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected		Not Detected		
pH	pH Units	N/a	MCERTS	6.5	7.7	7.3	6.7	7.5
Total Cyanide	mg/kg	< 1	NONE	< 1		< 1		
Complex Cyanide	mg/kg	< 1	NONE	< 1		< 1		
Free Cyanide	mg/kg	< 1	NONE	< 1		< 1		
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS		373		244	225
Total Sulphate as SO ₄	%	< 0.02	MCERTS		0.04		0.02	0.02
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	60	25	13	12
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.06	0.02	0.01	0.01
Total Sulphur	%	< 0.02	NONE		< 0.02		< 0.02	< 0.02
Organic Matter (SOM)	%	< 0.1	MCERTS	1.3		4.8		
Arsenic (As)	mg/kg	< 2	MCERTS	18		12		
W/S Boron	mg/kg	< 1	NONE	< 1		< 1		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.5		0.3		
Chromium (Cr)	mg/kg	< 2	MCERTS	15		25		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2		
Copper (Cu)	mg/kg	< 4	MCERTS	22		23		
Lead (Pb)	mg/kg	< 3	MCERTS	19		47		
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1		< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS	25		19		
Selenium (Se)	mg/kg	< 2	MCERTS	< 2		< 2		
Vanadium (V)	mg/kg	< 1	MCERTS	34		40		
Zinc (Zn)	mg/kg	< 3	MCERTS	98		80		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		< 2		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)



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Soil Analysis Certificate

DETS Report No: 23-11510	Date Sampled	05/09/23	05/09/23	05/09/23		
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	TP19	TP20	TP24		
Project / Job Ref: 28047	Additional Refs	ES101	ES101	ES101		
Order No: POP006482	Depth (m)	0.10	0.10	0.10		
Reporting Date: 19/09/2023	DETS Sample No	674441	674442	674443		

Determinand	Unit	RL	Accreditation	(n)				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected			
pH	pH Units	N/a	MCERTS	6.6	7.5	7.0		
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS					
Total Sulphate as SO ₄	%	< 0.02	MCERTS					
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	193	29		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.19	0.03		
Total Sulphur	%	< 0.02	NONE					
Organic Matter (SOM)	%	< 0.1	MCERTS	2.3	5.9	4.2		
Arsenic (As)	mg/kg	< 2	MCERTS	6	11	11		
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	0.5	0.3		
Chromium (Cr)	mg/kg	< 2	MCERTS	12	18	21		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		
Copper (Cu)	mg/kg	< 4	MCERTS	11	46	23		
Lead (Pb)	mg/kg	< 3	MCERTS	22	123	51		
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS	10	16	17		
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Vanadium (V)	mg/kg	< 1	MCERTS	19	30	33		
Zinc (Zn)	mg/kg	< 3	MCERTS	48	229	72		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-11510	Date Sampled	04/09/23	04/09/23	04/09/23	04/09/23	04/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	WS01	WS01	WS03	WS05	WS06
Project / Job Ref: 28047	Additional Refs	ES	ES	ES	ES	ES
Order No: POP006482	Depth (m)	0.15	0.50	0.20	0.20	0.10
Reporting Date: 19/09/2023	DETS Sample No	674420	674421	674422	674423	674424

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-11510	Date Sampled	04/09/23	05/09/23	05/09/23	05/09/23	06/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	WS07	WS08	WS09	WS10	WS14
Project / Job Ref: 28047	Additional Refs	ES	ES	ES	ES	ES
Order No: POP006482	Depth (m)	0.15	0.20	0.20	0.10	0.30
Reporting Date: 19/09/2023	DETS Sample No	674425	674427	674428	674429	674430

Determinand	Unit	RL	Accreditation	(n)				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.23
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.13	0.16	0.12	< 0.1	0.37
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.13	0.12	< 0.1	0.37
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.18
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.20
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.14	< 0.1	0.30
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.13
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.30
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.19
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.19
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	2.5



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-11510	Date Sampled	06/09/23	04/09/23	04/09/23	05/09/23	05/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	WS14	TP07	TP10	TP19	TP20
Project / Job Ref: 28047	Additional Refs	ES	ES101	ES101	ES101	ES101
Order No: POP006482	Depth (m)	0.50	0.30	0.20	0.10	0.10
Reporting Date: 19/09/2023	DETS Sample No	674431	674436	674438	674441	674442

Determinand	Unit	RL	Accreditation	(n)				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.12
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.18
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.14
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.11
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.14
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-11510	Date Sampled	05/09/23				
Mewies Engineering Consultants	Time Sampled	None Supplied				
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	TP24				
Project / Job Ref: 28047	Additional Refs	ES101				
Order No: POP006482	Depth (m)	0.10				
Reporting Date: 19/09/2023	DETS Sample No	674443				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	0.14			
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6			



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Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 23-11510	Date Sampled	04/09/23	06/09/23	06/09/23	04/09/23	04/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	WS01	WS14	WS14	TP07	TP10
Project / Job Ref: 28047	Additional Refs	ES	ES	ES	ES101	ES101
Order No: POP006482	Depth (m)	0.50	0.30	0.50	0.30	0.20
Reporting Date: 19/09/2023	DETS Sample No	674421	674430	674431	674436	674438

Determinand	Unit	RL	Accreditation	(n)					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	31	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	31	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	27	< 10	< 10	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	27	< 21	< 21	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	58	< 42	< 42	< 42	< 42

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



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Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 23-11510	Date Sampled	05/09/23				
Mewies Engineering Consultants	Time Sampled	None Supplied				
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	TP20				
Project / Job Ref: 28047	Additional Refs	ES101				
Order No: POP006482	Depth (m)	0.10				
Reporting Date: 19/09/2023	DETS Sample No	674442				

Determinand	Unit	RL	Accreditation	(n)				
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01				
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05				
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2				
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2				
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3				
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3				
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10				
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21				
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01				
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05				
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2				
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2				
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2				
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3				
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10				
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21				
Total >C5 - C35	mg/kg	< 42	NONE	< 42				



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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-11510	Date Sampled	04/09/23	06/09/23	06/09/23	04/09/23	04/09/23
Mewies Engineering Consultants	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	WS01	WS14	WS14	TP07	TP10
Project / Job Ref: 28047	Additional Refs	ES	ES	ES	ES101	ES101
Order No: POP006482	Depth (m)	0.50	0.30	0.50	0.30	0.20
Reporting Date: 19/09/2023	DETS Sample No	674421	674430	674431	674436	674438

Determinand	Unit	RL	Accreditation	(n)				
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-11510	Date Sampled	05/09/23				
Mewies Engineering Consultants	Time Sampled	None Supplied				
Site Reference: Land North of Normandy Way, Hinkley	TP / BH No	TP20				
Project / Job Ref: 28047	Additional Refs	ES101				
Order No: POP006482	Depth (m)	0.10				
Reporting Date: 19/09/2023	DETS Sample No	674442				

Determinand	Unit	RL	Accreditation	(n)				
Benzene	ug/kg	< 2	MCERTS	< 2				
Toluene	ug/kg	< 5	MCERTS	< 5				
Ethylbenzene	ug/kg	< 2	MCERTS	< 2				
p & m-xylene	ug/kg	< 2	MCERTS	< 2				
o-xylene	ug/kg	< 2	MCERTS	< 2				
MTBE	ug/kg	< 5	MCERTS	< 5				



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Soil Analysis Certificate - Sample Descriptions

DETS Report No: 23-11510

Mewies Engineering Consultants

Site Reference: Land North of Normandy Way, Hinkley

Project / Job Ref: 28047

Order No: POP006482

Reporting Date: 19/09/2023

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
674420	WS01	ES	0.15	23.1	Brown sandy clay with vegetation
674421	WS01	ES	0.50	10.5	Brown sandy clay
674422	WS03	ES	0.20	13.3	Brown sandy clay with vegetation
674423	WS05	ES	0.20	15.4	Brown sandy clay
674424	WS06	ES	0.10	14.6	Brown sandy clay with stones and vegetation
674425	WS07	ES	0.15	14.6	Brown sandy clay with stones and vegetation
674426	WS07	D	0.80	6.2	Brown sandy clay with stones
674427	WS08	ES	0.20	16.3	Brown sandy clay with stones and vegetation
674428	WS09	ES	0.20	16.1	Brown sandy clay with stones and vegetation
674429	WS10	ES	0.10	9.2	Brown sandy clay with vegetation
674430	WS14	ES	0.30	6.1	Brown sandy gravel with stones and concrete
674431	WS14	ES	0.50	16	Brown clay
674433	TP01	D1	0.80	19	Brown sandy clay
674434	TP04	D2	1.80	18.2	Brown clay
674435	TP06	D1	0.90	11.2	Light brown sandy clay
674436	TP07	ES101	0.30	9.1	Brown sandy clay with vegetation
674437	TP09	D1	1.00	20	Brown clay
674438	TP10	ES101	0.20	18.4	Brown sandy clay with vegetation
674439	TP16	D1	0.60	8.6	Brown sandy clay with stones
674440	TP17	D1	1.00	10.8	Brown sandy clay
674441	TP19	ES101	0.10	9.1	Brown sandy clay
674442	TP20	ES101	0.10	8.8	Brown sandy gravel with stones and brick
674443	TP24	ES101	0.10	15.8	Brown sandy clay with stones

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

Insufficient Sample ^{1/5}

Unsuitable Sample ^{U/S}



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Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 23-11510

Mewies Engineering Consultants

Site Reference: Land North of Normandy Way, Hinkley

Project / Job Ref: 28047

Order No: POP006482

Reporting Date: 19/09/2023

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

D Dried
AR As Received



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APPENDICES



APPENDIX E

Summary of Contaminant Concentrations Against Generic Assessment Criteria																			
Location ID	Determinant	Units	GAC	WS01	WS01	WS03	WS05	WS06	WS07	WS08	WS09	WS10	WS14	WS14	TP07	TP10	TP19	TP20	TP24
Depth (m bgl)			Residential with Consumption of Homegrown Produce (2.5% SOM)	0.15m	0.50m	0.20m	0.20m	0.10m	0.15m	0.20m	0.20m	0.10m	0.30m	0.50m	0.30m	0.20m	0.10m	0.10m	0.10m
Metals, Metalloids and Non-metals	Soil Organic Matter	%	N/A	6.4	1.7	2.8	3.4	4.5	4.8	5.1	3.6	2.9	4.9	0.9	1.3	4.8	2.3	5.9	4.2
	Arsenic	mg/kg	37	10	6	12	7	11	10	12	11	7	13	13	18	12	6	11	11
	Boron		290	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-
	Cadmium		11	0.3	-	0.3	0.2	0.3	0.3	0.2	-	-	0.4	-	0.5	0.3	-	0.5	0.3
	Chromium III		910	17	18	16	12	17	18	24	24	14	11	17	15	25	12	18	21
	Chromium VI		6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Copper		2,400	15	10	18	16	23	21	24	18	13	18	10	22	23	11	46	23
	Lead		200	47	18	30	31	33	54	46	29	32	21	14	19	47	22	123	51
	Mercury		1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Nickel		130	13	12	16	11	15	15	19	18	11	16	21	25	19	10	16	17
	Selenium		250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Vanadium		410	27	25	29	20	29	30	38	39	21	24	25	34	40	19	30	33
	Zinc		3,700	57	42	69	58	67	62	80	72	48	78	46	98	80	48	229	72
	Asbestos in Soil			Not Detected	NT	NT	NT	NT	NT	NT	NT	NT	Not Detected	NT	Not-Detected	Not Detected	Not Detected	Not Detected	NT
Polycyclic Aromatic Hydrocarbons	Naphthalene	mg/kg	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Acenaphthylene		420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Acenaphthene		510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Fluorene		400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Phenanthrene		220	-	-	-	-	-	-	-	-	-	0.23	-	-	-	-	0.12	-
	Anthracene		5,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Fluoranthene		560	-	-	-	-	-	0.13	0.16	0.12	-	0.37	-	-	-	-	0.18	0.14
	Pyrene		1,200	-	-	-	-	-	-	0.13	0.12	-	0.37	-	-	-	-	0.14	-
	Benzo(a)anthracene		10.9	-	-	-	-	-	-	-	-	-	0.18	-	-	-	-	-	-
	Chrysene		22.39	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	0.11	-
	Benzo(b)fluoranthene		3.30	-	-	-	-	-	-	-	0.14	-	0.3	-	-	-	-	0.14	-
	Benzo(k)fluoranthene		93	-	-	-	-	-	-	-	-	-	0.13	-	-	-	-	-	-
	Benzo(a)pyrene		2.70	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-
	Indeno(1,2,3-cd)pyrene		36	-	-	-	-	-	-	-	-	-	0.19	-	-	-	-	-	-
	Dibenz(a,h) anthracene		0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Benzo(ghi)perylene		340	-	-	-	-	-	-	-	-	-	0.19	-	-	-	-	-	-
Monoaromatics and Oxygenates	Benzene	µg/kg	0.170	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	Toluene		290	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	Ethylbenzene		110	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	p & m-xylene		130	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	o-xylene		140	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
Petroleum Hydrocarbons	TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	78	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aliphatic >EC6 - EC8		230	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aliphatic >EC8 - EC10		65	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aliphatic >EC10 - EC12		330 (118)	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aliphatic >EC12 - EC16		2400 (59)	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aliphatic >EC16 - EC21		92000 (21)	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aliphatic >EC21 - EC35			NT	-	NT	NT	NT	NT	NT	NT	NT	31	-	-	-	NT	-	NT
	TPH-CWG - Aliphatic (EC5 - EC35)		N/A	NT	-	NT	NT	NT	NT	NT	NT	NT	31	-	-	-	NT	-	NT
	TPH-CWG - Aromatic >EC5 - EC7		140	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aromatic >EC7 - EC8		290	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aromatic >EC8 - EC10		83	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aromatic >EC10 - EC12		180	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aromatic >EC12 - EC16		330	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aromatic >EC16 - EC21		540	NT	-	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	NT	-	NT
	TPH-CWG - Aromatic >EC21 - EC35		1,500	NT	-	NT	NT	NT	NT	NT	NT	NT	27	-	-	-	NT	-	NT
	TPH-CWG - Aromatic (EC5 - EC35)		N/A	NT	-	NT	NT	NT	NT	NT	NT	NT	27	-	-	-	NT	-	NT

Key:

N/A No applicable GAC

Not Detected Asbestos Not Detected in Sample

NT Not Tested

- Concentration reported below laboratory method detection limit

0.00 Concentrations exceed the adopted GAC



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APPENDICES



APPENDIX F

GAS AND GROUNDWATER MONITORING

Site:		Land North of Normandy Way, Hinckley
Client:		Richborough Estates Ltd
Job No.:		28047
Date:		13 September 2023
Start / End Time:		08:45 - 10:00
Engineer:		TB
Monitoring Equipment:	Gas Meter ID	12175
	PID ID	2475
	Dip Tape	Blue
	Other	

NR = Not Recorded
Dry = No Groundwater



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Weather Conditions	Start	End
(Dry / Raining)	Dry	Dry
Cloud Cover (Oktas)	2	1
Wind Strength (m/s)		
Wind Direction (from)		
Temperature (°C)	11.0	12.0
Barometric Pressure (mb)	1007	1007
(Rising/ Falling)	Static	
PID - Air	<0.1	<0.1
PID - Calibration Gas		

[illegible]

GAS AND GROUNDWATER MONITORING

Site:	Land North of Normandy Way, Hinckley		
Client:	Richborough Estates Ltd		
Job No.:	28047		
Date:	21 September 2023		
Start / End Time:	07:30 - 13:00		
Engineer:	CC + JK		
Monitoring Equipment:	Gas Meter ID	12175	
	PID ID	2475	
	Dip Tape	Blue	
	Other		

NR = Not Recorded
Dry = No Groundwater



Weather Conditions	Start	End
(Dry / Raining)	Dry	Dry
Cloud Cover (Oktas)	0	2
Wind Strength (m/s)	0.3	<0.1
Wind Direction (from)	NR	NR
Temperature (°C)	10.0	12.0
Barometric Pressure (mb)	988	980
(Rising/ Falling)	Falling	
PID - Air	<0.1	<0.1
PID - Calibration Gas		

[illegible]

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Weather Conditions	Start	End
(Dry / Raining)	Dry	Dry
Cloud Cover (Oktas)	4	4
Wind Strength (m/s)	2.2	1.9
Wind Direction (from)		
Temperature (°C)	20.0	22.0
Barometric Pressure (mb)	1003	1005
(Rising/ Falling)	Rising	
PID - Air	<0.1	<0.1
PID - Calibration Gas		

Site:		Land North of Normandy Way, Hinckley
Client:		Richborough Estates Ltd
Job No.:		28047
Date:		25 September 2023
Start / End Time:		
Engineer:		CC
Monitoring Equipment:	Gas Meter ID	12175
	PID ID	2475
	Dip Tape	Blue
	Other	

[illegible]

GAS AND GROUNDWATER MONITORING

Site:		Land North of Normandy Way, Hinckley
Client:		Richborough Estates Ltd
Job No.:		28047
Date:		03 October 2023
Start / End Time:		
Engineer:		CC
Monitoring Equipment:	Gas Meter ID	12175
	PID ID	2475
	Dip Tape	Blue
	Other	

NR = Not Recorded
Dry = No Groundwater



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Weather Conditions	Start	End
(Dry / Raining)	Dry	Dry
Cloud Cover (Oktas)	2	2
Wind Strength (m/s)	1.2	1.8
Wind Direction (from)		
Temperature (°C)	18.0	18.0
Barometric Pressure (mb)	1003	1004
(Rising/ Falling)	Rising	
PID - Air	<0.1	<0.1
PID - Calibration Gas		

[illegible]

GAS AND GROUNDWATER MONITORING

Site:		Land North of Normandy Way, Hinckley
Client:		Richborough Estates Ltd
Job No.:		28047
Date:		09 October 2023
Start / End Time:		11:52/15:29
Engineer:		CC
Monitoring Equipment:	Gas Meter ID	12175
	PID ID	2475
	Dip Tape	Blue
	Other	

NR = Not Recorded
Dry = No Groundwater



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Weather Conditions	Start	End
(Dry / Raining)	Dry	Dry
Cloud Cover (Oktas)	2	2
Wind Strength (m/s)	1.0	0.2
Wind Direction (from)		
Temperature (°C)	21.0	20.0
Barometric Pressure (mb)	1007	1007
(Rising/ Falling)		
PID - Air	0	0
PID - Calibration Gas	0	0

[illegible]

GAS AND GROUNDWATER MONITORING

Site:		Land North of Normandy Way, Hinckley
Client:		Richborough Estates Ltd
Job No.:		28047
Date:		19 October 2023
Start / End Time:		11:56
Engineer:		CC
Monitoring Equipment:	Gas Meter ID	12175
	PID ID	2475
	Dip Tape	Blue
	Other	

NR = Not Recorded
Dry = No Groundwater



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Weather Conditions	Start	End
(Dry / Raining)	Dry	Dry
Cloud Cover (Oktas)	8	4
Wind Strength (m/s)	1.2	0.9
Wind Direction (from)	NR	NR
Temperature (°C)	18.0	17.0
Barometric Pressure (mb)	968	965
(Rising/ Falling)	Falling	
PID - Air	<0.1	<0.1
PID - Calibration Gas		

[illegible]

SITE WIDE		GSV	
Maximum Carbon Dioxide Concentration (steady)	5.2 %	0.0052	(CO2)
Maximum Methane Concentration (peak)	0.1 %	0.0001	(CH4)
Maximum Flow Rate	0.1 l/hr	0.0052	(worst)
NHBC	Amber 1		
Characteristic Situation (W&C)	2		

Borehole Ref.	Flow* (l/hr)		Carbon Dioxide (% v/v)			Methane (% v/v)			GSV (l/hr)	Borehole Specific Classification	
	Min.	Max.	Min.	Max.	Avg.	Min.	Max.	Avg.		CS	NHBC
WS01	<0.1	<0.1	0.4	3.1	1.7	<0.1	<0.1	<0.1	0.003	1	Green
WS03	<0.1	<0.1	0.6	2.6	1.1	<0.1	<0.1	<0.1	0.003	1	Green
WS07	<0.1	0.1	0.4	0.9	0.6	<0.1	<0.1	<0.1	0.001	1	Green
WS10	<0.1	<0.1	0.6	3.7	2.3	<0.1	<0.1	<0.1	0.004	1	Green
WS11	<0.1	<0.1	1.7	2.9	2.4	<0.1	<0.1	<0.1	0.003	1	Green
WS12	<0.1	<0.1	0.7	4.2	2.8	<0.1	<0.1	<0.1	0.004	1	Green
WS16	<0.1	<0.1	2.5	5.2	4.2	<0.1	<0.1	<0.1	0.005	2	Amber 1
WS17	<0.1	<0.1	0.4	1.7	0.8	<0.1	<0.1	<0.1	0.002	1	Green



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APPENDICES



APPENDIX G

Scheme Land North of Normandy Way, Hinckley
Client Richborough Estates Ltd
Job Ref. 28047
Location DCP01

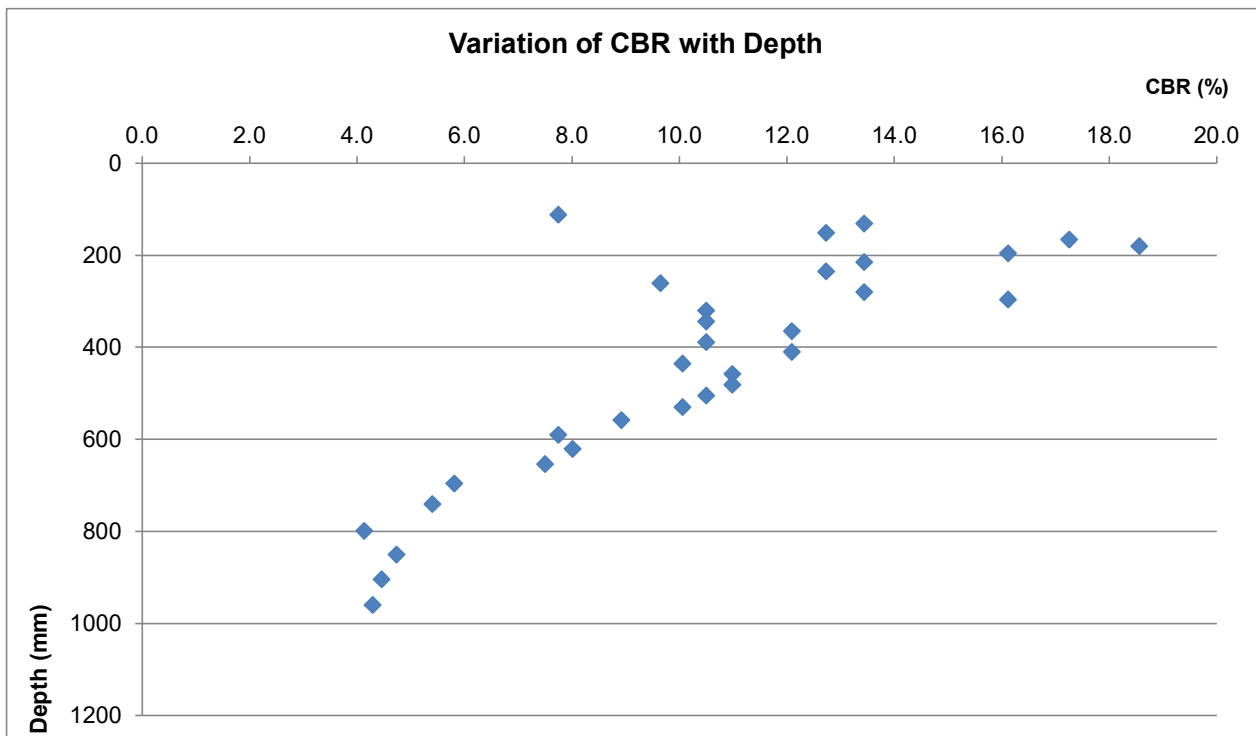
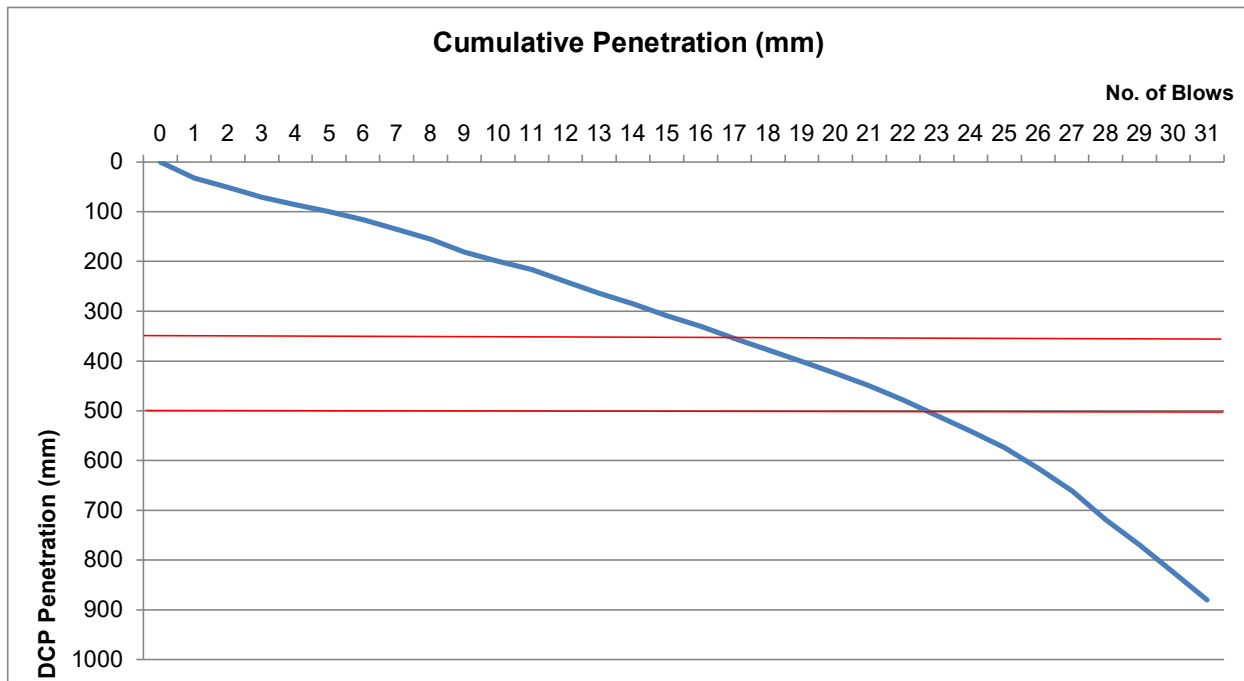
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Date 15/09/2023

ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	80	0	0		355	12.8
1	112	32	32	7.7		
2	131	19	51	13.4		
3	151	20	71	12.7		
4	166	15	86	17.3		
5	180	14	100	18.6		
6	196	16	116	16.1		
7	215	19	135	13.4		
8	235	20	155	12.7		
9	261	26	181	9.6		
10	280	19	200	13.4		
11	296	16	216	16.1		
12	320	24	240	10.5		
13	344	24	264	10.5		
14	365	21	285	12.1		
15	389	24	309	10.5		
16	410	21	330	12.1		
17	435	25	355	10.1	155	9.9
18	458	23	378	11.0		
19	481	23	401	11.0		
20	505	24	425	10.5		
21	530	25	450	10.1		
22	558	28	478	8.9		
23	590	32	510	7.7	390	5.5
24	621	31	541	8.0		
25	654	33	574	7.5		
26	696	42	616	5.8		
27	741	45	661	5.4		
28	799	58	719	4.1		
29	850	51	770	4.7		
30	904	54	824	4.5		
31	960	56	880	4.3		



Scheme Land North of Normandy Way, Hinckley
Client Richborough Estates Ltd
Job Ref. 28047
Location DCP01

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Mewies Engineering Consultants Ltd

Head Office: The Old Chapel, Station Road, Hugglescote, Leicestershire, LE67 2GB



Scheme Land North of Normandy Way, Hinckley
Client Richborough Estates Ltd
Job Ref. 28047
Location DCP02

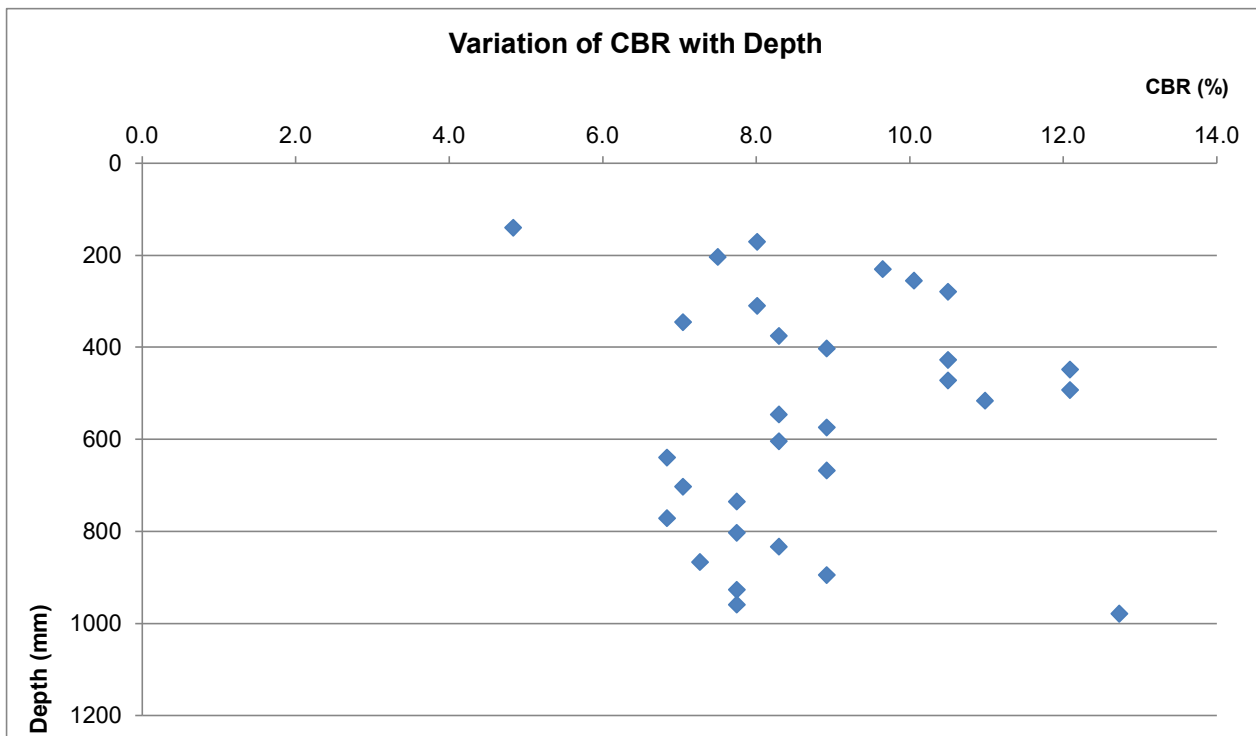
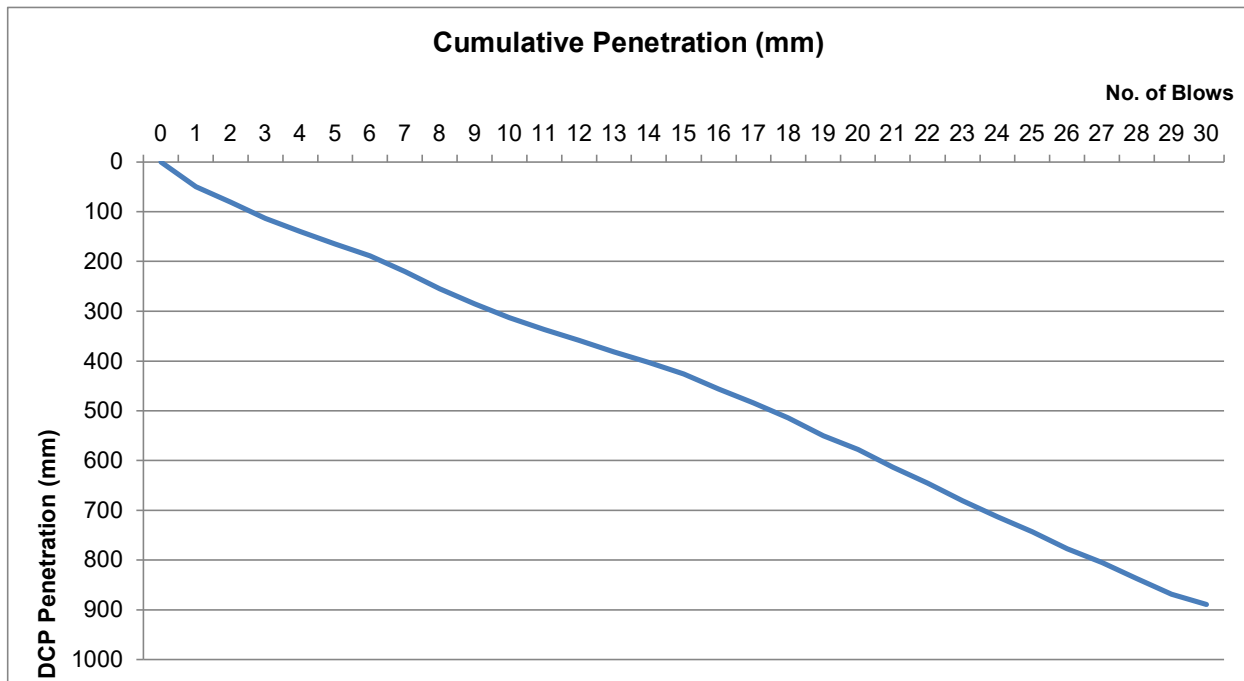
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Date 15/09/2023

ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	90	0	0		889	8.7
1	140	50	50	4.8		
2	171	31	81	8.0		
3	204	33	114	7.5		
4	230	26	140	9.6		
5	255	25	165	10.1		
6	279	24	189	10.5		
7	310	31	220	8.0		
8	345	35	255	7.0		
9	375	30	285	8.3		
10	403	28	313	8.9		
11	427	24	337	10.5		
12	448	21	358	12.1		
13	472	24	382	10.5		
14	493	21	403	12.1		
15	516	23	426	11.0		
16	546	30	456	8.3		
17	574	28	484	8.9		
18	604	30	514	8.3		
19	640	36	550	6.8		
20	668	28	578	8.9		
21	703	35	613	7.0		
22	735	32	645	7.7		
23	771	36	681	6.8		
24	803	32	713	7.7		
25	833	30	743	8.3		
26	867	34	777	7.3		
27	895	28	805	8.9		
28	927	32	837	7.7		
29	959	32	869	7.7		
30	979	20	889	12.7		



Scheme Land North of Normandy Way, Hinckley
Client Richborough Estates Ltd
Job Ref. 28047
Location DCP02

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Date 15/09/2023



Scheme Land North of Normandy Way, Hinckley
Client Richborough Estates Ltd
Job Ref. 28047
Location DCP03

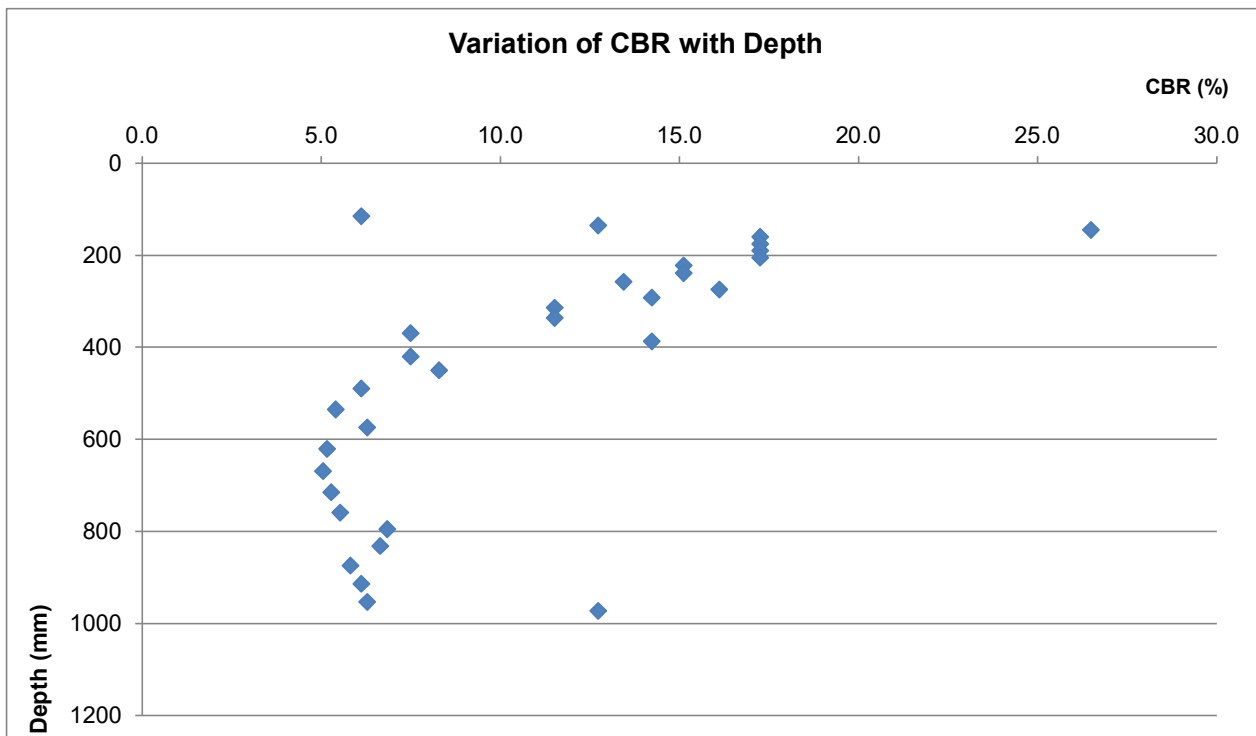
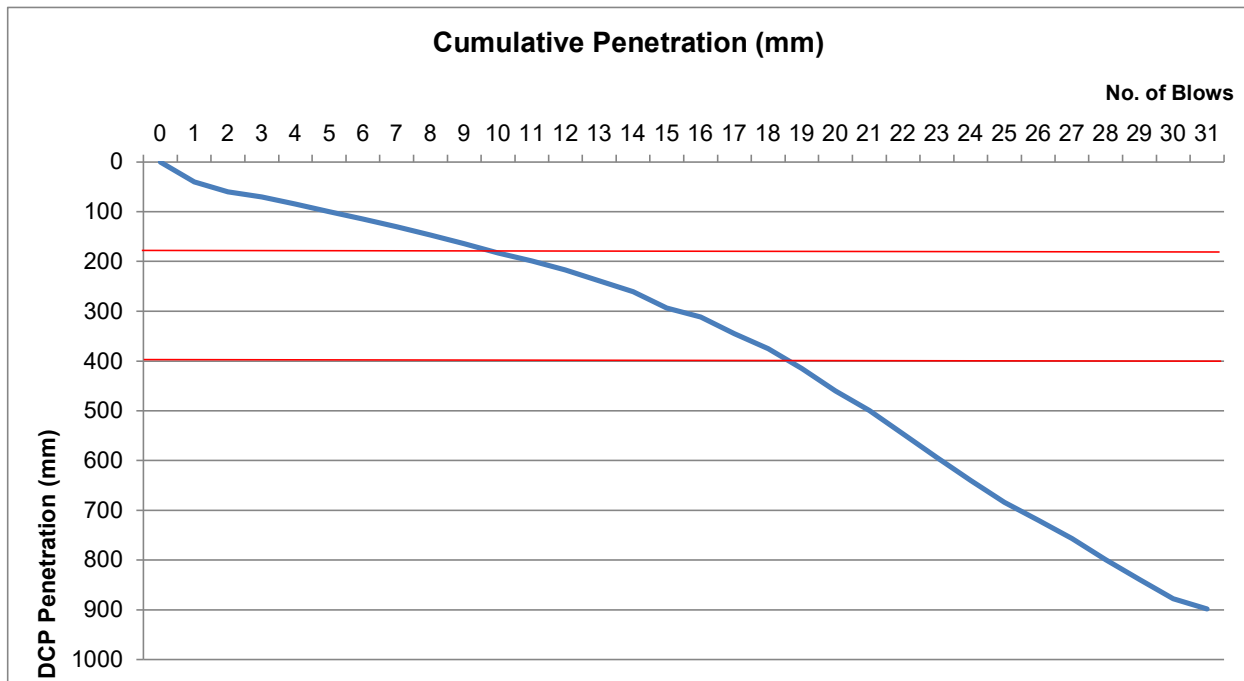
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	75	0	0		199	15.8
1	115	40	40	6.1		
2	135	20	60	12.7		
3	145	10	70	26.5		
4	160	15	85	17.3		
5	175	15	100	17.3		
6	190	15	115	17.3		
7	205	15	130	17.3		
8	222	17	147	15.1		
9	239	17	164	15.1		
10	258	19	183	13.4		
11	274	16	199	16.1	216	10.1
12	292	18	217	14.2		
13	314	22	239	11.5		
14	336	22	261	11.5		
15	369	33	294	7.5		
16	387	18	312	14.2		
17	420	33	345	7.5		
18	450	30	375	8.3		
19	490	40	415	6.1	483	6.4
20	535	45	460	5.4		
21	574	39	499	6.3		
22	621	47	546	5.2		
23	669	48	594	5.0		
24	715	46	640	5.3		
25	759	44	684	5.5		
26	795	36	720	6.8		
27	832	37	757	6.6		
28	874	42	799	5.8		
29	914	40	839	6.1		
30	953	39	878	6.3		



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Scheme Land North of Normandy Way, Hinckley
Client Richborough Estates Ltd
Job Ref. 28047
Location DCP04

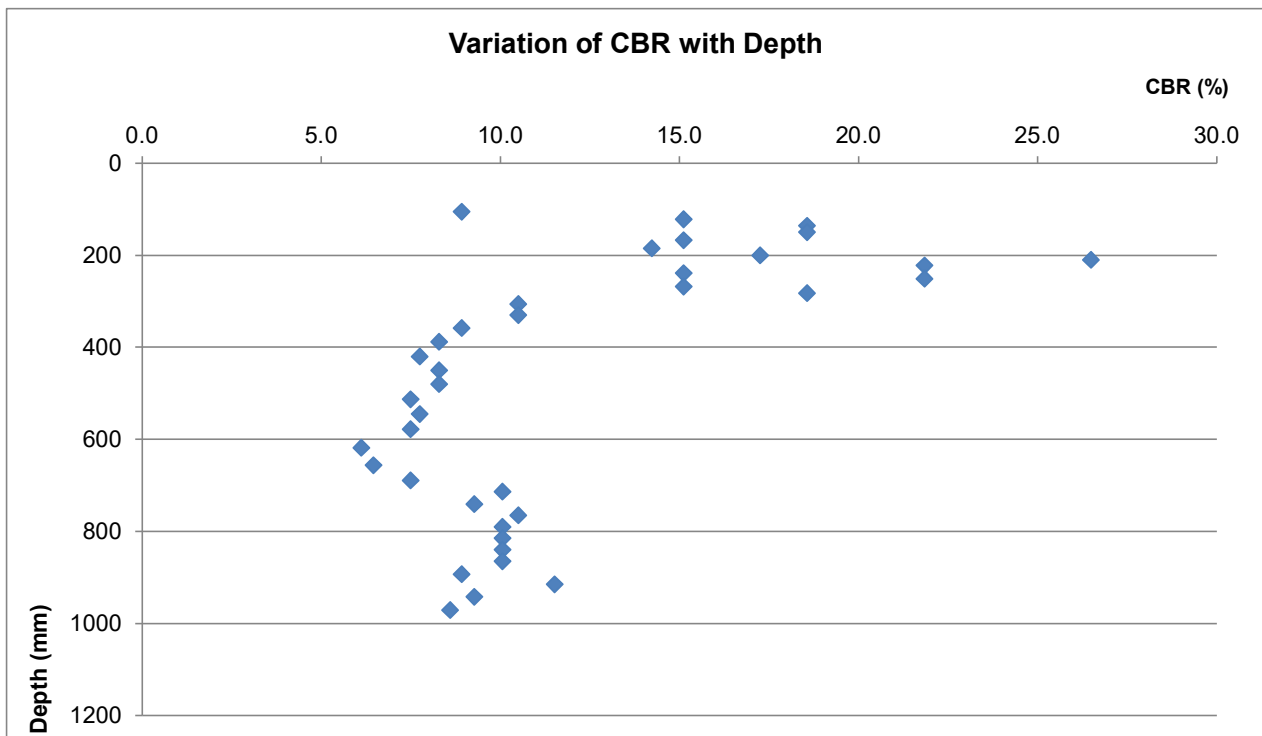
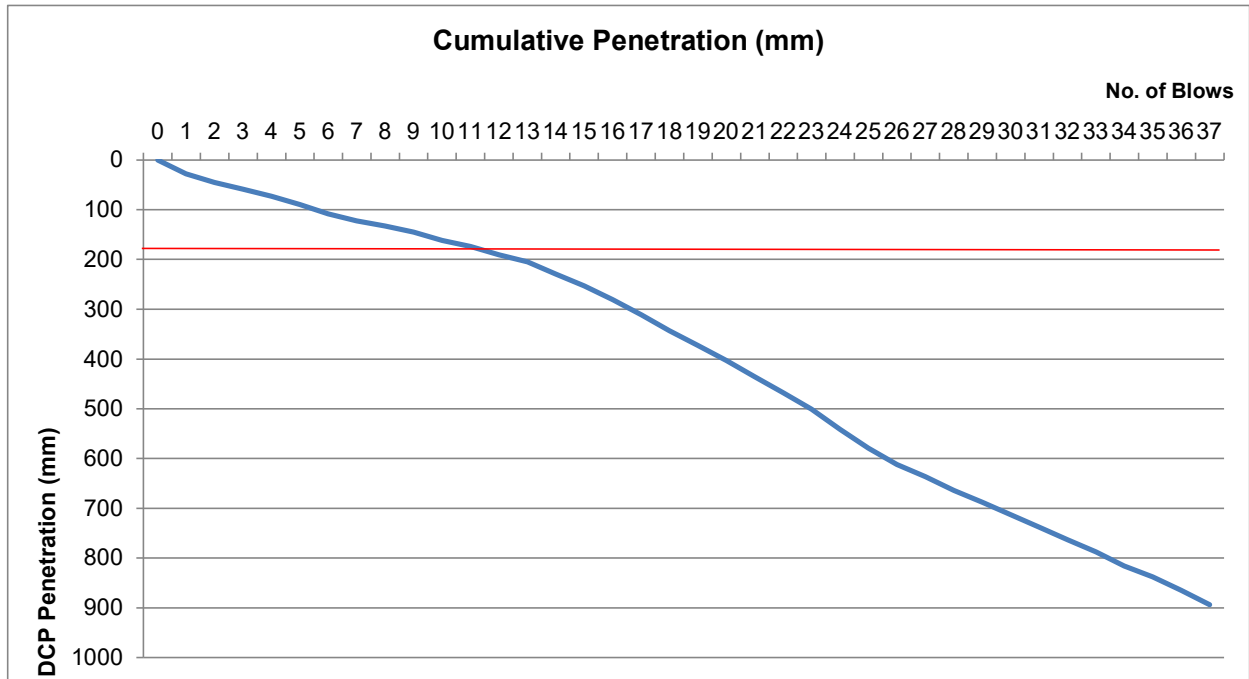
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	77	0	0		205	17.4
1	105	28	28	8.9		
2	122	17	45	15.1		
3	136	14	59	18.6		
4	150	14	73	18.6		
5	167	17	90	15.1		
6	185	18	108	14.2		
7	200	15	123	17.3		
8	210	10	133	26.5		
9	222	12	145	21.8		
10	239	17	162	15.1		
11	251	12	174	21.8		
12	268	17	191	15.1		
13	282	14	205	18.6		
14	306	24	229	10.5	689	8.9
15	330	24	253	10.5		
16	358	28	281	8.9		
17	388	30	311	8.3		
18	420	32	343	7.7		
19	450	30	373	8.3		
20	480	30	403	8.3		
21	513	33	436	7.5		
22	545	32	468	7.7		
23	578	33	501	7.5		
24	618	40	541	6.1		
25	656	38	579	6.5		
26	689	33	612	7.5		
27	714	25	637	10.1		
28	741	27	664	9.3		
29	765	24	688	10.5		
30	790	25	713	10.1		
31	815	25	738	10.1		
32	840	25	763	10.1		
33	865	25	788	10.1		
34	893	28	816	8.9		
35	915	22	838	11.5		
36	942	27	865	9.3		
37	971	29	894	8.6		



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Scheme Land North of Normandy Way, Hinckley
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Location DCP05

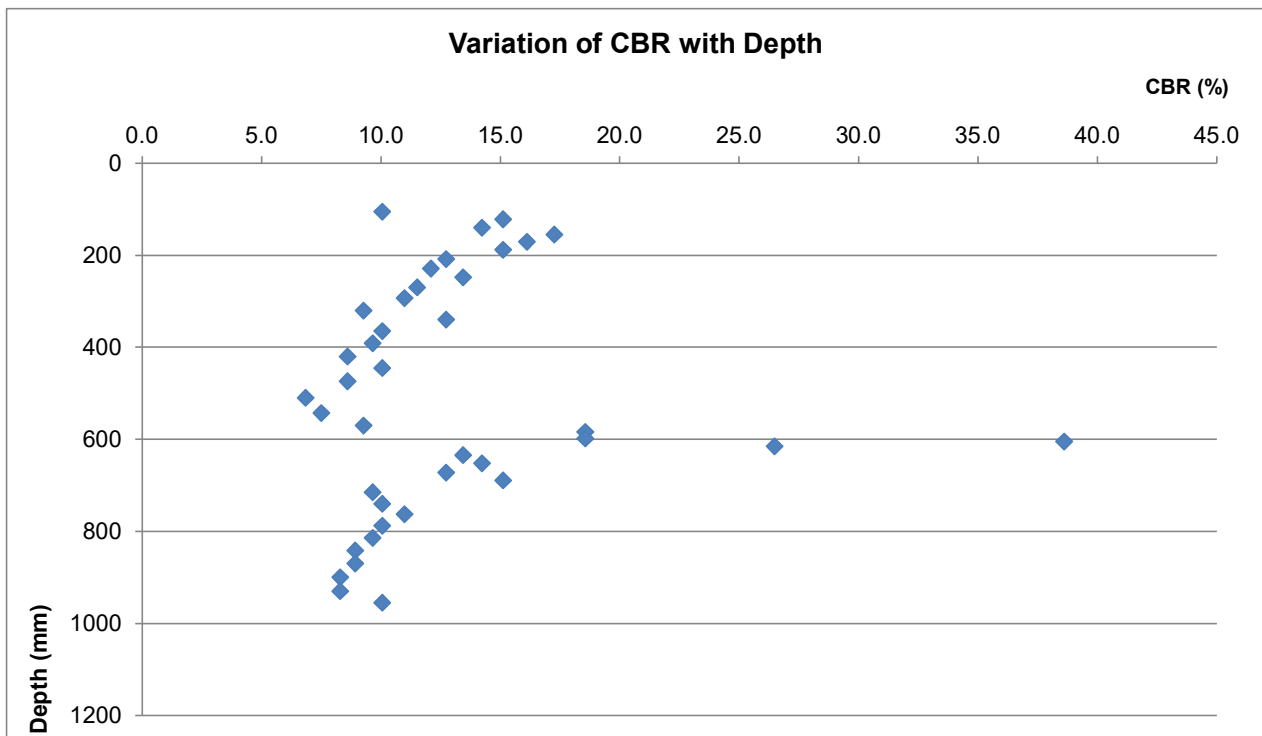
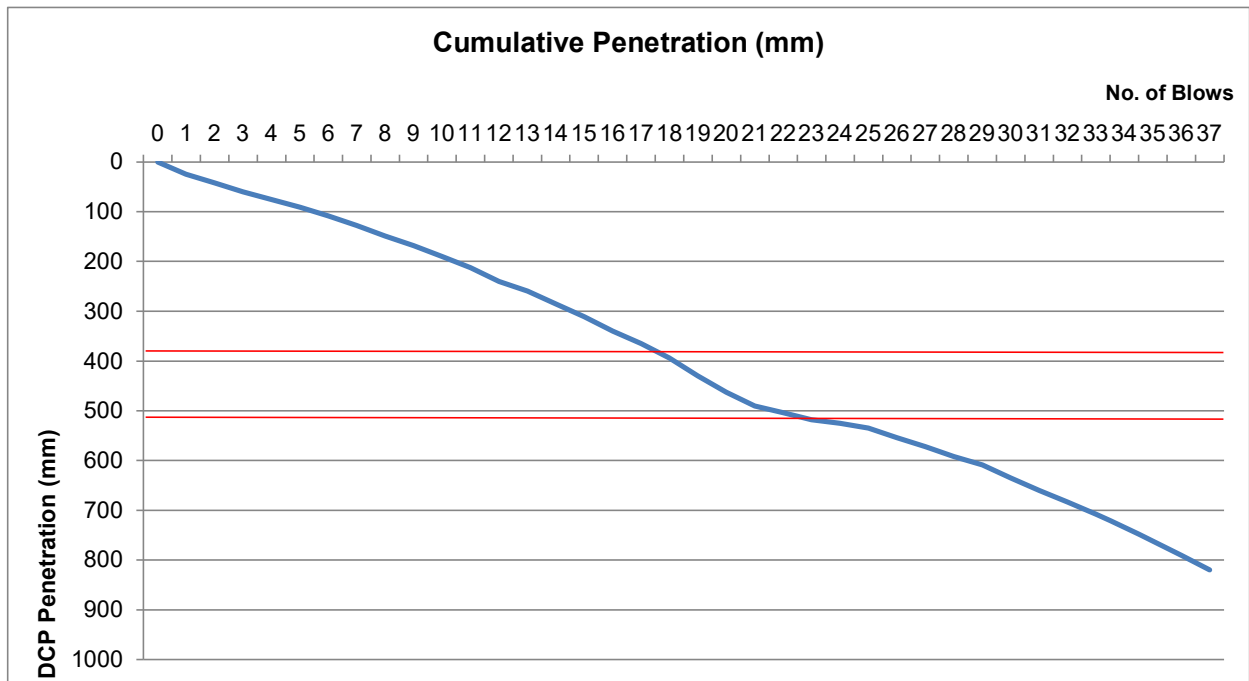
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	80	0	0		394	12.1
1	105	25	25	10.1		
2	122	17	42	15.1		
3	140	18	60	14.2		
4	155	15	75	17.3		
5	171	16	91	16.1		
6	188	17	108	15.1		
7	208	20	128	12.7		
8	229	21	149	12.1		
9	248	19	168	13.4		
10	270	22	190	11.5		
11	293	23	213	11.0		
12	320	27	240	9.3		
13	340	20	260	12.7		
14	365	25	285	10.1		
15	391	26	311	9.6		
16	420	29	340	8.6		
17	445	25	365	10.1		
18	474	29	394	8.6		
19	510	36	430	6.8	131	16.6
20	543	33	463	7.5		
21	570	27	490	9.3		
22	584	14	504	18.6		
23	598	14	518	18.6		
24	605	7	525	38.6		
25	615	10	535	26.5	370	11.8
26	634	19	554	13.4		
27	652	18	572	14.2		
28	672	20	592	12.7		
29	689	17	609	15.1		
30	715	26	635	9.6		
31	740	25	660	10.1		
32	763	23	683	11.0		
33	788	25	708	10.1		
34	814	26	734	9.6		
35	842	28	762	8.9		
36	870	28	790	8.9		
37	900	30	820	8.3		
38	930	30	850	8.3		
39	955	25	875	10.1		
40	975	20	895	12.7		



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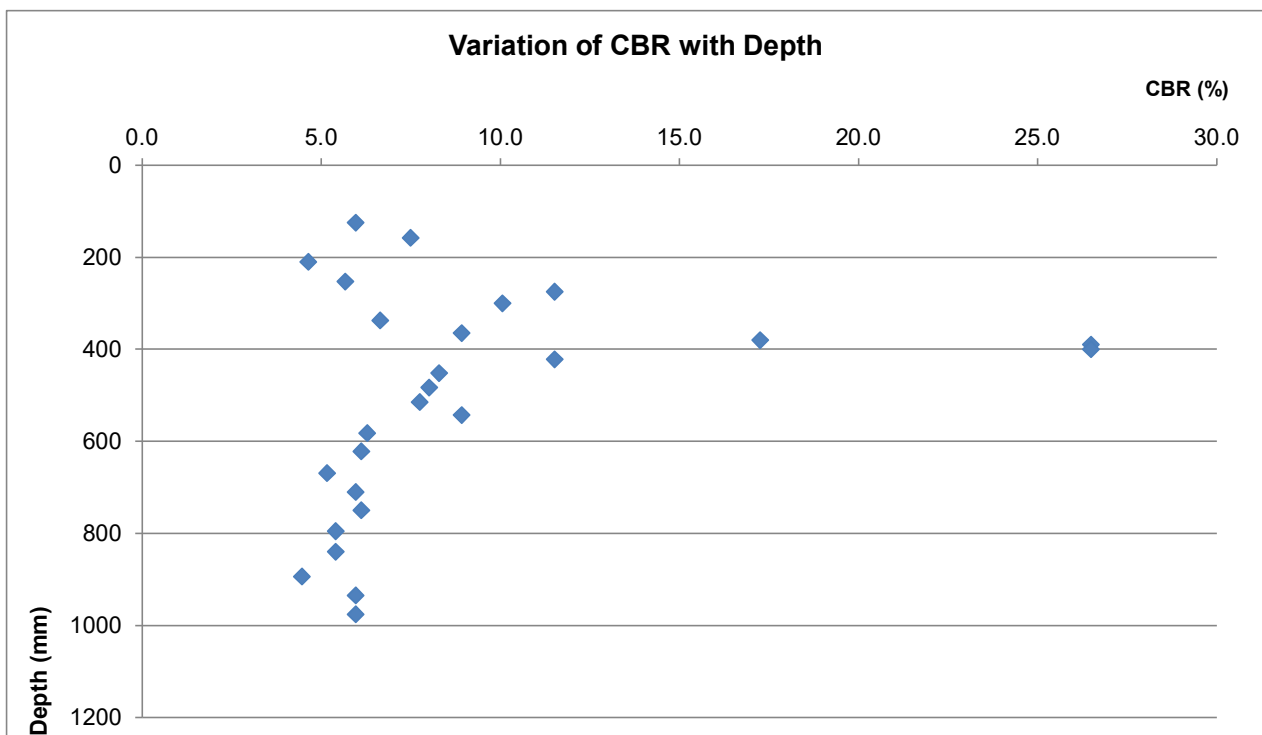
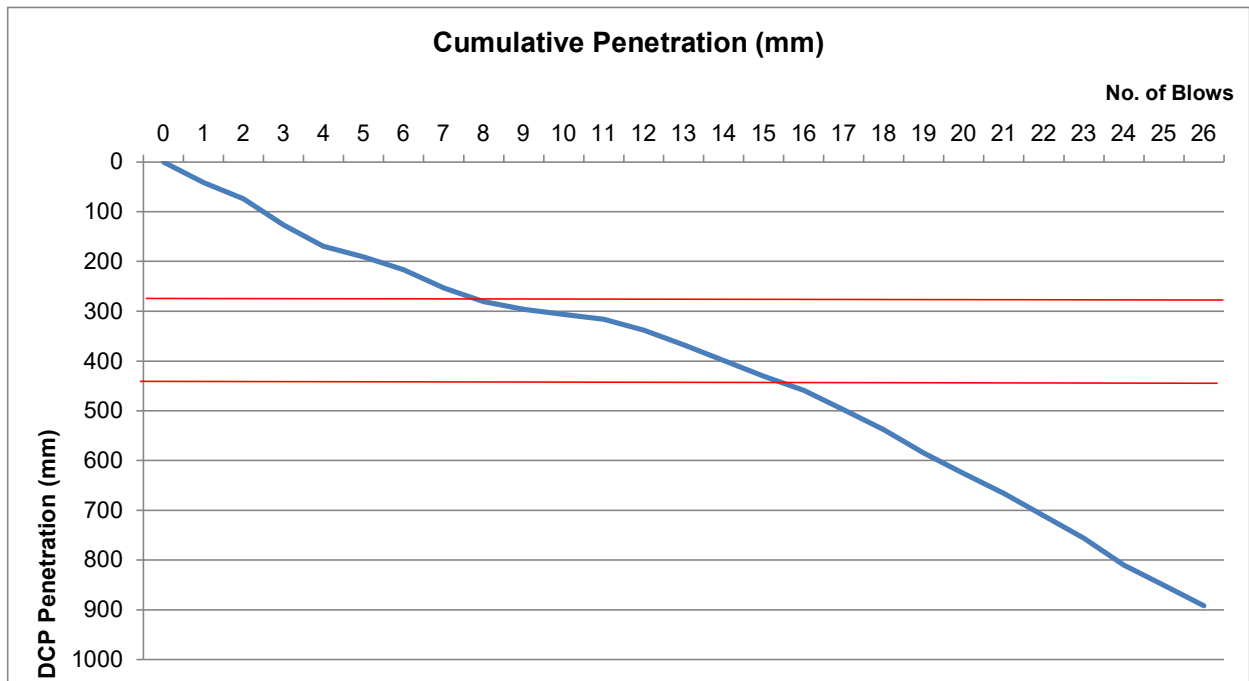
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	84	0	0		281	7.6
1	125	41	41	6.0		
2	158	33	74	7.5		
3	210	52	126	4.6		
4	253	43	169	5.7		
5	275	22	191	11.5		
6	300	25	216	10.1		
7	337	37	253	6.6		
8	365	28	281	8.9		
9	380	15	296	17.3	178	14.3
10	390	10	306	26.5		
11	400	10	316	26.5		
12	422	22	338	11.5		
13	452	30	368	8.3		
14	483	31	399	8.0		
15	515	32	431	7.7		
16	543	28	459	8.9		
17	582	39	498	6.3	433	5.7
18	622	40	538	6.1		
19	669	47	585	5.2		
20	710	41	626	6.0		
21	750	40	666	6.1		
22	795	45	711	5.4		
23	840	45	756	5.4		
24	894	54	810	4.5		
25	935	41	851	6.0		
26	976	41	892	6.0		



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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	72	0	0		149	12.8
1	107	35	35	7.0		
2	132	25	60	10.1		
3	150	18	78	14.2		
4	170	20	98	12.7		
5	185	15	113	17.3		
6	203	18	131	14.2		
7	221	18	149	14.2		
8	244	23	172	11.0	741	10.5
9	264	20	192	12.7		
10	290	26	218	9.6		
11	311	21	239	12.1		
12	336	25	264	10.1		
13	362	26	290	9.6		
14	385	23	313	11.0		
15	412	27	340	9.3		
16	438	26	366	9.6		
17	460	22	388	11.5		
18	493	33	421	7.5		
19	515	22	443	11.5		
20	546	31	474	8.0		
21	564	18	492	14.2		
22	583	19	511	13.4		
23	603	20	531	12.7		
24	629	26	557	9.6		
25	650	21	578	12.1		
26	685	35	613	7.0		
26	710	25	638	10.1		
27	740	30	668	8.3		
28	760	20	688	12.7		
29	785	25	713	10.1		
30	813	28	741	8.9		
31	840	27	768	9.3		
32	864	24	792	10.5		
33	890	26	818	9.6		
34	914	24	842	10.5		
35	939	25	867	10.1		
36	962	23	890	11.0		

Scheme Land North of Normandy Way, Hinckley
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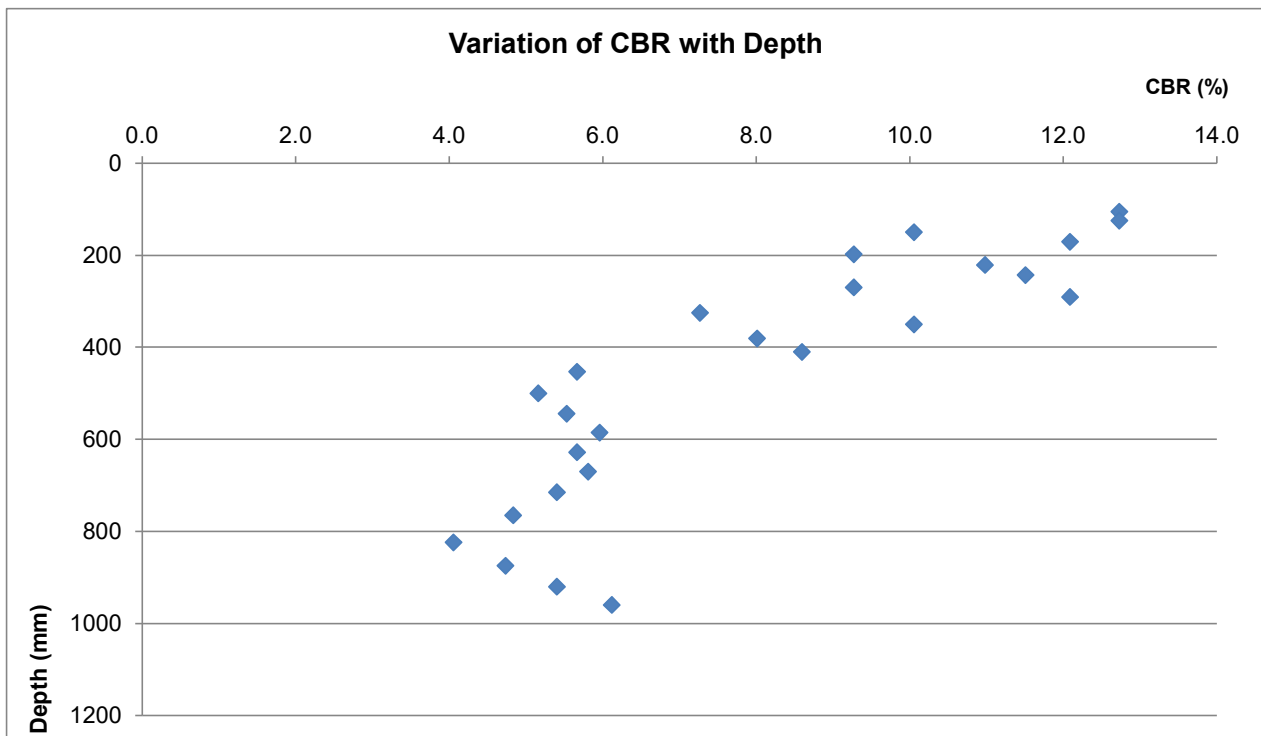
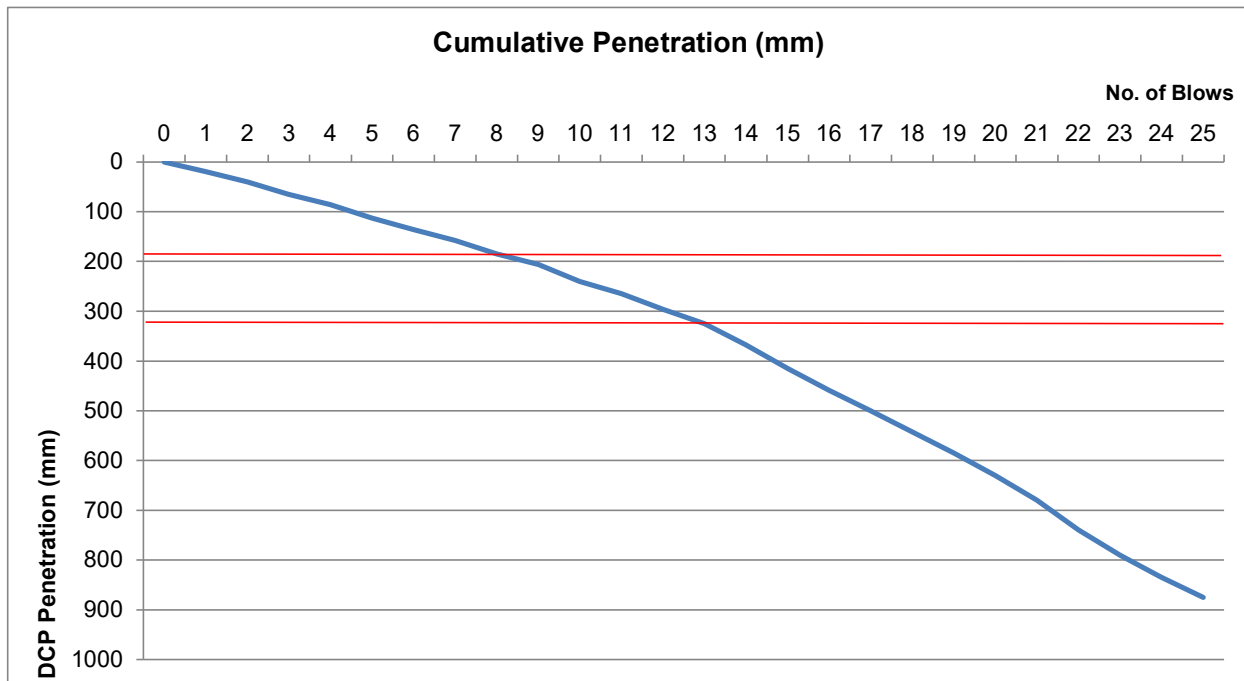
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	85	0	0		206	11.2
1	105	20	20	12.7		
2	125	20	40	12.7		
3	150	25	65	10.1		
4	171	21	86	12.1		
5	198	27	113	9.3		
6	221	23	136	11.0		
7	243	22	158	11.5		
8	270	27	185	9.3		
9	291	21	206	12.1		
10	325	34	240	7.3	119	8.5
11	350	25	265	10.1		
12	381	31	296	8.0		
13	410	29	325	8.6		
14	453	43	368	5.7		
15	500	47	415	5.2	550	5.4
16	544	44	459	5.5		
17	585	41	500	6.0		
18	628	43	543	5.7		
19	670	42	585	5.8		
20	715	45	630	5.4		
21	765	50	680	4.8		
22	824	59	739	4.1		
23	875	51	790	4.7		
24	920	45	835	5.4		
25	960	40	875	6.1		



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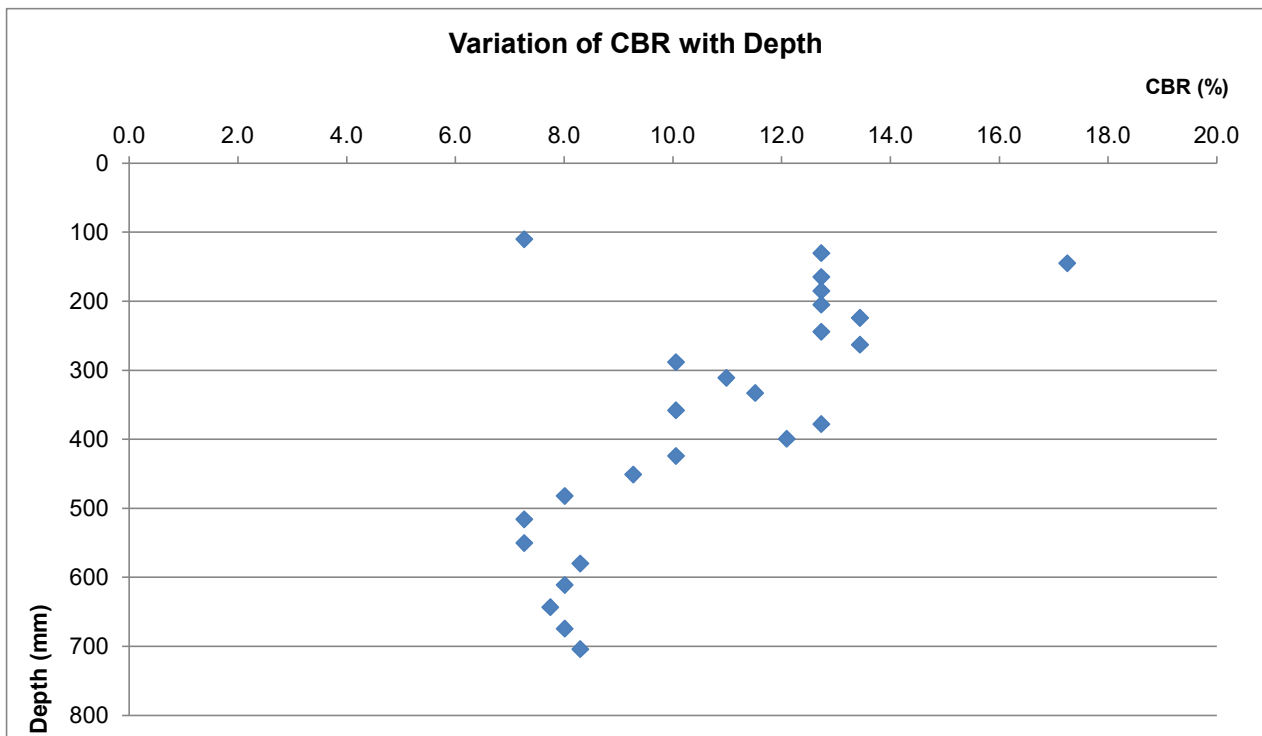
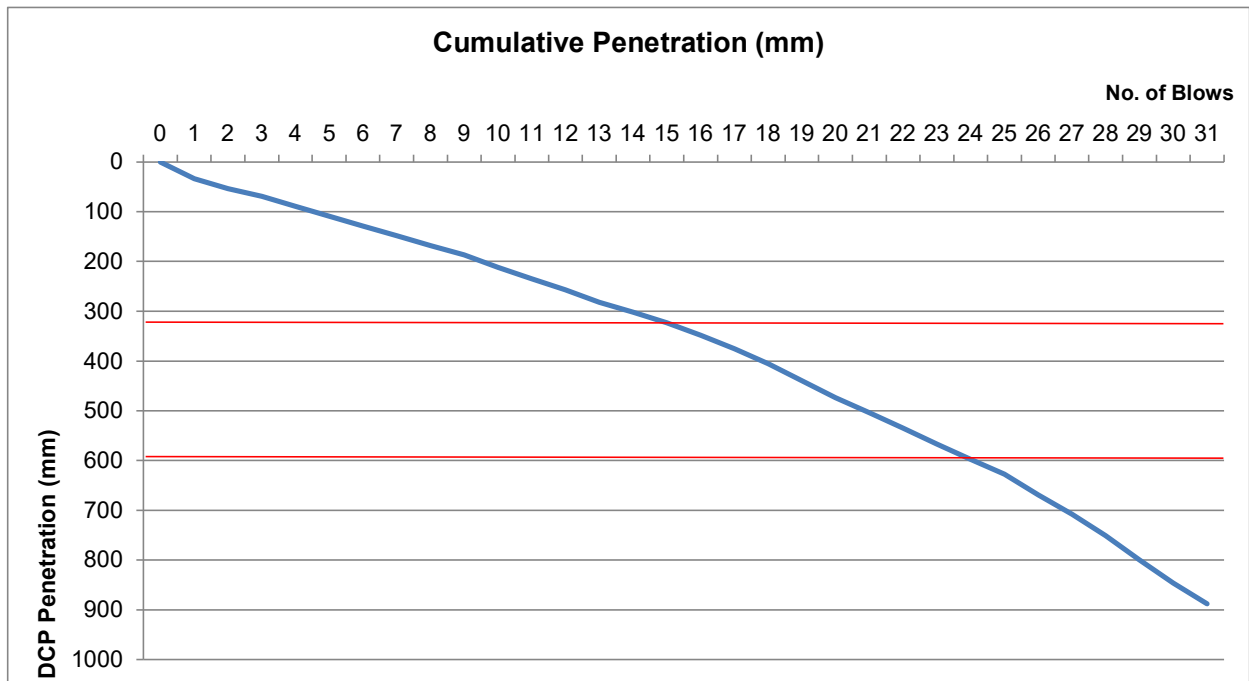
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	76	0	0		323	12.2
1	110	34	34	7.3		
2	130	20	54	12.7		
3	145	15	69	17.3		
4	165	20	89	12.7		
5	185	20	109	12.7		
6	205	20	129	12.7		
7	224	19	148	13.4		
8	244	20	168	12.7		
9	263	19	187	13.4		
10	288	25	212	10.1		
11	311	23	235	11.0		
12	333	22	257	11.5		
13	358	25	282	10.1		
14	378	20	302	12.7		
15	399	21	323	12.1	275	8.2
16	424	25	348	10.1		
17	451	27	375	9.3		
18	482	31	406	8.0		
19	516	34	440	7.3		
20	550	34	474	7.3		
21	580	30	504	8.3		
22	611	31	535	8.0		
23	643	32	567	7.7		
24	674	31	598	8.0		
25	704	30	628	8.3	290	6.0
26	745	41	669	6.0		
27	784	39	708	6.3		
28	827	43	751	5.7		
29	876	49	800	4.9		
30	922	46	846	5.3		
31	964	42	888	5.8		



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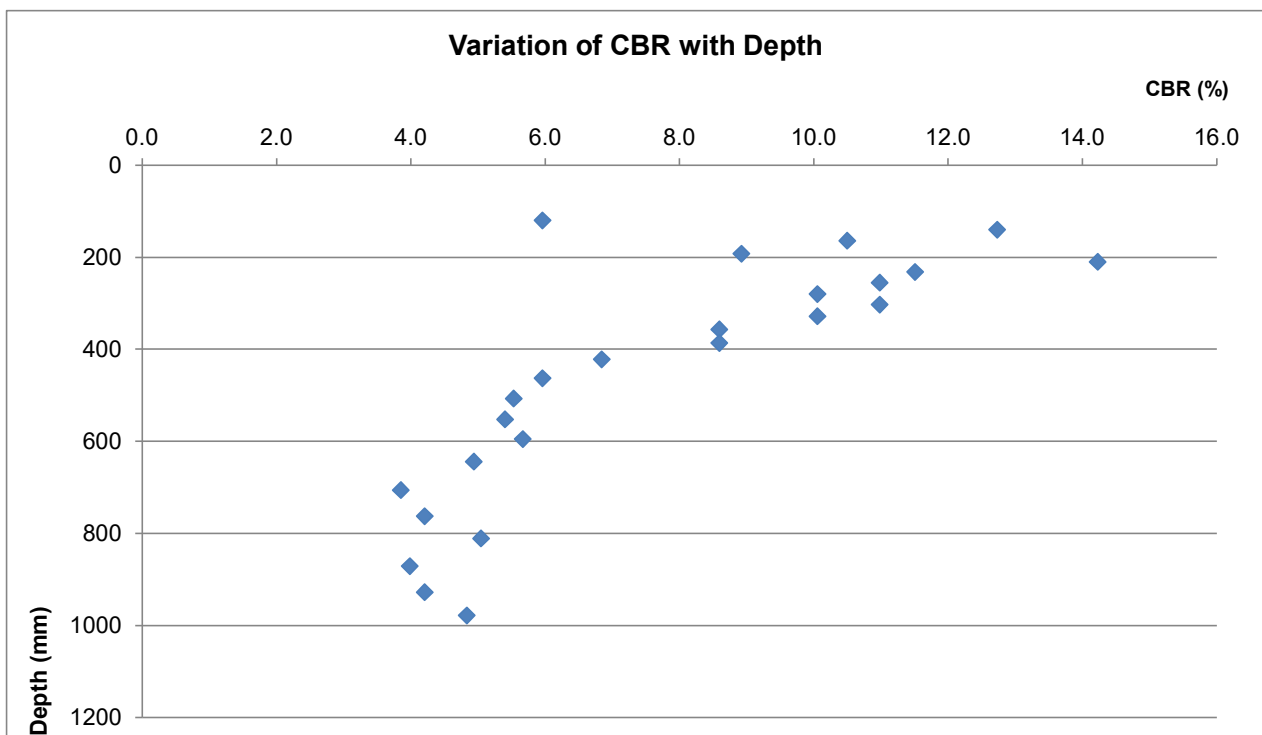
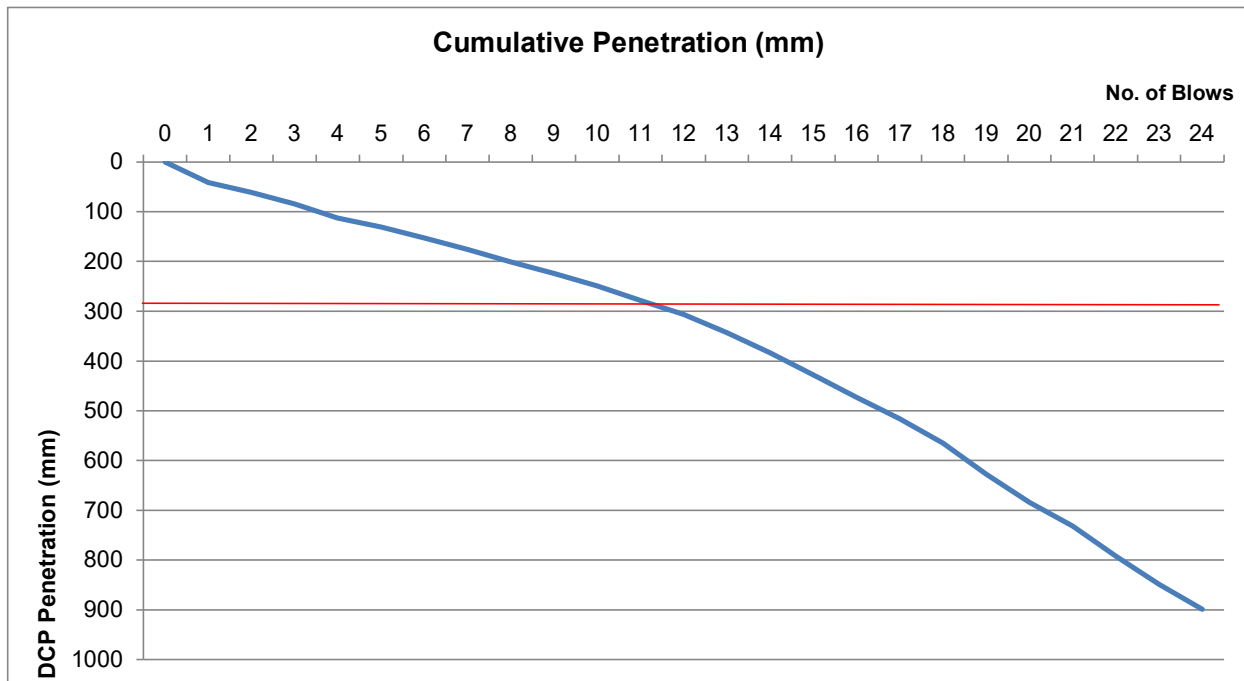
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	79	0	0		307	10.3
1	120	41	41	6.0		
2	140	20	61	12.7		
3	164	24	85	10.5		
4	192	28	113	8.9		
5	210	18	131	14.2		
6	232	22	153	11.5		
7	255	23	176	11.0		
8	280	25	201	10.1		
9	303	23	224	11.0		
10	328	25	249	10.1		
11	357	29	278	8.6		
12	386	29	307	8.6	592	5.0
13	422	36	343	6.8		
14	463	41	384	6.0		
15	507	44	428	5.5		
16	552	45	473	5.4		
17	595	43	516	5.7		
18	644	49	565	4.9		
19	706	62	627	3.8		
20	763	57	684	4.2		
21	811	48	732	5.0		
22	871	60	792	4.0		
23	928	57	849	4.2		
24	978	50	899	4.8		



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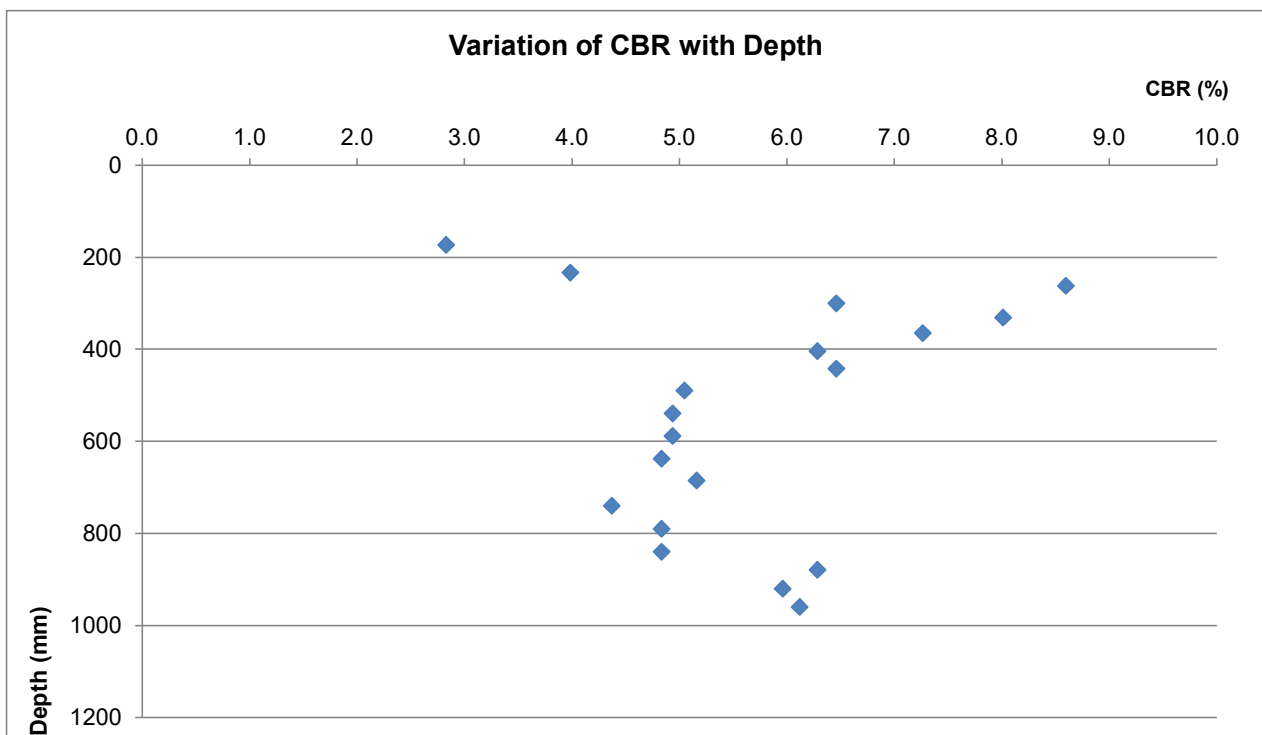
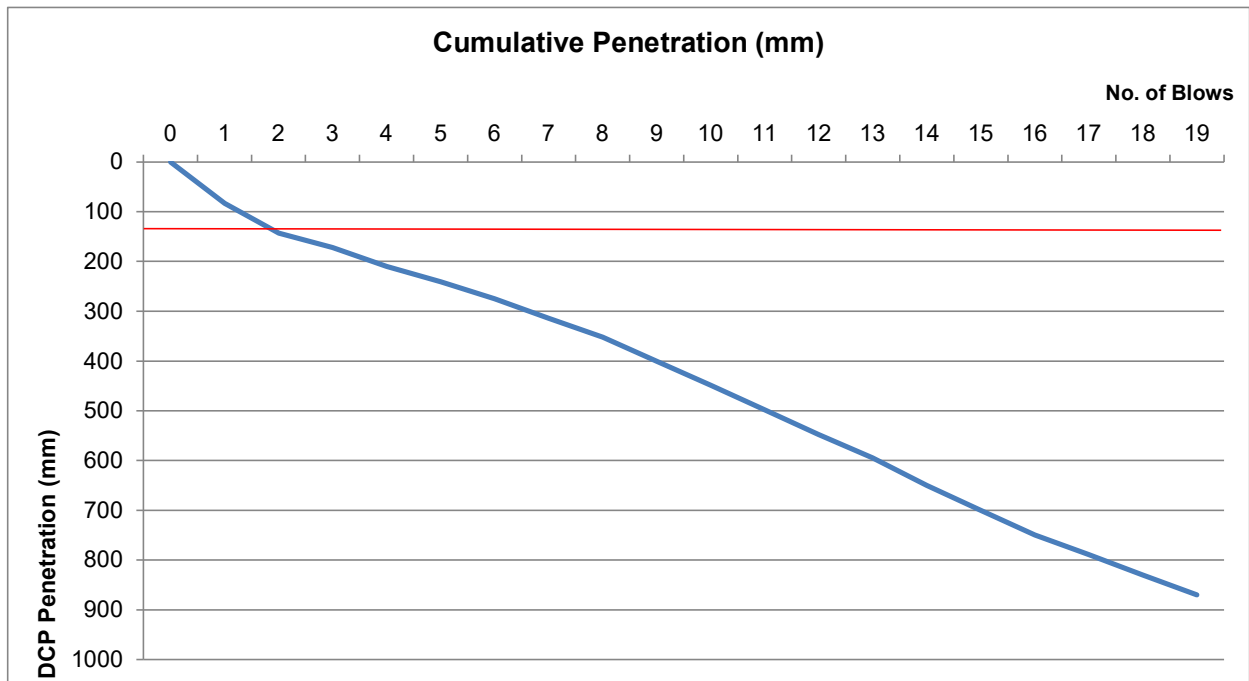
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	90	0	0		143	3.4
1	173	83	83	2.8		
2	233	60	143	4.0		
3	262	29	172	8.6	727	5.9
4	300	38	210	6.5		
5	331	31	241	8.0		
6	365	34	275	7.3		
7	404	39	314	6.3		
8	442	38	352	6.5		
9	490	48	400	5.0		
10	539	49	449	4.9		
11	588	49	498	4.9		
12	638	50	548	4.8		
13	685	47	595	5.2		
14	740	55	650	4.4		
15	790	50	700	4.8		
16	840	50	750	4.8		
17	879	39	789	6.3		
18	920	41	830	6.0		
19	960	40	870	6.1		



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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	90	0	0		382	6.5
1	135	45	45	5.4		
2	179	44	89	5.5		
3	214	35	124	7.0		
4	251	37	161	6.6		
5	289	38	199	6.5		
6	322	33	232	7.5		
7	358	36	268	6.8		
8	394	36	304	6.8		
9	430	36	340	6.8		
10	472	42	382	5.8	492	5.0
11	522	50	432	4.8		
12	578	56	488	4.3		
13	628	50	538	4.8		
14	678	50	588	4.8		
15	730	52	640	4.6		
16	790	60	700	4.0		
17	840	50	750	4.8		
18	883	43	793	5.7		
19	921	38	831	6.5		
20	964	43	874	5.7		

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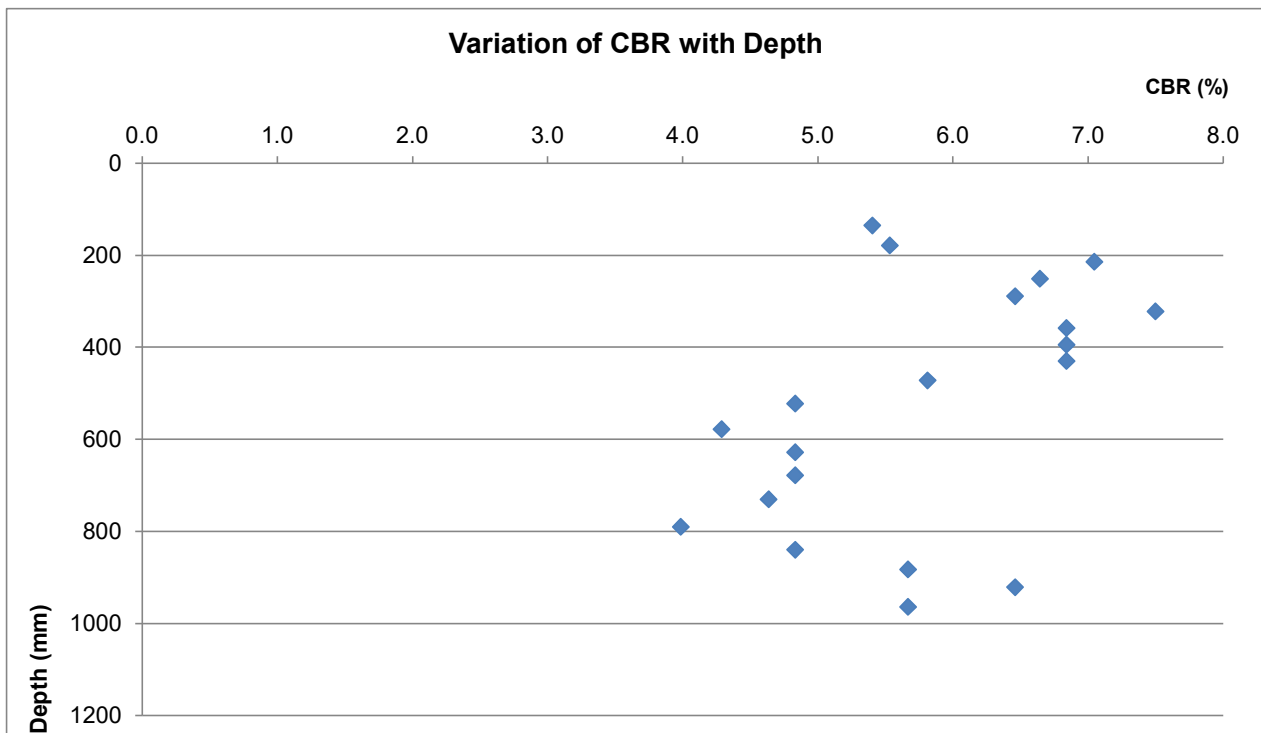
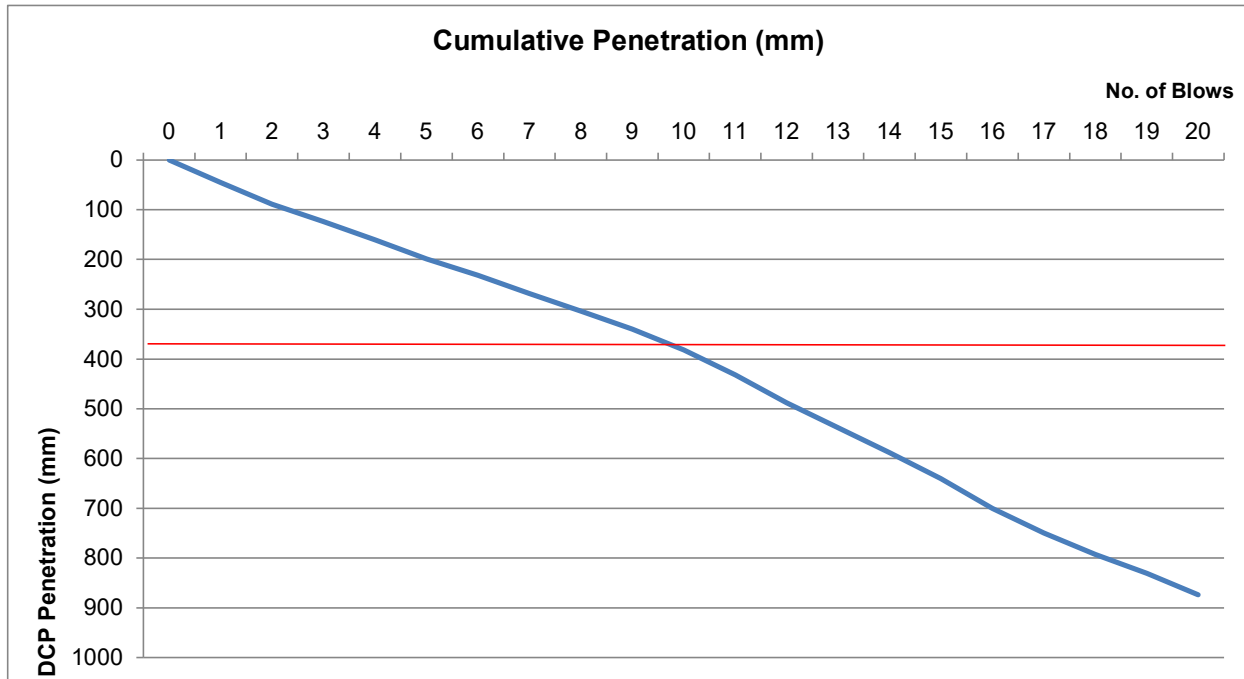
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	85	0	0		355	11.0
1	120	35	35	7.0		
2	145	25	60	10.1		
3	165	20	80	12.7		
4	190	25	105	10.1		
5	209	19	124	13.4		
6	229	20	144	12.7		
7	252	23	167	11.0		
8	272	20	187	12.7		
9	292	20	207	12.7		
10	315	23	230	11.0		
11	340	25	255	10.1		
12	365	25	280	10.1		
13	390	25	305	10.1		
14	419	29	334	8.6		
15	440	21	355	12.1	542	6.4
16	480	40	395	6.1		
17	521	41	436	6.0		
18	560	39	475	6.3		
19	598	38	513	6.5		
20	630	32	545	7.7		
21	665	35	580	7.0		
22	700	35	615	7.0		
23	738	38	653	6.5		
24	775	37	690	6.6		
25	815	40	730	6.1		
26	857	42	772	5.8		
27	894	37	809	6.6		
28	940	46	855	5.3		
29	982	42	897	5.8		

Scheme Land North of Normandy Way, Hinckley
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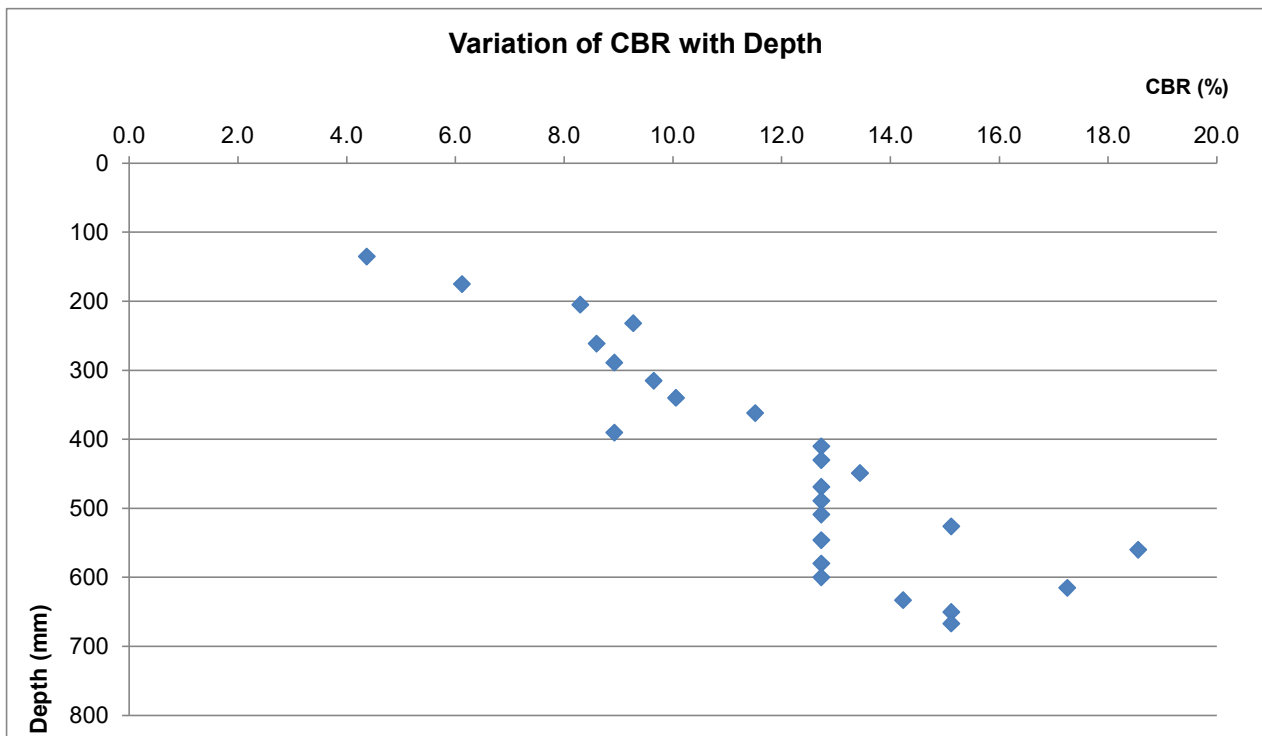
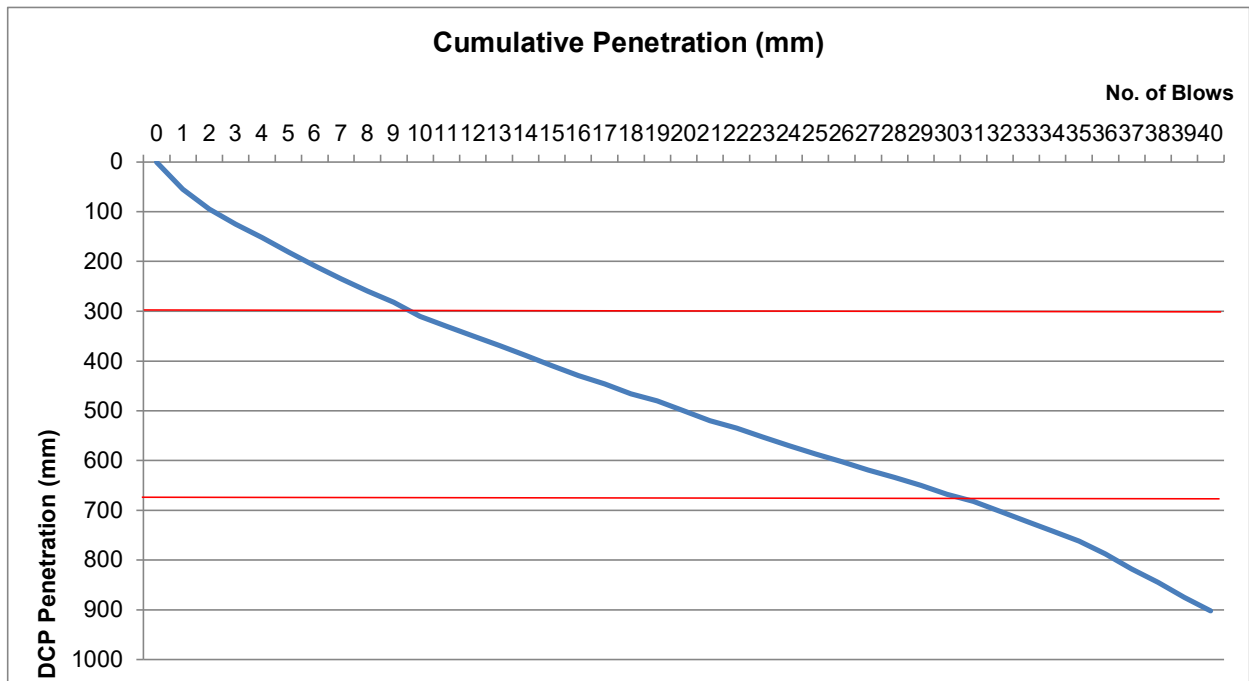
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	80	0	0		310	8.6
1	135	55	55	4.4		
2	175	40	95	6.1		
3	205	30	125	8.3		
4	232	27	152	9.3		
5	261	29	181	8.6		
6	289	28	209	8.9		
7	315	26	235	9.6		
8	340	25	260	10.1		
9	362	22	282	11.5		
10	390	28	310	8.9		
11	410	20	330	12.7	372	14.7
12	430	20	350	12.7		
13	449	19	369	13.4		
14	469	20	389	12.7		
15	489	20	409	12.7		
16	509	20	429	12.7		
17	526	17	446	15.1		
18	546	20	466	12.7		
19	560	14	480	18.6		
20	580	20	500	12.7		
21	600	20	520	12.7		
22	615	15	535	17.3		
23	633	18	553	14.2		
24	650	17	570	15.1		
25	667	17	587	15.1		
26	682	15	602	17.3		
27	699	17	619	15.1		
28	714	15	634	17.3		
29	730	16	650	16.1		
30	748	18	668	14.2		
31	762	14	682	18.6		
32	782	20	702	12.7	220	10.6
33	802	20	722	12.7		
34	822	20	742	12.7		
35	842	20	762	12.7		
36	868	26	788	9.6		
37	898	30	818	8.3		
38	925	27	845	9.3		
39	955	30	875	8.3		
40	982	27	902	9.3		



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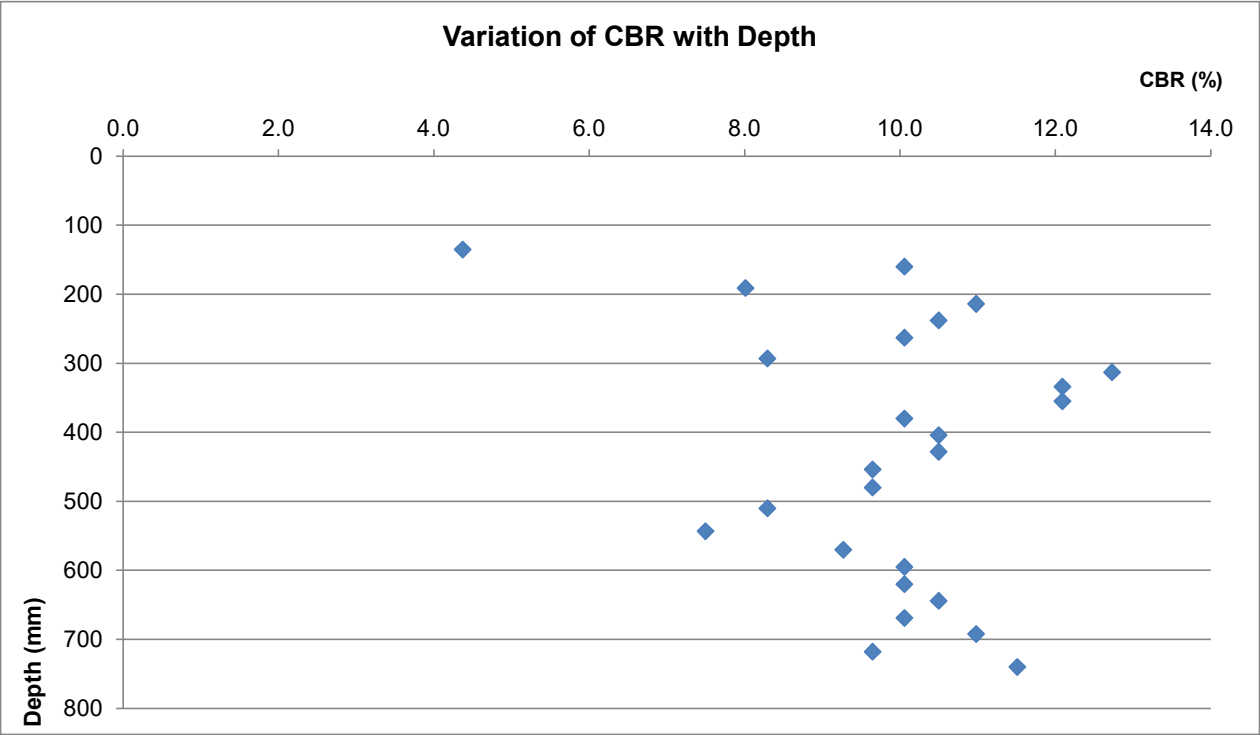
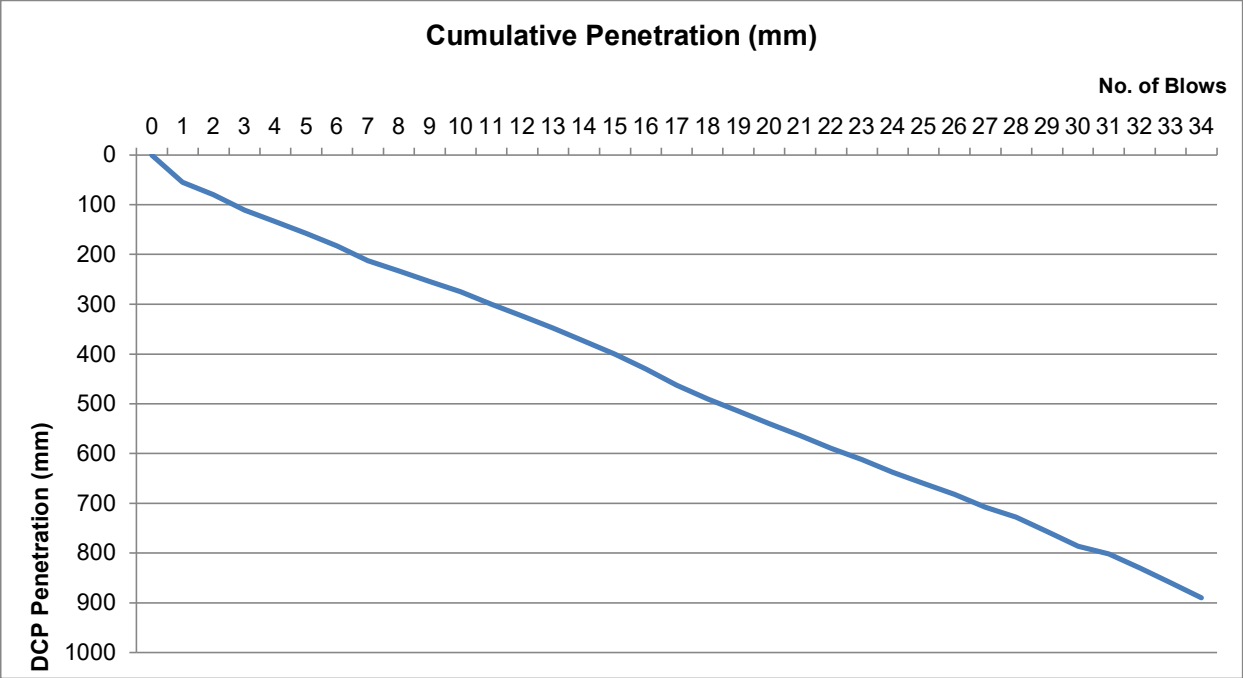
Scheme Land North of Normandy Way, Hinckley
Client Richborough Estates Ltd
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	80	0	0		890	10.0
1	135	55	55	4.4		
2	160	25	80	10.1		
3	191	31	111	8.0		
4	214	23	134	11.0		
5	238	24	158	10.5		
6	263	25	183	10.1		
7	293	30	213	8.3		
8	313	20	233	12.7		
9	334	21	254	12.1		
10	355	21	275	12.1		
11	380	25	300	10.1		
12	404	24	324	10.5		
13	428	24	348	10.5		
14	454	26	374	9.6		
15	480	26	400	9.6		
16	510	30	430	8.3		
17	543	33	463	7.5		
18	570	27	490	9.3		
19	595	25	515	10.1		
20	620	25	540	10.1		
21	644	24	564	10.5		
22	669	25	589	10.1		
23	692	23	612	11.0		
24	718	26	638	9.6		
25	740	22	660	11.5		
26	762	22	682	11.5		
27	788	26	708	9.6		
28	808	20	728	12.7		
29	837	29	757	8.6		
30	866	29	786	8.6		
31	882	16	802	16.1		
32	910	28	830	8.9		
33	940	30	860	8.3		
34	970	30	890	8.3		

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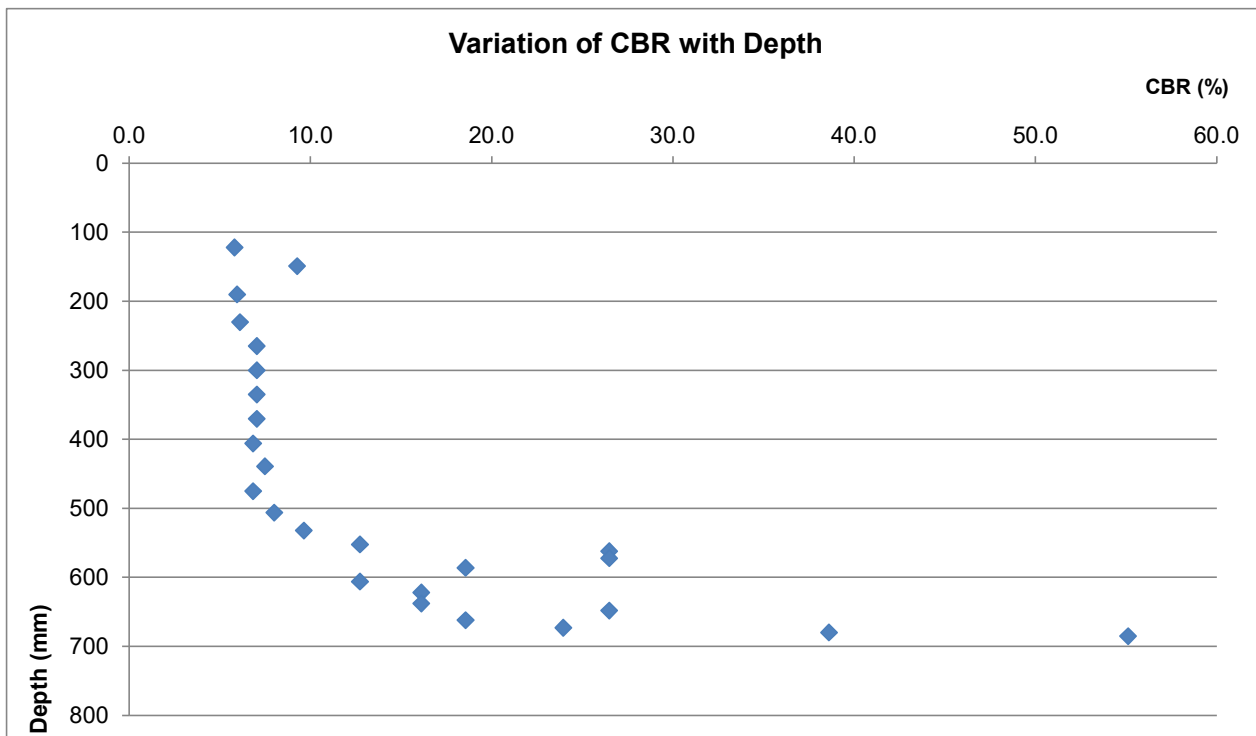
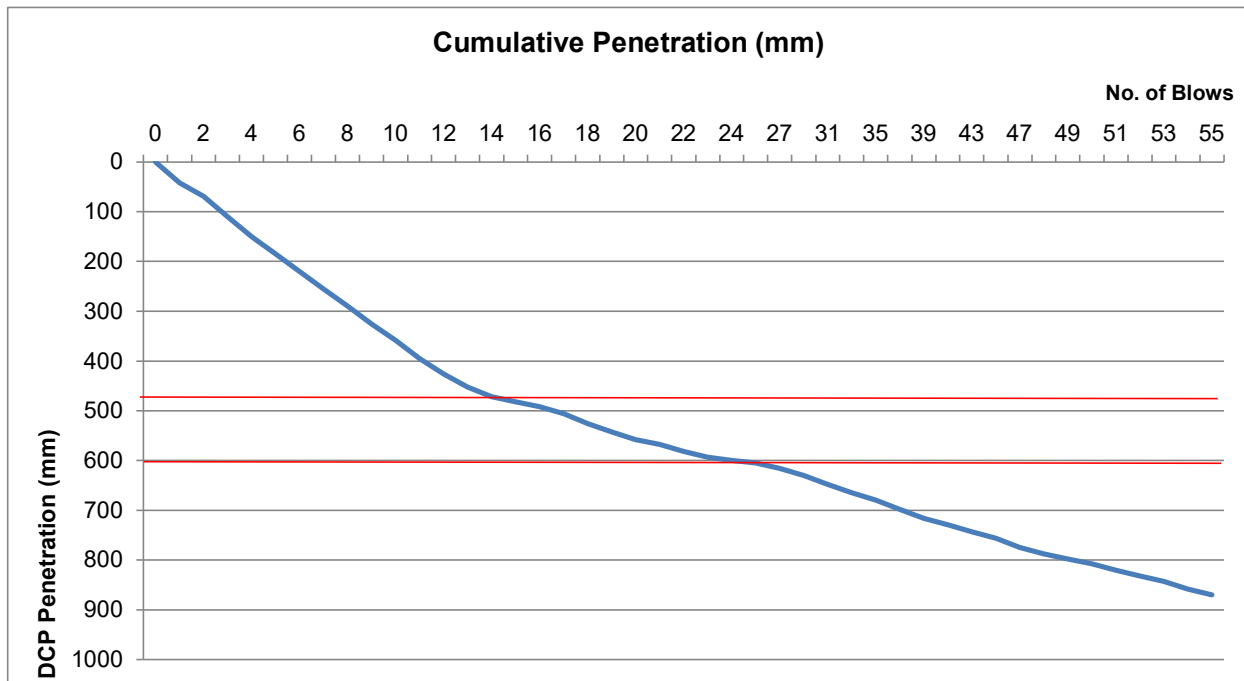
ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	80	0	0		492	10.0
1	122	42	42	5.8		
2	149	27	69	9.3		
3	190	41	110	6.0		
4	230	40	150	6.1		
5	265	35	185	7.0		
6	300	35	220	7.0		
7	335	35	255	7.0		
8	370	35	290	7.0		
9	406	36	326	6.8		
10	439	33	359	7.5		
11	475	36	395	6.8		
12	506	31	426	8.0		
13	532	26	452	9.6		
14	552	20	472	12.7		
15	562	10	482	26.5	124	25.0
16	572	10	492	26.5		
17	586	14	506	18.6		
18	606	20	526	12.7		
19	622	16	542	16.1		
20	638	16	558	16.1		
21	648	10	568	26.5		
22	662	14	582	18.6		
23	673	11	593	23.9		
24	680	7	600	38.6		
25	685	5	605	55.1		
27	696	11	616	23.9		
29	710	14	630	18.6	254	19.2
31	728	18	648	14.2		
33	745	17	665	15.1		
35	760	15	680	17.3		
37	778	18	698	14.2		
39	796	18	716	14.2		
41	809	13	729	20.1		
43	823	14	743	18.6		
45	836	13	756	20.1		
47	855	19	775	13.4		
48	868	13	788	20.1		
49	878	10	798	26.5		
50	888	10	808	26.5		
51	900	12	820	21.8		
52	912	12	832	21.8		

53	923	11	843	23.9	
54	938	15	858	17.3	
55	950	12	870	21.8	



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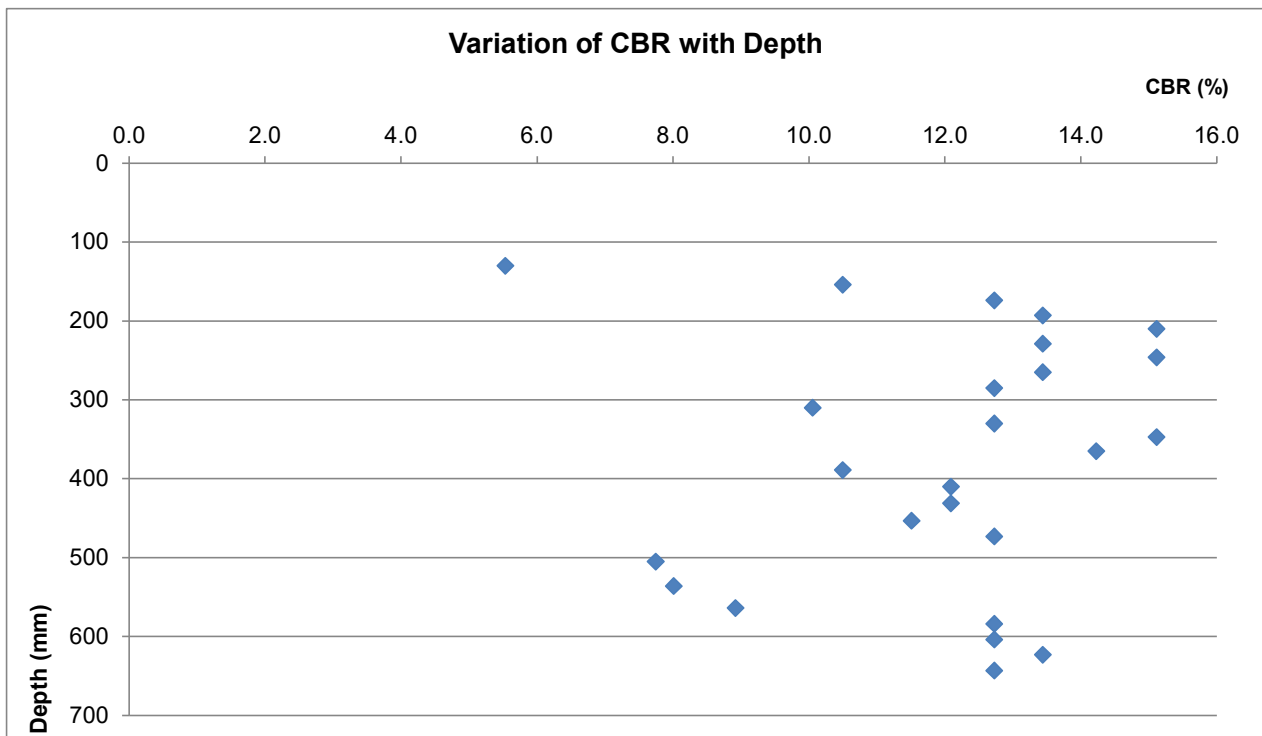
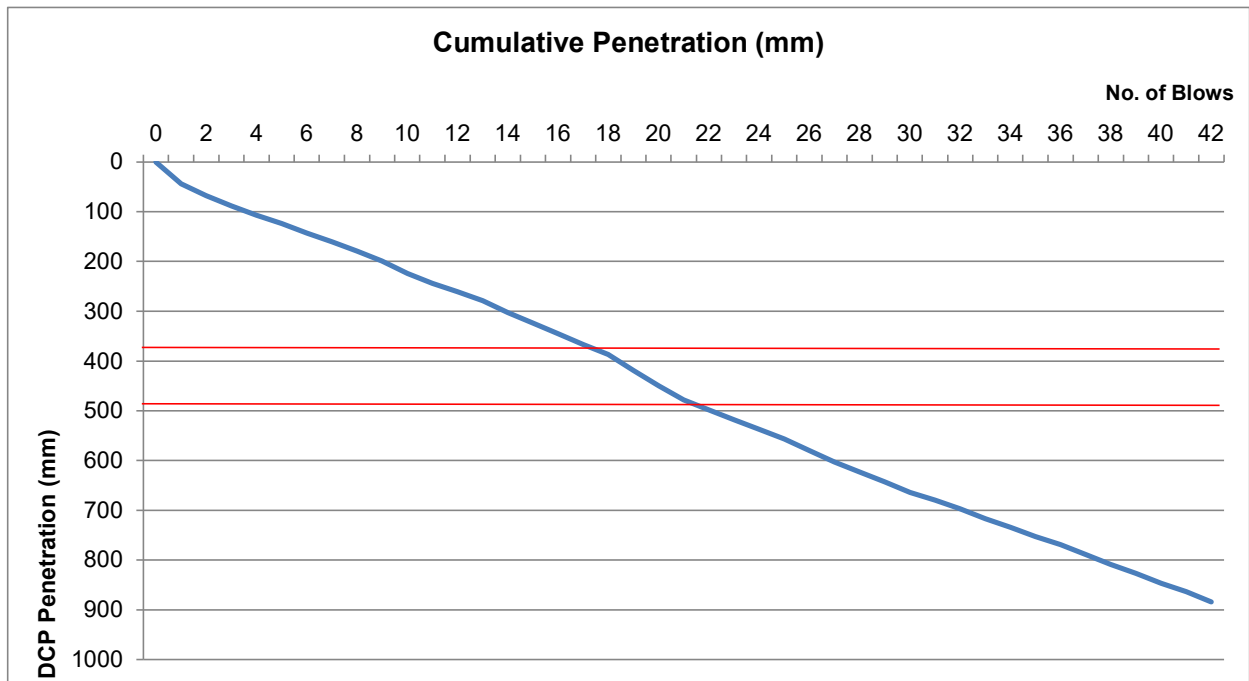
ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	86	0	0		387	12.4
1	130	44	44	5.5		
2	154	24	68	10.5		
3	174	20	88	12.7		
4	193	19	107	13.4		
5	210	17	124	15.1		
6	229	19	143	13.4		
7	246	17	160	15.1		
8	265	19	179	13.4		
9	285	20	199	12.7		
10	310	25	224	10.1		
11	330	20	244	12.7		
12	347	17	261	15.1		
13	365	18	279	14.2		
14	389	24	303	10.5		
15	410	21	324	12.1		
16	431	21	345	12.1		
17	453	22	367	11.5		
18	473	20	387	12.7		
19	505	32	419	7.7	91	8.2
20	536	31	450	8.0		
21	564	28	478	8.9		
22	584	20	498	12.7	406	13.3
23	604	20	518	12.7		
24	623	19	537	13.4		
25	643	20	557	12.7		
26	666	23	580	11.0		
27	689	23	603	11.0		
28	709	20	623	12.7		
29	729	20	643	12.7		
30	750	21	664	12.1		
31	766	16	680	16.1		
32	783	17	697	15.1		
33	803	20	717	12.7		
34	820	17	734	15.1		
35	839	19	753	13.4		
36	855	16	769	16.1		
37	875	20	789	12.7		
38	895	20	809	12.7		
39	913	18	827	14.2		
40	933	20	847	12.7		
41	950	17	864	15.1		

42	970	20	884	12.7		
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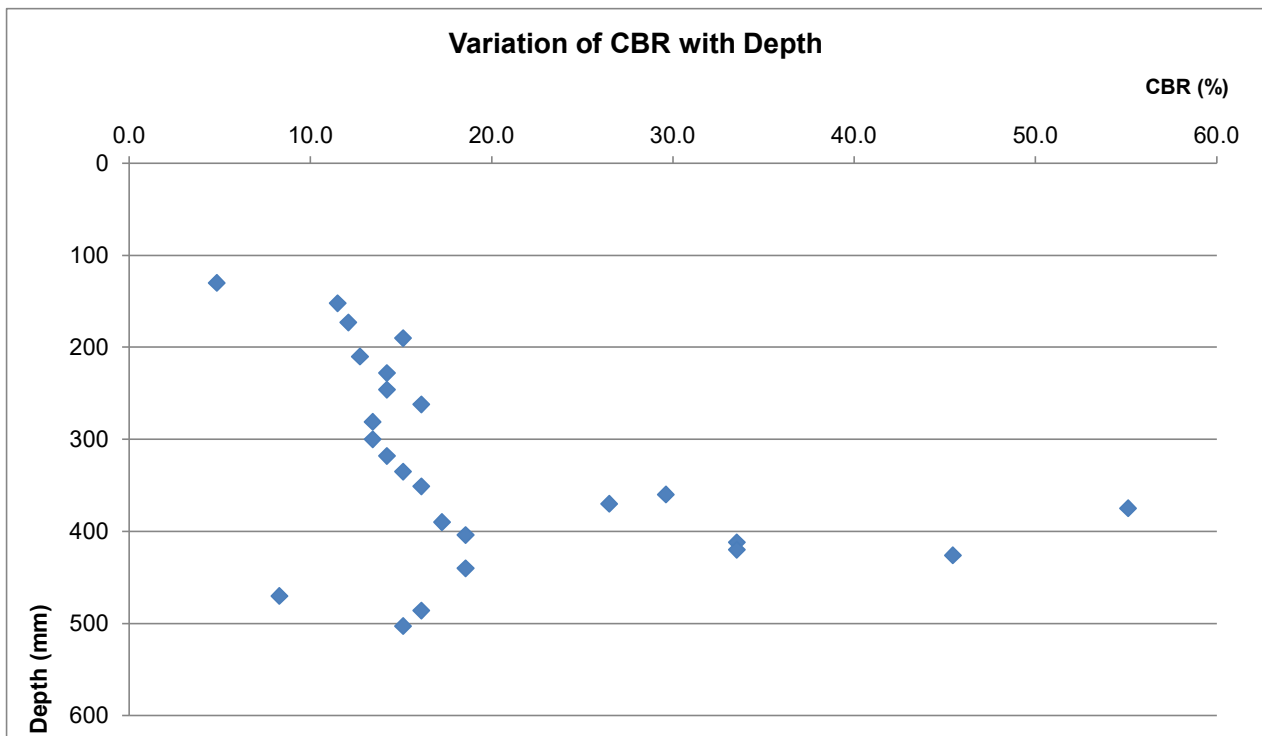
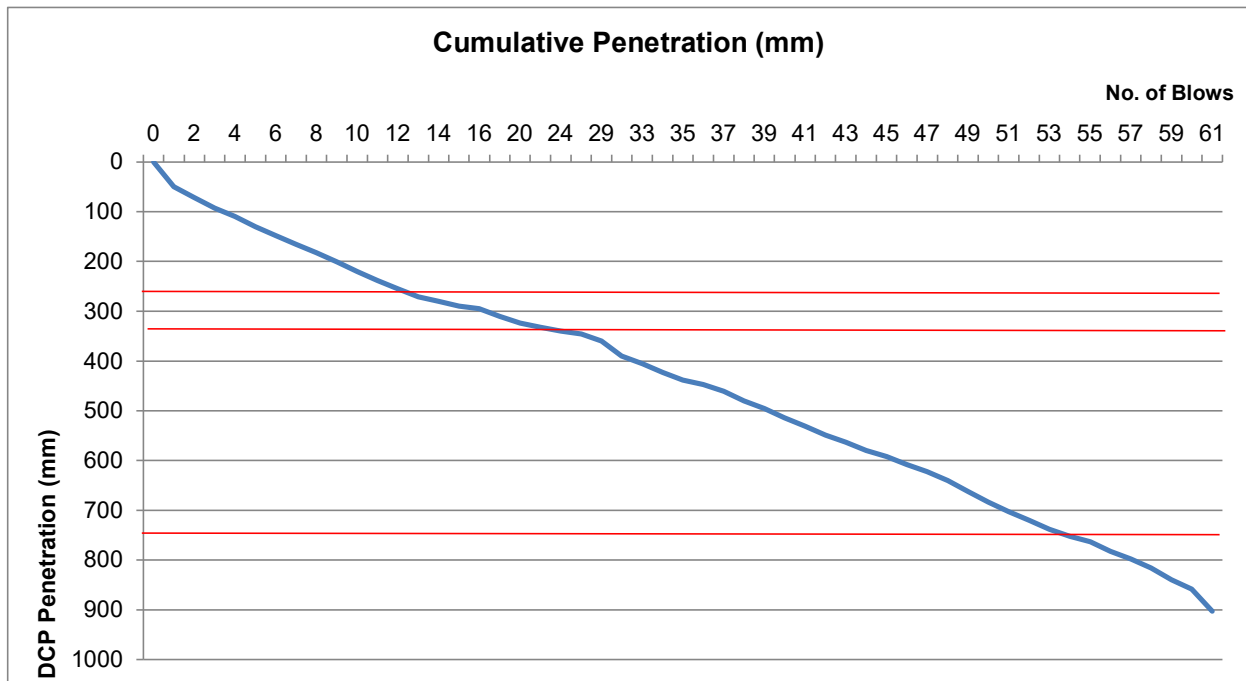
ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	80	0	0		271	13.3
1	130	50	50	4.8		
2	152	22	72	11.5		
3	173	21	93	12.1		
4	190	17	110	15.1		
5	210	20	130	12.7		
6	228	18	148	14.2		
7	246	18	166	14.2		
8	262	16	182	16.1		
9	281	19	201	13.4		
10	300	19	220	13.4		
11	318	18	238	14.2		
12	335	17	255	15.1		
13	351	16	271	16.1		
14	360	9	280	29.6	75	32.4
15	370	10	290	26.5		
16	375	5	295	55.1		
18	390	15	310	17.3		
20	404	14	324	18.6		
22	412	8	332	33.5		
24	420	8	340	33.5		
26	426	6	346	45.4		
29	440	14	360	18.6		
32	470	30	390	8.3	406	16.1
33	486	16	406	16.1		
34	503	17	423	15.1		
35	518	15	438	17.3		
36	527	9	447	29.6		
37	541	14	461	18.6		
38	560	19	480	13.4		
39	576	16	496	16.1		
40	594	18	514	14.2		
41	611	17	531	15.1		
42	629	18	549	14.2		
43	643	14	563	18.6		
44	660	17	580	15.1		
45	672	12	592	21.8		
46	688	16	608	16.1		
47	702	14	622	18.6		
48	720	18	640	14.2		
49	742	22	662	11.5		
50	763	21	683	12.1		

51	783	20	703	12.7		
52	800	17	720	15.1		
53	818	18	738	14.2		
54	832	14	752	18.6		
55	843	11	763	23.9	151	14.0
56	862	19	782	13.4		
57	878	16	798	16.1		
58	896	18	816	14.2		
59	920	24	840	10.5		
60	938	18	858	14.2		
61	983	45	903	5.4		



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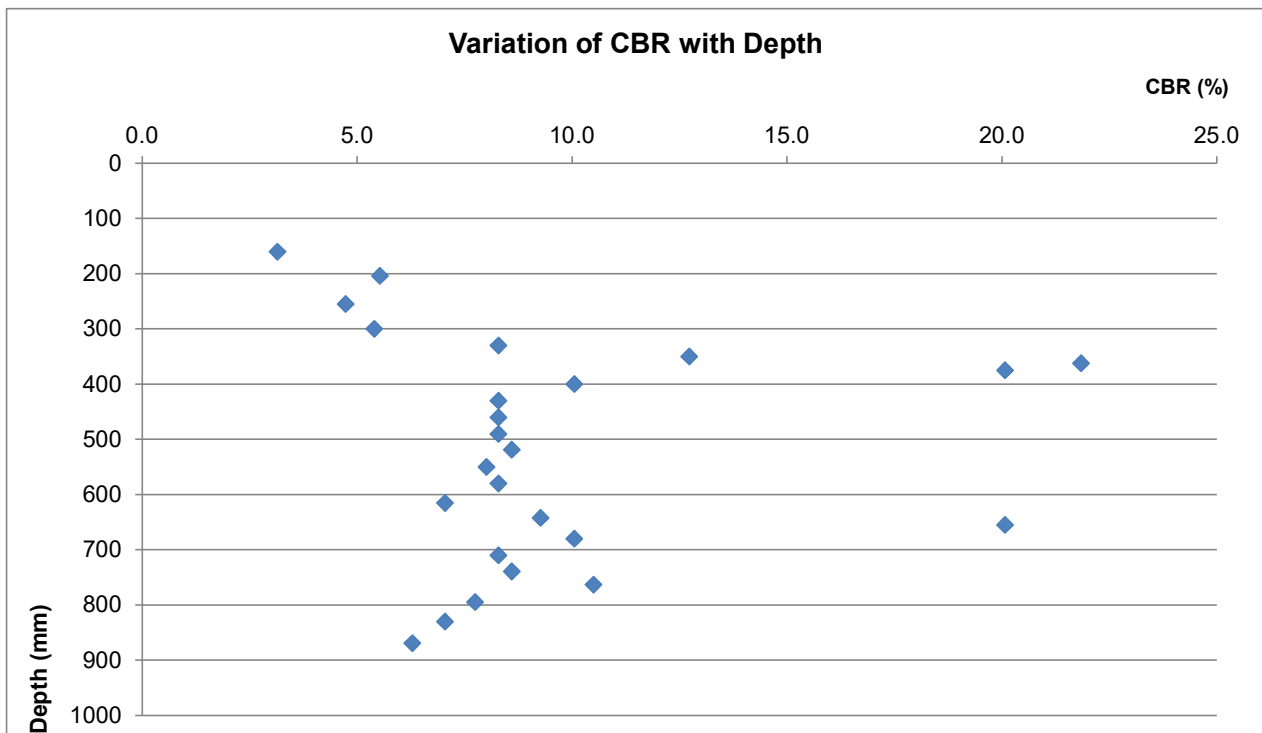
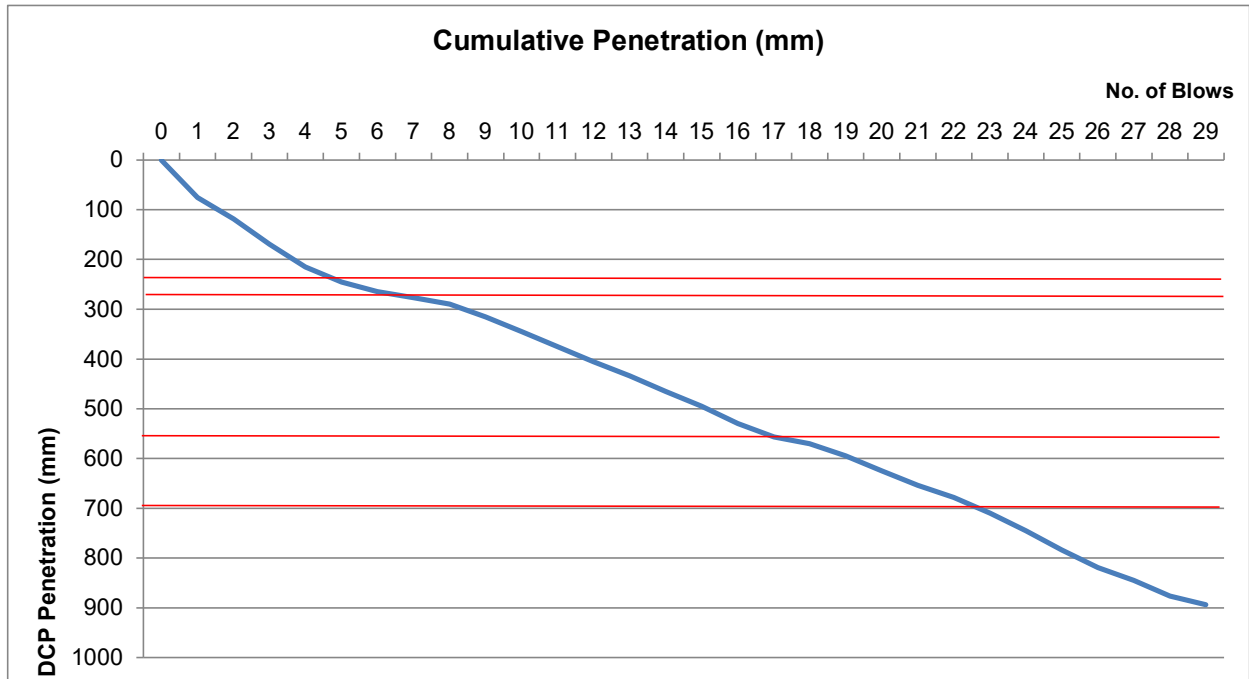
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	85	0	0		245	5.4
1	160	75	75	3.1		
2	204	44	119	5.5		
3	255	51	170	4.7		
4	300	45	215	5.4		
5	330	30	245	8.3		
6	350	20	265	12.7	32	17.3
7	362	12	277	21.8		
8	375	13	290	20.1	280	9.6
9	400	25	315	10.1		
10	430	30	345	8.3		
11	460	30	375	8.3		
12	490	30	405	8.3		
13	519	29	434	8.6		
14	550	31	465	8.0		
15	580	30	495	8.3		
16	615	35	530	7.0		
17	642	27	557	9.3		
18	655	13	570	20.1	153	10.9
19	680	25	595	10.1		
20	710	30	625	8.3		
21	739	29	654	8.6		
22	763	24	678	10.5		
23	795	32	710	7.7		
24	830	35	745	7.0	184	8.7
25	869	39	784	6.3		
26	904	35	819	7.0		
27	930	26	845	9.6		
28	961	31	876	8.0		
29	979	18	894	14.2		



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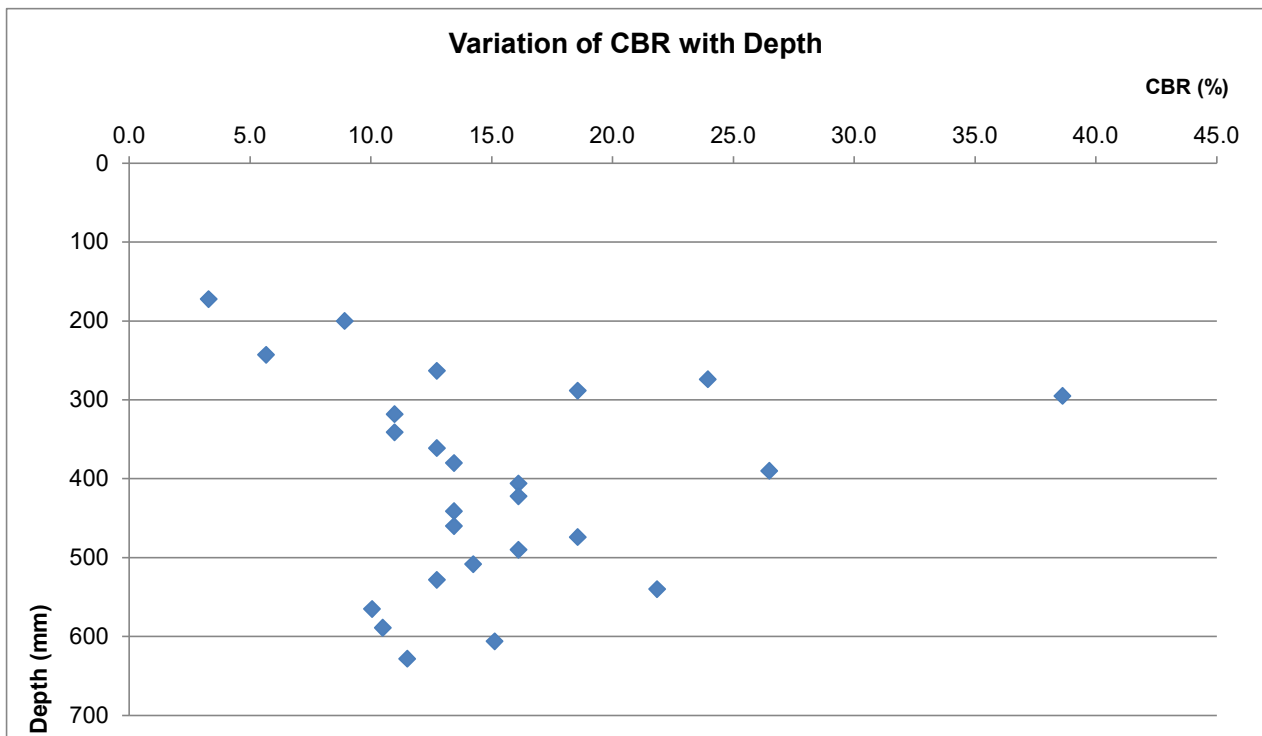
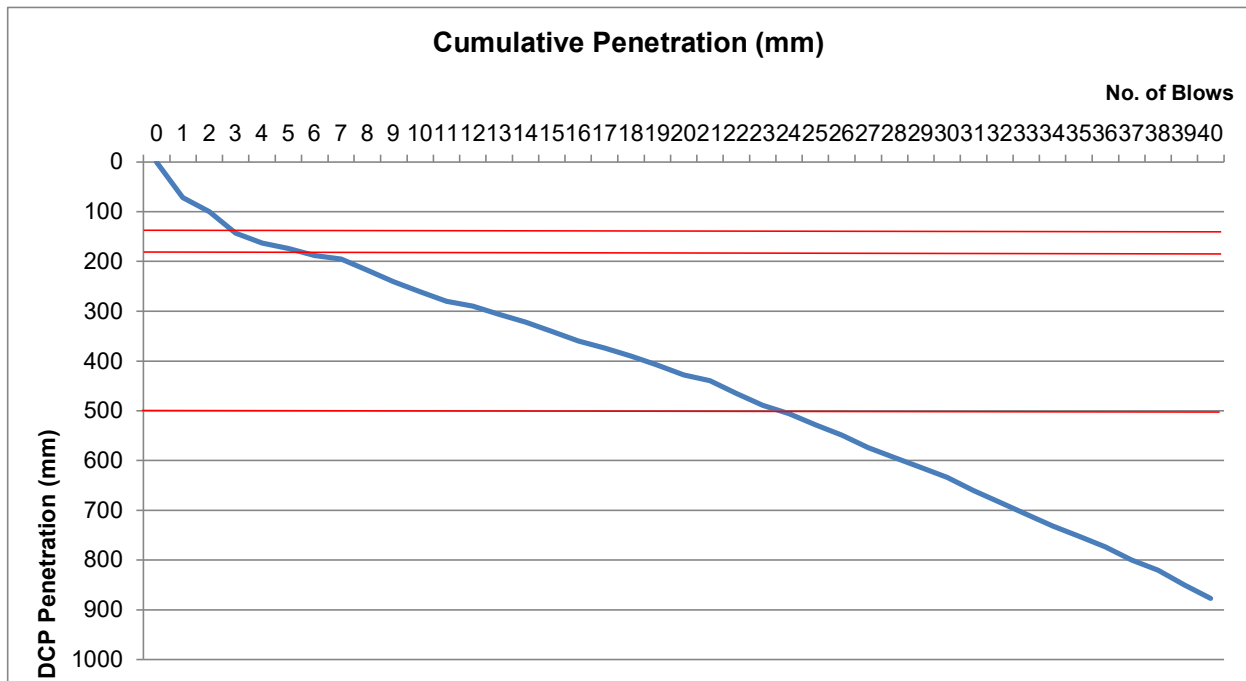
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	100	0	0		143	6.0
1	172	72	72	3.3		
2	200	28	100	8.9		
3	243	43	143	5.7		
4	263	20	163	12.7	52	23.5
5	274	11	174	23.9		
6	288	14	188	18.6		
7	295	7	195	38.6		
8	318	23	218	11.0	311	14.9
9	341	23	241	11.0		
10	361	20	261	12.7		
11	380	19	280	13.4		
12	390	10	290	26.5		
13	406	16	306	16.1		
14	422	16	322	16.1		
15	441	19	341	13.4		
16	460	19	360	13.4		
17	474	14	374	18.6		
18	490	16	390	16.1		
19	508	18	408	14.2		
20	528	20	428	12.7		
21	540	12	440	21.8		
22	565	25	465	10.1	371	11.1
23	589	24	489	10.5		
24	606	17	506	15.1		
25	628	22	528	11.5		
26	649	21	549	12.1		
27	674	25	574	10.1		
28	694	20	594	12.7		
29	714	20	614	12.7		
30	734	20	634	12.7		
31	760	26	660	9.6		
32	784	24	684	10.5		
33	808	24	708	10.5		
34	832	24	732	10.5		
35	852	20	752	12.7		
36	873	21	773	12.1		
37	900	27	800	9.3		
38	921	21	821	12.1		
39	950	29	850	8.6		
40	977	27	877	9.3		



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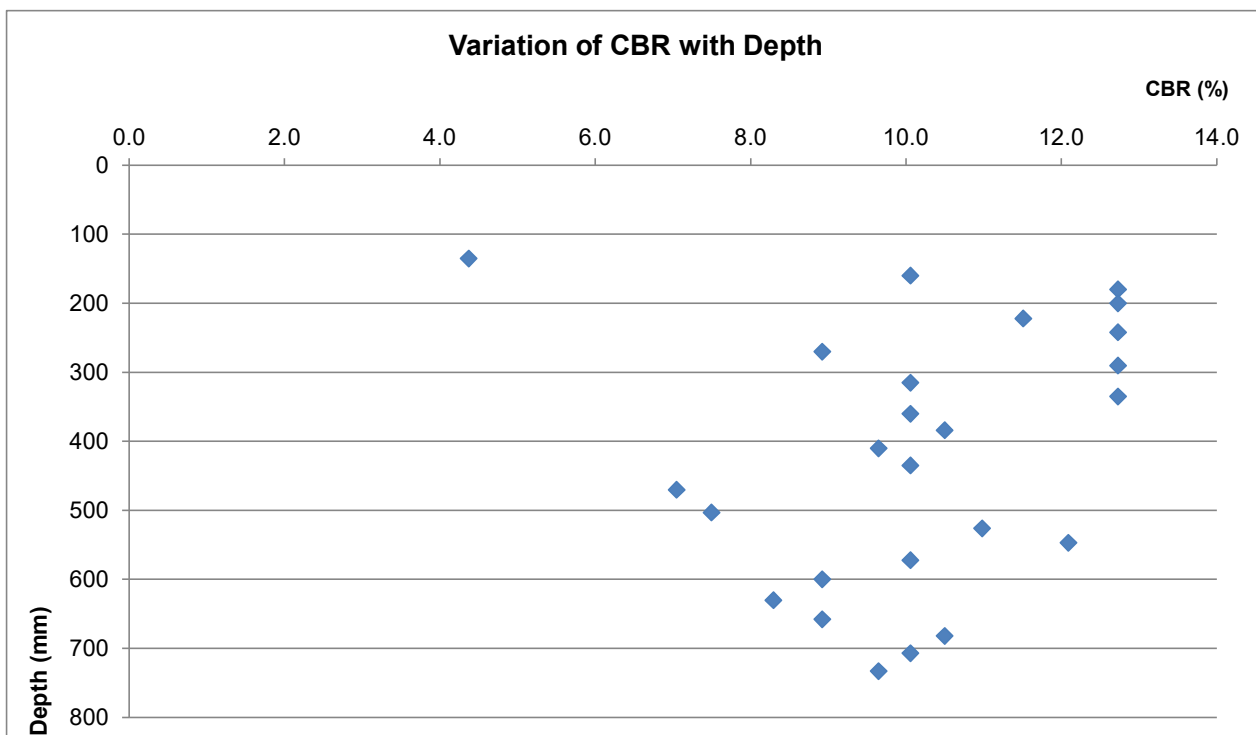
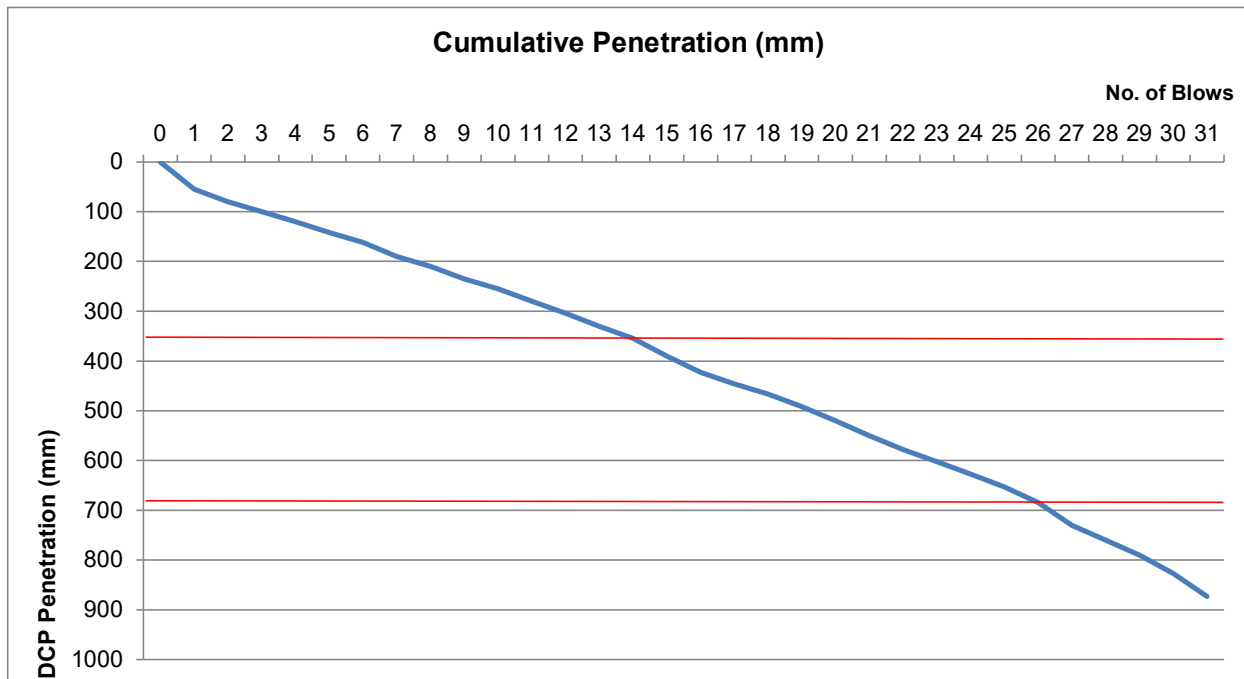
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	80	0	0		355	10.6
1	135	55	55	4.4		
2	160	25	80	10.1		
3	180	20	100	12.7		
4	200	20	120	12.7		
5	222	22	142	11.5		
6	242	20	162	12.7		
7	270	28	190	8.9		
8	290	20	210	12.7		
9	315	25	235	10.1		
10	335	20	255	12.7		
11	360	25	280	10.1		
12	384	24	304	10.5		
13	410	26	330	9.6		
14	435	25	355	10.1		
15	470	35	390	7.0	330	9.3
16	503	33	423	7.5		
17	526	23	446	11.0		
18	547	21	467	12.1		
19	572	25	492	10.1		
20	600	28	520	8.9		
21	630	30	550	8.3		
22	658	28	578	8.9		
23	682	24	602	10.5		
24	707	25	627	10.1		
25	733	26	653	9.6		
26	765	32	685	7.7		
27	810	45	730	5.4	188	6.8
28	840	30	760	8.3		
29	870	30	790	8.3		
30	907	37	827	6.6		
31	953	46	873	5.3		



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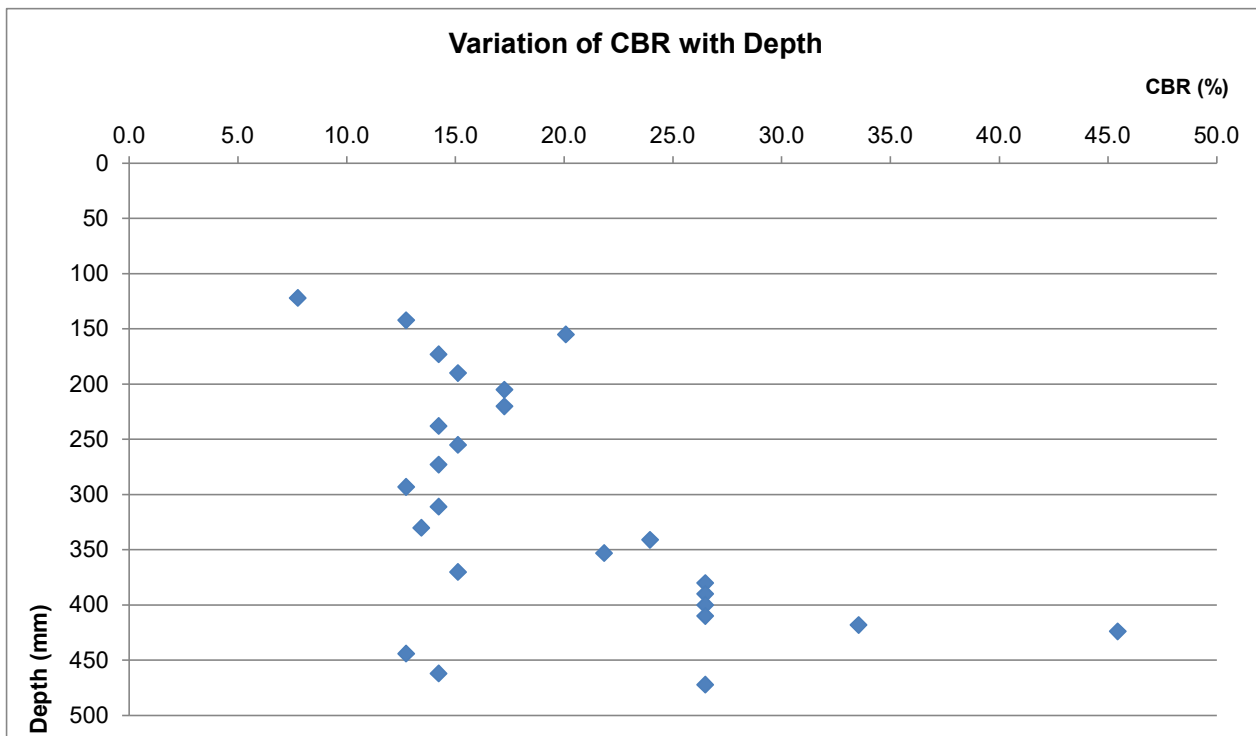
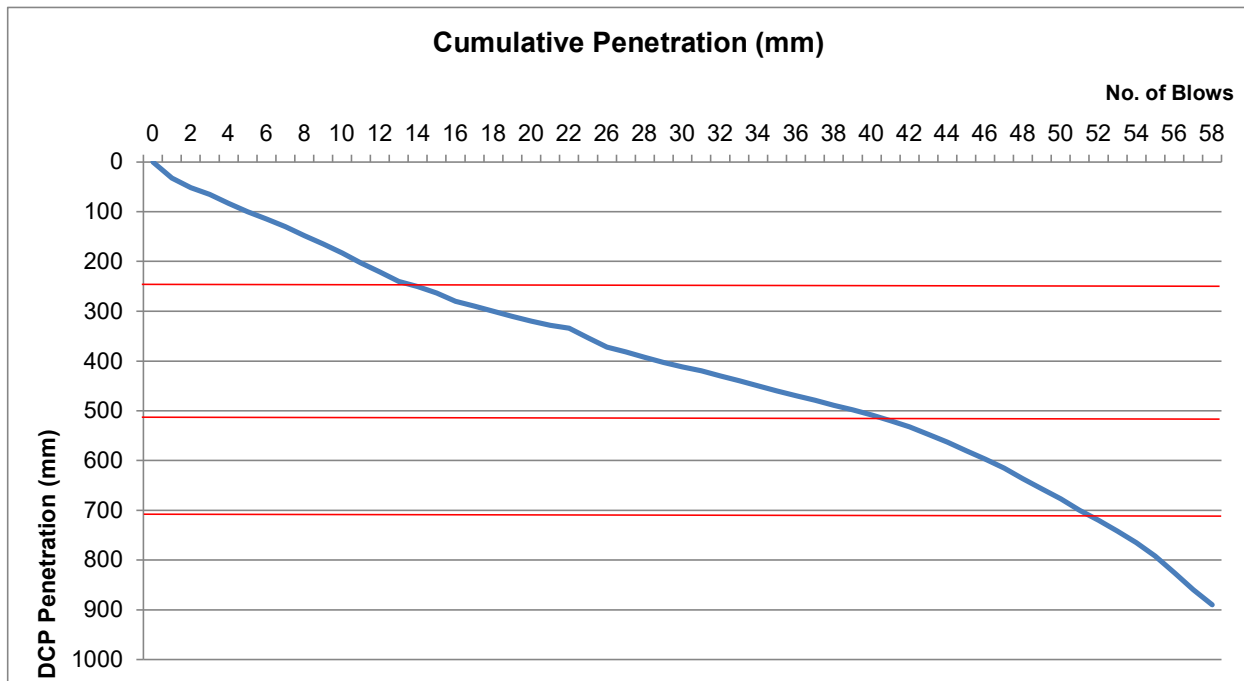
ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	90	0	0		251	15.2
1	122	32	32	7.7		
2	142	20	52	12.7		
3	155	13	65	20.1		
4	173	18	83	14.2		
5	190	17	100	15.1		
6	205	15	115	17.3		
7	220	15	130	17.3		
8	238	18	148	14.2		
9	255	17	165	15.1		
10	273	18	183	14.2		
11	293	20	203	12.7		
12	311	18	221	14.2		
13	330	19	240	13.4		
14	341	11	251	23.9		
15	353	12	263	21.8	269	26.2
16	370	17	280	15.1		
17	380	10	290	26.5		
18	390	10	300	26.5		
19	400	10	310	26.5		
20	410	10	320	26.5		
21	418	8	328	33.5		
22	424	6	334	45.4		
24	444	20	354	12.7		
26	462	18	372	14.2		
27	472	10	382	26.5		
28	483	11	393	23.9		
29	493	10	403	26.5		
30	502	9	412	29.6		
31	510	8	420	33.5		
32	520	10	430	26.5		
33	530	10	440	26.5		
34	540	10	450	26.5		
35	550	10	460	26.5		
36	560	10	470	26.5		
37	569	9	479	29.6		
38	579	10	489	26.5		
39	588	9	498	29.6		
40	598	10	508	26.5		
41	610	12	520	21.8		
42	622	12	532	21.8		
43	638	16	548	16.1		

44	653	15	563	17.3	200	14.6
45	671	18	581	14.2		
46	687	16	597	16.1		
47	705	18	615	14.2		
48	726	21	636	12.1		
49	747	21	657	12.1		
50	767	20	677	12.7		
51	790	23	700	11.0		
52	810	20	720	12.7		
53	832	22	742	11.5		
54	855	23	765	11.0	170	9.1
55	882	27	792	9.3		
56	915	33	825	7.5		
57	950	35	860	7.0		
58	980	30	890	8.3		



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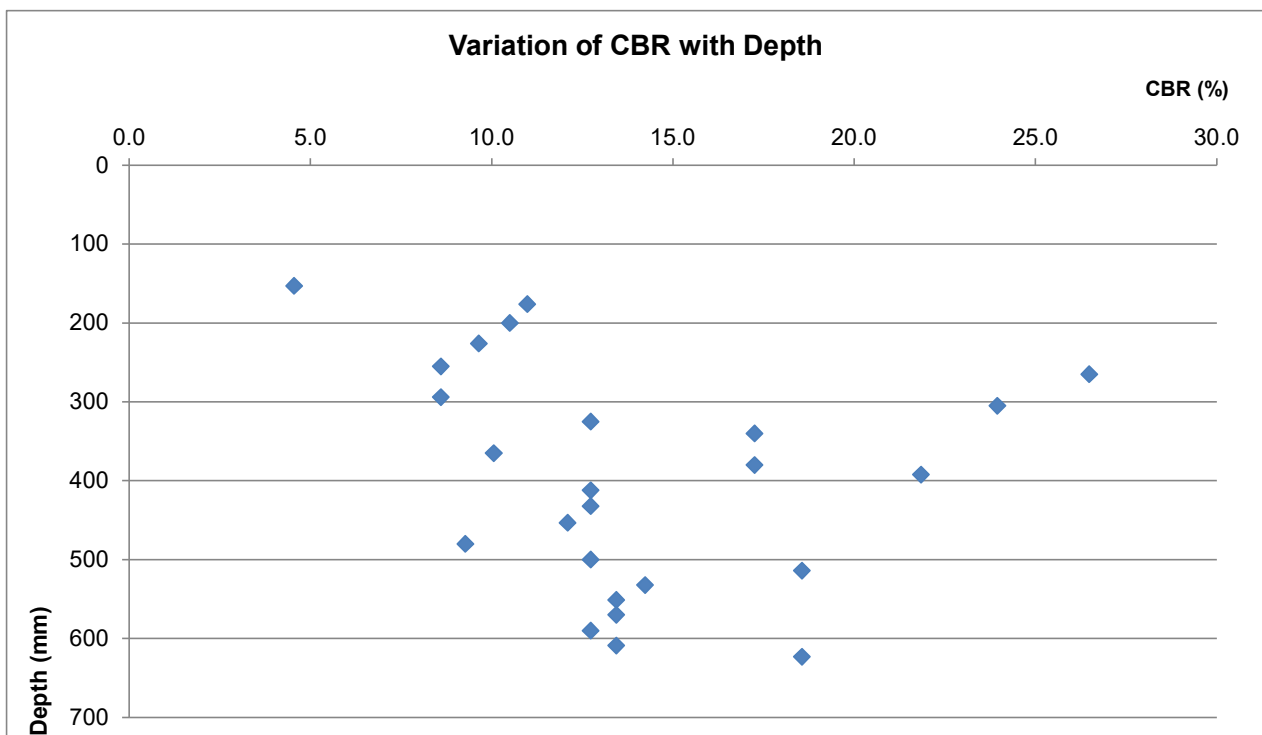
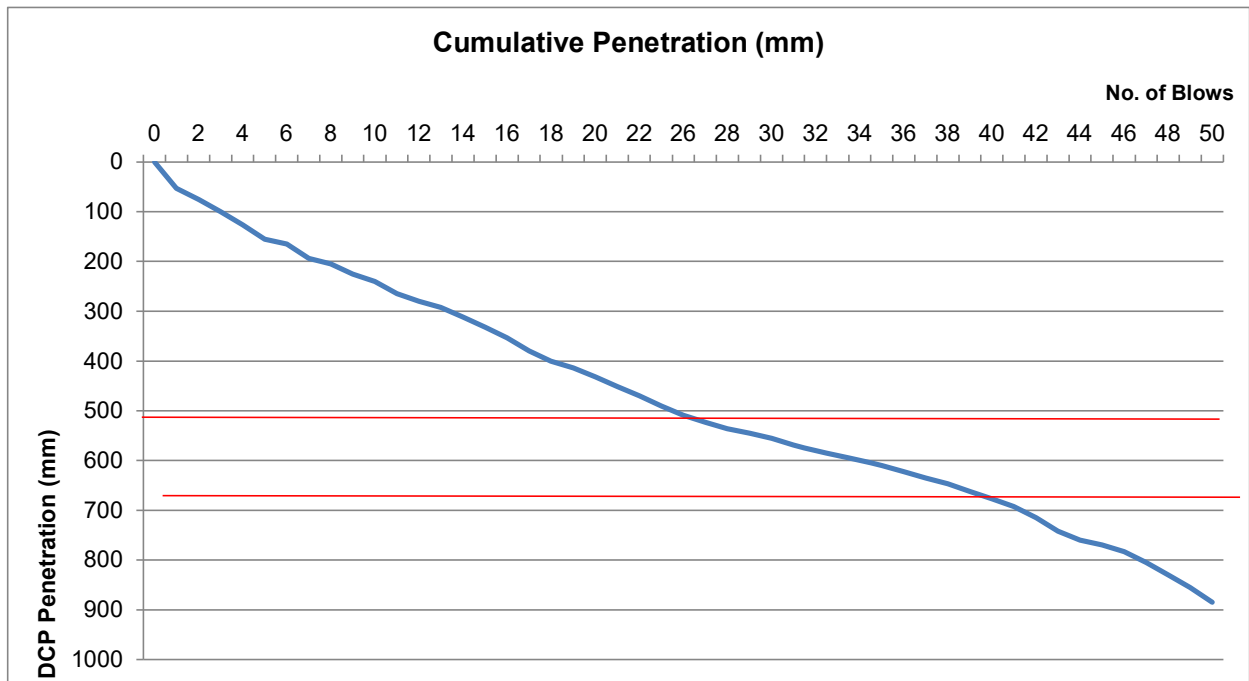
ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	100	0	0		509	13.7
1	153	53	53	4.5		
2	176	23	76	11.0		
3	200	24	100	10.5		
4	226	26	126	9.6		
5	255	29	155	8.6		
6	265	10	165	26.5		
7	294	29	194	8.6		
8	305	11	205	23.9		
9	325	20	225	12.7		
10	340	15	240	17.3		
11	365	25	265	10.1		
12	380	15	280	17.3		
13	392	12	292	21.8		
14	412	20	312	12.7		
15	432	20	332	12.7		
16	453	21	353	12.1		
17	480	27	380	9.3		
18	500	20	400	12.7		
19	514	14	414	18.6		
20	532	18	432	14.2		
21	551	19	451	13.4	168	22.5
22	570	19	470	13.4		
24	590	20	490	12.7		
26	609	19	509	13.4		
27	623	14	523	18.6		
28	636	13	536	20.1		
29	645	9	545	29.6		
30	655	10	555	26.5		
31	669	14	569	18.6		
32	680	11	580	23.9		
33	690	10	590	26.5		
34	700	10	600	26.5		
35	710	10	610	26.5		
36	722	12	622	21.8		
37	735	13	635	20.1		
38	747	12	647	21.8		
39	762	15	662	17.3		
40	777	15	677	17.3		
41	792	15	692	17.3		
42	815	23	715	11.0		
43	842	27	742	9.3		

44	860	18	760	14.2	208	13.8
45	870	10	770	26.5		
46	883	13	783	20.1		
47	905	22	805	11.5		
48	930	25	830	10.1		
49	955	25	855	10.1		
50	985	30	885	8.3		



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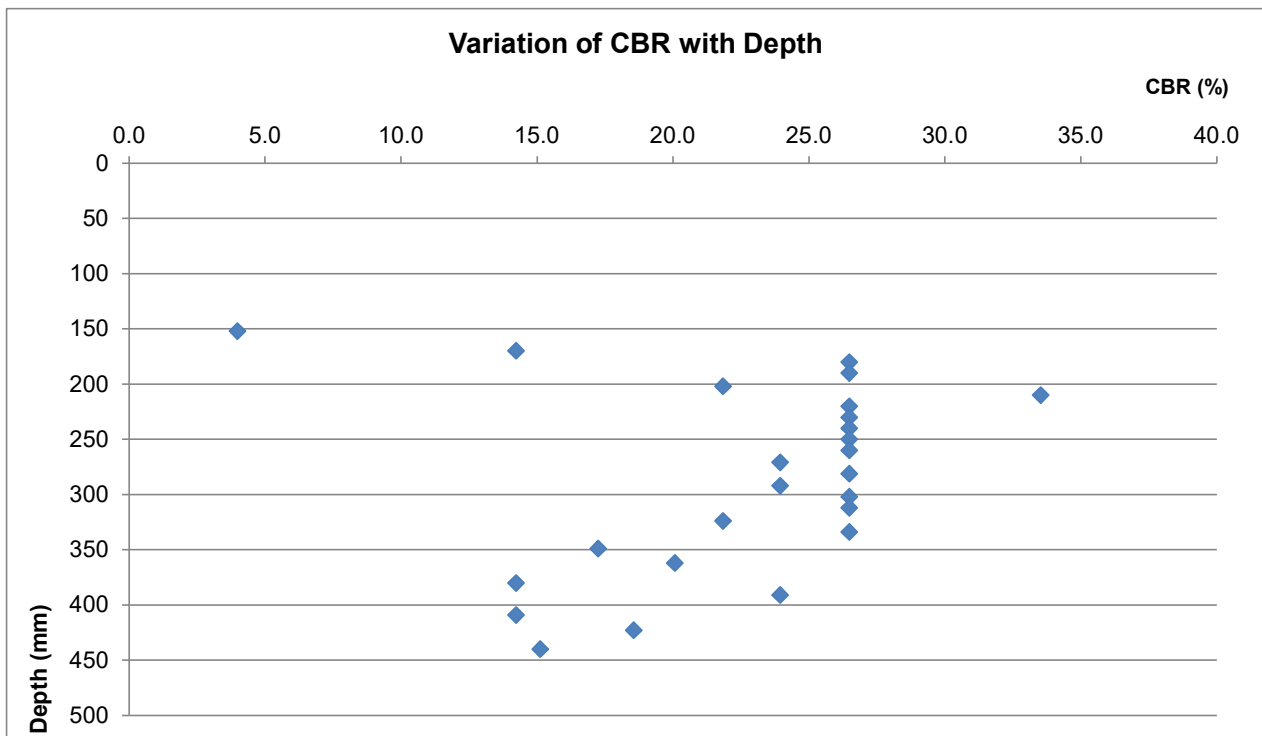
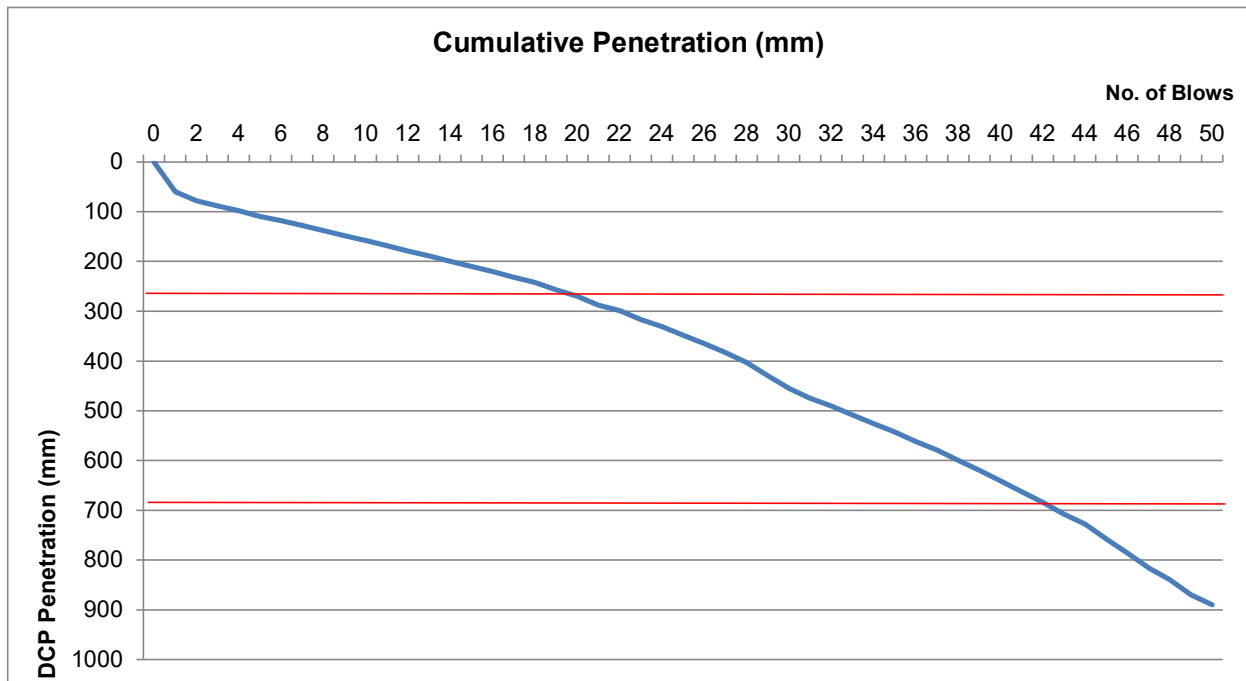
ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	92	0	0		270	23.6
1	152	60	60	4.0		
2	170	18	78	14.2		
3	180	10	88	26.5		
4	190	10	98	26.5		
5	202	12	110	21.8		
6	210	8	118	33.5		
7	220	10	128	26.5		
8	230	10	138	26.5		
9	240	10	148	26.5		
10	250	10	158	26.5		
11	260	10	168	26.5		
12	271	11	179	23.9		
13	281	10	189	26.5		
14	292	11	200	23.9		
15	302	10	210	26.5		
16	312	10	220	26.5		
17	324	12	232	21.8		
18	334	10	242	26.5		
19	349	15	257	17.3		
20	362	13	270	20.1	414	14.1
21	380	18	288	14.2		
22	391	11	299	23.9		
23	409	18	317	14.2		
24	423	14	331	18.6		
25	440	17	348	15.1		
26	457	17	365	15.1		
27	475	18	383	14.2		
28	495	20	403	12.7		
29	521	26	429	9.6		
30	547	26	455	9.6		
31	567	20	475	12.7		
32	582	15	490	17.3		
33	600	18	508	14.2		
34	618	18	526	14.2		
35	634	16	542	16.1		
36	654	20	562	12.7		
37	671	17	579	15.1		
38	692	21	600	12.1		
39	712	20	620	12.7		
40	733	21	641	12.1		
41	755	22	663	11.5		

42	776	21	684	12.1	206	
43	800	24	708	10.5		10.0
44	820	20	728	12.7		
45	850	30	758	8.3		
46	878	28	786	8.9		
47	908	30	816	8.3		
48	932	24	840	10.5		
49	962	30	870	8.3		
50	982	20	890	12.7		



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Location DCP25

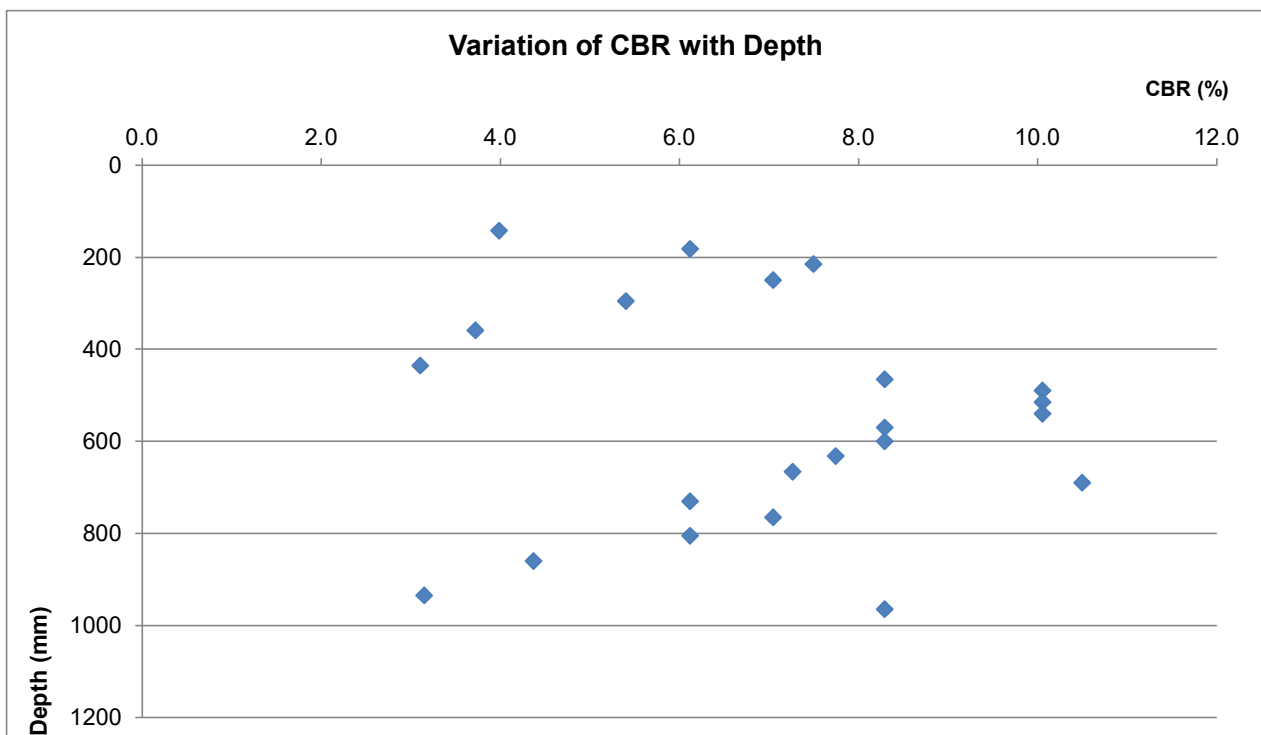
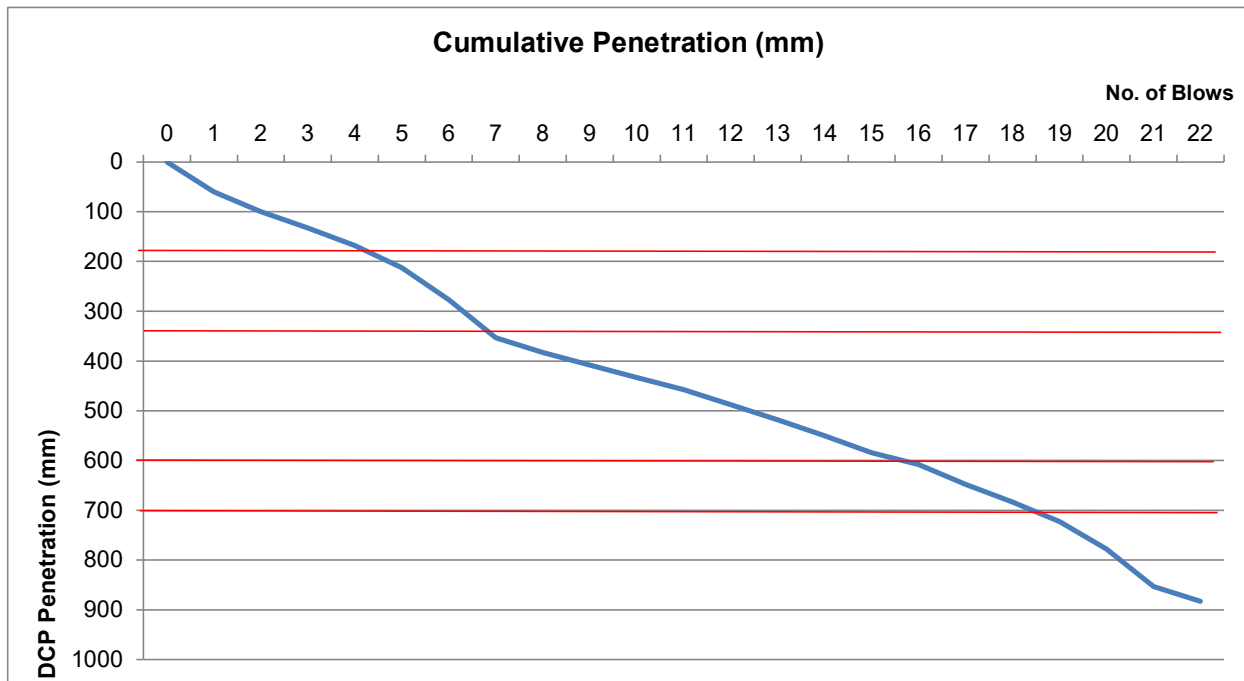
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	82	0	0		168	6.2
1	142	60	60	4.0		
2	182	40	100	6.1		
3	215	33	133	7.5		
4	250	35	168	7.0		
5	295	45	213	5.4	185	4.1
6	359	64	277	3.7		
7	435	76	353	3.1		
8	465	30	383	8.3	255	9.0
9	490	25	408	10.1		
10	515	25	433	10.1		
11	540	25	458	10.1		
12	570	30	488	8.3		
13	600	30	518	8.3		
14	632	32	550	7.7		
15	666	34	584	7.3	115	6.4
16	690	24	608	10.5		
17	730	40	648	6.1		
18	765	35	683	7.0		
19	805	40	723	6.1	160	5.3
20	860	55	778	4.4		
21	935	75	853	3.1		
22	965	30	883	8.3		



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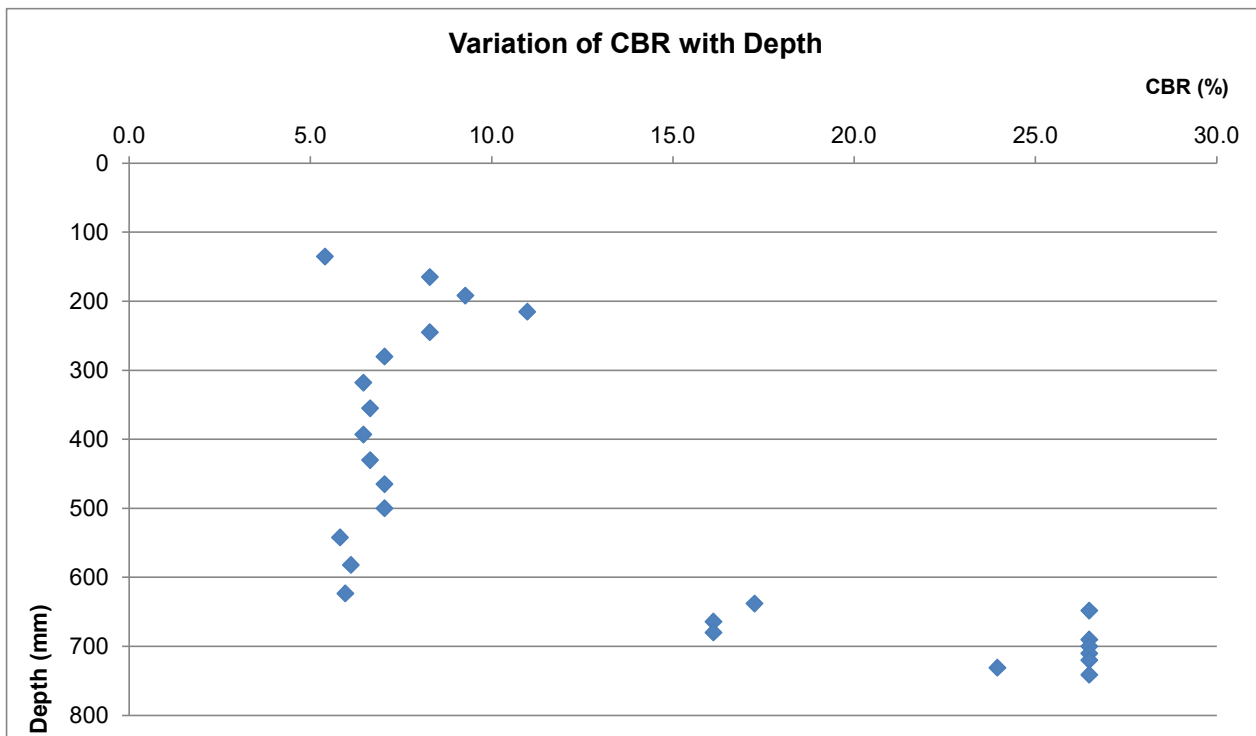
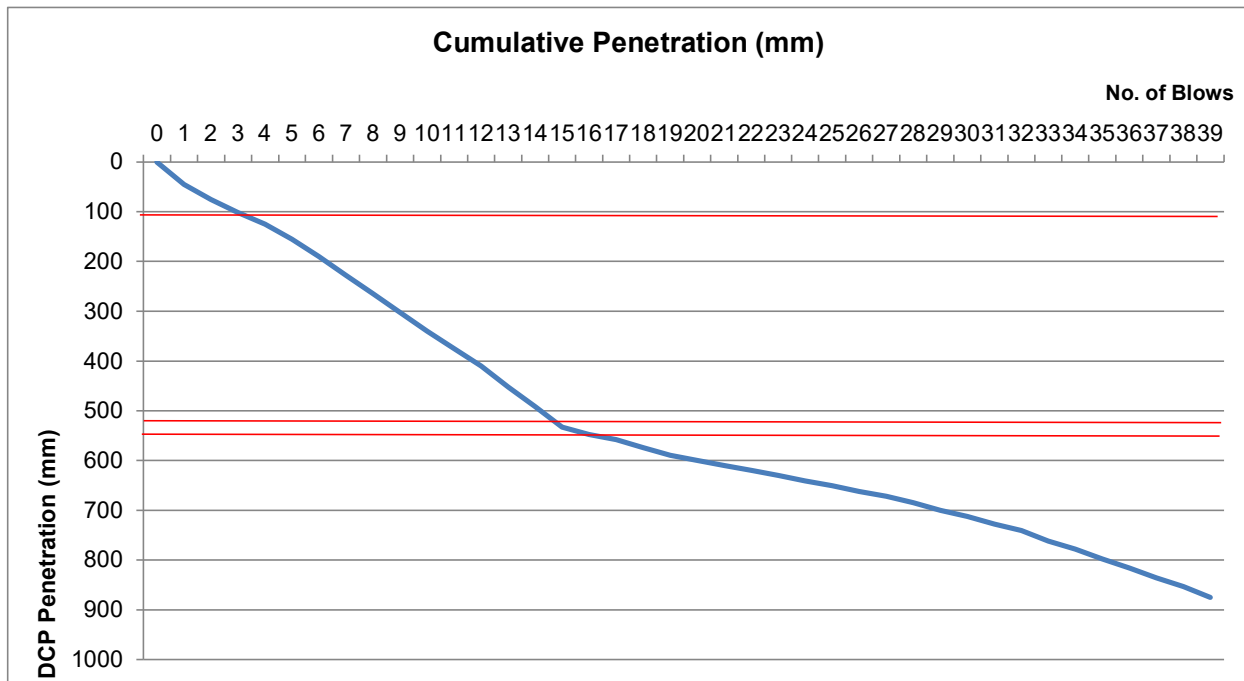
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	90	0	0		125	8.5
1	135	45	45	5.4		
2	165	30	75	8.3		
3	192	27	102	9.3		
4	215	23	125	11.0		
5	245	30	155	8.3	408	6.7
6	280	35	190	7.0		
7	318	38	228	6.5		
8	355	37	265	6.6		
9	393	38	303	6.5		
10	430	37	340	6.6		
11	465	35	375	7.0		
12	500	35	410	7.0		
13	542	42	452	5.8		
14	582	40	492	6.1		
15	623	41	533	6.0	25	23.6
16	638	15	548	17.3		
17	648	10	558	26.5	317	19.5
18	664	16	574	16.1		
19	680	16	590	16.1		
20	690	10	600	26.5		
21	700	10	610	26.5		
22	710	10	620	26.5		
23	720	10	630	26.5		
24	731	11	641	23.9		
25	741	10	651	26.5		
26	752	11	662	23.9		
27	762	10	672	26.5		
28	775	13	685	20.1		
29	790	15	700	17.3		
30	802	12	712	21.8		
31	818	16	728	16.1		
32	831	13	741	20.1		
33	852	21	762	12.1		
34	868	16	778	16.1		
35	888	20	798	12.7		
36	906	18	816	14.2		
37	926	20	836	12.7		
38	943	17	853	15.1		
39	965	22	875	11.5		



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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	125	0	0		116	11.6
1	180	55	55	4.4		
2	210	30	85	8.3		
3	224	14	99	18.6		
4	241	17	116	15.1		
5	251	10	126	26.5	90	22.4
6	262	11	137	23.9		
7	272	10	147	26.5		
8	282	10	157	26.5		
9	292	10	167	26.5		
10	309	17	184	15.1		
11	331	22	206	11.5	95	10.6
12	355	24	230	10.5		
13	380	25	255	10.1		
14	403	23	278	11.0		
15	426	23	301	11.0		
16	453	27	328	9.3	198	6.6
17	484	31	359	8.0		
18	522	38	397	6.5		
19	576	54	451	4.5		
20	624	48	499	5.0		
21	704	80	579	2.9	356	3.5
22	791	87	666	2.7		
23	842	51	717	4.7		
24	923	81	798	2.9		
25	980	57	855	4.2		

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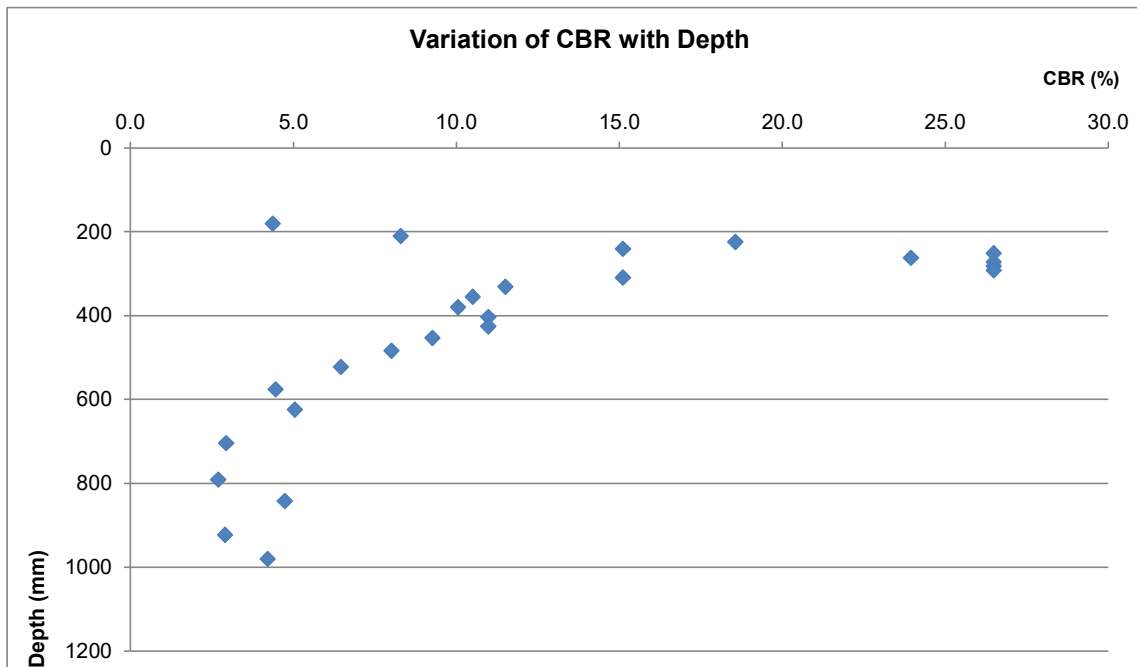
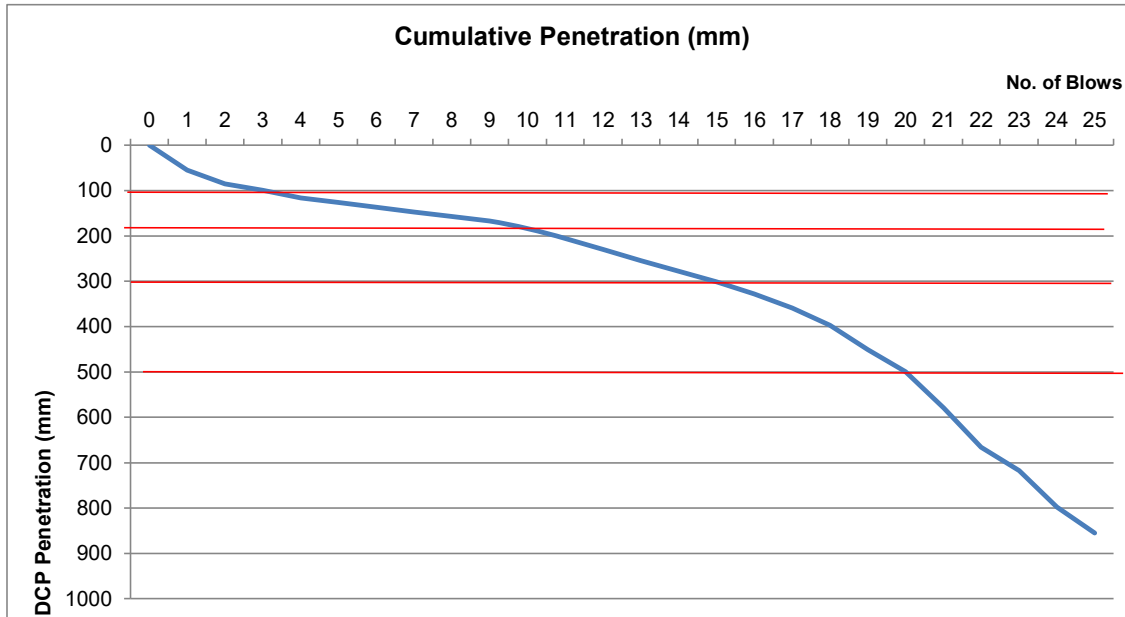
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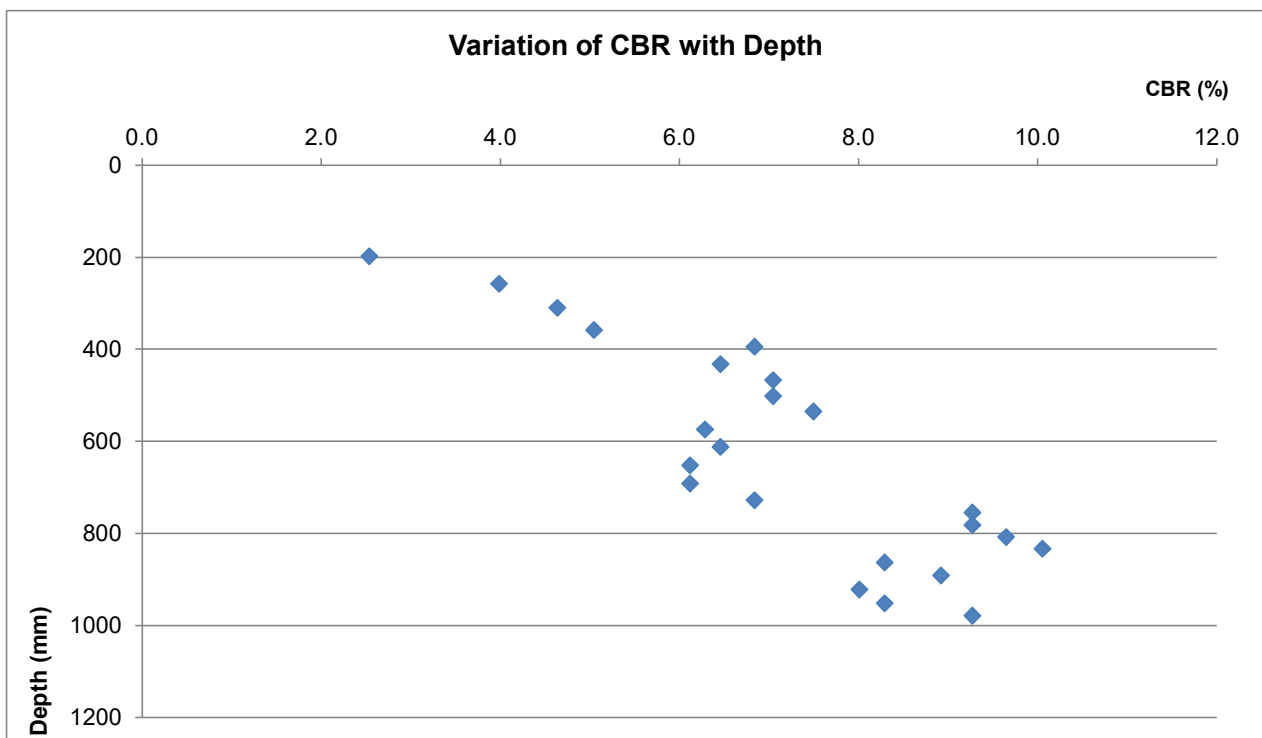
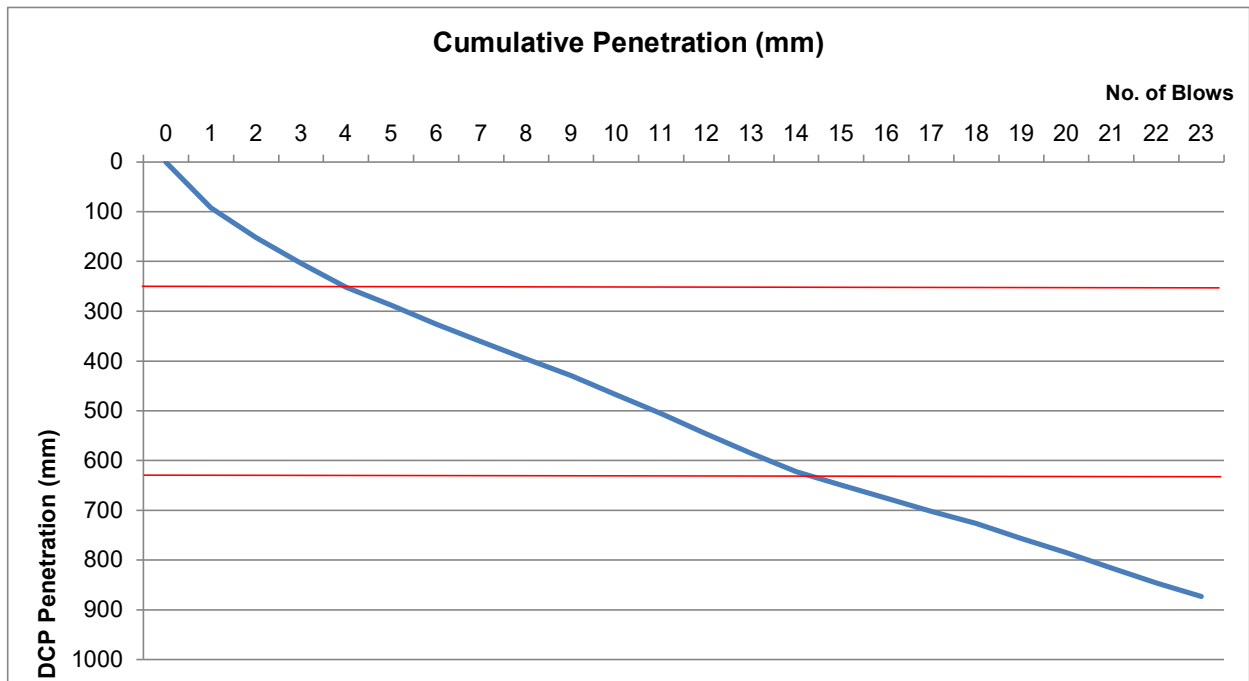
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS						
No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	106	0	0		252	4.1
1	198	92	92	2.5		
2	258	60	152	4.0		
3	310	52	204	4.6		
4	358	48	252	5.0		
5	394	36	288	6.8	370	6.7
6	432	38	326	6.5		
7	467	35	361	7.0		
8	502	35	396	7.0		
9	535	33	429	7.5		
10	574	39	468	6.3		
11	612	38	506	6.5		
12	652	40	546	6.1		
13	692	40	586	6.1		
14	728	36	622	6.8		
15	755	27	649	9.3	251	9.0
16	782	27	676	9.3		
17	808	26	702	9.6		
18	833	25	727	10.1		
19	863	30	757	8.3		
20	891	28	785	8.9		
21	922	31	816	8.0		
22	952	30	846	8.3		
23	979	27	873	9.3		



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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	93	0	0		240	4.1
1	170	77	77	3.1		
2	226	56	133	4.3		
3	282	56	189	4.3		
4	333	51	240	4.7		
5	400	67	307	3.5	370	3.9
6	455	55	362	4.4		
7	520	65	427	3.7		
8	586	66	493	3.6		
9	641	55	548	4.4		
10	690	49	597	4.9	251	6.0
11	740	50	647	4.8		
12	782	42	689	5.8		
13	820	38	727	6.5		
14	864	44	771	5.5		
15	904	40	811	6.1		
16	952	48	859	5.0		
17	980	28	887	8.9		

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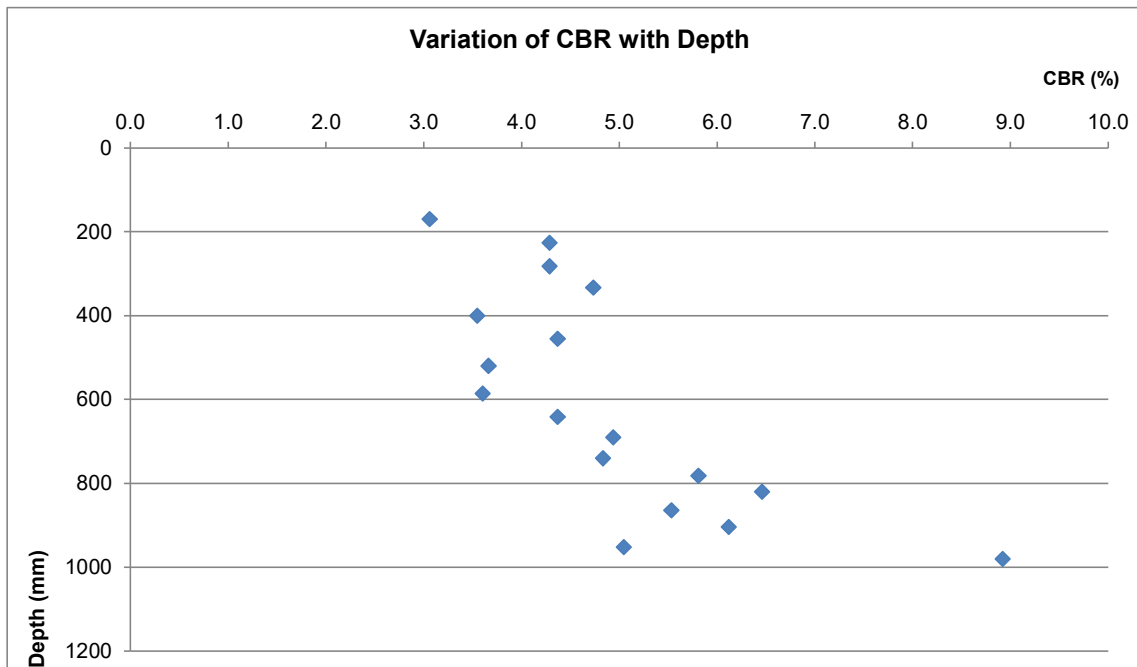
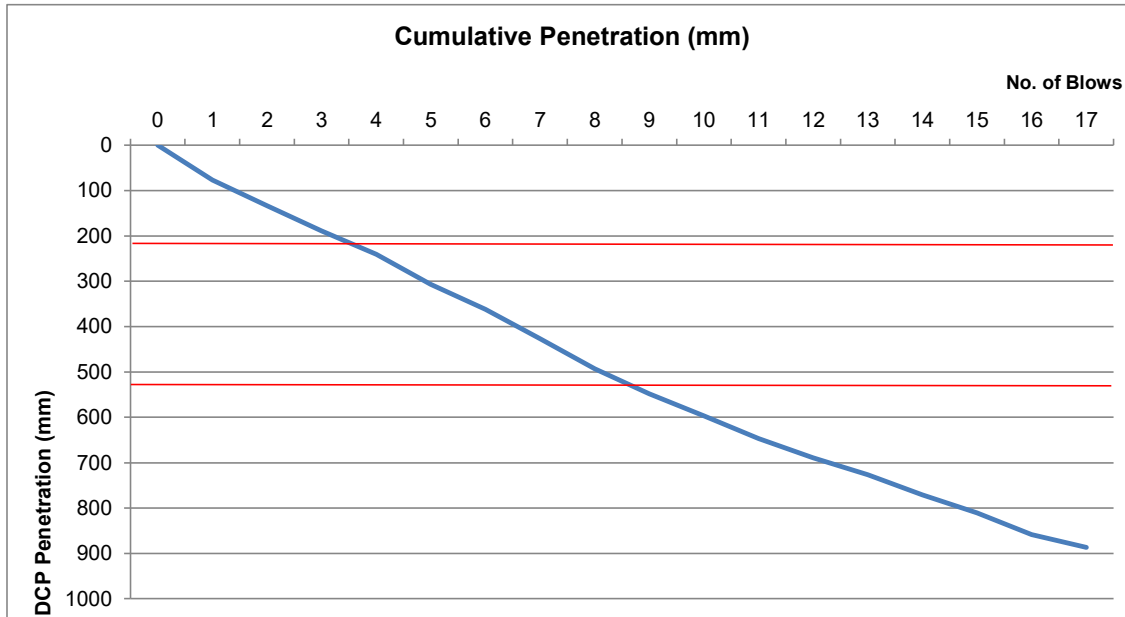
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	110	0	0		163	1.4
1	273	163	163	1.4		
2	346	73	236	3.2	110	4.9
3	383	37	273	6.6		
4	403	20	293	12.7	182	10.0
5	423	20	313	12.7		
6	447	24	337	10.5		
7	477	30	367	8.3		
8	503	26	393	9.6		
9	532	29	422	8.6		
10	565	33	455	7.5		
11	604	39	494	6.3	155	6.3
12	642	38	532	6.5		
13	683	41	573	6.0		
14	720	37	610	6.6		
15	742	22	632	11.5	86	12.2
16	758	16	648	16.1		
17	779	21	669	12.1		
18	806	27	696	9.3		
19	839	33	729	7.5	146	6.8
20	879	40	769	6.1		
21	911	32	801	7.7		
22	952	41	842	6.0		

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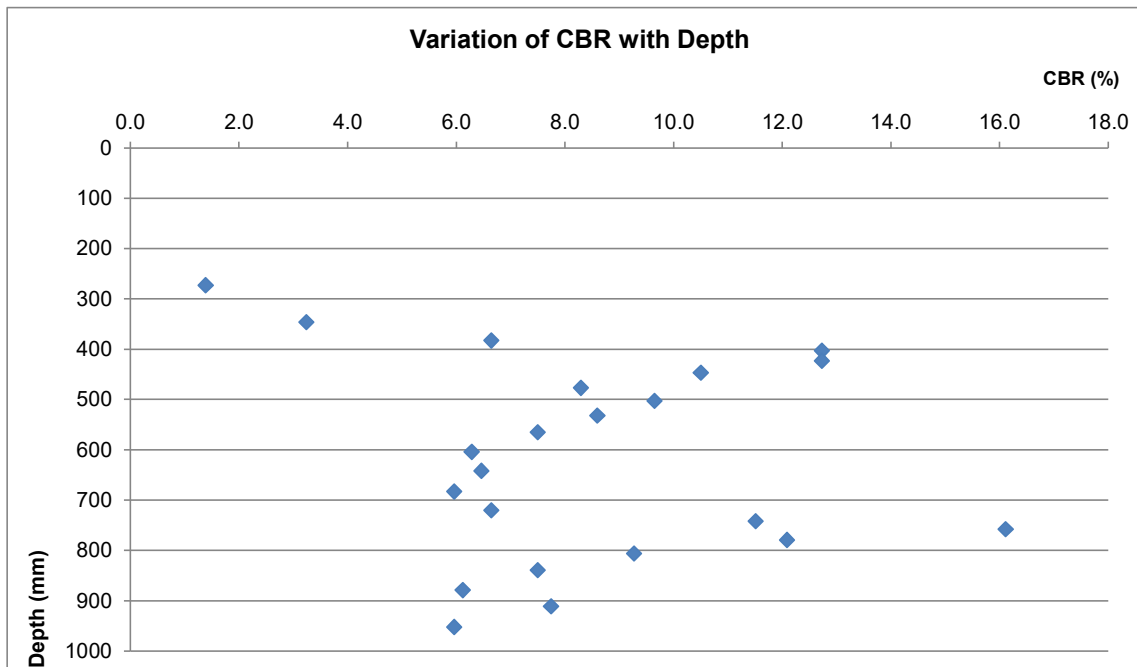
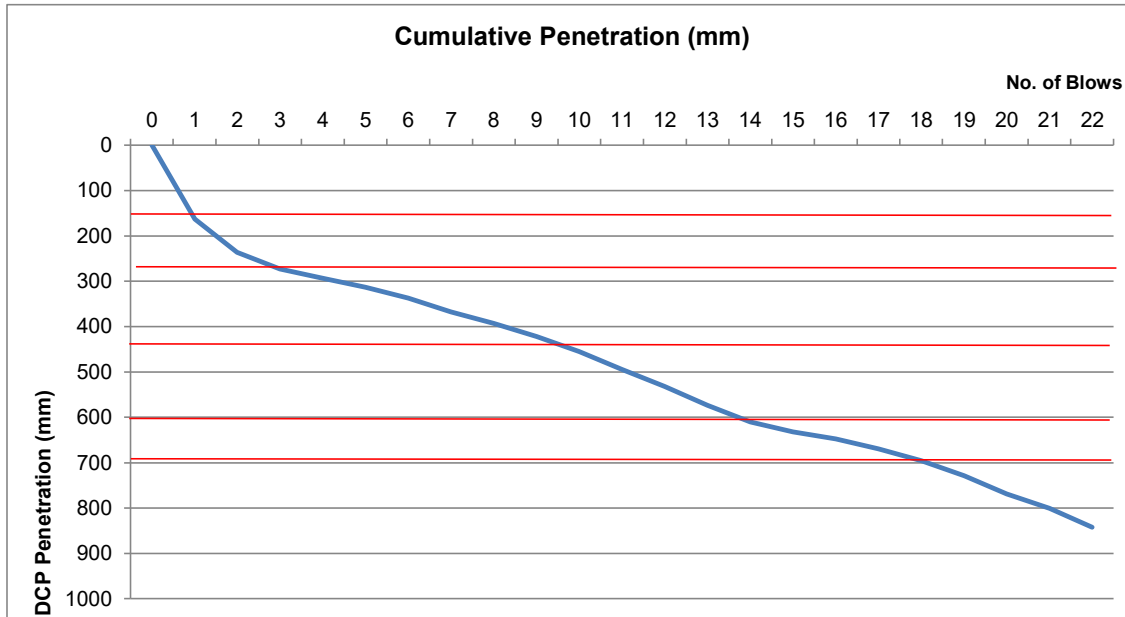
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	90	0	0		159	1.4
1	249	159	159	1.4		
2	306	57	216	4.2		
3	340	34	250	7.3	121	6.6
4	370	30	280	8.3		
5	380	10	290	26.5		
6	393	13	303	20.1	601	14.5
7	413	20	323	12.7		
8	438	25	348	10.1		
9	457	19	367	13.4		
10	478	21	388	12.1		
11	500	22	410	11.5		
12	520	20	430	12.7		
13	540	20	450	12.7		
14	559	19	469	13.4		
15	578	19	488	13.4		
16	596	18	506	14.2		
17	614	18	524	14.2		
18	633	19	543	13.4		
19	651	18	561	14.2		
20	670	19	580	13.4		
21	689	19	599	13.4		
22	704	15	614	17.3		
23	721	17	631	15.1		
24	741	20	651	12.7		
25	762	21	672	12.1		
26	781	19	691	13.4		
27	800	19	710	13.4		
28	820	20	730	12.7		
29	838	18	748	14.2		
30	856	18	766	14.2		
31	872	16	782	16.1		
32	890	18	800	14.2		
33	906	16	816	16.1		
34	921	15	831	17.3		
35	940	19	850	13.4		

36	958	18	868	14.2	
37	971	13	881	20.1	

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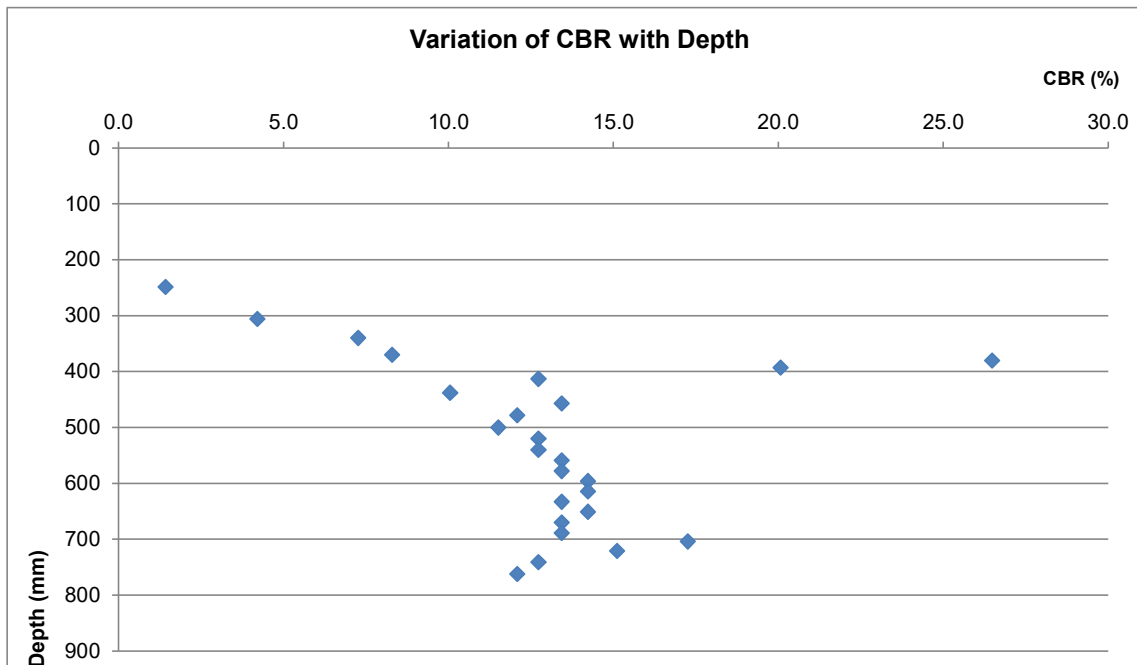
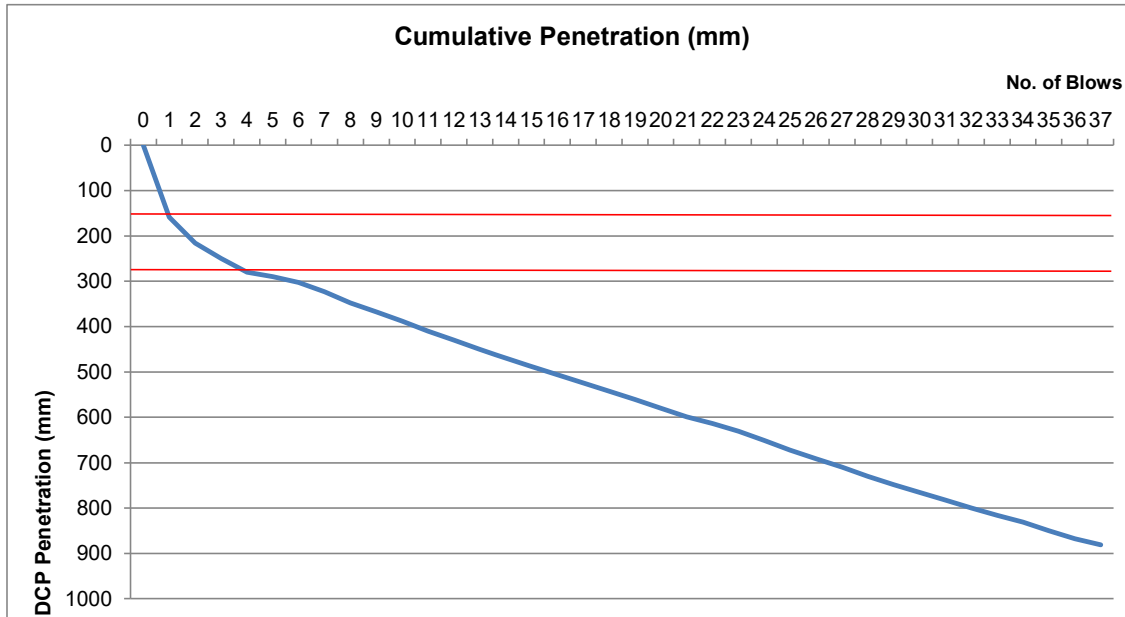
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	90	0	0		254	1.8
1	215	125	125	1.8		
2	344	129	254	1.8		
3	386	42	296	5.8	78	6.3
4	422	36	332	6.8		
5	448	26	358	9.6		
6	465	17	375	15.1	208	22.7
7	482	17	392	15.1		
8	496	14	406	18.6		
9	512	16	422	16.1		
10	526	14	436	18.6		
11	541	15	451	17.3		
12	555	14	465	18.6		
13	566	11	476	23.9		
14	575	9	485	29.6		
15	585	10	495	26.5		
16	596	11	506	23.9		
17	606	10	516	26.5		
18	613	7	523	38.6		
19	620	7	530	38.6		
21	630	10	540	26.5		
23	641	11	551	23.9	49	17.4
25	656	15	566	17.3		
27	679	23	589	11.0		
28	690	11	600	23.9		
29	700	10	610	26.5		
30	711	11	621	23.9		
31	721	10	631	26.5		
32	731	10	641	26.5		
33	740	9	650	29.6		
34	750	10	660	26.5		
35	760	10	670	26.5		
36	770	10	680	26.5		
37	779	9	689	29.6		
38	789	10	699	26.5		
39	800	11	710	23.9		

40	811	11	721	23.9	293	23.2
41	825	14	735	18.6		
42	838	13	748	20.1		
43	850	12	760	21.8		
44	864	14	774	18.6		
45	875	11	785	23.9		
46	889	14	799	18.6		
47	900	11	810	23.9		
48	912	12	822	21.8		
49	926	14	836	18.6		
50	940	14	850	18.6		
51	952	12	862	21.8		
52	972	20	882	12.7		

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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	145	0	0		120	1.9
1	265	120	120	1.9		
2	297	32	152	7.7		
3	313	16	168	16.1	66	12.7
4	331	18	186	14.2		
5	352	21	207	12.1		
6	384	32	239	7.7	231	13.7
7	412	28	267	8.9		
8	437	25	292	10.1		
9	461	24	316	10.5		
10	486	25	341	10.1		
11	508	22	363	11.5		
12	532	24	387	10.5		
13	556	24	411	10.5		
14	562	6	417	45.4		
15	586	24	441	10.5	418	11.2
16	604	18	459	14.2		
17	626	22	481	11.5		
18	646	20	501	12.7		
19	674	28	529	8.9		
20	697	23	552	11.0		
21	727	30	582	8.3		
22	744	17	599	15.1		
23	768	24	623	10.5		
24	792	24	647	10.5		
25	818	26	673	9.6		
26	835	17	690	15.1		
27	862	27	717	9.3		
28	885	23	740	11.0		
29	911	26	766	9.6		
30	934	23	789	11.0		
31	954	20	809	12.7		
32	980	26	835	9.6		

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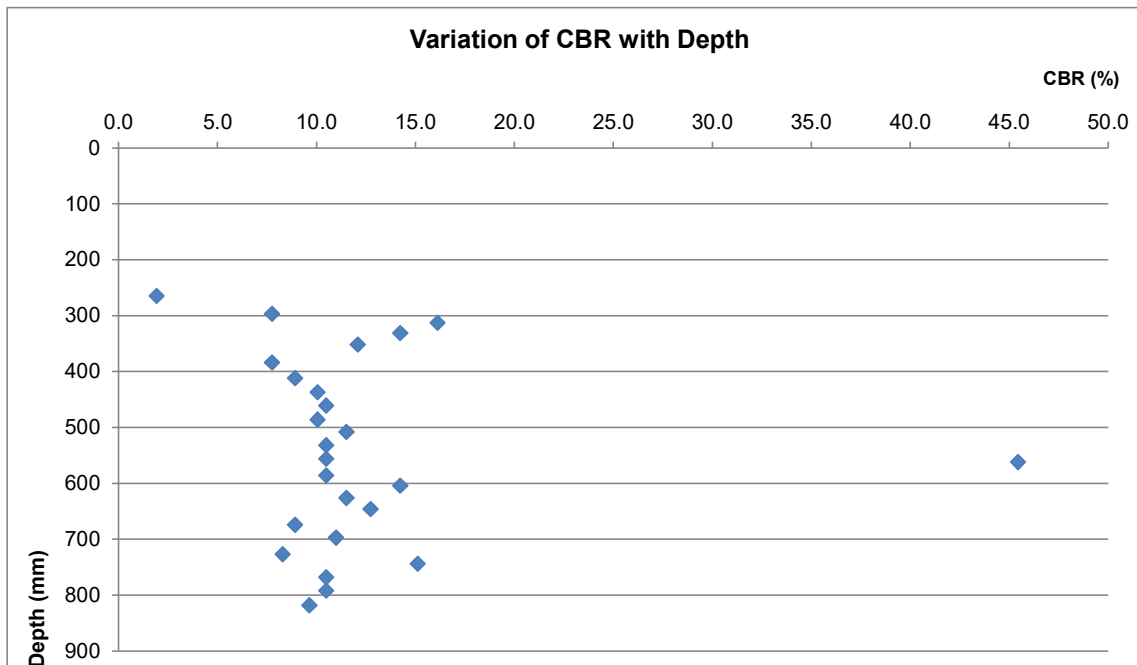
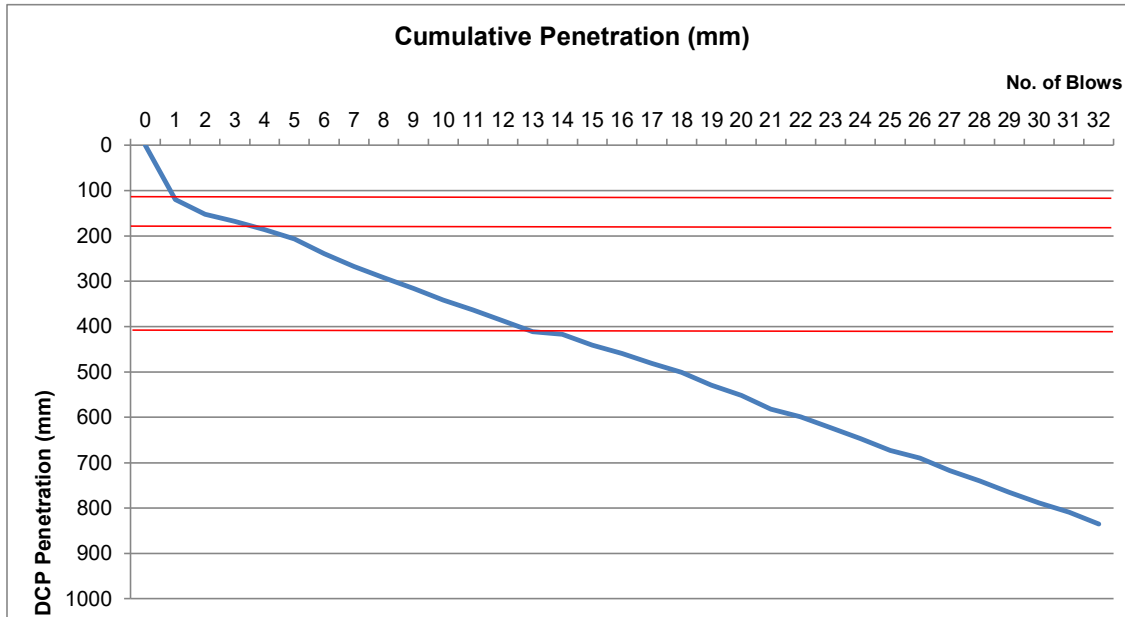
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	70	0	0		242	5.3
1	134	64	64	3.7		
2	172	38	102	6.5		
3	228	56	158	4.3		
4	276	48	206	5.0		
5	312	36	242	6.8		
6	343	31	273	8.0	284	6.1
7	388	45	318	5.4		
8	432	44	362	5.5		
9	472	40	402	6.1		
10	518	46	448	5.3		
11	557	39	487	6.3		
12	596	39	526	6.3	174	8.6
13	627	31	557	8.0		
14	659	32	589	7.7		
15	687	28	617	8.9		
16	714	27	644	9.3		
17	744	30	674	8.3		
18	770	26	700	9.6	200	12.8
19	787	17	717	15.1		
20	807	20	737	12.7		
21	826	19	756	13.4		
22	846	20	776	12.7		
23	867	21	797	12.1		
24	888	21	818	12.1		
25	909	21	839	12.1		
26	930	21	860	12.1		
27	950	20	880	12.7		
28	970	20	900	12.7		

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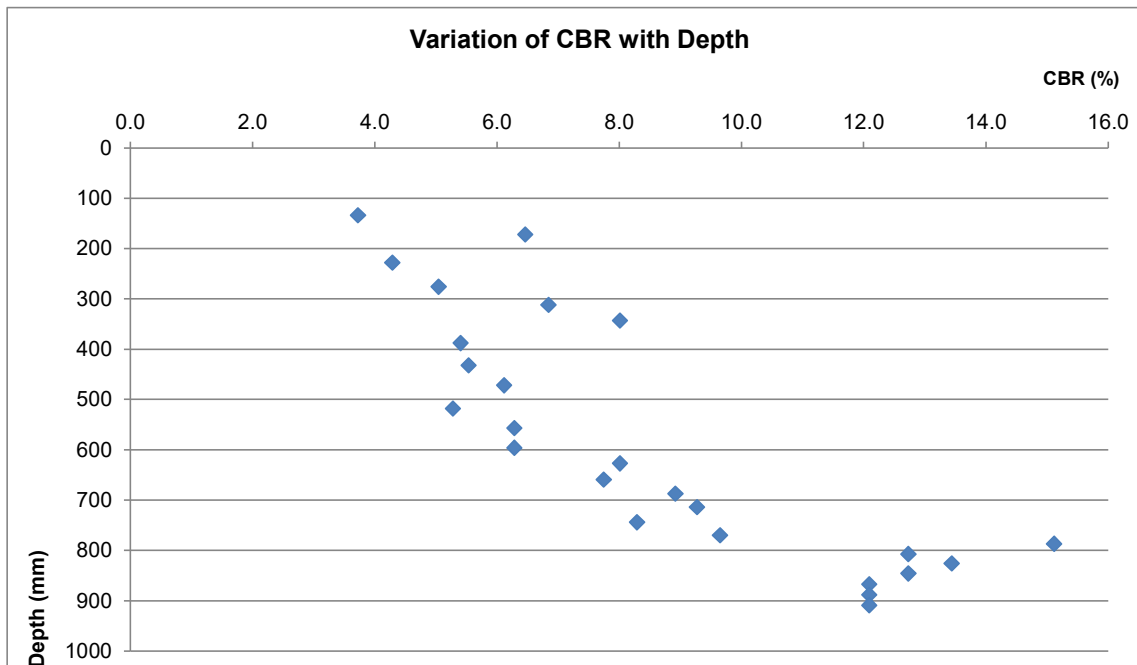
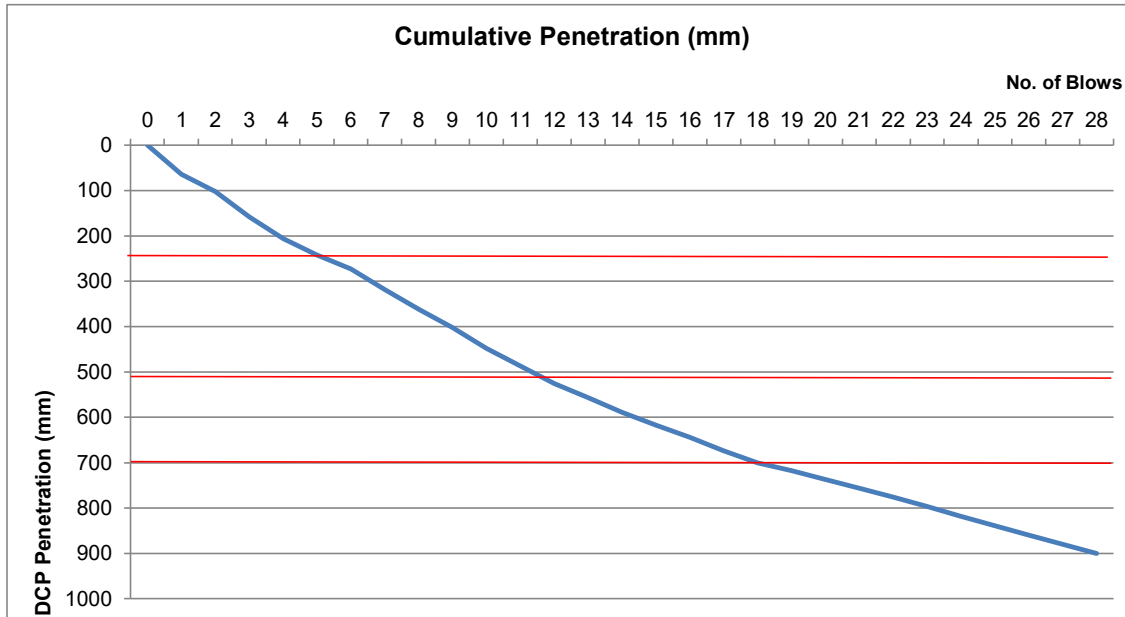
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	130	0	0		166	1.4
1	296	166	166	1.4		
2	354	58	224	4.1	196	7.1
3	399	45	269	5.4		
4	440	41	310	6.0		
5	470	30	340	8.3		
6	492	22	362	11.5		
7	535	43	405	5.7	343	6.6
8	580	45	450	5.4		
9	613	33	483	7.5		
10	646	33	516	7.5		
11	685	39	555	6.3		
12	720	35	590	7.0		
13	760	40	630	6.1		
14	804	44	674	5.5		
15	835	31	705	8.0	143	17.8
16	858	23	728	11.0		
17	880	22	750	11.5		
18	890	10	760	26.5		
19	902	12	772	21.8		
20	913	11	783	23.9		
21	930	17	800	15.1		
22	945	15	815	17.3		
23	965	20	835	12.7		
24	978	13	848	20.1		

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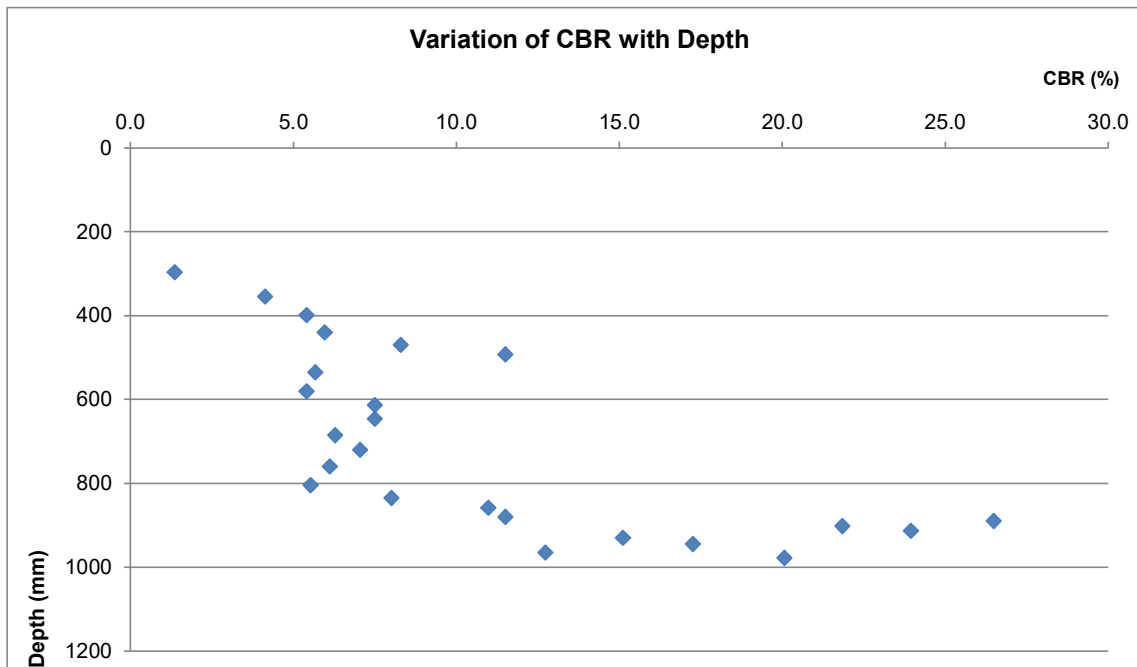
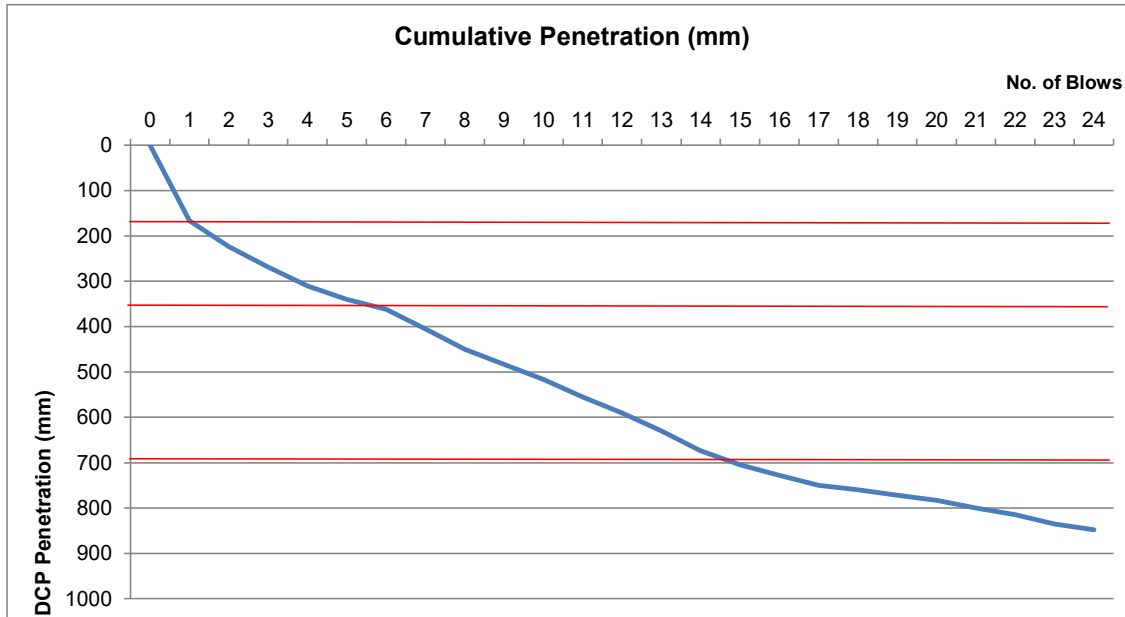
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	140	0	0		210	3.4
1	205	65	65	3.7		
2	282	77	142	3.1		
3	350	68	210	3.5		
4	371	21	231	12.1	50	16.0
5	385	14	245	18.6		
6	400	15	260	17.3		
7	424	24	284	10.5		
8	454	30	314	8.3	140	9.1
9	484	30	344	8.3		
10	507	23	367	11.0		
11	540	33	400	7.5		
12	585	45	445	5.4	209	6.1
13	636	51	496	4.7		
14	684	48	544	5.0		
15	721	37	581	6.6		
16	749	28	609	8.9	231	10.1
17	772	23	632	11.0		
18	796	24	656	10.5		
19	818	22	678	11.5		
20	840	22	700	11.5		
21	864	24	724	10.5		
22	890	26	750	9.6		
23	913	23	773	11.0		
24	943	30	803	8.3		
25	980	37	840	6.6		

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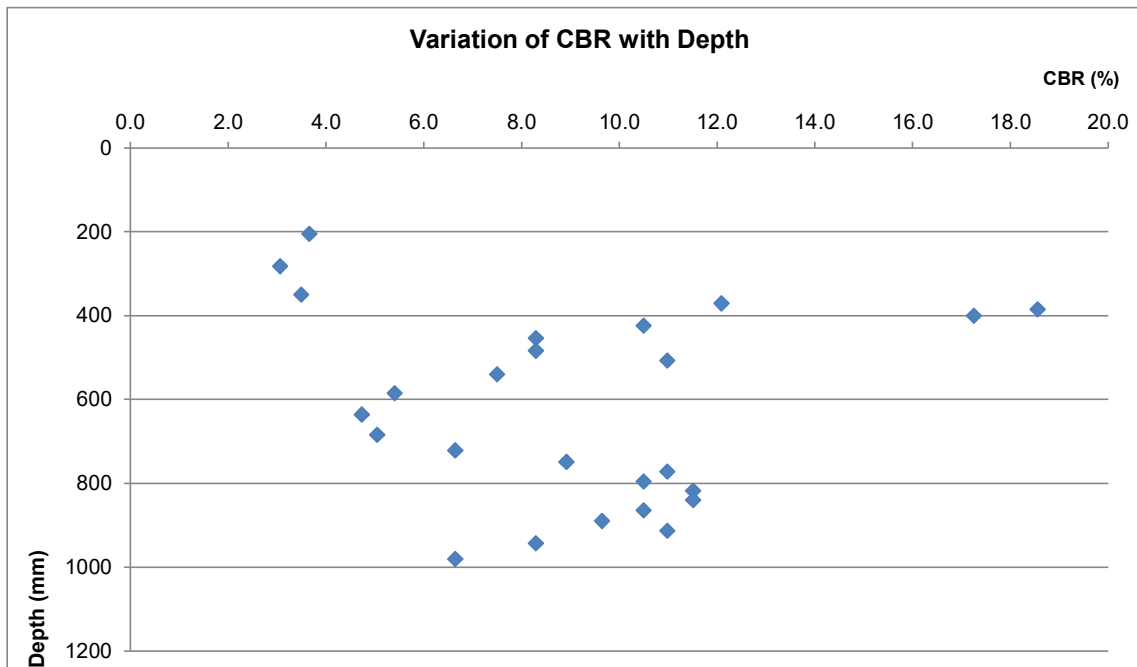
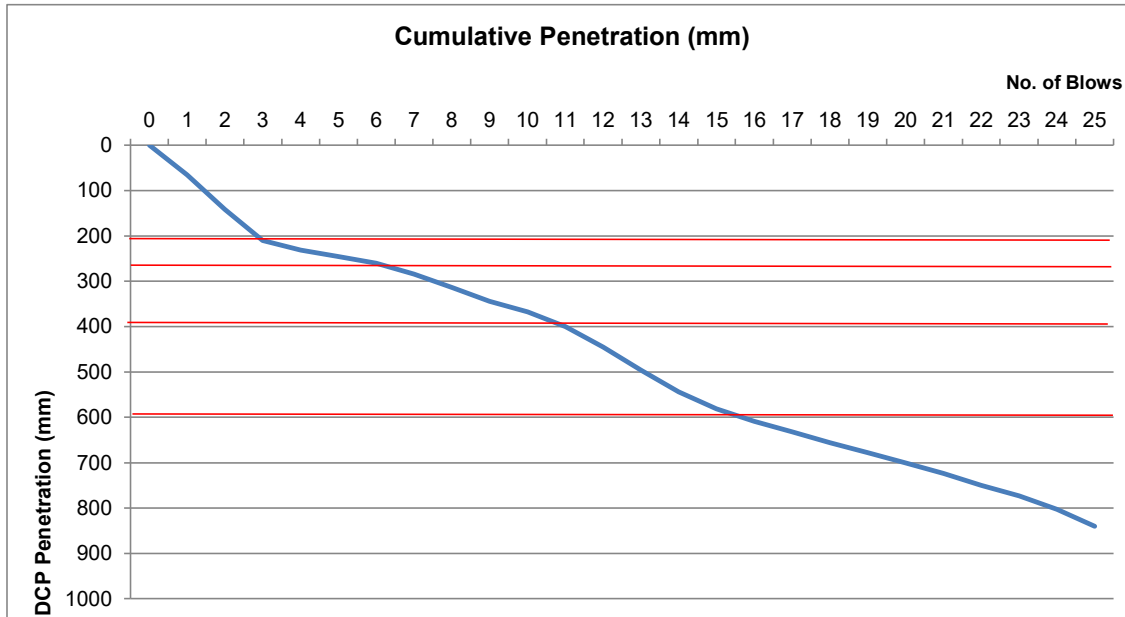
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	76	0	0		174	4.4
1	120	44	44	5.5		
2	170	50	94	4.8		
3	250	80	174	2.9		
4	277	27	201	9.3	102	10.0
5	305	28	229	8.9		
6	332	27	256	9.3		
7	352	20	276	12.7		
8	363	11	287	23.9	113	17.0
9	377	14	301	18.6		
10	390	13	314	20.1		
11	405	15	329	17.3		
12	428	23	352	11.0		
13	449	21	373	12.1		
14	465	16	389	16.1	391	10.0
15	488	23	412	11.0		
16	511	23	435	11.0		
17	539	28	463	8.9		
18	569	30	493	8.3		
19	600	31	524	8.0		
20	626	26	550	9.6		
21	654	28	578	8.9		
22	683	29	607	8.6		
23	710	27	634	9.3		
24	739	29	663	8.6		
25	766	27	690	9.3		
26	789	23	713	11.0		
27	819	30	743	8.3		
28	834	15	758	17.3		
29	856	22	780	11.5		
30	899	43	823	5.7	122	6.4
31	950	51	874	4.7		
32	978	28	902	8.9		

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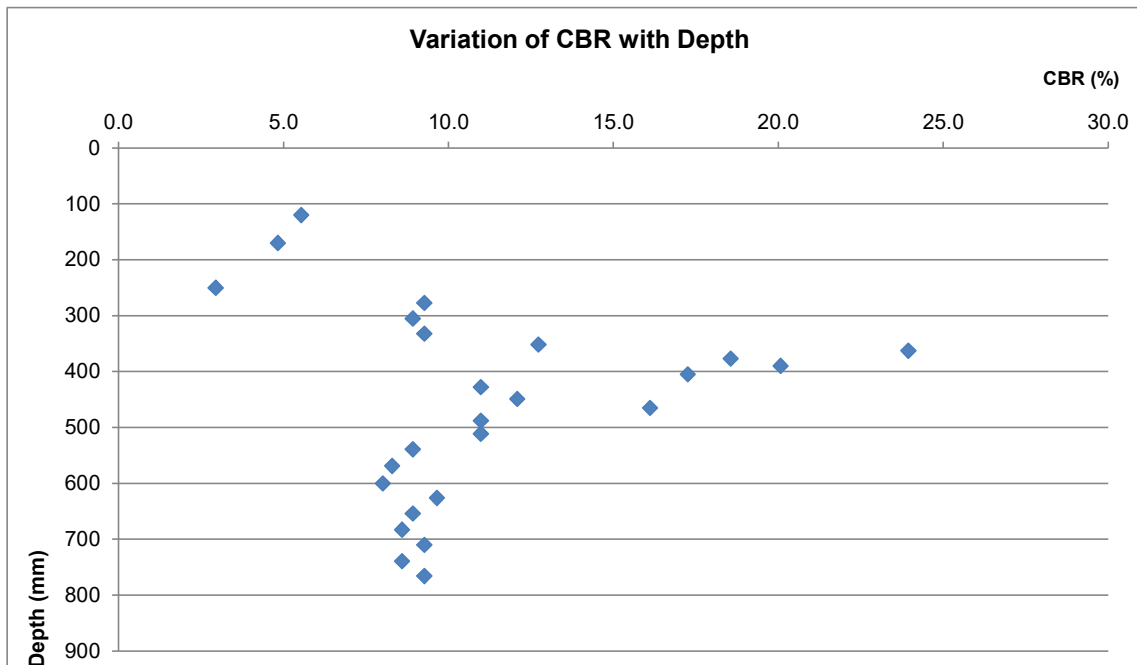
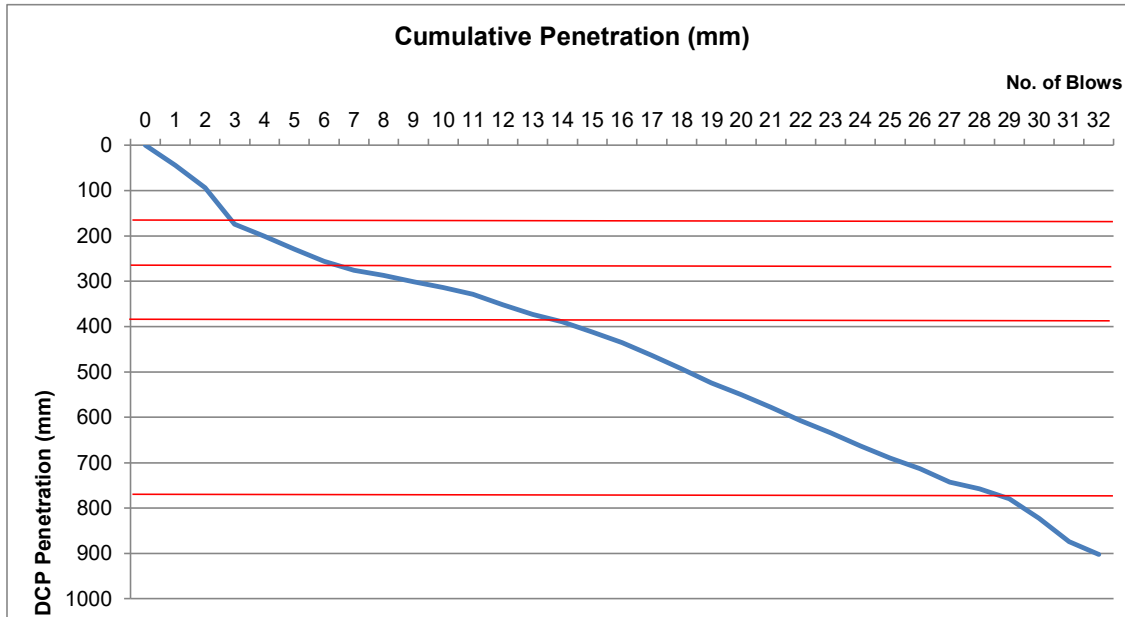
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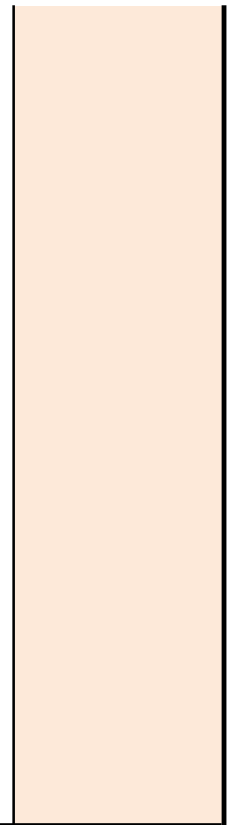
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	74	0	0		156	10.6
1	110	36	36	6.8		
2	145	35	71	7.0		
3	164	19	90	13.4		
4	193	29	119	8.6		
5	210	17	136	15.1		
6	230	20	156	12.7		
7	257	27	183	9.3	161	7.8
8	289	32	215	7.7		
9	318	29	244	8.6		
10	357	39	283	6.3		
11	391	34	317	7.3		
12	410	19	336	13.4	581	22.4
13	421	11	347	23.9		
14	432	11	358	23.9		
15	440	8	366	33.5		
16	452	12	378	21.8		
17	463	11	389	23.9		
18	474	11	400	23.9		
19	486	12	412	21.8		
20	499	13	425	20.1		
21	508	9	434	29.6		
22	517	9	443	29.6		
23	531	14	457	18.6		
24	543	12	469	21.8		
25	554	11	480	23.9		
26	564	10	490	26.5		
27	578	14	504	18.6		
28	590	12	516	21.8		
29	608	18	534	14.2		
30	617	9	543	29.6		
31	632	15	558	17.3		
32	650	18	576	14.2		
33	660	10	586	26.5		
34	671	11	597	23.9		
35	684	13	610	20.1		

36	697	13	623	20.1
37	712	15	638	17.3
38	723	11	649	23.9
39	737	14	663	18.6
40	748	11	674	23.9
41	760	12	686	21.8
42	773	13	699	20.1
43	783	10	709	26.5
44	800	17	726	15.1
45	811	11	737	23.9
46	823	12	749	21.8
47	829	6	755	45.4
48	837	8	763	33.5
50	853	16	779	16.1
52	868	15	794	17.3
54	882	14	808	18.6
56	896	14	822	18.6
58	912	16	838	16.1
60	926	14	852	18.6
62	942	16	868	16.1
64	966	24	892	10.5
66	972	6	898	45.4



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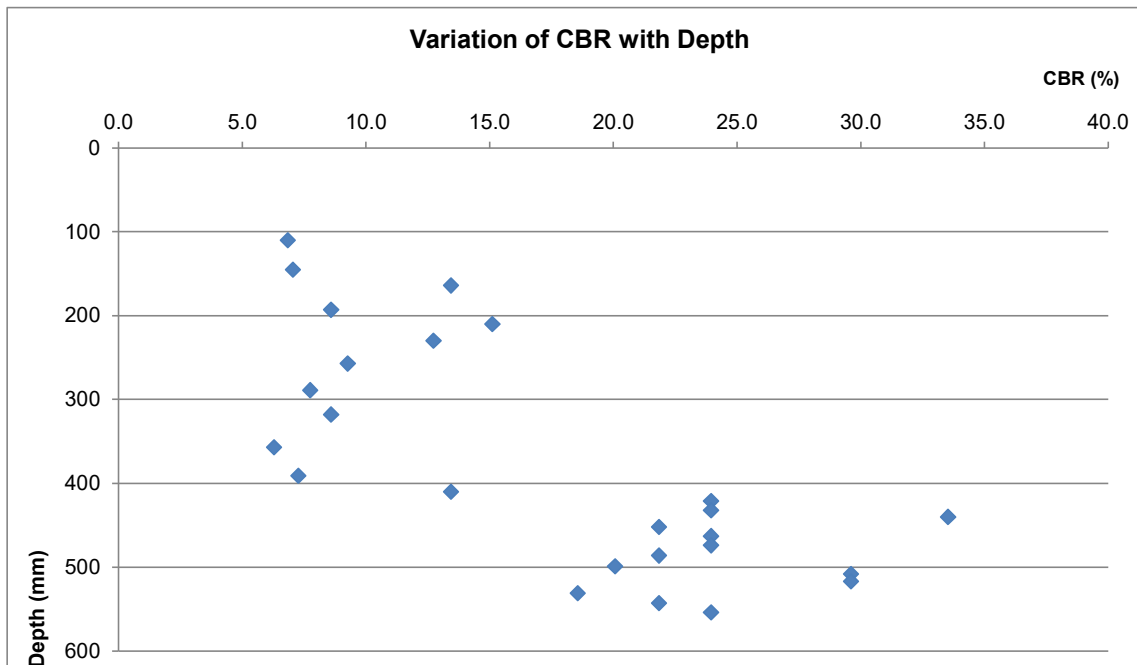
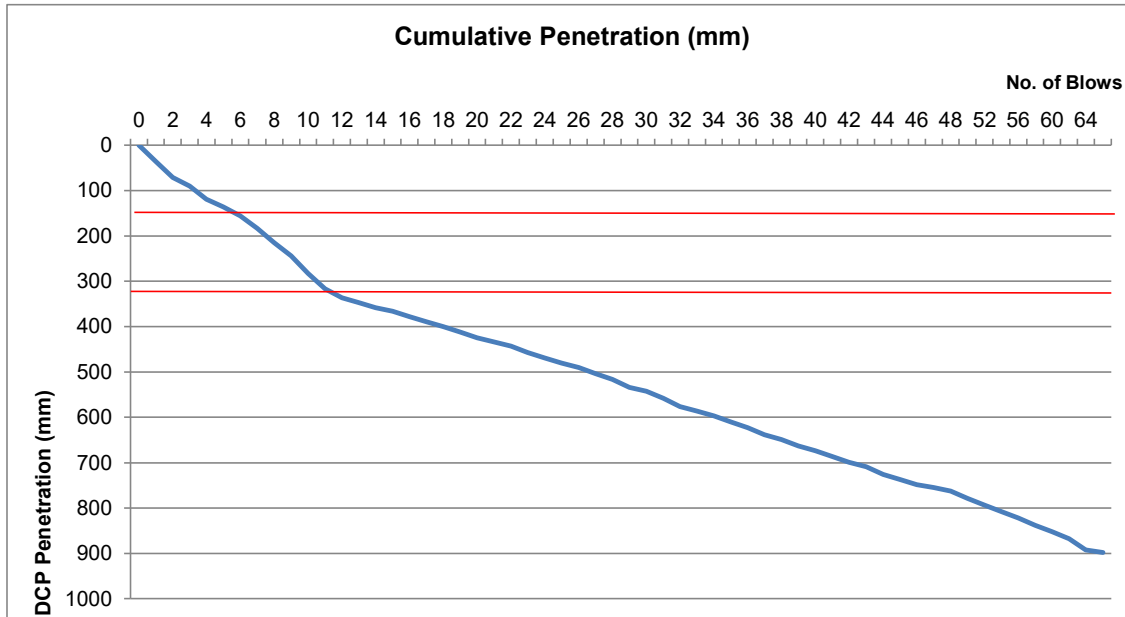
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	100	0	0		137	1.7
1	237	137	137	1.7		
2	301	64	201	3.7		
3	346	45	246	5.4	171	6.8
4	387	41	287	6.0		
5	408	21	308	12.1		
6	452	44	352	5.5	525	8.5
7	481	29	381	8.6		
8	515	34	415	7.3		
9	542	27	442	9.3		
10	569	27	469	9.3		
11	600	31	500	8.0		
12	631	31	531	8.0		
13	656	25	556	10.1		
14	678	22	578	11.5		
15	702	24	602	10.5		
16	730	28	630	8.9		
17	761	31	661	8.0		
18	792	31	692	8.0		
19	829	37	729	6.6		
20	861	32	761	7.7		
21	893	32	793	7.7		
22	921	28	821	8.9		
23	946	25	846	10.1		
24	977	31	877	8.0		

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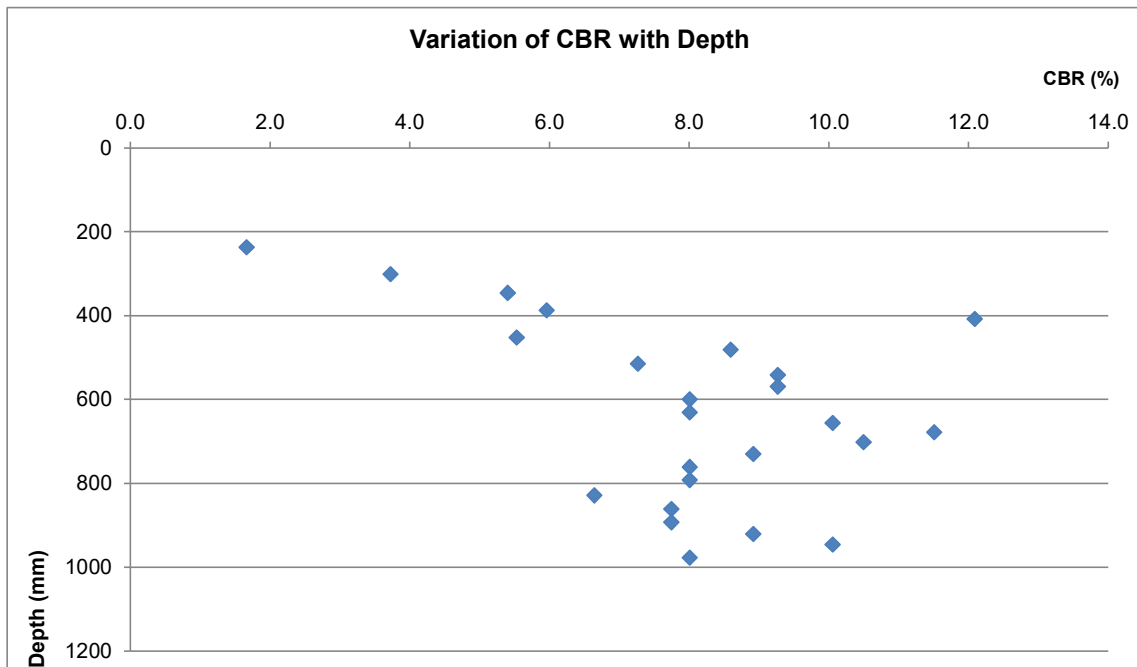
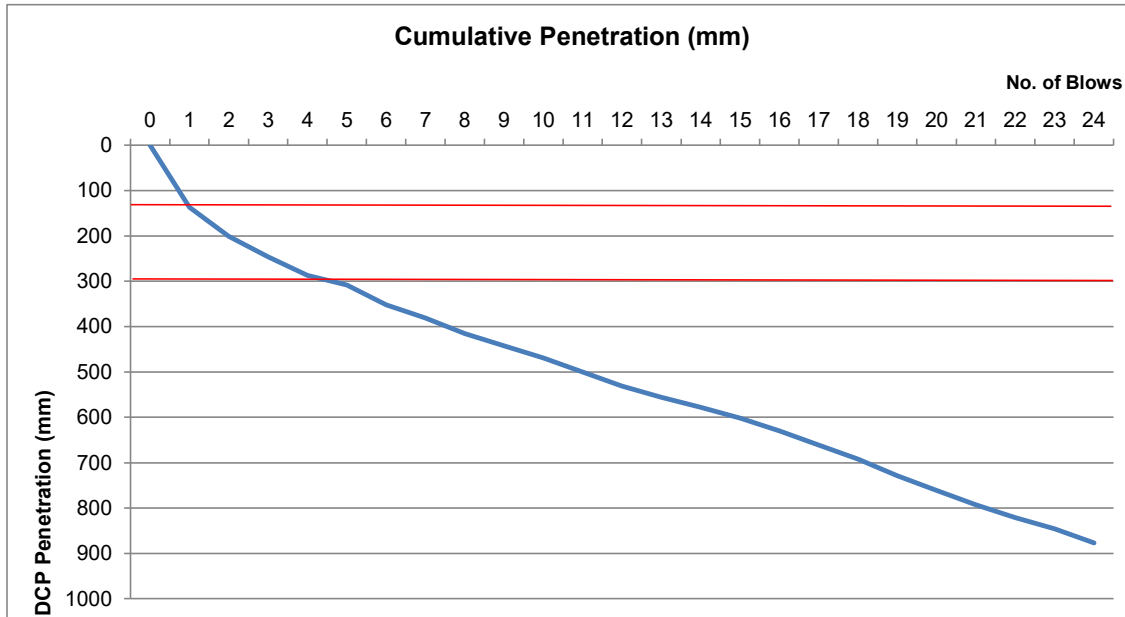
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	122	0	0		204	2.4
1	245	123	123	1.9		
2	326	81	204	2.9		
3	356	30	234	8.3	644	5.8
4	394	38	272	6.5		
5	441	47	319	5.2		
6	483	42	361	5.8		
7	523	40	401	6.1		
8	565	42	443	5.8		
9	605	40	483	6.1		
10	647	42	525	5.8		
11	687	40	565	6.1		
12	724	37	602	6.6		
13	772	48	650	5.0		
14	816	44	694	5.5		
15	864	48	742	5.0		
16	918	54	796	4.5		
17	970	52	848	4.6		

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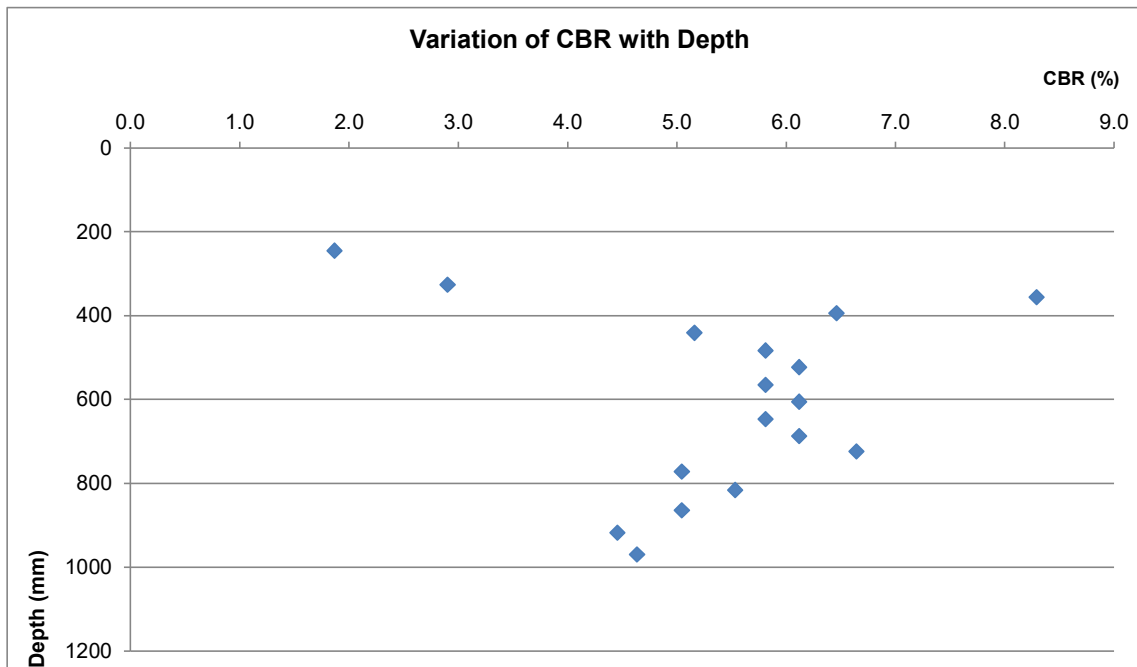
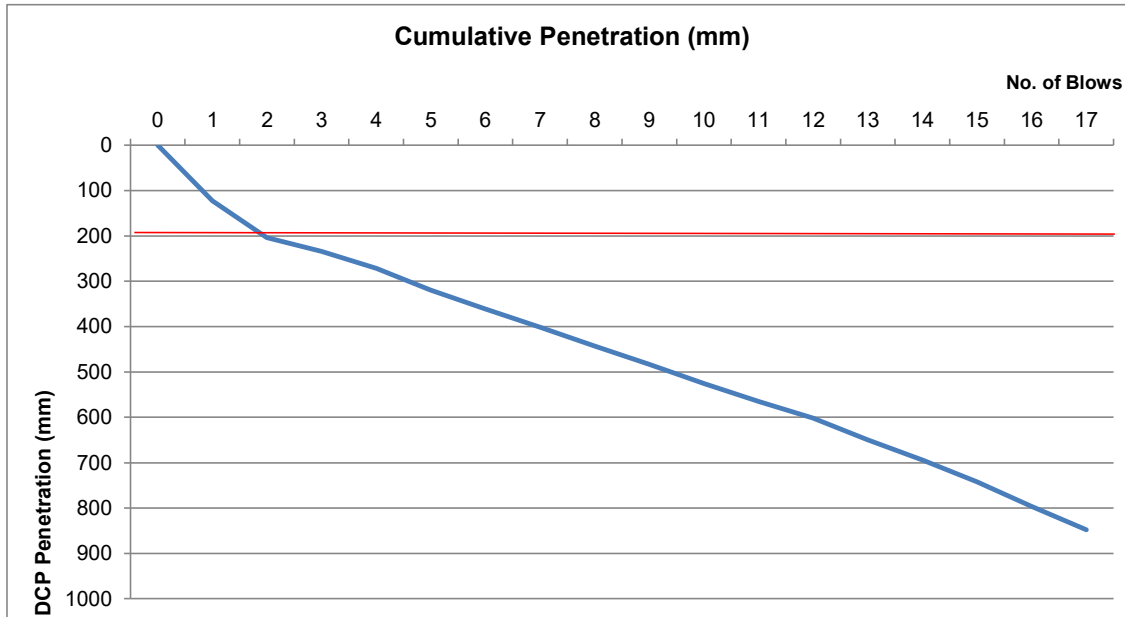
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	106	0	0		138	5.6
1	167	61	61	3.9		
2	207	40	101	6.1		
3	244	37	138	6.6		
4	267	23	161	11.0	61	18.4
5	281	14	175	18.6		
6	292	11	186	23.9		
7	305	13	199	20.1		
8	330	25	224	10.1	681	7.9
9	357	27	251	9.3		
10	388	31	282	8.0		
11	414	26	308	9.6		
12	439	25	333	10.1		
13	470	31	364	8.0		
14	502	32	396	7.7		
15	527	25	421	10.1		
16	550	23	444	11.0		
17	586	36	480	6.8		
18	616	30	510	8.3		
19	652	36	546	6.8		
20	691	39	585	6.3		
21	730	39	624	6.3		
22	760	30	654	8.3		
23	792	32	686	7.7		
24	827	35	721	7.0		
25	866	39	760	6.3		
26	903	37	797	6.6		
27	946	43	840	5.7		
28	986	40	880	6.1		

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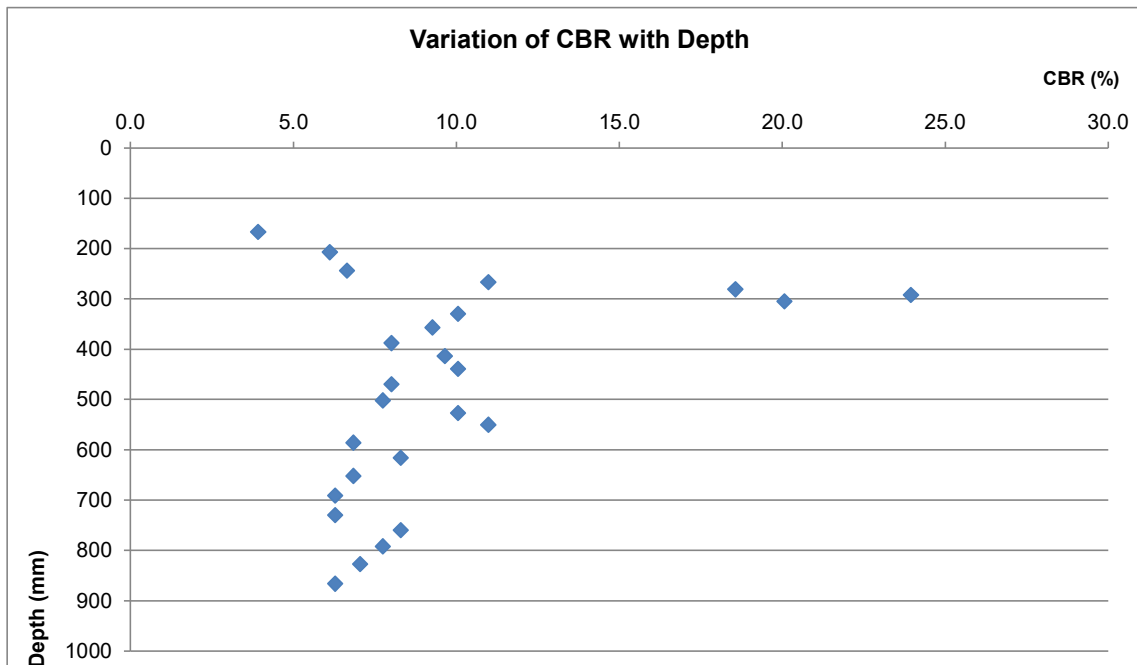
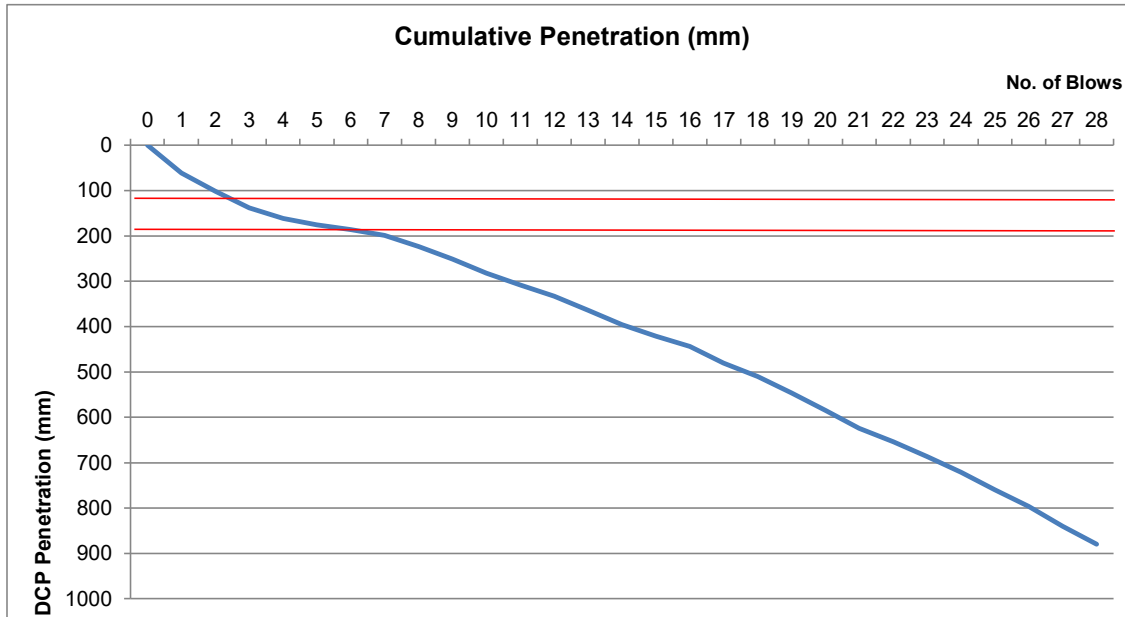
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	92	0	0		186	2.6
1	200	108	108	2.1		
2	278	78	186	3.0		
3	292	14	200	18.6	82	15.2
4	312	20	220	12.7		
5	330	18	238	14.2		
6	382	52	290	4.6	109	7.9
7	418	36	326	6.8		
8	439	21	347	12.1		
9	473	34	381	7.3	240	10.8
10	501	28	409	8.9		
11	525	24	433	10.5		
12	546	21	454	12.1		
13	567	21	475	12.1		
14	589	22	497	11.5		
15	613	24	521	10.5		
16	637	24	545	10.5		
17	656	19	564	13.4		
18	679	23	587	11.0		
19	703	24	611	10.5	199	22.3
20	727	24	635	10.5		
21	744	17	652	15.1		
22	765	21	673	12.1		
23	780	15	688	17.3		
24	794	14	702	18.6		
25	810	16	718	16.1		
26	823	13	731	20.1		
27	837	14	745	18.6		
28	846	9	754	29.6		
29	852	6	760	45.4		
30	862	10	770	26.5		
31	872	10	780	26.5		
32	878	6	786	45.4		
34	893	15	801	17.3		
36	904	11	812	23.9		
38	912	8	820	33.5		

40	923	11	831	23.9	95	26.0
42	934	11	842	23.9		
44	945	11	853	23.9		
46	954	9	862	29.6		
48	965	11	873	23.9		
50	973	8	881	33.5		

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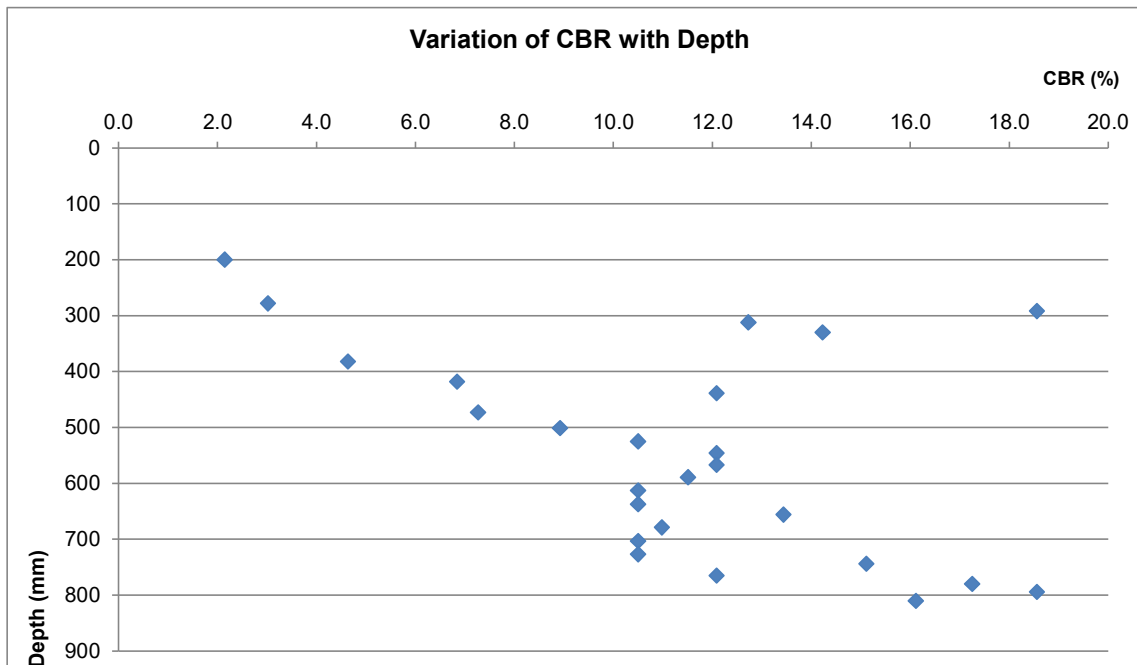
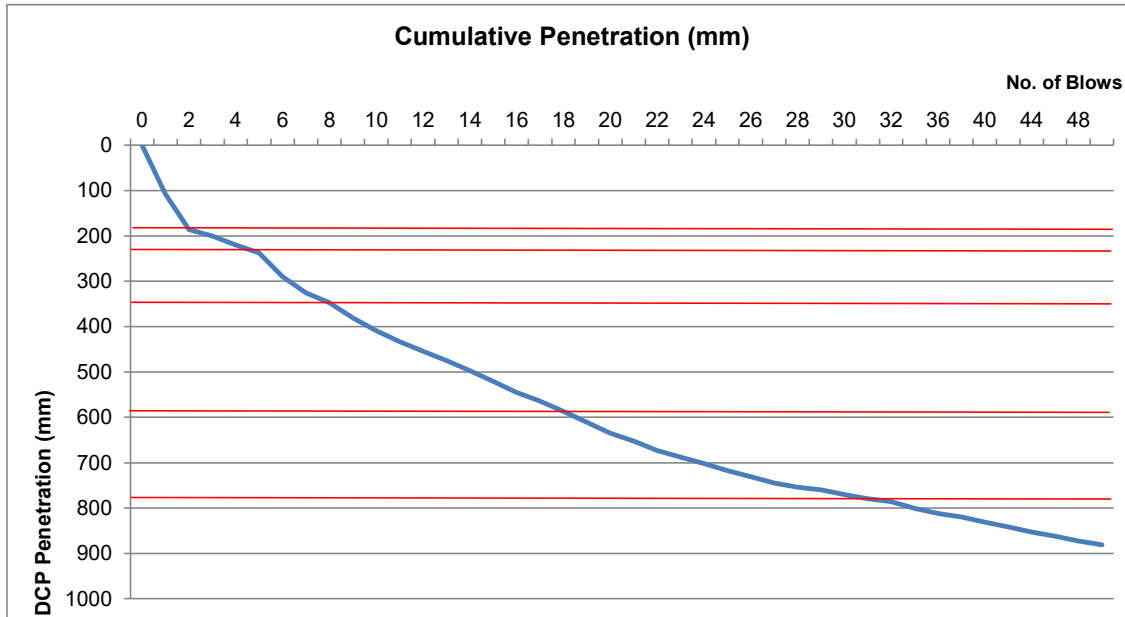
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	64	0	0		197	3.9
1	153	89	89	2.6		
2	214	61	150	3.9		
3	261	47	197	5.2		
4	292	31	228	8.0	96	7.8
5	326	34	262	7.3		
6	357	31	293	8.0		
7	374	17	310	15.1		
8	395	21	331	12.1	619	13.0
9	420	25	356	10.1		
10	444	24	380	10.5		
11	467	23	403	11.0		
12	486	19	422	13.4		
13	506	20	442	12.7		
14	522	16	458	16.1		
15	542	20	478	12.7		
16	561	19	497	13.4		
17	580	19	516	13.4		
18	602	22	538	11.5		
19	623	21	559	12.1		
20	641	18	577	14.2		
21	656	15	592	17.3		
22	675	19	611	13.4		
23	694	19	630	13.4		
24	714	20	650	12.7		
25	736	22	672	11.5		
26	756	20	692	12.7		
27	777	21	713	12.1		
28	798	21	734	12.1		
29	817	19	753	13.4		
30	841	24	777	10.5		
31	862	21	798	12.1		
32	881	19	817	13.4		
33	903	22	839	11.5		
34	920	17	856	15.1		
35	941	21	877	12.1		

36	963	22	899	11.5	
37	976	13	912	20.1	

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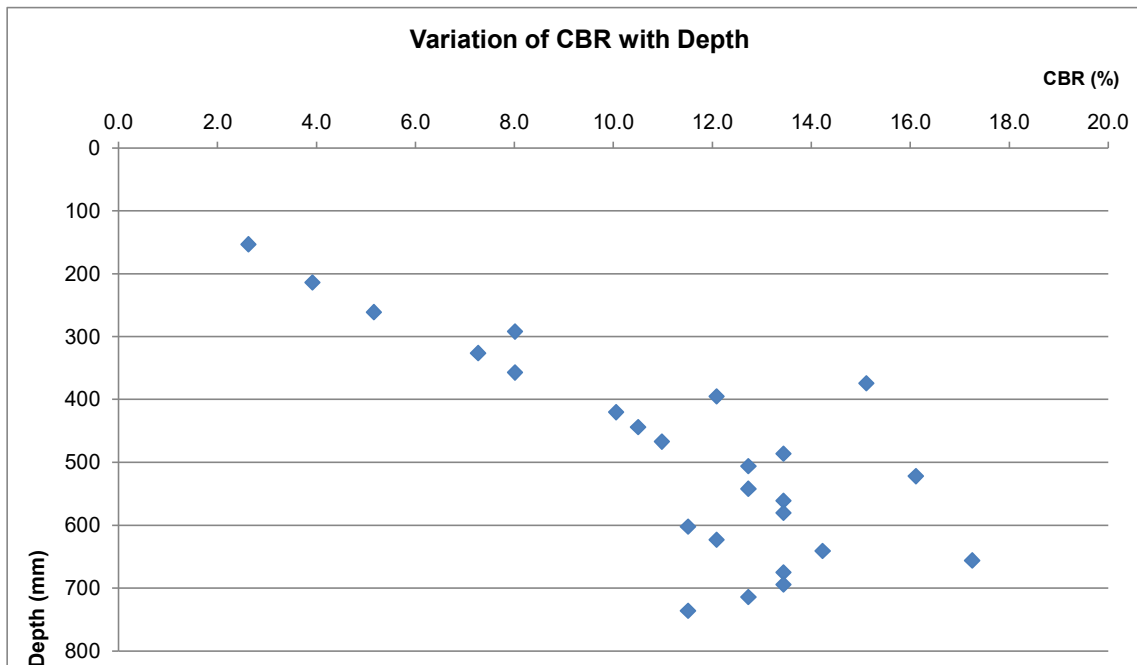
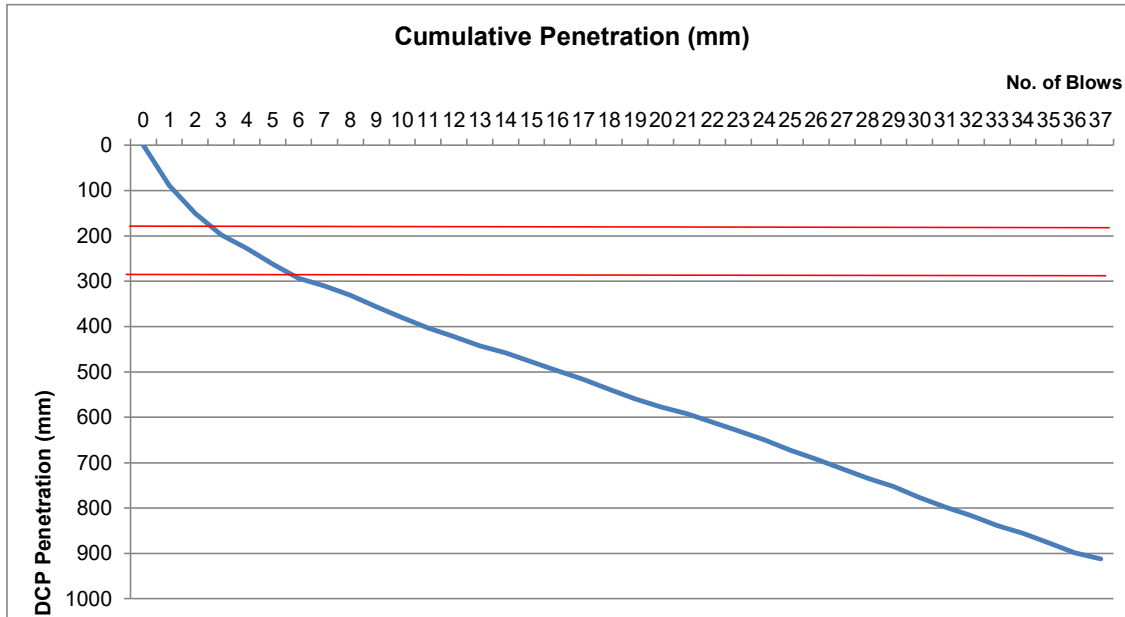
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No.of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	87	0	0		197	2.6
1	190	103	103	2.3		
2	286	96	199	2.4		
3	362	76	275	3.1		
4	412	50	325	4.8	96	5.6
5	457	45	370	5.4		
6	494	37	407	6.6		
7	533	39	446	6.3		
8	561	28	474	8.9	593	13.1
9	586	25	499	10.1		
10	611	25	524	10.1		
11	632	21	545	12.1		
12	654	22	567	11.5		
13	678	24	591	10.5		
14	702	24	615	10.5		
15	719	17	632	15.1		
16	732	13	645	20.1		
17	749	17	662	15.1		
18	767	18	680	14.2		
19	796	29	709	8.6		
20	807	11	720	23.9		
21	834	27	747	9.3		
22	852	18	765	14.2		
23	871	19	784	13.4		
24	895	24	808	10.5		
25	913	18	826	14.2		
26	934	21	847	12.1		
27	957	23	870	11.0		
28	973	16	886	16.1		

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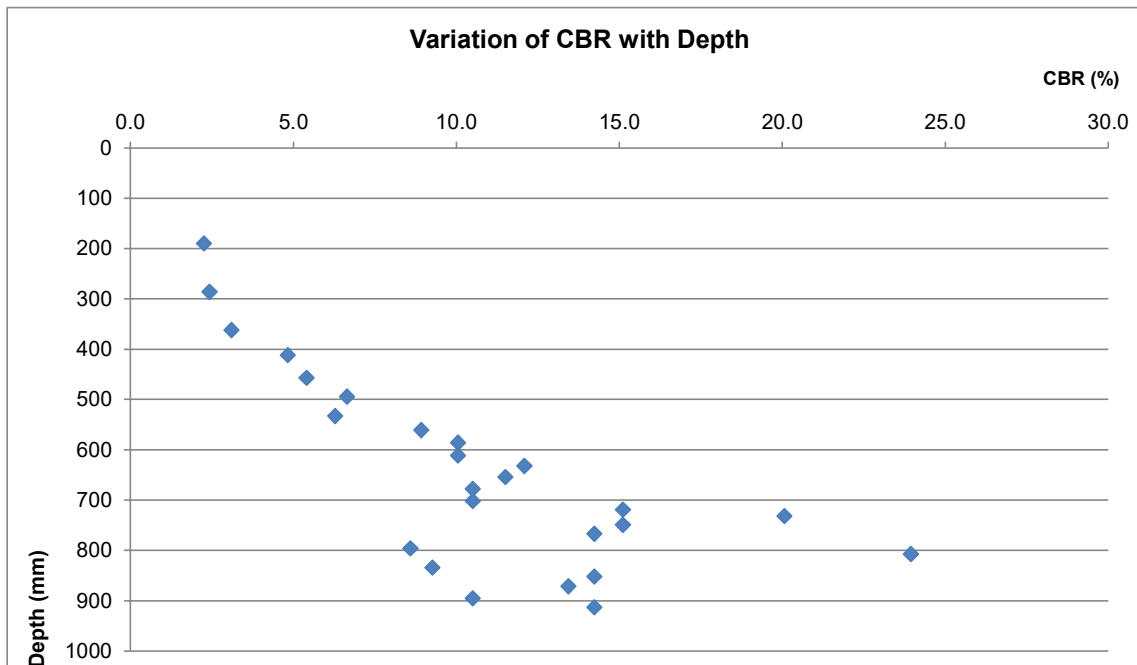
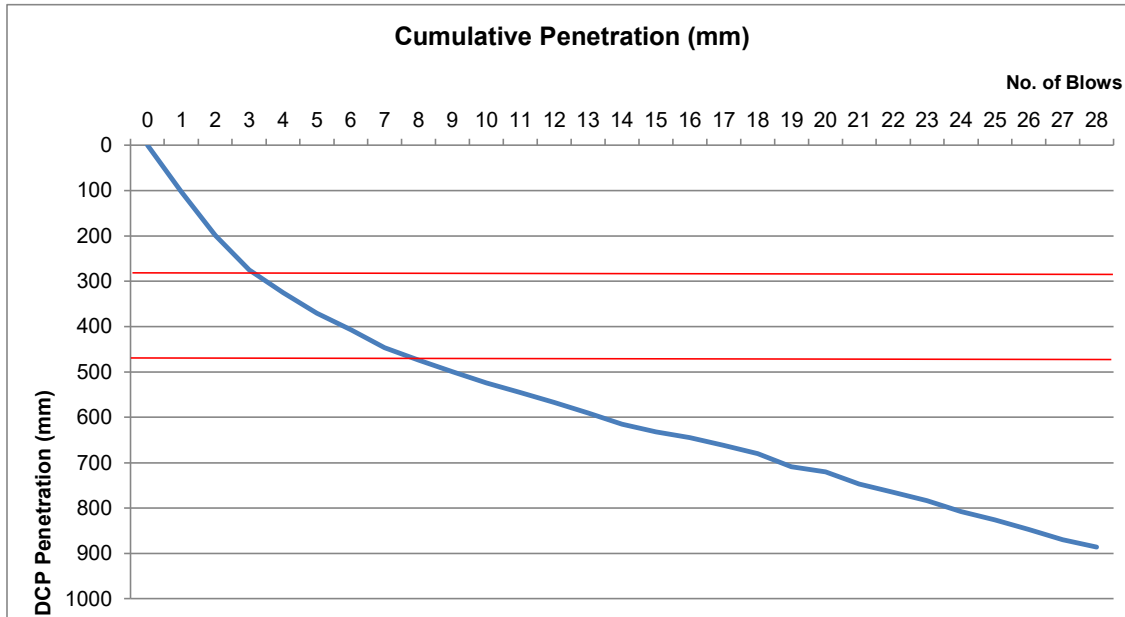
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	85	0	0		148	1.5
1	233	148	148	1.5		
2	292	59	207	4.1	179	5.7
3	337	45	252	5.4		
4	378	41	293	6.0		
5	412	34	327	7.3		
6	445	33	360	7.5	152	10.3
7	475	30	390	8.3		
8	500	25	415	10.1		
9	519	19	434	13.4		
10	542	23	457	11.0		
11	564	22	479	11.5	58	17.1
12	572	8	487	33.5		
13	596	24	511	10.5		
14	630	34	545	7.3	148	15.9
15	647	17	562	15.1		
16	666	19	581	13.4		
17	682	16	597	16.1		
18	700	18	615	14.2		
19	714	14	629	18.6		
20	729	15	644	17.3		
21	743	14	658	18.6		
22	759	16	674	16.1		
23	778	19	693	13.4		
24	802	24	717	10.5	194	10.5
25	827	25	742	10.1		
26	851	24	766	10.5		
27	872	21	787	12.1		
28	901	29	816	8.6		
29	922	21	837	12.1		
30	946	24	861	10.5		
31	972	26	887	9.6		

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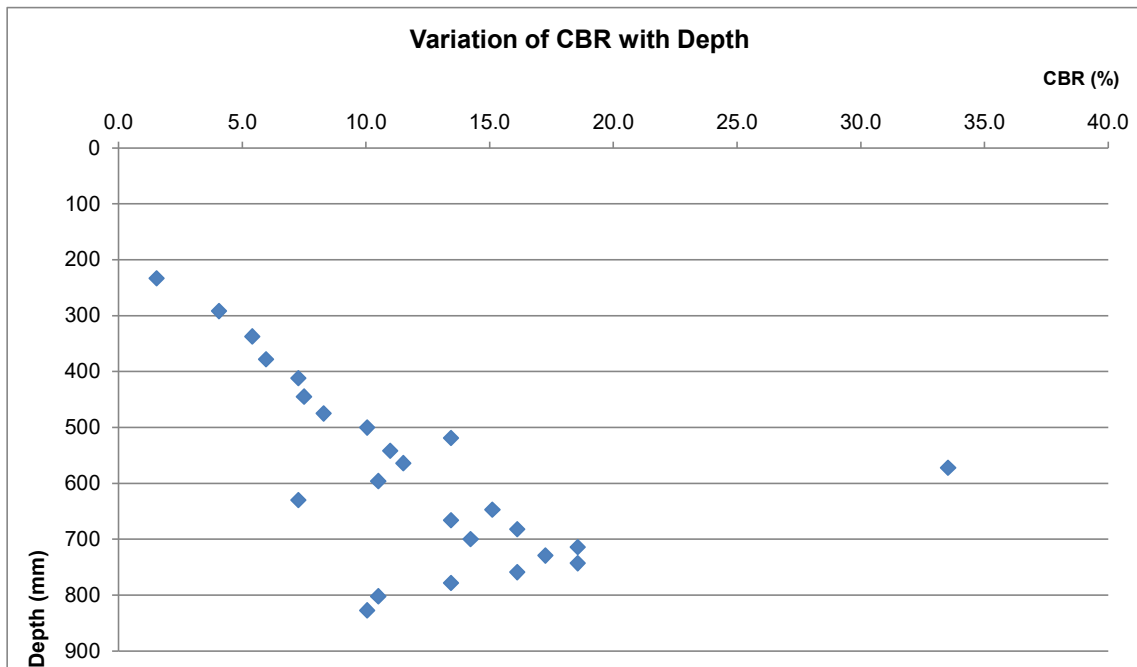
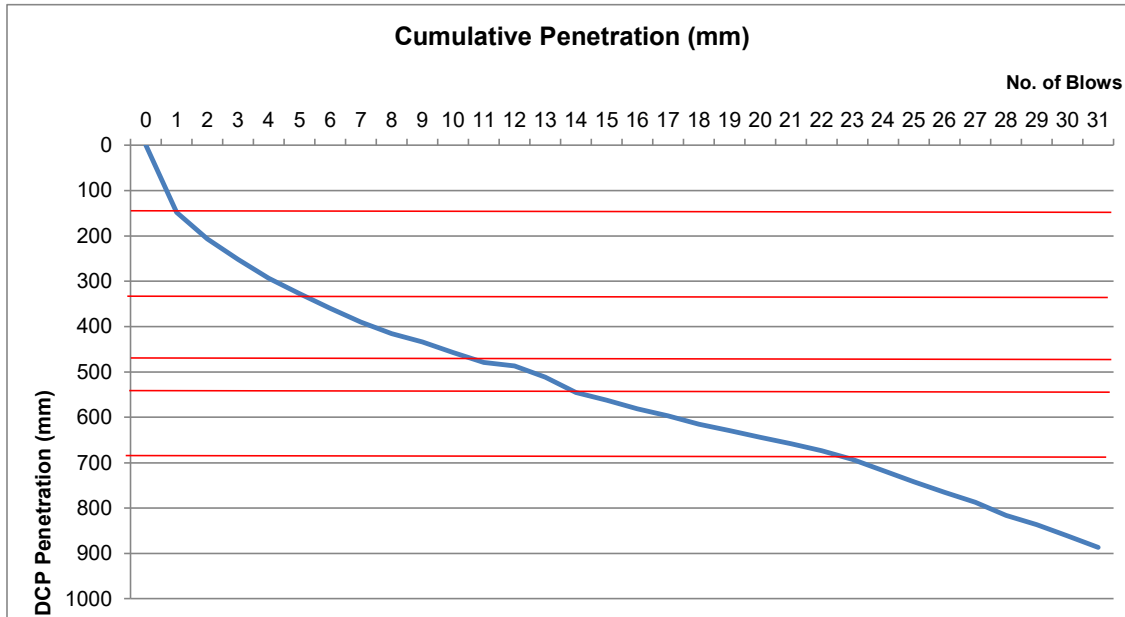
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	105	0	0		126	3.8
1	172	67	67	3.5		
2	231	59	126	4.1		
3	274	43	169	5.7	188	8.3
4	309	35	204	7.0		
5	343	34	238	7.3		
6	372	29	267	8.6		
7	396	24	291	10.5		
8	419	23	314	11.0		
9	439	20	334	12.7	245	14.9
10	459	20	354	12.7		
11	473	14	368	18.6		
12	491	18	386	14.2		
13	509	18	404	14.2		
14	525	16	420	16.1		
15	541	16	436	16.1		
16	556	15	451	17.3		
17	572	16	467	16.1		
18	591	19	486	13.4		
19	609	18	504	14.2		
20	627	18	522	14.2		
21	643	16	538	16.1	299	9.7
22	664	21	559	12.1		
23	682	18	577	14.2		
24	703	21	598	12.1		
25	724	21	619	12.1		
26	749	25	644	10.1		
27	777	28	672	8.9		
28	806	29	701	8.6		
29	832	26	727	9.6		
30	862	30	757	8.3		
31	889	27	784	9.3		
32	925	36	820	6.8		
33	963	38	858	6.5		

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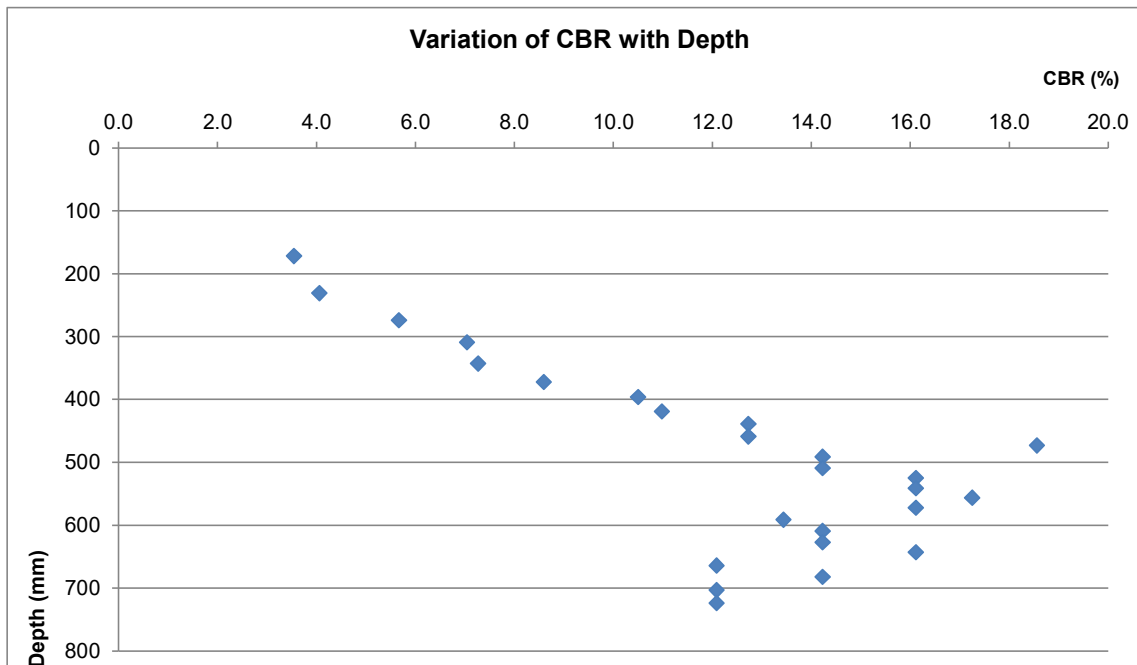
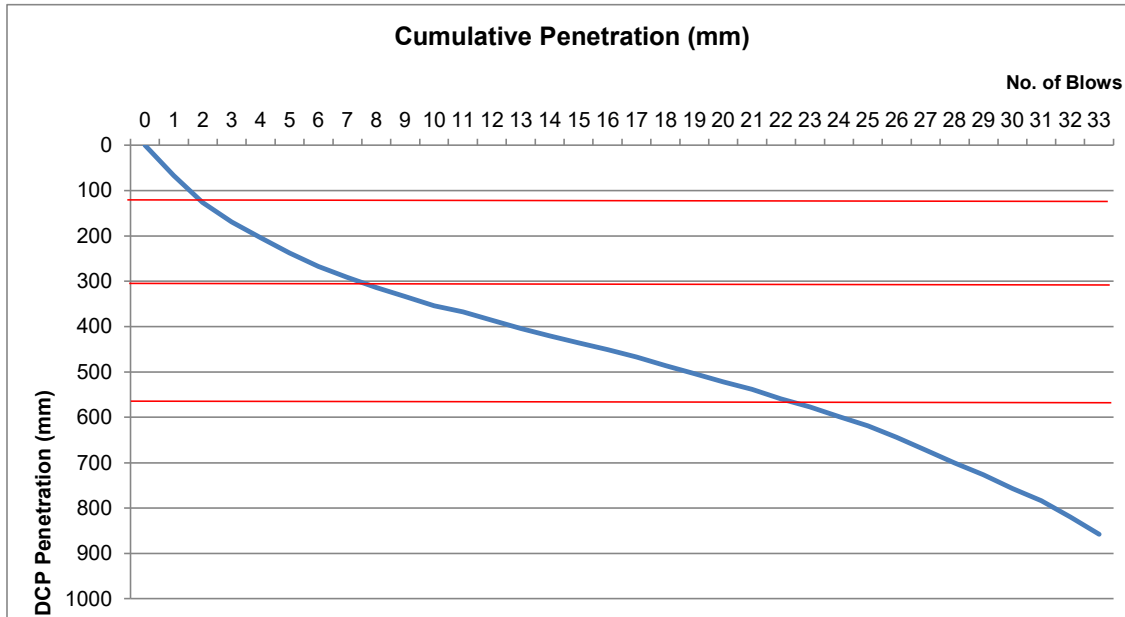
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	145	0	0		216	2.2
1	270	125	125	1.8		
2	361	91	216	2.6		
3	415	54	270	4.5	89	5.8
4	450	35	305	7.0		
5	478	28	333	8.9	306	11.0
6	500	22	355	11.5		
7	525	25	380	10.1		
8	546	21	401	12.1		
9	572	26	427	9.6		
10	597	25	452	10.1		
11	627	30	482	8.3		
12	650	23	505	11.0		
13	674	24	529	10.5		
14	696	22	551	11.5		
15	719	23	574	11.0		
16	739	20	594	12.7		
17	756	17	611	15.1	214	18.0
18	773	17	628	15.1		
19	783	10	638	26.5		
20	798	15	653	17.3		
21	810	12	665	21.8		
22	820	10	675	26.5		
23	833	13	688	20.1		
24	849	16	704	16.1		
25	861	12	716	21.8		
26	879	18	734	14.2		
27	892	13	747	20.1		
28	911	19	766	13.4		
29	931	20	786	12.7		
30	951	20	806	12.7		
31	970	19	825	13.4		

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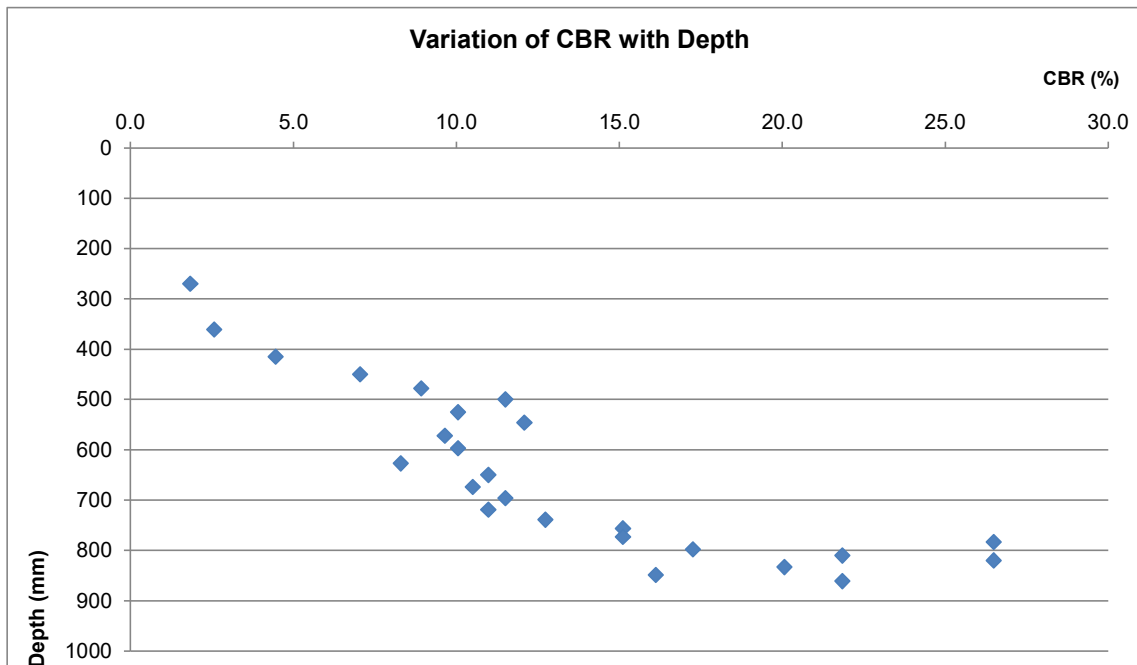
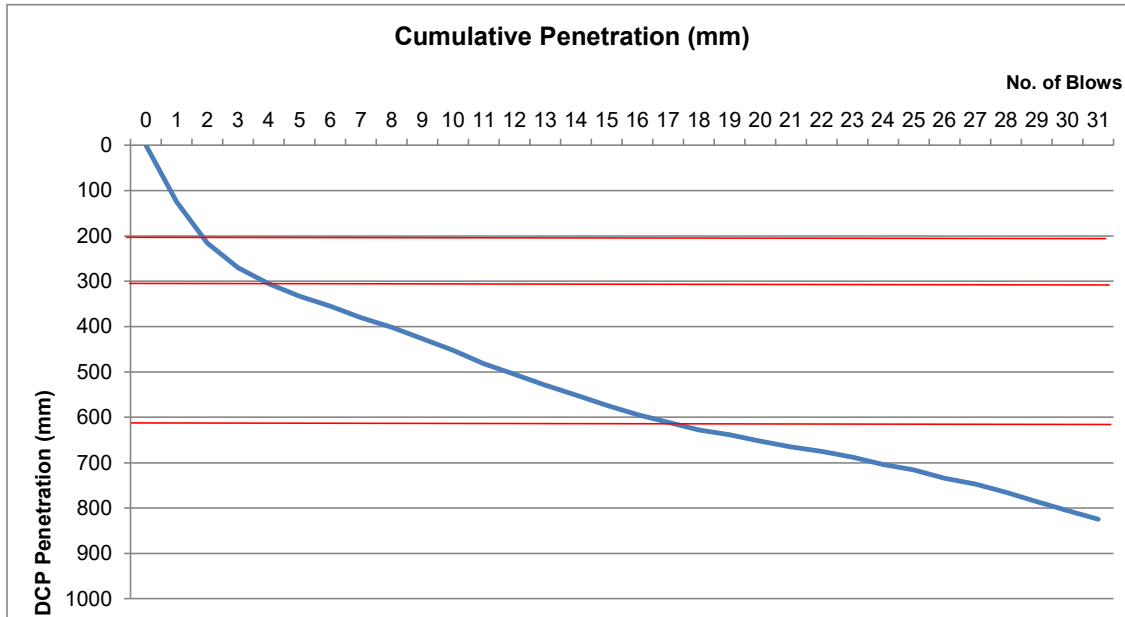
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	140	0	0		275	3.2
1	295	155	155	1.5		
2	363	68	223	3.5		
3	415	52	275	4.6		
4	445	30	305	8.3	255	9.3
5	474	29	334	8.6		
6	512	38	372	6.5		
7	548	36	408	6.8		
8	578	30	438	8.3		
9	606	28	466	8.9		
10	630	24	490	10.5		
11	650	20	510	12.7		
12	670	20	530	12.7		
13	696	26	556	9.6		
14	719	23	579	11.0	193	15.2
15	736	17	596	15.1		
16	750	14	610	18.6		
17	766	16	626	16.1		
18	781	15	641	17.3		
19	800	19	660	13.4		
20	814	14	674	18.6		
21	830	16	690	16.1		
22	846	16	706	16.1		
23	863	17	723	15.1		
24	884	21	744	12.1	107	9.7
25	913	29	773	8.6		
26	946	33	806	7.5		
27	970	24	830	10.5		

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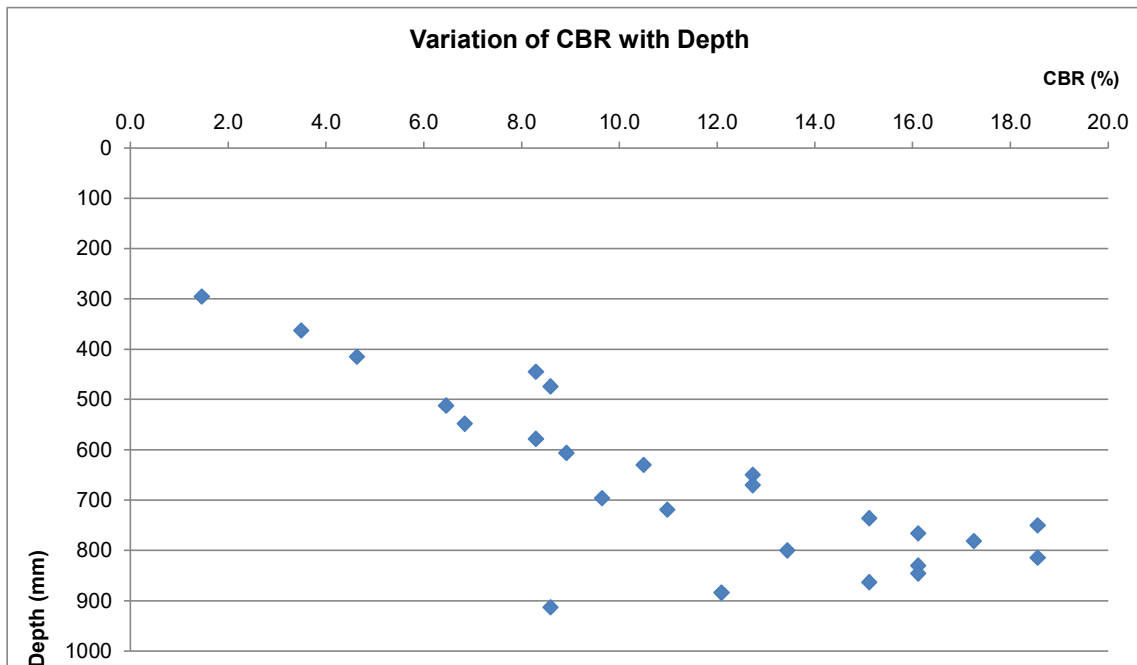
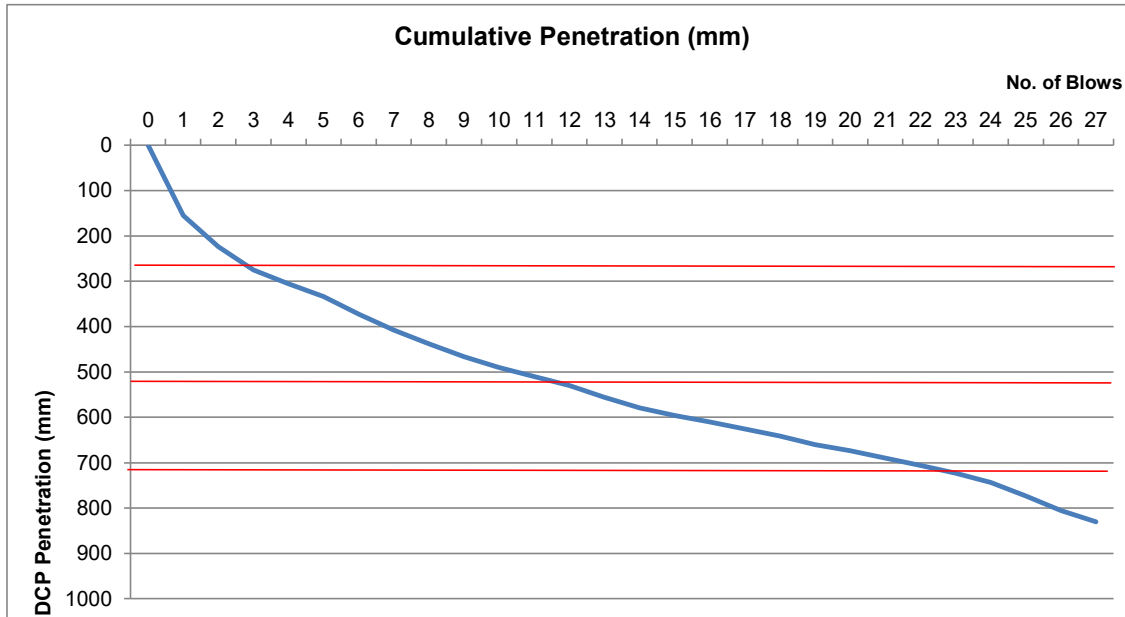
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ANALYSIS OF TRL DYNAMIC CONE PENETRATION TEST RESULTS

No. of Blows	DCP Scale Reading (mm)	Penetration/Blow (mm)	Cumulative Penetration (mm)	CBR Value (%)	Layer Thickness (mm)	Average CBR (%)
0	110	0	0		272	3.6
1	275	165	165	1.4		
2	340	65	230	3.7		
3	382	42	272	5.8		
4	399	17	289	15.1	245	7.8
5	440	41	330	6.0		
6	484	44	374	5.5		
7	526	42	416	5.8		
8	561	35	451	7.0		
9	596	35	486	7.0		
10	627	31	517	8.0		
11	650	23	540	11.0	78	13.3
12	670	20	560	12.7		
13	688	18	578	14.2		
14	705	17	595	15.1		
15	727	22	617	11.5	251	9.2
16	752	25	642	10.1		
17	777	25	667	10.1		
18	801	24	691	10.5		
19	831	30	721	8.3		
20	864	33	754	7.5		
21	896	32	786	7.7		
22	922	26	812	9.6		
23	956	34	846	7.3		

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Scheme Land North of Normandy Way, Hinckley

Client Richborough Estates Ltd

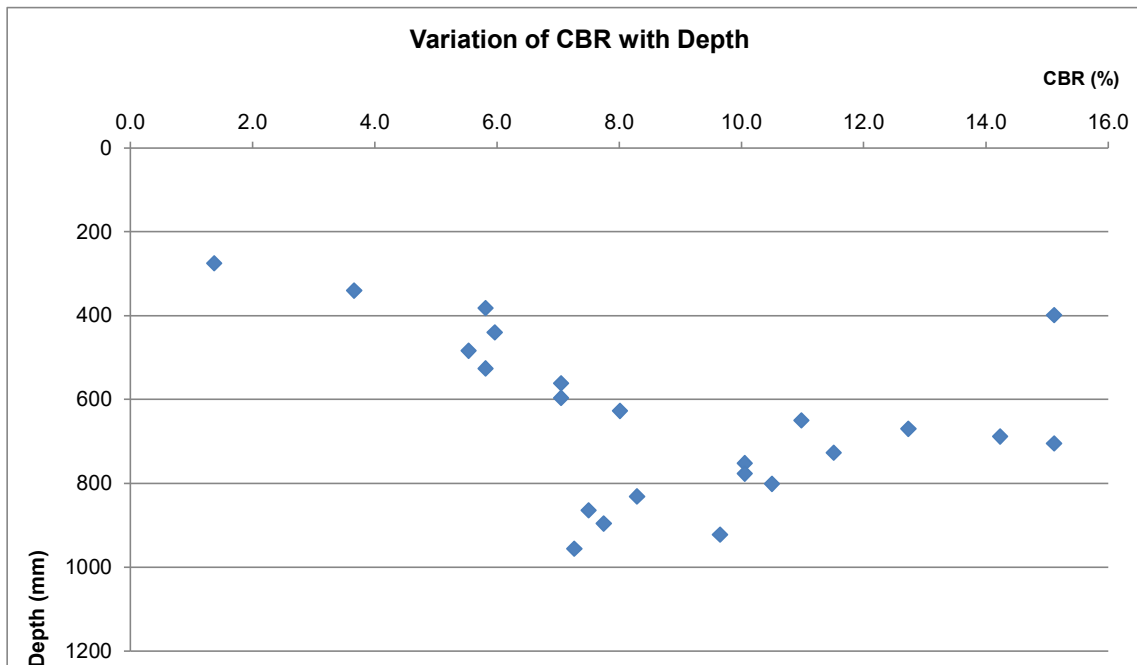
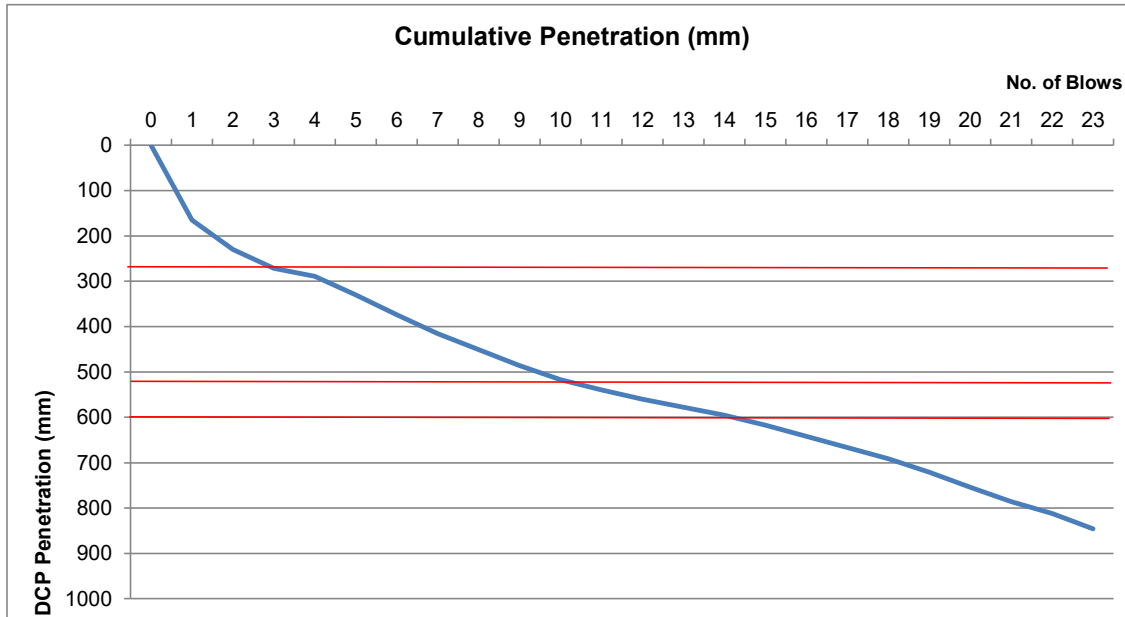
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Date 15/09/2023





CIVIL ENGINEERING



TRANSPORT



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