

**TESCO STORES LIMITED**

**NEW MILL ROAD  
HOLMFIRTH**

**FINAL FACTUAL REPORT ON  
GROUND INVESTIGATION**

**Contract: W08/40349**

**Date: October 2008**

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**FINAL FACTUAL REPORT ON  
GROUND INVESTIGATION**

carried out at

**NEW MILL ROAD**

**HOLMFIRTH**

Prepared for

**TESCO STORES LIMITED**

**Cirrus Building**

**Shire Park**

**Welwyn Garden City**

**Hertfordshire**

**AL7 1AB**

Contract No: W08/40349

Date: October 2008

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## **1.0 INTRODUCTION**

- 1.1 On the instructions of W.A. Fairhurst & Partners Consulting Engineers to Tesco Stores Limited, a ground investigation was undertaken to determine ground and groundwater conditions at the site.
- 1.2 This report has been prepared for the sole use of the Client for the purpose described and no extended duty of care to any third party is implied or offered. Third parties using any information contained within this report do so at their own risk.
- 1.3 The comments given in this report and the opinions expressed herein are based on the information received, the conditions encountered during site works, and on the results of tests made in the field and laboratory. However, there may be conditions prevailing at the site which have not been disclosed by the investigation and which have not been taken into account in the report.
- 1.4 The comments on groundwater conditions are based on observations made at the time the site work was carried out. It should be noted that groundwater levels vary owing to seasonal or other effects.

## **2.0 SITE SETTING**

### **2.1 Site Location**

- 2.1.1 The site is situated in off New Mill Road, near to the centre of Holmfirth and may be located by National Grid reference SE 148 093. A site location plan is included in Appendix 1, Figure A1.1.

### **2.2 Site Description**

- 2.2.1 At the time of the investigation the site comprised unoccupied land with both tarmacadam and concrete hardstanding, dense vegetation, steep slopes and floor slabs of previously demolished buildings.
- 2.2.2 The site was bounded to the east by New Mill Road, to the north by open land and tennis courts, to the west by a steep embankment and to the south by residential properties.
- 2.2.3 A site plan is included in Appendix 1, Figure A1.2.

### **3.0 SITE WORK**

- 3.1 The site work was carried out between 14<sup>th</sup> April and 29<sup>th</sup> April 2008 and an additional phase between 3<sup>rd</sup> September and 5<sup>th</sup> September 2008. The locations of exploratory holes were indicated by the Engineer, and the site works carried out on the basis of the practices set out in BS 10175:2001, ref. 5.1, and BS 5930:1999 ref. 5.2.
- 3.2 Thirteen boreholes, designated BH01 to BH13 were sunk by light cable percussion method, fifteen window sample holes, designated WS01 to WS12, WS12A, WS13 and WS13A, 2WS14 to 2WS20 and 2WS22, were sunk by drive-in window sampler techniques and twelve trial pits designated TP01 to TP12 were excavated by machine, at the positions shown on the site plan, Appendix 1, Figure A1.2. The depths of boreholes, window sample holes and trial pits, descriptions of strata encountered and comments on groundwater conditions are given in the borehole, window sample hole and trial records, Appendix 2, Figures A2.1, A2.2 and A2.4.
- 3.3 Eight window holes were undertaken during the phase 2 works, designated 2WS14 to 2WS20 and 2WS22, were sunk by drive-in window sampler techniques at the positions shown on the site plan, Appendix 1, Figure A1.2. The depths of window sample holes, descriptions of strata encountered and comments on groundwater conditions are given in the window sample hole and trial records, Appendix 2, Figure A2.3.
- 3.4 Representative disturbed and undisturbed samples were taken at the depths shown on the borehole records and despatched to the laboratory. Standard (split-barrel and cone) penetration tests, ref. 5.3 were carried out in the light cable percussion boreholes in the various strata to assess the relative density or consistency. The values of penetration resistance are given in the borehole records and in greater detail in Appendix 2, Figure A2.5.
- 3.5 Samples were collected for environmental purposes in amber glass jars and kept in a cool box.
- 3.6 Perforated standpipes, surrounded by pea shingle and protected by a stopcock cover were installed in seventeen boreholes, BH01, BH02, BH04, BH05, BH09, BH11, BH12, WS01, WS03, WS04, WS07, WS08, WS09, WS10, WS11, WS12 and WS13 as detailed in the borehole records and also in Appendix 2, Figure A2.6.
- 3.7 The ground levels at the borehole locations were not determined.
- 3.8 Gas and groundwater levels were recorded on five occasions following site works. Details of this monitoring are presented in Appendix 5.

## 4.0 LABORATORY TESTS

### 4.1 Geotechnical Testing

4.1.1 All soil samples were prepared in accordance with BS1377: Part One: 1990 ref. 5.3 and representative sub-samples were taken for testing. The following tests were carried out:

- 11 No. Moisture content
- 10 No. Plasticity indices
- 5 No. Californian Bearing Ratio

4.1.2 The results of these tests are presented in Appendix 3.

### 4.2 Chemical Testing

4.2.1 A suite of chemical analyses was undertaken based on instructions from the Engineer. The chemical analyses were carried out on thirty-five samples of soil and eighteen samples of leachate. The nature of the analyses is detailed below:

#### 4.2.2 Soil Suite:

4.2.2.1 **General Suite** - arsenic, cadmium, chromium, selenium, mercury, lead, copper, nickel, zinc, boron (water soluble), polycyclic aromatic hydrocarbon (PAH) screen, total petroleum hydrocarbon (TPH) screen, cyanides (total, free and complex), thiocyanate, total sulphate, soluble sulphate, sulphur, sulphide, pH and total phenols.

4.2.2.2 **Concrete Suite** – total sulphate, water soluble sulphate, sulphide, total sulphur, water soluble magnesium, ammonium ion, pH, chloride ions and nitrate ions.

4.2.2.3 **Speciated Total Petroleum Hydrocarbons Screen.**

4.2.2.4 **VOC/SVOC Screen.**

4.2.2.5 **BTEX/MTBE Screen.**

4.2.2.6 **Calorific Value.**

4.2.2.7 **Asbestos.**

4.2.2.8 **WAC Classification.**

#### 4.2.3 **Leachate Suite:**

4.2.3.1 **General Suite** - arsenic, cadmium, chromium, selenium, mercury, lead, copper, nickel, zinc, boron, polyaromatic hydrocarbons (PAH) screen, total petroleum hydrocarbons (TPH) screen, cyanides (total, free and complex), thiocyanate, total sulphate, soluble sulphate, sulphur, sulphide, pH and total phenols.

4.2.3.2 **Speciated Total Petroleum Hydrocarbons Screen.**

4.2.3.3 **Speciated Polyaromatic Hydrocarbons Screen.**

4.2.4 The results of these tests are shown in Appendix 4.

## 5.0 REFERENCES

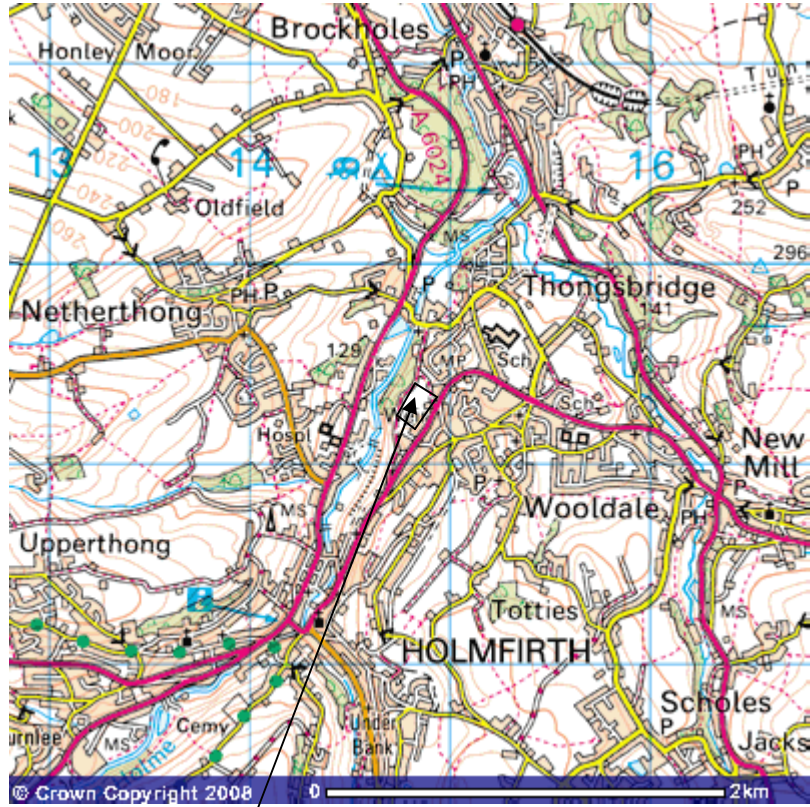
- 5.1 British Standards Institute: BS 10175 'Code of practice for the investigation of potentially contaminated sites', BSI 2001.
- 5.2 British Standards Institute: BS 5930 'Code of practice for site investigations', BSI 1999.
- 5.3 British Standard 1377:1990, Part 9, 'Methods of Test for Soils for Civil Engineering Purposes'.

For and on behalf of Ian Farmer Associates (1998) Limited

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**APPENDIX 1**  
**DRAWINGS**



THE SITE

<b>PROJECT: 40349 – New Mill Road, Holmfirth</b>	
<b>FIGURE No. A1.1.</b>	<b>SCALE: 1:50,000</b>
<b>TITLE: Site Location Plan</b>	
 <b>IAN FARMER ASSOCIATES</b> Geotechnical & Environmental Specialists	

**APPENDIX 2**

**SITE WORK**

## APPENDIX 2

### GENERAL NOTES ON SITE WORKS

#### A2.1 SITE WORK

##### A2.1.1 Rotary Drilling

For exploration within rock rotary drilling methods are employed, where the drill bit is rotated on the bottom of the borehole. This method is occasionally used for drilling within soils. The drilling fluid is transferred from the surface through hollow drilling rods to the bit cooling and lubricating. Drilling fluids commonly comprise clean water, air, foam, mud or polymers which aid the transportation of drill cuttings to the surface and maximise core recovery.

There are two basic types of rotary drilling:

- Open hole where the drill bit cuts all the material within the diameter of the borehole. This technique is sometimes used in soils and weak rocks as a rapid and economical means of making holes for taking soil samples, carrying out insitu soil tests, installing instruments and probing for voids such as mine workings or solution cavities. The only samples recovered are the poor quality drill cuttings.
- Core drilling where an annular bit fixed to the bottom of the core barrel cuts a core, which is recovered within the innermost tube of the core barrel. Coring is normally carried out by triple tube core barrels. At the end of the core run the core barrel assembly is brought to the surface. The core is prevented from dropping out of the barrel by a core catcher made of spring steel. The non-rotating inner barrel contains a removable sample tube or liner. At the end of each coring run the liner is extracted from the barrel and stored in a core box, where it can be photographed, described and tested.

##### A2.1.2 Light Cable Percussion Boring

For routine soil exploration to depths in excess of 3m, the light cable percussion rig is generally employed for boring through soils and weak rocks. It consists of a powered winch and tripod frame, with running wheels that are permanently attached so that the rig may be towed behind a suitable vehicle. The rig is towed into position and set up using its own winching system.

The locations of services are checked to make sure the borehole is not situated unacceptably near any services. Regardless of the proximity of services, a CAT scan is undertaken at the borehole location and a trial hole dug to 1.20m by hand.

Boreholes are advanced in soil by the percussive action of the cable tool. The force of the cylindrical tool as it is dropped a short distance cuts a plug of cohesive soil that is removed by the tool.

In non-cohesive soils, the borehole is advanced by a 'shell', otherwise known as a 'bailer' or 'sand pump', which incorporates a clack valve. Material is transferred into the shell and retained by the clack valve. The water level in a borehole is maintained above that in the surrounding granular soil to allow for temporary reductions in the head of water as the shell is withdrawn from the borehole. Water should flow from the borehole into the surrounding soil at all times to prevent 'piping' and loosening the soil at the base of the hole. The casing is always advanced with the borehole in granular soil so that material is drawn from the base rather than the borehole sides.

Obstructions to boring are overcome by fitting a serrated chiselling ring to the base of the percussion tool. For large obstructions, a heavy chisel with a hardened cutting edge may have to be used.

Disturbed samples are taken in polythene bags, jars or tubs that are sealed against air or water loss.

Undisturbed samples are generally taken in cohesive materials at changes in strata and at one metre intervals to 5 metres then at 1.5 metre intervals to the full depths of the borehole. The general purpose open-tube sampler is suitable for firm to stiff clays, but is often used to retrieve disturbed samples of weak rocks, soft or hard clay and also clayey sand or silts. This has been adopted for routine use, and usually consists of a 100mm internal diameter tube (U100), which is capable of taking soil samples up to 450mm in length. The undisturbed samples are sealed at each end using micro-crystalline wax to prevent drying.

Standard penetration tests are generally carried out in non-cohesive soils but also in stiff clays and soft rocks at frequencies similar to that of undisturbed sampling.

### **A2.1.3 Drive-in Window Sampler**

The drive-in window sampler consists of a series of cylindrical sample tubes, generally varying in diameter from 80mm to 35mm. A cutting shoe is fitted to the bottom of each tube, while a window, representing about a quarter of the circumference, is cut along the length of the tube.

The largest diameter tube is driven into the ground using a small vibrating breaker. The sample tube is extracted by means of a ratchet or hydraulic extraction system.

The borehole is extended by using progressively smaller diameter tubes.

Soil samples are extracted through the window of the tube.

### **A2.1.4 Dynamic Probing Heavy, DPH**

This covers the determination of the resistance of in-situ soil to a 90° cone being driven dynamically, ref 5.3. Dynamic Probing can be used to determine presence of variations in strata, however, since samples are not recovered, it should be carried out in conjunction with sampling.

In principle, the test consists of driving a 90° cone of 15cm<sup>2</sup> cross-sectional area into the ground using a 50kg drop hammer falling a standard height of 500mm. At regular intervals, in order to minimise friction on the shaft, the rods are turned.

The results are recorded as the number of blows of the hammer to drive the cone 100mm, N<sub>100</sub>, together with the torque to turn the rods.

As an approximate correlation, the resistance determined by the DPH may be related to the SPT 'N' value as:

$$\text{'N' value} = 2 \times N_{100}$$

## **A2.2 IN-SITU TESTS**

### **A2.2.1 Standard Penetration Test**

The Standard Penetration Test is carried out in accordance with the proposals recommended by BS 1377, Part 9, 1990, ref 5.3.

The standard penetration test, **SPT**, covers the determination of the resistance of soils to the penetration of a split barrel sampler. A 50mm diameter split barrel sampler is driven 450mm into the soil using a 65kg hammer with a 760mm drop. The penetration resistance is expressed as the number of blows required to obtain 300mm penetration below an initial seating drive of 150mm through any disturbed ground at the bottom of the borehole. The number of blows to achieve the standard penetration of 300mm is reported as the 'N' value.

The test is generally carried out in fine soils, however, it may also be carried out in coarse granular soils, weak rocks and glacial tills using the same procedure as for the SPT but with a 50mm diameter, 60° apex solid cone replacing the split spoon sampler, **CPT**.

When attempting the standard penetration test in very dense material or weathered rocks it may be necessary to terminate the test before completion to prevent damage to the equipment. In these circumstances it is important to distinguish how the blow count relates to the penetration of the sampler. This may be achieved in the following manner:

- Where the seating drive has been completed, the test drive is terminated if 50 blows are reached before the full penetration of 300mm is achieved. The penetration for 50 blows is recorded and an approximate N value obtained by linear extrapolation of the number of blows for the partial test drive.
- If the seating drive of 150mm is not achieved within the first 25 blows, the penetration after 25 blows is recorded and the test drive then commenced.
- For tests in soft rocks, the test drive should be terminated after 100 blows where the penetration of 300mm has not been achieved.

The N-value obtained from the Standard Penetration Test may be used to assess the relative density of sands and gravels as follows:

Term	SPT N-Value : Blows/300mm Penetration
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Over 50

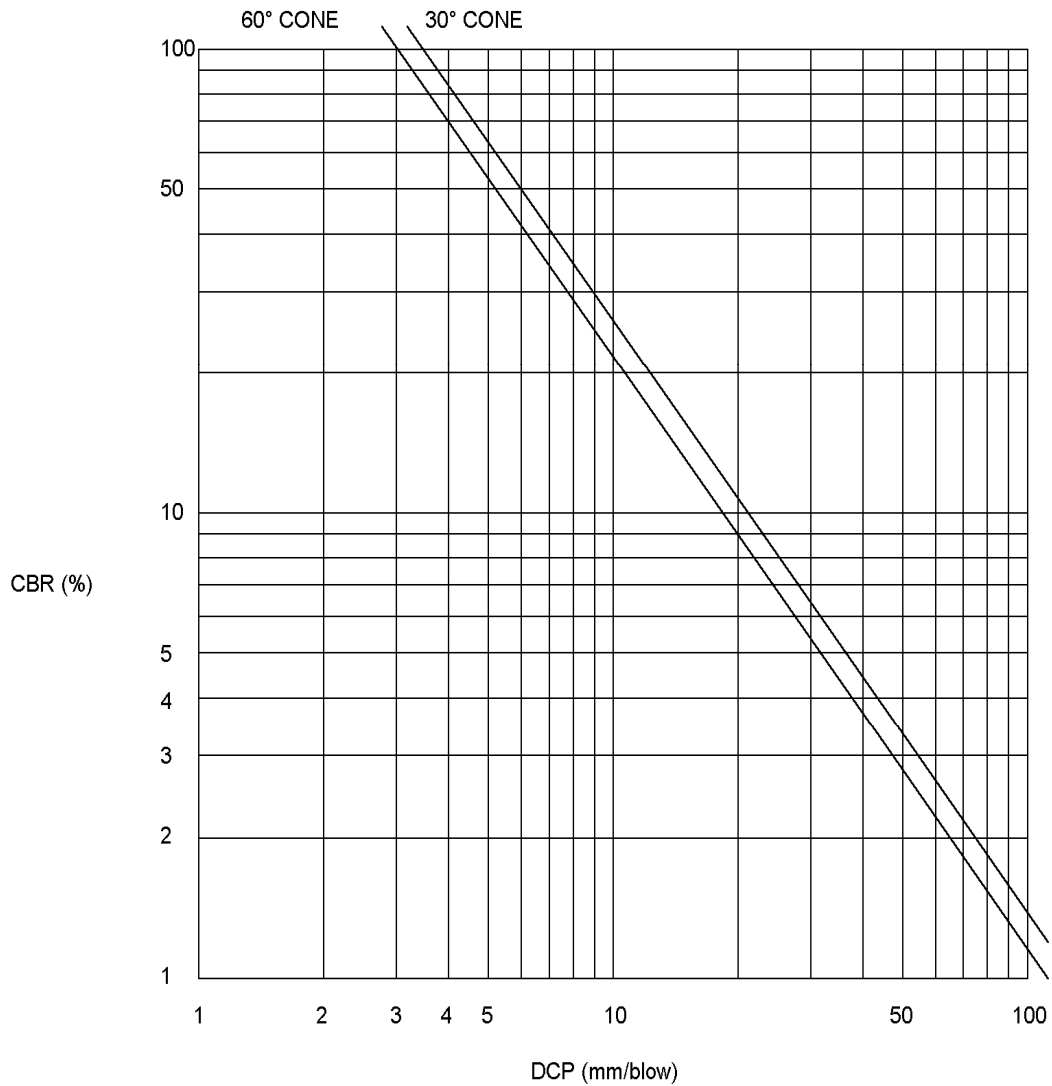
### A2.2.2 Dynamic Cone Penetrometer, DCP

The dynamic cone penetrometer consists of a 16mm diameter rod with a 20mm diameter, 60° cone of tempered steel at one end. The impact is provided by means of an 8kg sliding hammer falling 575mm. The total weight of the instrument is about 12kg.

The correlation of DCP to California Bearing Ratio, CBR, has been determined to be as below.

The correlation for DCP to SPT 'N' value has been determined on the basis of equivalent energy imparted per unit area of penetrometer. This provides an approximate correlation of

$$\text{'N' value} = \frac{\text{DCP blows for 300mm}}{0.6}$$



### A2.2.3 California Bearing Ratio, CBR

The California Bearing Ratio test is used to evaluate the strength of subgrade by measuring the load required to cause a plunger of standard size (50mm diameter) into the ground at a standard rate (1.00mm/min) and comparing the result with a standard material, ref 5.3.

The test is arbitrary in that the results cannot be accurately related to any of the fundamental properties governing soil strength. However, in that the deformation is predominantly shear, the CBR can be regarded as an indirect measurement of shear strength and modulus of subgrade reaction.

Alternative methods of determining the equivalent CBR by cone penetrometer can be undertaken. The Mexicone consists of a 30° cone of 129mm<sup>2</sup> cross-section that is pushed into the ground at a steady rate. The load is determined through a compression spring that deflects under load and is calibrated to give a direct reading of CBR on a dial. The instrument is best suited in cohesive or fine granular soil, but in gravelly soil it should not be used.

### A2.3 SAMPLES

U(x) represents undisturbed 100mm diameter sample with (x) being the number of blows required to obtain sample.

U fail	indicates undisturbed sample not recovered
HV	represents Hand Vane test with equivalent undrained shear strength
PP	represents Pocket Penetrometer test with equivalent undrained shear strength
CBR	represents California Bearing Ratio test
B	represents large bulk disturbed samples
D	represents small disturbed sample
W	represents water sample
▽	represents water strike
▼	represents level to which water rose

## **A2.4 DESCRIPTION OF SOILS**

### **A2.4.1 General**

The procedures and principles given in Section 6 of BS 5930, ref. 5.2 have been used in the soil descriptions contained within this report.

### **A2.4.2 Predominantly Coarse Soils**

A coarse soil (omitting any boulders or cobbles) contains about 65% or more coarse material and is described as a SAND or GRAVEL depending on which of the constituents predominates. The secondary constituents of coarse soils should precede the main soil type e.g. 'Medium dense brown very gravelly coarse SAND. Gravel is subangular fine and medium of sandstone and mudstone'.

### **A2.4.3 Deposits containing silt-sized and clay-sized particles**

Most soils are mixtures of clay and silt sized particles. Fine soil should be described as either a clay or a silt, depending on the plastic properties. If ambiguous, the term CLAY/SILT should be used.

### **A2.4.4 Deposits containing mixtures of fine and coarse soil.**

The appropriate quantified terms should be used before the principal soil type. It is recommended that the dominant secondary fraction come immediately before the principal soil term. Additional detail can be added in a separate sentence thus, 'Gravelly very clayey SAND. Gravel (10%) is fine of rounded quartz. Clay is firm'.

The terms 'silty' and 'clayey' are mutually exclusive as in a coarse soil and based on the plastic properties of the fine fraction.

**Table 1 Deposits containing boulder-size and cobble-size particles**

<b>Term</b>	<b>Composition</b>
BOULDERS (or COBBLES) with a little finer material	Up to 5% finer material
BOULDERS (or COBBLES) with some finer material	5 to 20% finer material
BOULDERS (or COBBLES) with much finer material	20 to 50% finer material
FINER MATERIAL with many boulders (or cobbles)	50 to 20% boulders (or cobbles)
FINER MATERIAL with some boulders (or Cobbles)	20 to 5% boulders (or cobbles)
FINER MATERIAL with occasional boulders (or cobbles)	up to 5% boulders (or cobbles)

<b>Term</b>	<b>Principal Soil Type</b>	<b>Approximate proportion of secondary constituent</b>
Slightly sandy or gravelly	SAND	Up to 5%
Sandy or gravelly	or GRAVEL	5 to 20%
Very sandy or gravelly		over 20%
	SAND and GRAVEL	about equal proportions

**Table 2 Mixtures of coarse and fine fractions.**

<b>Term Before</b>	<b>Principal Term</b>	<b>Proportion of secondary Coarse soil</b>	<b>constituent Coarse and/or fine soil</b>
Slightly clayey or silty and/or sandy gravelly	SAND		< 5
Clayey or silty and/or sandy or gravelly	and/or GRAVEL		5 – 20 %
Very clayey or silty and/or sandy or gravelly			20 %
Very sandy or gravelly	SILT or CLAY	< 65%	
Sandy and/or gravelly		35 – 65 %	
Slightly sandy an/or gravelly		<35 %	

**For clays the strength scale is used as follows:**

<b>Term</b>	<b>Field Identification</b>	<b>Undrained shear strength (KN/m<sup>2</sup>)</b>
Very Soft	Exudes between fingers when squeezed in hand	< 20
Soft	Moulded by light finger pressure	20 - 40
Firm	Can be moulded by strong finger pressure	40 - 75
Stiff	Cannot be moulded by finger. Can be indented by thumb.	75 - 150
Very Stiff	Can be indented by thumbnail.	150 - 300
Hard (or very weak mudstone)		> 300

#### **A2.4.5 Man Made Soils**

Man made soils (Made Ground or Fill) have been placed by man and can be divided into those composed of natural reworked soils and those composed of man-made materials. Fills are placed in the ground in a controlled manner and soils defined as Made Ground are placed without any engineering control. For example:

‘MADE GROUND comprising plastic bags, window frames, garden refuse and newspapers’.

‘MADE GROUND dense brown sandy GRAVEL with occasional tiles, wire and glass’.

‘Firm yellow brown slightly sandy CLAY with clods (up to 200mm) of firm to stiff orange CLAY (EMBANKMENT FILL)’.

#### **A2.4.6 Organic Soils**

Small quantities of dispersed organic matter can have a marked effect on plasticity and hence the engineering properties of the soil. The following quantifying terms are appropriate:

<b>Term</b>	<b>Organic Content</b>	<b>Typical Colour</b>
Slightly organic clay or silt	2 - 5	Grey
Slightly organic sand	1 – 3	As mineral
Organic clay or silt	5 – 10	Dark grey
Organic sand	3 – 5	Dark grey
Very organic clay or silt	>10	Black
Very organic sand	>5	Black

## **A2.5 GEOLOGICAL LOGGING**

### **A2.5.1 General**

The procedures and principles given in Section 6 of BS 5930, ref. 5.2 have been used in the rock descriptions contained within this report.

Open hole drilling (OH) was achieved with a tricone rock bit.

A core run is the length of rock drilled from the base of the hole each time the core barrel is run into the hole.

### **A2.5.2 Fracture State**

Various criteria may be used for quantitative description of the Fracture State of rock cores. The standard terms are as follows.

TCR (%)	ratio of core recovered (solid and non intact) to length of core run.
SCR (%)	ratio of solid core recovered to length of core run.
RQD (%)	ratio of solid core pieces longer than 100mm to length of core run.
Fracture Index	a count of the number or spacing of fractures over an arbitrary length of core of similar intensity of fracturing. Commonly reported as either Fracture Index (FI, number of fractures per metre) or as Fracture Spacing ( $I_f$ mm).
NR	indicates no core recovery.
NI	indicates intensely fractured rock which is not of sufficient quality to allow an assessment of fracture spacing to be made.

**Figure A2.1**  
**Borehole Records**

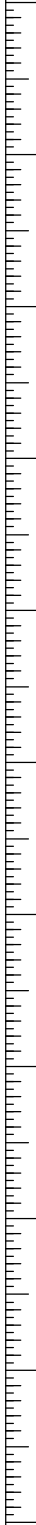



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 10.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 14/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.35-1.20	B1					(0.10) 0.10 (0.25) 0.35	MADE GROUND: Tarmacadam (driller's description).			
1.20-1.65 1.20-1.65	CPT N=16 B2	1.20	DRY	1,2/3,4,3,6		(1.65)	MADE GROUND: Gravel, clay, tarmacadam and ash fill (driller's description).			
2.00-2.45 2.00-2.45	CPT N=5 B3	1.50	DRY	1,1/1,1,2,1		2.00	MADE GROUND: Medium dense, dark brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL with occasional cobbles and occasional pockets of clay. Gravel includes concrete, sandstone, limestone and ceramics.			
3.00-3.45 3.00-3.45	CPT N=5 B4	3.00	DRY	1,2/1,1,2,1			MADE GROUND: Soft, slightly friable, sandy, gravelly CLAY with occasional cobbles and occasional plastic bags. Gravel is angular to subrounded, fine to coarse including brick, concrete, sandstone and glass.			
4.00-4.45 4.00-4.45	CPT N=9 B5	4.00	DRY	1,2/1,3,3,2		(4.00)	At 3.00m: occasional metal shards/fragments.			
5.00-5.45 5.00-5.45	CPT N=10 B6	4.50	DRY	1,1/2,2,3,3			Below 4.00m: firm.			
6.00-6.45 6.00-6.45	CPT N=8 B7	6.00	DRY	1,2/2,2,2,2		6.00	MADE GROUND: Soft, dark brown, very friable, sandy, slightly gravelly SILT with occasional pockets of clay and occasional bone and metal fragments. Gravel is angular to subrounded, fine to coarse including brick, sandstone and glass.			
7.30 7.50-7.95 7.50-7.95 7.50-7.95	D8 SPT N=22 D10 B9	7.50	DRY	2,4/5,5,6,6		7.30	MADE GROUND: Soft, dark brown, very friable, sandy, slightly gravelly SILT with occasional pockets of clay and occasional bone and metal fragments. Gravel is angular to subrounded, fine to coarse including brick, sandstone and glass.			
9.00-9.45	U11 0.30	9.00	DRY	120 blows		(2.20)	Grey, mottled orange brown MUDSTONE, recovered as stiff, slightly sandy, gravelly clay. Gravel is angular, fine to coarse.			
9.50	D12					9.50				
10.00-10.37	SPT 50/220	10.00	DRY	5,10/13,17,20		(0.87)	Grey brown SILTSTONE, recovered as very stiff, slightly clayey, slightly sandy, angular, fine to coarse gravel.			

<b>Remarks</b> Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.BH01	

<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 10.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 14/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.00-10.37	D13					(0.87) 10.37 	Complete at 10.37m			

<b>Remarks</b>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
	<b>Figure No.</b> 40349.BH01	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 15/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00-0.50	B1					(0.50)	MADE GROUND: Light brown, slightly silty, very gravelly SAND with occasional cobbles of concrete. Gravel is angular to subangular, fine to coarse including sandstone and concrete.			
0.50-1.20	B2					0.50	MADE GROUND: Loose, brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL with occasional cobbles and metal shards. Gravel includes sandstone, ash and brick. Cobbles of sandstone.			
1.20-1.65 1.20-1.65	CPT N=5 B3	1.20	DRY	2,2/1,2,1,1			Below 1.20m: very clayey with occasional pockets of clay.			
2.00-2.45 2.00-2.45	CPT N=10 B4	1.50	DRY	1,1/3,3,2,2		(3.50)				
3.00-3.45 3.00-3.45	CPT N=8 B5	3.00	DRY	4,3/3,2,1,2						
4.00-4.45 4.00-4.45	CPT N=9 B6	4.00	DRY	2,2/3,2,2,2		4.00	MADE GROUND: Soft, brown, sandy, gravelly CLAY. Gravel is angular to subrounded, fine to coarse including brick, ash, sandstone and ceramic.			
5.00-5.45 5.00-5.45	CPT N=8 B7	4.50	DRY	1,2/2,3,2,1			Between 4.00m and 4.45m: slight hydrocarbon odour noted.			
6.00-6.45 6.00-6.45	CPT N=9 B8	6.00	DRY	2,1/2,2,3,2			Below 5.00m: orange/brown.			
7.40 7.50-7.95	D9 U10 0.40	7.50	DRY	65 blows		7.40	Grey, mottled orange brown MUDSTONE, recovered as firm, friable, mottled grey/orange brown, sandy, gravelly clay. Gravel is angular, fine to coarse.			
8.00	D11									
9.00-9.45 9.00-9.45 9.00-9.45	SPT N=37 B12 D13	9.00	DRY	3,5/7,9,10,11			Below 9.00m: becoming stiff, mottled blue grey/orange brown.			
						(4.74)				

<b>Remarks</b> Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.BH02	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 15/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.50-10.95 10.50-10.95 10.50-10.95	SPT 50/295 B14 D15	10.50	DRY	5,7/10,12,14,14		(4.74)	Below 10.50m: very stiff.			
12.00-12.14 12.00-12.14	SPT 25*/70 50/70 D16	12.00	DRY	25/50		12.14	Complete at 12.14m			

<b>Remarks</b>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
	<b>Figure No.</b> 40349.BH02	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 4.50m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 22/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30-0.80	B1					(0.05) 0.05	MADE GROUND: Tarmacadam (driller's description).		
						(0.25) 0.30 (0.50)	MADE GROUND: Brown sandstone fill (driller's description).		
0.90	D2					0.80	MADE GROUND: Soft, dark brown, grey, sandy, slightly gravelly CLAY with some rootlets. Gravel is subangular to subrounded, fine to coarse including sandstone and siltstone. Slight organic odour noted.		
1.20-1.65 1.20-1.65 1.20-1.65	SPT N=10 D4 B3	1.20	DRY	1,1/2,2,3,3		(1.50)	Firm, light grey brown, sandy, slightly gravelly CLAY of high plasticity. Gravel is subangular to subrounded, fine to coarse including sandstone and siltstone.		
2.00-2.45	U5 0.30	1.50	DRY	90 blows		2.30			
2.50	D6					(0.70)	Dark blue grey SILTSTONE/MUDSTONE, recovered as slightly clayey, angular to subangular, fine and medium gravel.		
3.00-3.29 3.00-3.29 3.00-3.45	SPT 50/140 D8 B7	3.00	DRY	9,16/24,26		3.00	Orange brown SANDSTONE, recovered as silty sand and subangular to subrounded, fine to coarse gravel.		
4.00-4.34 4.00-4.34 4.00-4.45	SPT 50/185 D10 B9	4.00	DRY	7,12/16,21,13		(2.00)	Below 4.00m: very silty with occasional lenses of clay.		
5.00-5.06 5.00-5.06	CPT 25*/30 50/25 D11	4.50	DRY	25/50		5.00	At 5.00m: recovered as grey brown, angular to subangular, tabular, fine to coarse gravel.		
							Complete at 5.00m		

<b>Remarks</b> Chiselling from 4.70m to 5.00m for 1.00 hour. Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.BH03	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 15/04/2008- 16/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.10-1.20	B1						Grass over MADE GROUND: Loose, dark brown, very clayey SAND and angular to subrounded, fine to coarse GRAVEL with occasional pockets of clay. Gravel includes sandstone, siltstone and ash.			
1.20-1.65 1.20-1.65	CPT N=11 B2	1.20	DRY	3,3/4,2,3,2			At 1.20m: medium dense.			
2.00-2.45 2.00-2.45	CPT N=6 B3	1.50	DRY	1,2/1,2,2,1			Below 2.00m: silty.			
3.00-3.45 3.00-3.45	CPT N=6 B4	3.00	DRY	1,1/2,1,1,2						
4.00-4.45 4.00-4.45	CPT N=5 B5	4.00	DRY	1,2/1,1,1,2		(7.40)				
5.00-5.45 5.00-5.45	CPT N=6 B6	4.50	DRY	1,3/2,1,1,2			Below 5.00m: becoming very gravelly sand.			
6.00-6.45 6.00-6.45	CPT N=5 B7	6.00	DRY	2,1/1,2,1,1						
7.40 7.50-7.95	D8 U9 0.40	7.50	DRY	50 blows		7.40	Dark blue grey, mottled orange brown MUDSTONE, recovered as friable, orange brown, sandy, gravelly clay. Gravel is angular to subangular, fine and coarse.			
8.00	D10					(1.60)				
9.00-9.45 9.00-9.45 9.00-9.45	SPT N=30 D12 B11	9.00	DRY	3,5/6,7,8,9		9.00  (1.50)	Orange brown SILTSTONE/SANDSTONE, recovered as stiff, slightly friable, sandy, slightly gravelly clay. Gravel is subangular to subrounded, fine and medium.			

<b>Remarks</b> Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.BH04	





<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 7.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 21/04/2008- 22/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.05-0.50	B1					(0.05) 0.05 (0.45)	MADE GROUND: Tarmacadam (driller's description).			
0.50-1.20	B2					0.50	MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel of sandstone.			
1.20-1.65 1.20-1.65	CPT N=14 B3	1.20	DRY	1,2/4,4,3,3			MADE GROUND: Medium dense, dark brown, clayey, very gravelly SAND with occasional pockets of clay. Gravel is angular to subrounded, fine to coarse including brick, sandstone and siltstone.			
2.00-2.45 2.00-2.45	CPT N=9 B4	2.00	DRY	1,2/2,3,2,2		(2.70)	At 1.20m: with occasional cobbles of brick.  Below 2.00m: loose, very silty gravel with fabrics. Gravel includes ash, ceramic and glass.			
3.00-3.45 3.00-3.45	CPT N=12 B5	3.00	DRY	1,1/2,3,3,4		3.20	Firm, mottled orange brown, sandy, slightly gravelly CLAY with occasional rootlets. Gravel is subangular to subrounded, fine and medium including sandstone, siltstone and coal.			
3.50	D6					(1.00)				
4.00-4.45	U7 0.45	4.00	DRY	120 blows		4.20				
4.50	D8						Orange brown SANDSTONE/SILTSTONE, recovered as slightly silty sand and angular to subangular, fine to coarse gravel.			
5.00-5.35 5.00-5.35 5.00-5.45	SPT 50/200 D10 B9	4.50	DRY	5,9/14,20,16		(2.85)				
6.00-6.36 6.00-6.36 6.00-6.45	SPT 50/210 D12 B11	6.00	DRY	7,12/15,19,16						
7.00-7.05 7.00-7.05	CPT 25*/25 50/20 D13	7.00	DRY	25/50		7.05	At 7.00m: grey brown.  Complete at 7.05m			

<b>Remarks</b> Chiselling from 6.70m to 7.00m for 1.00 hour. Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.BH05	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 1.50m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 22/04/2008- 23/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-0.70	B1					0.10 0.10	MADE GROUND: Tarmacadam (driller's description).		
0.70-1.20	B2					0.70	MADE GROUND: Light brown SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone, siltstone and limestone.		
1.20-1.56 1.20-1.56 1.20-1.65	SPT 50/210 D4 B3	1.20	DRY	5,10/15,20,15		(1.35)	Brown SANDSTONE/SILTSTONE recovered as clayey, sandy, angular to subangular, fine to coarse gravel.		
2.00-2.05 2.00-2.05	CPT 25*/20 50/30 D5	1.50	DRY	25/50		2.05	At 2.00m: recovered as dark brown, slightly sandy, angular to subangular, fine to coarse gravel.		
							Complete at 2.05m		

<b>Remarks</b> Chiselling from 1.60m to 2.00m for 1.00 hour. Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.BH06	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008- 18/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-1.20	B1						Grass over MADE GROUND: Medium dense, brown, slightly clayey, gravelly SAND. Gravel is angular to subrounded, fine to coarse including sandstone, concrete, brick, glass, ceramic and ash. Occasional plastic, wood, paper, wire and brick fragments.		
1.20-1.65 1.20-1.65	CPT N=11 B2	1.20	DRY	2,3/2,4,3,2					
2.00-2.45 2.00-2.45	CPT N=7 B3	1.50	DRY	1,2/2,1,2,2			Below 2.00m: loose.		
3.00-3.45 3.00-3.45	CPT N=6 B4	3.00	DRY	1,1/2,1,1,2					
4.00-4.45 4.00-4.45	CPT N=6 B5	4.00	DRY	1,1/1,1,2,2		(9.00)			
5.00-5.45 5.00-5.45	CPT N=12 B6	4.50	DRY	2,2/3,3,3,3			At 5.00m: medium dense.		
6.00-6.45 6.00-6.45	CPT N=9 B7	6.00	DRY	1,2/2,3,2,2					
7.50-7.95 7.50-7.95	CPT N=5 B8	7.50	DRY	1,1/1,2,1,1					
9.00-9.45 9.00 9.00-9.45 9.00-9.45	SPT N=30 D9 D11 B10	9.00	DRY	3,5/6,7,7,10		9.00	Orange brown SANDSTONE, recovered as very stiff, friable, very sandy, slightly gravelly clay. Gravel is angular to subrounded, fine to coarse.		

<b>Remarks</b> Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	JT
	<b>Figure No.</b> 40349.BH07	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008- 18/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.50-10.78 10.50-10.78 10.50-10.95	SPT 50/125 D13 B12	10.50	DRY	9,15/23,27		(3.00)			
12.00-12.09 12.00	SPT 25*/50 50/40 D14	12.00	DRY	25/50		12.00	Complete at 12.00m		

<b>Remarks</b>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> JT
	<b>Figure No.</b> 40349.BH07	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 1.50m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 23/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30	D1					(0.20)	MADE GROUND: Reinforced concrete (driller's description).		
0.50-1.20	B2					0.20 (0.30) 0.50	MADE GROUND: Yellow brown, angular to subangular, fine to coarse GRAVEL including sandstone.		
1.20-1.49 1.20-1.49 1.20-1.65	SPT 50/135 D4 B3	1.20	DRY	4,10/25,25		(1.50)	Yellow brown SANDSTONE, recovered as slightly clayey sand and angular to subrounded, fine to coarse gravel.		
2.00-2.04 2.00-2.04	CPT 25*/15 50/20 D5	1.50	DRY	25/50		2.00	At 2.00m: slightly sandy gravel		
							Complete at 2.00m		

<b>Remarks</b> Chiselling from 1.70m to 2.00m for 1.00 hour. Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	JT
	<b>Figure No.</b> 40349.BH08	





<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 10.50m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.50-10.55 10.50	CPT 25*/25 50/20 D12	10.50	DRY	25/50		(1.50) 10.50	Complete at 10.50m			

<b>Remarks</b> Chiselling from 10.20m to 10.50m for 1.00 hour.	<b>Scale (approx)</b> 1:50	<b>Logged By</b> JT
	<b>Figure No.</b> 40349.BH09	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 1.50m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 23/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20-0.60	B1					(0.10) 0.10	MADE GROUND: Tarmacadam (driller's description).		
0.60-1.20	B2					(0.10) 0.20 (0.40) 0.60	MADE GROUND: Roadstone fill (driller's description).		
1.20-1.63 1.20-1.65 1.20-1.65	SPT 50/275 D4 B3	1.20	DRY	5,7/8,12,18,12		(1.40)	MADE GROUND: Grey brown, fine to coarse SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone.		
2.00-2.05 2.00	CPT 25*/25 50/25 D5	1.50	DRY	25/50		2.00	Yellow brown SANDSTONE, recovered as fine to coarse sand and angular to subrounded, fine to coarse gravel.  At 2.00m: slightly sandy.		
							Complete at 2.00m		

<b>Remarks</b> Chiselling from 1.70m to 2.00m for 1.00 hour. Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	JT
	<b>Figure No.</b> 40349.BH10	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 21/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.05-0.50	B1					(0.05) 0.05 (0.45)	MADE GROUND: Tarmacadam (driller's description).			
0.50-1.20	B2					0.50	MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone.			
1.20-1.65 1.20-1.65	CPT N=8 B3	1.20	DRY	1,1/1,2,1,4			MADE GROUND: Loose, dark brown, very clayey SAND and angular to subrounded, fine to coarse GRAVEL with occasional plastic shards/bottles, pockets of clay, newspaper, metal shards, polystyrene and fragments of synthetic fibres. Gravel includes sandstone, glass, ceramics and ash.			
2.00-2.45 2.00-2.45	CPT N=8 B4	1.50	DRY	1,1/2,2,1,3						
3.00-3.45 3.00-3.45	CPT N=6 B5	3.00	DRY	1,2/1,1,2,2						
4.00-4.45 4.00-4.45	CPT N=5 B6	4.00	DRY	1,1/1,1,2,1						
5.00-5.45 5.00-5.45	CPT N=5 B7	4.50	DRY	1,0/1,1,1,2						
6.00-6.45 6.00-6.45	CPT N=5 B8	6.00	DRY	1,2/1,1,1,2		(10.80)				
7.50-7.95 7.50-7.95	CPT N=7 B9	7.50	DRY	1,2/2,1,3,1						
9.00-9.45 9.00-9.45	CPT N=6 B10	9.00	DRY	1,1/1,2,1,2						

<b>Remarks</b> Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.BH11	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 21/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.50-10.95 10.50-10.95	CPT N=6 B11	10.50	DRY	1,2/1,1,2,2		(10.80)				
11.30	D12					11.30	Orange brown SANDSTONE, recovered as sandy, angular to subangular, fine to coarse gravel.			
12.00-12.44 12.00-12.45	SPT 50/285 D13	12.00	DRY	5,8/11,13,15,11		(1.14)  12.44	Below 12.00m: light grey/cream, slightly sandy.			
							Complete at 12.44m			

<b>Remarks</b>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
	<b>Figure No.</b> 40349.BH11	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 10.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 18/04/2008-21/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.40-1.20	B1					(0.05) 0.05 (0.35) 0.40	MADE GROUND: Tarmacadam (driller's description). MADE GROUND: Brown sandstone fill (driller's description). MADE GROUND: Loose, dark brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL with some plastic bags, occasional pockets of clay and occasional paper and fabric fragments. Gravel includes ceramic, glass, brick, ash, sandstone and siltstone.			
1.20-1.65 1.20-1.65	CPT N=6 B2	1.20	DRY	1,1/1,2,1,2						
2.00-2.45 2.00-2.45	CPT N=6 B3	1.50	DRY	1,0/1,1,2,2						
3.00-3.45 3.00-3.45	CPT N=5 B4	3.00	DRY	1,2/2,1,1,1						
4.00-4.45 4.00-4.45	CPT N=5 B5	4.00	DRY	1,1/2,1,1,1		(7.80)				
5.00-5.45 5.00-5.45	CPT N=6 B6	5.00	DRY	2,1/1,2,1,2						
6.00-6.45 6.00-6.45	CPT N=7 B7	6.00	DRY	1,2/3,2,1,1			Below 6.00m: red brown.			
7.50-7.95 7.50-7.95	CPT N=10 B8	7.50	DRY	1,1/2,4,2,2			Below 7.00m: occasional cobbles and occasional fragments of slag and ash.			
8.20	D9					8.20	Orange brown SANDSTONE, recovered as sandy, angular to subangular, fine to coarse gravel.			
9.00-9.29 9.00-9.29 9.00-9.45	SPT 50/140 D11 B10	9.00	DRY	8,15/24,26		(1.80)	At 9.00m: very sandy gravel.			
10.00-10.06	50/30 CPT 25*/25	10.00	DRY	25/50		10.00	At 10.00m: gravel.			

<b>Remarks</b> Chiselling from 9.60m to 10.00m for 1.00 hour. Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.BH12	



**IAN FARMER  
ASSOCIATES**

**Site**  
New Mill Road, Holmfirth  
**Borehole  
Number**  
**BH12**

<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 10.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 18/04/2008- 21/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.00	D12									

<b>Remarks</b>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
	<b>Figure No.</b> 40349.BH12	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 16/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-1.20	B1						Grass over MADE GROUND: Medium dense, dark brown, slightly silty, gravelly, fine to coarse SAND. Gravel is subangular to rounded, fine to coarse including ash, brick, glass, ceramic. Occasional plastic, cloth and wood fragments.		
1.20-1.65 1.20-1.65	CPT N=12 B2	1.20	DRY	2,2/3,4,3,2					
2.00-2.45 2.00-2.45	CPT N=8 B3	1.50	DRY	2,3/3,2,1,2			Between 2.00m and 4.00m: loose, with occasional pockets of soft clay.		
3.00-3.45 3.00-3.45	CPT N=9 B4	3.00	DRY	1,1/3,2,2,2					
4.00-4.45 4.00-4.45	CPT N=12 B5	4.00	DRY	1,1/1,2,7,2		(9.30)			
5.00-5.45 5.00-5.45	CPT N=6 B6	4.50	DRY	1,2/1,1,2,2			At 5.00m: loose.		
6.00-6.45 6.00-6.45	CPT N=10 B7	6.00	DRY	1,1/2,2,3,3					
7.50-7.95 7.50-7.95	CPT N=11 B8	7.50	DRY	1,2/2,2,3,4			Below 7.50m: medium dense.		
9.00-9.45 9.00-9.45	CPT N=10 B9	9.00	DRY	1,2/2,2,3,3			At 9.00m: with some pockets of soft, grey clay.		
9.50	D10					(1.10)	Firm, grey CLAY with some partially decayed plant material.		

<b>Remarks</b> Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	JT
	<b>Figure No.</b> 40349.BH13	



<b>Boring Method</b> Cable Percussion	<b>Casing Diameter</b> 150mm to 12.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 16/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.40 10.50-10.95	D11 U12 0.30	10.50	DRY	120 blows		(1.10) 10.40	Weak MUDSTONE, recovered as dark grey, slightly sandy, slightly clayey gravel. Gravel is angular to subangular, fine to coarse.		
11.00	D13					(1.60)	At 10.40m: orange, mottled grey, slightly gravelly. Gravel is angular to subrounded, fine to coarse including mudstone.		
12.00-12.12 12.00	SPT 25*/60 50/55 D14	12.00	DRY	25/50		12.00	Complete at 12.00m		

<b>Remarks</b>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> JT
	<b>Figure No.</b> 40349.BH13	

**Figure A2.2**

**Window Sample Hole Records**



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 25/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.10					0.10	MADE GROUND: Concrete.			
0.50	J2					MADE GROUND: Medium dense, brown SAND and angular to subrounded, fine to coarse GRAVEL with occasional boulders. Gravel includes brick, sandstone and concrete.			
0.50	V3								
0.50	D1								
1.00-1.45	SPT N=15	DRY	2,3/3,4,3,5		(1.50)	Below 1.00m: gravel predominately of ash.			
1.00-1.45	D4								
1.30	D5								
1.30	J6								
1.30	V7								
1.60					1.60	Below 1.50m: orange brown. Gravel is predominately of sandstone and ash.			
1.70	V10								
1.70	D8								
1.70	J9								
2.00-2.45	SPT N=9	DRY	2,3/3,2,2,2		(2.90)	Firm, brown, sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine and medium including sandstone, siltstone and coal.			
2.00-2.45	D11								
2.70	J13					At 4.50m: driller notes obstruction. Complete at 4.50m			
2.70	V14								
2.70	D12								
3.00-3.45	SPT N=11	DRY	1,1/3,2,3,3						
3.00-3.45	D15								
3.30	D16								
3.30	J17								
3.30	V18								
3.70	D19								
3.70	J20								
3.70	V21								
4.00-4.45	SPT N=13	DRY	1,2/2,3,2,6		4.50				
4.00-4.45	D22								

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS01	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 25/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.10)	MADE GROUND: Tarmacadam.		
					0.10			
					(0.20)	MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel of sandstone.		
					0.30			
0.50	J2							
0.50	V3							
0.50	D1							
1.00-1.45	SPT N=10	DRY	1,2/3,2,3,2			MADE GROUND: Loose, dark brown SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone, concrete and ash. Slight hydrocarbon odour noted.		
1.00-1.45	D4				(1.90)	Below 1.10m: sand and gravel is predominately of ash.		
1.50	D5							
1.50	J6							
1.50	V7							
2.00-2.45	SPT N=6	DRY	1,1/1,2,1,2					
2.00-2.45	D8				2.20			
2.30	V11				(0.30)	MADE GROUND: Firm, dark grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine and medium including sandstone, siltstone and ash. Slight hydrocarbon odour noted.		
2.30	J10				2.50			
2.70	J13				(0.50)			
2.70	V14							
2.70	D12				3.00	Firm, mottled orange grey, slightly sandy, slightly gravelly CLAY with occasional rootlets. Gravel is subangular to subrounded, fine and medium including sandstone, siltstone, mudstone and quartz. (Possible weathered mudstone).		
3.00-3.45	SPT N=4	DRY	1,1/0,1,1,2					
3.00-3.45	D15							
3.50	D16							
3.50	J17							
3.50	V18							
4.00-4.45	SPT N=22	DRY	1,3/4,5,6,7					
4.00-4.45	D19				(2.45)	Grey MUDSTONE, recovered as stiff, grey, friable, sandy, gravelly CLAY. Gravel is angular to subangular, fine and medium.		
4.50	D20							
4.50	J21							
4.50	V22							
5.00-5.45	SPT N=46	DRY	4,11/11,11,12,12			At 5.00m: very stiff.		
5.00-5.45	D23				5.45			
						Complete at 5.45m		

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS02	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 29/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.50	V3				(0.20)	MADE GROUND: Concrete.	[Cross-hatch pattern]		[Dotted pattern]
0.50	J2				0.20				[Diagonal lines]
0.50	D1				(0.20)	MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel of sandstone.	[Cross-hatch pattern]		[Diagonal lines]
1.00-1.45	SPT N=10	DRY	2,2/2,2,3,3		0.40				[Diagonal lines]
1.00-1.45	D6								[Dotted pattern]
1.20	V5					MADE GROUND: Loose, dark brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone, ash, brick and concrete. Below 1.10m: gravel is predominately of ash.	[Cross-hatch pattern]		[Dotted pattern]
1.20	J4								[Diagonal lines]
2.00-2.45	SPT N=7	DRY	2,1/2,1,2,2		(3.60)	At 1.60m: occasional cobbles of sandstone. Below 1.70m: gravel is predominately of sandstone.	[Cross-hatch pattern]		[Dotted pattern]
2.00-2.45	D7								[Diagonal lines]
2.50	V9								[Dotted pattern]
2.50	J8								[Diagonal lines]
3.00-3.45	SPT N=10	DRY	3,4/4,2,2,2						[Dotted pattern]
3.00-3.45	D10								[Diagonal lines]
3.50	V13								[Dotted pattern]
3.50	J12								[Diagonal lines]
3.50	D11				4.00	At 4.00m: driller notes obstruction.	[Cross-hatch pattern]		[Dotted pattern]
						Complete at 4.00m			

<b>Remarks</b> Window sample hole collapsed at 2.20m. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS03	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 24/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
					(0.10) 0.10	MADE GROUND: Concrete.			
0.50 0.50 0.50	J2 V3 D1					MADE GROUND: Loose, dark brown, slightly silty SAND and angular to subangular, fine to coarse GRAVEL. Gravel includes concrete brick and ceramic.			
1.00-1.45 1.00-1.45 1.20 1.20 1.20	SPT N=7 D4 D5 J6 V7	DRY	1,2/2,1,2,2		(2.20)	Below 1.10m: clayey.			
1.70 1.70 1.70 2.00-2.45 2.00-2.45	D8 J9 V10 SPT N=8 D11	DRY	1,2/2,3,2,1		2.30				
2.50 2.50 2.50	J13 V14 D12				(0.40) 2.70	MADE GROUND: Soft, friable, dark brown, sandy, gravelly CLAY. Gravel is angular to subrounded, fine to coarse including brick, ash and siltstone.			
3.00-3.45 3.00-3.45	SPT N=7 D15	DRY	2,3/2,2,1,2		(1.10)	Soft, brown, slightly sandy, slightly gravelly CLAY of intermediate plasticity. Gravel is subangular to subrounded, fine and medium including sandstone and siltstone (possible made ground).			
3.50 3.50 3.50	D16 J17 V18				3.80 (0.20) 4.00				
4.00-4.45 4.00-4.45	SPT N=14 D19	DRY	1,2/3,3,4,4		(1.00)	Firm, grey, occasionally mottled orange, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine and medium including sandstone, siltstone and quartz. Slight organic odour noted.			
4.50 4.50 4.50	D20 J21 V22				5.00	Blue grey, mottled orange brown MUDSTONE, recovered as stiff, friable, sandy, gravelly CLAY. Gravel is angular to subangular, fine and medium.			
5.00-5.45 5.00-5.45	SPT N=21 D23	DRY	2,3/4,5,6,6			Complete at 5.00m			

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS04	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 24/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50 0.50	J2 V3 D1				(0.10) 0.10	MADE GROUND: Concrete.		
1.00-1.45 1.00 1.00 1.00 1.00-1.45 1.50 1.50 1.50	SPT N=5 D4 J6 V7 D5 V10 D8 J9	DRY	1,1/2,1,1,1		(3.40)	MADE GROUND: Loose, dark brown SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes ash, concrete and sandstone. Sand is predominately of ash.		
2.00-2.45 2.00-2.45	SPT N=4 D11	DRY	1,1/1,1,1,1			Below 3.00m: medium dense.		
2.50 2.50 2.50	D12 J13 V14				3.50	Soft, grey, sandy, slightly gravelly CLAY of high plasticity. Gravel is subangular to subrounded, fine to coarse including sandstone, siltstone and coal.		
3.00-3.45 3.00-3.45 3.20	SPT N=13 D15 J16	DRY	1,1/2,3,4,4		(0.95)	Below 3.70m: firm, mottled orange brown grey.		
3.80 3.80 3.80 4.00-4.45 4.00-4.45	D17 J18 V19 SPT N=39 D20	DRY	6,8/9,9,10,11		4.45	Below 4.00m: window sample hole collapsed.		
						Complete at 4.45m		

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS05	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 25/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00-1.45 1.00-1.45	SPT N=6 D1	DRY	1,1/2,1,1,2		(0.20) 0.20 (0.20) 0.40	MADE GROUND: Concrete. MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL of sandstone.		
1.50 1.50 1.50	D2 J3 V4				1.20 (0.60)	Soft, orange/dark brown, sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse including sandstone and siltstone (possible made ground).		
2.00-2.45 2.00-2.45	SPT N=6 D5	DRY	1,1/1,1,2,2		1.80	Soft, friable, dark grey, sandy, gravelly CLAY. Gravel is angular to subangular, fine to coarse of mudstone (possible made ground).		
2.50 2.50 2.50	D6 J7 V8				(1.70)			
3.00-3.45 3.00-3.45	SPT N=10 D9	DRY	1,1/2,2,3,3		3.50	Firm, orange brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine and medium including sandstone and quartz.		
3.50 3.50 3.70 3.90 3.90	V11 J10 J12 D13 V14				(1.10)			
4.00-4.45 4.00-4.45 4.40 4.40	SPT N=22 D15 J16 V17	DRY	2,3/4,5,6,7		4.60	Between 3.50m and 3.60m: light grey with slight organic odour noted. Below 4.20m: stiff, sandy.		
4.80	D18				(0.40)	Grey MUDSTONE, recovered as stiff, friable, sandy, slightly gravelly CLAY. Gravel is angular to subangular, fine and medium.		
5.00-5.45 5.00-5.45	SPT N=30 D19	DRY	2,4/5,7,8,10		5.00	Complete at 5.00m		

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS06	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 29/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.50	V3				(0.20)	MADE GROUND: Concrete.	[Cross-hatch pattern]		[Dotted pattern]
0.50	J2				0.20	MADE GROUND: Brick obstruction/wall.	[Cross-hatch pattern]		[Diagonal lines]
0.50	D1				0.40	MADE GROUND: Dark brown, slightly clayey SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes ash, brick and sandstone.	[Cross-hatch pattern]		[Diagonal lines]
1.00-1.45	SPT N=9	DRY	1,2/2,3,2,2		1.10	MADE GROUND: Very soft, grey brown, sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse including brick, ash and sandstone.	[Cross-hatch pattern]		[Diagonal lines]
1.00-1.45	D4								
1.50	V7								
1.50	J6								
1.50	D5								
2.00-2.45	SPT N=8	DRY	1,0/1,2,3,2		(2.50)	Below 2.50m: slight hydrocarbon odour noted.	[Cross-hatch pattern]		[Diagonal lines]
2.00-2.45	D8								
2.50	V10								
2.50	J9								
2.60	D11								
3.00-3.45	SPT N=23	DRY	2,2/1,2,2,18						
3.00-3.45	D12								
3.40	V14				3.60	At 3.50m: fragments of cast iron pipe. At 3.60m: driller notes obstruction.	[Cross-hatch pattern]		[Diagonal lines]
3.40	J13					Complete at 3.60m			

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS07	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 24/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
					(0.10) 0.10	MADE GROUND: Tarmacadam.			
0.30 0.30 0.50 0.50 0.50	V2 J1 D3 J4 V5					MADE GROUND: Loose, cream/grey SAND and subangular to subrounded, fine to coarse GRAVEL of limestone.			
1.00-1.45 1.00-1.45	SPT N=6 D6	DRY	1,1/2,2,1,1		(1.70)	Below 0.40m: orange brown, silty.			
1.60 1.60	J7 V8				1.80				
2.00-2.45 2.00-2.45	SPT N=7 D9	DRY	1,1/1,1,2,3			MADE GROUND: Soft, dark brown, sandy, gravelly CLAY. Gravel is subangular to subrounded, fine to coarse including sandstone, brick and ash.			
2.70 2.70 3.00-3.45 3.00-3.45	V11 J10 SPT N=8 D12	DRY	2,1/3,2,1,2		(3.70)				
4.00-4.45 4.00-4.45	SPT N=7 D13	DRY	1,2/2,2,1,2			Below 4.00m: light brown, slightly gravelly.			
5.00-5.45 5.00-5.45 5.00-6.00	SPT N=9 D14 J15	DRY	1,2/2,3,2,2		5.50				
					(1.00)	Dark grey, silty SAND. Strong hydrocarbon odour noted.			
6.70 6.70 6.70 6.80	D16 J17 V18 D19				6.50 (0.50) 7.00	Soft, mottled orange brown, slightly sandy, slightly gravelly CLAY of low plasticity with occasional rootlets. Gravel is subangular to subrounded, fine and medium including sandstone and siltstone. Slight hydrocarbon odour noted. Between 6.60m and 6.70m: band of subangular to subrounded, fine and medium gravel. Below 6.70m: firm, friable, dark grey with some plant material.			
						Complete at 7.00m			

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS08	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 25/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
					(0.10) 0.10	MADE GROUND: Concrete.			
0.50 0.50 0.50	J2 V3 D1				(1.40)	MADE GROUND: Loose, dark brown, slightly silty SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes concrete, brick, ash and sandstone.  Below 1.00m: gravelly sand.			
1.00-1.45 1.00 1.00 1.00 1.00-1.45	SPT N=5 D4 J6 V7 D5	DRY	1,1/2,1,1,1		1.50	MADE GROUND: Soft, friable, brown, sandy, slightly gravelly CLAY. Gravel is angular to subangular, fine to coarse including mudstone and siltstone.			
1.70 1.70 1.70 2.00-2.45 2.00-2.45	V10 D8 J9 SPT N=9 D11	DRY	1,1/2,2,2,3		(1.50)	Below 1.80m: gravelly.  Below 2.50m: orange brown with occasional pockets of dark brown/black silt. Slight organic odour noted.			
2.70 2.70 3.00-3.45 3.00-3.45	V13 J12 SPT N=6 D14	DRY	1,1/1,1,2,2		3.00	MADE GROUND: Loose, dark brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel includes ash and sandstone.			
3.50 3.50	J15 V16				(1.00)				
4.00-4.45 4.00-4.45	SPT N=7 D17	DRY	1,1/2,2,1,2		4.00	Firm, grey, sandy, slightly gravelly CLAY of high plasticity. Gravel is subangular to subrounded, fine and medium including sandstone and siltstone.			
4.40	D18				4.50				
4.70 4.70 5.00-5.45 5.00-5.45	J19 V20 SPT N=25 D21	DRY	1,2/4,5,7,9		(0.50) 5.00	Firm, mottled orange brown grey, sandy, slightly gravelly CLAY. Gravel is angular to subangular, fine and medium including mudstone and siltstone (possible weathered mudstone).			
						Complete at 5.00m			

<b>Remarks</b> Excavating from 0.00m to 1.20m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS09	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 24/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
					(0.20)	MADE GROUND: Concrete.			
0.50	J2				0.20	MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone and limestone.			
0.50	V3				(0.20)				
0.50	D1				0.40				
1.00-1.45	SPT N=6	DRY	1,1/1,2,1,2		(1.60)	MADE GROUND: Loose, dark brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes ash, slag, sandstone and brick.			
1.50	D5					At 1.50m: very clayey. Between 1.50m and 1.60m: grey, silty sand. At 1.70m: band of gravel.			
1.50	J6								
1.50	V7								
2.00-2.45	SPT N=2	DRY	0,0/0,0,1,1		2.00	MADE GROUND: Very soft, orange, sandy, slightly gravelly CLAY. Gravel is subrounded, fine to coarse of sandstone.			
2.00-2.45	D8				(0.70)				
2.50	D9					MADE GROUND: Firm, grey, slightly sandy, slightly gravelly CLAY. Gravel is subrounded, fine and medium including sandstone and siltstone.			
2.60	J10				2.70				
2.60	V11								
3.00-3.45	SPT N=6	DRY	1,1/2,2,1,1			Below 3.50m: very soft, occasional dark brown.			
3.00-3.45	D12								
3.70	J14					(4.00)			
3.70	V15								
3.70	D13								
4.00-4.45	SPT N=5	DRY	1,1/1,1,2,1			Between 5.60m and 5.70m: band of wet, brown sand.			
4.00-4.45	D16								
4.70	J17					Below 6.40m: grey.			
4.70	V18								
4.70	D19								
5.00-5.45	SPT N=2	DRY	1,0/0,0,1,1			Firm, dark grey, sandy, slightly gravelly CLAY with some rootlets. Gravel is subangular to subrounded, fine and medium including sandstone and siltstone.			
5.00-5.45	D19								
5.70	J20					Complete at 7.00m			
5.70	V21				6.70				
5.70	D22				(0.30)				
6.00-6.45	SPT N=7	DRY	1,1/1,2,3,1		7.00				
6.00-6.45	D22								
6.70	J23								
6.70	V24								
7.00-7.45	SPT N=13	DRY	2,5/5,3,2,3						
7.00-7.45	D25								

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS10	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 25/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
					(0.10) 0.10	MADE GROUND: Concrete.			
0.50 0.50 0.50	J2 V3 D1				(1.40)	MADE GROUND: Very loose, brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone, ash and slag.			
1.00-1.45 1.00-1.45	SPT N=1 D4	DRY	0,0/0,0,1,0		1.50				
1.50 1.50 1.50	D5 J6 V7				(0.30) 1.80 (0.10)	MADE GROUND: Very soft, orange brown, sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse of sandstone.			
2.00-2.45 2.00-2.45	SPT N=2 D8	DRY	0,0/0,1,0,1		1.90 (0.90)	MADE GROUND: Black, silty SAND.  MADE GROUND: Very loose, red brown SAND and angular to subrounded, fine and medium GRAVEL. Gravel includes ash.			
2.50 2.50 2.50	J10 V11 D9				2.80				
3.00-3.45 3.00-3.45	SPT N=2 D12	DRY	1,0/0,1,0,1		(2.65)	MADE GROUND: Soft, grey, sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse of sandstone.			
3.90 3.90 4.00-4.45 4.00-4.45	D13 V14 SPT N=5 D15	DRY	2,1/1,1,2,1		5.45				
4.90 5.00-5.45 5.00-5.45	D16 SPT N=7 D17	DRY	2,1/2,1,2,2			Complete at 5.45m			

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS11	




<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 29/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
1.00-1.45	SPT N=11 D4	DRY	2,2/3,3,3,2		(0.80)	MADE GROUND: Concrete.			
1.00-1.45					0.80	MADE GROUND: Soft, grey brown, sandy, gravelly CLAY with occasional pockets of sand. Gravel is subangular to subrounded, fine to coarse including sandstone and brick.			
1.50	D1				(2.10)				
1.50	J2								
1.50	V3								
2.00-2.45	SPT N=5 D5	DRY	1,2/1,1,2,1			At 2.50m: band of gravelly sand.			
2.00-2.45	D6								
2.20	J6								
2.50	J7								
3.00-3.45	SPT N=3 D8	DRY	1,0/1,1,0,1		2.90	MADE GROUND: Very loose, dark brown, clayey, very gravelly SAND. Gravel is angular to subrounded, fine to coarse including brick, ash and sandstone.			
3.00-3.45					(0.90)				
3.50	V11								
3.50	D9								
3.50	J10								
4.00-4.45	SPT N=7 D12	DRY	2,2/1,2,2,2			MADE GROUND: Soft, grey brown, sandy, gravelly CLAY. Gravel is subangular to subrounded, fine to coarse including sandstone and ash.			
4.00-4.45									
4.70	V14								
4.70	J13								
4.80	D15								
5.00-5.45	SPT N=5 D16	DRY	1,0/1,1,1,2						
5.00-5.45									
5.50	J17								
5.50	V18								
5.60	D19				(3.70)				
6.00-6.45	SPT N=7 D20	MOIST	1,1/1,2,2,2						
6.00-6.45									
6.60	J21		Slow seepage(1) at 6.50m.						
6.60	V22								
6.70	D23								
7.00-7.45	SPT N=16 D24	6.00	2,3/4,5,4,3			At 6.70m: Very soft. Slight hydrocarbon odour noted.			
7.00-7.45					7.50				
						Complete at 7.50m			

<b>Remarks</b> Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	GP
	<b>Figure No.</b> 40349.WS12	

<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>		<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>		<b>Dates</b> 24/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.50) 0.50	MADE GROUND: Concrete (driller's description).  Complete at 0.50m		

<b>Remarks</b> Window sample hole terminated at 0.50m due to concrete obstruction - redrilled as WS12.	<b>Scale (approx)</b> 1:50	<b>Logged By</b> n/a
	<b>Figure No.</b> 40349.WS12A	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 25/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr		
0.70	J2	DRY	1,0/0,0,0,0		(0.70)	MADE GROUND: Yellow brown, fine to coarse SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone.					
0.70	J3						0.70	MADE GROUND: Very soft, brown, slightly sandy, gravelly CLAY. Gravel is subangular to subrounded, fine and medium including sandstone.			
0.70	V4										
1.00-1.45	SPT N=0										
0.70	D1										
1.00-1.45	D5										
								(2.00)			
1.70	D6										
1.70	J8										
1.70	J7										
2.00-2.45	SPT N=0										
1.70	V9										
2.00-2.45	D10										
					2.70						
2.70	V14	DRY	1,0/0,1,1,1		(1.10)	Very soft, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine and medium including sandstone.					
2.70	D11										
2.70	J13										
3.00-3.45	SPT N=3										
2.70	J12										
3.00-3.45	D15										
					3.80						
3.80	D16	DRY	2,3/5,7,7,9		(0.60)	Stiff, grey brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine and medium including mudstone and sandstone.					
3.80	J17										
3.80	J18										
4.00-4.45	SPT N=28										
3.80	V19										
4.00	D20										
4.00	J22										
4.00	J21										
4.00	V23										
4.00-4.45	D24										
4.50	V28										
4.50	D25										
4.50	J27										
4.50	J26										
					4.90						
						Complete at 4.90m					

<b>Remarks</b> Window sample hole terminated at 4.90m due to refusal. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	JT
	<b>Figure No.</b> 40349.WS13	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 24/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.10) 0.10	MADE GROUND: Concrete.		
					(0.60)	MADE GROUND: Brown sandstone fill.		
					0.70 (0.10) 0.80	MADE GROUND: Concrete.		
						Complete at 0.80m		

<b>Remarks</b> Window sample hole terminated at 0.80m due to obstruction - redrilled as WS13. Excavating from 0.00m to 0.80m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	n/a
	<b>Figure No.</b> 40349.WS13A	

**Figure A2.3**

**Phase 2 Window Sample Hole Records**



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b> 100mm to 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 05/09/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00	J1				(0.15) 0.15 (0.25) 0.40 (0.30) 0.70	MADE GROUND: Light grey concrete. MADE GROUND: Light grey, sandy, angular and subangular, fine to coarse GRAVEL of limestone. MADE GROUND: Grey concrete.		
2.00	J2					MADE GROUND: Firm, brown and dark grey, slightly sandy, gravelly CLAY with some cobbles of sandstone. Gravel is angular to subrounded, fine to coarse including mudstone, sandstone and brick.		
3.00	J3				(4.10)	Below 3.00m: dark grey, slightly sandy, slightly gravelly clay. Slight organic odour noted.		
4.00	J4							
5.00	J5				4.80	Weak, dark grey MUDSTONE, recovered as stiff, gravelly clay. Gravel is angular, fine and medium .		
6.00	D6				(1.60)	Below 6.00m: very stiff.		
					6.40	Complete at 6.40m		

<b>Remarks</b> Samples marked as J comprise 1x tub, 1 x amber jar, 1 x vial. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	TB
	<b>Figure No.</b> 40349.WS214	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b> 100mm to 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 05/09/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00	J1				(0.15) 0.15 (0.15) 0.30 (0.60) 0.90	MADE GROUND: Tarmacadam. MADE GROUND: Light grey, sandy, angular and subangular, fine to coarse GRAVEL of limestone. MADE GROUND: Brown, slightly clayey, sandy GRAVEL with many cobbles of sandstone and brick. Gravel is angular to subrounded, fine to coarse including mudstone, sandstone and brick. MADE GROUND: Firm, dark brown and brown, sandy, gravelly CLAY with some cobbles of sandstone. Gravel is angular to subrounded, fine to coarse including mudstone, sandstone and brick.		
2.00	J2					Between 1.40m and 1.50m: black, angular and subangular, fine and medium gravel of tarmacadam.		
3.00	J3					Between 3.10m and 3.20m: dark grey, medium to coarse sand.		
4.00	J4				(6.10)			
5.00	J5							
6.00	J6							
7.00	J7				7.00	Complete at 7.00m		

<b>Remarks</b> Samples marked as J comprise 1x tub, 1 x amber jar, 1 x vial. Excavating from 0.00m to 1.00m for 1 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	TB
	<b>Figure No.</b> 40349.WS215	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b> 100mm to 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 04/09/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.60	J1				(0.20) 0.20 (0.30) 0.50	MADE GROUND: Light grey concrete.		
1.50	J2				(2.50)	MADE GROUND: Light brown, sandy, angular and subangular, fine to coarse GRAVEL of limestone.		
2.50	J3				3.00	MADE GROUND: Brown, very sandy, angular to subrounded, fine to coarse GRAVEL including sandstone, mudstone, brick, concrete and ceramic fragments. Between 0.50m and 1.00m: gravel includes clinker. Below 1.00m: clayey.		
3.50	J4				(3.40)	MADE GROUND: Firm, brown, slightly sandy, slightly gravelly CLAY with occasional cobbles of sandstone. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone, brick and clinker. Slight organic odour noted.		
5.00	J5				6.40			
6.00	J6							
						Complete at 6.40m		

<b>Remarks</b> Samples marked as J comprise 1x tub, 1 x amber jar, 1 x vial. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	TB
	<b>Figure No.</b> 40349.WS216	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b> 100mm to 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 04/09/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00	J1				(0.20) 0.20	MADE GROUND: Pink brown concrete.		
					(0.80)	MADE GROUND: Brown, sandy, angular and subangular, fine to coarse GRAVEL of limestone.		
2.00	J2				1.00	MADE GROUND: Firm, brown, sandy, gravelly CLAY with occasional cobbles of sandstone. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone, brick and glass.		
3.00	J3					Between 2.70m and 3.10m: band of dark brown, sandy gravel.		
4.00	J4				(5.60)	Between 3.90m and 4.50m: band of black, silty sand.  Below 4.50m: with some cobbles of sandstone.		
5.00	J5					Between 5.00m and 6.00m: cobble obstruction (poor recovery).		
6.50	J6				6.60 (0.10)	MADE GROUND: COBBLES of sandstone.		
					6.70 (0.30)	Very weak, grey MUDSTONE, highly weathered.		
					7.00	Complete at 7.00m		

<b>Remarks</b> Samples marked as J comprise 1x tub, 1 x amber jar, 1 x vial. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	TB
	<b>Figure No.</b> 40349.WS217	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b> 100mm to 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 04/09/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00	J1				(0.15) 0.15 (0.45) 0.60	MADE GROUND: Light grey concrete. MADE GROUND: Light grey, sandy, angular and subangular, fine to coarse GRAVEL of limestone.		
2.00	J2				(2.20)	MADE GROUND: Dark brown, gravelly, fine to coarse SAND. Gravel is angular to subrounded fine to coarse including sandstone, clinker, mudstone and bitumen.  Below 1.40m: red brown with crushed brick fragments.		
3.00	J3				2.80	MADE GROUND: Firm, brown, sandy, gravelly CLAY with many cobbles of sandstone. Gravel is subangular to subrounded, fine to coarse including sandstone, mudstone and brick.		
4.00	J4				(2.00)			
5.00	J5				4.80 (0.90)	Firm, brown, mottled light grey and orange, slightly sandy, slightly gravelly CLAY with some cobbles of sandstone. Gravel is angular to subrounded, fine and medium including sandstone and mudstone.		
6.00	J6				5.70 (1.30)	Very weak, light grey, mottled brown and orange MUDSTONE, recovered as stiff clay.		
7.00	D7	5.80			7.00	Below 6.70m: weak.  Complete at 7.00m		

<b>Remarks</b> Samples marked as J comprise 1x tub, 1 x amber jar, 1 x vial. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	TB
	<b>Figure No.</b> 40349.WS218	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b> 100mm to 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 04/09/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1				0.15 0.15 (0.15) 0.30	MADE GROUND: Tarmacadam. MADE GROUND: Grey concrete.		
1.50	J2				(0.90) 1.20 (1.30)	MADE GROUND: Brown, very sandy, angular and subangular, fine to coarse GRAVEL including limestone and sandstone. Some subangular cobbles of sandstone. MADE GROUND: Dark brown, gravelly, fine to coarse SAND. Gravel is subangular to subrounded, fine to coarse including brick, sandstone, concrete and mudstone.		
2.50	J3				2.50 (1.30)	MADE GROUND: Firm, grey brown, mottled orange, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse including mudstone, sandstone and brick fragments.		
3.50	J4				3.80 (0.80)	MADE GROUND: Light brown, sandy, angular and subangular, fine to coarse GRAVEL including sandstone and brick.		
4.50	J5				Below 4.40m: black 4.60			
5.00-6.00	D7				4.60	MADE GROUND: Firm, grey brown, sandy, gravelly CLAY with occasional cobbles of brick and sandstone. Gravel is subangular to subrounded, fine to coarse including brick, sandstone and mudstone.		
5.50	J6				Between 5.30m and 5.50m: band of gravel (wet). Slight hydrocarbon odour noted. (2.10)			
6.00	J8				Between 6.00m and 6.10m: moderate hydrocarbon odour noted. 6.70 (0.30) 7.00			
					6.70 (0.30) 7.00	Stiff, light grey and brown, mottled orange, slightly sandy, slightly gravelly CLAY. Gravel is angular, fine and medium of mudstone (possible weathered mudstone). Complete at 7.00m		

<b>Remarks</b> Samples marked as J comprise 1x tub, 1 x amber jar, 1 x vial. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	TB
	<b>Figure No.</b> 40349.WS219	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b> 100mm to 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 03/09/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1				0.40	MADE GROUND: Light grey, sandy, angular and subangular, fine to coarse GRAVEL of limestone.		
1.50	J2				1.50	MADE GROUND: Dark brown, gravelly, fine to coarse SAND. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone, brick and ceramic fragments.		
2.50	J3				1.90	MADE GROUND: Firm, light brown, sandy, gravelly CLAY with occasional cobbles of sandstone. Gravel is angular and subangular, fine to coarse including sandstone and mudstone.		
3.50	J4				3.70	Light grey and brown, mottled orange MDUSTONE, highly weathered, recovered as a stiff, gravelly clay. Gravel is angular, fine and medium.		
4.50	J5							
5.50	J6				(3.30)	Between 5.00m and 6.10m: grey.		
6.50	J7				7.00	Complete at 7.00m		

<b>Remarks</b> Samples marked as J comprise 1x tub, 1 x amber jar, 1 x vial. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	TB
	<b>Figure No.</b> 40349.WS220	



<b>Excavation Method</b> Drive-in Window Sampler	<b>Dimensions</b> 100mm to 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 03/09/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1				(1.80)	MADE GROUND: Brown and light brown, slightly clayey, sandy, angular to subrounded, fine to coarse GRAVEL including sandstone, mudstone, limestone, concrete and brick. Some subangular cobbles of brick and sandstone.		
1.50	J2				1.80	MADE GROUND: Firm, brown, sandy, slightly gravelly CLAY with occasional cobbles of sandstone and concrete. Gravel is angular to subrounded, fine to coarse including mudstone, sandstone and concrete.		
2.50	J3				(2.30)			
3.50	J4				4.10			
4.50	J5				(0.80)	Firm, grey and brown, mottled light grey and orange, slightly sandy, slightly gravelly CLAY with some cobbles of sandstone. Gravel is subangular to subrounded, fine to coarse including sandstone and mudstone.		
					4.90	Below 4.50m: stiff.		
5.50	J6				(2.10)	Very weak, dark grey, mottled orange MUDSTONE, recovered as stiff, gravelly clay. Gravel is angular, fine and medium.		
						Below 5.90m: weak.		
6.50	J7				7.00	Complete at 7.00m		

<b>Remarks</b> Samples marked as J comprise 1x tub, 1 x amber jar, 1 x vial. Excavating from 0.00m to 1.00m for 1.00 hour.	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	TB
	<b>Figure No.</b> 40349.WS222	

**Figure A2.4**  
**Trial Pit Records**








<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.80m x 0.80m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 18/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50 0.50	D2 HSV 80kPa B1		Water strike(1) at 0.50m. 76,80,84/Av. 80.00		(0.40) 0.40	MADE GROUND: Tarmacadam.		∇1
1.00 1.00 1.00	HSV 82kPa D4 B3		78,82,86/Av. 82.00		(1.50)	Firm, orange, mottled grey, slightly sandy, slightly gravelly CLAY of high plasticity. Gravel is subangular to subrounded, fine to coarse including sandstone and siltstone. Below 0.80m: mottled orange/blue grey.		
2.00 2.00	D6 B5				1.90	Below 1.70m: brown, friable, sandy, slightly gravelly.		
3.00 3.00	B7 D8				(1.10)	Dark orange brown MUDSTONE/SILTSTONE, recovered as slightly clayey, sandy, angular to subangular, fine to coarse gravel. Below 2.50m: blue grey.		
					3.00	Complete at 3.00m		







<b>Plan</b> .	<b>Remarks</b>		
	Groundwater located at 0.50m. Trial pit remained stable throughout excavation.		
	<b>Scale (approx)</b>	<b>Logged By</b>	<b>Figure No.</b>
	1:50	GP	40349.TP01

<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.90m x 0.80m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 18/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50	D2 B1				(0.05) 0.05 (0.25) 0.30	MADE GROUND: Tarmacadam.  MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone and limestone. At 0.30m: geotextile.		
1.00 1.00	D4 B3					MADE GROUND: Brown, slightly clayey SAND and angular to subrounded, fine to coarse GRAVEL with occasional boulders. Gravel includes brick, concrete, glass and ceramic fragments. Occasional fabric, glass bottles and some plastic fragments.		
2.00 2.00	D6 B5				(2.70)	At 1.00m: slight organic odour noted. Below 1.00m: red brown.  At 2.50m: occasional pockets of silty sand.		
3.00 3.00	B7 D8				3.00	Below 2.70m: gravel is predominately of ash and slag.  Complete at 3.00m		

<b>Plan</b> 	<b>Remarks</b> Trial pit remained dry throughout excavation. Major spalling between 0.00m and 0.50m.		
	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP	<b>Figure No.</b> 40349.TP02

<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.50m x 0.70m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.40	D2				0.40	Grass over Brown, clayey, sandy, slightly gravelly TOPSOIL with some rootlets. Gravel is subangular to subrounded, fine to coarse of sandstone.		
0.40	B1		98,96,100/Av. 98.00			Firm, orange brown, sandy, slightly gravelly CLAY of intermediate plasticity. Gravel is subangular to subrounded, fine to coarse of sandstone.		
0.50	HSV 98kPa							
0.50	D4							
0.50	B3		184,176,180/Av. 180.00					
1.00	HSV 180kPa							
1.00	D6				(1.50)	Below 1.00m: stiff, mottled blue grey/orange brown.		
1.00	B5							
2.00					1.90	Below 1.70m: brown.		
2.00	D8					Orange brown SILTSTONE/SANDSTONE, recovered as slightly silty sand and angular to subrounded, fine to coarse gravel.		
2.00	B7				(1.10)			
3.00	B9				3.00	At 3.00m: gravel is angular to subangular.		
3.00	D10		Water strike(1) at 3.00m.					√1
						Complete at 3.00m		

<b>Plan</b> .	<b>Remarks</b> Groundwater located at 3.00m. Trial pit remained stable throughout excavation.		
	<table border="1"> <tr> <td><b>Scale (approx)</b> 1:50</td> <td><b>Logged By</b> GP</td> <td><b>Figure No.</b> 40349.TP03</td> </tr> </table>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP	<b>Figure No.</b> 40349.TP03	





<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.80m x 0.70m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30 0.30 0.50 0.50	D2 B1 D4 B3				0.10 0.10 (0.30) 0.40	Grass over MADE GROUND: Light brown, very clayey, sandy, slightly gravelly TOPSOIL with rootlets. Gravel is subangular to subrounded, fine to coarse including sandstone and brick.		
1.00 1.00	D6 B5					MADE GROUND: Firm, orange brown grey, slightly friable, sandy, slightly gravelly CLAY with some rootlets. Gravel is angular to subrounded, fine to coarse including brick, sandstone and ceramic fragments.		
2.00 2.00	D8 B7		Water strike(1) at 1.80m.		(2.60)	MADE GROUND: Dark brown, slightly clayey SAND and angular to subangular, fine to coarse GRAVEL with some plastic bags and timber fragments. Gravel includes brick, ceramic, glass and ash. Below 0.80m: some plastic bag, timber fragments, glass bottles and occasional newspaper. Below 2.00m: slight organic odour and ledger documents.		∇1
3.00 3.00	B9 D10				3.00	At 3.00m: occasional pockets of silt. Complete at 3.00m		

<b>Plan</b> .	<b>Remarks</b>  Groundwater located at 1.80m. Major spalling between 1.00m and 2.00m.		
	<table border="1"> <tr> <td><b>Scale (approx)</b> 1:50</td> <td><b>Logged By</b> GP</td> <td><b>Figure No.</b> 40349.TP05</td> </tr> </table>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP	<b>Figure No.</b> 40349.TP05	



<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.90m x 0.70m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50	D2 B1					Grass over MADE GROUND: Dark brown orange, slightly clayey, very gravelly SAND with occasional cobbles, glass bottles and plant material. Gravel is angular to subrounded, fine to coarse including brick, concrete, glass and ceramic fragments.		
1.00 1.00	D4 B3				(3.00)	At 1.00m: pocket of wood shavings. Below 1.00m: occasional fabrics and metal cans. Slight organic odour noted.		
2.00 2.00	D6 B5					Below 2.00m: strong organic odour noted.		
3.00 3.00	B7 D8				3.00	Below 2.70m: some plastic bags. At 3.00m: newspaper (dated 15th March 1975). Complete at 3.00m		

<b>Plan</b> .	<b>Remarks</b> Trial pit remained dry and stable throughout excavation.		
	<table border="1"> <tr> <td><b>Scale (approx)</b> 1:50</td> <td><b>Logged By</b> GP</td> <td><b>Figure No.</b> 40349.TP06</td> </tr> </table>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP	<b>Figure No.</b> 40349.TP06	







<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 3.00m x 0.70m x 1.50m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50	D2 B1		trickle(1) at 0.60m.		0.10 0.10	MADE GROUND: Orange cream, slightly clayey SAND and subangular to subrounded, fine to coarse GRAVEL with occasional plastic bags. Gravel includes sandstone.		∇1
1.00 1.00	D4 B3				(1.40)	Blue grey SILTSTONE, recovered as grey, slightly sandy, angular, fine to coarse, tabular/flat gravel.		
					1.50	Complete at 1.50m		

<b>Plan</b> 	<b>Remarks</b> Groundwater located at 0.60m. Trial pit remained stable throughout excavation. Trial pit terminated at 1.50m due to lack of progress (1.3m-1.5m in 10 minutes).	
		<b>Scale (approx)</b> 1:50

<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.80m x 0.80m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 18/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50	D2 B1		Water strike(1) at 0.50m.		(0.10) 0.10 (0.30) 0.40 (0.40)	MADE GROUND: Tarmacadam.  MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone and limestone. At 0.40m: geotextile.		∇1
1.00 1.00	D4 B3				0.80	MADE GROUND: Dark brown, friable, sandy, slightly gravelly CLAY with occasional paper fragments and glass bottles.		
2.00 2.00	D6 B5				(2.20)	MADE GROUND: Dark brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL with some plastic, metal, fabric and glass and occasional newspaper (dated 31st August 1974). Gravel includes brick, concrete and sandstone. Slight organic odour noted.  Below 2.30m: strong organic odour noted.		
3.00 3.00	B7 D8				3.00	Below 2.70m: sand predominately of ash with occasional wood fragments.  Complete at 3.00m		

<b>Plan</b> .	<b>Remarks</b>		
	Groundwater located at 0.50m - rose to 0.45m (5 minutes). Slight spalling between 1.00m and 3.00m.		
	<b>Scale (approx)</b>	<b>Logged By</b>	<b>Figure No.</b>
	1:50	GP	40349.TP08



<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 3.00m x 0.70m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30	HSV 161kPa		160,164,160/Av. 161.33			Grass over MADE GROUND: Dark brown, silty, gravelly SAND. Gravel is subangular to subrounded, fine to coarse including brick, ash and sandstone.		
0.50 0.50	D2 B1					Between 0.30m and 0.50m: stiff, orange grey, sandy clay with occasional partially decayed plant material. Below 1.00m: very gravelly with glass, ceramic and with some plastic and fabrics (landfill waste).		
1.00 1.00	D4 B3				(3.00)	Below 2.00m: some plastic, glass bottles, fabric and timber. Slight organic odour noted.		
2.00 2.00	D6 B5							
3.00	D7				3.00	At 3.00m: old tyre and rubbish bags. Complete at 3.00m		

<b>Plan</b> 	<b>Remarks</b> Trial pit remained dry and stable throughout excavation.		
	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP	<b>Figure No.</b> 40349.TP09



<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.50m x 0.80m x 0.80m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 18/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50	D2 B1				(0.20) 0.20 (0.20) 0.40 (0.40) 0.80	MADE GROUND: Concrete with re-bar. MADE GROUND: Orange brown SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone, brick and limestone. Orange brown SANDSTONE, recovered as sandy, angular to subangular, fine to coarse gravel with some cobbles and occasional boulders. Complete at 0.80m		

<b>Plan</b> 	<b>Remarks</b> Trial pit remained dry and stable throughout excavation. Trial pit terminated at 0.80m due to lack of progress (0.50m-0.80m in 10 minutes).		
		<table border="1"> <tr> <td><b>Scale (approx)</b> 1:50</td> <td><b>Logged By</b> GP</td> <td><b>Figure No.</b> 40349.TP10</td> </tr> </table>	<b>Scale (approx)</b> 1:50
<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP	<b>Figure No.</b> 40349.TP10	



<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.80m x 0.70m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50	D2 B1				(0.10) 0.10 (0.10) 0.20	MADE GROUND: Tarmacadam. MADE GROUND: Light brown, slightly clayey SAND and subangular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone.		
1.00 1.00	D4 B3					MADE GROUND: Brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL. Gravel includes sandstone, siltstone and occasional brick.		
2.00 2.00	D6 B5		Water strike(1) at 1.80m.		(2.80)			∇1
3.00 3.00	B7 D8				3.00	At 2.70m: pocket of black, silty sand. Complete at 3.00m		

<b>Plan</b> .	<b>Remarks</b> Groundwater located at 1.80m. Slight spalling between 1.00m and 3.00m. At 1.80m: 15 inch diameter encountered, old redundant clay pipe, contains negligible surface drainage water.		
	<table border="1"> <tr> <td><b>Scale (approx)</b> 1:50</td> <td><b>Logged By</b> GP</td> <td><b>Figure No.</b> 40349.TP11</td> </tr> </table>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP	<b>Figure No.</b> 40349.TP11	



<b>Excavation Method</b> JCB 3CX	<b>Dimensions</b> 2.80m x 0.70m x 3.00m	<b>Ground Level (mOD)</b>	<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Dates</b> 17/04/2008	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.40 0.40	D2 B1				(0.50) 0.50	MADE GROUND: Light brown/grey, very clayey, very sandy, gravelly TOPSOIL with occasional rootlets. Gravel is angular to subrounded, fine to coarse including sandstone, brick and ceramic.		
1.00 1.00	D4 B3				(2.50)	MADE GROUND: Dark brown, clayey SAND and angular to subrounded, fine to coarse GRAVEL with occasional plastic bags. Gravel includes brick, glass and ash.  At 1.00m: some plastic bags and occasional glass bottles.		
2.00 2.00	D6 B5					At 2.00m: orange brown staining with occasional metal/tin lids.		
3.00 3.00	B7 D8				3.00	Complete at 3.00m		

<b>Plan</b> .	<b>Remarks</b>  Trial pit remained dry throughout excavation. Slight spalling between 0.00m and 2.00m.		
	<table border="1"> <tr> <td><b>Scale (approx)</b> 1:50</td> <td><b>Logged By</b> GP</td> <td><b>Figure No.</b> 40349.TP12</td> </tr> </table>	<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP
<b>Scale (approx)</b> 1:50	<b>Logged By</b> GP	<b>Figure No.</b> 40349.TP12	

**Figure A2.5**  
**SPT Summary Table**



Site : New Mill Road, Holmfirth

Client : Tesco Stores Ltd

Engineer : W A Fairhurst & Partners

Job Number

40349

Sheet

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Borehole Number	Base of Borehole (m)	End of Seating Drive (m)	End of Test Drive (m)	Test Type	Seating Blows per 75mm		Blows for each 75mm penetration				Result	Comments
					1	2	1	2	3	4		
BH01	1.20	1.35	1.65	CPT	1	2	3	4	3	6	N=16	
BH01	2.00	2.15	2.45	CPT	1	1	1	1	2	1	N=5	
BH01	3.00	3.15	3.45	CPT	1	2	1	1	2	1	N=5	
BH01	4.00	4.15	4.45	CPT	1	2	1	3	3	2	N=9	
BH01	5.00	5.15	5.45	CPT	1	1	2	2	3	3	N=10	
BH01	6.00	6.15	6.45	CPT	1	2	2	2	2	2	N=8	
BH01	7.50	7.65	7.95	SPT	2	4	5	5	6	6	N=22	
BH01	10.00	10.15	10.37	SPT	5	10	13	17	20		50/220mm	
BH02	1.20	1.35	1.65	CPT	2	2	1	2	1	1	N=5	
BH02	2.00	2.15	2.45	CPT	1	1	3	3	2	2	N=10	
BH02	3.00	3.15	3.45	CPT	4	3	3	2	1	2	N=8	
BH02	4.00	4.15	4.45	CPT	2	2	3	2	2	2	N=9	
BH02	5.00	5.15	5.45	CPT	1	2	2	3	2	1	N=8	
BH02	6.00	6.15	6.45	CPT	2	1	2	2	3	2	N=9	
BH02	9.00	9.15	9.45	SPT	3	5	7	9	10	11	N=37	
BH02	10.50	10.65	10.95	SPT	5	7	10	12	14	14	N=29	50/295mm
BH02	12.00	12.07	12.14	SPT	25		50					25*/70mm 50/70mm
BH03	1.20	1.35	1.65	SPT	1	1	2	2	3	3	N=10	
BH03	3.00	3.15	3.29	SPT	9	16	24	26				50/140mm
BH03	4.00	4.15	4.34	SPT	7	12	16	21	13			50/185mm
BH03	5.00	5.03	5.06	CPT	25		50					25*/30mm 50/25mm
BH04	1.20	1.35	1.65	CPT	3	3	4	2	3	2	N=11	
BH04	2.00	2.15	2.45	CPT	1	2	1	2	2	1	N=6	
BH04	3.00	3.15	3.45	CPT	1	1	2	1	1	2	N=6	
BH04	4.00	4.15	4.45	CPT	1	2	1	1	1	2	N=5	
BH04	5.00	5.15	5.45	CPT	1	3	2	1	1	2	N=6	
BH04	6.00	6.15	6.45	CPT	2	1	1	2	1	1	N=5	
BH04	9.00	9.15	9.45	SPT	3	5	6	7	8	9	N=30	
BH04	10.50	10.65	10.95	SPT	3	6	8	9	10	12	N=39	
BH04	12.00	12.15	12.30	SPT	7	14	23	27				50/145mm
BH05	1.20	1.35	1.65	CPT	1	2	4	4	3	3	N=14	
BH05	2.00	2.15	2.45	CPT	1	2	2	3	2	2	N=9	
BH05	3.00	3.15	3.45	CPT	1	1	2	3	3	4	N=12	
BH05	5.00	5.15	5.35	SPT	5	9	14	20	16			50/200mm
BH05	6.00	6.15	6.36	SPT	7	12	15	19	16			50/210mm
BH05	7.00	7.03	7.05	CPT	25		50					25*/25mm 50/20mm
BH06	1.20	1.35	1.56	SPT	5	10	15	20	15			50/210mm
BH06	2.00	2.02	2.05	CPT	25		50					25*/20mm 50/30mm
BH07	1.20	1.35	1.65	CPT	2	3	2	4	3	2	N=11	
BH07	2.00	2.15	2.45	CPT	1	2	2	1	2	2	N=7	
BH07	3.00	3.15	3.45	CPT	1	1	2	1	1	2	N=6	



Site : New Mill Road, Holmfirth

Client : Tesco Stores Ltd

Engineer : W A Fairhurst & Partners

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40349

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Borehole Number	Base of Borehole (m)	End of Seating Drive (m)	End of Test Drive (m)	Test Type	Seating Blows per 75mm		Blows for each 75mm penetration				Result	Comments
					1	2	1	2	3	4		
BH07	4.00	4.15	4.45	CPT	1	1	1	1	2	2	N=6	
BH07	5.00	5.15	5.45	CPT	2	2	3	3	3	3	N=12	
BH07	6.00	6.15	6.45	CPT	1	2	2	3	2	2	N=9	
BH07	7.50	7.65	7.95	CPT	1	1	1	2	1	1	N=5	
BH07	9.00	9.15	9.45	SPT	3	5	6	7	7	10	N=30	
BH07	10.50	10.65	10.78	SPT	9	15	23	27			50/125mm	
BH07	12.00	12.05	12.09	SPT	25		50				25*/50mm 50/40mm	
BH08	1.20	1.35	1.49	SPT	4	10	25	25			50/135mm	
BH08	2.00	2.02	2.04	CPT	25		50				25*/15mm 50/20mm	
BH09	1.20	1.35	1.65	CPT	1	2	3	3	2	3	N=11	
BH09	2.00	2.15	2.45	CPT	2	2	1	2	3	2	N=8	
BH09	3.00	3.15	3.45	CPT	1	1	2	1	1	2	N=6	
BH09	4.00	4.15	4.45	CPT	1	2	2	3	1	2	N=8	
BH09	5.00	5.15	5.45	CPT	1	1	2	4	3	3	N=12	
BH09	6.00	6.15	6.45	CPT	1	2	4	3	3	2	N=12	
BH09	7.50	7.65	7.95	CPT	2	3	3	3	2	1	N=9	
BH09	9.00	9.15	9.37	SPT	8	12	14	18	18		50/215mm	
BH09	10.50	10.53	10.55	CPT	25		50				25*/25mm 50/20mm	
BH10	1.20	1.35	1.63	SPT	5	7	8	12	18	12	50/275mm	
BH10	2.00	2.03	2.05	CPT	25		50				25*/25mm 50/25mm	
BH11	1.20	1.35	1.65	CPT	1	1	1	2	1	4	N=8	
BH11	2.00	2.15	2.45	CPT	1	1	2	2	1	3	N=8	
BH11	3.00	3.15	3.45	CPT	1	2	1	1	2	2	N=6	
BH11	4.00	4.15	4.45	CPT	1	1	1	1	2	1	N=5	
BH11	5.00	5.15	5.45	CPT	1	0	1	1	1	2	N=5	
BH11	6.00	6.15	6.45	CPT	1	2	1	1	1	2	N=5	
BH11	7.50	7.65	7.95	CPT	1	2	2	1	3	1	N=7	
BH11	9.00	9.15	9.45	CPT	1	1	1	2	1	2	N=6	
BH11	10.50	10.65	10.95	CPT	1	2	1	1	2	2	N=6	
BH11	12.00	12.15	12.44	SPT	5	8	11	13	15	11	50/285mm	
BH12	1.20	1.35	1.65	CPT	1	1	1	2	1	2	N=6	
BH12	2.00	2.15	2.45	CPT	1	0	1	1	2	2	N=6	
BH12	3.00	3.15	3.45	CPT	1	2	2	1	1	1	N=5	
BH12	4.00	4.15	4.45	CPT	1	1	2	1	1	1	N=5	
BH12	5.00	5.15	5.45	CPT	2	1	1	2	1	2	N=6	
BH12	6.00	6.15	6.45	CPT	1	2	3	2	1	1	N=7	
BH12	7.50	7.65	7.95	CPT	1	1	2	4	2	2	N=10	
BH12	9.00	9.15	9.29	SPT	8	15	24	26			50/140mm	
BH12	10.00	10.03	10.06	CPT	25		50				25*/25mm 50/30mm	
BH13	1.20	1.35	1.65	CPT	2	2	3	4	3	2	N=12	
BH13	2.00	2.15	2.45	CPT	2	3	3	2	1	2	N=8	



**Site** : New Mill Road, Holmfirth

**Client** : Tesco Stores Ltd

**Engineer** : W A Fairhurst & Partners

**Job Number**

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**Sheet**

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Borehole Number	Base of Borehole (m)	End of Seating Drive (m)	End of Test Drive (m)	Test Type	Seating Blows per 75mm		Blows for each 75mm penetration				Result	Comments
					1	2	1	2	3	4		
BH13	3.00	3.15	3.45	CPT	1	1	3	2	2	2	N=9	
BH13	4.00	4.15	4.45	CPT	1	1	1	2	7	2	N=12	
BH13	5.00	5.15	5.45	CPT	1	2	1	1	2	2	N=6	
BH13	6.00	6.15	6.45	CPT	1	1	2	2	3	3	N=10	
BH13	7.50	7.65	7.95	CPT	1	2	2	2	3	4	N=11	
BH13	9.00	9.15	9.45	CPT	1	2	2	2	3	3	N=10	
BH13	12.00	12.06	12.12	SPT	25		50				25*/60mm 50/55mm	
WS0	1.00	1.15	1.45	SPT	1	2	2	1	2	2	N=7	
WS0	2.00	2.15	2.45	SPT	1	2	2	3	2	1	N=8	
WS0	3.00	3.15	3.45	SPT	2	3	2	2	1	2	N=7	
WS0	4.00	4.15	4.45	SPT	1	2	3	3	4	4	N=14	
WS0	5.00	5.15	5.45	SPT	2	3	4	5	6	6	N=21	
WS01	1.00	1.15	1.45	SPT	2	3	3	4	3	5	N=15	
WS01	2.00	2.15	2.45	SPT	2	3	3	2	2	2	N=9	
WS01	3.00	3.15	3.45	SPT	1	1	3	2	3	3	N=11	
WS01	4.00	4.15	4.45	SPT	1	2	2	3	2	6	N=13	
WS02	1.00	1.15	1.45	SPT	1	2	3	2	3	2	N=10	
WS02	2.00	2.15	2.45	SPT	1	1	1	2	1	2	N=6	
WS02	3.00	3.15	3.45	SPT	1	1	0	1	1	2	N=4	
WS02	4.00	4.15	4.45	SPT	1	3	4	5	6	7	N=22	
WS02	5.00	5.15	5.45	SPT	4	11	11	11	12	12	N=46	
WS03	1.00	1.15	1.45	SPT	2	2	2	2	3	3	N=10	
WS03	2.00	2.15	2.45	SPT	2	1	2	1	2	2	N=7	
WS03	3.00	3.15	3.45	SPT	3	4	4	2	2	2	N=10	
WS04	1.00	1.15	1.45	SPT	1	2	2	1	2	2	N=7	
WS04	2.00	2.15	2.45	SPT	1	2	2	3	2	1	N=8	
WS04	3.00	3.15	3.45	SPT	2	3	2	2	1	2	N=7	
WS04	4.00	4.15	4.45	SPT	1	2	3	3	4	4	N=14	
WS04	5.00	5.15	5.45	SPT	2	3	4	5	6	6	N=21	
WS05	1.00	1.15	1.45	SPT	1	1	2	1	1	1	N=5	
WS05	2.00	2.15	2.45	SPT	1	1	1	1	1	1	N=4	
WS05	3.00	3.15	3.45	SPT	1	1	2	3	4	4	N=13	
WS05	4.00	4.15	4.45	SPT	6	8	9	9	10	11	N=39	
WS06	1.00	1.15	1.45	SPT	1	1	2	1	1	2	N=6	
WS06	2.00	2.15	2.45	SPT	1	1	1	1	2	2	N=6	
WS06	3.00	3.15	3.45	SPT	1	1	2	2	3	3	N=10	
WS06	4.00	4.15	4.45	SPT	2	3	4	5	6	7	N=22	
WS06	5.00	5.15	5.45	SPT	2	4	5	7	8	10	N=30	
WS07	1.00	1.15	1.45	SPT	1	2	2	3	2	2	N=9	
WS07	2.00	2.15	2.45	SPT	1	0	1	2	3	2	N=8	



**Site** : New Mill Road, Holmfirth

**Client** : Tesco Stores Ltd

**Engineer** : W A Fairhurst & Partners

**Job Number**

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**Sheet**

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Borehole Number	Base of Borehole (m)	End of Seating Drive (m)	End of Test Drive (m)	Test Type	Seating Blows per 75mm		Blows for each 75mm penetration				Result	Comments
					1	2	1	2	3	4		
WS07	3.00	3.15	3.45	SPT	2	2	1	2	2	18	N=23	
WS08	1.00	1.15	1.45	SPT	1	1	2	2	1	1	N=6	
WS08	2.00	2.15	2.45	SPT	1	1	1	1	2	3	N=7	
WS08	3.00	3.15	3.45	SPT	2	1	3	2	1	2	N=8	
WS08	4.00	4.15	4.45	SPT	1	2	2	2	1	2	N=7	
WS08	5.00	5.15	5.45	SPT	1	2	2	3	2	2	N=9	
WS09	1.00	1.15	1.45	SPT	1	1	2	1	1	1	N=5	
WS09	2.00	2.15	2.45	SPT	1	1	2	2	2	3	N=9	
WS09	3.00	3.15	3.45	SPT	1	1	1	1	2	2	N=6	
WS09	4.00	4.15	4.45	SPT	1	1	2	2	1	2	N=7	
WS09	5.00	5.15	5.45	SPT	1	2	4	5	7	9	N=25	
WS10	1.00	1.15	1.45	SPT	1	1	1	2	1	2	N=6	
WS10	2.00	2.15	2.45	SPT	0	0	0	0	1	1	N=2	
WS10	3.00	3.15	3.45	SPT	1	1	2	2	1	1	N=6	
WS10	4.00	4.15	4.45	SPT	1	1	1	1	2	1	N=5	
WS10	5.00	5.15	5.45	SPT	1	0	0	0	1	1	N=2	
WS10	6.00	6.15	6.45	SPT	1	1	1	2	3	1	N=7	
WS10	7.00	7.15	7.45	SPT	2	5	5	3	2	3	N=13	
WS11	1.00	1.15	1.45	SPT	0	0	0	0	1	0	N=1	
WS11	2.00	2.15	2.45	SPT	0	0	0	1	0	1	N=2	
WS11	3.00	3.15	3.45	SPT	1	0	0	1	0	1	N=2	
WS11	4.00	4.15	4.45	SPT	2	1	1	1	2	1	N=5	
WS11	5.00	5.15	5.45	SPT	2	1	2	1	2	2	N=7	
WS12	1.00	1.15	1.45	SPT	2	2	3	3	3	2	N=11	
WS12	2.00	2.15	2.45	SPT	1	2	1	1	2	1	N=5	
WS12	3.00	3.15	3.45	SPT	1	0	1	1	0	1	N=3	
WS12	4.00	4.15	4.45	SPT	2	2	1	2	2	2	N=7	
WS12	5.00	5.15	5.45	SPT	1	0	1	1	1	2	N=5	
WS12	6.00	6.15	6.45	SPT	1	1	1	2	2	2	N=7	
WS12	7.00	7.15	7.45	SPT	2	3	4	5	4	3	N=16	
WS13	1.00	1.15	1.45	SPT	1	0	0	0	0	0	N=0	
WS13	2.00	2.15	2.45	SPT	1	0	0	0	0	0	N=0	
WS13	3.00	3.15	3.45	SPT	1	0	0	1	1	1	N=3	
WS13	4.00	4.15	4.45	SPT	2	3	5	7	7	9	N=28	

**Figure A2.6**  
**Instrumentation Details**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
				1.00	Cement/Bentonite Grout															
						Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					Slotted Standpipe															
						Instrument Groundwater Observations														
						Inst. [A] Type :														
						Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												
				7.30	Cement/Bentonite Seal															
				8.30																
					General Backfill															
				10.00																

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
				1.00	Cement/Bentonite Grout															
						<b>Groundwater Observations During Drilling</b>														
						<b>Start of Shift</b>					<b>End of Shift</b>									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					Slotted Standpipe															
						<b>Instrument Groundwater Observations</b>														
						<b>Inst. [A] Type :</b>														
						Date	<b>Instrument [A]</b>			<b>Remarks</b>										
							Time	Depth (m)	Level (mOD)											
				7.40	Cement/Bentonite Seal															
				8.50																
					General Backfill															
				12.00																

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
				1.00	Cement/Bentonite Grout			10.20		slight seepage										
						Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					Slotted Standpipe															
						Instrument Groundwater Observations														
						Inst. [A] Type :														
				7.40		Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												
					Cement/Bentonite Seal															
				12.30																

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
				1.00	Cement/Bentonite Grout															
				3.20	Slotted Standpipe	Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
				4.20	Cement/Bentonite Seal	Instrument Groundwater Observations														
						Inst. [A] Type :														
						Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												
				7.05	General Backfill															

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling											
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)		
				0.20	Concrete			0.50		slight seepage							
				1.00	Cement/Bentonite Grout												
						Groundwater Observations During Drilling											
						Start of Shift					End of Shift						
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
					Slotted Standpipe	Instrument Groundwater Observations											
						Inst. [A] Type :											
						Date	Instrument [A]			Remarks							
						Time	Depth (m)	Level (mOD)									
				9.00													
					Cement/Bentonite Seal												
				10.50													

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
				1.00	Cement/Bentonite Grout															
						Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					Slotted Standpipe	Instrument Groundwater Observations														
						Inst. [A] Type :														
						Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												
				11.30	Cement/Bentonite Seal															
				12.44																

**Remarks**



<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
5 min	10 min	15 min	20 min																	
				0.20	Concrete															
				1.00	Cement/Bentonite Grout															
						Groundwater Observations During Drilling														
						Date	Start of Shift				End of Shift									
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					Slotted Standpipe															
						Instrument Groundwater Observations														
						Inst. [A] Type :														
						Date	Instrument [A]			Remarks										
							Time	Depth (m)	Level (mOD)											
				8.20																
					Cement/Bentonite Seal															
				10.00																

**Remarks**



<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
					Cement/Bentonite Grout	Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
				1.60																
						Instrument Groundwater Observations														
						Inst. [A] Type :														
					Slotted Standpipe	Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												
				3.60																
					Cement/Bentonite Seal															
				4.50																

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
				0.50	Cement/Bentonite Grout															
						Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					Slotted Standpipe															
						Instrument Groundwater Observations														
						Inst. [A] Type :														
				2.20		Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												
					General Backfill															
				4.00																

**Remarks**



<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
				1.00	Cement/Bentonite Grout															
				2.30	Slotted Standpipe	Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
				5.00	Cement/Bentonite Seal	Instrument Groundwater Observations														
						Inst. [A] Type :														
						Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												

**Remarks**



<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling															
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)						
				0.30	Concrete																
					Topfill																
				1.00	Cement/Bentonite Grout	Groundwater Observations During Drilling															
						Start of Shift					End of Shift										
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)					
				2.00	Slotted Standpipe	Instrument Groundwater Observations															
						Inst. [A] Type :															
						Date	Instrument [A]			Remarks											
						Time	Depth (m)	Level (mOD)													
				3.00	General Backfill																
				3.60																	

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling															
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)						
				0.20	Concrete																
						<b>Groundwater Observations During Drilling</b>															
						<b>Start of Shift</b>					<b>End of Shift</b>										
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)					
				5.00	Cement/Bentonite Grout																
						<b>Instrument Groundwater Observations</b>															
						<b>Inst. [A] Type :</b>															
						Date	<b>Instrument [A]</b>			<b>Remarks</b>											
							Time	Depth (m)	Level (mOD)												
				7.00	Slotted Standpipe																

**Remarks**



<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling															
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)						
				0.20	Concrete																
					Cement/Bentonite Grout	Groundwater Observations During Drilling															
						Start of Shift					End of Shift										
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
						Instrument Groundwater Observations															
						Inst. [A] Type :															
				3.00	Slotted Standpipe	Date	Instrument [A]			Remarks											
							Time	Depth (m)	Level (mOD)												
				4.00																	
				5.00	Cement/Bentonite Seal																

**Remarks**



<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.50	Concrete															
						<b>Groundwater Observations During Drilling</b>														
						Date	Start of Shift					End of Shift								
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					Cement/Bentonite Grout															
						<b>Instrument Groundwater Observations</b>														
						<b>Inst. [A] Type :</b>														
						Date	Instrument [A]			Remarks										
							Time	Depth (m)	Level (mOD)											
				5.00	Slotted Standpipe															
				6.00	Cement/Bentonite Seal															
				7.00																

**Remarks**



<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.50	Concrete															
					Cement/Bentonite Grout	Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
				2.00	Slotted Standpipe	Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
						Instrument Groundwater Observations														
				2.80		Inst. [A] Type :														
						Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												
				5.45	Cement/Bentonite Seal															

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.20	Concrete															
				0.50	Cement/Bentonite Grout			6.50		Slow seepage										
						Groundwater Observations During Drilling														
						Start of Shift					End of Shift									
					Topfill	Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
						Instrument Groundwater Observations														
						Inst. [A] Type :														
				4.00		Date	Instrument [A]			Remarks										
						Time	Depth (m)	Level (mOD)												
					Cement/Bentonite Grout															
				6.50																
					Slotted Standpipe															
				7.50																

**Remarks**

<b>Installation Type</b>	<b>Dimensions</b>		<b>Client</b> Tesco Stores Ltd	<b>Job Number</b> 40349
	<b>Location</b>	<b>Ground Level (mOD)</b>	<b>Engineer</b> W A Fairhurst & Partners	<b>Sheet</b> 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
				0.30	Concrete															
						<b>Groundwater Observations During Drilling</b>														
						Date	Start of Shift					End of Shift								
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					Cement/Bentonite Grout															
						<b>Instrument Groundwater Observations</b>														
						<b>Inst. [A] Type :</b>														
						Date	Instrument [A]			Remarks										
							Time	Depth (m)	Level (mOD)											
				3.50	Slotted Standpipe															
				4.50	Cement/Bentonite Seal															
				4.90																

**Remarks**

**APPENDIX 3**  
**LABORATORY TESTS**

14 Faraday Close, District 15, Pattinson North Industrial Estate, Washington, Tyne & Wear, NE38 8QJ.  
Tel. 0191 4166375 Fax. 0191 4191578 Email. lab@ifawashington.co.uk Internet. www.ianfarmerassociates.co.uk

Ian Farmer Associates (1998) Ltd  
17 Rivington Court  
Warrington  
Cheshire  
WA1 4RT

F.A.O. Mr A Latimer

### TEST REPORT - 40349/1

Site : New Mill Road, Holmfirth

Job Number : 40349

Originating Client : Tesco Stores Ltd

Originating Reference : 40349

Date Sampled : Not Given

Date Scheduled : 02/06/08

Date Testing Started : 04/06/08

Date Testing Finished : 16/06/08

Remarks :

- First Report for above Job Number
- Samples will be disposed of 28 days after the report is issue unless otherwise agreed
- This report may contain results from tests which are not included within the scope of the UKAS accreditation. Please see final sheet for details.

Authorised By: J.M. Jones

Position : Senior Materials Engineer

Date : 16/06/08

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**Site** : New Mill Road, Holmfirth

**Job Number**

40349

**Client** : Tesco Stores Ltd

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**DETERMINATION OF MOISTURE CONTENT**

Borehole/ Trial Pit	Depth (m)	Sample	Moisture Content %	Description
BH03	1.20	B3	25	Brown gravelly slightly sandy CLAY
BH05	3.00	B5	26	Brown grey slightly gravelly slightly sandy CLAY
BH13	9.00	B9	55	Grey slightly sandy slightly gravelly CLAY slightly organic with ash
TP01	1.00	D4	38	Brown grey slightly sandy slightly gravelly CLAY
TP03	1.00	D6	25	Brown grey slightly gravelly CLAY
WS01	3.30	D16	7.1	Brown gravelly slightly sandy CLAY
WS04	3.00	D15	24	Brown slightly sandy gravelly CLAY
WS05	3.80	D17	33	Brown slightly sandy gravelly CLAY
WS08	6.70	D16	21	Brown slightly gravelly CLAY
WS09	4.40	D14	35	Brown slightly gravelly CLAY
WS10	7.00	D25	36	Brown gravelly CLAY

**Method of Preparation** : BS 1377:PART 1:1990:7.3.3 Preparation of samples for classification tests

**Method of Test** : BS 1377:PART 2:1990:3.2 Determination of oven dried moisture content

**Remarks** :

**Site** : New Mill Road, Holmfirth

**Job Number**

40349

**Client** : Tesco Stores Ltd

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**DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT  
AND DERIVATION OF PLASTICITY AND LIQUIDITY INDEX**

Borehole/ Trial Pit	Depth (m)	Sample	Natural / Sieved	Natural Moisture Content %	Sample Passing 425µm Sieve		Liquid Limit %	Plastic Limit %	Plasticity Index %	Liquidity Index	Class	Description / Remarks
					Percentage %	Moisture Content %						
BH03	1.20	B3	Natural	25	86	28	69	32	37	-0.11	CH	Brown gravelly slightly sandy CLAY
BH05	3.00	B5	Natural	26	92	27	62	32	30	-0.17	MH	Brown grey slightly gravelly slightly sandy CLAY
BH13	9.00	B9	Natural	55	82	65	64	33	31	1.03	MH	Grey slightly sandy slightly gravelly CLAY slightly organic with ash
TP01	1.00	D4	Natural	38	92	41	59	31	28	0.36	MH	Brown grey slightly sandy slightly gravelly CLAY
TP03	1.00	D6	Natural	25	86	28	49	27	22	0.05	CI	Brown grey slightly gravelly CLAY
WS01	3.30	D16	Natural	7.1	78	7.7		NP				Brown gravelly slightly sandy CLAY
WS04	3.00	D15	Natural	24	27	73	39	21	18	2.89	CI	Brown slightly sandy gravelly CLAY
WS05	3.80	D17	Natural	32	57	53	56	28	28	0.89	CH	Brown slightly sandy gravelly CLAY
WS08	6.70	D16	Natural	21	26	68	34	20	14	3.43	CL	Brown slightly gravelly CLAY
WS09	4.40	D14	Natural	35	82	41	56	31	25	0.40	MH	Brown slightly gravelly CLAY

**Method of Preparation** : BS 1377:PART 1:1990:7.4 Preparation of samples for classification tests BS 1377:PART 2:1990:4.2 & 5.2 Sample preparations

**Method of Test** : BS 1377:PART 2:1990:3.2 Determination of moisture content 4.3 Determination of the liquid limit 5.3 Determination of the plastic limit and plasticity index

Site : New Mill Road, Holmfirth  
Client : Tesco Stores Ltd

Job Number  
40349  
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### DETERMINATION OF CALIFORNIA BEARING RATIO (CBR)

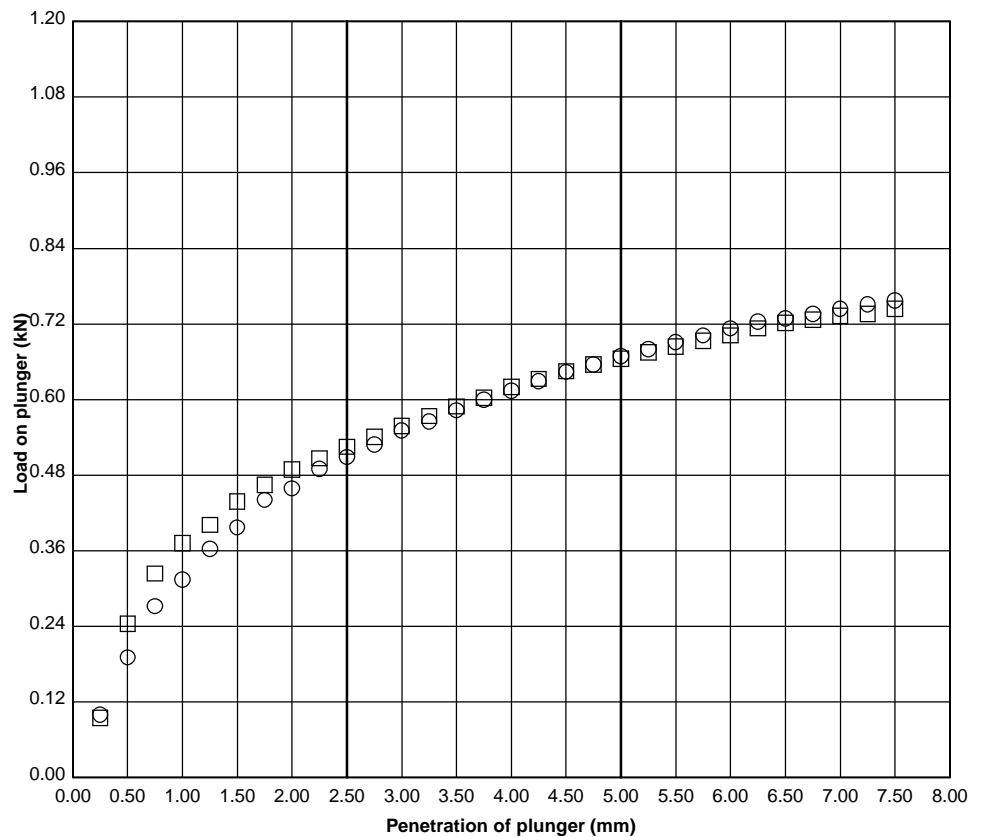
Borehole / Trial Pit	Depth (m)	Sample	% Passing 20 mm Sieve	Description
BH03	1.20	B3	99 %	Brown gravelly slightly sandy CLAY

Moisture Content %	
Bulk Density Mg/m <sup>3</sup>	1.93
Dry Density Mg/m <sup>3</sup>	1.47
Soaked Test	No

Test on	<input type="checkbox"/> TOP
Moisture Content %	33
Surcharge weight kg	4.50
Penetration mm	2.5   5.0
Force kN	0.52   0.67
Corrected CBR %	4.0   3.3

Test on	<input type="radio"/> BOTTOM
Moisture Content %	29
Surcharge weight kg	4.50
Penetration mm	2.5   5.0
Force kN	0.51   0.67
Corrected CBR %	3.9   3.3

Test on	TOP	BOTTOM
Reported CBR %	4.0	3.9
Mean CBR %	4.0	



**Method of Preparation :** The specimen was prepared by Dynamic compression using a 4.5 kg Rammer  
BS 1377:PART 1:1990:7.6.1 General 1990:7.6.5 California bearing ratio test BS 1377:PART 4:1990:7.2 Preparation of test sample

**Method of Test :** BS 1377:PART 4:1990:7.4 Penetration test procedure

**Remarks :**

**Site** : New Mill Road, Holmfirth

**Job Number**

40349

**Client** : Tesco Stores Ltd

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**DETERMINATION OF CALIFORNIA BEARING RATIO (CBR)**

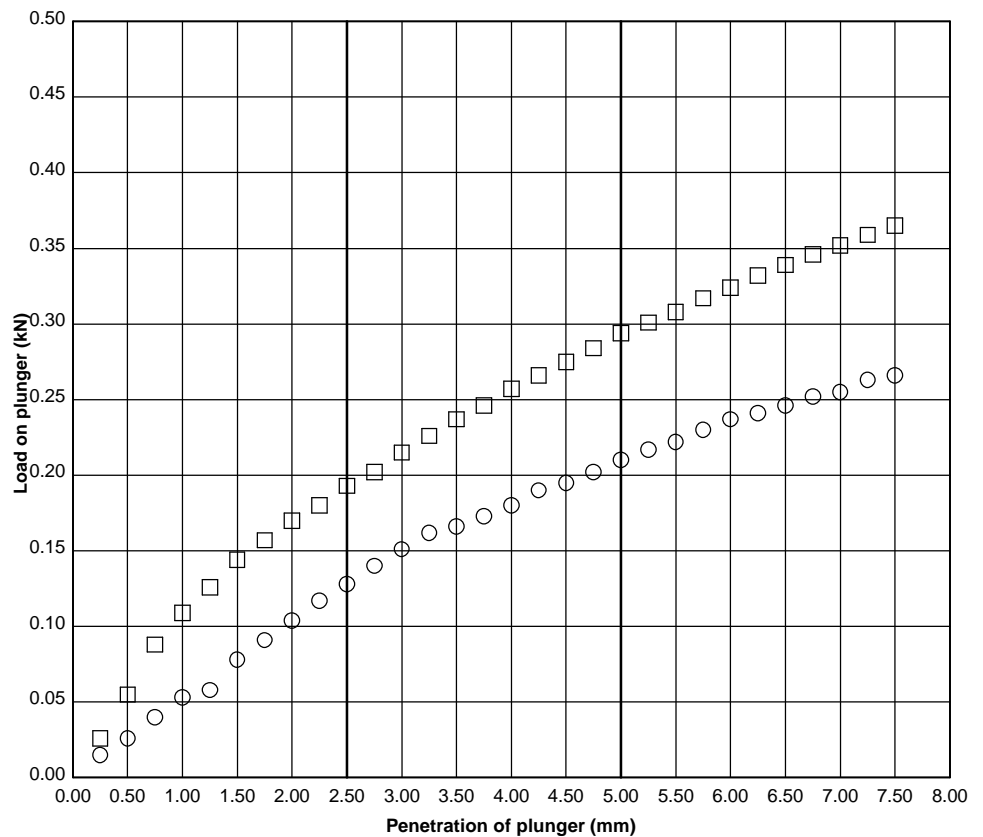
Borehole / Trial Pit	Depth (m)	Sample	% Passing 20 mm Sieve	Description
BH05	3.00	B5	99 %	Brown grey slightly gravelly slightly sandy CLAY

<b>Moisture Content %</b>	
<b>Bulk Density Mg/m<sup>3</sup></b>	1.86
<b>Dry Density Mg/m<sup>3</sup></b>	1.43
<b>Soaked Test</b>	No

<b>Test on</b>	<input type="checkbox"/> TOP
<b>Moisture Content %</b>	28
<b>Surcharge weight kg</b>	4.50
<b>Penetration mm</b>	2.5   5.0
<b>Force kN</b>	0.19   0.29
<b>Corrected CBR %</b>	1.5   1.5

<b>Test on</b>	<input type="radio"/> BOTTOM
<b>Moisture Content %</b>	32
<b>Surcharge weight kg</b>	4.50
<b>Penetration mm</b>	2.5   5.0
<b>Force kN</b>	0.13   0.21
<b>Corrected CBR %</b>	0.97   1.0

<b>Test on</b>	TOP	BOTTOM
<b>Reported CBR %</b>	1.5	1.0


**Method of Preparation** : The specimen was prepared by Dynamic compression using a 4.5 kg Rammer  
 BS 1377:PART 1:1990:7.6.1 General 1990:7.6.5 California bearing ratio test BS 1377:PART 4:1990:7.2 Preparation of test sample

**Method of Test** : BS 1377:PART 4:1990:7.4 Penetration test procedure

**Remarks** :

**Site** : New Mill Road, Holmfirth

**Job Number**

40349

**Client** : Tesco Stores Ltd

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**DETERMINATION OF CALIFORNIA BEARING RATIO (CBR)**

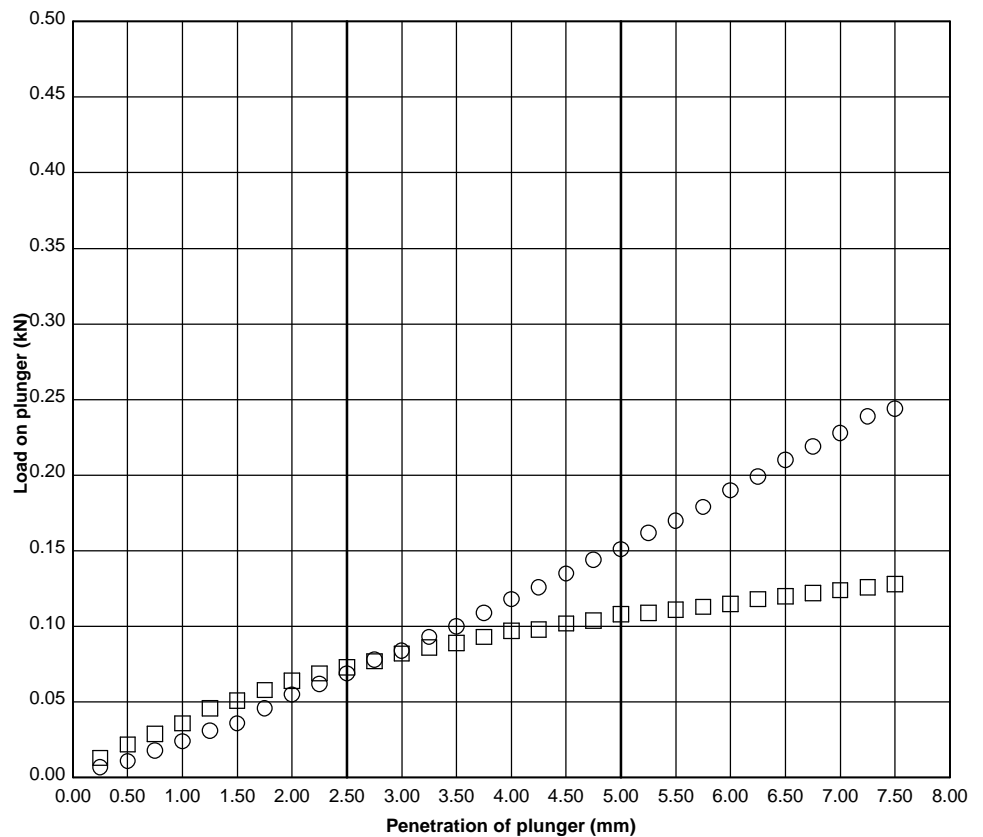
Borehole / Trial Pit	Depth (m)	Sample	% Passing 20 mm Sieve	Description
BH13	9.00	B9	90 %	Grey slightly sandy slightly gravelly CLAY slightly organic with ash

<b>Moisture Content %</b>	
<b>Bulk Density Mg/m<sup>3</sup></b>	1.63
<b>Dry Density Mg/m<sup>3</sup></b>	1.19
<b>Soaked Test</b>	No

<b>Test on</b>	<input type="checkbox"/> TOP
<b>Moisture Content %</b>	39
<b>Surcharge weight kg</b>	
<b>Penetration mm</b>	2.5    5.0
<b>Force kN</b>	0.07    0.11
<b>Corrected CBR %</b>	0.55    0.54

<b>Test on</b>	<input type="radio"/> BOTTOM
<b>Moisture Content %</b>	35
<b>Surcharge weight kg</b>	
<b>Penetration mm</b>	2.5    5.0
<b>Force kN</b>	0.07    0.15
<b>Corrected CBR %</b>	0.52    0.76

<b>Test on</b>	TOP	BOTTOM
<b>Reported CBR %</b>	0.55	0.76


**Method of Preparation** : The specimen was prepared by Dynamic compression using a 4.5 kg Rammer  
 BS 1377:PART 1:1990:7.6.1 General 1990:7.6.5 California bearing ratio test BS 1377:PART 4:1990:7.2 Preparation of test sample

**Method of Test** : BS 1377:PART 4:1990:7.4 Penetration test procedure

**Remarks** :

Site : New Mill Road, Holmfirth  
Client : Tesco Stores Ltd

Job Number  
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**DETERMINATION OF CALIFORNIA BEARING RATIO (CBR)**

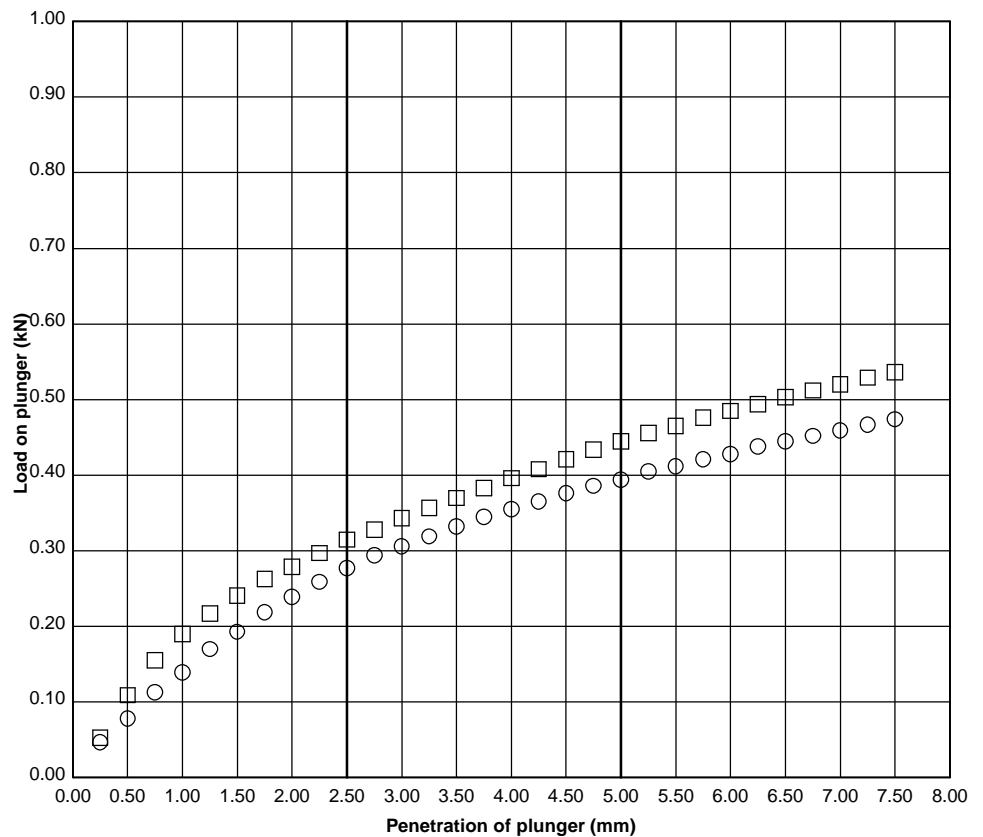
Borehole / Trial Pit	Depth (m)	Sample	% Passing 20 mm Sieve	Description
TP01	1.00	B3	100 %	Brown slightly gravelly CLAY

Moisture Content %	
Bulk Density Mg/m <sup>3</sup>	1.84
Dry Density Mg/m <sup>3</sup>	1.35
Soaked Test	No

Test on	<input type="checkbox"/> TOP
Moisture Content %	36
Surcharge weight kg	4.50
Penetration mm	2.5   5.0
Force kN	0.31   0.44
Corrected CBR %	2.4   2.2

Test on	<input type="radio"/> BOTTOM
Moisture Content %	36
Surcharge weight kg	4.50
Penetration mm	2.5   5.0
Force kN	0.28   0.39
Corrected CBR %	2.1   2.0

Test on	TOP	BOTTOM
Reported CBR %	2.4	2.1
Mean CBR %	2.2	



**Method of Preparation :** The specimen was prepared by Dynamic compression using a 4.5 kg Rammer  
BS 1377:PART 1:1990:7.6.1 General 1990:7.6.5 California bearing ratio test BS 1377:PART 4:1990:7.2 Preparation of test sample

**Method of Test :** BS 1377:PART 4:1990:7.4 Penetration test procedure

**Remarks :**

**Site** : New Mill Road, Holmfirth

**Job Number**

40349

**Client** : Tesco Stores Ltd

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**DETERMINATION OF CALIFORNIA BEARING RATIO (CBR)**

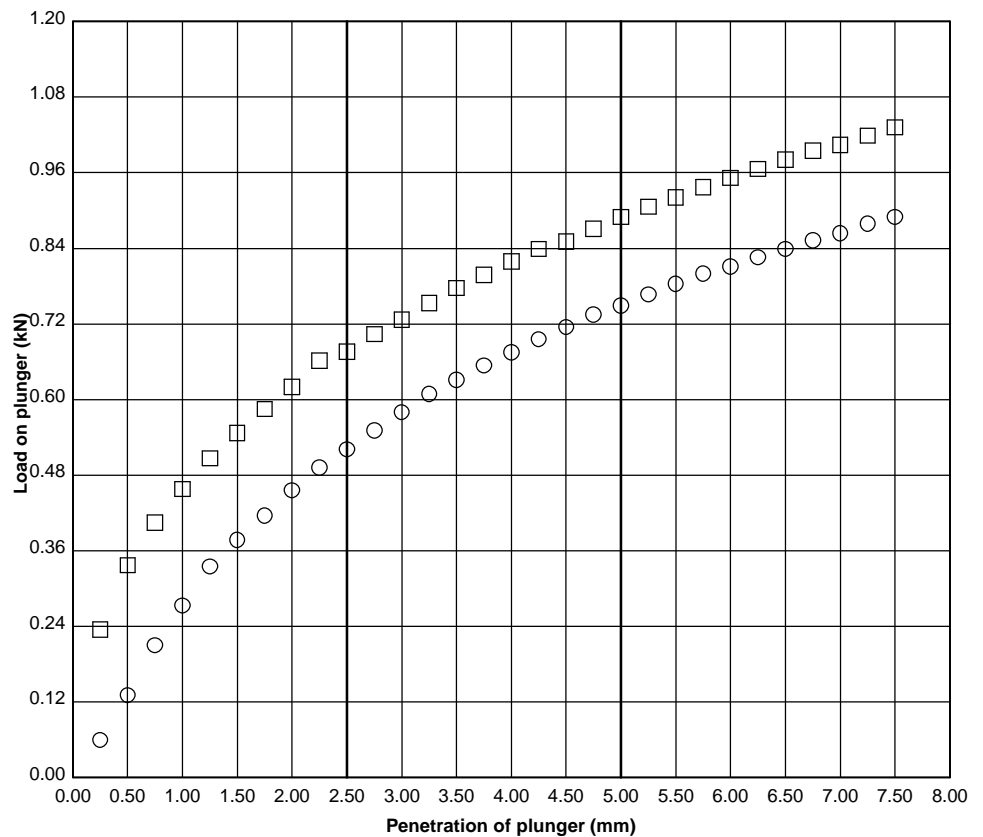
Borehole / Trial Pit	Depth (m)	Sample	% Passing 20 mm Sieve	Description
TP03	1.00	B5	99 %	Brown slightly gravelly sandy CLAY

<b>Moisture Content %</b>	
<b>Bulk Density Mg/m<sup>3</sup></b>	1.92
<b>Dry Density Mg/m<sup>3</sup></b>	1.48
<b>Soaked Test</b>	No

<b>Test on</b>	□ TOP
<b>Moisture Content %</b>	29
<b>Surcharge weight kg</b>	
<b>Penetration mm</b>	2.5   5.0
<b>Force kN</b>	0.68   0.89
<b>Corrected CBR %</b>	5.1   4.4

<b>Test on</b>	○ BOTTOM
<b>Moisture Content %</b>	30
<b>Surcharge weight kg</b>	
<b>Penetration mm</b>	2.5   5.0
<b>Force kN</b>	0.52   0.75
<b>Corrected CBR %</b>	4.0   3.8

<b>Test on</b>	TOP	BOTTOM
<b>Reported CBR %</b>	5.1	4.0


**Method of Preparation** : The specimen was prepared by Dynamic compression using a 4.5 kg Rammer  
 BS 1377:PART 1:1990:7.6.1 General 1990:7.6.5 California bearing ratio test BS 1377:PART 4:1990:7.2 Preparation of test sample

**Method of Test** : BS 1377:PART 4:1990:7.4 Penetration test procedure

**Remarks** :

**Test Report :** 40349/1

Site : New Mill Road, Holmfirth  
Job Number : 40349  
Originating Client : Tesco Stores Ltd

All opinions and interpretations contained within this report are outside of our Scope of Accreditation.

The following tests contained within this report are not UKAS Accredited.

Date of Issue : 16/06/08

**APPENDIX 4**  
**CHEMICAL TESTS**



2139

## Certificate of Analysis

Date: 28/05/2008

Certificate Number: 08-19406

Client: Ian Farmer Associates  
17 Rivington Court  
Hardwick Grange  
Woolston  
Warrington  
Cheshire  
WA1 4RT

Our Reference: 08-19406

Client Reference: 40349

Contract Title: New Mill Road, Holmfirth

Description: 23 soil samples

Date Received: 16/05/2008

Date Started: 16/05/2008

Date Completed: 28/05/2008

Test Procedures: Identified by prefix DETSn, details available upon request.

Notes: Observations and interpretations are outside the scope of UKAS accreditation  
\* denotes test not included in laboratory scope of accreditation  
# denotes test that holds MCERT accreditation  
\$ denotes tests completed by approved subcontractors  
I/S denotes insufficient sample to carry out test  
N/S denotes that the sample is not suitable for testing  
DETSM denotes tests carried out by DETS Midlands laboratory  
Solid samples will be disposed 1 month and liquids 2 weeks  
after the date of issue of this test certificate  
Asbestos subsamples will be kept for 6 months

Approved By:

Authorised Signatories: Richard Bennett  
Director

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# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			132669	132670	132671	132672
		Lab No.				
		Sample Ref	WS02	WS02	WS02	WS03
		Depth	0.50	2.30	2.70	1.00-1.45
		Other Ref	2	10	13	6
		Sample Type	J	J	J	D
Test	Units	DETSxx				
Arsenic	mg/kg	DETS 042#	5	8	3	
Cadmium	mg/kg	DETS 042#	0.5	1	1.2	
Chromium	mg/kg	DETS 042#	12	19	25	
Copper	mg/kg	DETS 042#	21	18	22	
Lead	mg/kg	DETS 042#	110	55	15	
Mercury	mg/kg	DETS 081*	0.1	0.1	< 0.1	
Nickel	mg/kg	DETS 042#	12	17	20	
Selenium	mg/kg	DETS 042#	< 0.5	< 0.5	< 0.5	
Zinc	mg/kg	DETS 042#	49	51	50	
Chloride Aqueous Extract	g/l	DETS 055	0.02			
Nitrate Aqueous Extract as NO3	g/l	DETS 055	0.01			
Boron (water soluble)	mg/kg	DETS 020#	0.7	0.8	0.9	
Calorific Value	KJ/kg	DETS 037*				
Thiocyanate	mg/kg	DETS 025	1.3	< 1.0	< 1.0	
Cyanide total	mg/kg	DETS 067#	0.3	0.1	< 0.1	
Cyanide free	mg/kg	DETS 067#	< 0.1	< 0.1	< 0.1	
Cyanide complex	mg/kg	DETS 067	0.3	< 0.2	< 0.2	
Magnesium Aqueous Extract	g/l	DETS 042	< 0.01			
Sulphur (free)	mg/kg	DETS 049#	40	30	110	
Sulphide	mg/kg	DETS 024#	110	< 10	16	
Total Sulphate as SO4	%	DETS 075#	0.11	0.05	0.02	
Sulphate Aqueous Extract as SO4	g/l	DETS 076#	0.16	0.05	0.04	
Total Sulphur as S	%	DETS 064*	0.07			
pH		DETS 008#	10.9	8.6	8.6	
Aliphatic C5-C6	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	
Aliphatic C6-C8	mg/kg	DETS 072*	< 0.01	< 0.01	1.2	
Aliphatic C8-C10	mg/kg	DETS 072*	< 0.01	< 0.01	0.19	
Aliphatic C10-C12	mg/kg	DETS 072*	2.1	1.5	1.5	
Aliphatic C12-C16	mg/kg	DETS 072*	30	1.6	1.4	
Aliphatic C16-C21	mg/kg	DETS 072*	32	2.8	1.8	
Aliphatic C21-C35	mg/kg	DETS 072*	240	8.9	5.9	
Aromatic C5-C7	mg/kg	DETS 072*	< 0.01	< 0.01	0.58	
Aromatic C7-C8	mg/kg	DETS 072*	< 0.01	< 0.01	0.31	
Aromatic C8-C10	mg/kg	DETS 072*	< 0.01	< 0.01	0.04	
Aromatic C10-C12	mg/kg	DETS 072*	0.9	2.4	1.9	
Aromatic C12-C16	mg/kg	DETS 072*	29	0.7	0.5	
Aromatic C16-C21	mg/kg	DETS 072*	330	5.4	2.5	
Aromatic C21-C35	mg/kg	DETS 072*	500	23	22	
Aliphatic C5-C35	mg/kg	DETS 072*	310	15	12	
Aromatic C5-C35	mg/kg	DETS 072*	860	31	28	
TPH Ali/Aro	mg/kg	DETS 072*	1200	46	40	
Acenaphthene	mg/kg	DETS 050	9.5	0.7	< 0.1	
Acenaphthylene	mg/kg	DETS 050	1	0.4	< 0.1	
Anthracene	mg/kg	DETS 050	21	0.5	< 0.1	
Benzo(a)anthracene	mg/kg	DETS 050	15	0.4	< 0.1	

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			Lab No.	132669	132670	132671	132672
			Sample Ref	WS02	WS02	WS02	WS03
			Depth	0.50	2.30	2.70	1.00-1.45
			Other Ref	2	10	13	6
			Sample Type	J	J	J	D
Test	Units	DETSxx					
Benzo(a)pyrene	mg/kg	DETS 050	11	< 0.1	< 0.1	< 0.1	
Benzo(b)fluoranthene	mg/kg	DETS 050	14	< 0.1	< 0.1	< 0.1	
Benzo(k)fluoranthene	mg/kg	DETS 050	4.8	< 0.1	< 0.1	< 0.1	
Benzo(g,h,i)perylene	mg/kg	DETS 050	6.9	< 0.1	< 0.1	< 0.1	
Chrysene	mg/kg	DETS 050	13	0.4	< 0.1	< 0.1	
Dibenzo(a,h)anthracene	mg/kg	DETS 050	1.5	0.3	< 0.1	< 0.1	
Fluoranthene	mg/kg	DETS 050	47	1	< 0.1	< 0.1	
Fluorene	mg/kg	DETS 050	9.1	0.3	< 0.1	< 0.1	
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	6.6	< 0.1	< 0.1	< 0.1	
Napthalene	mg/kg	DETS 050	1	0.7	0.2		
Phenanthrene	mg/kg	DETS 050	55	1.2	< 0.1	< 0.1	
Pyrene	mg/kg	DETS 050	35	0.6	< 0.1	< 0.1	
PAH	mg/kg	DETS 050	250	6.4	< 5.0	< 5.0	
Benzene	mg/kg	DETS 062#	< 0.01	< 0.01	0.16	0.16	
Ethylbenzene	mg/kg	DETS 062#	< 0.01	< 0.01	0.04	0.04	
Toluene	mg/kg	DETS 062#	< 0.01	< 0.01	0.24	0.24	
Xylene	mg/kg	DETS 062#	< 0.01	< 0.01	0.01	0.01	
MTBE	mg/kg	DETS 062	< 0.01		0.42	0.42	
Phenol - Monohydric	mg/kg	DETS 067#	0.9	< 0.3	< 0.3	< 0.3	
Total VOC's	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Ammonia as NH4	g/l	DETS 019	< 0.01				
1,2,3-trichlorobenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Hexachlorobutadiene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
1,2-dibromo-3-chloropropane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
1,2-dichlorobenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
n-butylbenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
1,4-dichlorobenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
1,3-dichlorobenzene+p-isopropyltoluene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
sec-butylbenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
1,2,4-trimethylbenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Tert-butylbenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
4-chlorotoluene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
1,3,5-trimethylbenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
2-chlorotoluene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
n-propylbenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
1,2,3-trichloropropane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Bromobenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Isopropylbenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Bromoform	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Styrene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Naphthalene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
1,1-dichloroethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
Trans-1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
o-Xylene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	
m+p-Xylene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01	

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			132669	132670	132671	132672
		Lab No.				
		Sample Ref	WS02	WS02	WS02	WS03
		Depth	0.50	2.30	2.70	1.00-1.45
		Other Ref	2	10	13	6
		Sample Type	J	J	J	D
Test	Units	DETSxx				
Ethylbenzene+1,1,1,2-tetrachloroethane	mg/kg	DETS 068*	< 0.01	< 0.01		
Chlorobenzene	mg/kg	DETS 068*	< 0.01	< 0.01		
1,2-dibromoethane	mg/kg	DETS 068*	< 0.01	< 0.01		
Dibromochloromethane	mg/kg	DETS 068*	< 0.01	< 0.01		
1,3-dichloropropane	mg/kg	DETS 068*	< 0.01	< 0.01		
Tetrachloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01		
1,1,2-trichloroethane	mg/kg	DETS 068*	< 0.01	< 0.01		
trans-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01	< 0.01		
Toluene	mg/kg	DETS 068*	< 0.01	< 0.01		
Methylene Chloride	mg/kg	DETS 068*	< 0.01	< 0.01		
cis-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01	< 0.01		
Bromodichloromethane	mg/kg	DETS 068*	< 0.01	< 0.01		
Dibromomethane	mg/kg	DETS 068*	< 0.01	< 0.01		
1,2-dichloropropane	mg/kg	DETS 068*	< 0.01	< 0.01		
Trichloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01		
1,2-dichloroethane	mg/kg	DETS 068*	< 0.01	< 0.01		
Benzene	mg/kg	DETS 068*	< 0.01	< 0.01		
Carbon tetrachloride + 1,1-dichloropropene	mg/kg	DETS 068*	< 0.01	< 0.01		
1,1,1-trichloroethane	mg/kg	DETS 068*	< 0.01	< 0.01		
Chloroform	mg/kg	DETS 068*	< 0.01	< 0.01		
Bromochloromethane	mg/kg	DETS 068*	< 0.01	< 0.01		
1,1 Dichloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01		
1,2,4-trichlorobenzene	mg/kg	DETS 068*	< 0.01	< 0.01		
2,2-dichloropropane+1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01		

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			132673	132674	132675	132676
		Lab No.				
		Sample Ref	WS04	WS07	WS08	WS10
		Depth	4.50	2.50	5.00-6.00	1.50
		Other Ref	21	9	15	5
		Sample Type	J	J	J	D
Test	Units	DETSxx				
Arsenic	mg/kg	DETS 042#	1	8	36	38
Cadmium	mg/kg	DETS 042#	1	0.8	0.9	1.7
Chromium	mg/kg	DETS 042#	25	26	19	46
Copper	mg/kg	DETS 042#	41	55	17	81
Lead	mg/kg	DETS 042#	14	52	85	14000
Mercury	mg/kg	DETS 081*	< 0.1	0.2	0.2	0.4
Nickel	mg/kg	DETS 042#	31	18	2	37
Selenium	mg/kg	DETS 042#	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	mg/kg	DETS 042#	75	68	51	110
Chloride Aqueous Extract	g/l	DETS 055				
Nitrate Aqueous Extract as NO3	g/l	DETS 055				
Boron (water soluble)	mg/kg	DETS 020#	0.6	1.4	1.4	0.7
Calorific Value	KJ/kg	DETS 037*				
Thiocyanate	mg/kg	DETS 025	1.4	< 1.0	5.5	1.5
Cyanide total	mg/kg	DETS 067#	0.2	0.4	33000	21
Cyanide free	mg/kg	DETS 067#	< 0.1	0.2	40	0.5
Cyanide complex	mg/kg	DETS 067	< 0.2	0.2	33000	21
Magnesium Aqueous Extract	g/l	DETS 042				
Sulphur (free)	mg/kg	DETS 049#	5.3	100	31000	39
Sulphide	mg/kg	DETS 024#	< 10	31	130	74
Total Sulphate as SO4	%	DETS 075#	0.11	0.05	0.74	0.2
Sulphate Aqueous Extract as SO4	g/l	DETS 076#	0.22	0.05	0.9	0.2
Total Sulphur as S	%	DETS 064*				
pH		DETS 008#	6.8	7.8	6.7	8.0
Aliphatic C5-C6	mg/kg	DETS 072*	< 0.01	< 0.01	0.03	< 0.01
Aliphatic C6-C8	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	mg/kg	DETS 072*	< 0.01	4.9	10	< 0.01
Aliphatic C10-C12	mg/kg	DETS 072*	0.8	5.4	1300	2.1
Aliphatic C12-C16	mg/kg	DETS 072*	1.1	36	3800	2.8
Aliphatic C16-C21	mg/kg	DETS 072*	1.5	58	2200	7.7
Aliphatic C21-C35	mg/kg	DETS 072*	7.2	85	5800	33
Aromatic C5-C7	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	mg/kg	DETS 072*	< 0.01	0.75	5.3	< 0.01
Aromatic C10-C12	mg/kg	DETS 072*	< 0.1	1.1	130	0.9
Aromatic C12-C16	mg/kg	DETS 072*	< 0.1	3.2	480	1
Aromatic C16-C21	mg/kg	DETS 072*	< 0.1	11	2300	34
Aromatic C21-C35	mg/kg	DETS 072*	< 0.1	37	2100	120
Aliphatic C5-C35	mg/kg	DETS 072*	11	190	13000	46
Aromatic C5-C35	mg/kg	DETS 072*	< 1	53	4900	150
TPH Ali/Aro	mg/kg	DETS 072*	11	240	18000	200
Acenaphthene	mg/kg	DETS 050	< 0.1	6.3	350	0.5
Acenaphthylene	mg/kg	DETS 050	< 0.1	0.4	290	1
Anthracene	mg/kg	DETS 050	< 0.1	2.7	250	4.1
Benzo(a)anthracene	mg/kg	DETS 050	< 0.1	0.3	560	10

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	132673	132674	132675	132676
		Sample Ref	WS04	WS07	WS08	WS10
		Depth	4.50	2.50	5.00-6.00	1.50
		Other Ref	21	9	15	5
		Sample Type	J	J	J	D
Test	Units	DETSxx				
Benzo(a)pyrene	mg/kg	DETS 050	< 0.1	0.2	190	10
Benzo(b)fluoranthene	mg/kg	DETS 050	< 0.1	0.6	400	11
Benzo(k)fluoranthene	mg/kg	DETS 050	< 0.1	0.3	190	3.8
Benzo(g,h,i)perylene	mg/kg	DETS 050	< 0.1	0.3	360	6
Chrysene	mg/kg	DETS 050	< 0.1	0.3	420	9.2
Dibenzo(a,h)anthracene	mg/kg	DETS 050	< 0.1	< 0.1	100	1.3
Fluoranthene	mg/kg	DETS 050	< 0.1	0.5	1000	26
Fluorene	mg/kg	DETS 050	< 0.1	4.5	540	0.9
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	< 0.1	0.3	170	5.3
Napthalene	mg/kg	DETS 050	0.1	3.5	300	0.5
Phenanthrene	mg/kg	DETS 050	< 0.1	0.4	1300	11
Pyrene	mg/kg	DETS 050	< 0.1	0.5	870	22
PAH	mg/kg	DETS 050	< 5.0	21	7300	120
Benzene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	mg/kg	DETS 062	< 0.01	< 0.01	< 0.01	< 0.01
Phenol - Monohydric	mg/kg	DETS 067#	< 0.3	< 0.3	8.3	< 0.3
Total VOC's	mg/kg	DETS 068*		< 0.01	2.8	
Ammonia as NH4	g/l	DETS 019				
1,2,3-trichlorobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
Hexachlorobutadiene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,2-dibromo-3-chloropropane	mg/kg	DETS 068*		< 0.01	< 0.01	
1,2-dichlorobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
n-butylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,4-dichlorobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,3-dichlorobenzene+p-isopropyltoluene	mg/kg	DETS 068*		< 0.01	0.04	
sec-butylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,2,4-trimethylbenzene	mg/kg	DETS 068*		< 0.01	0.05	
Tert-butylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
4-chlorotoluene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,3,5-trimethylbenzene	mg/kg	DETS 068*		< 0.01	0.08	
2-chlorotoluene	mg/kg	DETS 068*		< 0.01	0.01	
n-propylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,2,3-trichloropropane	mg/kg	DETS 068*		< 0.01	< 0.01	
Bromobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
Isopropylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
Bromoform	mg/kg	DETS 068*		< 0.01	< 0.01	
Styrene	mg/kg	DETS 068*		< 0.01	< 0.01	
Napthalene	mg/kg	DETS 068*		< 0.01	2	
1,1-dichloroethane	mg/kg	DETS 068*		< 0.01	< 0.01	
Trans-1,2-dichloroethylene	mg/kg	DETS 068*		< 0.01	< 0.01	
o-Xylene	mg/kg	DETS 068*		< 0.01	< 0.01	
m+p-Xylene	mg/kg	DETS 068*		< 0.01	0.01	

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	132673	132674	132675	132676
		Sample Ref	WS04	WS07	WS08	WS10
		Depth	4.50	2.50	5.00-6.00	1.50
		Other Ref	21	9	15	5
		Sample Type	J	J	J	D
Test	Units	DETSxx				
Ethylbenzene+1,1,1,2-tetrachloroethane	mg/kg	DETS 068*		< 0.01	< 0.01	
Chlorobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,2-dibromoethane	mg/kg	DETS 068*		< 0.01	< 0.01	
Dibromochloromethane	mg/kg	DETS 068*		< 0.01	< 0.01	
1,3-dichloropropane	mg/kg	DETS 068*		< 0.01	< 0.01	
Tetrachloroethylene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,1,2-trichloroethane	mg/kg	DETS 068*		< 0.01	< 0.01	
trans-1,3-dichloropropene	mg/kg	DETS 068*		< 0.01	< 0.01	
Toluene	mg/kg	DETS 068*		< 0.01	0.08	
Methylene Chloride	mg/kg	DETS 068*		< 0.01	< 0.01	
cis-1,3-dichloropropene	mg/kg	DETS 068*		< 0.01	< 0.01	
Bromodichloromethane	mg/kg	DETS 068*		< 0.01	< 0.01	
Dibromomethane	mg/kg	DETS 068*		< 0.01	< 0.01	
1,2-dichloropropane	mg/kg	DETS 068*		< 0.01	< 0.01	
Trichloroethylene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,2-dichloroethane	mg/kg	DETS 068*		< 0.01	< 0.01	
Benzene	mg/kg	DETS 068*		< 0.01	0.11	
Carbon tetrachloride + 1,1-dichloropropene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,1,1-trichloroethane	mg/kg	DETS 068*		< 0.01	< 0.01	
Chloroform	mg/kg	DETS 068*		< 0.01	< 0.01	
Bromochloromethane	mg/kg	DETS 068*		< 0.01	< 0.01	
1,1 Dichloroethylene	mg/kg	DETS 068*		< 0.01	< 0.01	
1,2,4-trichlorobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	
2,2-dichloropropane+1,2-dichloroethylene	mg/kg	DETS 068*		< 0.01	< 0.01	

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			Lab No.	132677	132678	132679	132680
			Sample Ref	WS11	WS12	BH02	BH05
			Depth	2.50	1.50	4.00-4.50	2.00-2.45
			Other Ref	10	1	6	4
			Sample Type	J	D	B	B
Test	Units	DETSxx					
Arsenic	mg/kg	DETS 042#	49			7	44
Cadmium	mg/kg	DETS 042#	1			0.9	1.4
Chromium	mg/kg	DETS 042#	41			19	31
Copper	mg/kg	DETS 042#	110			50	130
Lead	mg/kg	DETS 042#	550			86	330
Mercury	mg/kg	DETS 081*	0.1			0.1	0.3
Nickel	mg/kg	DETS 042#	49			22	55
Selenium	mg/kg	DETS 042#	< 0.5			< 0.5	< 0.5
Zinc	mg/kg	DETS 042#	56			69	280
Chloride Aqueous Extract	g/l	DETS 055	< 0.01	0.02		0.03	
Nitrate Aqueous Extract as NO3	g/l	DETS 055	< 0.01	< 0.01		< 0.01	
Boron (water soluble)	mg/kg	DETS 020#	1.4			1	1.9
Calorific Value	KJ/kg	DETS 037*				< 1000	
Thiocyanate	mg/kg	DETS 025	1.6			< 1.0	< 1.0
Cyanide total	mg/kg	DETS 067#	4.2			1.1	6.8
Cyanide free	mg/kg	DETS 067#	0.2			< 0.1	0.2
Cyanide complex	mg/kg	DETS 067	4			1	6.6
Magnesium Aqueous Extract	g/l	DETS 042	< 0.01	< 0.01		0.01	
Sulphur (free)	mg/kg	DETS 049#	3.4			24	< 0.8
Sulphide	mg/kg	DETS 024#	35	55		23	59
Total Sulphate as SO4	%	DETS 075#	0.13	0.03		0.08	0.46
Sulphate Aqueous Extract as SO4	g/l	DETS 076#	0.12	0.03		0.17	0.28
Total Sulphur as S	%	DETS 064*	0.08	0.05		0.03	
pH		DETS 008#	8.0	10.7		9.0	8.4
Aliphatic C5-C6	mg/kg	DETS 072*	< 0.01			< 0.01	< 0.01
Aliphatic C6-C8	mg/kg	DETS 072*	< 0.01			< 0.01	< 0.01
Aliphatic C8-C10	mg/kg	DETS 072*	< 0.01			< 0.01	< 0.01
Aliphatic C10-C12	mg/kg	DETS 072*	0.4			0.5	0.8
Aliphatic C12-C16	mg/kg	DETS 072*	1.4			16	8.2
Aliphatic C16-C21	mg/kg	DETS 072*	14			35	18
Aliphatic C21-C35	mg/kg	DETS 072*	32			12	66
Aromatic C5-C7	mg/kg	DETS 072*	< 0.01			< 0.01	< 0.01
Aromatic C7-C8	mg/kg	DETS 072*	< 0.01			< 0.01	< 0.01
Aromatic C8-C10	mg/kg	DETS 072*	< 0.01			< 0.01	< 0.01
Aromatic C10-C12	mg/kg	DETS 072*	0.2			0.2	0.3
Aromatic C12-C16	mg/kg	DETS 072*	0.4			6.6	5.2
Aromatic C16-C21	mg/kg	DETS 072*	26			190	120
Aromatic C21-C35	mg/kg	DETS 072*	81			270	250
Aliphatic C5-C35	mg/kg	DETS 072*	48			63	93
Aromatic C5-C35	mg/kg	DETS 072*	110			470	380
TPH Ali/Aro	mg/kg	DETS 072*	160			530	470
Acenaphthene	mg/kg	DETS 050	< 0.1			0.6	4.3
Acenaphthylene	mg/kg	DETS 050	< 0.1			0.4	0.7
Anthracene	mg/kg	DETS 050	< 0.1			4.2	8.3
Benzo(a)anthracene	mg/kg	DETS 050	< 0.1			6.8	11

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	132677	132678	132679	132680
		Sample Ref	WS11	WS12	BH02	BH05
		Depth	2.50	1.50	4.00-4.50	2.00-2.45
		Other Ref	10	1	6	4
		Sample Type	J	D	B	B
Test	Units	DETSxx				
Benzo(a)pyrene	mg/kg	DETS 050	< 0.1		5.7	8.8
Benzo(b)fluoranthene	mg/kg	DETS 050	< 0.1		7.3	11
Benzo(k)fluoranthene	mg/kg	DETS 050	< 0.1		2.5	3.9
Benzo(g,h,i)perylene	mg/kg	DETS 050	< 0.1		3	5.3
Chrysene	mg/kg	DETS 050	< 0.1		6	9.9
Dibenzo(a,h)anthracene	mg/kg	DETS 050	< 0.1		0.6	1.3
Fluoranthene	mg/kg	DETS 050	< 0.1		17	33
Fluorene	mg/kg	DETS 050	< 0.1		0.9	3.8
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	< 0.1		3.2	5.6
Napthalene	mg/kg	DETS 050	0.1		< 0.1	0.7
Phenanthrene	mg/kg	DETS 050	< 0.1		9.3	26
Pyrene	mg/kg	DETS 050	< 0.1		13	24
PAH	mg/kg	DETS 050	< 5.0		81	160
Benzene	mg/kg	DETS 062#	< 0.01		< 0.01	< 0.01
Ethylbenzene	mg/kg	DETS 062#	< 0.01		< 0.01	< 0.01
Toluene	mg/kg	DETS 062#	< 0.01		< 0.01	< 0.01
Xylene	mg/kg	DETS 062#	< 0.01		< 0.01	< 0.01
MTBE	mg/kg	DETS 062	< 0.01			
Phenol - Monohydric	mg/kg	DETS 067#	< 0.3		< 0.3	< 0.3
Total VOC's	mg/kg	DETS 068*	< 0.01		< 0.01	
Ammonia as NH4	g/l	DETS 019	< 0.01	< 0.01	< 0.01	
1,2,3-trichlorobenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
Hexachlorobutadiene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,2-dibromo-3-chloropropane	mg/kg	DETS 068*	< 0.01		< 0.01	
1,2-dichlorobenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
n-butylbenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,4-dichlorobenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,3-dichlorobenzene+p-isopropyltoluene	mg/kg	DETS 068*	< 0.01		< 0.01	
sec-butylbenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,2,4-trimethylbenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
Tert-butylbenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
4-chlorotoluene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,3,5-trimethylbenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
2-chlorotoluene	mg/kg	DETS 068*	< 0.01		< 0.01	
n-propylbenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,2,3-trichloropropane	mg/kg	DETS 068*	< 0.01		< 0.01	
Bromobenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
Isopropylbenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
Bromoform	mg/kg	DETS 068*	< 0.01		< 0.01	
Styrene	mg/kg	DETS 068*	< 0.01		< 0.01	
Naphthalene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,1-dichloroethane	mg/kg	DETS 068*	< 0.01		< 0.01	
Trans-1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01		< 0.01	
o-Xylene	mg/kg	DETS 068*	< 0.01		< 0.01	
m+p-Xylene	mg/kg	DETS 068*	< 0.01		< 0.01	

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			132677	132678	132679	132680
		Lab No.	132677	132678	132679	132680
		Sample Ref	WS11	WS12	BH02	BH05
		Depth	2.50	1.50	4.00-4.50	2.00-2.45
		Other Ref	10	1	6	4
		Sample Type	J	D	B	B
Test	Units	DETSxx				
Ethylbenzene+1,1,1,2-tetrachloroethane	mg/kg	DETS 068*	< 0.01		< 0.01	
Chlorobenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,2-dibromoethane	mg/kg	DETS 068*	< 0.01		< 0.01	
Dibromochloromethane	mg/kg	DETS 068*	< 0.01		< 0.01	
1,3-dichloropropane	mg/kg	DETS 068*	< 0.01		< 0.01	
Tetrachloroethylene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,1,2-trichloroethane	mg/kg	DETS 068*	< 0.01		< 0.01	
trans-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01		< 0.01	
Toluene	mg/kg	DETS 068*	< 0.01		< 0.01	
Methylene Chloride	mg/kg	DETS 068*	< 0.01		< 0.01	
cis-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01		< 0.01	
Bromodichloromethane	mg/kg	DETS 068*	< 0.01		< 0.01	
Dibromomethane	mg/kg	DETS 068*	< 0.01		< 0.01	
1,2-dichloropropane	mg/kg	DETS 068*	< 0.01		< 0.01	
Trichloroethylene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,2-dichloroethane	mg/kg	DETS 068*	< 0.01		< 0.01	
Benzene	mg/kg	DETS 068*	< 0.01		< 0.01	
Carbon tetrachloride + 1,1-dichloropropene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,1,1-trichloroethane	mg/kg	DETS 068*	< 0.01		< 0.01	
Chloroform	mg/kg	DETS 068*	< 0.01		< 0.01	
Bromochloromethane	mg/kg	DETS 068*	< 0.01		< 0.01	
1,1 Dichloroethylene	mg/kg	DETS 068*	< 0.01		< 0.01	
1,2,4-trichlorobenzene	mg/kg	DETS 068*	< 0.01		< 0.01	
2,2-dichloropropane+1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01		< 0.01	

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	132681	132682	132683	132684
		Sample Ref	BH06	BH07	BH09	BH11
		Depth	0.70-1.20	2.00-2.45	4.00-4.45	2.00-2.45
		Other Ref	2	3	5	4
		Sample Type	B	B	B	B
Test	Units	DETSxx				
Arsenic	mg/kg	DETS 042#		20	27	58
Cadmium	mg/kg	DETS 042#		1.9	31	34
Chromium	mg/kg	DETS 042#		29	33	35
Copper	mg/kg	DETS 042#		910	200	230
Lead	mg/kg	DETS 042#		180	180	460
Mercury	mg/kg	DETS 081*		0.3	0.4	0.7
Nickel	mg/kg	DETS 042#		23	21	62
Selenium	mg/kg	DETS 042#		< 0.5	< 0.5	< 0.5
Zinc	mg/kg	DETS 042#		490	300	530
Chloride Aqueous Extract	g/l	DETS 055	0.01	0.02	< 0.01	
Nitrate Aqueous Extract as NO3	g/l	DETS 055	< 0.01	0.1	0.03	
Boron (water soluble)	mg/kg	DETS 020#		2.8	2.8	3
Calorific Value	KJ/kg	DETS 037*	< 1000	1600	4900	2500
Thiocyanate	mg/kg	DETS 025		1.4	2.1	1.1
Cyanide total	mg/kg	DETS 067#		1.2	84	4
Cyanide free	mg/kg	DETS 067#		0.1	1	0.2
Cyanide complex	mg/kg	DETS 067		1.1	83	3.9
Magnesium Aqueous Extract	g/l	DETS 042	< 0.01	0.01	0.01	
Sulphur (free)	mg/kg	DETS 049#		< 0.8	9.3	70
Sulphide	mg/kg	DETS 024#	12	180	82	90
Total Sulphate as SO4	%	DETS 075#	0.02	0.22	0.33	0.79
Sulphate Aqueous Extract as SO4	g/l	DETS 076#	0.03	0.45	0.2	1.5
Total Sulphur as S	%	DETS 064*	0.01	0.16	0.35	
pH		DETS 008#	8.5	8.6	8.6	7.9
Aliphatic C5-C6	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	mg/kg	DETS 072*		1.7	3.1	1.9
Aliphatic C12-C16	mg/kg	DETS 072*		6.3	4.5	5.5
Aliphatic C16-C21	mg/kg	DETS 072*		29	31	37
Aliphatic C21-C35	mg/kg	DETS 072*		170	350	180
Aromatic C5-C7	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01
Aromatic C7-C8	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01
Aromatic C8-C10	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01
Aromatic C10-C12	mg/kg	DETS 072*		0.3	0.4	0.6
Aromatic C12-C16	mg/kg	DETS 072*		2.2	0.5	1.3
Aromatic C16-C21	mg/kg	DETS 072*		48	10	19
Aromatic C21-C35	mg/kg	DETS 072*		180	93	110
Aliphatic C5-C35	mg/kg	DETS 072*		200	380	220
Aromatic C5-C35	mg/kg	DETS 072*		230	100	130
TPH Ali/Aro	mg/kg	DETS 072*		430	490	350
Acenaphthene	mg/kg	DETS 050		2.6	< 0.1	0.4
Acenaphthylene	mg/kg	DETS 050		0.4	< 0.1	0.5
Anthracene	mg/kg	DETS 050		4.6	< 0.1	0.1
Benzo(a)anthracene	mg/kg	DETS 050		5.7	< 0.1	3.8

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	132681	132682	132683	132684
		Sample Ref	BH06	BH07	BH09	BH11
		Depth	0.70-1.20	2.00-2.45	4.00-4.45	2.00-2.45
		Other Ref	2	3	5	4
		Sample Type	B	B	B	B
Test	Units	DETSxx				
Benzo(a)pyrene	mg/kg	DETS 050		3.8	< 0.1	0.3
Benzo(b)fluoranthene	mg/kg	DETS 050		6.6	11	0.8
Benzo(k)fluoranthene	mg/kg	DETS 050		5.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	mg/kg	DETS 050		2.1	< 0.1	0.2
Chrysene	mg/kg	DETS 050		5.4	< 0.1	0.4
Dibenzo(a,h)anthracene	mg/kg	DETS 050		1	7.3	0.7
Fluoranthene	mg/kg	DETS 050		17	< 0.1	0.9
Fluorene	mg/kg	DETS 050		2.1	< 0.1	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050		1.9	< 0.1	0.3
Napthalene	mg/kg	DETS 050		0.4	0.1	0.3
Phenanthrene	mg/kg	DETS 050		14	< 0.1	0.7
Pyrene	mg/kg	DETS 050		25	< 0.1	1.2
PAH	mg/kg	DETS 050		97	19	11
Benzene	mg/kg	DETS 062#		< 0.01	< 0.01	< 0.01
Ethylbenzene	mg/kg	DETS 062#		< 0.01	< 0.01	< 0.01
Toluene	mg/kg	DETS 062#		< 0.01	< 0.01	< 0.01
Xylene	mg/kg	DETS 062#		< 0.01	< 0.01	< 0.01
MTBE	mg/kg	DETS 062				
Phenol - Monohydric	mg/kg	DETS 067#		0.6	< 0.3	0.5
Total VOC's	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Ammonia as NH4	g/l	DETS 019	< 0.01	< 0.01	< 0.01	
1,2,3-trichlorobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
n-butylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene+p-isopropyltoluene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
sec-butylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Tert-butylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
4-chlorotoluene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
2-chlorotoluene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
n-propylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Bromobenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Isopropylbenzene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Bromoform	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Styrene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Naphthalene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
1,1-dichloroethane	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
o-Xylene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01
m+p-Xylene	mg/kg	DETS 068*		< 0.01	< 0.01	< 0.01

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	132681	132682	132683	132684
		Sample Ref	BH06	BH07	BH09	BH11
		Depth	0.70-1.20	2.00-2.45	4.00-4.45	2.00-2.45
		Other Ref	2	3	5	4
		Sample Type	B	B	B	B
Test	Units	DETSxx				
Ethylbenzene+1,1,1,2-tetrachloroethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Methylene Chloride	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride + 1,1-dichloropropene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane+1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01	< 0.01	< 0.01	< 0.01

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			Lab No.	132685	132686	132687	132688
			Sample Ref	BH12	TP02	TP06	TP08
			Depth	1.20-1.65	2.00	2.00	1.00
			Other Ref	2	6	5	4
			Sample Type	B	D	B	D
Test	Units	DETSxx					
Arsenic	mg/kg	DETS 042#		30	140	17	42
Cadmium	mg/kg	DETS 042#		9.9	2.3	1	1.7
Chromium	mg/kg	DETS 042#		33	29	110	52
Copper	mg/kg	DETS 042#		220	290	63	150
Lead	mg/kg	DETS 042#		250	460	130	280
Mercury	mg/kg	DETS 081*		0.4	0.3	0.1	0.5
Nickel	mg/kg	DETS 042#		39	73	29	31
Selenium	mg/kg	DETS 042#		< 0.5	0.6	1.3	< 0.5
Zinc	mg/kg	DETS 042#		840	920	160	460
Chloride Aqueous Extract	g/l	DETS 055			< 0.01		
Nitrate Aqueous Extract as NO3	g/l	DETS 055			0.02		
Boron (water soluble)	mg/kg	DETS 020#		1.8	1.8	2.1	3.4
Calorific Value	KJ/kg	DETS 037*		1200			
Thiocyanate	mg/kg	DETS 025		1.6	1.3	1.7	< 1.0
Cyanide total	mg/kg	DETS 067#		0.9	0.7	0.6	1.1
Cyanide free	mg/kg	DETS 067#		< 0.1	< 0.1	< 0.1	0.1
Cyanide complex	mg/kg	DETS 067		0.8	0.7	0.6	1
Magnesium Aqueous Extract	g/l	DETS 042			< 0.01		
Sulphur (free)	mg/kg	DETS 049#		40	< 0.8	99	260
Sulphide	mg/kg	DETS 024#		190	74	610	86
Total Sulphate as SO4	%	DETS 075#		0.33	0.43	0.35	0.3
Sulphate Aqueous Extract as SO4	g/l	DETS 076#		1.1	0.17	1	0.94
Total Sulphur as S	%	DETS 064*			0.2		
pH		DETS 008#		8.0	8.1	10.6	9.0
Aliphatic C5-C6	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	mg/kg	DETS 072*		1.5	0.3	2.9	1.2
Aliphatic C12-C16	mg/kg	DETS 072*		2	1.1	6.9	6
Aliphatic C16-C21	mg/kg	DETS 072*		28	39	63	21
Aliphatic C21-C35	mg/kg	DETS 072*		250	430	410	150
Aromatic C5-C7	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	mg/kg	DETS 072*		< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	mg/kg	DETS 072*		0.2	0.2	0.8	0.2
Aromatic C12-C16	mg/kg	DETS 072*		0.6	0.2	3.3	0.3
Aromatic C16-C21	mg/kg	DETS 072*		16	12	24	13
Aromatic C21-C35	mg/kg	DETS 072*		100	150	130	84
Aliphatic C5-C35	mg/kg	DETS 072*		280	470	480	170
Aromatic C5-C35	mg/kg	DETS 072*		120	170	160	98
TPH Ali/Aro	mg/kg	DETS 072*		400	640	640	270
Acenaphthene	mg/kg	DETS 050		0.6	0.6	0.7	0.5
Acenaphthylene	mg/kg	DETS 050		0.3	0.3	0.3	0.2
Anthracene	mg/kg	DETS 050		0.7	0.6	1.3	0.7
Benzo(a)anthracene	mg/kg	DETS 050		1.5	2.1	3.8	4.2

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			Lab No.	132685	132686	132687	132688
			Sample Ref	BH12	TP02	TP06	TP08
			Depth	1.20-1.65	2.00	2.00	1.00
			Other Ref	2	6	5	4
			Sample Type	B	D	B	D
Test	Units	DETSxx					
Benzo(a)pyrene	mg/kg	DETS 050	1.1	1.7	3	2.5	
Benzo(b)fluoranthene	mg/kg	DETS 050	2	2.1	4.3	4.7	
Benzo(k)fluoranthene	mg/kg	DETS 050	0.6	0.7	1.4	1.5	
Benzo(g,h,i)perylene	mg/kg	DETS 050	0.6	0.8	1.7	1.3	
Chrysene	mg/kg	DETS 050	1.2	2.1	3.3	4.1	
Dibenzo(a,h)anthracene	mg/kg	DETS 050	< 0.1	0.1	0.5	1.2	
Fluoranthene	mg/kg	DETS 050	4	4.2	11	8.9	
Fluorene	mg/kg	DETS 050	0.3	0.2	0.4	0.3	
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	0.5	1	1.8	1.3	
Napthalene	mg/kg	DETS 050	0.3	0.2	0.3	0.3	
Phenanthrene	mg/kg	DETS 050	1.8	1.8	3.1	1.2	
Pyrene	mg/kg	DETS 050	3.2	3.6	7.9	6.8	
PAH	mg/kg	DETS 050	19	22	44	40	
Benzene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01	
Ethylbenzene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01	
Toluene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01	
Xylene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01	
MTBE	mg/kg	DETS 062					
Phenol - Monohydric	mg/kg	DETS 067#	0.4	< 0.3	< 0.3	< 0.3	
Total VOC's	mg/kg	DETS 068*	< 0.01				
Ammonia as NH4	g/l	DETS 019		< 0.01			
1,2,3-trichlorobenzene	mg/kg	DETS 068*	< 0.01				
Hexachlorobutadiene	mg/kg	DETS 068*	< 0.01				
1,2-dibromo-3-chloropropane	mg/kg	DETS 068*	< 0.01				
1,2-dichlorobenzene	mg/kg	DETS 068*	< 0.01				
n-butylbenzene	mg/kg	DETS 068*	< 0.01				
1,4-dichlorobenzene	mg/kg	DETS 068*	< 0.01				
1,3-dichlorobenzene+p-isopropyltoluene	mg/kg	DETS 068*	< 0.01				
sec-butylbenzene	mg/kg	DETS 068*	< 0.01				
1,2,4-trimethylbenzene	mg/kg	DETS 068*	< 0.01				
Tert-butylbenzene	mg/kg	DETS 068*	< 0.01				
4-chlorotoluene	mg/kg	DETS 068*	< 0.01				
1,3,5-trimethylbenzene	mg/kg	DETS 068*	< 0.01				
2-chlorotoluene	mg/kg	DETS 068*	< 0.01				
n-propylbenzene	mg/kg	DETS 068*	< 0.01				
1,2,3-trichloropropane	mg/kg	DETS 068*	< 0.01				
Bromobenzene	mg/kg	DETS 068*	< 0.01				
Isopropylbenzene	mg/kg	DETS 068*	< 0.01				
Bromoform	mg/kg	DETS 068*	< 0.01				
Styrene	mg/kg	DETS 068*	< 0.01				
Naphthalene	mg/kg	DETS 068*	< 0.01				
1,1-dichloroethane	mg/kg	DETS 068*	< 0.01				
Trans-1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01				
o-Xylene	mg/kg	DETS 068*	< 0.01				
m+p-Xylene	mg/kg	DETS 068*	< 0.01				

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		<b>Lab No.</b>	132685	132686	132687	132688
		<b>Sample Ref</b>	BH12	TP02	TP06	TP08
		<b>Depth</b>	1.20-1.65	2.00	2.00	1.00
		<b>Other Ref</b>	2	6	5	4
		<b>Sample Type</b>	B	D	B	D
<b>Test</b>	<b>Units</b>	<b>DETSxx</b>				
Ethylbenzene+1,1,1,2-tetrachloroethane	mg/kg	DETS 068*	< 0.01			
Chlorobenzene	mg/kg	DETS 068*	< 0.01			
1,2-dibromoethane	mg/kg	DETS 068*	< 0.01			
Dibromochloromethane	mg/kg	DETS 068*	< 0.01			
1,3-dichloropropane	mg/kg	DETS 068*	< 0.01			
Tetrachloroethylene	mg/kg	DETS 068*	< 0.01			
1,1,2-trichloroethane	mg/kg	DETS 068*	< 0.01			
trans-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01			
Toluene	mg/kg	DETS 068*	< 0.01			
Methylene Chloride	mg/kg	DETS 068*	< 0.01			
cis-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01			
Bromodichloromethane	mg/kg	DETS 068*	< 0.01			
Dibromomethane	mg/kg	DETS 068*	< 0.01			
1,2-dichloropropane	mg/kg	DETS 068*	< 0.01			
Trichloroethylene	mg/kg	DETS 068*	< 0.01			
1,2-dichloroethane	mg/kg	DETS 068*	< 0.01			
Benzene	mg/kg	DETS 068*	< 0.01			
Carbon tetrachloride + 1,1-dichloropropene	mg/kg	DETS 068*	< 0.01			
1,1,1-trichloroethane	mg/kg	DETS 068*	< 0.01			
Chloroform	mg/kg	DETS 068*	< 0.01			
Bromochloromethane	mg/kg	DETS 068*	< 0.01			
1,1 Dichloroethylene	mg/kg	DETS 068*	< 0.01			
1,2,4-trichlorobenzene	mg/kg	DETS 068*	< 0.01			
2,2-dichloropropane+1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01			

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			Lab No.	132689	132690	132691
			Sample Ref	TP09	TP11	TP12
			Depth	1.00	1.00	2.00
			Other Ref	3	3	6
			Sample Type	B	B	D
Test	Units	DETSxx				
Arsenic	mg/kg	DETS 042#	59	6	32	
Cadmium	mg/kg	DETS 042#	1.5	0.9	2	
Chromium	mg/kg	DETS 042#	27	23	34	
Copper	mg/kg	DETS 042#	260	34	180	
Lead	mg/kg	DETS 042#	280	34	230	
Mercury	mg/kg	DETS 081*	0.4	< 0.1	0.4	
Nickel	mg/kg	DETS 042#	34	23	31	
Selenium	mg/kg	DETS 042#	< 0.5	< 0.5	< 0.5	
Zinc	mg/kg	DETS 042#	420	84	350	
Chloride Aqueous Extract	g/l	DETS 055			< 0.01	
Nitrate Aqueous Extract as NO3	g/l	DETS 055			< 0.01	
Boron (water soluble)	mg/kg	DETS 020#	2	1	2	
Calorific Value	KJ/kg	DETS 037*				
Thiocyanate	mg/kg	DETS 025	1.3	< 1.0	< 1.0	
Cyanide total	mg/kg	DETS 067#	4.9	< 0.1	1.2	
Cyanide free	mg/kg	DETS 067#	0.3	< 0.1	0.1	
Cyanide complex	mg/kg	DETS 067	4.6	< 0.2	1	
Magnesium Aqueous Extract	g/l	DETS 042			0.02	
Sulphur (free)	mg/kg	DETS 049#	39	< 0.8	21	
Sulphide	mg/kg	DETS 024#	51	94	100	
Total Sulphate as SO4	%	DETS 075#	0.42	0.03	0.34	
Sulphate Aqueous Extract as SO4	g/l	DETS 076#	1.4	0.06	1	
Total Sulphur as S	%	DETS 064*			0.23	
pH		DETS 008#	9.2	8.9	8.1	
Aliphatic C5-C6	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	
Aliphatic C6-C8	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	
Aliphatic C8-C10	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	
Aliphatic C10-C12	mg/kg	DETS 072*	0.7	0.3	0.5	
Aliphatic C12-C16	mg/kg	DETS 072*	1.1	0.1	3.5	
Aliphatic C16-C21	mg/kg	DETS 072*	9	2.5	36	
Aliphatic C21-C35	mg/kg	DETS 072*	63	12	330	
Aromatic C5-C7	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	
Aromatic C7-C8	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	
Aromatic C8-C10	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	
Aromatic C10-C12	mg/kg	DETS 072*	0.1	0.3	0.2	
Aromatic C12-C16	mg/kg	DETS 072*	0.1	< 0.1	0.3	
Aromatic C16-C21	mg/kg	DETS 072*	18	3.1	13	
Aromatic C21-C35	mg/kg	DETS 072*	67	18	160	
Aliphatic C5-C35	mg/kg	DETS 072*	74	15	370	
Aromatic C5-C35	mg/kg	DETS 072*	85	22	170	
TPH Ali/Aro	mg/kg	DETS 072*	160	37	540	
Acenaphthene	mg/kg	DETS 050	< 0.1	< 0.1	0.3	
Acenaphthylene	mg/kg	DETS 050	< 0.1	< 0.1	0.2	
Anthracene	mg/kg	DETS 050	0.3	< 0.1	0.1	
Benzo(a)anthracene	mg/kg	DETS 050	2.3	< 0.1	0.4	

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

			Lab No.	132689	132690	132691
			Sample Ref	TP09	TP11	TP12
			Depth	1.00	1.00	2.00
			Other Ref	3	3	6
			Sample Type	B	B	D
Test	Units	DETSxx				
Benzo(a)pyrene	mg/kg	DETS 050	2.5	< 0.1	0.3	
Benzo(b)fluoranthene	mg/kg	DETS 050	3.5	< 0.1	0.5	
Benzo(k)fluoranthene	mg/kg	DETS 050	1.2	< 0.1	0.3	
Benzo(g,h,i)perylene	mg/kg	DETS 050	2.7	< 0.1	0.1	
Chrysene	mg/kg	DETS 050	2.4	< 0.1	0.4	
Dibenzo(a,h)anthracene	mg/kg	DETS 050	0.4	< 0.1	1.9	
Fluoranthene	mg/kg	DETS 050	3.6	0.3	0.9	
Fluorene	mg/kg	DETS 050	< 0.1	< 0.1	0.1	
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	1.8	< 0.1	0.2	
Napthalene	mg/kg	DETS 050	0.1	< 0.1	0.4	
Phenanthrene	mg/kg	DETS 050	0.5	< 0.1	0.2	
Pyrene	mg/kg	DETS 050	3.6	0.2	0.7	
PAH	mg/kg	DETS 050	25	< 5.0	7.1	
Benzene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	
Ethylbenzene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	
Toluene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	
Xylene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	
MTBE	mg/kg	DETS 062				
Phenol - Monohydric	mg/kg	DETS 067#	< 0.3	< 0.3	0.3	
Total VOC's	mg/kg	DETS 068*				
Ammonia as NH4	g/l	DETS 019			< 0.01	
1,2,3-trichlorobenzene	mg/kg	DETS 068*				
Hexachlorobutadiene	mg/kg	DETS 068*				
1,2-dibromo-3-chloropropane	mg/kg	DETS 068*				
1,2-dichlorobenzene	mg/kg	DETS 068*				
n-butylbenzene	mg/kg	DETS 068*				
1,4-dichlorobenzene	mg/kg	DETS 068*				
1,3-dichlorobenzene+p-isopropyltoluene	mg/kg	DETS 068*				
sec-butylbenzene	mg/kg	DETS 068*				
1,2,4-trimethylbenzene	mg/kg	DETS 068*				
Tert-butylbenzene	mg/kg	DETS 068*				
4-chlorotoluene	mg/kg	DETS 068*				
1,3,5-trimethylbenzene	mg/kg	DETS 068*				
2-chlorotoluene	mg/kg	DETS 068*				
n-propylbenzene	mg/kg	DETS 068*				
1,2,3-trichloropropane	mg/kg	DETS 068*				
Bromobenzene	mg/kg	DETS 068*				
Isopropylbenzene	mg/kg	DETS 068*				
Bromoform	mg/kg	DETS 068*				
Styrene	mg/kg	DETS 068*				
Naphthalene	mg/kg	DETS 068*				
1,1-dichloroethane	mg/kg	DETS 068*				
Trans-1,2-dichloroethylene	mg/kg	DETS 068*				
o-Xylene	mg/kg	DETS 068*				
m+p-Xylene	mg/kg	DETS 068*				

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

<b>Lab No.</b>	132689	132690	132691
<b>Sample Ref</b>	TP09	TP11	TP12
<b>Depth</b>	1.00	1.00	2.00
<b>Other Ref</b>	3	3	6
<b>Sample Type</b>	B	B	D

<b>Test</b>	<b>Units</b>	<b>DETSxx</b>
Ethylbenzene+1,1,1,2-tetrachloroethane	mg/kg	DETS 068*
Chlorobenzene	mg/kg	DETS 068*
1,2-dibromoethane	mg/kg	DETS 068*
Dibromochloromethane	mg/kg	DETS 068*
1,3-dichloropropane	mg/kg	DETS 068*
Tetrachloroethylene	mg/kg	DETS 068*
1,1,2-trichloroethane	mg/kg	DETS 068*
trans-1,3-dichloropropene	mg/kg	DETS 068*
Toluene	mg/kg	DETS 068*
Methylene Chloride	mg/kg	DETS 068*
cis-1,3-dichloropropene	mg/kg	DETS 068*
Bromodichloromethane	mg/kg	DETS 068*
Dibromomethane	mg/kg	DETS 068*
1,2-dichloropropane	mg/kg	DETS 068*
Trichloroethylene	mg/kg	DETS 068*
1,2-dichloroethane	mg/kg	DETS 068*
Benzene	mg/kg	DETS 068*
Carbon tetrachloride + 1,1-dichloropropene	mg/kg	DETS 068*
1,1,1-trichloroethane	mg/kg	DETS 068*
Chloroform	mg/kg	DETS 068*
Bromochloromethane	mg/kg	DETS 068*
1,1 Dichloroethylene	mg/kg	DETS 068*
1,2,4-trichlorobenzene	mg/kg	DETS 068*
2,2-dichloropropane+1,2-dichloroethylene	mg/kg	DETS 068*

# SVOC's

## Soil Report - 08-82640

New Mill Road, Holmfirth

08-19406

Analysis	LOD	Units	SP No	Sample type			
				Soil 1	Soil 2	Soil 3	Soil 4
				1	2	3	4
				WS02	WS02	WS07	WS08
				132669	132670	132674	132675
				0.50	2.30	2.50	5.0-6.0
Aniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Bis(2-chloroethyl)ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Phenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2-Chlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Benzyl Alcohol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2-Methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
3& 4-Methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2,4-dimethylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Bis-(dichloroethoxy)methane <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2,4-Dichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
1,2,4-Trichlorobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Napthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	0.93	<0.10	0.14	69
4-Chloro-3-methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2-Methylnapthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	1.4	<0.10	0.19	<0.10
Hexachlorocyclpentadiene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2,4,6 Trichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2,4,5 Trichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2-Chloronapthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
1,4-dinitrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Dimethyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
1,3-dintrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Acenaphthylene <sup>x</sup>	0.1	mg/kg	DETSM-134	0.22	<0.10	<0.10	3.8
2,6-Dinitrotoluene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
1,2-Dinitrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
3-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Acenaphthene <sup>x</sup>	0.1	mg/kg	DETSM-134	8.3	<0.10	<0.10	<0.10
Dibenzofuran <sup>x</sup>	0.1	mg/kg	DETSM-134	5.6	<0.10	<0.10	<0.10
2,4-Dinitrotoluene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
4-Nitrophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2,3,4,6-Tetrachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
2,3,5,6-Tetrachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Diethylphthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Fluorene <sup>x</sup>	0.1	mg/kg	DETSM-134	7.8	<0.10	<0.10	<0.10
4-Chlorophenyl phenyl ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
4-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Diphenylamine/4,6-Dinitro-2-methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Azobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
4-Bromophenyl phenyl ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Hexachlorobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Pentachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Phenanthrene <sup>x</sup>	0.1	mg/kg	DETSM-134	65	<0.10	<0.10	880

### Key

- Not Scheduled  
NR - Not Received

# SVOC's

## Soil Report - 08-82640

New Mill Road, Holmfirth

08-19406

Analysis	LOD	Units	Sample type Laboratory reference Borehole/trial pit DETS Ref: Depth (m) SP No	Soil	Soil	Soil	Soil
				1	2	3	4
				WS02	WS02	WS07	WS08
				132669	132670	132674	132675
				0.50	2.30	2.50	5.0-6.0
Anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	19	<0.10	<0.10	110
Carbazole <sup>x</sup>	0.1	mg/kg	DETSM-134	5.2	<0.10	<0.10	<0.10
Di-n-butylphthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Benzy butyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Bis(2-ethylhexyl)ester <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	53	<0.10	0.18	780
Pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	40	<0.10	0.15	550
Benzo(a)anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	14	<0.10	<0.10	200
Chrysene <sup>x</sup>	0.1	mg/kg	DETSM-134	18	<0.10	0.14	290
Di-n-octyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	8.1	<0.10	<0.10	130
Benzo(k)fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	11	<0.10	<0.10	110
Benzo(a)pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	13	0.17	<0.10	5.7
Indeno(1,2,3-cd)pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	2.5	0.59	<0.10	<0.10
Dibenz(a,h)anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	<0.10
Benzo(ghi)perylene <sup>x</sup>	0.1	mg/kg	DETSM-134	1.0	0.54	<0.10	<0.10

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# SVOC's

## Soil Report - 08-82640

New Mill Road, Holmfirth

08-19406

Analysis	LOD	Units	SP No	Sample type		
				Soil 5	Soil 6	Soil 7
				WS11	BH02	BH07
				132677	132679	132682
				2.50	4.0-4.5	2.0-2.45
Aniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Bis(2-chloroethyl)ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Phenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2-Chlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Benzyl Alcohol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2-Methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
3& 4-Methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2,4-dimethylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Bis-(dichloroethoxy)methane <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2,4-Dichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
1,2,4-Trichlorobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Napthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	4.4
4-Chloro-3-methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2-Methylnapthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.11	4.0
Hexachlorocyclopentadiene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2,4,6 Trichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2,4,5 Trichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2-Chloronapthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
1,4-dinitrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Dimethyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
1,3-dinitrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Acenaphthylene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.29	<0.10
2,6-Dinitrotoluene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
1,2-Dinitrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
3-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Acenaphthene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	1.1	25
Dibenzofuran <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.85	1.8
2,4-Dinitrotoluene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
4-Nitrophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2,3,4,6-Tetrachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
2,3,5,6-Tetrachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Diethylphthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Fluorene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	1.4	22
4-Chlorophenyl phenyl ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
4-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Diphenylamine/4,6-Dinitro-2-methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Azobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
4-Bromophenyl phenyl ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Hexachlorobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Pentachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10
Phenanthrene <sup>x</sup>	0.1	mg/kg	DETSM-134	0.41	17	130

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# SVOC's

## Soil Report - 08-82640

New Mill Road, Holmfirth

08-19406

Analysis	LOD	Units	SP No	Sample type	Soil	Soil	Soil
				Laboratory reference	5	6	7
				Borehole/trial pit	WS11	BH02	BH07
				DETS Ref:	132677	132679	132682
				Depth (m)	2.50	4.0-4.5	2.0-2.45
Anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	6.5	33	
Carbazole <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.66	6.8	
Di-n-butylphthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Benzo butyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Bis(2-ethylhexyl)ester <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	0.32	22	130	
Pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	0.21	18	100	
Benzo(a)anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	6.3	39	
Chrysene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	8.0	44	
Di-n-octyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Benzo(b)fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	3.3	29	
Benzo(k)fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	4.5	31	
Benzo(a)pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	5.0	39	
Indeno(1,2,3-cd)pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.88	22	
Dibenz(a,h)anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Benzo(ghi)perylene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	17	

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# SVOC's

## Soil Report - 08-82640

New Mill Road, Holmfirth

08-19406

Analysis	LOD	Units	SP No	Sample type	Soil	Soil	Soil
				Laboratory reference	8	9	10
				Borehole/trial pit	BH09	BH11	BH12
				DETS Ref:	132683	132684	132685
Depth (m)	4.0-4.45	2.0-2.45	1.2-1.65				
Aniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Bis(2-chloroethyl)ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Phenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2-Chlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Benzyl Alcohol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2-Methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
3& 4-Methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2,4-dimethylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Bis-(dichloroethoxy)methane <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2,4-Dichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
1,2,4-Trichlorobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Napthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.86	0.88	
4-Chloro-3-methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2-Methylnapthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.49	0.50	
Hexachlorocyclopentadiene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2,4,6 Trichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2,4,5 Trichlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2-Chloronapthalene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
1,4-dinitrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Dimethyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
1,3-dinitrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Acenaphthylene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2,6-Dinitrotoluene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
1,2-Dinitrobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
3-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Acenaphthene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	1.0	
Dibenzofuran <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.14	0.91	
2,4-Dinitrotoluene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
4-Nitrophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2,3,4,6-Tetrachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
2,3,5,6-Tetrachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Diethylphthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Fluorene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	1.1	
4-Chlorophenyl phenyl ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
4-Nitroaniline <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Diphenylamine/4,6-Dinitro-2-methylphenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Azobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
4-Bromophenyl phenyl ether <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Hexachlorobenzene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Pentachlorophenol <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Phenanthrene <sup>x</sup>	0.1	mg/kg	DETSM-134	0.10	1.7	9.0	

### Key

- Not Scheduled  
NR - Not Received

# SVOC's

## Soil Report - 08-82640

New Mill Road, Holmfirth

08-19406

Analysis	LOD	Units	SP No	Sample type	Soil	Soil	Soil
				Laboratory reference	8	9	10
				Borehole/trial pit	BH09	BH11	BH12
				DETS Ref:	132683	132684	132685
				Depth (m)	4.0-4.45	2.0-2.45	1.2-1.65
Anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	0.34	3.3	
Carbazole <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	0.57	
Di-n-butylphthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Benzy l butyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Bis(2-ethylhexyl)ester <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	1.3	4.9	14	
Pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	1.0	4.9	12	
Benzo(a)anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	3.0	5.4	
Chrysene <sup>x</sup>	0.1	mg/kg	DETSM-134	0.29	3.8	6.7	
Di-n-octyl phthalate <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Benzo(b)fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	1.2	2.8	4.0	
Benzo(k)fluoranthene <sup>x</sup>	0.1	mg/kg	DETSM-134	0.71	3.1	4.3	
Benzo(a)pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	9.5	3.6	6.1	
Indeno(1,2,3-cd)pyrene <sup>x</sup>	0.1	mg/kg	DETSM-134	53	4.2	4.8	
Dibenz(a,h)anthracene <sup>x</sup>	0.1	mg/kg	DETSM-134	<0.10	<0.10	<0.10	
Benzo(ghi)perylene <sup>x</sup>	0.1	mg/kg	DETSM-134	49	4.8	4.8	

### Key

- Not Scheduled  
NR - Not Received

## Summary of Asbestos Analysis Soil Samples

Our Ref: 08-19406

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

Laboratory Number	Sample Ref	Depth	Sample Type	Material	Result
132669	WS02	0.50	J	Soil	NAD
132671	WS02	2.70	J	Soil	NAD
132672	WS03	1.00-1.45	D	Soil	NAD
132678	WS12	1.50	D	Soil	NAD
132679	BH02	4.00-4.50	B	Soil	NAD
132680	BH05	2.00-2.45	B	Soil	NAD
132681	BH06	0.70-1.20	B	Soil	NAD
132682	BH07	2.00-2.45	B	Soil	NAD
132683	BH09	4.00-4.45	B	Soil	NAD
132684	BH11	2.00-2.45	B	Soil	NAD
132685	BH12	1.20-1.65	B	Soil	NAD
132686	TP02	2.00	D	Soil	Chrysotile

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos

NAD = No Asbestos Detected. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos

Samples are analysed using polarised light microscopy in accordance with HSG248 and documented in-house methods. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'.



2139

## Certificate of Analysis

Date: 13/06/2008

Certificate Number: 08-19723

Client: Ian Farmer Associates  
17 Rivington Court  
Hardwick Grange  
Woolston  
Warrington  
Cheshire  
WA1 4RT

Our Reference: 08-19723

Client Reference: 40349

Contract Title: New Mill Road, Holmfirth

Description: 6 soil samples, 6 leachate samples

Date Received: 03/06/2008

Date Started: 03/06/2008

Date Completed: 12/06/2008

Test Procedures: Identified by prefix DETSn, details available upon request.

Notes: Observations and interpretations are outside the scope of UKAS accreditation  
\* denotes test not included in laboratory scope of accreditation  
# denotes test that holds MCERT accreditation  
\$ denotes tests completed by approved subcontractors  
I/S denotes insufficient sample to carry out test  
N/S denotes that the sample is not suitable for testing  
DETSM denotes tests carried out by DETS Midlands laboratory  
Solid samples will be disposed 1 month and liquids 2 weeks  
after the date of issue of this test certificate  
Asbestos subsamples will be kept for 6 months  
SUB denotes sub-contracted results

Approved By:

Authorised Signatories: Rob Brown  
Business Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-19723

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		<b>Lab No.</b>	134628	134629	134630	134631	134632	134633
		<b>Sample Ref</b>	BH01	BH07	BH12	WS02	WS07	WS11
		<b>Depth</b>	3.00-3.45	5.00-5.45	5.00-5.45	1.00-1.45	2.60	2.50
		<b>Other Ref</b>	B4	B6	B6	D4	D11	D9
		<b>Sample Type</b>						
<b>Test</b>	<b>Units</b>	<b>DETSxx</b>						
Conductivity	uS/cm	DETS 009	400	1100	470	260	140	290

**WASTE ACCEPTANCE CRITERIA TESTING  
ANALYTICAL REPORT**

**Job Title:** New Mill Road, Holmfirth  
**Client Reference:** 40349  
**Sample ID:** BH01 / 3.00-3.45

**Job Number:** 08-19723  
**Sample Number:** 134628 / 134634  
**Date Analysed:** 12/06/2008

Test Results On Waste		
Determinand and Method Reference	Units	Result
002 Total Organic Carbon	%	2.3
003 Loss On Ignition	%	5.9
062 BTEX	mg/kg	
052 PCB's (7 congeners)	mg/kg	
051 TPH (C10 - C40)	mg/kg	
050 PAH's	mg/kg	
008 pH	pH Units	8.5
073 Acid Neutralisation Capacity (pH4)*	mol/kg	<1.0
073 Acid Neutralisation Capacity (pH7)*	mol/kg	<1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate				
Determinand and Method Reference	Conc in Eluate ug/l		Amount Leached mg/kg	
	2:1	8:1	LS2	LS10
010 Arsenic as As	<1	<1	<0.002	<0.01
042 Barium as Ba*	56	42	0.11	0.43
042 Cadmium as Cd	<2	<2	<0.004	<0.02
042 Chromium as Cr	<10	<10	<0.02	<0.1
042 Copper as Cu	2	<2	<0.004	<0.02
078 Mercury as Hg*	<0.2	<0.2	<0.0004	<0.002
042 Molybdenum as Mo*	<10	<10	<0.02	<0.1
042 Nickel as Ni	<10	<10	<0.02	<0.1
042 Lead as Pb	<5	<5	<0.01	<0.05
042 Antimony as Sb*	<5	<5	<0.01	<0.05
017 Selenium as Se	<3	<3	<0.006	<0.03
042 Zinc as Zn	15	13	0.030	0.13
055 Chloride as Cl	6700	1100	<20	<100
055 Fluoride as F	480	220	0.96	2.5
055 Sulphate as SO4	210000	29000	420	535
035 Total Dissolved Solids	430000	84000	860	1301
067 Phenol Index*	<100	<100	<0.2	<1.0
033 Dissolved Organic Carbon*	6300	6500	13	63
Additional Information				
008 pH	7.8	7.2		
009 Conductivity uS/cm	627	124		
Temperature*	19	20		
Mass of Sample Kg	0.140			
Mass of dry Sample Kg	0.115			
Stage 1				
Volume of Leachant L2	0.206			
Volume of Eluate VE1	0.160			
Stage 2				
Volume of Leachant L8	0.922			
Volume of Eluate VE2	0.850			

WAC Limit Values limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE = To Be Evaluated

SNRHW = Stable Non-Reactive Hazardous Waste

*Disclaimer: The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

**DERWENTSIDE ENVIRONMENTAL SERVICES TESTING LIMITED**

**WASTE ACCEPTANCE CRITERIA TESTING  
ANALYTICAL REPORT**

**Job Title:** New Mill Road, Holmfirth  
**Client Reference:** 40349  
**Sample ID:** BH07 / 5.00-5.45

**Job Number:** 08-19723  
**Sample Number:** 134629 / 134635  
**Date Analysed:** 12/06/2008

Test Results On Waste		
Determinand and Method Reference	Units	Result
002 Total Organic Carbon	%	6.0
003 Loss On Ignition	%	17
062 BTEX	mg/kg	
052 PCB's (7 congeners)	mg/kg	
051 TPH (C10 - C40)	mg/kg	
050 PAH's	mg/kg	
008 pH	pH Units	8.3
073 Acid Neutralisation Capacity (pH4)*	mol/kg	<1.0
073 Acid Neutralisation Capacity (pH7)*	mol/kg	<1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate				
Determinand and Method Reference	Conc in Eluate ug/l		Amount Leached mg/kg	
	2:1	8:1	LS2	LS10
010 Arsenic as As	<1	<1	<0.002	<0.01
042 Barium as Ba*	94	110	0.19	1.0
042 Cadmium as Cd	<2	<2	<0.004	<0.02
042 Chromium as Cr	<10	<10	<0.02	<0.1
042 Copper as Cu	7	<2	0.014	<0.02
078 Mercury as Hg*	<0.2	<0.2	<0.0004	<0.002
042 Molybdenum as Mo*	11	<10	0.022	<0.1
042 Nickel as Ni	<10	<10	<0.02	<0.1
042 Lead as Pb	<5	<5	<0.01	<0.05
042 Antimony as Sb*	<5	<5	<0.01	<0.05
017 Selenium as Se	<3	<3	<0.006	<0.03
042 Zinc as Zn	49	38	0.10	0.38
055 Chloride as Cl	31000	7000	62	<100
055 Fluoride as F	170	<100	0.34	0.20
055 Sulphate as SO4	180000	27000	360	442
035 Total Dissolved Solids	850000	360000	1700	4073
067 Phenol Index*	<100	<100	<0.2	<1.0
033 Dissolved Organic Carbon*	7300	6400	15	63
Additional Information				
008 pH	7.6	7.1		
009 Conductivity uS/cm	1250	533		
Temperature*	19	20		
Mass of Sample Kg	0.140			
Mass of dry Sample Kg	0.110			
Stage 1				
Volume of Leachant L2	0.191			
Volume of Eluate VE1	0.130			
Stage 2				
Volume of Leachant L8	0.883			
Volume of Eluate VE2	0.810			

WAC Limit Values limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE = To Be Evaluated

SNRHW = Stable Non-Reactive Hazardous Waste

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**DERWENTSIDE ENVIRONMENTAL SERVICES TESTING LIMITED**

**WASTE ACCEPTANCE CRITERIA TESTING  
ANALYTICAL REPORT**

**Job Title:** New Mill Road, Holmfirth  
**Client Reference:** 40349  
**Sample ID:** BH12 / 5.00-5.45

**Job Number:** 08-19723  
**Sample Number:** 134630 / 134636  
**Date Analysed:** 12/06/2008

Test Results On Waste		
Determinand and Method Reference	Units	Result
002 Total Organic Carbon	%	6.1
003 Loss On Ignition	%	20
062 BTEX	mg/kg	
052 PCB's (7 congeners)	mg/kg	
051 TPH (C10 - C40)	mg/kg	
050 PAH's	mg/kg	
008 pH	pH Units	8.1
073 Acid Neutralisation Capacity (pH4)*	mol/kg	<1.0
073 Acid Neutralisation Capacity (pH7)*	mol/kg	<1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate				
Determinand and Method Reference	Conc in Eluate ug/l		Amount Leached mg/kg	
	2:1	8:1	LS2	LS10
010 Arsenic as As	<1	<1	<0.002	<0.01
042 Barium as Ba*	69	85	0.14	0.80
042 Cadmium as Cd	<2	<2	<0.004	<0.02
042 Chromium as Cr	<10	<10	<0.02	<0.1
042 Copper as Cu	5	<2	0.010	<0.02
078 Mercury as Hg*	<0.2	<0.2	<0.0004	<0.002
042 Molybdenum as Mo*	13	<10	0.026	<0.1
042 Nickel as Ni	<10	<10	<0.02	<0.1
042 Lead as Pb	<5	<5	<0.01	<0.05
042 Antimony as Sb*	<5	<5	<0.01	<0.05
017 Selenium as Se	<3	<3	<0.006	<0.03
042 Zinc as Zn	65	43	0.13	0.44
055 Chloride as Cl	16000	7400	32	<100
055 Fluoride as F	<100	<100	<0.02	<0.1
055 Sulphate as SO4	210000	120000	420	1258
035 Total Dissolved Solids	420000	100000	840	1334
067 Phenol Index*	<100	<100	<0.2	<1.0
033 Dissolved Organic Carbon*	<5000	<5000	<10	<50
Additional Information				
008 pH	8.0	7.4		
009 Conductivity uS/cm	613	153		
Temperature*	19	20		
Mass of Sample Kg	0.140			
Mass of dry Sample Kg	0.103			
Stage 1				
Volume of Leachant L2	0.169			
Volume of Eluate VE1	0.120			
Stage 2				
Volume of Leachant L8	0.825			
Volume of Eluate VE2	0.765			

WAC Limit Values limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE = To Be Evaluated

SNRHW = Stable Non-Reactive Hazardous Waste

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**DERWENTSIDE ENVIRONMENTAL SERVICES TESTING LIMITED**

**WASTE ACCEPTANCE CRITERIA TESTING  
ANALYTICAL REPORT**

**Job Title:** New Mill Road, Holmfirth  
**Client Reference:** 40349  
**Sample ID:** WS02 / 1.00-1.45

**Job Number:** 08-19723  
**Sample Number:** 134631 / 134637  
**Date Analysed:** 12/06/2008

Test Results On Waste	
Determinand and Method Reference	Result
002 Total Organic Carbon	2.0
003 Loss On Ignition	6.7
062 BTEX	
052 PCB's (7 congeners)	
051 TPH (C10 - C40)	
050 PAH's	
008 pH	8.3
073 Acid Neutralisation Capacity (pH4)*	<1.0
073 Acid Neutralisation Capacity (pH7)*	<1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg
	10:1	LS10
010 Arsenic as As	2	0.004
042 Barium as Ba*	17	0.034
042 Cadmium as Cd	<2	<0.004
042 Chromium as Cr	<10	<0.02
042 Copper as Cu	<2	<0.004
078 Mercury as Hg*	<0.2	<0.0004
042 Molybdenum as Mo*	<10	<0.02
042 Nickel as Ni	<10	<0.02
042 Lead as Pb	<5	<0.01
042 Antimony as Sb*	<5	<0.01
017 Selenium as Se	<3	<0.006
042 Zinc as Zn	<1	<0.002
055 Chloride as Cl	980	<20
055 Fluoride as F	<100	<0.02
055 Sulphate as SO4	15000	30
035 Total Dissolved Solids	48000	96
067 Phenol Index*	<100	<0.2
033 Dissolved Organic Carbon*	<5000	<10
Additional Information		
008 pH	8.3	
009 Conductivity uS/cm	70	
Temperature*	20	
Mass of Sample Kg		
Mass of dry Sample Kg		
Stage 1		
Volume of Leachant L10 l		
Volume of Eluate VE1 l		

WAC Limit Values limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE = To Be Evaluated

SNRHW = Stable Non-Reactive Hazardous Waste

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**DERWENTSIDE ENVIRONMENTAL SERVICES TESTING LIMITED**

**WASTE ACCEPTANCE CRITERIA TESTING  
ANALYTICAL REPORT**

**Job Title:** New Mill Road, Holmfirth  
**Client Reference:** 40349  
**Sample ID:** WS07 / 2.60

**Job Number:** 08-19723  
**Sample Number:** 134632 / 134638  
**Date Analysed:** 12/06/2008

Test Results On Waste		
Determinand and Method Reference	Units	Result
002 Total Organic Carbon	%	2.7
003 Loss On Ignition	%	8.8
062 BTEX	mg/kg	
052 PCB's (7 congeners)	mg/kg	
051 TPH (C10 - C40)	mg/kg	
050 PAH's	mg/kg	
008 pH	pH Units	7.9
073 Acid Neutralisation Capacity (pH4)*	mol/kg	<1.0
073 Acid Neutralisation Capacity (pH7)*	mol/kg	<1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate				
Determinand and Method Reference	Conc in Eluate ug/l		Amount Leached mg/kg	
	2:1	8:1	LS2	LS10
010 Arsenic as As	<1	<1	<0.002	<0.01
042 Barium as Ba*	9	13	0.018	0.12
042 Cadmium as Cd	<2	<2	<0.004	<0.02
042 Chromium as Cr	<10	<10	<0.02	<0.1
042 Copper as Cu	5	<2	0.010	<0.02
078 Mercury as Hg*	<0.2	<0.2	<0.0004	<0.002
042 Molybdenum as Mo*	12	<10	0.024	<0.1
042 Nickel as Ni	<10	<10	<0.02	<0.1
042 Lead as Pb	<5	<5	<0.01	<0.05
042 Antimony as Sb*	<5	<5	<0.01	<0.05
017 Selenium as Se	<3	<3	<0.006	<0.03
042 Zinc as Zn	18	12	0.036	0.12
055 Chloride as Cl	2300	1100	<20	<100
055 Fluoride as F	<100	<100	<0.02	<0.1
055 Sulphate as SO4	14000	4200	28	<100
035 Total Dissolved Solids	45000	17000	90	197
067 Phenol Index*	<100	<100	<0.2	<1.0
033 Dissolved Organic Carbon*	13000	8300	26	86
Additional Information				
008 pH	7.1	6.7		
009 Conductivity uS/cm	67	25		
Temperature*	19	20		
Mass of Sample Kg	0.140			
Mass of dry Sample Kg	0.108			
Stage 1				
Volume of Leachant L2	0.183			
Volume of Eluate VE1	0.125			
Stage 2				
Volume of Leachant L8	0.861			
Volume of Eluate VE2	0.805			

WAC Limit Values limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE = To Be Evaluated

SNRHW = Stable Non-Reactive Hazardous Waste

*Disclaimer: The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

**DERWENTSIDE ENVIRONMENTAL SERVICES TESTING LIMITED**

**WASTE ACCEPTANCE CRITERIA TESTING  
ANALYTICAL REPORT**

**Job Title:** New Mill Road, Holmfirth  
**Client Reference:** 40349  
**Sample ID:** WS11 / 2.50

**Job Number:** 08-19723  
**Sample Number:** 134633 / 134639  
**Date Analysed:** 12/06/2008

Test Results On Waste		
Determinand and Method Reference	Units	Result
002 Total Organic Carbon	%	3.4
003 Loss On Ignition	%	3.7
062 BTEX	mg/kg	
052 PCB's (7 congeners)	mg/kg	
051 TPH (C10 - C40)	mg/kg	
050 PAH's	mg/kg	
008 pH	pH Units	8.2
073 Acid Neutralisation Capacity (pH4)*	mol/kg	<1.0
073 Acid Neutralisation Capacity (pH7)*	mol/kg	<1.0

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate				
Determinand and Method Reference	Conc in Eluate ug/l		Amount Leached mg/kg	
	2:1	8:1	LS2	LS10
010 Arsenic as As	5	4	0.010	0.040
042 Barium as Ba*	48	38	0.10	0.38
042 Cadmium as Cd	<2	<2	<0.004	<0.02
042 Chromium as Cr	<10	<10	<0.02	<0.1
042 Copper as Cu	2	<2	<0.004	<0.02
078 Mercury as Hg*	<0.2	<0.2	<0.0004	<0.002
042 Molybdenum as Mo*	<10	<10	<0.02	<0.1
042 Nickel as Ni	<10	<10	<0.02	<0.1
042 Lead as Pb	<5	<5	<0.01	<0.05
042 Antimony as Sb*	<5	<5	<0.01	<0.05
017 Selenium as Se	<3	<3	<0.006	<0.03
042 Zinc as Zn	36	<1	0.072	0.041
055 Chloride as Cl	1800	830	<20	<100
055 Fluoride as F	420	370	0.84	3.7
055 Sulphate as SO4	38000	11000	76	138
035 Total Dissolved Solids	140000	46000	280	556
067 Phenol Index*	<100	<100	<0.2	<1.0
033 Dissolved Organic Carbon*	<5000	<5000	<10	<50
Additional Information				
008 pH	7.3	6.8		
009 Conductivity uS/cm	210	68		
Temperature*	19	20		
Mass of Sample Kg	0.140			
Mass of dry Sample Kg	0.114			
Stage 1				
Volume of Leachant L2	0.203			
Volume of Eluate VE1	0.130			
Stage 2				
Volume of Leachant L8	0.916			
Volume of Eluate VE2	0.865			

WAC Limit Values limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE = To Be Evaluated

SNRHW = Stable Non-Reactive Hazardous Waste

*Disclaimer: The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

**DERWENTSIDE ENVIRONMENTAL SERVICES TESTING LIMITED**



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## Certificate of Analysis

Date: 26/06/2008

Certificate Number: 08-20119

Client: Ian Farmer Associates  
17 Rivington Court  
Hardwick Grange  
Woolston  
Warrington  
Cheshire  
WA1 4RT

Our Reference: 08-20119

Client Reference: 40349

Contract Title: New Mill Road, Holmfirth

Description: 15 leachate samples

Date Received: 17/06/2008

Date Started: 17/06/2008

Date Completed: 26/06/2008

Test Procedures: Identified by prefix DETSn, details available upon request.

Notes: Observations and interpretations are outside the scope of UKAS accreditation  
\* denotes test not included in laboratory scope of accreditation  
# denotes test that holds MCERT accreditation  
\$ denotes tests completed by approved subcontractors  
I/S denotes insufficient sample to carry out test  
N/S denotes that the sample is not suitable for testing  
DETSM denotes tests carried out by DETS Midlands laboratory  
Solid samples will be disposed 1 month and liquids 2 weeks  
after the date of issue of this test certificate  
Asbestos subsamples will be kept for 6 months

Approved By:

Authorised Signatories: Rob Brown  
Business Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

# Summary of Chemical Analysis

## Leachate Samples

Our Ref: 08-20119

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	137586	137587	137588	137589	137590	137591
		Sample Ref	WS02	WS02	WS07	WS10	WS11	BH05
		Depth	0.50	2.70	2.50	1.50	2.50	2.00-2.45
		Other Ref	J2	J12	J9	D5	J10	B4
		Sample Type	J	J	J	D	D	B
Test	Units	DETSxx						
Arsenic Dissolved	ug/l	DETS 010			< 1	1		3
Cadmium Dissolved	ug/l	DETS 042			< 2	< 2		< 2
Chromium Dissolved	ug/l	DETS 042			< 10	< 10		< 10
Copper Dissolved	ug/l	DETS 042			< 2	< 2		< 2
Lead Dissolved	ug/l	DETS 042			< 5	< 5		< 5
Mercury Dissolved	ug/l	DETS 078*			< 0.05	< 0.05		< 0.05
Nickel Dissolved	ug/l	DETS 042			< 10	< 10		< 10
Selenium Dissolved	ug/l	DETS 017			< 3	< 3		< 3
Zinc Dissolved	ug/l	DETS 042			< 1	< 1		23
Sulphate	mg/l	DETS 055			3.6	7.4		41
Boron	ug/l	DETS 020			< 100	110		< 100
Thiocyanate	mg/l	DETS 025			< 0.4	< 0.4		< 0.4
Cyanide total	ug/l	DETS 067			< 40	< 40		< 40
Cyanide free	ug/l	DETS 067			< 20	< 20		< 20
Cyanide complex	ug/l	DETS 067			< 40	< 40		< 40
Sulphur (free)	ug/l	DETS 049			< 90	< 90		< 90
Sulphide	ug/l	DETS 024			< 250	< 250		< 250
pH		DETS 008			6.6	6.6		6.7
Aliphatic C5-C6	ug/l	DETS 072*			< 0.1	< 0.1		
Aliphatic C6-C8	ug/l	DETS 072*			< 0.1	< 0.1		
Aliphatic C8-C10	ug/l	DETS 072*			< 0.1	< 0.1		
Aliphatic C10-C12	ug/l	DETS 072*			3	< 1		
Aliphatic C12-C16	ug/l	DETS 072*			2	< 1		
Aliphatic C16-C21	ug/l	DETS 072*			2	< 1		
Aliphatic C21-C35	ug/l	DETS 072*			< 1	< 1		
Aromatic C5-C7	ug/l	DETS 072*			< 0.1	< 0.1		
Aromatic C7-C8	ug/l	DETS 072*			< 0.1	< 0.1		
Aromatic C8-C10	ug/l	DETS 072*			< 0.1	< 0.1		
Aromatic C10-C12	ug/l	DETS 072*			4	< 1		
Aromatic C12-C16	ug/l	DETS 072*			9	< 1		
Aromatic C16-C21	ug/l	DETS 072*			11	< 1		
Aromatic C21-C35	ug/l	DETS 072*			24	< 1		
Aliphatic C5-C35	ug/l	DETS 072*			< 10	< 10		
Aromatic C5-C35	ug/l	DETS 072*			48	< 10		
TPH Ali/Aro	ug/l	DETS 072*			56	< 10		
PAH	ug/l	DETS 074*	60	< 0.20	0.28	0.27		4.6
TPH (C10-C40)	ug/l	DETS 051	1600	700	200	130	36	
Phenol	ug/l	DETS 054*			< 0.50	< 0.50		< 0.50

# Summary of Chemical Analysis

## Leachate Samples

Our Ref: 08-20119

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	137592	137593	137594	137595	137596	137597
		Sample Ref	BH02	BH07	BH09	BH12	TP02	TP06
		Depth	4.00-4.50	2.00-2.45	4.00-4.45	1.20-1.65	2.00	2.00
		Other Ref	B6	B3	B5	B2	D6	B5
		Sample Type	B	B	B	B	D	B
Test	Units	DETSxx						
Arsenic Dissolved	ug/l	DETS 010						
Cadmium Dissolved	ug/l	DETS 042						
Chromium Dissolved	ug/l	DETS 042						
Copper Dissolved	ug/l	DETS 042						
Lead Dissolved	ug/l	DETS 042						
Mercury Dissolved	ug/l	DETS 078*						
Nickel Dissolved	ug/l	DETS 042						
Selenium Dissolved	ug/l	DETS 017						
Zinc Dissolved	ug/l	DETS 042						
Sulphate	mg/l	DETS 055						
Boron	ug/l	DETS 020						
Thiocyanate	mg/l	DETS 025						
Cyanide total	ug/l	DETS 067						
Cyanide free	ug/l	DETS 067						
Cyanide complex	ug/l	DETS 067						
Sulphur (free)	ug/l	DETS 049						
Sulphide	ug/l	DETS 024						
pH		DETS 008						
Aliphatic C5-C6	ug/l	DETS 072*		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	ug/l	DETS 072*		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	ug/l	DETS 072*		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	ug/l	DETS 072*		3	2	4	< 1	< 1
Aliphatic C12-C16	ug/l	DETS 072*		< 1	< 1	4	2	< 1
Aliphatic C16-C21	ug/l	DETS 072*		< 1	< 1	4	16	< 1
Aliphatic C21-C35	ug/l	DETS 072*		< 1	< 1	4	340	< 1
Aromatic C5-C7	ug/l	DETS 072*		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	ug/l	DETS 072*		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	ug/l	DETS 072*		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	ug/l	DETS 072*		2	3	2	2	2
Aromatic C12-C16	ug/l	DETS 072*		1	2	7	3	2
Aromatic C16-C21	ug/l	DETS 072*		< 1	< 1	10	10	4
Aromatic C21-C35	ug/l	DETS 072*		< 1	< 1	32	220	< 1
Aliphatic C5-C35	ug/l	DETS 072*		< 10	< 10	15	360	< 10
Aromatic C5-C35	ug/l	DETS 072*		< 10	< 10	51	240	< 10
TPH Ali/Aro	ug/l	DETS 072*		< 10	< 10	67	600	< 10
PAH	ug/l	DETS 074*	5.9	< 0.20	0.21	0.43	< 0.20	0.38
TPH (C10-C40)	ug/l	DETS 051						
Phenol	ug/l	DETS 054*						

# Summary of Chemical Analysis

## Leachate Samples

Our Ref: 08-20119

Client Ref: 40349

Contract Title: New Mill Road, Holmfirth

		Lab No.	137598	137599	137811
		Sample Ref	TP08	TP12	WS08
		Depth	2.00	2.00	5.00-6.00
		Other Ref	D4	D6	J15
		Sample Type	D	D	
Test	Units	DETSxx			
Arsenic Dissolved	ug/l	DETS 010			2
Cadmium Dissolved	ug/l	DETS 042			< 2
Chromium Dissolved	ug/l	DETS 042			< 10
Copper Dissolved	ug/l	DETS 042			< 2
Lead Dissolved	ug/l	DETS 042			< 5
Mercury Dissolved	ug/l	DETS 078*			< 0.05
Nickel Dissolved	ug/l	DETS 042			< 10
Selenium Dissolved	ug/l	DETS 017			< 3
Zinc Dissolved	ug/l	DETS 042			< 1
Sulphate	mg/l	DETS 055			3.1
Boron	ug/l	DETS 020			100
Thiocyanate	mg/l	DETS 025			< 0.4
Cyanide total	ug/l	DETS 067			< 40
Cyanide free	ug/l	DETS 067			< 20
Cyanide complex	ug/l	DETS 067			< 40
Sulphur (free)	ug/l	DETS 049			< 90
Sulphide	ug/l	DETS 024			< 250
pH		DETS 008			6.9
Aliphatic C5-C6	ug/l	DETS 072*	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	ug/l	DETS 072*	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	ug/l	DETS 072*	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	ug/l	DETS 072*	15	19	6
Aliphatic C12-C16	ug/l	DETS 072*	3	5	< 1
Aliphatic C16-C21	ug/l	DETS 072*	3	4	< 1
Aliphatic C21-C35	ug/l	DETS 072*	11	6	< 1
Aromatic C5-C7	ug/l	DETS 072*	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	ug/l	DETS 072*	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	ug/l	DETS 072*	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	ug/l	DETS 072*	4	2	3
Aromatic C12-C16	ug/l	DETS 072*	3	4	3
Aromatic C16-C21	ug/l	DETS 072*	2	2	2
Aromatic C21-C35	ug/l	DETS 072*	3	1	2
Aliphatic C5-C35	ug/l	DETS 072*	32	35	< 10
Aromatic C5-C35	ug/l	DETS 072*	12	< 10	10
TPH Ali/Aro	ug/l	DETS 072*	44	44	17
PAH	ug/l	DETS 074*	< 0.20	1.5	0.48
TPH (C10-C40)	ug/l	DETS 051			27
Phenol	ug/l	DETS 054*			< 0.50



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## Certificate of Analysis

Date: 26/09/2008

Certificate Number: 08-22490

Client: Ian Farmer Associates  
17 Rivington Court  
Hardwick Grange  
Woolston  
Warrington  
Cheshire  
WA1 4RT

Our Reference: 08-22490

Client Reference: 40349

Contract Title: Holmfirth Plume Plotting

Description: 6 soil samples, 3 leachate samples

Date Received: 17/09/2008

Date Started: 17/09/2008

Date Completed: 26/09/2008

Test Procedures: Identified by prefix DETSn, details available upon request.

Notes: Observations and interpretations are outside the scope of UKAS accreditation  
\* denotes test not included in laboratory scope of accreditation  
# denotes test that holds MCERT accreditation, however, MCERTS accreditation is only implied if the report carries the MCERTS logo  
\$ denotes tests completed by an approved subcontractor  
I/S denotes insufficient sample to carry out test  
N/S denotes that the sample is not suitable for testing  
DETSM denotes tests carried out by DETS Midlands laboratory  
Solid samples will be disposed 1 month and liquids 2 weeks after the date of issue of this test certificate  
Asbestos subsamples will be kept for 6 months

Approved By:

Authorised Signatories: Rob Brown  
Business Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-22490

Client Ref: 40349

Contract Title: Holmfirth Plume Plotting

		Lab No.	154684	154685	154686	154687
		Sample Ref	2WS19	2WS18	2WS16	2WS22
		Depth	6.00	6.00	3.50	6.50
		Other Ref	J8	J6	J4	J7
Test	Units	Sample Type				
Lead	mg/kg	DETS 042#	43	21	350	33
Cyanide total	mg/kg	DETS 067#	< 0.1	< 0.1	< 0.1	< 0.1
Cyanide free	mg/kg	DETS 067#	< 0.1	< 0.1	< 0.1	< 0.1
Cyanide complex	mg/kg	DETS 067	< 0.2	< 0.2	< 0.2	< 0.2
Aliphatic C5-C6	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	mg/kg	DETS 072*	16	< 0.1	< 0.1	< 0.1
Aliphatic C12-C16	mg/kg	DETS 072*	79	< 0.1	< 0.1	< 0.1
Aliphatic C16-C21	mg/kg	DETS 072*	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C21-C35	mg/kg	DETS 072*	250	< 0.1	< 0.1	< 0.1
Aromatic C5-C7	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	mg/kg	DETS 072*	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	mg/kg	DETS 072*	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C12-C16	mg/kg	DETS 072*	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C16-C21	mg/kg	DETS 072*	7.7	< 0.1	1.3	0.2
Aromatic C21-C35	mg/kg	DETS 072*	30	< 0.1	< 0.1	1.0
Aliphatic C5-C35	mg/kg	DETS 072*	350	< 1	< 1	< 1
Aromatic C5-C35	mg/kg	DETS 072*	38	< 1	1	1
TPH Ali/Aro	mg/kg	DETS 072*	380	<1	1	1
Acenaphthene	mg/kg	DETS 050				
Acenaphthylene	mg/kg	DETS 050				
Anthracene	mg/kg	DETS 050				
Benzo(a)anthracene	mg/kg	DETS 050				
Benzo(a)pyrene	mg/kg	DETS 050				
Benzo(b)fluoranthene	mg/kg	DETS 050				
Benzo(k)fluoranthene	mg/kg	DETS 050				
Benzo(g,h,i)perylene	mg/kg	DETS 050				
Chrysene	mg/kg	DETS 050				
Dibenzo(a,h)anthracene	mg/kg	DETS 050				
Fluoranthene	mg/kg	DETS 050				
Fluorene	mg/kg	DETS 050				
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050				
Naphthalene	mg/kg	DETS 050				
Phenanthrene	mg/kg	DETS 050				
Pyrene	mg/kg	DETS 050				
PAH	mg/kg	DETS 050				
Benzene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	mg/kg	DETS 062#	< 0.01	< 0.01	< 0.01	< 0.01

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-22490

Client Ref: 40349

Contract Title: Holmfirth Plume Plotting

<b>Lab No.</b>	154688	154689
<b>Sample Ref</b>	2WS14	2WS14
<b>Depth</b>	3.00	5.00
<b>Other Ref</b>	J5	J5
<b>Sample Type</b>		

<b>Test</b>	<b>Units</b>	<b>DETSxx</b>		
Lead	mg/kg	DETS 042#		
Cyanide total	mg/kg	DETS 067#		
Cyanide free	mg/kg	DETS 067#		
Cyanide complex	mg/kg	DETS 067		
Aliphatic C5-C6	mg/kg	DETS 072*		
Aliphatic C6-C8	mg/kg	DETS 072*		
Aliphatic C8-C10	mg/kg	DETS 072*		
Aliphatic C10-C12	mg/kg	DETS 072*		
Aliphatic C12-C16	mg/kg	DETS 072*		
Aliphatic C16-C21	mg/kg	DETS 072*		
Aliphatic C21-C35	mg/kg	DETS 072*		
Aromatic C5-C7	mg/kg	DETS 072*		
Aromatic C7-C8	mg/kg	DETS 072*		
Aromatic C8-C10	mg/kg	DETS 072*		
Aromatic C10-C12	mg/kg	DETS 072*		
Aromatic C12-C16	mg/kg	DETS 072*		
Aromatic C16-C21	mg/kg	DETS 072*		
Aromatic C21-C35	mg/kg	DETS 072*		
Aliphatic C5-C35	mg/kg	DETS 072*		
Aromatic C5-C35	mg/kg	DETS 072*		
TPH Ali/Aro	mg/kg	DETS 072*		
Acenaphthene	mg/kg	DETS 050	< 0.1	< 0.1
Acenaphthylene	mg/kg	DETS 050	< 0.1	< 0.1
Anthracene	mg/kg	DETS 050	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	DETS 050	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	DETS 050	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	DETS 050	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	DETS 050	< 0.1	< 0.1
Benzo(g,h,i)perylene	mg/kg	DETS 050	0.3	< 0.1
Chrysene	mg/kg	DETS 050	< 0.1	< 0.1
Dibenzo(a,h)anthracene	mg/kg	DETS 050	< 0.1	< 0.1
Fluoranthene	mg/kg	DETS 050	0.2	< 0.1
Fluorene	mg/kg	DETS 050	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	< 0.1	< 0.1
Naphthalene	mg/kg	DETS 050	< 0.1	< 0.1
Phenanthrene	mg/kg	DETS 050	< 0.1	< 0.1
Pyrene	mg/kg	DETS 050	< 0.1	< 0.1
PAH	mg/kg	DETS 050	< 5.0	< 5.0
Benzene	mg/kg	DETS 062#		
Ethylbenzene	mg/kg	DETS 062#		
Toluene	mg/kg	DETS 062#		
Xylene	mg/kg	DETS 062#		

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-22490

Client Ref: 40349

Contract Title: Holmfirth Plume Plotting

Lab No. 154684  
Sample Ref 2WS19  
Depth 6.00  
Other Ref J8  
Sample Type

Test	Units	DETSxx	
Total VOC's	mg/kg	DETS 068*	< 0.01
1,2,4-trichlorobenzene	mg/kg	DETS 068*	< 0.01
1,2-dibromo-3-chloropropane	mg/kg	DETS 068*	< 0.01
1,2-dichlorobenzene	mg/kg	DETS 068*	< 0.01
n-butylbenzene	mg/kg	DETS 068*	< 0.01
1,4-dichlorobenzene	mg/kg	DETS 068*	< 0.01
1,3-dichlorobenzene+p-isopropyltoluene	mg/kg	DETS 068*	< 0.01
sec-butylbenzene	mg/kg	DETS 068*	< 0.01
1,2,4-trimethylbenzene	mg/kg	DETS 068*	< 0.01
Tert-butylbenzene	mg/kg	DETS 068*	< 0.01
4-chlorotoluene	mg/kg	DETS 068*	< 0.01
1,3,5-trimethylbenzene	mg/kg	DETS 068*	< 0.01
2-chlorotoluene	mg/kg	DETS 068*	< 0.01
n-propylbenzene	mg/kg	DETS 068*	< 0.01
1,2,3-trichloropropane	mg/kg	DETS 068*	< 0.01
Bromobenzene	mg/kg	DETS 068*	< 0.01
Isopropylbenzene	mg/kg	DETS 068*	< 0.01
Bromoform	mg/kg	DETS 068*	< 0.01
Styrene	mg/kg	DETS 068*	< 0.01
o-Xylene	mg/kg	DETS 068*	< 0.01
m+p-Xylene	mg/kg	DETS 068*	< 0.01
Ethylbenzene+1,1,1,2-tetrachloroethane	mg/kg	DETS 068*	< 0.01
Chlorobenzene	mg/kg	DETS 068*	< 0.01
1,2-dibromoethane	mg/kg	DETS 068*	< 0.01
Dibromochloromethane	mg/kg	DETS 068*	< 0.01
1,3-dichloropropane	mg/kg	DETS 068*	< 0.01
Tetrachloroethylene	mg/kg	DETS 068*	< 0.01
1,1,2-trichloroethane	mg/kg	DETS 068*	< 0.01
trans-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01
Toluene	mg/kg	DETS 068*	< 0.01
Hexachlorobutadiene	mg/kg	DETS 068*	< 0.01
Naphthalene	mg/kg	DETS 068*	< 0.01
cis-1,3-dichloropropene	mg/kg	DETS 068*	< 0.01
Bromodichloromethane	mg/kg	DETS 068*	< 0.01
Dibromomethane	mg/kg	DETS 068*	< 0.01
1,2-dichloropropane	mg/kg	DETS 068*	< 0.01
Trichloroethylene	mg/kg	DETS 068*	< 0.01
1,2-dichloroethane	mg/kg	DETS 068*	< 0.01
Benzene	mg/kg	DETS 068*	< 0.01
Carbon tetrachloride + 1,1-dichloropropene	mg/kg	DETS 068*	< 0.01
1,1,1-trichloroethane	mg/kg	DETS 068*	< 0.01
Chloroform	mg/kg	DETS 068*	< 0.01
Bromochloromethane	mg/kg	DETS 068*	< 0.01

## Summary of Chemical Analysis

### Soil Samples

Our Ref: 08-22490

Client Ref: 40349

Contract Title: Holmfirth Plume Plotting

**Lab No.** 154684  
**Sample Ref** 2WS19  
**Depth** 6.00  
**Other Ref** J8

**Sample Type**

<b>Test</b>	<b>Units</b>	<b>DETSxx</b>	
2,2-dichloropropane+1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01
1,1-dichloroethane	mg/kg	DETS 068*	< 0.01
Trans-1,2-dichloroethylene	mg/kg	DETS 068*	< 0.01
Methylene Chloride	mg/kg	DETS 068*	< 0.01
1,1 Dichloroethylene	mg/kg	DETS 068*	< 0.01
1,2,3-trichlorobenzene	mg/kg	DETS 068*	< 0.01

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-82993  
 Client Ref: 08-22490  
 Contract Title: Holmfirm Plume Plotting

Lab No. 154684  
 Sample Ref 2WS19  
 Depth 6.00  
 Other Ref J8  
 Sample Type Soil

Test	Units	DETSxx	
Aniline	mg/kg	DETSM-134*	<0.10
Bis(2-chloroethyl)ether	mg/kg	DETSM-134*	<0.10
Phenol	mg/kg	DETSM-134*	<0.10
2-Chlorophenol	mg/kg	DETSM-134*	<0.10
Benzyl Alcohol	mg/kg	DETSM-134*	<0.10
2-Methylphenol	mg/kg	DETSM-134*	<0.10
3& 4-Methylphenol	mg/kg	DETSM-134*	<0.10
2,4-dimethylphenol	mg/kg	DETSM-134*	<0.10
Bis-(dichloroethoxy)methane	mg/kg	DETSM-134*	<0.10
2,4-Dichlorophenol	mg/kg	DETSM-134*	<0.10
1,2,4-Trichlorobenzene	mg/kg	DETSM-134*	<0.10
Napthalene	mg/kg	DETSM-134*	<0.10
4-Chloro-3-methylphenol	mg/kg	DETSM-134*	<0.10
2-Methylnapthalene	mg/kg	DETSM-134*	<0.10
Hexachlorocyclopentadiene	mg/kg	DETSM-134*	<0.10
2,4,6 Trichlorophenol	mg/kg	DETSM-134*	<0.10
2,4,5 Trichlorophenol	mg/kg	DETSM-134*	<0.10
2-Chloronapthalene	mg/kg	DETSM-134*	<0.10
2-Nitroaniline	mg/kg	DETSM-134*	<0.10
1,4-dinitrobenzene	mg/kg	DETSM-134*	<0.10
Dimethyl phthalate	mg/kg	DETSM-134*	<0.10
1,3-dinitrobenzene	mg/kg	DETSM-134*	<0.10
Acenaphthylene	mg/kg	DETSM-134*	<0.10
2,6-Dinitrotoluene	mg/kg	DETSM-134*	<0.10
1,2-Dinitrobenzene	mg/kg	DETSM-134*	<0.10
3-Nitroaniline	mg/kg	DETSM-134*	<0.10
Acenaphthene	mg/kg	DETSM-134*	<0.10
Dibenzofuran	mg/kg	DETSM-134*	<0.10
2,4-Dinitrotoluene	mg/kg	DETSM-134*	<0.10
4-Nitrophenol	mg/kg	DETSM-134*	<0.10
2,3,4,6-Tetrachlorophenol	mg/kg	DETSM-134*	<0.10
2,3,5,6-Tetrachlorophenol	mg/kg	DETSM-134*	<0.10
Diethylphthalate	mg/kg	DETSM-134*	<0.10
Fluorene	mg/kg	DETSM-134*	<0.10
4-Chlorophenyl phenyl ether	mg/kg	DETSM-134*	<0.10
4-Nitroaniline	mg/kg	DETSM-134*	<0.10
Diphenylamine/4,6-Dinitro-2-methylphenol	mg/kg	DETSM-134*	<0.10
Azobenzene	mg/kg	DETSM-134*	<0.10
4-Bromophenyl phenyl ether	mg/kg	DETSM-134*	<0.10
Hexachlorobenzene	mg/kg	DETSM-134*	<0.10
Pentachlorophenol	mg/kg	DETSM-134*	<0.10
Phenanthrene	mg/kg	DETSM-134*	0.19
Anthracene	mg/kg	DETSM-134*	<0.10
Carbazole	mg/kg	DETSM-134*	<0.10
Di-n-butylphthalate	mg/kg	DETSM-134*	<0.10
Benzyl butyl phthalate	mg/kg	DETSM-134*	<0.10
Bis(2-ethylhexyl)ester	mg/kg	DETSM-134*	<0.10
Fluoranthene	mg/kg	DETSM-134*	0.36
Pyrene	mg/kg	DETSM-134*	0.33
Benzo(a)anthracene	mg/kg	DETSM-134*	0.23
Chrysene	mg/kg	DETSM-134*	0.13

# Summary of Chemical Analysis

## Soil Samples

Our Ref: 08-82993  
Client Ref: 08-22490  
Contract Title: Holmfirm Plume Plotting

Lab No. 154684  
Sample Ref 2WS19  
Depth 6.00  
Other Ref J8  
Sample Type Soil

Test	Units	DETSxx	
Di-n-octyl phthalate	mg/kg	DETSM-134*	<0.10
Benzo(b)fluoranthene	mg/kg	DETSM-134*	0.13
Benzo(k)fluoranthene	mg/kg	DETSM-134*	0.10
Benzo(a)pyrene	mg/kg	DETSM-134*	<0.10
Indeno(1,2,3-cd)pyrene	mg/kg	DETSM-134*	<0.10
Dibenz(a,h)anthracene	mg/kg	DETSM-134*	<0.10
Benzo(ghi)perylene	mg/kg	DETSM-134*	<0.10

# Summary of Chemical Analysis

## Leachate Samples

Our Ref: 08-22490

Client Ref: 40349

Contract Title: Holmfirth Plume Plotting

<b>Lab No.</b>	154690	154691	154692
<b>Sample Ref</b>	2WS18	2WS16	2WS14
<b>Depth</b>	6.00	6.00	3.00
<b>Other Ref</b>	J6	J6	J3

<b>Test</b>	<b>Units</b>	<b>Sample Type</b>			
		<b>DETSxx</b>			
Aliphatic C5-C6	ug/l	DETS 072*			< 0.1
Aliphatic C6-C8	ug/l	DETS 072*			< 0.1
Aliphatic C8-C10	ug/l	DETS 072*			< 0.1
Aliphatic C10-C12	ug/l	DETS 072*			2
Aliphatic C12-C16	ug/l	DETS 072*			< 1
Aliphatic C16-C21	ug/l	DETS 072*			2
Aliphatic C21-C35	ug/l	DETS 072*			< 1
Aromatic C5-C7	ug/l	DETS 072*			< 0.1
Aromatic C7-C8	ug/l	DETS 072*			< 0.1
Aromatic C8-C10	ug/l	DETS 072*			< 0.1
Aromatic C10-C12	ug/l	DETS 072*			5
Aromatic C12-C16	ug/l	DETS 072*			< 1
Aromatic C16-C21	ug/l	DETS 072*			< 1
Aromatic C21-C35	ug/l	DETS 072*			8
Aliphatic C5-C35	ug/l	DETS 072*			< 10
Aromatic C5-C35	ug/l	DETS 072*			12
TPH Ali/Aro	ug/l	DETS 072*			18
PAH	ug/l	DETS 074*	0.24	0.54	
EPH (C10-C40)	ug/l	DETS 051	75	93	

**APPENDIX 5**

**GAS AND GROUNDWATER MONITORING**

## Gas and Groundwater Monitoring Results

<b>Contract Number:</b>		W08 40349									
<b>Contract Name:</b>		New Mill Road, Holmfirth									
<b>Date:</b>		14th May 2008									
Background Readings:		O <sub>2</sub> % v/v	21.3	CO <sub>2</sub> % v/v	0.0	CH <sub>4</sub> % v/v	0.0	H <sub>2</sub> S ppm	0.0		
		Weather Conditions:				Cloudy					
		Ground Conditions (dry / wet etc)				Dry					
		Atmospheric Pressure (Start)				1002mb					
		Atmospheric Pressure (Finish)				999mb					
Hole No:	VOC ppm	O <sub>2</sub> % v/v	CO <sub>2</sub> %v/v	CH <sub>4</sub> % v/v		LEL	H <sub>2</sub> S ppm	Gas flow Rate (l/hr)	Depth to base of well	SWL	
		Steady	Steady	Peak	Steady	Steady	Steady	Range	mBGL	mBGL	
BH01	0.0	20.4	0.3	0.0	0.0	0.0	0.0	0.0	7.30	Dry	
BH02	7.3	19.8	0.5	0.0	0.0	0.0	0.0	-0.2	7.30	Dry	
BH04	0.0	13.3	4.3	0.0	0.0	0.0	0.0	0.0	7.40	Dry	
BH05	0.0	17.8	1.1	0.0	0.0	0.0	0.0	0.2	3.20	Dry	
BH09	*1										
BH11	0.0	4.7	13.0	0.3	0.3	2.4	0.0	-1.2	11.20	Dry	
BH12	0.0	15.6	6.0	0.0	0.0	0.0	0.0	-0.2	8.15	Dry	
WS01	4.4	21.2	0.0	0.0	0.0	0.0	0.0	-0.4	2.60	Dry	
WS03	2.8	20.7	0.0	0.0	0.0	0.0	0.0	0.0	2.10	Dry	
WS04	3.6	19.8	0.4	0.0	0.0	0.0	0.0	0.2	2.40	Dry	
WS07	2.5	9.8	2.0	0.0	0.0	0.0	0.0	-0.7	3.10	Dry	
WS08	6.3	20.5	0.1	0.0	0.0	0.0	0.0	-0.3	5.55	Dry	
WS09	*1										
WS10	0.9	20.1	0.3	0.0	0.0	0.0	0.0	0.2	4.90	Dry	
WS11	2.1	19.7	0.2	0.0	0.0	0.0	0.0	1.1	7.00	Dry	
WS12	13.4	19.5	0.5	0.0	0.0	0.0	0.0	-0.3	2.90	Dry	
WS13	3.0	15.6	1.0	0.0	0.0	0.0	0.0	-0.2	6.00	Dry	
Remarks: *1 = not located during visit. *2 = no groundwater samples recovered.											
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr.											
Readings Taken By:		CR									
Checked By:		AL									

## Gas and Groundwater Monitoring Results

<b>Contract Number:</b>		W08 40349									
<b>Contract Name:</b>		New Mill Road, Holmfirth									
<b>Date:</b>		9th June 2008									
Background Readings:		O <sub>2</sub> % v/v	21.2	CO <sub>2</sub> % v/v	0.0	CH <sub>4</sub> % v/v	0.0	H <sub>2</sub> S ppm	0.0		
		Weather Conditions:				Sunny					
		Ground Conditions (dry / wet etc)				Dry					
		Atmospheric Pressure (Start)				1006mb					
		Atmospheric Pressure (Finish)				1021mb					
Hole No:	VOC ppm	O <sub>2</sub> % v/v Steady	CO <sub>2</sub> %v/v Steady	CH <sub>4</sub> % v/v Peak    Steady		LEL Steady	H <sub>2</sub> S ppm Steady	Gas flow Rate (l/hr) Range	Depth to base of well mBGL	SWL mBGL	
BH01	5.3	20.2	0.3	0.0	0.0	0.0	0.0	0.0	7.30	Dry	
BH02	3.4	19.5	0.4	0.0	0.0	0.0	0.0	0.1	7.30	Dry	
BH04	1.1	20.6	0.0	0.0	0.0	0.0	0.0	-0.5	7.40	Dry	
BH05	2.0	12.4	4.4	0.0	0.0	0.0	0.0	-0.2	3.20	Dry	
BH09	0.0	10.4	6.9	5.3	5.3	70.2	0.0	-0.3	8.90	Dry	
BH11	2.5	2.8	16.0	1.7	1.4	13.2	0.0	-0.3	11.20	Dry	
BH12	1.2	11.0	6.2	0.0	0.0	0.0	0.0	0.0	8.20	Dry	
WS01	1.7	20.7	0.1	0.0	0.0	0.0	0.0	0.0	2.60	Dry	
WS03	0.6	20.7	0.4	0.0	0.0	0.0	0.0	0.4	2.10	Dry	
WS04	1.7	19.2	0.5	0.0	0.0	0.0	0.0	1.2	2.40	Dry	
WS07	2.7	10.3	2.7	0.0	0.0	0.0	0.0	0.1	3.10	Dry	
WS08	1.9	20.5	0.0	0.0	0.0	0.0	0.0	0.3	5.50	Dry	
WS09	*1										
WS10	0.8	14.7	1.5	0.0	0.0	0.0	0.0	0.0	4.90	Dry	
WS11	2.2	18.6	0.4	0.0	0.0	0.0	0.0	0.0	7.00	Dry	
WS12	8.9	19.4	0.5	0.0	0.0	0.0	0.0	-0.3	2.90	Dry	
WS13	0.9	20.4	0.0	0.0	0.0	0.0	0.0	-0.1	6.00	Dry	
Remarks: *1 = not located during visit. *2 = no groundwater samples recovered.											
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr.											
Readings Taken By:		CR									
Checked By:		AL									

## Gas and Groundwater Monitoring Results

<b>Contract Number:</b>		W08 40349									
<b>Contract Name:</b>		New Mill Road, Holmfirth									
<b>Date:</b>		7th July 2008									
Background Readings:		O <sub>2</sub> % v/v	21.2	CO <sub>2</sub> % v/v	0.0	CH <sub>4</sub> % v/v	0.0	H <sub>2</sub> S ppm	0.0		
		Weather Conditions:				Raining					
		Ground Conditions (dry / wet etc)				Wet					
		Atmospheric Pressure (Start)				971mb					
		Atmospheric Pressure (Finish)				978mb					
Hole No:	VOC ppm	O <sub>2</sub> % v/v	CO <sub>2</sub> %v/v	CH <sub>4</sub> % v/v		LEL	H <sub>2</sub> S ppm	Gas flow Rate (l/hr)	Depth to base of well	SWL	
		Steady	Steady	Peak	Steady	Steady	Steady	Range	mBGL	mBGL	
BH01	4.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	7.30	Dry	
BH02	3.2	20.2	0.1	0.0	0.0	0.0	0.0	0.1	7.30	Dry	
BH04	2.0	20.8	0.0	0.0	0.0	0.0	0.0	0.2	7.40	Dry	
BH05	3.6	15.6	2.5	0.0	0.0	0.0	0.0	-0.2	3.20	Dry	
BH09	1.0	12.4	5.5	2.5	2.5	65.0	0.0	-0.3	8.90	Dry	
BH11	0.8	10.3	2.8	2.0	2.0	10.2	0.0	-0.2	11.20	Dry	
BH12	0.6	15.0	3.5	0.0	0.0	0.0	0.0	0.0	8.20	Dry	
WS01	1.0	21.2	0.0	0.0	0.0	0.0	0.0	0.0	2.60	Dry	
WS03	0.4	21.1	0.1	0.0	0.0	0.0	0.0	0.1	2.10	Dry	
WS04	3.0	20.0	0.5	0.0	0.0	0.0	0.0	0.0	2.40	Dry	
WS07	3.5	17.0	2.8	0.0	0.0	0.0	0.0	0.1	3.10	Dry	
WS08	4.6	21.0	0.0	0.0	0.0	0.0	0.0	0.0	6.50	Dry	
WS09	*1										
WS10	0.6	18.0	4.0	0.0	0.0	0.0	0.0	0.0	4.90	Dry	
WS11	3.1	19.7	1.2	0.0	0.0	0.0	0.0	0.1	7.00	Dry	
WS12	10.2	21.0	0.0	0.0	0.0	0.0	0.0	0.0	2.90	Dry	
WS13	1.9	21.1	0.0	0.0	0.0	0.0	0.0	0.1	4.90	Dry	
Remarks: *1 = not located during visit. *2 = no groundwater samples recovered.											
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr.											
Readings Taken By:		CR									
Checked By:		AL									

## Gas and Groundwater Monitoring Results

<b>Contract Number:</b>		W08 40349										
<b>Contract Name:</b>		New Mill Road, Holmfirth										
<b>Date:</b>		2nd September 2008										
Background Readings:			O <sub>2</sub> % v/v	21.2	CO <sub>2</sub> % v/v	0.0	CH <sub>4</sub> % v/v	0.0	H <sub>2</sub> S ppm	0.0		
			Weather Conditions:				Raining					
			Ground Conditions (dry / wet etc)				Wet					
			Atmospheric Pressure (Start)				976mb					
			Atmospheric Pressure (Finish)				976mb					
Hole No:	VOC ppm	O <sub>2</sub> % v/v	CO <sub>2</sub> %v/v	CH <sub>4</sub> % v/v		LEL	H <sub>2</sub> S ppm	Gas flow Rate (l/hr)	Depth to base of well	SWL		
		Steady	Steady	Peak	Steady	Steady	Steady	Range	mBGL	mBGL		
BH01	3.0	18.3	0.6	0.0	0.0	0.0	0.0	0.1	7.30	Dry		
BH02	2.2	19.8	0.1	0.0	0.0	0.0	0.0	0.0	7.30	Dry		
BH04	3.1	20.8	0.2	0.0	0.0	0.0	0.0	0.2	7.40	Dry		
BH05	0.0	7.9	11.0	0.0	0.0	0.0	0.0	0.1	3.25	Dry		
BH09	0.0	15.0	3.2	2.6	2.6	48.0	0.0	-0.1	8.90	Dry		
BH11	0.4	1.4	22.0	12.0	12.0	>>>>	0.0	0.0	11.20	Dry		
BH12	0.0	21.0	0.2	0.0	0.0	0.0	0.0	0.1	8.25	Dry		
WS01	1.0	19.5	0.1	0.0	0.0	0.0	0.0	0.0	2.65	Dry		
WS03	0.3	20.8	0.0	0.0	0.0	0.0	0.0	0.0	2.10	Dry		
WS04	3.0	21.0	0.1	0.0	0.0	0.0	0.0	0.1	2.40	Dry		
WS07	2.0	19.3	2.3	0.0	0.0	0.0	0.0	0.2	3.10	Dry		
WS08	4.3	21.0	0.0	0.0	0.0	0.0	0.0	0.1	6.50	Dry		
WS09	2.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0	4.90	Dry		
WS10	0.0	19.8	1.4	0.0	0.0	0.0	0.0	0.2	4.90	Dry		
WS11	2.0	20.5	0.3	0.0	0.0	0.0	0.0	0.1	7.00	Dry		
WS12	8.4	21.1	0.0	0.0	0.0	0.0	0.0	0.0	2.90	Dry		
WS13	0.8	21.3	0.0	0.0	0.0	0.0	0.0	0.1	4.90	Dry		
Remarks: *1 = not located during visit. *2 = no groundwater samples recovered.												
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr.												
Readings Taken By:		CR										
Checked By:		AL										

## Gas and Groundwater Monitoring Results

<b>Contract Number:</b>		W08 40349									
<b>Contract Name:</b>		New Mill Road, Holmfirth									
<b>Date:</b>		20th October 2008									
Background Readings:		O <sub>2</sub> % v/v	21.2	CO <sub>2</sub> % v/v	0.0	CH <sub>4</sub> % v/v	0.0	H <sub>2</sub> S ppm	0.0		
		Weather Conditions:				Cloudy					
		Ground Conditions (dry / wet etc)				Dry					
		Atmospheric Pressure (Start)				976mb					
		Atmospheric Pressure (Finish)				976mb					
Hole No:	VOC ppm	O <sub>2</sub> % v/v	CO <sub>2</sub> %v/v	CH <sub>4</sub> % v/v		LEL	H <sub>2</sub> S ppm	Gas flow Rate (l/hr)	Depth to base of well	SWL	
		Steady	Steady	Peak	Steady	Steady	Steady	Range	mBGL	mBGL	
BH01	0.6	21.1	0.0	0.0	0.0	0.0	0.0	0.0	7.25	Dry	
BH02	1.3	20.6	0.2	0.0	0.0	0.0	0.0	0.1	7.30	Dry	
BH04	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0	7.26	Dry	
BH05	0.0	17.4	3.7	0.0	0.0	0.0	0.0	-0.2	3.18	Dry	
BH09	0.0	18.5	2.5	0.0	0.0	0.0	0.0	1.2	8.82	Dry	
BH11	0.0	0.7	19.0	6.4	6.0	>>>>	0.0	0.8	11.15	Dry	
BH12	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	8.10	Dry	
WS01	0.4	20.7	1.0	0.0	0.0	0.0	0.0	0.0	2.58	Dry	
WS03	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.1	2.00	Dry	
WS04	2.0	21.3	0.0	0.0	0.0	0.0	0.0	0.1	2.30	Dry	
WS07	0.0	20.0	0.6	0.0	0.0	0.0	0.0	0.1	3.00	Dry	
WS08	2.6	21.2	0.0	0.0	0.0	0.0	0.0	0.1	6.42	Dry	
WS09	0.8	21.3	0.0	0.0	0.0	0.0	0.0	0.0	4.85	Dry	
WS10	0.0	20.4	1.0	0.0	0.0	0.0	0.0	0.2	4.80	Dry	
WS11	0.6	21.2	0.0	0.0	0.0	0.0	0.0	0.0	6.94	Dry	
WS12	3.5	21.3	0.0	0.0	0.0	0.0	0.0	0.0	2.85	Dry	
WS13	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.1	4.80	Dry	
Remarks: *1 = not located during visit. *2 = no groundwater samples recovered.											
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr.											
Readings Taken By:		CR									
Checked By:		AL									



KEY	
	BH : CABLE PERCUSSION BOREHOLES
	WS : WINDOW SAMPLE BOREHOLES
	TP : TRIAL PIT

Project Title:  
**PROPOSED DEVELOPMENT  
 HOLMFIRTH**

Drawing Title:  
**EXPLORATORY HOLE  
 LOCATION PLAN**

**FAIRHURST**  
 GEOTECHNICAL

514, St. Pauls Street  
 Leeds LS1 2TE 243 4671  
 F. 0113 242 3663

Scale of Drawing: 1:500  
 Drawing No: 69565/G03

Rev.	Date	Description	Drawn	Checked	Approved

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