

Remediation Strategy and Verification Plan

**Residential Development Site
Land at Toynbee Road
Eastleigh
Hampshire**

Client

Foreman Homes

J02411rem

May 2024



Project title	Land at Toynbee Road, Eastleigh		Project ref J02411rem
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Issue No	Status	Date	Approved for Issue
1	Final	8 May 2024	

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1.0 INTRODUCTION

Following on from the provision of a ground investigation and contaminated land assessment, the Wilson Bailey Partnership has been commissioned by Foreman Homes to provide a Remediation Strategy for the proposed development land at Toynbee Road, Eastleigh

1.1 Proposed Development

This formerly backfilled gravel extraction pit that has subsequently been used as a builders merchant prior to demolition and clearance is to be redeveloped through the construction of a new residential housing scheme comprising a range of semi-detached and detached houses with private gardens, public soft landscaping and a network of access roads, private driveways and areas of hardstanding for car parking.

Purpose of Work

The principal technical objectives of the work carried out were as follows.

- to set out the remediation objectives;
- to provide an assessment of alternative approaches and sustainability of the proposed works;
- to determine the remediation actions;
- to identify the key information that is required to be collated to demonstrate monitoring of the works; and
- to agree the scope of a Verification Report to demonstrate the completion of the remediation work.

1.3 Site Description

A full description of the site, its environmental setting and history is provided as part of the previous ground investigation reports, which include reports provided by others, and should be read in conjunction with this report. The site has remained disused and secured following the demolition and clearance that was carried out at the time of the previous phase of ground investigation.

1.4 Limitations

The conclusions and recommendations made in this report are limited to those that can be made on the basis of the investigation. The results of the work should be viewed in the context of the range of data sources consulted, the number of locations where the ground was sampled and the number of soil, gas or groundwater samples tested; no liability can be accepted for information in other data sources or conditions not revealed by the sampling or testing. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate; no independent validation of such information has been made by the Wilson Bailey Partnership.

2.0 Requirement for Remediation

The previous desk study and ground investigation reports have identified a requirement for remediation in order to ensure the protection of end users in areas of proposed garden and also to mitigate the risk of carbon dioxide ingress into proposed new buildings.

Desk study research indicates that prior to use of the site as a builders merchant it was part of a gravel extraction pit that was historically backfilled.

The multiphased ground investigation has identified the presence of apparently localized pockets of soils that have been found to be contaminated with polyaromatic hydrocarbons and metallic contaminants including arsenic and lead. Whilst the statistical analyses have not indicated these apparently localised pockets of contamination to be site wide, by virtue of the demolition and clearance of the site and its historical filling, it is not possible to accurately and robustly zone the site or delineate the extent of the localised ground contamination such that a requirement for remediation across the site has been identified.

A requirement for remediation has therefore been established at this site with respect to a proposed residential redevelopment.

3.0 Remediation Objectives

The following objectives have been identified as part of the contaminated land risk assessment.

3.1 Protection of Human Health (end users)

Potential risks posed to human health have been considered and the results of soil contamination testing indicate that there is a requirement for ground remediation with respect to human health of future homeowners.

An objective of the remediation works will be to ensure that end users are protected from dermal contact and ingestion of any contaminated soils together with mitigating the risk of ingestion of related potentially contaminated dusts.

A Gas Risk Assessment carried out by others has indicated a requirement for incorporating gas protection measures into the design of proposed new buildings. A copy of the report by others is included in the appendix to this report.

3.2 Protection of Human Health (site workers and future maintenance workers)

Precautions with regards to site workers and future maintenance workers are not anticipated over and above normal safe working practices such as restricted eating and drinking, regular hand washing and the provision and use of routine PPE.

3.3 Protection of Property buildings service lines and pipes

The risk to these potential receptors has been considered and in view of the absence of significant mobile contamination, a significant risk warranting further action has not been identified. A requirement for the protection of drinking water pipework has been identified by virtue of the presence of significantly raised concentrations of poly-aromatic hydrocarbons.

New utility trenches shall be backfilled with either clean sand, other certified clean imported fill or

clean segregated and tested subsoil arisings from excavations on site.

3.4 Protection of Adjoining Land

The contaminated land risk to this potential receptor has been considered and in view of the absence of significant potentially mobile ground contamination, a significant risk warranting further action has not been identified.

3.5 Protection of Groundwater and Surface Water

The site is located within a moderately sensitive setting with regards to groundwater, as a result of the presence of permeable soils that are locally classified as a Secondary Aquifer providing baseline flow to the Monks Brook, although the site is not indicated to be located within any class of groundwater source protection zone.

Significantly elevated concentrations of potentially mobile contaminants have not been identified, although there remains a perhaps limited potential for localised contamination with fuels, oils and greases to be present.

4.0 Remediation Actions

In order to satisfy the Remediation Objectives, the following Remediation Actions will be required.

4.1 Topsoil and Subsoil Capping to Gardens and Soft Landscaping Areas

Placement of a clean capping layer of topsoil and subsoil over a geotextile marker layer should ensure that end users are protected from both the chemical and physical hazards presented by the near surface soils identified as part of this ground investigation.

- The depth of capping shall be 600mm within private gardens and 450mm within areas of proposed managed soft landscaping and planting.
- The capping shall be formed using certified imported topsoil and subsoil;
- The capping soils shall be placed over a marker layer where made ground remains present at the reduced formation level.
- In gardens within the western part of the site there is a potential that the reduced formation level for gardens may be formed within natural soils, at which depth further excavation into the natural soils will not be required and a reduced capping depth can be used. Testing and inspection of any reduced depth garden formation level in natural soils will be required to demonstrate the suitability of the proposed formation.
- Where gardens and soft landscaping areas are to be formed within natural soils the requirement for the geotextile marker layer may also be obviated.

Detailed records, inspections, photos and test results will need to be collected as part of these remediation actions, the details of which are presented in Section 5.1 of this report.

4.2 Protection to Buried Services and Utilities

Subject to discussions with the utility providers it is considered unlikely that protected plastic pipework will be required, although this should be resolved through discussions with the statutory provider in advance of commencement of any excavations for proposed new utilities. It is conceivable that regardless of the results of soil contamination testing that the utility providers may insist upon protected plastic pipe work on the basis of the site history and previous use as a backfilled gravel pit and subsequently as a builders merchant.

All service trenches should be backfilled with clean soils rather than arisings in order to provide a further level of protection of buried utilities and future maintenance workers. Consideration could be given to backfilling with stockpiled site won clean and natural soils, subject to a regime of segregation and testing,

4.3 Ground Works Watching Brief

The ground works associated with the consented development should be carried out in accordance with the requirements of a routine geo-environmental watching brief, whereby should any contaminated or suspicious soils be encountered they may be appropriately tested, investigated, and assessed by Wilson Bailey in consultation with the Regulatory Authorities before agreeing the scope of any remedial actions as necessary.

Detailed records, inspections, photos, and test results will need to be collected as part of these remediation actions, the details of which are presented in Section 5 of this report.

4.4 Ground Gas Protection

The appended Gas Risk Assessment carried out by others indicates a requirement for gas protection measures to be incorporated into the design of proposed buildings in accordance with the requirements of CS2 (BS8485) are designed, installed, and independently verified in accordance with CIRIA C735.

In accordance with these requirements, membranes shall be detailed in accordance with the guidance provided by CIRIA and BRE and the membranes shall be installed by specialist contractors under a regime of inspections and verification.

5.0 Verification Plan and Monitoring Proposals

The following records and information will need to be collected as part of the identified remediation works to demonstrate that the works have been carried out in accordance with the requirements set out in this report in order to ensure that the site has been rendered suitable for the consented residential redevelopment.

As the development at this site progresses it is anticipated that a phased approach to validation will be taken, although the validation report will be provided to the Regulatory Authorities as a single volume for review and consideration.

5.1 Topsoil and Subsoil Capping to Gardens and Soft Landscaping Areas

Photographic records of the segregation of subsoils and topsoil for reuse shall be provided together with photographic records of the subsequent placement of topsoil and subsoil to each plot in order

to demonstrate the placement of the marker layer and the agreed thickness of topsoil and subsoil.

In particular, where gardens and areas of soft landscaping are to be formed at a reduced depth owing to the presence of natural soils at a depth of less than 600mm (or 450mm in the case of soft landscaping) additional photographs and soil samples will need to be taken to demonstrate the absence of potentially contaminated fill materials and the presence of clean natural soils.

Testing of clean natural subsoils at formation level should be carried out on the basis of one sample per plot where a reduced depth of capping is proposed within natural soils.

A plan identifying the locations of any plots where a reduced capping has been used shall be provided as part of a Verification Report together with the other supporting documentation to demonstrate that the site has been rendered suitable for the consented residential redevelopment.

It is considered that there is no potential for reuse of site won topsoil at this site, due to the absence of any areas of existing planting. There is however a potential for arisings from foundation excavations to be reuse as subsoil within the propose clean soil capping to areas of garden and soft landscaping, providing it can be robustly segregated and stockpiled on site for reuse.

Imported topsoil and imported or site won subsoil will need to be tested to confirm its chemical suitability for reuse.

Testing shall be carried out at a rate of not less than 1 sample per 50m³ of materials and the acceptability criteria to determine the suitability of any soils are presented below:

Determinant	Acceptability Criteria (residential with plant uptake) mg/kg	Determinant	Acceptability Criteria (residential with plant uptake) mg/kg
Asbestos	No quantifiable asbestos	Mercury (Hg)	1.2
Arsenic (As)	37	Nickel (Ni)	130
Cadmium (Cd)	11	Selenium (Se)	350
Chromium (hex)	21	Zinc (Zn)	3750
Chromium (Cr)	910	Benzo(a)pyrene	5.0
Copper (Cu)	2400	Total Phenols (mono)	420
Lead (Pb)	200	Speciated Fuel Relation hydrocarbons (TPH)	Various species-specific values

Photographic records of the placement of topsoil to each plot shall be taken in order to demonstrate the placement of the marker layer and the agreed thickness of topsoil and subsoil.

In particular, where gardens and areas of soft landscaping are to be formed at a reduced depth owing to the presence of natural soils at a depth of less than 600mm (or 450mm in the case of soft landscaping) additional photographs and soil samples will need to be taken to demonstrate the absence of potentially contaminated fill materials and the presence of clean natural soils.

Testing of clean natural subsoils should be carried out on the basis of one sample per plot where a reduced depth of capping is proposed within natural soils.

A plan identifying the locations of any plots where a reduced capping has been used shall be provided as part of a Verification Report together with the other supporting documentation to

demonstrate that the site has been rendered suitable for the consented residential redevelopment. As the development at this site progresses it is anticipated that a phased approach to garden validation will be taken, whereby selected plots will be inspected as and when they are ready and groups of plots may be reported separately. The verification report for each plot will however be provided prior to the occupation of each plot, even if the clearance of any contaminated land related planning conditions can only be achieved upon completion of the verification to all plots.

5.1.1 Regulatory Requirements Associated with Formation of Capping

The reuse of site won materials will need to be carried out in accordance with all waste management legislation and this will need to be confirmed as part of the Verification Report. Consideration may be given to the use of a U1 Waste Exemption, or materials may be reused within the CLAIRE DoW-CoP framework using a Materials Management Plan that has been reviewed by a Qualified Person and declared through to the Environment Agency prior to the excavation of any materials that may be considered suitable for reuse.

5.2 Ground Gas Protection Measures for New Buildings

A requirement for gas protection measures has been established on the basis of the appended Gas Risk Assessment.

Ground gas protection measures are therefore required to be installed in accordance with the requirements of CS2 (BS8485) with independent verification in accordance with CIRIA C735.

Copies of product data sheets, installation verification inspection sheets and photographic records will be collated and included as part of the Verification Report.

As the development at this site progresses it is anticipated that a phased approach to plot validation will be taken, whereby selected plots will be inspected as and when they are ready and groups of plots may be reported separately. The verification report for each plot will however be provided prior to the occupation of each plot, even if the clearance of any contaminated land related planning conditions can only be achieved upon completion of the verification to all plots.

5.3 Protection to Buried Services

Copies of correspondence with utility suppliers shall be collated to evidence the decisions made with regards to the use of protected plastic pipework as necessary.

In the event that further testing is carried out to support these discussions, records of these works shall also be collated and presented as part of a Verification Report to demonstrate that the site has been rendered suitable for the consented residential redevelopment. The backfilling of service trenches with clean and suitable soils shall also be recorded through inspections and photographs.

5.4 Ground Works Watching Brief

The records of all inspection visits shall be collated to provide an overall record of the watching brief.

The individual records of any more substantial supplementary investigation of any potential localised pockets of ground contamination shall be collated and shall include test results, plans, photos and the records of discussions with the Regulatory Authorities to evidence the discussion of any such areas and the requirement for any further remediation.

APPENDIX

Gas Risk Assessment

Development Layout Plan



Ground Gas Risk Assessment

at

Site off Toynbee Road, Eastleigh, Hampshire SO50 9DN

for

Foreman Homes

Reference: I7587/GGRA/Rev I.0

March 2024

Control Document

Project

Site off Toynbee Road, Eastleigh, Hampshire SO50 9DN

Document Type

Ground Gas Risk Assessment

Document Reference

17587/GGRA/Rev 1.0

Document Status

Final

Date

March 2024

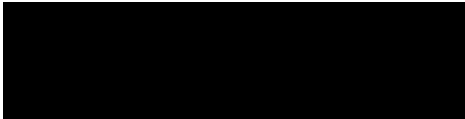
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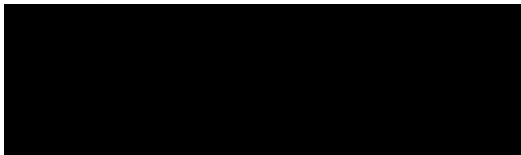
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This is not a valid document for use in the design of the project unless it is titled Final in the document status box.

Current regulations and good practice were used in the preparation of this report. The recommendations given in this report must be reviewed by an appropriately qualified person at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.



Commission

This document comprises the Ground Gas Risk Assessment (GGRA) and incorporates the results, discussion, and conclusions to this intrusive works. General site data is recorded below:

Commission Record	
Client	Foreman Homes
Site Name	Site off Toynbee Road, Eastleigh, Hampshire SO50 9DN
Grid Reference	SU 45153 19561
Soils Limited Quotation Ref	Q20562
Clients Purchase Order	HFM-495/0003

Documents associated with this development that must be referred to are given below.

Record Of Associated Documents			
Reference	Type	Date	Creator
I7587/ PIR	Preliminary Investigation Report	June 2019	Soils Limited
I7587/ MIR	Main Investigation Report	June 2019	Soils Limited
I7.096.43.SK01 rev C	Development Drawing	May 2018	HGP Architects
I9292/LR	Infiltration Testing Letter Report	May 2021	Soils Limited
Note(s): I			

Limitations and Disclaimers

The report was prepared solely for the brief described in Section 1.1 of this report.

The contents, recommendations and advice given in the report are subject to the Terms and Conditions given in Soils Limited's Quotation

Soils Limited disclaims any responsibility to the Client and others in respect of any matters outside the scope of the above.

This report has been prepared by Soils Limited, with all reasonable skill, care and diligence within the terms of the Contract with the Client, incorporation of our General Conditions of Contract of Business and taking into account the resources devoted to us by agreement with the Client.

The report is personal and confidential to the Client and Soils Limited accept no responsibility of whatever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report wholly at its own risk.

The Client may not assign the benefit of the report or any part to any third party without the written consent of Soils Limited.

The ground is a product of continuing natural and artificial processes. As a result, the ground will exhibit a variety of characteristics that vary from place to place across a site, and also vary with time. Whilst a ground investigation will mitigate to a greater or lesser degree against the resulting risk from variation, the risks cannot be eliminated.

The investigation, interpretations, and recommendations given in this report were prepared for the sole benefit of the client in accordance with their brief. As such these do not necessarily address all aspects of ground behaviour at the site.

Current regulations and good practice were used in the preparation of this report. An appropriately qualified person must review the recommendations given in this report at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

If the term “competent person” is used in this report or any Soils Limited document, it means an engineering geologist or civil engineer with a minimum of three years post graduate experience in the understanding and application of the appropriate codes of practice.

Within the report reference to ground level relates to the site level at the time of the investigation, unless otherwise stated.

Exploratory hole is a generic term used to describe a method of direct investigation. The term trial pit, borehole or window sample borehole implies the specific technique used to produce an exploratory hole.

Ownership of land brings with it onerous legal liabilities in respect of harm to the environment. “Contaminated Land” is defined in Section 57 of the Environment Act 1995 (Updated 2021) as:

“Land which is in such a condition by reason of substances in, on or under the land that significant harm is being caused or that there is a significant possibility of such harm being caused or that pollution of controlled waters is being, or is likely to be caused”.

Deleterious materials may be present in any Made Ground that pose a potential risk to site workers, end users and adjacent vulnerable receptors. These could include a range of contaminants, including asbestos, especially if the material includes large fractions of demolition derived materials.

All works are undertaken in the context of, and in compliance with, BS8485:2015+A1 2019 and LCRM (EA 2021) and all other pertinent planning, standards, documentation and guidance appropriate to the site at the time of production which may include, but are not necessarily limited to, documents provided by BS/CEN/ISO, NHBC, AGS, CIEH, CIRIA, SoBRA and CLAIRE.

The investigation, analysis or recommendations in respect of contamination are made solely in respect of the prevention of harm to vulnerable receptors, using where possible best practice at the date of preparation of the report. The investigation and report do not address, define or make recommendations in respect of environmental liabilities. A separate environmental audit and liaison with statutory authorities is required to address these issues.

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Section I Introduction

I.1 Objective of Investigation

The Client commissioned Soils Limited to undertake a Ground Gas Risk Assessment to supply the client and their designers with information regarding the Ground Gas conditions prevalent on the site, to assist in informing the design of Ground Gas protection measures, where required.

The investigation was to be undertaken to understand the ground conditions and to quantify the Ground Gas conditions present on site. The investigation was to be made by means of borehole well installations with subsequent monitoring visits over time to measure the insitu Ground Gas concentrations and flow rate.

I.2 Location

The site was located at Toynbee Road, Eastleigh, Hampshire SO50 9DN and had an approximate O.S Land Ranger Grid Reference of SU451 195.

The site location plan is given in Figure 1.

I.3 Site Description

At the time of the intrusive works (between 16th April 2019 and 25th April 2019), the site comprised a builders merchant to the south, a vehicle rental company to the centre and a self-storage company to the north.

The site was bounded to the south by a new build residential development, to the north by a railway line, to the east by mixed residential and commercial property and to the west by Eastleigh cemetery.

The site was largely covered by buildings or hardstanding except for sporadic mature trees at the boundaries between each of the three businesses. The boundaries with the cemetery to the west and the railway to the north were also bounded by mature trees. The site was generally flat and sloped down gently to the south.

An aerial photograph of the site and its close environs has been included in Figure 2.

I.4 Proposed Development

The proposed development was for the demolition of the existing structures and the erection of 92 units of residential accommodation to include a mix of apartments, terraced and semi-detached properties.

Soft landscaping was proposed in the form of private residential gardens and shared open space. The development was to be joined to the recent development immediately south of the site by two roads running approximately north to south.

In compiling this report reliance was placed on drawing number 17.096.43.SK01 rev C, dated May 2018, prepared by HGP Architects. The recommendations provided within this report are made exclusively in relation to the scheme outlined above, and must not be applied to any other scheme without further consultation with Soils Limited. Soils Limited must be notified about any change or deviation from the scheme outlined.

Development plans provided by the client are presented in Appendix C.

I.5 Anticipated Geology

The 1:50,000 BGS Geology map showed the site to be situated on the Wittering Formation bedrock, with overlying superficial River Terrace Deposits.

I.5.1 River Terrace Deposits

The rivers Test and Itchen have deposited extensive spreads of River Terrace Deposits in the Southampton area, representative of ancient floodplains. In total, eleven terraces have been recorded. The River Terrace Deposits consist predominantly of gravels made up of subangular to subrounded flints with a significant sand component locally with lenses of silt, clay or peat.

The five highest terraces have appreciable clay content. Poorly sorted, clayey and sandy silts and silty clays overlie the 1st, 3rd, 5th and 6th terraces and locally at above terrace gravels.

I.5.2 Wittering Formation

The Wittering Formation comprises greyish brown laminated clay; wavy to lenticular-bedded sand interbedded with clay in equal proportions; and fine to medium-grained sparsely glauconitic sand.

Section 2 Site Works

2.1 Intrusive Site Works

The intrusive project site works were designed to provide information on the ground conditions for the proposed residential development. The intended investigation, as outlined within the Soils Limited quotation and subsequently documented within Soils Limited Main Investigative Report (17587/MIR), comprised the following items:

The actual project works were undertaken between 16th April 2019 and 25th April 2019 and comprised:

- 13No. windowless sampler boreholes;
- 12No. dynamic probes;
- 3No. 15m deep cable percussive boreholes;
- 2No. BRE365 Infiltration tests;
- Installation of 4No. soil-gas monitoring wells;
- In-situ CBR tests by DCP;
- Contamination laboratory testing;
- Geotechnical laboratory testing;

2.2 Ground Gas Monitoring Well Installations

Between the 16th and 25th April 2019 a total of 1No. Cable percussive borehole and 3 No. Windowless sampler boreholes were installed with dual purpose Ground Gas and groundwater monitoring wells. The wells were installed to facilitate the ongoing monitoring of groundwater level, Ground Gas concentrations and flow rates.

Full details of the monitoring wells are presented within Appendix B.1 and a summary of the well installations is presented in Table 2.1.

Table 2.1 Summary of Well Installations

Detail	BH01	WS1, WS8 & WS 13
Cover type	Standard tamper proof flush cover	Standard tamper proof flush cover
Head works	Gas tap with cone gas valve	Gas tap with cone gas valve
Pipe Work	33m OD HDPE Plain pipe for 0.00 to 1.00m then slotted to 5.00m bgl. Slotted section includes 12.1% 3mm slots with a solid end cap at base.	33m OD HDPE Plain pipe for 0.00 to 1.00m then slotted to 10.00m bgl. Slotted section includes 12.1% 3mm slots with a solid end cap at base.
Top seal	0.10 to 3.00m bgl (bentonite pellets)	0.10 to 1.00m bgl (bentonite pellets)
Filter pack	3.00 to 9.00m bgl 3-5mm washed gravel.	3.00 to 9.00m bgl 3-5mm washed gravel.
Base Seal	N/A	N/A

Note(s): The depths given in this table are taken from the ground level on-site at the time of investigation.

Section 3 Ground Model

3.1 Ground Conditions

Between the 16th and 25th April 2019 three cable percussive boreholes were drilled using a Dando 2000 drilling rig to depths of 15.00m bgl.

Between 16th and 25th April 2019 thirteen windowless sampler boreholes were drilled, using an Archway Competitor and a Premier type tracked drilling rig, to depths ranging between 0.40 and 4.00m below ground level (bgl) at locations selected by Soils Limited using a development plan provided by the client.

Standpipes were installed within trial hole locations BH1, WS1, WS8 and WS13 to allow for continued monitoring of both groundwater and soils gas, where present.

Three windowless sampler boreholes (WS1, WS8 and WS13) and one cable percussive borehole (BH1) were backfilled with gravel and bentonite following the installation of monitoring wells.

The maximum depths of trial holes have been included in Table 3.1.

All trial holes were scanned with a Cable Avoidance Tool (C.A.T.) and GENNY prior to excavation to ensure the health and safety of the operatives.

Table 3.1 Final Depth of Trial Holes

Trial Hole	Depth (m bgl)
BH1(w)	15.00
BH2	15.00
BH3	15.00
WS1(w)	4.00
WS3	4.00
WS4	4.00
WS5	4.00
WS6	4.00
WS7	3.00
WS8(w)	3.80
WS9	4.00
WS10	0.40
WS11	4.00
WS13(w)	3.00
WS14	4.00
WS15	4.00
Note: w - well installation	

The approximate trial hole locations are shown on Figure 3.

The soil conditions encountered were recorded and soil sampling commensurate with the purposes of the investigation was carried out. The depths given on the trial hole logs and quoted in this report were measured from ground level.

The soils encountered from immediately below ground surface have been described in the following manner. Where the soil incorporated an organic content such as either decomposing leaf litter or roots, or has been identified as part of the in-situ weathering profile, it has been described as Topsoil both on the logs and within this report. Where man has clearly either placed the soil, or the composition altered, with say greater than an estimated 5% of a non-natural constituent, it has been referred to as Made Ground both on the log and within this report.

For more complete information about the soils encountered within the general area of the site reference should be made to the detailed records given within Appendix A, but for the purposes of discussion, the succession of conditions encountered in the trial holes in descending order can be summarised as:

Made Ground/Topsoil (MG/TS)
River Terrace Deposits (RTD)
Wittering Formation (WTT)
Whitecliff Sand Member (WSM)

The ground conditions encountered in the trial holes are summarised in Table 3.2.

Table 3.2 Ground Conditions

Strata	Depth Encountered (m bgl)		Typical Thickness (m)	Typical Description
	Top	Bottom		
MG	0.00	0.20– >4.00 ¹	2.25	Dark greenish grey black sandy CLAY with clinker, concrete, chalk fragments and brick.
RTD	0.20–4.00	4.00– 7.00	4.00	Light orangish brown CLAY / light yellowish brown sandy GRAVEL.
WTT	4.00–7.00	4.50– 8.60	1.00	Firm dark brownish grey silty CLAY.
WSM	4.00–7.00	>15.00 ¹	Not Proven ²	Dark yellowish brown fine to medium SAND.

Note: ¹ Final depth of trial hole. ² Base of strata not encountered based on all trial holes

3.2 Groundwater

Groundwater was only encountered within three out of the sixteen trial holes. From the trial hole logs for boreholes BH1 and BH2, two inferred water bodies were observed, a shallow perched water body struck at the base of the Made Ground at 3.00m in BH2 and a deeper strike within the River Terrace Deposits which appeared to be confined by a layer of clay resulting in a significant rise of water from 7.40 to 5.30m bgl.

Changes in groundwater level occur for a number of reasons including seasonal effects and variations in drainage. The investigation was conducted in April 2019, when groundwater levels should be rising from their annual maximum (highest) elevation, which typically occurs around March.

As part of the ground investigation monitoring wells were installed in BH1, WS1, WS8 and WS13, to measure soil gas concentrations and monitor groundwater levels, model

groundwater flow direction and if considered necessary, allow for the sampling of groundwater.

Table 3.3 Groundwater strikes

Trial Hole	Depth to Water (m bgl)
BH1	7.40 rising to 5.30m bgl after 20mins
BH2	3.00 rising to 2.90m bgl after 20mins
BH3	3.40 rising to 3.20m bgl after 20mins

Further groundwater monitoring was conducted within the standpipe installed on site following completion of site works and has been presented in Table 3.4.

Table 3.4 Groundwater Monitoring

Trial Hole	Well Depth (m bgl)	Depth to Water (m bgl)					
		17/06/19	23/07/19	13/09/19	16/10/19	11/11/19	16/12/19
BH1	9.80	no access	5.75	5.78	no access	5.40	5.37
WS1	4.00	3.50	no access	Dry	Dry	3.27	3.27
WS8	3.80	3.43	3.58	3.60	no access	3.10	3.15
WS13	3.00	Dry	no access	Dry	2.30	dry	dry
Note(s):							

Groundwater, was rising from its lowest elevation recorded at 5.75 bgl during the intrusive investigation to 5.37m bgl in December 2019.

Groundwater equilibrium conditions may only be conclusively established, if a series of observations are made via groundwater monitoring wells.

Section 4 Ground Gas Monitoring

4.1 Conceptual Site Model

The preliminary conceptual site model (report ref: 17587/PIR dated June 2019) identified a low to moderate risk of ground contamination including risk from Ground Gas, as presented within Table 4.21.

Table 4.1 Preliminary Conceptual Site Model

Potential source (Ground Gas)	Pathway	Receptor	Risk ¹
On Site			
Gravel Pit (infilled)	Migration of gases through the permeable soils	End User	Moderate to very low
Garage		Site Workers	Moderate to very low
Allotment Gardens		Off-site Users	Moderate to very low
Saw Mill			Moderate to very low
Timber Yard			Moderate to very low
Above Ground Fuel Storage Tanks			Low to very low
Off Site			
Railway Line			Very Low

Note(s): ¹= Risk is a function of probability and severity as defined fully within Soils Limited I7587/ PIR, dated June 2019.

4.2 Methodology

The gas monitoring regime was designed in accordance with the principals of CIRIA:C665:2007 and BS:8576:2013 to allow the resultant data to be considered in the context of potential protective options in accordance with BS:8485+A1:2019.

The gas hazard was assessed as being low to moderate risk and the proposed end use of 92 units of residential accommodation including houses which are high sensitivity of end-use, was assessed as being very low to moderate (see CIRIA C665 Table 4.2 and Table 5.5a).

The location, spread and individual response zones of the well installations were designed to target the potential sources and pathways, in accordance with BS:8576.

The monitoring frequency and period were designed in accordance with CIRIA C665 Table 5.5a and Table 5.5b based on the classification of the potential source and of the sensitivity of the receptor. A total of six monitoring visits were carried out, over a period of six months to give the best chance of capturing the “worst case” scenario whereby the general atmospheric conditions are low and falling pressure. On certain visits a few of the locations were inaccessible.

The initial monitoring visit was conducted a minimum of seven days after construction of the borehole to allow for the gas within the well to reach equilibrium.

4.3 Equipment used

The well installations were monitored using a Gas Data GFM 435 (serial number 11555)

equipped with flow meter, methane, LEL, carbon dioxide, oxygen, hydrogen sulphide and carbon monoxide sensors. In addition, a Multirae lite (serial number M01C01191) / Procheck Tiger (serial number T111179) photo ionising detector (PID), fitted with a 10.6ev bulb was used to screen for VOC's/SVOC's, where indicated likely in the conceptual site model.

The gas meter and PID are calibrated and serviced on an annual basis with certification available on request.

Details of the gas meter and PID used on each visit has been recorded on the raw data included within Appendix B.2.

4.4 Ground Gas Monitoring Results

Ground Gas measurements were taken of methane, carbon dioxide, oxygen, hydrogen sulphide, carbon monoxide and volatile organic concentrations, as well as flow rates, ambient pressure, differential pressure and groundwater level.

Ambient pressure was recorded at each location prior to connecting the gas meter to the well installation. Once connected to the borehole the tap was opened and a flow reading was taken, once a steady flow reading had been recorded, peak and steady Ground Gas readings were taken. In order to calculate the worst case situation, the values presented in Table 4.2 and taken through into the Ground Gas risk assessment are peak readings.

A summary of the gas monitoring results is presented in Table 4.2.

Table 4.2 Ground Gas Monitoring Results

Date (Baro Trend)	Exploratory Hole	CH ₄ (%v/v)	CO ₂ (%v/v)	O ₂ (%v/v)	H ₂ S (ppm)	CO (ppm)	LEL (%)	aP (mb)	Flow (l/h)	Dp	H ₂ O (m bgl)	VOC (ppm)
17/06/19 (Steady)	BH1 ¹	-	-	-	-	-	-	-	-	-	-	-
	WS1	<0.1	4.9	15.8	<1	<1	<2	1014	<0.1	<1	3.50	<1
	WS8	0.3	11	0.0	<1	<1	<2	1014	<0.1	<1	3.43	<1
	WS13	<0.1	<0.1	17.4	<1	<1	<2	1014	<0.1	<1	Dry	<1
22/07/19 (Rising)	BH1	<0.1	4.9	16.9	<1	<1	<2	1014	<0.1	<1	5.75	<1
	WS1 ¹	-	-	-	-	-	-	-	-	-	-	-
	WS8	0.9	9.6	0.0	<1	<1	6	1014	<0.1	<1	3.58	<1
	WS13 ¹	-	-	-	-	-	-	-	-	-	-	-
13/09/19 (Falling)	BH1	<0.1	5.0	16.0	<1	<1	<2	1031	<0.1	<1	5.78	<1
	WS1	<0.1	5.9	11.5	<1	<1	<2	1029	<0.1	<1	Dry	<1
	WS8	0.6	11.0	0.7	<1	<1	4	1031	<0.1	<1	3.60	<1
	WS13	<0.1	5.4	15.6	<1	<1	<2	1029	<0.1	<1	Dry	<1
16/10/19 (Falling)	BH1 ¹	-	-	-	-	-	-	-	-	-	-	-
	WS1	<0.1	5.7	11.0	<1	<1	<2	1002	<0.1	<1	Dry	<1
	WS8 ¹	-	-	-	-	-	-	-	-	-	-	-
	WS13	<0.1	4.8	15.7	<1	<1	<2	1002	<0.1	<1	Dry	<1
11/11/19 (Falling)	BH1	<0.1	5.6	12.9	<1	<1	<2	1002	<0.1	<1	5.40	<1
	WS1	<0.1	5.4	11.8	<1	<1	<2	1002	<0.1	<1	3.27	<1
	WS8	0.8	5	9.4	<1	<1	5	1002	<0.1	<1	3.10	<1
	WS13	<0.1	4.6	15.5	<1	<1	<2	1002	<0.1	<1	Dry	<1
16/12/19 (Falling)	BH1	<0.1	5.2	14.4	<1	<1	<2	1000	<0.1	<1	5.37	<1
	WS1	<0.1	4.0	14.9	<1	<1	<2	998	<0.1	<1	3.27	<1
	WS8	0.8	9.5	0.0	<1	<1	18.8	998	<0.1	<1	3.15	<1
	WS13	<0.1	3.6	15.5	<1	<1	<2	998	<0.1	<1	Dry	<1
Minimum		<0.1	<0.1	0.0	<1	<1	<2	998	<0.1	<1	Dry	<1
Maximum		0.9	11.0	17.4	<1	<1	18.8	1031	<0.1	<1	2.30	<1

Note: Published barometric pressure trend data were obtained for each monitoring visit (data from weatheronline.co.uk). G.L. – Ground Level ¹ Access not possible as compound was locked, ² Above detection limit of the device

Section 5 Ground Gas Risk Assessment

5.1 Data Quality

A review was made of the quality of the available data for the site, which can be viewed in Table 2. CIRIA 665 (2007) and BS 8485:2015 + A1:2019 stress the need for risk assessments to be based on good quality data and give guidance as to best practice in this respect.

Table 5.1 Review of Data Quality

Data Type	Current Situation	UK Best Practice
Geological and hydro-geological conditions	Geology and hydrogeology are understood to be fully understood as presented in I7587/MIR, dated June 2019 and I7584/PIR, dated June 2019.	CIRA 665, Wilson and Card (2007) and BS 8485:2015 + A1:2019 recommend that geology and hydrogeology be fully understood.
Monitoring period	The monitoring has been undertaken on a total of five occasions over a six month period. Monitoring has been undertaken over a range of weather conditions including low and high atmospheric pressures.	CIRIA 665 recommends approximately 3-month monitoring over a range of weather conditions.
Gas data sets	Borehole flow velocity and borehole gas has been measured on each monitoring occasion.	Borehole flow velocity and borehole gas volume required to define characteristic gas saturation. Modified Wilson and Card, Table 8.5 of CIRIA 665 (2006)/Table 2 of BS 8485:2015 + A1:2019 .

The data quality can be characterised as good overall, covering a range of atmospheric pressures including a low-pressure event with an ambient pressure of <1000 mb. The geological and hydrological conditions have been investigated previously and are fully understood in relation to Ground Gas.

5.2 Ground Gas Risk Assessment

The minimum and maximum Ground Gas concentrations have been summarised in Table 5.2. The full set of results has been summarised in Table 4.2 and the full set of field data is presented within Appendix B.2.

Table 5.2 Ground Gas Data

Range	CH₄ (%v/v)	LEL CH₄ (%v/v)	CO₂ (%v/v)	O₂ (%v/v)	H₂S (ppm)	CO (ppm)	aP (mb)	Flow (l/hr)	VOC (ppm)
Minimum	<0.1	<2	<0.1	<0.1	<1	<1	998	<0.1	<1
Maximum	0.9	18.8	11.0	17.4	<1	<1	1031	<0.1	<1

Based on the documentation presented in the “BS 8485:2015+A1:2019”, Code of practice for the design of protective measures for Methane and Carbon Dioxide ground gases for new buildings” the hazardous gas flow rate (Q_{hg}) was calculated using Equation 1:

Equation 1

Where:

C_{hg} is the measured hazardous gas concentration in percentage volume-by-volume

q is the flow rate in litres per hour of combined gases found by direct measurement – where the flow rate is zero or below the detection level of the instrument, this must default to the detection limit, in this case 0.1ltr/hr.

Consequently, the Q_{hg} , using carbon dioxide as the maximum C_{hg} was calculated using Equation 1. The flow rate used was 0.1 l/hr (as no flow above detection limited was recorded).

Initially, based upon the site characteristic hazardous gas flow rate (Q_{hg}) the characteristic gas situation (CS) would be classified as CS1, as this is below the CS1/CS2 threshold of 0.07 l/hr.

No signs of active generation are present (no Methane, on all but one occasion at one location >1, Hydrogen Sulphide, Carbon Monoxide, VOC's) and the site is unlikely to be subject to significant piston effects locally, as there were no gas flow rates encountered onsite. Methane was recorded at 15.0 % during one of the visits at WS08 location and this is likely an anomaly, inconsistent with the other results.

However, BS 8485:2015 states that when the carbon dioxide concentration is greater than 5%, an increase to CS2 should be considered.

Given carbon dioxide is recorded above 5% in more than one borehole location and on multiple occasions, an increase to CS2 is justified.

Section 6 Conclusion

6.1 Characteristic Gas Situation

On the basis of the Ground Gas monitoring undertaken to date, a ground gas risk has been confirmed as being present on-site. The ground gas concentrations present are typical of a low risk source and confirm the risk as hypothesised within the CSM. Therefore, it is considered that the design of the ground gas monitoring regime was appropriate to the sources, pathways and receptors identified. As such no further monitoring is indicated at this time and the monitoring which has been undertaken to date is in compliance with appropriate guidance and the quality of the data are considered good.

The technical results of the initial characterisation of the Ground Gas regime, accepting a low risk as having been confirmed in this case, classifies the site as **Characteristic Situation 2 (CS2)**, where ground gas protection is necessary within new properties.

It is therefore recommended that ground gas protection measures in line with CS2 (BS 8485) are designed, installed, and independently verified in accordance with CIRIA C735.

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Appendix A Standards and Resources

Appendix B Field Work

Appendix B.1 Engineers Logs

Appendix B.2 Raw Gas Monitoring Data

Appendix C Proposed Development



Figure I – Site Location Map



Job Number
I7587

Project
Site off Toynbee Road, Eastleigh, Hampshire SO50
9DN

Client
Foreman Homes

Date
March 2024



Figure 2 – Aerial Photograph

Project
Site off Toynbee Road, Eastleigh,
Hampshire SO50 9DN

Client
Foreman Homes

Date
March 2024

Job Number
I7587





Figure 3 – Trial Hole Plan

Project

Site off Toynbee Road, Eastleigh,
Hampshire SO50 9DN

Client

Foreman Homes

Date

March 2024

Job Number

I7587



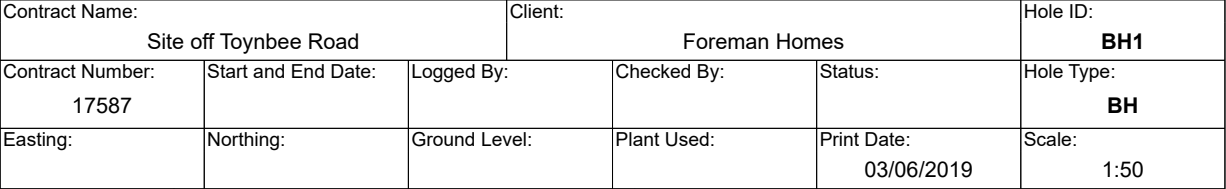
Appendix A Standards and Resources

The site works and monitoring was undertaken in accordance with the following standards where applicable:

- BS 8485:2015+A1:2019
- BS 8576:2013
- BS 5930:2015+A1:2020
- NHBC Report Edition 04 2007 as updated
- CIRIA 665
- CIRIA 682
- CIRIA 735
- CLAIre RB17

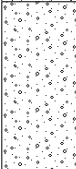
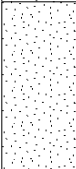
Appendix B Field Work

Appendix B.1 Engineers Logs



Samples & In Situ Testing			Strata Details						Groundwater	
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation

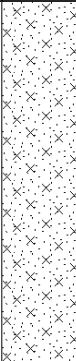
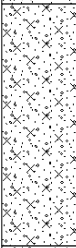
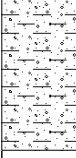
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
									7.40	7.30		20	5.30	
									Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.					

				Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: BH1			
				Contract Number: 17587		Start and End Date:		Logged By:		Checked By:		Status:		Hole Type: BH	
				Easting:		Northing:		Ground Level:		Plant Used:		Print Date: 03/06/2019		Scale: 1:50	
				Termination:				SPT Hammer: N/R, Energy Ratio: 73%				Sheet 2 of 2			
Samples & In Situ Testing				Strata Details										Groundwater	
Depth	Type	Results		Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description					Water Strike	Backfill/Installation		
10.50	SPT	50 (5,13/50 for 155mm)			10.50		Dark yellowish brown, slightly silty, fine to medium SAND. WHITECLIFF SAND MEMBER								
10.50 - 11.00	D B				(2.00)		Black, rounded, medium to coarse flint GRAVEL. Sandy from 10.5 - 11.0 m bgl (sand is fine to medium). WHITECLIFF SAND MEMBER					11			
12.00	SPT	69 (7,10/69 for 225mm)			12.50		Yellowish brown SAND. WHITECLIFF SAND MEMBER					12			
12.00 - 12.50	B				(0.50)							13			
13.50	SPT	50 (20,25/50 for 150mm)			13.00		Brownish grey, medium SAND. WHITECLIFF SAND MEMBER					14			
13.50 - 14.00	B				(2.00)							15			
14.80	D				15.00		End of Borehole at 15.00m					16			
15.00	SPT	50 (21,25/50 for 150mm)										17			
												18			
												19			
												20			
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:						
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)							
Chiselling					Installation				Water Strikes						
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	
									7.40	7.30		20	5.30		
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.															

	Contract Name: Site off Toynbee Road				Client: Foreman Homes			Hole ID: BH2							
	Contract Number: 17587		Start and End Date:		Logged By:		Checked By:		Status:		Hole Type: BH				
	Easting:		Northing:		Ground Level:		Plant Used:		Print Date: 03/06/2019		Scale: 1:50				
			Termination:				SPT Hammer: N/R, Energy Ratio: 73%				Sheet 1 of 2				
Samples & In Situ Testing				Strata Details								Groundwater			
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/ Installation		
0.10 - 0.60	B	N=9 (2,2/2,3,2,2)		0.05		No sample. From driller's log: GRAVEL. Stiff, multicoloured mottled, slightly sandy, very gravelly CLAY. Gravel is angular to sub-angular, fine to coarse, flint, brick, and concrete. MADE GROUND.						1			
0.60 - 1.10	B			0.45											
1.20	SPT			0.50		Firm, dark greyish brown, slightly sandy, gravelly CLAY. Gravel is angular to rounded fine to coarse, brick, flint, and clinker. Very rare 1 cm * 1 cm wood fragments. MADE GROUND.									2
1.20 - 1.70	D			(1.10)											
2.00 - 2.30	U	Ublow = 50		1.60		Firm, white mottled, yellowish brown, slightly sandy, gravelly CLAY. Gravel is angular to sub-rounded, fine to coarse, chalk and flint. MADE GROUND.						3			
2.30	D			(1.40)											
3.00	D	40 (11,13/40 for 205mm)		3.00		Soft, dark grey, slightly sandy, gravelly CLAY. Gravel is angular, fine to coarse flint. Possibly reworked. MADE GROUND Multi-coloured mottled, light brown, slightly sandy, angular to rounded, fine to coarse flint GRAVEL. RIVER TERRACE DEPOSITS						4			
3.10	SPT			3.10											
3.10 - 3.60	B	50 (4,8/50 for 225mm)		(1.60)		Firm, yellowish brown, slightly sandy CLAY. RIVER TERRACE DEPOSITS						5			
4.00	SPT			4.70											
4.00 - 4.50	B			(0.40)											
4.70 - 5.00	B			5.10											
5.00	SPT	N=17 (2,3/4,4,4,5)		5.10		Firm, grey, slightly silty CLAY. Frequent angular to rounded, fine to coarse, flint gravel. WITTERING FORMATION						6			
5.00 - 5.50	D			(0.90)											
5.50 - 5.95	U	Ublow = 80		6.00		Black, slightly clayey, rounded, flint GRAVEL. WHITECLIFF SAND MEMBER						7			
5.95	D			6.60											
6.10 - 6.60	B	50 (6,10/50 for 220mm)		(0.60)		Grey, slightly silty, fine to medium SAND. WHITECLIFF SAND MEMBER						8			
6.90	D			6.60											
7.50	SPT			(6.30)											
7.50 - 8.00	D			9.00											
9.00	SPT	50 (10,12/50 for 225mm)										9			
	D														
												10			
Start & End of Shift Observations				Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)						Dia (mm)		
Chiselling				Installation				Water Strikes							
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	
									3.00	3.00		20	2.90		
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.															

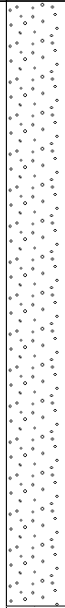
Observations		Borehole Diameter		Casing Diameter		Remarks:
Drilling (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	
		Installation				Water Strikes
Remarks	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)
					3.00	3.00
					20	2.90
					Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.	

		Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: BH3				
		Contract Number: 17587		Start and End Date:		Logged By:		Checked By:		Status:		Hole Type: BH		
		Easting:		Northing:		Ground Level:		Plant Used:		Print Date: 03/06/2019		Scale: 1:50		
				Termination:				SPT Hammer: N/R, Energy Ratio: 73%				Sheet 1 of 2		
Samples & In Situ Testing				Strata Details								Groundwater		
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
0.30 - 0.80	B	N=5 (1,2/1,2,1,1)		(0.30)		No sample. From driller's logs: CONCRETE.						1		
0.80 - 1.20	B			(0.50)		Dark reddish brown, slightly clayey, slightly sandy GRAVEL. Gravel is angular to sub-angular, fine to coarse, brick, flint and clinker, with one burnt brick/ slag cobble. Occasional coarse gravel sized clayey pockets. MADE GROUND.								
1.20	SPT B			(0.80)		Dark yellowish brown, slightly silty, gravelly SAND. Becoming sandy CLAY with depth. MADE GROUND.								
1.20 - 1.70	D	N=4 (1,1/1,1,1,1)		1.60		Soft, black, slightly sandy, slightly gravelly CLAY. Gravel is angular to rounded, fine to coarse flint, clinker, and pottery. High organic content. MADE GROUND.								
1.80				(1.70)										
2.00	SPT D B	N=21 (1,2/2,3,7,9)		3.30		Light yellowish brown, sandy, angular to sub-angular, fine to medium flint GRAVEL. RIVER TERRACE DEPOSITS								
2.00 - 2.50	(0.70)													
3.00	SPT D B	N=13 (1,1/2,2,3,6)		4.00		From driller's logs: Soft to firm, grey, silty CLAY. WITTERING FORMATION								
3.00 - 3.50	(0.50)													
4.00	SPT B	50 (1,11/50 for 210mm)		4.50		Yellowish brown, silty SAND. Occasional rounded, fine to medium flint gravel. WHITECLIFF SAND MEMBER								
4.00 - 4.50	D													
4.60	SPT D B	50 (18,21/50 for 150mm)	(4.90)											
5.00														
5.00 - 5.50	SPT D B	50 (1,9/50 for 150mm)	9.40		Greyish brown, slightly silty, medium SAND. WHITECLIFF SAND MEMBER									
6.50														
6.50 - 7.00	SPT D B	50 (16,2/50 for 150mm)												
8.00														
8.00 - 8.50	SPT D B													
9.50														
9.50 - 10.00														
Start & End of Shift Observations				Borehole Diameter		Casing Diameter		Remarks:						
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)							Dia (mm)
Chiselling				Installation		Water Strikes								
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
									3.40	3.00		20	3.20	
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

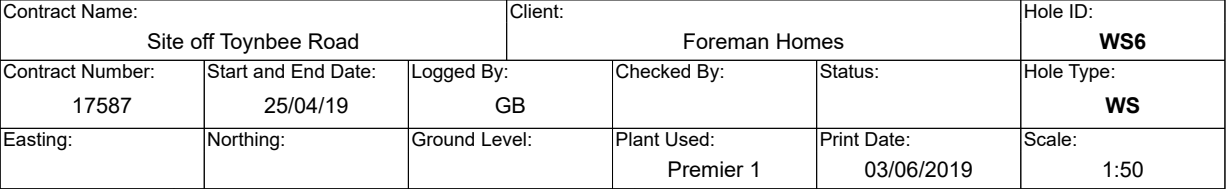
	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: BH3						
	Contract Number: 17587		Start and End Date:		Logged By:		Checked By:		Status:		Hole Type: BH				
	Easting:		Northing:		Ground Level:		Plant Used:		Print Date: 03/06/2019		Scale: 1:50				
			Termination:				SPT Hammer: N/R, Energy Ratio: 73%				Sheet 2 of 2				
Samples & In Situ Testing					Strata Details							Groundwater			
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation		
11.00 11.00 - 11.50	SPT D B	50 (10,16/50 for 150mm)		(3.00)		Greyish brown, slightly silty, medium SAND. WHITECLIFF SAND MEMBER						11			
												12			
12.50 12.50 - 13.00	SPT B	N=50 (4,7/50 for 235mm)		12.40 (1.60)		Dark grey, slightly silty, slightly gravelly, SAND. Gravel is black, angular to rounded, medium to coarse, flint. WHITECLIFF SAND MEMBER						13			
												14			
14.00	SPT D	N=49 (8,9/9,13,13,14)		14.00 (1.00)		VerY soft, dark grey, slightly gravelly, sandy CLAY. Gravel is angular to rounded, fine to coarse flint. WHITECLIFF SAND MEMBER						14			
						End of Borehole at 15.00m						15			
15.00	SPT	N=44 (6,7/11,12,11,10)		15.00								16			
												17			
												18			
												19			
												20			
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:						
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)							
Chiselling					Installation				Water Strikes						
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)		Rose to (m)	Remarks
									3.40	3.00		20		3.20	
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.															

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS1					
	Contract Number: 17587		Start and End Date: 17/04/19		Logged By: GB		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Premier 2		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:									Sheet 1 of 1		
Samples & In Situ Testing				Strata Details								Groundwater		
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
0.30	D+J+B			(0.30)		CONCRETE								
0.30				0.30		Soft to hard dark red orange brown sandy SILT. Sand is fine to coarse. Occasional fine brick, tarmac, concrete, ash fragments. Occasional fine angular to sub angular gravel. MADE GROUND								
0.50				0.50										
0.70	D+J					Soft to firm light orange brown CLAY. Occasional fine angular to sub angular gravel. Rare black staining. RIVER TERRACE DEPOSITS								
1.20	D+J			(0.90)								1		
1.40				1.40		Soft orange brown gravelly CLAY. Frequent fine angular to sub angular gravel flint. RIVER TERRACE DEPOSITS								
1.70	D			(0.60)										
2.20	D			2.00		Light yellow orange brown gravelly SAND. Sand is fine to coarse. Frequent occasional fine angular to sub angular gravel flint. RIVER TERRACE DEPOSITS						2		
2.60	D													
3.10	D			(1.70)								3		
3.60	D													
4.00	D			3.70 (0.30) 4.00		Fine angular to sub angular sandy flint GRAVEL. Sand is fine to coarse. RIVER TERRACE DEPOSITS						4		
						End of Borehole at 4.00m								
												5		
												6		
												7		
												8		
												9		
												10		
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	1.00	PLAIN	33						
					1.00	4.00	SLOTTED	33						
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS3					
	Contract Number: 17587		Start and End Date: 18/04/19		Logged By: DW		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Archway		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:					Sheet 1 of 1						
Samples & In Situ Testing				Strata Details								Groundwater		
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
0.40 0.70 0.90 1.10 1.30 1.60 2.10 2.60 2.80 3.70	D+J D+J D+J D+J D D D D D			0.20		CONCRETE	1							
				(0.40)		Multicoloured mottled, slightly clayey, sandy GRAVEL. Gravel is angular to sub-angular, fine to coarse, flint. MADE GROUND.								
				0.60		Very stiff to stiff, dark grey and greyish brown mottled, slightly sandy, silty CLAY. Sand is fine. Occasional angular, fine to coarse flint and limestone gravel. Occasional fine ash. Angular brick cobble at 0.80 - 0.90 m bgl (broken up). Pocket of fine ash and black staining from 0.90 m bgl.								
				(0.40)		MADE GROUND								
				1.00		Soft, slightly black stained, brown to light brown with depth, slightly sandy, gravelly CLAY. Gravel is angular to sub-angular, fine to coarse flint. Possibly re-worked. Gravel content increases with depth.								
				(0.50)		MADE GROUND								
				1.50		Light brown, slightly clayey, sandy GRAVEL. Sand features frequent coarse chalk fragments. Gravel is angular to sub-angular, fine to coarse, flint. MADE GROUND								
				(1.20)										
				2.70		Orangish brown to brown, slightly silty, slightly sandy GRAVEL. Gravel is angular to sub-angular, fine to coarse, flint. RIVER TERRACE DEPOSITS								
				(1.30)		Low recovery from 3.0 - 3.5 m.								
4.00						End of Borehole at 4.00m						4		
												5		
												6		
												7		
												8		
												9		
												10		
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS4					
	Contract Number: 17587		Start and End Date: 25/04/19		Logged By: DW		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Premier 1		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:					Sheet 1 of 1						
Samples & In Situ Testing				Strata Details								Groundwater		
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/ Installation	
0.20	D+J			(0.65)		Multicoloured mottled, slightly sandy, gravelly CLAY. Gravel is angular to sub-angular, flint, and rare clinker. Black staining around clinker pocket at 0.45 - 0.5 m bgl, hydrocarbon odour associated. MADE GROUND.						1		
0.45	D+J			0.65		Slightly grey mottled, greyish white, structureless chalk. Recovered as angular to sub-angular, fine to coarse, chalk clasts, in a silty comminuted matrix. Grade Dc. MADE GROUND.								
0.80	D+J			(0.45)		Soft to firm, greenish grey, black, and greyish brown mottled, slightly sandy CLAY. Sand is fine. Occasional, angular to rounded, fine to medium, flint, clinker, and brick gravel. Black stained pocket with associated hydrocarbon odour at 1.55 m bgl. Occasional fibrous peaty material. MADE GROUND.								
1.40	D+J			(0.70)		Soft to firm, greenish grey, black, and greyish brown mottled, slightly sandy CLAY. Sand is fine. Occasional, angular to rounded, fine to medium, flint, clinker, and brick gravel. Black stained pocket with associated hydrocarbon odour at 1.55 m bgl. Occasional fibrous peaty material. MADE GROUND.						2		
1.55	J			1.10		Firm, slightly greenish grey mottled, yellowish brown, slightly sandy, silty CLAY. Frequent orangish brown stained metallic oxide pockets. Occasional sub-angular, fine to coarse flint gravel. Occasional decomposing woody roots. MADE GROUND.								
1.70	D+J			(1.80)		Firm, slightly greenish grey mottled, yellowish brown, slightly sandy, silty CLAY. Frequent orangish brown stained metallic oxide pockets. Occasional sub-angular, fine to coarse flint gravel. Occasional decomposing woody roots. MADE GROUND.								
2.00	J			(2.00)		Firm, slightly greenish grey mottled, yellowish brown, slightly sandy, silty CLAY. Frequent orangish brown stained metallic oxide pockets. Occasional sub-angular, fine to coarse flint gravel. Occasional decomposing woody roots. MADE GROUND.						3		
3.70	D+J			3.80		Firm, black stained, dark greyish brown, slightly sandy, silty CLAY. Occasional angular, fine to medium flint, and rare clinker and brick gravel. MADE GROUND.								
3.90	D+J			4.00		Firm, black stained, dark greyish brown, slightly sandy, silty CLAY. Occasional angular, fine to medium flint, and rare clinker and brick gravel. MADE GROUND.								
						End of Borehole at 4.00m						4		
												5		
												6		
												7		
												8		
												9		
												10		
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS5					
	Contract Number: 17587		Start and End Date: 18/04/19		Logged By: DW		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Archway		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:					Sheet 1 of 1						
Samples & In Situ Testing					Strata Details							Groundwater		
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
0.40	J			(0.40)		MADE GROUND								
0.65	D+J			0.40		Firm, black and greyish brown mottled, slightly gravelly, silty CLAY. Gravel is angular to sub-angular, fine to coarse, charcoal and chalk. Frequent decomposing wood fragments. MADE GROUND.								
0.80	D+J			0.55		White, silty, angular, fine to coarse chalk GRAVEL. MADE GROUND.								
				0.75		Firm, black and greyish brown mottled, slightly gravelly, silty CLAY. Gravel is angular to sub-angular, fine to coarse, clinker, chalk, and fine brick. High organic content. 1 cm diameter x 4 cm wood fragment. MADE GROUND.						1		
1.20	D+J			0.90		Firm, greyish brown, silty CLAY. Occasional angular to sub-rounded, fine to medium, flint gravel. Rare, fine gravel sized orange oxide staining in patches. Medium gravel sized black peat pocket at 2.5 m bgl. Very rare, angular, fine brick gravel. Plastic coated wire length at base of stratum. MADE GROUND.								
1.70	D+J			(1.75)		No sample from 2 - 2.40 m bgl (likely due to compression of soft materials below stratum).						2		
2.40	D+J													
2.70	D+J			2.65		Soft, black and brownish grey mottled, slightly peaty, silty CLAY. Rare angular, fine to medium, slag, and flint gravel. Faint organic odour, with very faint creosote odour at 3.7 m bgl. MADE GROUND.								
				(0.35)										
				3.00		Brown, slightly silty, slightly sandy GRAVEL. Gravel is angular to sub-angular, fine to coarse, flint. Faint hydrocarbon odour. RIVER TERRACE DEPOSITS						3		
						No sample from 3 - 3.60 m bgl.								
3.80	D+J			(1.00)										
				4.00		End of Borehole at 4.00m						4		
												5		
												6		
												7		
												8		
												9		
												10		
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														



Weather:	Termination:		Sheet 1 of 1
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Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

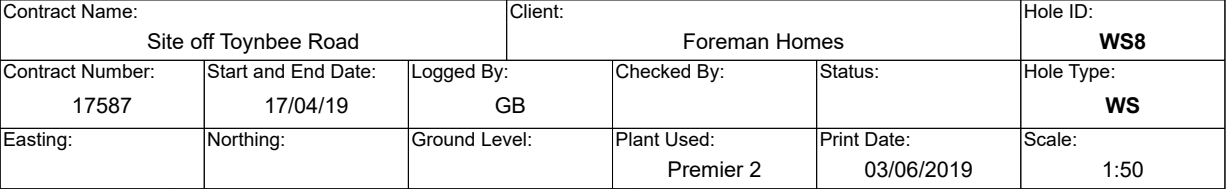


Contract Name: Site off Toynbee Road		Client: Foreman Homes			Hole ID: WS7
Contract Number: 17587	Start and End Date: 25/04/19	Logged By: GB	Checked By:	Status:	Hole Type: WS
Easting:	Northing:	Ground Level:	Plant Used: Premier 1	Print Date: 03/06/2019	Scale: 1:50

Weather:	Termination:	Sheet 1 of 1
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Samples & In Situ Testing			Strata Details						Groundwater	
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation
0.40	D+J			(0.30)		CONCRETE				
				0.30		Soft dark grey orange brown slightly sandy silty CLAY. Sand is fine to coarse. Rare occasional fine brick, concrete, ash fragments. Rare fine angular to sub angular gravel. Made ground				
0.80	D+J			(0.60)					1	
0.95	D+J			0.90		Soft light orange brown slightly sandy CLAY. Sand is fine to coarse. Rare fine angular to rounded gravel. Made ground				
1.05	D+J			1.00						
1.30	D+J			1.10		Soft dark orange brown sandy CLAY. Sand is fine to coarse. Occasional fine ash, brick, clinker, concrete and glass fragments. MADE GROUND				
1.60	D+J			(0.30)		Soft light orange brown slightly sandy gravelly CLAY. Sand is finbe to coarse. Frequent occasional fine angular to sub angular gravel. MADE GROUND				
				1.40		Soft light orange brown slightly sandy CLAY. Sand is fine to coarse. Rare fine angualr to sub angular gravel. MADE GROUND				
2.10	D+J			(0.60)					2	
2.30	D+J			2.00		Soft light orange brown slightly sandy CLAY. Sand is fine to coarse. Occasional fine ash fragments. Rare fine ceramic fragments. MADE GROUND				
				2.20		Soft to very soft light orange brown sandy gravelly CLAY. Sand is fine to coarse. Frequent fine angular to sub angular gravel. RIVER TERRACE DEPOSITS				
				2.40		Fine angular to sub angular to rounded sandy GRAVEL. Sand is soft light orange brown fine to coarse. RIVER TERRACE DEPOSITS				
3.00	D			(0.80)					3	
				3.00		End of Borehole at 3.00m				
									4	
									5	
									6	
									7	
									8	
									9	
									10	

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:			
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)				
Chiselling					Installation							
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)				

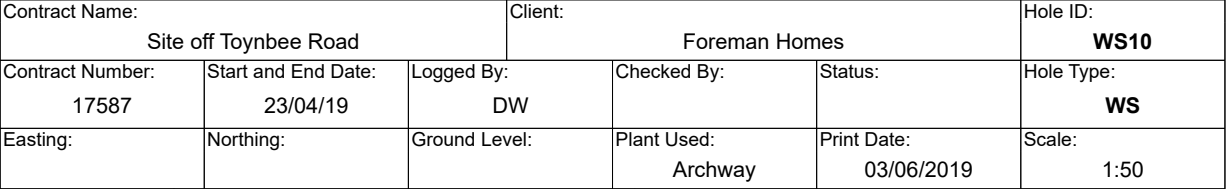


Weather:	Termination:		Sheet 1 of 1
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Samples & In Situ Testing			Strata Details						Groundwater	
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation
0.40 0.70 1.00 1.50 2.00 2.50 3.00 3.50 3.80	D+J			(0.40)		CONCRETE			1	
	D+J			0.40		Soft dark grey brown CLAY. Occasional fine angular to sub angular to rounded gravel. Occasional fine brick fragments. Rare fine ash fragments. MADE GROUND				
	D+J			(0.70)						
	D+J			1.10		Soft to firm dark orange grey mottled brown CLAY. Rare fine angular gravel. MADE GROUND				
	D+J			(0.30)						
	D+J			1.40		Soft to very soft dark grey slightly sandy CLAY. Sand is fine to coarse. Occasional fine rounded gravel. Rare black staining. MADE GROUND				
	D+J			(0.40)						
	D+J			1.80		Band of soft to hard dark grey black slightly clayey sandy SILT. Sand is fine to coarse. Occasional fine ash fragments. Rare fine brick fragments. Rare fine angular gravel. MADE GROUND				
	D			2.60		Soft to very soft dark grey gravelly CLAY. Occasional fine angular gravel. Becoming very soft with depth. MADE GROUND				
D	(1.10)					3				
D	3.70		Light yellow grey gravelly SAND. Sand is fine to coarse. Frequent fine angular gravel. RIVER TERRACE DEPOSITS							
D	3.80				End of Borehole at 3.80m			4		
								5		
								6		
								7		
								8		
								9		
								10		

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	1.00	PLAIN	33						
					1.00	3.80	SLOTTED	33						
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS9					
	Contract Number: 17587		Start and End Date: 23/04/19		Logged By: DW		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Archway		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:					Sheet 1 of 1						
Samples & In Situ Testing					Strata Details							Groundwater		
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
				0.20		CONCRETE								
0.30	D+J			(0.30)		Multicoloured mottled, black and red, slightly clayey, sandy GRAVEL. Gravel is angular to rounded, fine to coarse, brick, flint tarmac, and concrete Rare roots. MADE GROUND.								
0.55	D+J			0.50		Firm, greyish brown, slightly sandy, slightly clayey, desiccated CLAY. Gravel is angular to sub-rounded, fine to coarse, flint, brick, concrete and clinker. MADE GROUND.								
0.80	D+J			0.65		Firm to stiff, brown silty CLAY. Rare, angular, fine to medium flint gravel. Rare roots. Very rare angular brick fragment (< 5%). MADE GROUND								
				(0.35)		Firm to stiff, brown slightly sandy, gravelly CLAY. Gravel is angular to sub-angular, fine to medium flint. MADE GROUND							1	
				1.00		Firm to stiff, brown silty CLAY. Rare, angular, fine to medium flint gravel. Rare roots. MADE GROUND								
1.30	D			(0.45)		Firm to stiff, brown silty CLAY. Rare, angular, fine to medium flint gravel. Rare roots. MADE GROUND								
1.50	D			1.45		Firm to stiff, brown slightly sandy, gravelly CLAY. Gravel is angular to sub-angular, fine to medium flint. MADE GROUND								
1.80	D			1.70		Firm to stiff, brown slightly sandy, gravelly CLAY. Gravel is angular to sub-angular, fine to medium flint. MADE GROUND							2	
				(0.80)		Firm to stiff, brown silty CLAY. Rare, angular, fine to medium flint gravel. Rare roots. MADE GROUND								
2.60	D			2.50		Soft, slightly black speckled, brown silty CLAY. Rare, angular to sub-angular, fine flint gravel. MADE GROUND								
				(0.30)		Very soft, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to sub-angular, fine to medium flint. MADE GROUND								
2.90	D			2.80		Brown, slightly silty, slightly sandy GRAVEL. Gravel is angular to rounded, fine to coarse, flint. RIVER TERRACE DEPOSITS							3	
3.30	D			3.00		Becomes sandy gravel at 3.8 m bgl, with greenish brown fine to medium sand.								
3.80	D			(1.00)										
				4.00		End of Borehole at 4.00m								
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Roots observed to 1.70 m bgl.					
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														



Samples & In Situ Testing	Strata Details	Groundwater
---------------------------	----------------	-------------

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks: Water Strikes <table><tr><th>Strike (m)</th><th>Casing (m)</th><th>Sealed (m)</th><th>Time (mins)</th><th>Rose to (m)</th><th>Remarks</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks						
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks																
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)													
Chiselling					Installation																
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)													

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS11					
	Contract Number: 17587		Start and End Date: 23/04/19		Logged By: DW		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Archway		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:									Sheet 1 of 1		
Samples & In Situ Testing					Strata Details								Groundwater	
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
0.10	D+J					Multicoloured mottled, black and greyish brown, slightly clayey, slightly sandy GRAVEL. Gravel is angular to rounded, fine to coarse flint with rare slag and fine brick. MADE GROUND.								
0.30	D+J			0.25 (0.35)										
0.70	D+J			0.60		Firm, brownish grey mottled, black, slightly sandy, gravelly desiccated CLAY. Gravel is angular to rounded, fine to coarse, clinker, flint, and rare brick. High organic content. MADE GROUND.								
1.20	D+J			(1.40)										
1.70	D+J			2.00		Firm to stiff, slightly black mottled, dark greyish brown, slightly sandy, slightly gravelly, silty CLAY. Gravel is angular to sub-rounded, fine to coarse, flint, with rare brick and clinker. Rare medium gravel sized peat pockets. Black staining around 1.4 m. Faint hydrocarbon odour around 1.2 m. MADE GROUND.						1		
2.20	D+J			(0.50)										
2.60	D			2.50		Very soft, slightly dark grey speckled, slightly sandy, slightly gravelly CLAY. Gravel is angular to sub-rounded, fine to coarse, flint. MADE GROUND						2		
3.10	D			(0.80)										
3.50	D			3.30		Greyish brown to yellowish brown, slightly clayey becoming silty with depth, slightly sandy GRAVEL. Gravel is angular to rounded, fine to coarse flint. RIVER TERRACE DEPOSITS						3		
3.70	D			(0.40)										
				3.70 (0.30)		Firm, orangish brown mottled, brown, slightly sandy CLAY. Sand is fine. RIVER TERRACE DEPOSITS						4		
				4.00										
						End of Borehole at 4.00m								
												5		
												6		
												7		
												8		
												9		
												10		
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS13					
	Contract Number: 17587		Start and End Date: 17/04/19		Logged By: GB		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Premier 2		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:									Sheet 1 of 1		
Samples & In Situ Testing					Strata Details								Groundwater	
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
0.20	D+J			0.20		CONCRETE								
0.50	D+J			0.40		Dark grey gravelly SAND. Sand is fine to coarse. Occasional fine angular to sub angular gravel. Rare fine brick fragments. MADE GROUND								
				(0.50)		Soft dark grey brown CLAY. Rare fine angular to sub angular to rounded gravel. MADE GROUND								
1.00	D+J			0.90		Soft light orange brown gravelly CLAY. Occasional fine angular to sub angular flint gravel. RIVER TERRACE DEPOSITS						1		
1.50	D			(0.90)										
2.00	D			1.80		Light yellow orange brown gravelly SAND. Sand is fine to coarse. Frequent occasional fine angular to sub angular gravel flint. RIVER TERRACE DEPOSITS						2		
2.50	D			(1.20)										
3.00	D			3.00		End of Borehole at 3.00m						3		
												4		
												5		
												6		
												7		
												8		
												9		
												10		
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	1.00	PLAIN	33						
					1.00	3.00	SLOTTED	33						
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS14					
	Contract Number: 17587		Start and End Date: 18/04/19		Logged By: DW		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Archway		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:									Sheet 1 of 1		
Samples & In Situ Testing				Strata Details								Groundwater		
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
0.30	D+J			0.20		No sample. From driller's logs: CONCRETE.								
				0.45		Soft to firm, yellowish brown to brown, slightly sandy, very gravelly CLAY. Gravel is angular to sub-rounded, fine to coarse, flint. One piece of iron slag at 0.20 m bgl.RIVER TERRACE DEPOSITS								
0.60	D+J			(0.35)		Stiff, brown, slightly orangish brown mottled, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to sub-rounded, fine to coarse, flint. RIVER TERRACE DEPOSITS								
0.90	D+J			0.80		Firm, brown, very gravelly CLAY. Gravel is angular to sub-rounded, fine to coarse, flint. RIVER TERRACE DEPOSITS						1		
1.10	D			(1.00)										
1.70	D			1.80		Brown, slightly sandy, clayey GRAVEL. Gravel is angular to sub-rounded, fine to coarse, flint. RIVER TERRACE DEPOSITS								
1.90	D			2.00		Light brown, slightly silty, sandy GRAVEL. Gravel is angular to sub-rounded, fine to coarse, flint. RIVER TERRACE DEPOSITS						2		
2.10	D			(1.00)										
2.60	D			3.00		Brown to yellowish brown, slightly silty, sandy GRAVEL. Gravel is angular to rounded, fine to coarse, flint. RIVER TERRACE DEPOSITS						3		
3.30	D			(1.00)										
3.80	D			4.00		End of Borehole at 4.00m						4		
												5		
												6		
												7		
												8		
												9		
												10		
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Roots observed to 1.70 m bgl.					
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

	Contract Name: Site off Toynbee Road				Client: Foreman Homes				Hole ID: WS15					
	Contract Number: 17587		Start and End Date: 18/04/19		Logged By: DW		Checked By:		Status:		Hole Type: WS			
	Easting:		Northing:		Ground Level:		Plant Used: Archway		Print Date: 03/06/2019		Scale: 1:50			
Weather:			Termination:					Sheet 1 of 1						
Samples & In Situ Testing				Strata Details								Groundwater		
Depth	Type	Results	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						Water Strike	Backfill/Installation	
0.10	D+J			(0.35)		Dark blackish grey, slightly sandy GRAVEL. Gravel is angular to rounded, fine to coarse, clinker, limestone, concrete, and flint. Pocket of grey, angular to rounded, fine to coarse, concrete gravel at base of stratum. MADE GROUND.						1		
0.50	D+J			0.35										
0.90	D+J			(0.65)		Very stiff, brown, slightly sandy, CLAY. Sand is fine. Occasional roots. Occasional to frequent, angular to sub-angular flint gravel, increasing from 0.7 m bgl towards base of stratum. MADE GROUND <i>Apparent dynamic probe through sample. Woody roots ~ 3 mm diameter at 1.0 m bgl.</i>						2		
1.50	D			1.00										
1.90	D			(0.70)		Firm, slightly black stained, brown, slightly sandy, very gravelly CLAY. Gravel is angular to sub-angular, fine to coarse, flint. Occasional rootlets. MADE GROUND						3		
2.40	D			1.70										
2.80	D			(0.90)		Grey mottled, light greyish brown, slightly clayey, slightly sandy GRAVEL. Gravel is angular to sub-rounded, fine to coarse, flint. RIVER TERRACE DEPOSITS						4		
3.30	D			2.60										
3.80	D			2.60		Brown to yellowish brown, slightly silty, sandy GRAVEL. Gravel is angular to rounded, fine to coarse, flint. RIVER TERRACE DEPOSITS						5		
				(1.40)										
				4.00	End of Borehole at 4.00m						6			
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Root encountered at 1.00m bgl.					
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														

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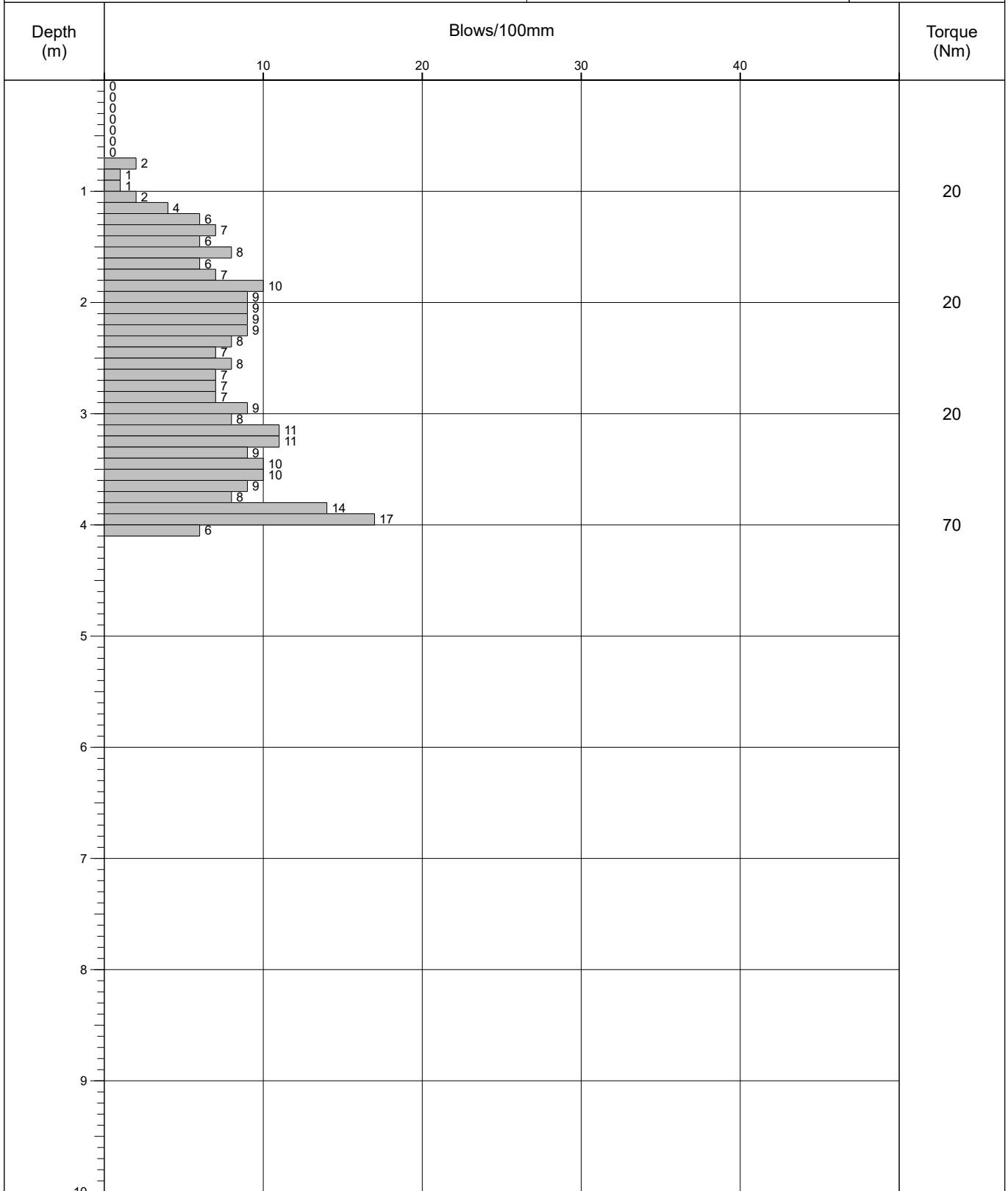
Probe Log

Probe No.

DP1

Sheet 1 of 1

Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	17/04/2019			Logged By	



Remarks	Fall Height 750mm	Cone Base Diameter 33mm	
	Hammer Weight 63.5kg	Final Depth 4.1m	
	Probe Type DPSH	Energy Ratio (Er) 79.93%	



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Probe Log

Probe No.

DP4

Sheet 1 of 1

Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	25/04/2019			Logged By	

Depth (m)	Blows/100mm				Torque (Nm)
	0	10	20	30	40
0	1				
0.1	5				
0.2	6				
0.3	7				
0.4	5				
0.5	3				
0.6	3				
0.7	2				
0.8	4				80
0.9	2				
1.0	1				
1.1	0				
1.2	1				
1.3	2				
1.4	1				
1.5	1				
1.6	2				
1.7	1				10
1.8	1				
1.9	0				
2.0	0				
2.1	1				
2.2	0				
2.3	0				
2.4	0				
2.5	1				
2.6	0				
2.7	0				
2.8	0				
2.9	1				
3.0	0				10
3.1	0				
3.2	0				
3.3	1				
3.4	0				
3.5	0				
3.6	1				
3.7	0				
3.8	0				
3.9	1				
4.0	2				
4.1	1				50
4.2	1				
4.3	1				
4.4					
4.5					
4.6					
4.7					
4.8					
4.9					
5.0					
5.1					
5.2					
5.3					
5.4					
5.5					
5.6					
5.7					
5.8					
5.9					
6.0					
6.1					
6.2					
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6.7					
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6.9					
7.0					
7.1					
7.2					
7.3					
7.4					
7.5					
7.6					
7.7					
7.8					
7.9					
8.0					
8.1					
8.2					
8.3					
8.4					
8.5					
8.6					
8.7					
8.8					
8.9					
9.0					
9.1					
9.2					
9.3					
9.4					
9.5					
9.6					
9.7					
9.8					
9.9					
10.0					
Remarks	Fall Height 750mm		Cone Base Diameter 33mm		
	Hammer Weight 63.5kg		Final Depth 4.1m		
	Probe Type DPSH		Energy Ratio (Er) 78.58%		

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Probe Log

Probe No.

DP5

Sheet 1 of 1

Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	18/04/2019			Logged By	

Depth (m)	Blows/100mm				Torque (Nm)
	10	20	30	40	
0					
0.1					
0.2					
0.3					
0.4					
0.5					
0.6					
0.7					
0.8					
0.9					
1					5
1.1					
1.2					
1.3					
1.4					
1.5					
1.6					
1.7					
1.8					
1.9					
2					5
2.1					
2.2					
2.3					
2.4					
2.5					
2.6					
2.7					
2.8					
2.9					
3					10
3.1					
3.2					
3.3					
3.4					
3.5					
3.6					
3.7					
3.8					
3.9					
4					10
4.1					
4.2					
4.3					
4.4					
4.5					
4.6					
4.7					
4.8					
4.9					
5					
5.1					
5.2					
5.3					
5.4					
5.5					
5.6					
5.7					
5.8					
5.9					
6					
6.1					
6.2					
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6.4					
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7					
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8					
8.1					
8.2					
8.3					
8.4					
8.5					
8.6					
8.7					
8.8					
8.9					
9					
9.1					
9.2					
9.3					
9.4					
9.5					
9.6					
9.7					
9.8					
9.9					
10					
Remarks	Fall Height 750mm		Cone Base Diameter 33mm		
	Hammer Weight 63.5kg		Final Depth 4.1m		
	Probe Type DPSH		Energy Ratio (Er) 68.22%		

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Probe Log

Probe No.

DP7

Sheet 1 of 1

Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	25/04/2019			Logged By	

Depth (m)	Blows/100mm					Torque (Nm)
	0	10	20	30	40	
0	0					
0.1	0					
0.2	0					
0.3	0					
0.4	0					
0.5	0					
0.6	0					
0.7	0					
0.8	0					
0.9	0					
1	0					
1.1	1					
1.2	1					
1.3	1					
1.4	1					
1.5	1					
1.6	0					
1.7	1					
1.8	1					
1.9	1					
2	0					15
2.1	1					
2.2	1					
2.3	1					
2.4	1					
2.5	1					
2.6	2					
2.7	3					
2.8	9					
2.9	14					
3	15					25
3.1	19					
3.2	16					
3.3	7					
3.4	3					
3.5	3					
3.6	9					
3.7	7					
3.8	4					
3.9	2					
4	4					75
4.1						
4.2						
4.3						
4.4						
4.5						
4.6						
4.7						
4.8						
4.9						
5						
5.1						
5.2						
5.3						
5.4						
5.5						
5.6						
5.7						
5.8						
5.9						
6						
6.1						
6.2						
6.3						
6.4						
6.5						
6.6						
6.7						
6.8						
6.9						
7						
7.1						
7.2						
7.3						
7.4						
7.5						
7.6						
7.7						
7.8						
7.9						
8						
8.1						
8.2						
8.3						
8.4						
8.5						
8.6						
8.7						
8.8						
8.9						
9						
9.1						
9.2						
9.3						
9.4						
9.5						
9.6						
9.7						
9.8						
9.9						
10						
Remarks	Fall Height 750mm		Cone Base Diameter 33mm			
	Hammer Weight 63.5kg		Final Depth 4.1m			
	Probe Type DPSH		Energy Ratio (Er) %			

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Probe Log

Probe No.

DP8

Sheet 1 of 1

Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	17/04/2019			Logged By	

Depth (m)	Blows/100mm				Torque (Nm)
0					
0.1					
0.2					
0.3					
0.4					
0.5					
0.6					
0.7					
0.8					
0.9					
1.0					0
1.1					
1.2					
1.3					
1.4					
1.5					
1.6					
1.7					
1.8					
1.9					
2.0					0
2.1					
2.2					
2.3					
2.4					
2.5					
2.6					
2.7					
2.8					
2.9					
3.0					10
3.1					
3.2					
3.3					
3.4					
3.5					
3.6					
3.7					
3.8					
3.9					
4.0					70
4.1					
4.2					
4.3					
4.4					
4.5					
4.6					
4.7					
4.8					
4.9					
5.0					
5.1					
5.2					
5.3					
5.4					
5.5					
5.6					
5.7					
5.8					
5.9					
6.0					
6.1					
6.2					
6.3					
6.4					
6.5					
6.6					
6.7					
6.8					
6.9					
7.0					
7.1					
7.2					
7.3					
7.4					
7.5					
7.6					
7.7					
7.8					
7.9					
8.0					
8.1					
8.2					
8.3					
8.4					
8.5					
8.6					
8.7					
8.8					
8.9					
9.0					
9.1					
9.2					
9.3					
9.4					
9.5					
9.6					
9.7					
9.8					
9.9					
10.0					
Remarks	Fall Height	750mm	Cone Base Diameter	33mm	
	Hammer Weight	63.5kg	Final Depth	4.1m	
	Probe Type	DPSH	Energy Ratio (Er)	79.93%	

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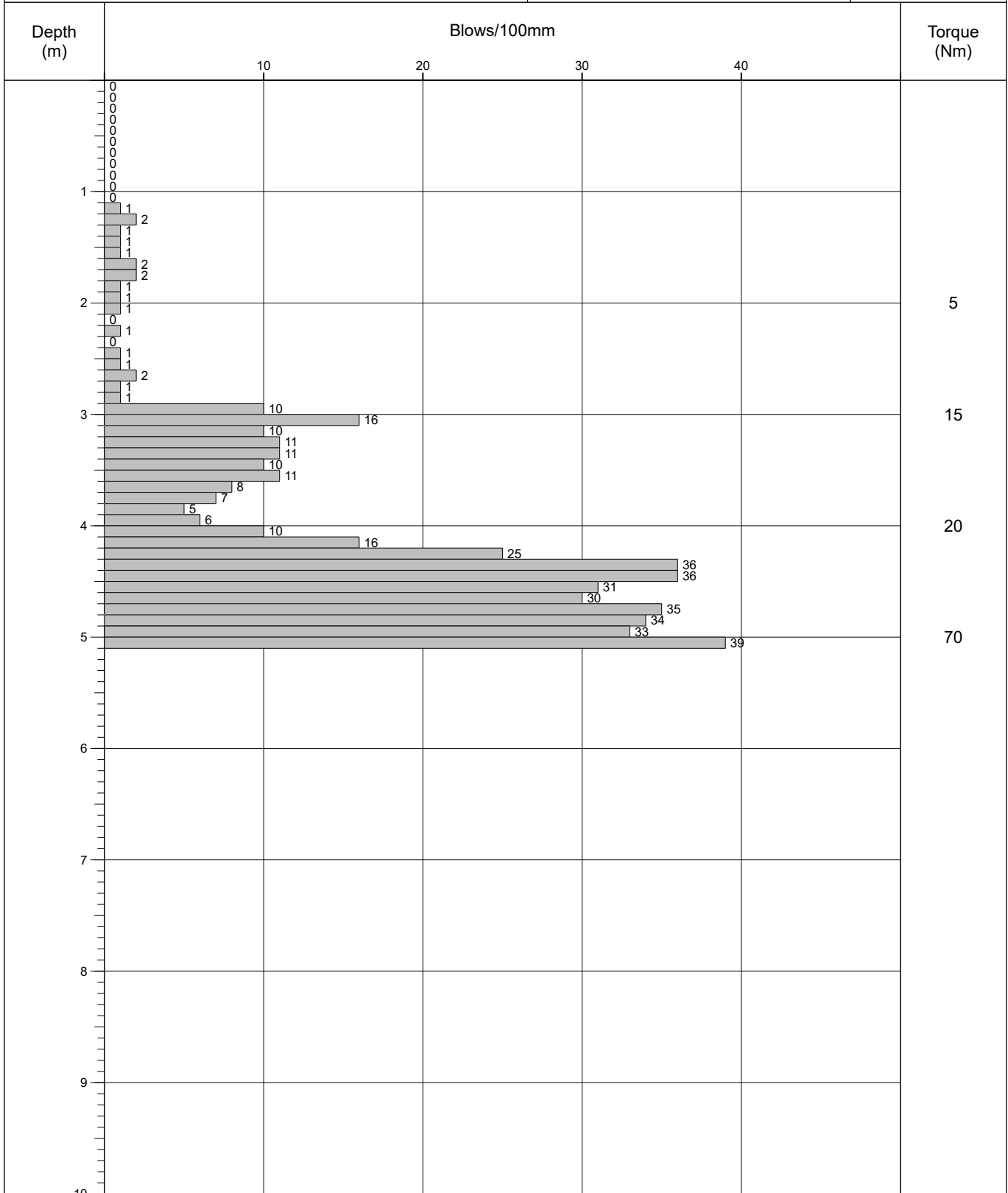
Probe Log

Probe No.

DP9

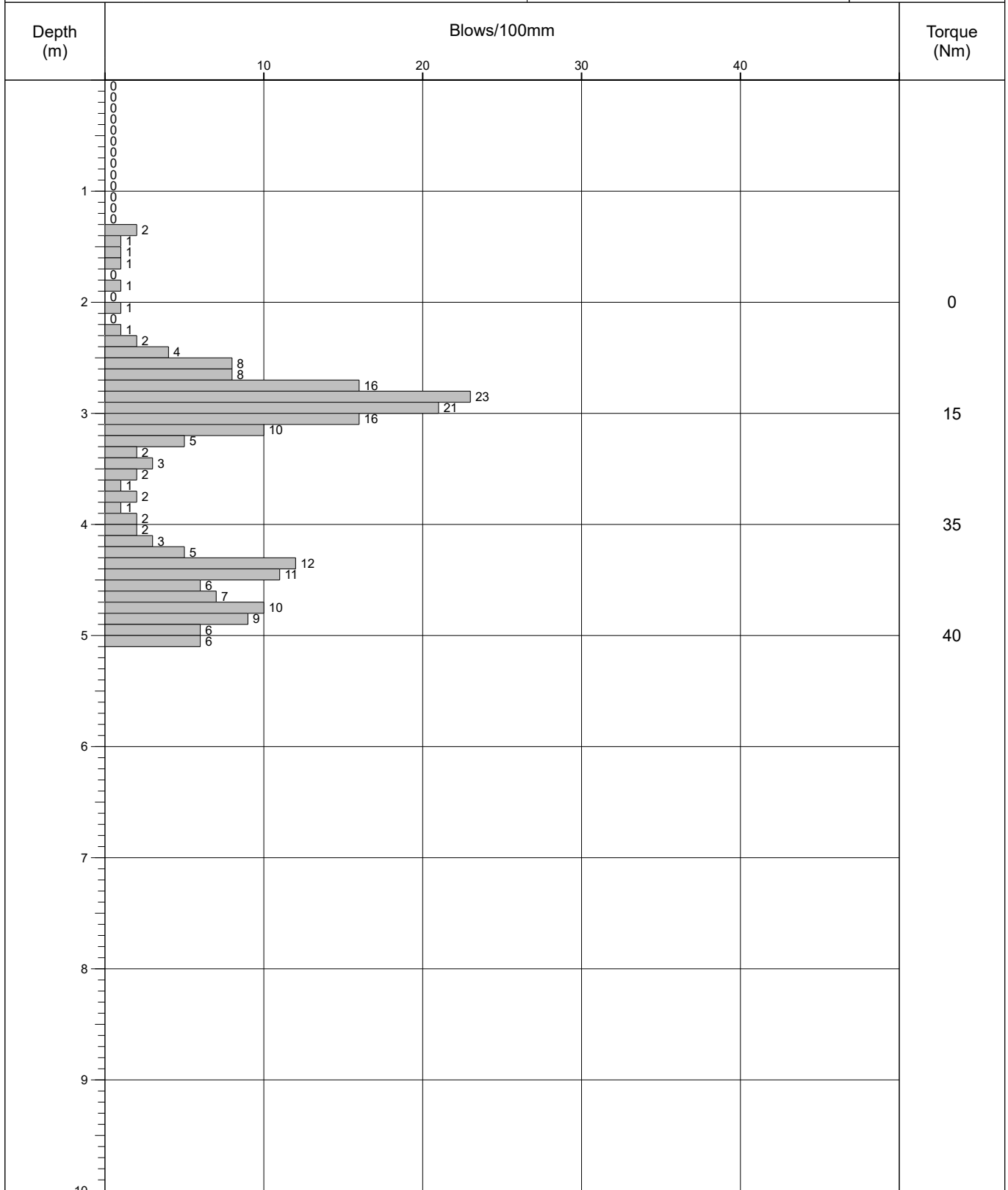
Sheet 1 of 1

Project Name:	Site off Toynebee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	23/04/2019			Logged By	



Remarks	Fall Height 750mm	Cone Base Diameter 33mm	
	Hammer Weight 63.5kg	Final Depth 5.1m	
	Probe Type DPSH	Energy Ratio (Er) 68.22%	

Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD	Scale	1:50	Logged By	
Client:	Foreman Homes	Dates:	23/04/2019				



Remarks	Fall Height	750mm	Cone Base Diameter	33mm
	Hammer Weight	63.5kg	Final Depth	5.1m
	Probe Type	DPSH	Energy Ratio (Er)	68.22%

**Soils Limited**

Newton House, Cross Road, Tadworth KT20 5SR
Tel: 01737 814221 Email: admin@soilslimited.co.uk

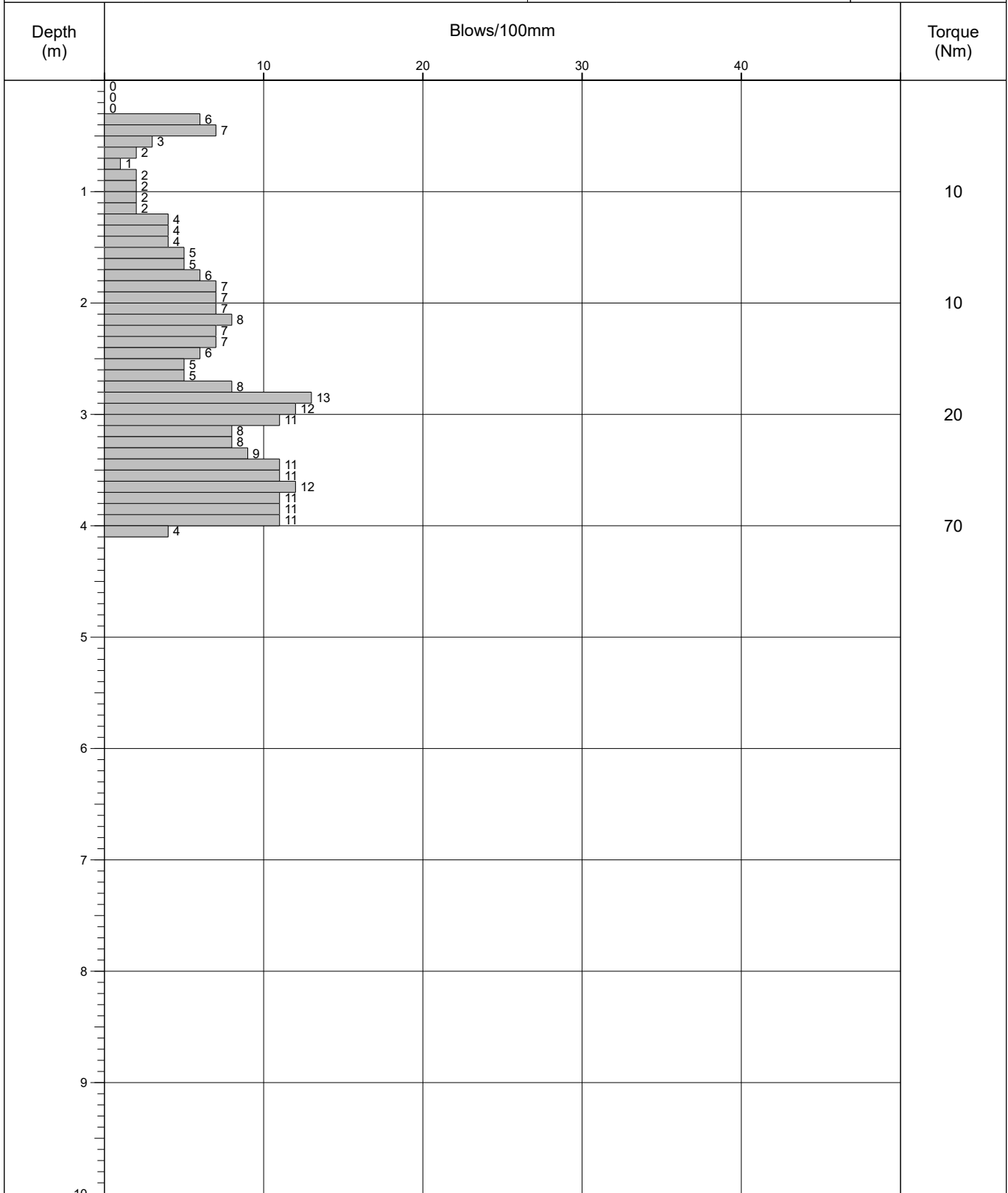
Probe Log

Probe No.

DP13

Sheet 1 of 1

Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	17/04/2019			Logged By	



Remarks	Fall Height	750mm	Cone Base Diameter	33mm
	Hammer Weight	63.5kg	Final Depth	4.1m
	Probe Type	DPSH	Energy Ratio (Er)	79.93%



**Soils Limited**

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Tel: 01737 814221 Email: admin@soilslimited.co.uk

Probe Log

Probe No.

DP14

Sheet 1 of 1

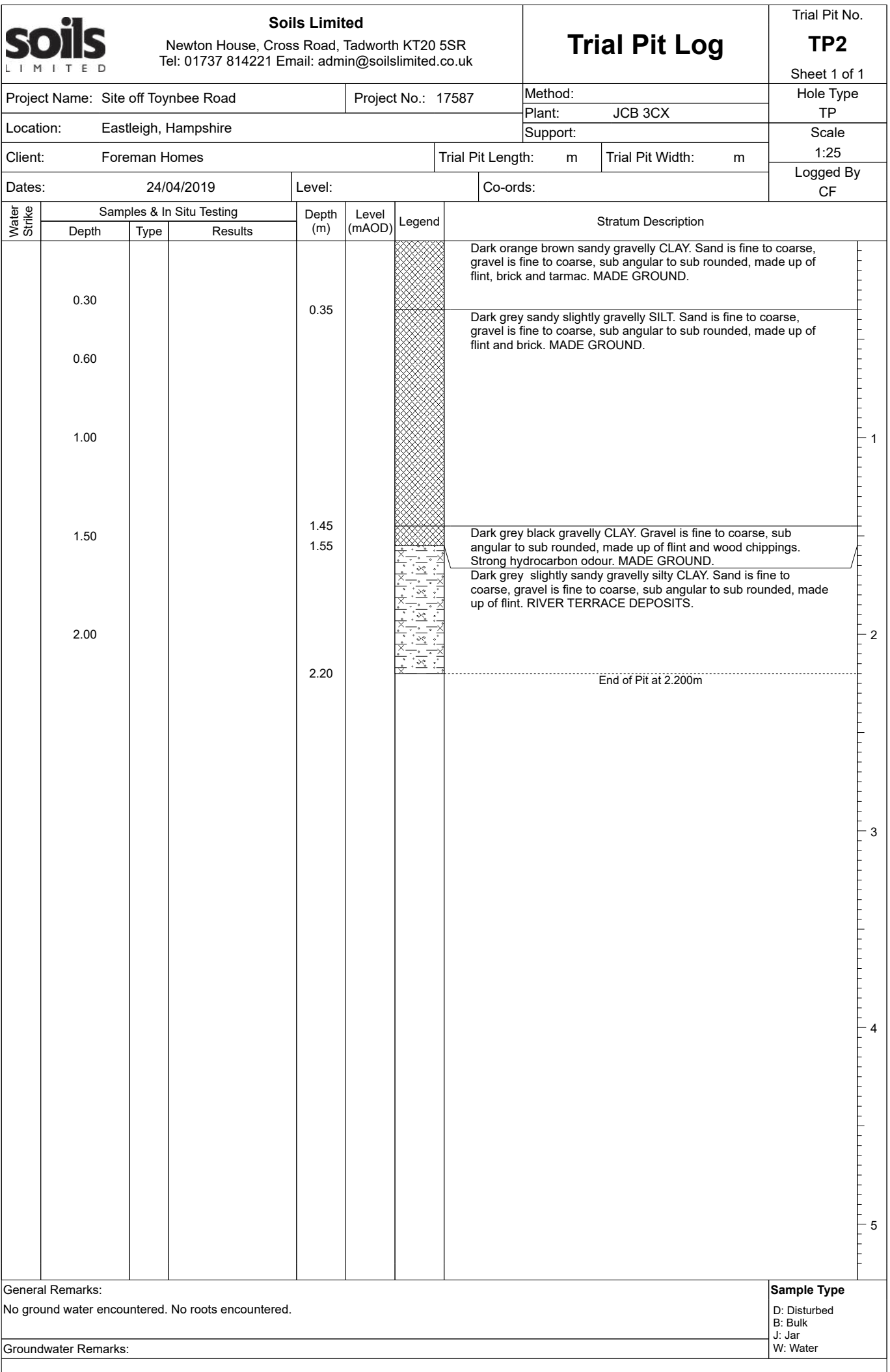
Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	18/04/2019			Logged By	

Depth (m)	Blows/100mm					Torque (Nm)
	0	10	20	30	40	
0	0					
	5					
	9					
	5					
	4					
	3					
	2					
1	5					
	8					
	6					
	7					
	6					
	7					
	5					
	4					
	5					
	6					
2	7					
	9					
	8					
	10					
	11					
	10					
	10					
	9					
	8					
3	7					
	5					
	6					
	5					
	7					
	9					
	5					
	5					
	8					
	12					
	11					
4	13					
	16					
5						
6						
7						
8						
9						
10						
Remarks						
Fall Height 750mm			Cone Base Diameter 33mm			
Hammer Weight 63.5kg			Final Depth 4.1m			
Probe Type DPSH			Energy Ratio (Er) 68.22%			

Project Name:	Site off Toynbee Road	Project No.	17587	Co-ords:		Hole Type	DP
Location:	Eastleigh, Hampshire	Level:	m AOD			Scale	1:50
Client:	Foreman Homes	Dates:	18/04/2019			Logged By	

Depth (m)	Blows/100mm				Torque (Nm)
	0	10	20	30	40
0	6	11			
0.1	6				
0.2	3				
0.3	3				
0.4	3				
0.5	3				
0.6	4				
0.7	4				
0.8	5				
0.9	5				
1	6				15
1.1	6				
1.2	5				
1.3	3				
1.4	3				
1.5	2				
1.6	2				
1.7	4				
1.8	3				
1.9	6				
2	7				
2.1	13				20
2.2	12				
2.3	13				
2.4	14				
2.5	19				
2.6	22				
2.7	22				
2.8	24				
2.9	24				
3	24				
4	34				15
5					
6					
7					
8					
9					
10					
Remarks	Fall Height 750mm		Cone Base Diameter 33mm		
	Hammer Weight 63.5kg		Final Depth 4.1m		
	Probe Type DPSH		Energy Ratio (Er) 68.22%		

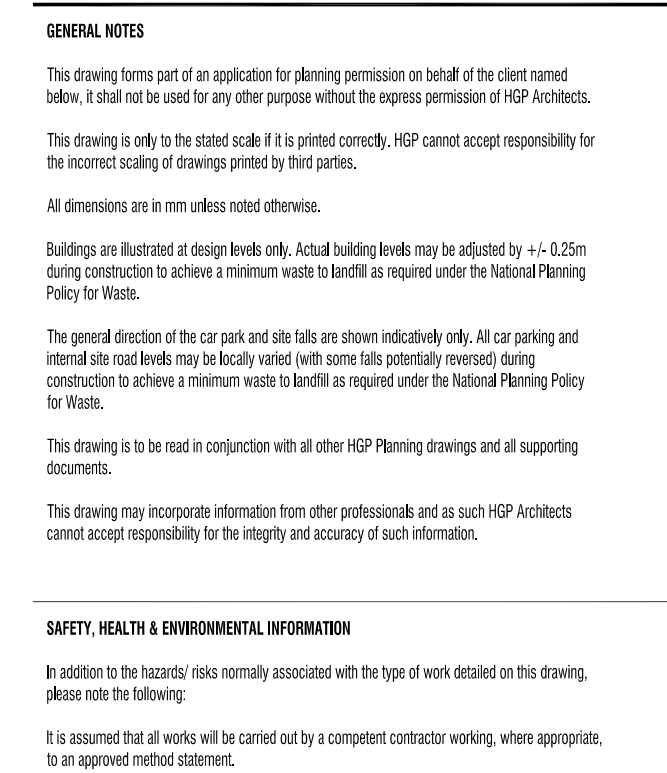
		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. TP1 Sheet 1 of 1	
Project Name: Site off Toynbee Road				Project No.: 17587		Method:		Hole Type TP
Location: Eastleigh, Hampshire						Plant: JCB 3CX		
Client: Foreman Homes				Trial Pit Length: m		Trial Pit Width: m		Scale 1:25
Dates: 24/04/2019				Level:		Co-ords:		Logged By CF
Water Strike	Samples & In Situ Testing			Depth (m)	Level (mAOD)	Legend	Stratum Description	
	Depth	Type	Results					
				0.25			CONCRETE SLAB.	
	0.30						Pink sandy fine to coarse sub angular to sub rounded granite and brick GRAVEL. Sand is fine to coarse. MADE GROUND.	
	0.60			0.60			Sawdust and wood chippings. MADE GROUND.	
	1.00			0.90			Soft dark brown sandy gravelly SILT. Sand is fine to coarse, gravel is fine to cobble, sub angular to sub rounded, made up of flint brick concrete, teapots, China and glass. MADE GROUND.	1
	1.50							
	2.00							2
				2.20			Soft light brown grey sandy gravelly CLAY. Sand is fine to coarse, gravel is fine to coarse, sub angular to sub rounded, made up of flint, brick, concrete and metal. MADE GROUND.	
	2.70			2.80			End of Pit at 2.800m	3
								4
								5
General Remarks: No ground water encountered. No roots encountered.								Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:								



		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. TP3 Sheet 1 of 1	
Project Name: Site off Toynbee Road				Project No.: 17587		Method:		Hole Type TP
Location: Eastleigh, Hampshire						Plant: JCB 3CX		
Client: Foreman Homes				Trial Pit Length: m		Trial Pit Width: m		Scale 1:25
Dates: 24/04/2019				Level:		Co-ords:		Logged By CF
Water Strike	Samples & In Situ Testing			Depth (m)	Level (mAOD)	Legend	Stratum Description	
	Depth	Type	Results					
							TARMAC.	
	0.40			0.35				
	0.60			0.55			Light yellow grey sandy gravelly SILT. Sand is fine to coarse, gravel is fine to coarse, sub angular to sub rounded, made up of flint and brick. MADE GROUND.	
	0.90						Dark grey sandy slightly gravelly SILT. Sand is fine to coarse, gravel is fine to medium, sub angular to sub rounded, made up of flint. RIVER TERRACE DEPOSITS	1
				1.10			Dark orange brown sandy gravelly CLAY. Sand is fine to coarse, gravel is fine to coarse, sub angular to sub rounded, made up of flint. RIVER TERRACE DEPOSITS	
	1.50			1.60			End of Pit at 1.600m	2
								3
								4
								5
General Remarks:								Sample Type D: Disturbed B: Bulk J: Jar W: Water
No ground water encountered. No roots encountered.								
Groundwater Remarks:								

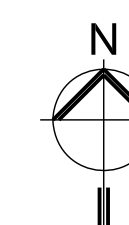
Appendix B.2 Raw Gas Monitoring Data

Appendix C Proposed Development



6 No. 1 Bed Apartments
27 No. 2 Bed Apartments
17 No. 2 Bed Houses
42 No. 3 Bed Houses

- * Affordable Rented
- * Shared Ownership



Layout amended	01.02.19	HE	HE	C
Layout amended	14.06.18	VP	HE	B
Drawing amended	07.06.18	HE	HE	A

REVISIONS	DATE	DRN	CKD	REV
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CLIENT  **Foreman**
Homes

PROJECT

Land at Toynbee Road Eastleigh

TITLE

Site Plan

STATUS

Sketch

Drawn	Checked	Scale	Date
VP	HJE	1:500 @ A1	May '18

Drawing No.

17.096.43.SK01

HGP
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All dimensions are in mm unless noted otherwise.

Buildings are illustrated at design levels only. Actual building levels may be adjusted by +1.025m during construction to achieve a minimum waste to landfill as required under the National Planning Policy for Waste.

The general direction of the car park and site falls are shown indicatively only. All car parking and internal site road levels may be locally varied (with some falls potentially reversed) during construction to achieve a minimum waste to landfill as required under the National Planning Policy for Waste.

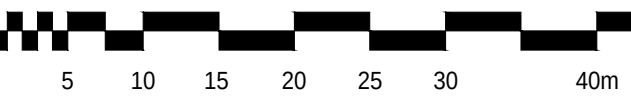
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SAFETY, HEALTH & ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, please note the following:

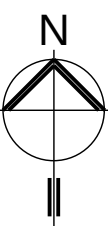
It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.



Accommodation Schedule:

- 10 No. 1 Bed Apartments
- 48 No. 2 Bed Apartments
- 16 No. 2 Bed Houses
- 27 No. 3 Bed Houses
- 4 No. 4 Bed Houses

Total 105 Units



Amended to client's comments	14.01.22	VP	HJE	J
Amended to client's comments	22.10.21	VP	HJE	I
Coordinated with Landscape Architect's designs	15.07.21	VP	HE	H
Updated to consultants' comments	12.07.21	VP	HE	G
Plot numbers amended	27.05.21	VP	HE	F
Landscape design amended	07.12.20	WT	HE	E
Landscape design amended	30.11.20	WT	HE	D
Pumping Station amended	17.11.20	WT	HE	C
Site layout amended	13.11.20	WT	HE	B
Site layout updated	03.11.20	WT	HE	A

REVISIONS	DATE	DRN	CHD	REV
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CLIENT

VIVID

PROJECT

Land at Toynbee Road
Eastleigh

TITLE

Site Plan

STATUS

For Planning

Drawn	Checked	Scale	Date
VP	HJE	1:500 @ A1	Oct 20

Drawing No.	Revision
-------------	----------

20.095.02 J

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