REPORT ON A GEOTECHNICAL INVESTIGATION

at

LAND ADJACENT TO 29 HARBOUR ROAD, PAGHAM, BOGNOR REGIS, SUSSEX

for

PAGHAM BEACH HOLDINGS LTD

Report No 06/7782/A/GO

November, 2006

ALBURY S.I. LTD

Miltons Yard Petworth Road
Witley Godalming Surrey GU8 5LH

[redacted] [redacted]

ARUN DISTRICT COUNCIL P/94/15/PL

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FOREWORD

The following notes should be read in conjunction with the report. Any variations on the general procedures outlined below are indicated in the text.

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General

The recommendations made and opinions expressed in the report are based on the strata conditions revealed by the fieldworks as indicated on the boring and trialpit records, together with an assessment of the data from insitu and laboratory tests. No responsibility can be accepted for conditions, which have not been revealed by the fieldworks, for example, between borehole and/or trialpit positions. While the report may offer opinions on the possible configuration of strata, both between the excavations and below the maximum depth achieved by the investigation, these comments are for guidance only and no liability can be accepted for their accuracy. For investigations, which include environmental issues, the data obtained relate to the conditions which are relevant at the time of the investigation.

Boring Techniques

Unless otherwise stated, the light cable percussion technique of soft ground boring has been used. This method generally enables the maximum information to be obtained in respect of strata conditions, but a degree of mixing if some layered soils, for example, thin bands of coarse and fine granular soils, is inevitable. Specific attention is drawn to this occurrence where evidence of such a condition is available.

The penetration resistances quoted on the boring records have been determined generally in accordance with the procedure given in BS1377 : 1990. The suffix '+' donates that the results has been extrapolated from less then 0.3m penetration into undisturbed soil.

Routine Sampling

During construction of boreholes, sampling and insitu testing will be completed in general accordance with BS5930 : 1999. Variations to this code of practice will only occur where the strata conditions preclude implementation or the contract specifies alternatives.

Samples which are required for environmental testing will be stored in suitable glass containers in accordance with current guidelines.

Groundwater

The groundwater observations entered on boring and trialpit records are those noted at the time of the investigation. The normal rate of progress does not usually permit the recording of any equilibrium water level for any one water strike. Moreover, groundwater levels are prone to seasonal variation and to changes in local drainage conditions. The table on each boring record shows the groundwater level at the quoted borehole and casing depths usually at the start and finish of a day's work. The word 'none' indicates that groundwater was sealed off by the borehole casing, or that no water was observed in the borehole.

Trialpits

The method of construction employed to form the trialpits is entered in their records. In general, it is not possible to extend machine excavated trialpits to depths significantly below the water table, especially in predominantly granular soils. Except for manually excavated pits, and unless otherwise stated, the trialpits have not been provided with temporary side support during their construction, hence personnel have not entered them and examined the insitu exposed strata.

Window Sampling

Window sampling comprises driving a probe into the ground. On extraction of the probe the strata encountered are logged and representative disturbed samples recovered. In general, window sampling cannot be completed in granular soils, or below the water table.

Laboratory Testing

Unless stated in the tests, all laboratory tests have been performed in accordance with the requirements detailed in BS1377 (1990) : Parts 1-9, or other standards or specifications that may by appropriate.

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PAGHAM BEACH HOLDINGS

Report No 06/7782/A/GO **November, 2006**

Prepared by	**G Owens BSc** **Geotechnical Engineer**	[redacted]
Reviewed by	**C V Sweby CEng MICE** **Managing Director**	

1 SYNOPSIS

This investigation has demonstrated that a limited depth of made ground overlies brown sandy gravel which represents Alluvium of Recent or late Pleistocene age. It is understood that these soils overlie the London Clay of late Eocene age. The groundwater observations noted at the time of the fieldworks suggest that problems with respect to shallow depth excavations are unlikely.

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The ground conditions revealed at this site indicate that foundations located at a minimum depth of 1m can be designed to apply a maximum increase in load of 150kPa.

The results of laboratory analysis have not noted any significant levels of contamination. Therefore, no remedial measures are likely to be required as part of the proposed redevelopment.

II INTRODUCTION

It is understood that Pagham Beach Holdings Ltd propose to undertake a residential development of the area of land adjacent to 29 Harbour Road, Pagham. Following the completion of a desk study, a geotechnical investigation has been undertaken in order to ascertain the nature and engineering properties of the soils underlying this site, and to obtain data which will assist in the formulation of a safe and economical foundation solution. In addition, consideration has been given to the environmental issues at this site.

The programme of this investigation comprised the construction of five boreholes, using a composite terrier rig. During this work, samples were recovered for further examination and laboratory testing. In addition, insitu standard penetration tests were also performed during the construction of each borehole. These boreholes were extended by dynamic probing techniques.

This report describes the work undertaken, presents the information obtained and discusses the ground conditions with respect to the proposed development.

III FIELDWORKS

The boreholes were constructed on the 26th October, 2006, at positions as shown on the site plan, drawing no 06/7782/1, which is presented as Appendix IV to this report. The salient details of this drawing have been supplied by the Client's Chartered Surveyors, J.Higham Associates.

The depths and descriptions of the strata encountered in the boreholes are given on the borehole and dynamic probing records which comprise Appendix I to this report. These

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records note the depths at which samples were taken, the results of insitu standard penetration tests and any groundwater observations noted at the time of the fieldworks. The results of the continuous probing are presented as a penetration resistance-depth relationship.

IV GEOLOGY AND STRATA CONDITIONS

An examination of the 1:50,000 Geological Survey map of the area, no 332 Bognor, indicates that the site is underlain by alluvium of recent or Pleistocene age. These soils overlie the London Clay of late Eocene age. However this deposit was not proved by this investigation.

Made ground of variable composition was shown to extend to a depth of 0.2m. Brown sandy gravel was revealed upon penetration of the made ground and was shown to extend to a depth of 2.5m. These boreholes were extended by dynamic probing to depths of 5m.

Insitu standard penetration tests were carried out within the brown sandy gravel. This work revealed penetration resistances within the range 18 blows/0.3m and 37 blows/0.3m, which is indicative of a medium to dense insitu condition for a granular soil.

No groundwater strikes were encountered during the course of the fieldworks.

V LABORATORY TESTING

A programme of laboratory testing has been undertaken and the results are presented as Appendix II to this report. Each type of test is briefly summarised below, and the results obtained have been used to assist in the formulation of the discussion of ground conditions.

a) Particle Size Distribution

Samples of the sub-soils have been subjected to sieve analysis in order to determine their particle size distribution. The results are presented in the form of grading curves which show the soil to be a well graded sandy gravel.

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b) Chemical Analyses

The soluble sulphate contents and pH values of the materials revealed at this site have been established. The results of this work show that soluble sulphate content was below the limit of detection in association with neutral pH values.

c) Contamination

Samples of the sub soil have been subjected to a suite of tests proposed within the former ICRCL Guidance Note 59/83 and current CLEA guidelines. This work was completed within the *MCERTS* and UKAS accredited laboratories operated by Messrs Bodycote Health Sciences.

VI DISCUSSION OF GROUND CONDITIONS

It is understood that Pagham Beach Holdings Ltd propose to undertake a residential development of the site at the land adjacent to 29 Harbour Road, Pagham. At the time of the preparation of this report, no information regarding the likely structural loadings was available.

It cannot be recommended that major structural foundations be located within the made ground revealed by this investigation. Soils of this type or origin are generally present in a weak and variable condition, such that unacceptable settlement could occur under the action of low loading intensities.

Consideration of the data derived from this investigation would suggest that strip or spread foundations constructed within the brown sandy gravel can be designed to apply a maximum increase in load of 150kPa. Foundations operating at this loading intensity will incorporate a factor of safety of 3 against general shear and will be subjected to limited settlements.

Alternatively, consideration may be given to the use of a piled foundation solution. The design of piles lies outside the scope of this report as it is dependent upon the type of pile employed, its size and required bearing capacity. Should a piled foundation system be

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considered, it would be prudent to seek the advice and experience of specialist piling contractors in order to obtain suitable economic designs.

A flood risk assessment has been carried out by Messrs University of Portsmouth, report number 1408-355, which recommends that the ground level of the proposed development site be raised by 1m (4.5m AoD). Therefore, fully suspended ground floor slabs should be designed in accordance these above requirements.

No groundwater was encountered during the period of the site works. Accordingly, ingress of groundwater into excavations are unlikely to occur. Should slight seepages be encountered, or surface water run off drain into foundation excavations, then these minor amounts could be dealt with using good engineering practice.

VII CONTAMINATION

Samples of the near surface soils have been tested for a range of parameters based on the former ICRCL Guidance Note 59/83. The ICRCL Guidance Note 59/83 has been withdrawn. Therefore, an assessment of the results has been made using the Contaminated Land Exposure Assessment Model and, where applicable, Dutch Government Guidelines, E.U. Council Directive No 86/278/EEC (Agricultural Use of Sewage Sludge) and BRE Special Digest 1. The tables, which comprise Appendix III list the determinants, current guideline values and the guideline sources.

The results obtained have been compared with CLEA soil guidance values for Residential with Plant Uptake. The laboratory test results show that there is no evidence of significant contamination at this site.

Any spoil should be taken for disposal to an appropriately licensed landfill site. The classification of the spoil lies outside the scope of this report, as it is dependent upon parameters that may be set by the site operator or the Local or County Authority. In these circumstances, the results of laboratory testing should be used to classify the spoil and thus identify sites, which will accept excavated material.

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VIII EFFECT OF SULPHATES

The information obtained from this investigation has been compared with the criteria proposed in BRE Special Digest 1, Concrete in Aggressive Ground. Using the information in Table 2 of this publication the Aggressive Chemical Environment for Concrete Classification is AC-1s, which coincides with a Design Sulphate Class DS-1.

This grouping has been compared with the information given in Part 2 of the Special Digest and it is apparent that for a low to normal structural performance concrete, special precautions on respect of buried concrete may not be required. However, it is important to clarify the final concrete design mix when the details of the development are available.

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APPENDIX I

Boring Records

ALBURY S.I. LTD Petworth Road, Witley, Godalming, Surrey GU8 5LH		Borehole No 1
CONTRACT	Pagham	Report No 06/7782/A/GO
Client	Pagham Beach (Holdings) Ltd	Ground Level mOD
Site Address	Land adjacent to 29 Harbour Road, Pagham, Bognor Regis, Sussex	Boring Commenced 26/10/06 Boring Completed 26/10/06

Type and Diameter of Boring: 150mm dia. Composite Rig

Water Strikes, m	Water Levels Recorded During Boring, m							
1 None	Date							
2	Hole Depth							
3	Casing Depth							
4	Water Level							

Remarks
Sacrificial cone used

Samples of Tests		SPT			
Type	Depth, m	N	Depth	Legend	Strata Description
			0.20		Made ground (grass over brown sandy topsoil) Brown sandy gravel
D	0.50				
D	1.00-2.00				
			2.00		

Sampling Code: U - Undisturbed B - Large disturbed D - Small disturbed W - Water (U*) Non recovery of U Sample

ALBURY S.I. LTD Petworth Road, Witley, Godalming, Surrey GU8 5LH		Borehole No 2
CONTRACT	Pagham	Report No 06/7782/A/GO
Client	Pagham Beach (Holdings) Ltd	Ground Level mOD
Site Address	Land adjacent to 29 Harbour Road, Pagham, Bognor Regis, Sussex	Boring Commenced 26/10/06 Boring Completed 26/10/06

Type and Diameter of Boring: 150mm dia Composite Rig

Water Strikes, m	Water Levels Recorded During Boring, m							
1 None	Date							
2	Hole Depth							
3	Casing Depth							
4	Water Level							

Remarks
Sacrificial cone used

Samples of Tests		SPT				Strata Description
Type	Depth, m	N	Depth		Legend	
D	0.10		0.20			Made ground (grass over brown sandy topsoil with occasional brick fragments)
D	0.50					Medium dense brown sandy gravel
D	1.00					
D	1.00-2.00	19				
D	2.00-2.50	26				
D	2.00-3.00					
						Borehole extended from 3m to 5m by dynamic probing

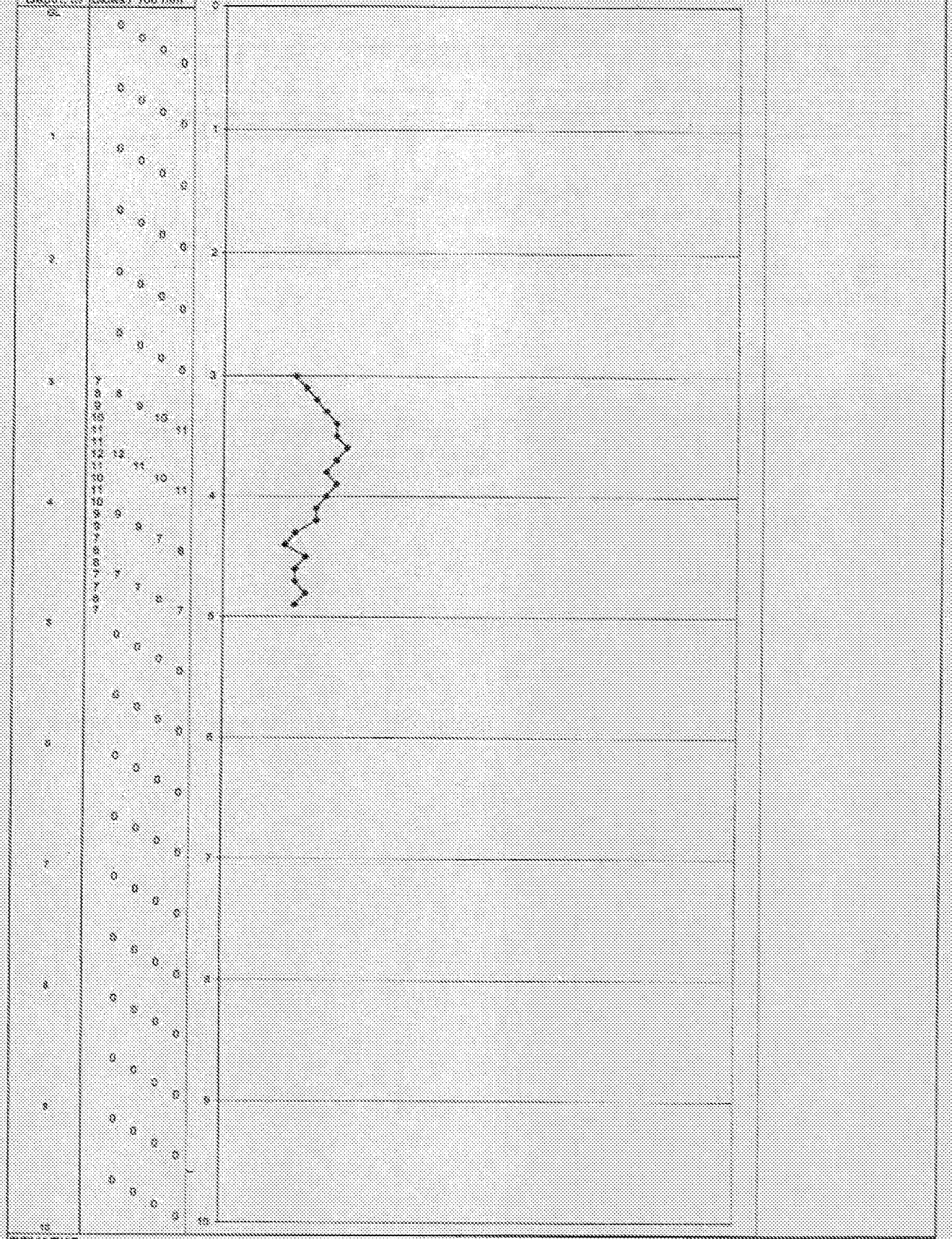
Sampling Code: U - Undisturbed B - Large disturbed D - Small disturbed W - Water (U*) Non recovery of U Sample

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ALBURY S.I. LTD

REPORT No: 06/7782/GO	BOREHOLE 2	
Sheet 1 of 1	Client: Pagham Beach (Holdings) Ltd	Date: 26/10/06
DPH Dynamic Probe	Site Address: Land adjacent to 29, Harbour Road, Pagham, Bognor Regis	Ground Level, mOD
Detached Tip		

Depth, m | Blows / 100 mm | 0 10 20 30 40 50 | Torque, Nm



REMARKS

ALBURY S.I. LTD Petworth Road, Witley, Godalming, Surrey GU8 5LH		Borehole No 3
CONTRACT	Pagham	Report No 06/7782/A/GO
Client	Pagham Beach (Holdings) Ltd	Ground Level mOD
Site Address	Land adjacent to 29 Harbour Road, Pagham, Bognor Regis, Sussex	Boring Commenced 26/10/06 Boring Completed 26/10/06

Type and Diameter of Boring: 150mm dia Composite Rig

Water Strikes, m	Water Levels Recorded During Boring, m							
1 None	Date							
2	Hole Depth							
3	Casing Depth							
4	Water Level							

Remarks
Sacrificial cone used

Samples of Tests		SPT			
Type	Depth, m	N	Depth	Legend	Strata Description
D	0.10		0.20		Made ground (grass over brown sandy topsoil with occasional brick fragments)
D	0.50				Medium dense brown sandy gravel
D	1.00-1.50	18			
D	2.00-2.50	37			
					Borehole extended from 2.5m to 5m by dynamic probing

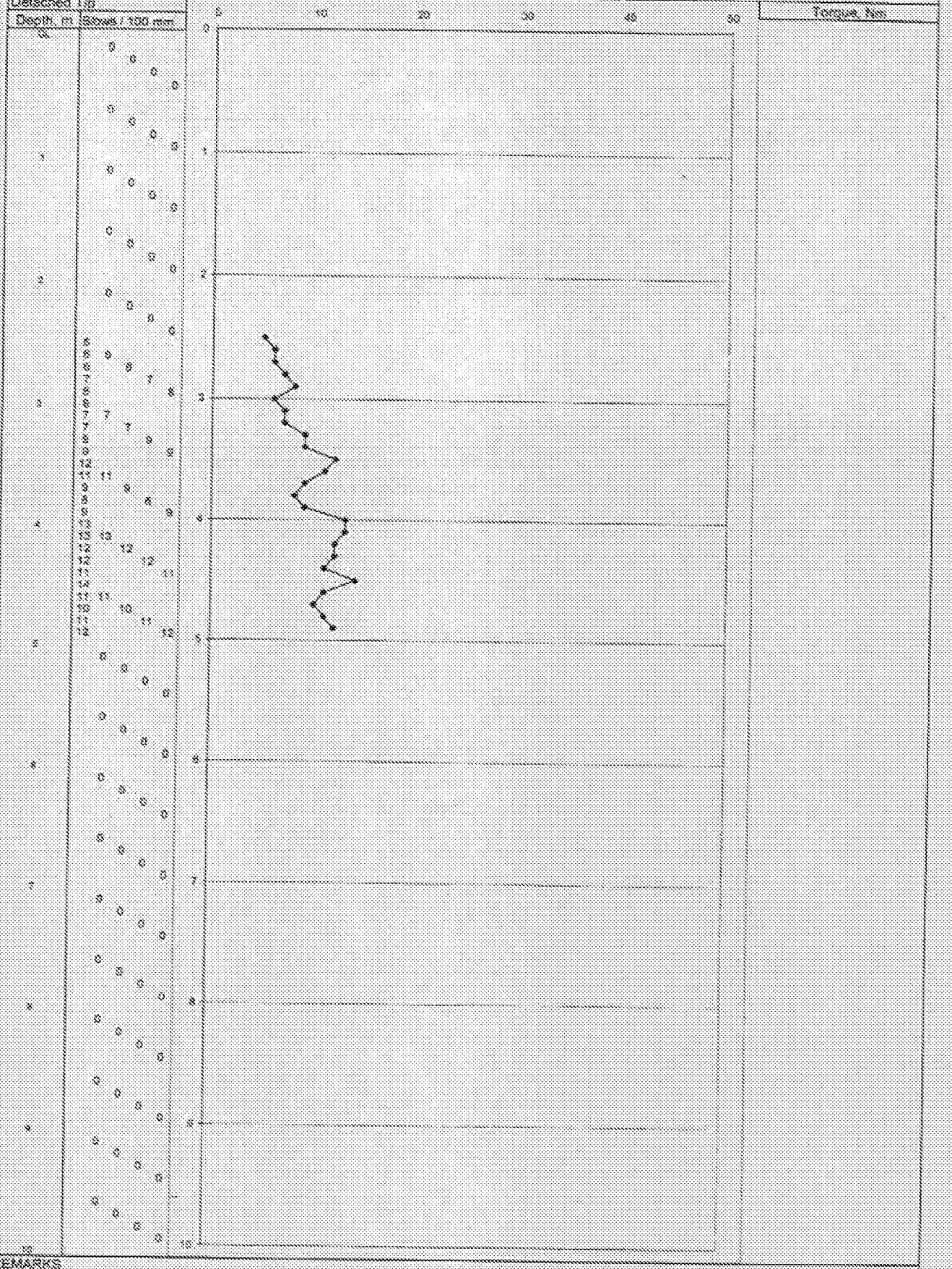
Sampling Code: U - Undisturbed B - Large disturbed D - Small disturbed W - Water (U*) Non recovery of U Sample

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REPORT No: 08/7782/GO	BOREHOLE 3	
Sheet 1 of 1	Client: Pagham Beach (Holdings) Ltd	Date: 26/10/06
DPH Dynamic Probe	Site Address: Land adjacent to 29, Harbour Road, Pagham, Bognor Regis	Ground Level, mOD
Detached Tip		

Depth, m | Blows / 100 mm | Torque, Nm



REMARKS

ALBURY S.I. LTD Petworth Road, Witley, Godalming, Surrey GU8 5LH		Borehole No 4
CONTRACT	Pagham	Report No 06/7782/A/GO
Client	Pagham Beach (Holdings) Ltd	Ground Level mOD
Site Address	Land adjacent to 29 Harbour Road, Pagham, Bognor Regis, Sussex	Boring Commenced 26/10/06 Boring Completed 26/10/06

Type and Diameter of Boring: 150mm dia.Composite Rig

Water Strikes, m	Water Levels Recorded During Boring, m							
1 None	Date							
2	Hole Depth							
3	Casing Depth							
4	Water Level							

Remarks
Sacrificial cone used

Samples of Tests		SPT			
Type	Depth, m	N	Depth	Legend	Strata Description
D	GL-1.00		0.20		Made ground (grass over brown sandy topsoil)
					Medium dense brown sandy gravel
D	1.00-1.50	22			
D	2.00-2.50	37			
					Borehole extended from 2.5m to 3m by dynamic probing

Sampling Code: U - Undisturbed B - Large disturbed D - Small disturbed W - Water (U*) Non recovery of U Sample

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REPORT No: 06/7762/GO

BOREHOLE 4

Sheet 1 of 1

Client: Pagham Beach (Holdings) Ltd

Date: 26/10/06

DPH Dynamic Probe

Site Address: Land adjacent to 29, Harbour Road, Pagham, Bognor Regis

Ground Level, mOD

Detached Tip

Depth, m	Blows / 100 mm	0	10	20	30	40	50	Torque, Nm
0	0 0 0 0 0 0 0 0 0 0	0						
1	0 0 0 0 0 0 0 0 0 0	1						
2	0 0 0 0 0 0 0 0 0 0	2						
3	6 7 7 8 9 9 11 11 9 10	3						
4	11 12 10 8 10 12 13 11	4						
5	0 0 0 0 0 0 0 0 0 0	5						
6	0 0 0 0 0 0 0 0 0 0	6						
7	0 0 0 0 0 0 0 0 0 0	7						
8	0 0 0 0 0 0 0 0 0 0	8						
9	0 0 0 0 0 0 0 0 0 0	9						
10	0 0 0 0 0 0 0 0 0 0	10						

REMARKS

ALBURY S.I. LTD Petworth Road, Witley, Godalming, Surrey GU8 5LH		Borehole No 3	
CONTRACT	Pagham	Report No	06/7782/A/GO
Client	Pagham Beach (Holdings) Ltd	Ground Level	mOD
Site Address	Land adjacent to 29 Harbour Road, Pagham, Bognor Regis, Sussex	Boring Commenced Boring Completed	26/10/06 26/10/06

Type and Diameter of Boring: 150mm dia.Composite Rig

Water Strikes, m	Water Levels Recorded During Boring, m							
1 None	Date							
2	Hole Depth							
3	Casing Depth							
4	Water Level							

Remarks
Sacrificial cone used

Samples of Tests		SPT			Strata Description
Type	Depth, m	N	Depth	Legend	
D	GL-1.00		0.20		Made ground (grass over brown sandy topsoil)
					Medium dense brown sand and gravel
D	1.00-1.50	20			
D	2.00-2.50	22			
					Borehole extended from 2.5m to 5m by dynamic probing

Sampling Code: U - Undisturbed B - Large disturbed D - Small disturbed W - Water (U*) Non recovery of U Sample

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	REPORT No: 06/7782/GO	BOREHOLE 5
Sheet 1 of 1	Client: Pagham Beach (Holdings) Ltd	Date: 26/10/06
DPH Dynamic Probe	Site Address: Land adjacent to 29, Harbour Road, Pagham, Bognor Regis	Ground Level, mOD
Detached Tip		

Depth, m	Blows / 100 mm	Torque, Nm
0	0 0 0 0 0	0 10 20 30 40 50
1	0 0 0 0 0	1
2	0 0 0 0 0	2
3	5 3 5 6 8	3
4	7 10 11 16	4
5	9 10 9 9	5
6	10 9 11 13	6
7	11 9 8 8	7
8	0 0 0 0 0	8
9	0 0 0 0 0	9
10	0 0 0 0 0	10

REMARKS

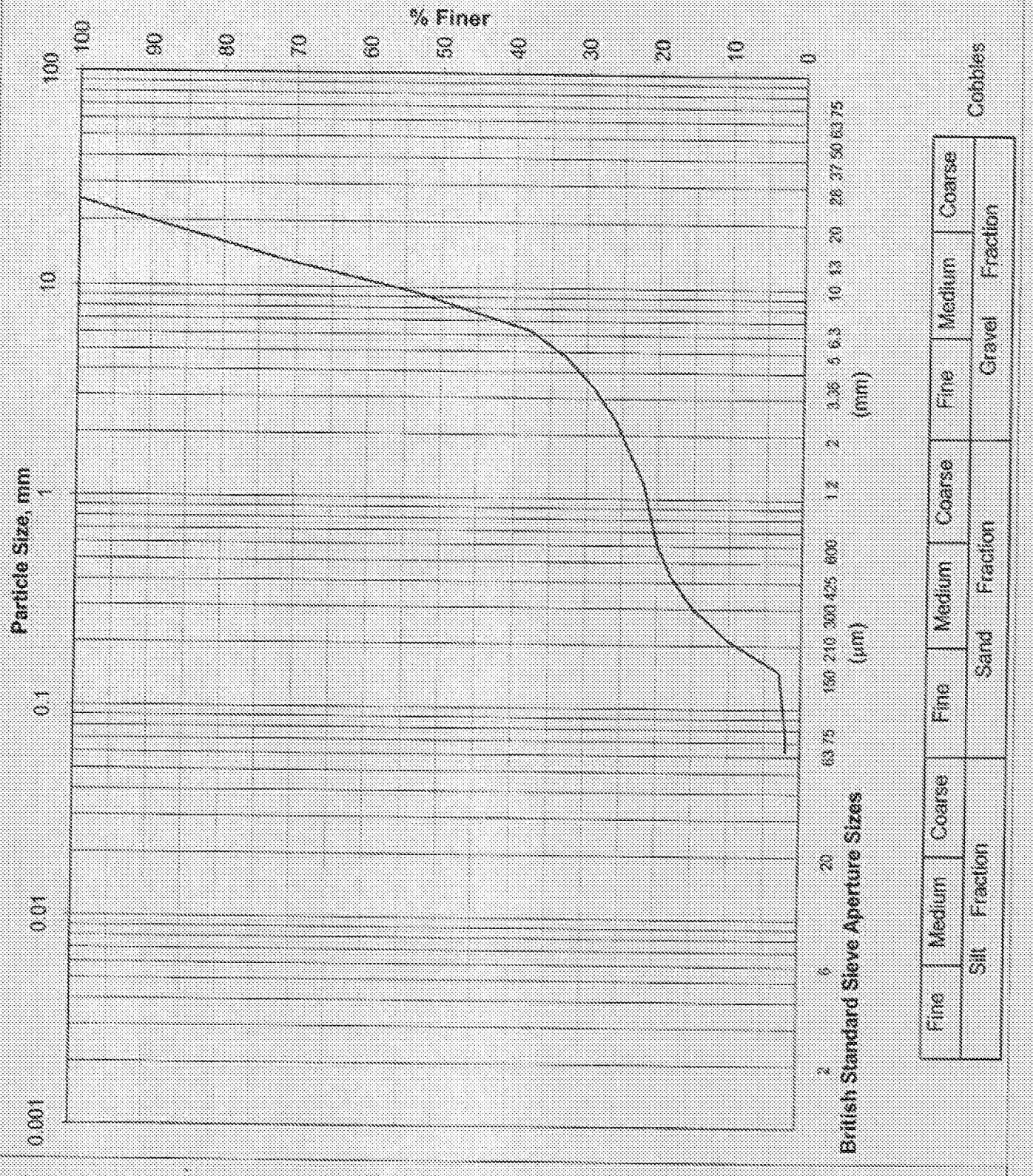
APPENDIX II

Laboratory Test Results

PARTICLE SIZE DISTRIBUTION - GRADING CURVE

Contract: Pagham

Report No. 06/7782/A/GO



Borehole No. 1

Depth of Sample, m: 1.00-2.00

Visual Description: Brown Sandy Gravel

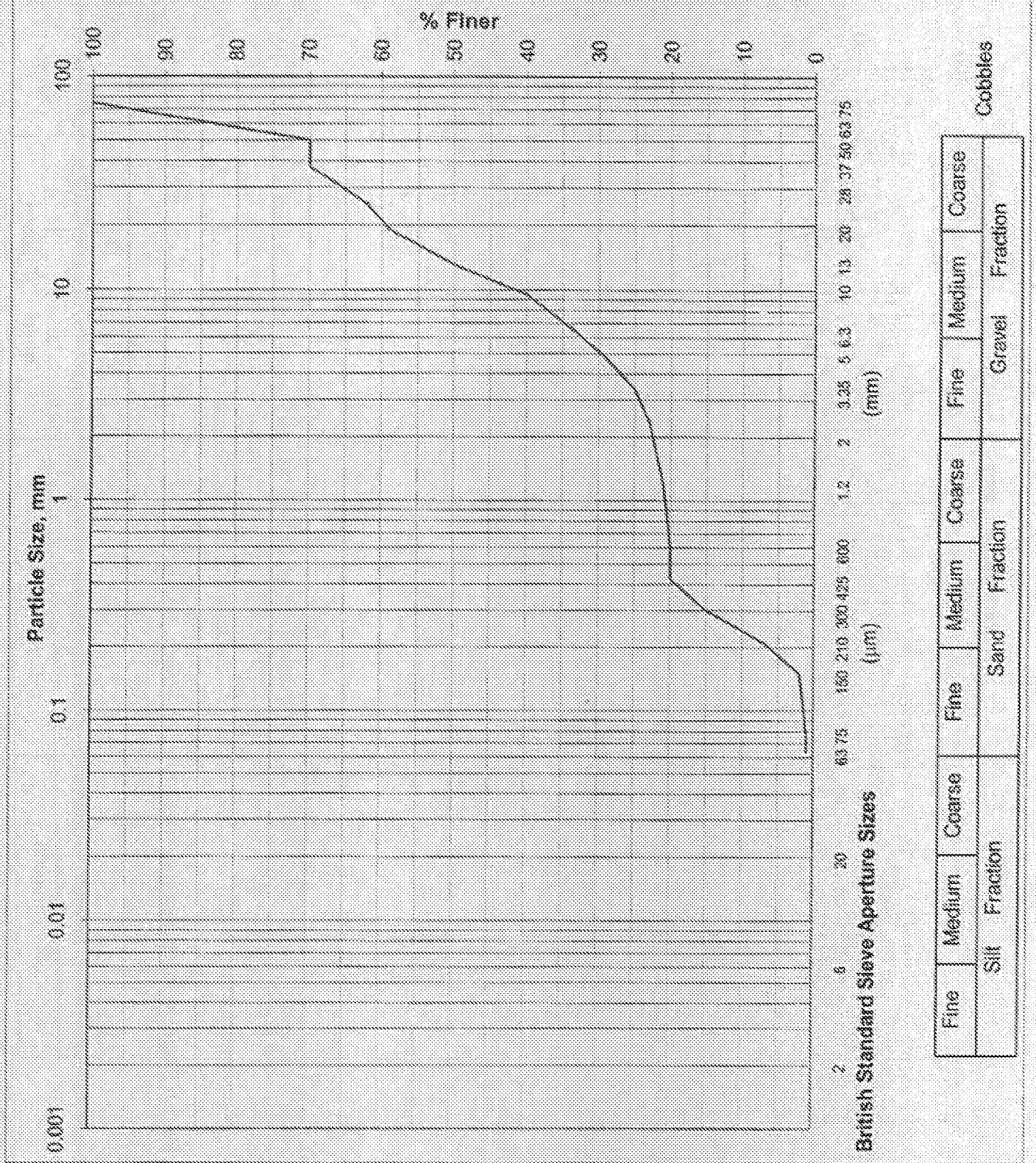
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PARTICLE SIZE DISTRIBUTION - GRADING CURVE

Contract: Pagham

Report No. 06/7782/A/GO



Borehole No. 2

Depth of Sample, m: 1.00-2.00

Visual Description: Brown sandy gravel

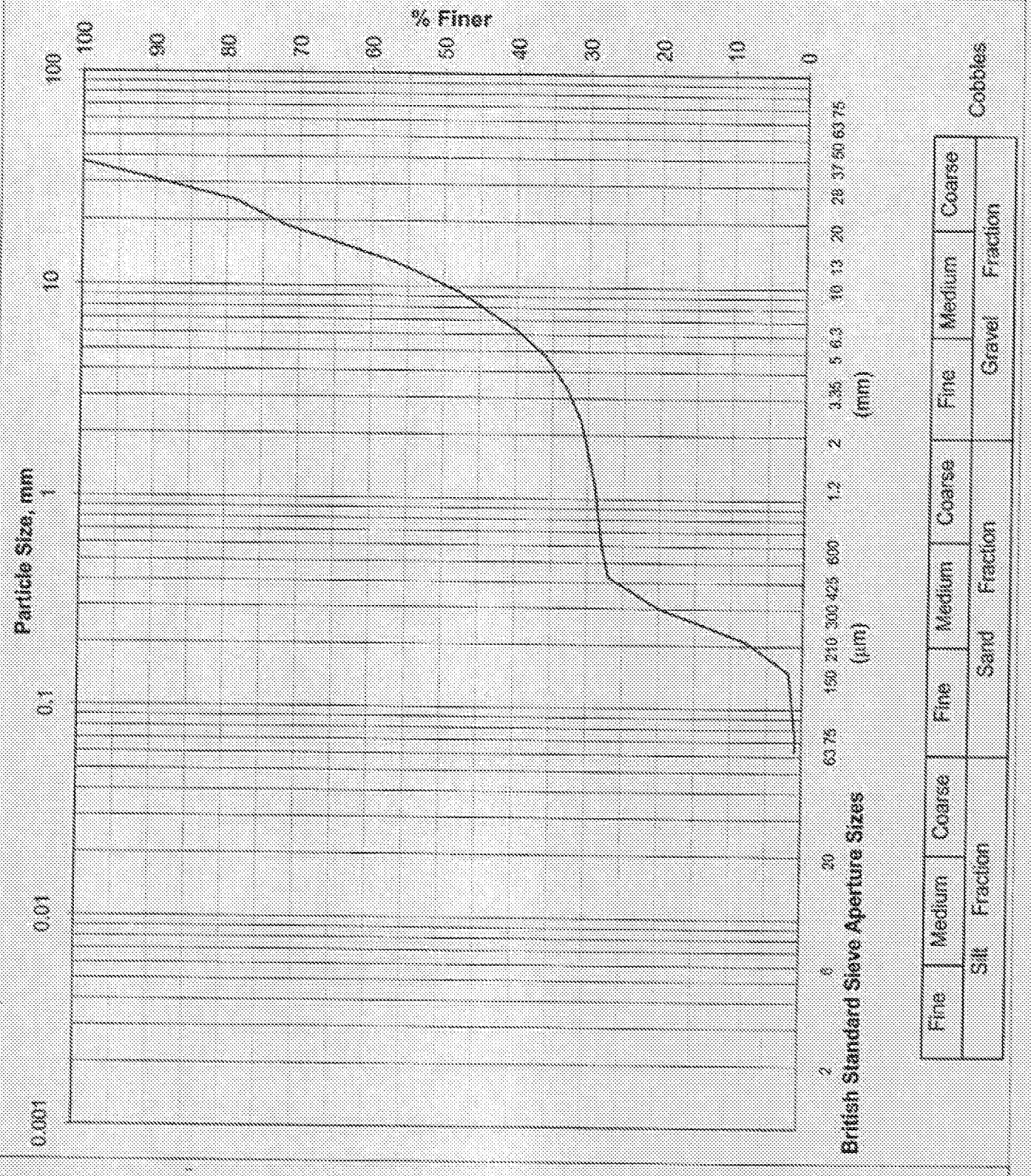
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PARTICLE SIZE DISTRIBUTION - GRADING CURVE

Contract: Pagham

Report No. 06/7782/A/GO



Borehole No. 3

Depth of Sample, m: 1.50-2.00

Visual Description: Brown sandy gravel

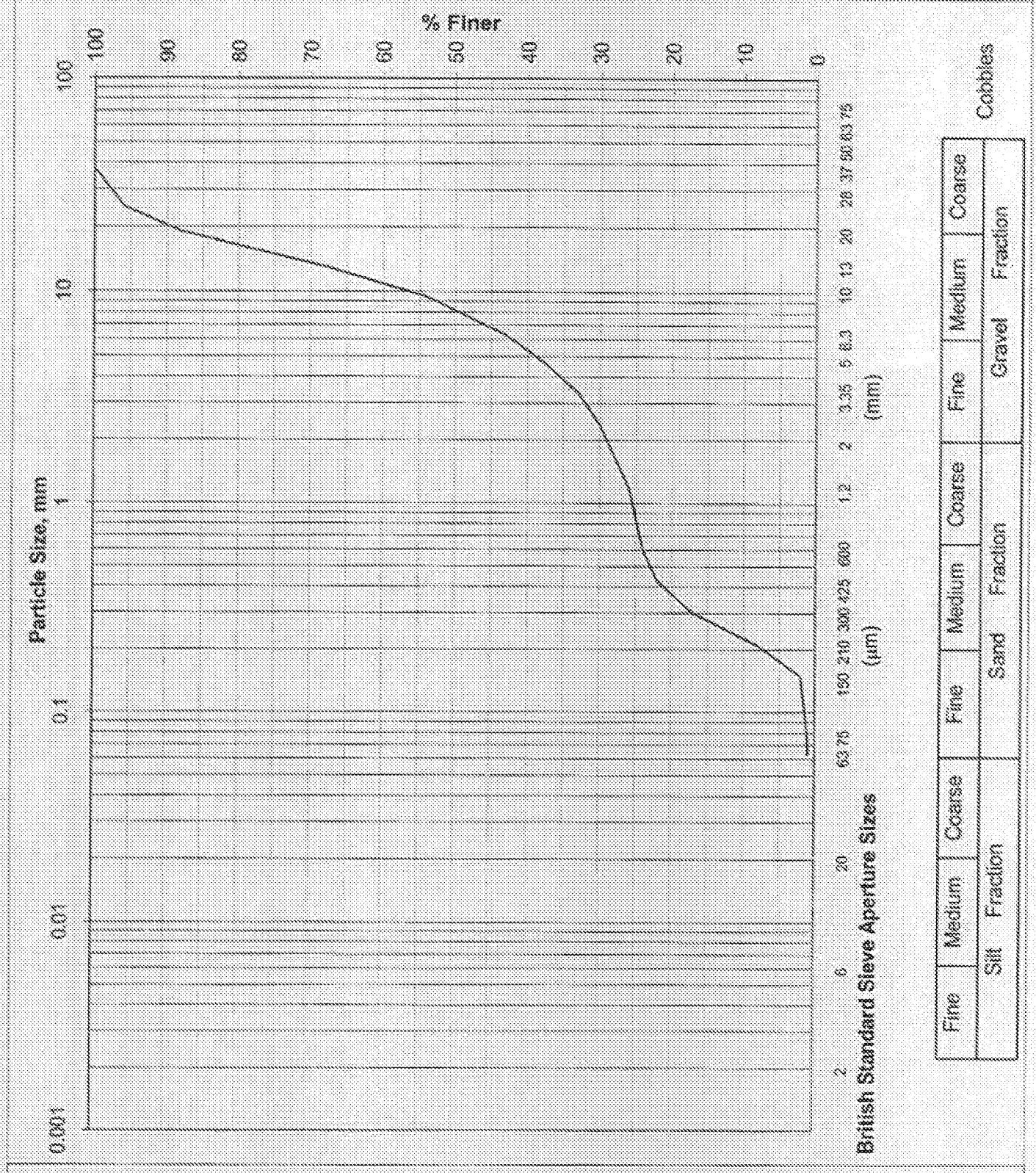
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PARTICLE SIZE DISTRIBUTION - GRADING CURVE

Contract: Pagham

Report No. 06/7782/A/GO



Borehole No. 4

Depth of Sample, m: 1.00-1.50

Visual Description: Brown sandy gravel

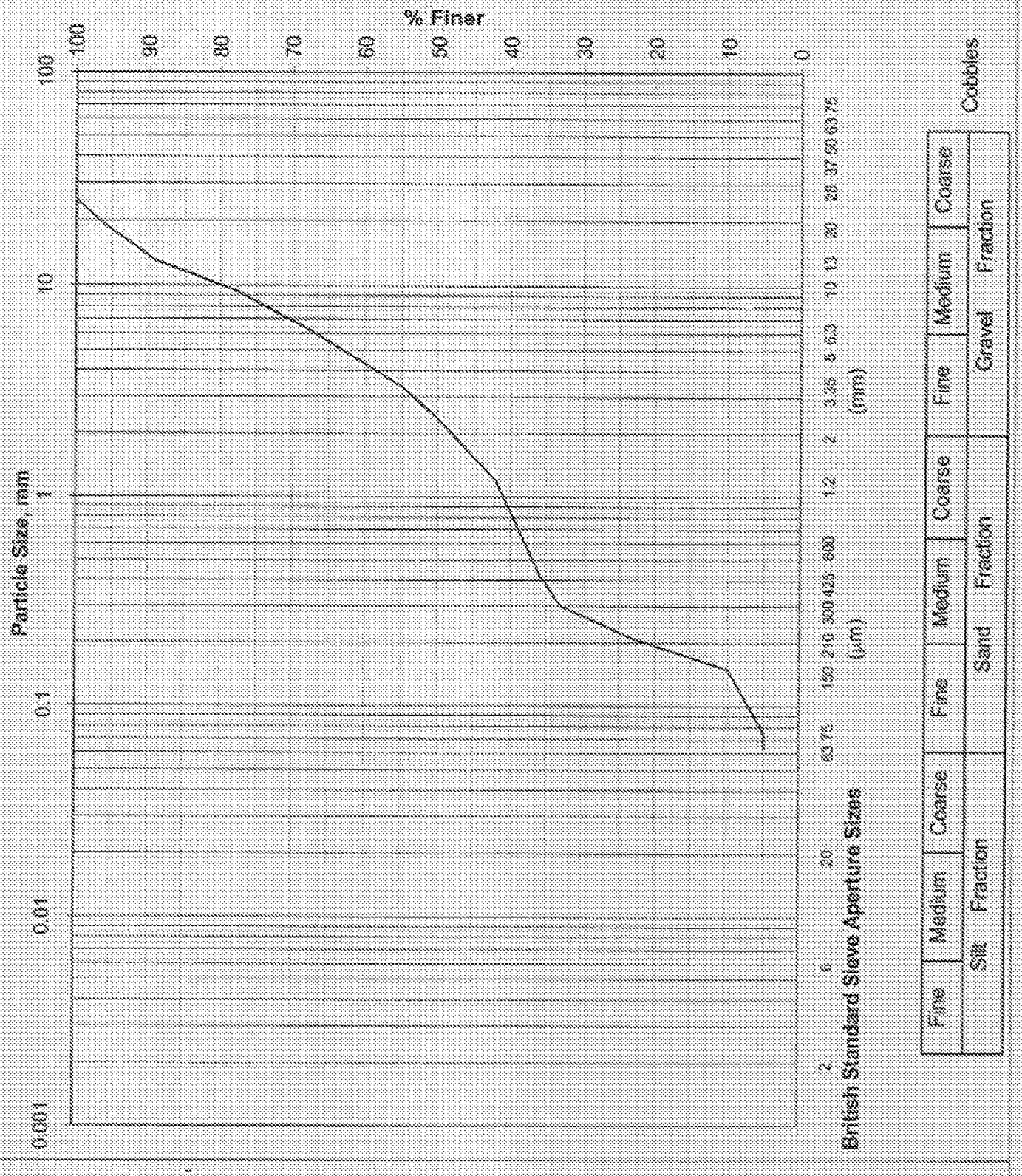
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PARTICLE SIZE DISTRIBUTION - GRADING CURVE

Contract: Pagham

Report No. 06/7782/A/GO



Borehole No. 5

Depth of Sample, m: 2.00-2.50

Visual Description: Brown sand and gravel

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RESULTS OF CHEMICAL ANALYSES

Determination of Sulphate Content and pH value

Contract: Pagham **Report No:** 06/7782/GO

BH No	Depth of sample, m	Description	Concentrations of Sulphates expressed as SO_4			pH value
			In soil		In ground-Water g/l	
			Total SO_4 (%)	2:1 water-soil extract g/l		
1	1.00-2.00	Sand and gravel		<0.25		7.4
2	1.00-1.45	Sand and gravel		<0.25		7.3
3	1.50-2.00	Sand and gravel		<0.25		7.2
4	2.00-2.50	Sand and gravel		<0.25		7.3
5	2.00-2.50	Sand and gravel		<0.25		7.2

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Bodycote

Chemistry Laboratory Certificate

Environmental
www.bodycote.com
www.healthsciences.bodycote.com

Client: Albury SI Ltd
Miltons Yard, Petworth Road, Witley, Surrey, GU8 5LH
Site: Pagham
Date Tested: 31/10/06, 01/11/06, 02/11/06, 03/11/06, 06/11/06, 08/11/06, 09/11/06
Methodology: CTP01, CTP07, CTP11a, CTP11b, CTP11h, CTP11i, CTP12, CTP14, CTP16, CTP18c, CTP20, SOP01 VOC, SOP02 GC-MS, SOP03 TPH, SOP11 S, Stones
Date Reported: 9 November, 2006
Date Received: 27 October, 2006
Sample Type: Solid

Certificate No: 06/4408/S0/C1
File No: 06/4408/S0
Client Ref: 05/7782/GO

Lab sample ref	B335650	B335651	B335652	B335653	B335654
Client sample ref	BH1 0.5m	BH2 0.1m	BH3 0.5m	BH4 0.1m	BH5 0.1m
Date sampled					
Sample matrix (see notes page)	S	S	S	S	S

Analyte	Units	ISO17025	MCERTS	LOD					
pH		Y	Y		8.3	6.1	8.1	7.4	5.9
Sulphate (total) $_S$	mg/kg	Y	Y	300	<300	<300	<300	340	270
Sulphide $_{SM}$	mg/kg	Y	N	2	<2	<2	<2	<2	<2
Sulphur (elemental) $_S$	mg/kg	Y	Y	20	<20	<20	<20	<20	<20
Cyanide (total) $_{SM}$	mg/kg	Y	Y	10	<10	<10	<10	<10	<10
PAH (total) $_S$	mg/kg	N	N	1	<1	<1	<1	3	1
Phenols (screen) $_{SM}$	mg/kg	Y	Y	1	<1	<1	<1	<1	1
Arsenic $_S$	mg/kg	Y	Y	5	<5	6	<5	6	6
Boron (water soluble) $_S$	mg/kg	N	N	1	<1	<1	<1	<1	<1
Cadmium $_S$	mg/kg	Y	N	0.5	<0.5	<0.5	<0.5	0.5	0.7
Chromium (total) $_S$	mg/kg	Y	Y	2	8	8	<2	9	9
Copper $_S$	mg/kg	Y	Y	5	<5	9	<5	11	16
Lead $_S$	mg/kg	Y	Y	5	<5	76	<5	56	62
Mercury $_S$	mg/kg	Y	N	0.5	<0.5	<0.5	<0.5	0.6	<0.5
Nickel $_S$	mg/kg	Y	Y	3	<3	<3	<3	7	8
Selenium $_S$	mg/kg	Y	N	5	<5	<5	<5	<5	<5
Zinc $_S$	mg/kg	Y	N	3	<3	83	9	77	128
TPH (GC) $_{SM}$	mg/kg	Y	Y	10	13	21	48	20	19
VOC $_{SM}$		Y	Y		#	#	#	#	#

Notes
1. Analyses suffixed 'S' were performed on the sample dried at 35°C.
2. Analyses suffixed 'SM' were performed on the sample as received.
3. All results are expressed as dry weight.
4. MCERTS accreditation applicable to Sample Matrix 'S' only.
5. Natural stones (pebbles, gravels etc.) which do not pass a 10mm sieve are excluded from air dried analyses and results corrected accordingly.
6. # indicates separate report appended.
7. Tests marked * indicate subcontracted analyses.

Prepared by:

[redacted]

Approved by:

[redacted]

Section Leader

0871

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Client	Albury St Ltd, Millons Yard, Petworth Road,Witley, Surrey, GU8 5LH
Contract/Site	Pagham
Sample Matrix	solids
File No.	06/4408/SOIC1
Date Received	27-Oct-06
Date Tested	07-Nov-06
Methodology	Laboratory Developed In-House Method - SOP01-Determination of VOC by GC-MS Headspace

Analysis : VOLATILE ORGANIC COMPOUNDS

Analysed by:
[redacted]
David Darlow
Chemist

Authorised by:
[redacted]
Section Leader

ARUN DISTRICT COUNCIL P/94/15/PL

Bodycote TESTING

All Values in ug/kg

VOLATILE ORGANIC COMPOUNDS

Compound	CAS No.	Units	339880 BH1-0.5m	339881 BH2-0.1m	339882 BH3-0.5m	339883 BH4-0.1m	339884 BH5-0.1m
Vinyl chloride	75-01-4	<	<10	<10	<10	<10	<10
Bromomethane	74-83-9	<	<10	<10	<10	<10	<10
Trichlorofluoromethane	75-69-4	<	<10	<10	<10	<10	<10
11-Dichloroethene	75-35-4	NS	<10	<10	<10	<10	<10
trans-12-Dichloroethene	156-60-5	<	<10	<10	<10	<10	<10
11-Dichloroethane	75-34-3	<	<10	<10	<10	<10	<10
22-Dichloropropane	594-20-7	<	<10	<10	<10	<10	<10
cis-12-Dichloroethene	156-59-2	<	<10	<10	<10	<10	<10
Bromochloromethane	74-97-5	<	<10	<10	<10	<10	<10
Chloroform	67-66-3	<	<10	<10	<10	<10	<10
111-Trichloroethane	71-55-6	NS	<10	<10	<10	<10	<10
Carbon tetrachloride	56-23-5	<	<10	<10	<10	<10	<10
11-Dichloropropene	563-58-6	<	<10	<10	<10	<10	<10
Benzene	71-43-2	<	<10	<10	<10	<10	<10
12-Dichloroethane	107-06-2	<	<10	<10	<10	<10	<10
Trichloroethene	79-01-6	<	<10	<10	<10	<10	<10
12-Dichloropropane	78-87-5	<	<10	<10	<10	<10	<10
Dibromomethane	74-95-3	NS	<10	<10	<10	<10	<10
Bromodichloromethane	75-27-4	<	<10	<10	<10	<10	<10
cis-13-Dichloro-1-propene	10061-01-5	<	<10	<10	<10	<10	<10
Toluene	108-88-3	<	<10	<10	<10	<10	<10
trans-13-Dichloro-1-propene	10061-02-6	<	<10	<10	<10	<10	<10
112-Trichloroethane	79-00-5	<	<10	<10	<10	<10	<10
Tetrachloroethylene	127-18-4	<	<10	<10	<10	<10	<10
13-Dichloropropane	142-28-9	NS	<10	<10	<10	<10	<10
Dibromochloromethane	124-48-1	<	<10	<10	<10	<10	<10
12-Dibromoethane	106-93-4	NS	<10	<10	<10	<10	<10
Chlorobenzene	108-90-7	<	<10	<10	<10	<10	<10
1112-Tetrachloroethane	630-20-6	<	<10	<10	<10	<10	<10
Ethylbenzene	100-41-4	<	<10	<10	<10	<10	<10
m&p-Xylene	108-38-3/106-42-3	<	<10	<10	<10	<10	<10
o-Xylene	95-47-6	<	<10	<10	<10	<10	<10
Styrene	100-42-5	NS	<10	<10	<10	<10	<10
Bromoform	75-25-2	NS	<10	<10	<10	<10	<10
isoPropylbenzene	98-82-8	NS	<10	<10	<10	<10	<10
Bromobenzene	108-86-1	NS	<10	<10	<10	<10	<10
123-Trichloropropane	96-18-4	NS	<10	<10	<10	<10	<10
n-Propylbenzene	103-65-1	NS	<10	<10	<10	<10	<10
2-Chlorotoluene	95-49-8	NS	<10	<10	<10	<10	<10
135-Trimethylbenzene	108-67-8	NS	<10	<10	<10	<10	<10
4-Chlorotoluene	106-43-4	NS	<10	<10	<10	<10	<10
tert-Butylbenzene	98-06-6	NS	<10	<10	<10	<10	<10
124-Trimethylbenzene	95-63-6	NS	<10	<10	<10	<10	<10
sec-Butylbenzene	135-98-8	NS	<10	<10	<10	<10	<10
13-Dichlorobenzene	541-73-1	<	<10	<10	<10	<10	<10
4-Isopropyltoluene	99-87-6	NS	<10	<10	<10	<10	<10
14-Dichlorobenzene	106-46-7	NS	<10	<10	<10	<10	<10
n-Butylbenzene	104-51-8	NS	<10	<10	<10	<10	<10
12-Dichlorobenzene	95-50-1	NS	<10	<10	<10	<10	<10
12-Dibromo-3-Chloropropane	96-12-8	NS	<10	<10	<10	<10	<10
124-Trichlorobenzene	120-82-1	NS	<10	<10	<10	<10	<10
Hexachlorobutadiene	87-68-3	NS	<10	<10	<10	<10	<10
123-Trichlorobenzene	87-61-6	NS	<10	<10	<10	<10	<10

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APPENDIX III

Contamination Tables

CONTAMINATED LAND EXPOSURE ASSESSMENT MODEL

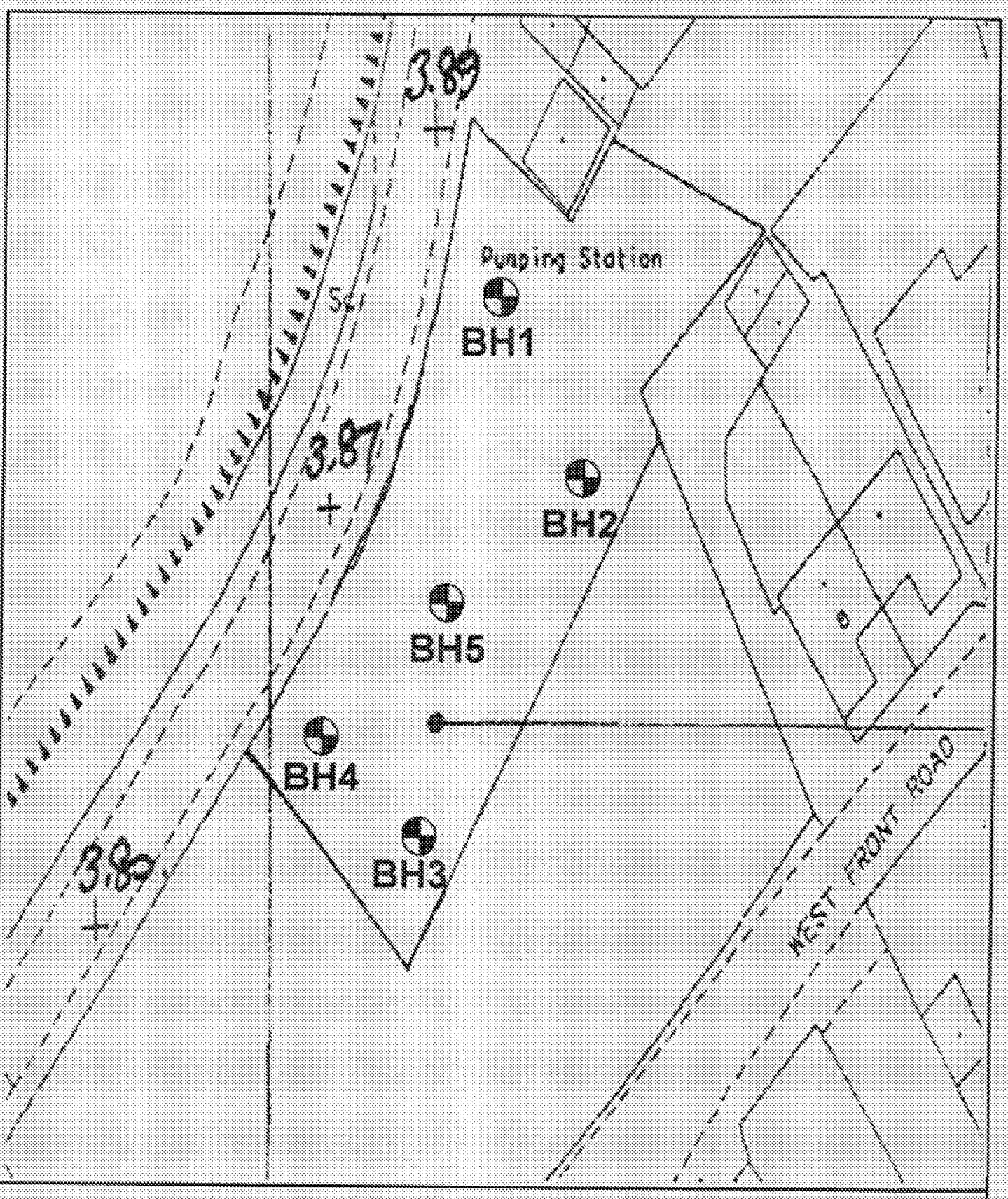
SOIL GUIDANCE VALUES

Determinand (total mg/kg)	CLEA Soil Guideline Values					EU86/278				Dutch Government	
	Residential with plant uptake			Residential without plant uptake	Industrial /commercial	Agricultural Use of Sewage Sludge					
	pH 6	pH 7	pH 8			pH 5.0<5.5	pH 5.5>6.0	pH 6.0<7.0	pH >7.0	Target	Intervention
Arsenic				20	500						
Boron	Normal range 1 - 100 (ICRCL 23/70)										
Cadmium	1	2	8	30	1400						
Chromium	130			200	5000						
Copper						130	170	225	330		
Cyanide										1	20
Lead	450			450	750						
Mercury	8			15	480						
Nickel	80			75	5000						
PAH										1	40
pH						<5					
Selenium	35			260	8000						
Sulphate	2400 (BRE Special Digest 1)										
Sulphide	250 (ICRCL 18/79										
Sulphur	5000 ICRCL 18/79										
Zinc						300	420	300	750		

Soil Guideline Value (mg/kg dry weight soil)												
	Residential with Plant uptake			Residential without Plant Uptake			Allotments			Industrial/Commercial		
	SOM%			SOM%			SOM%			SOM%		
	1	2.5	5	1	2.5	5	1.0	2.5	5	1	2.5	5
Ethylbenzene	9	21	43	16	41	80	18	43	85	48,000		
Phenol	78	150	180	21,900	34,400	37,500	80	155	280	21,900	43,000	78,100
Toluene	3	7	14	3	8	15	31	73	140	150	350	680
	SOM = Soil Organic Matter											

APPENDIX IV

Site Plan



Albury S.I. Ltd

Land adjacent to 29 Harbour Road, Pagham, Bognor Regis, Sussex, Site Plan	Scale: N.T.S
	Drg No: 06/7782/1

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