

Hamble Airfield

Geological Report

CEMEX UK Operations Limited



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1. Introduction

Scope of the report

Fisher German LLP (FG) has been instructed by CEMEX UK Operations Limited (CEMEX) to compile the relevant geological information and to provide a mineral reserve assessment figures for the companies holding known as Hamble Airfield, Hamble-le-Rice (the site).

2. Site Location, Ownership and Description

Site Location

The site is located approximately 7.2km southeast of the centre of Southampton, between Hamble Lane and Satchell Lane, Hamble-le-Rice. The approximate Ordnance Survey National Grid Reference for the centre of the site is SU 478 077 and an extract from the relevant 1:25,000 Scale is shown in Figure 1.

Ownership

The site is owned by Persimmon Homes Ltd and leased to CEMEX.

Description

The site is approximately rectangular in shape and covers an area of about 0.6km². It is generally level, but falls gently along the eastern boundary towards the estuary frontage. This site is covered by scrub vegetation and small trees between 0.5 and 2m high.

The site boundaries are flanked to the north by a railway line and Satchell Lane, to the east by Satchell Lane, houses along the south-east, south, and south-west boundaries, and to Hamble Lane in the west.

Services

Pipeline infrastructure linking the Hamble-le-Rice fuel refinery to the main UK pipeline network is present beneath the land. The pipelines run parallel to the eastern boundary of the site and are excluded from the development area.

The 2017 site investigation undertaken by CEMEX, first purchased a Utility Report from the mapping provider eMapsite before breaking ground. Figure 2 highlights those services in the vicinity of Hamble. The majority of these are located outside of the site boundary and not directly affected, with the exception of the fuel pipelines mentioned above.

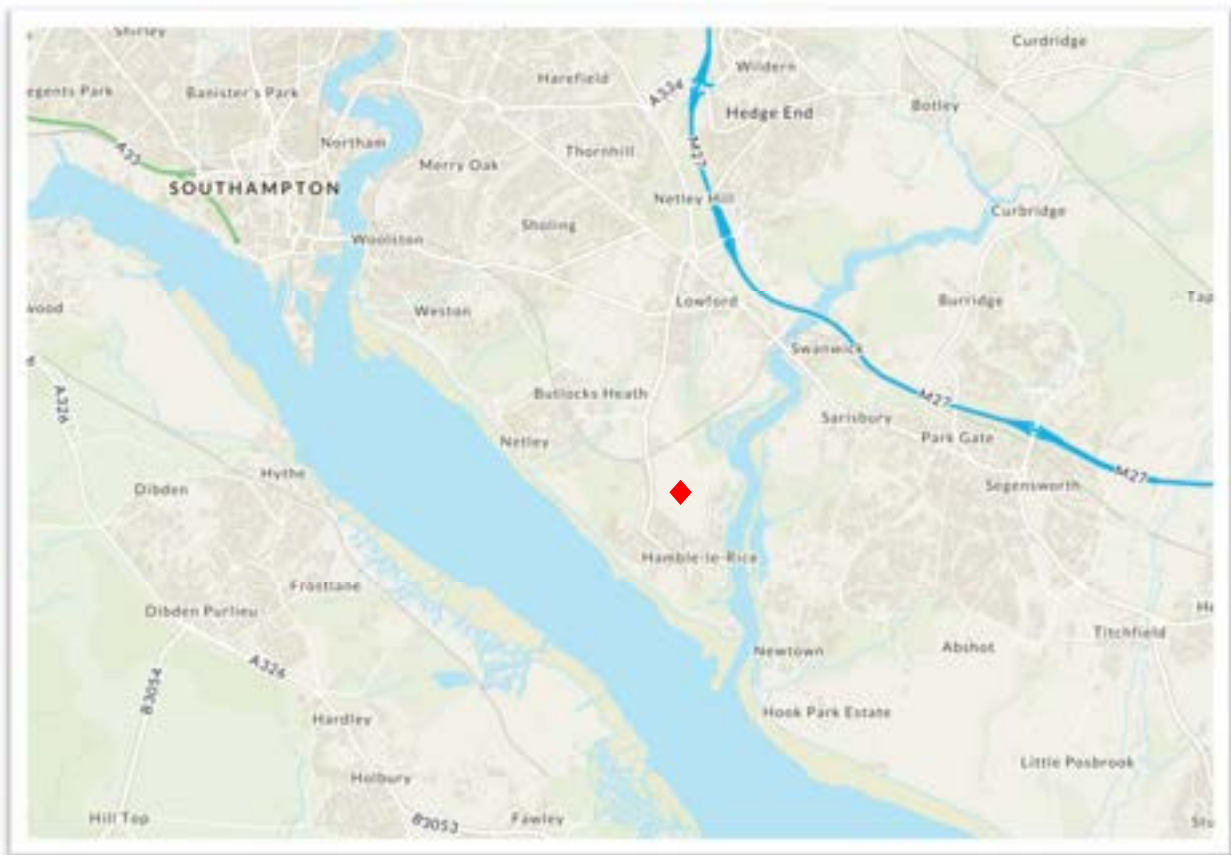


Figure 1 – Site Location plan showing high-level location and indicative site boundary

Figure 2 – List of utilities within the vicinity of Hamble Airfield. Note only Oil/Fuel pipelines present on site

Utility Company	Site Area Affected ✓	Digitised ✓
Water		
Foul Water Company – Southern Water	✓	
Surface Water Company – Southern Water	✓	
Potable Water Company – Southern Water	✓	
Electricity		
Electricity Company – Scottish & Southern Energy	✓	
Gas		
Gas Distribution Company – SGN	✓	
Telecoms		
Atkins Global (Vodafone)	✓	
BT Openreach	✓	
Virgin Media	✓	
Oil/Fuel		
CLH Pipeline System Ltd	✓	
DIO (MOD Abandoned Pipelines)	✓	
Esso Petroleum Company Ltd	✓	
Network Rail		
Network Rail	✓	
Utility Company	Site Area Affected ✓	Digitised ✓

3. Geological Setting

The British Geological Survey mapping for the area shows the site to be underlain by River Terrace deposits comprising sands and gravels, overlying the Marsh Farm Formation comprising clay, silt, and sand and the Earnley Sand Formation comprising of Sand, Silt And Clay.

Figure 3 shows an excerpt from the British Geological Survey highlighting the indicative site boundary in relation to the superficial sand and gravel mineral terraces for the Hamble peninsula.



Figure 3 Extract from 1:50,000 geological sheet (not to scale) showing the indicative Hamble site location

4. Site Investigation Data

To date, there have been two exploratory investigations on the site. The first of these was undertaken by RMC Aggregates Limited in 1995. The ground investigation comprised of 28 shell and auger boreholes drilled over the entirety of the holding. This site investigation provided the majority of the data used within the geological models and volumetric calculations.

In 2017 CEMEX instructed an additional site investigation which was undertaken by Geotechnics Ltd. This comprised of 10 trial pit excavations. The primary goal of this second site investigation was to ratify the 1995 data as well as take bulk samples from the site for testing in the laboratory.

In addition to the exploratory site investigations, water observation boreholes have been installed over the site. The first suite of permanent boreholes were drilled in 2008 and the second in 2020. All borehole and trial pit locations are shown in appendix 1 with the detailed logs being shown in appendix 2.

5. Interpretation

The materials encountered in the 1995 boreholes and 2017 trial pits have been related to the published geology. This allows for effective correlation between site investigation data and can also provide invaluable information when interpreting the materials encountered.

Soils

Between 0.2m and 0.4m of soil (undifferentiated between topsoil and subsoil) was encountered in all boreholes. It is generally described as:

- Grass over soft dark brown slightly gravel clay. (TOPSOIL)

Overburden

Material considered representative of the overburden was encountered in all boreholes and trial pits. It ranges between 0.3m and 1.5m thick and the base undulates between 15.84mAOD and 22.19mAOD.

Sand & Gravel

The mineral deposit is found over the entirety of the site and ranges in thickness from 0.6m in BH16/95 up to a maximum thickness of 5.20m in BH14/95. Two separate varying layers of sand & gravel were encountered during the site investigations. The upper layer is locally referred to as a 'Hoggin' material. Hoggin typically has a higher fines content than the lower and cleaner sand & gravel. The units are intermingled over the entirety of the site, and so have not been reported separately within the resource volumes.

The mineral sand and gravel mineral deposits can be described as a silty (sometimes very clayey) sandy gravel. The average gradings for the 'as raised' material from across the whole site are expressed as a percentage in Table 1. Testing of the target mineral samples in the laboratory, state the sand conforms with BS882 Medium to Coarse Sand.

Table 1 – Average percentage breakdown of sand & gravel

	Gravel Percentage (%)	Sand Percentage (%)	Fines Percentage (%)
MAX	70	65.1	30.5
MIN	21.4	24.8	3
AVERAGE	52.5	37.6	9.9

Basal Geology

All the boreholes and the majority of the trial pits proved the Marsh Farm Formation. This unit consists of very fine quartz sands and pipe clays, and is considered to be non-mineral. The elevation of the top of the Marsh Farm unit has been placed into a geological model and defines the base of the overlying sand and gravels.

Water Table

As mentioned in the Site Investigation Data section, there have been two suites of water observation boreholes installed at Hamble Airfield. These boreholes have been regularly dipped by monitoring technicians in order to capture background data for the seasonal fluctuations in the water table at Hamble. The groundwater regime at Hamble is covered in the hydrogeological chapters of the application.

6. Reserve Assessment

Reserve Assessment Technique

The reserve reassessment documented within this report utilises the sites topographic survey (see Appendix 1) which has been used as the datum for all the corresponding geological models, as well as a proposed quarry design used to quantify the mineral volumes.

All the survey information has been brought into the 3D modelling software 'LSS'. Volumes are based upon the comparison between the LSS digital terrain models (DTMs). LSS creates a network of 3D prisms which fill the void between the two DTMs, accounting for every subtle undulation in each model. This 'prismoidal' volume allows for a precise volume to be generated between the various geological and survey models used.

Mineral Resource Volumes and Tonnages

To calculate the mineral resource volumes at Hamble, a pit design has been created to simulate the maximum extent of development. The proposed pit design uses appropriate geotechnical design parameters as outlined by the Quarries Regulations 1999. Face heights are limited to 4 metres with 10 metre wide benches to allow safe access to all levels within the quarry. LSS software has then been used to compare the topographic survey to the proposed quarry design in order to generate the overburden and mineral volumes.

Further constraining factors have been applied to derive the workable area. The appropriate standoff to houses, underground utilities/pipelines and tree root protection zones have all been individually calculated by separate studies and used to define the workable area

The volumetric software generates a gross volume of mineral which is then converted into tonnage using a conversion factor of 1.65 tonnes per 1m³ (expressed as 1.65t/m³). Silt and fines are then removed from the gross tonnage figure to derive a 'net saleable tonnage'.

It is estimated a saleable sand and gravel resource of **1.672 Million tonnes (Mt)** is present beneath the Hamble Airfield holding. The split of these resources by phase is shown in Table 2 and the Phasing overview plan is shown in Appendix 3.

Description	Workable area (sq.m)	Gross Mineral Vol (m.cu)	Net Tonnage (t)
Plant Site (Phase 7)	37,448	128,025	174,114
Phase 1	63,177	154,927	210,701
Phase 2	73,091	256,373	348,667
Phase 3	59,708	225,173	306,235
Phase 4	59,319	210,025	285,634
Phase 5	67,351	178,397	242,620
Phase 6	48,826	76,850	104,516
TOTALS	408,921	1,229,770	1,672,487

7. Conclusions

A parcel of land, known as Hamble Airfield has been subject to a several geological investigations dating from 1995, to determine the presence of workable sand and gravel. The site is shown by publicly available geological information to be underlain by terrace sand and gravel deposits.

Drilling investigations undertaken in 1995 and 2017 indicates an economically viable sand and gravel deposit. Subsequent laboratory testing of samples taken during the drilling indicate a deposit that is indicated to be 52% Gravel and 37% Sand.

Due consideration has been given to all external constraining factors (houses, underground utilities and tree root protection zones) in order to derive a workable mineral area of 40.8Ha.

An assessment of the available sand and gravel has determined a net saleable resource of **1.672** Million Tonnes. To access this mineral resource, 662,000m³ of overburden, comprising soils, subsoils and clays, will need to be stripped, stored and used in restoration.

Report compiled by:

Tom Giddings CGeol FIQ
Fisher German LLP
Date: 7 December 2021

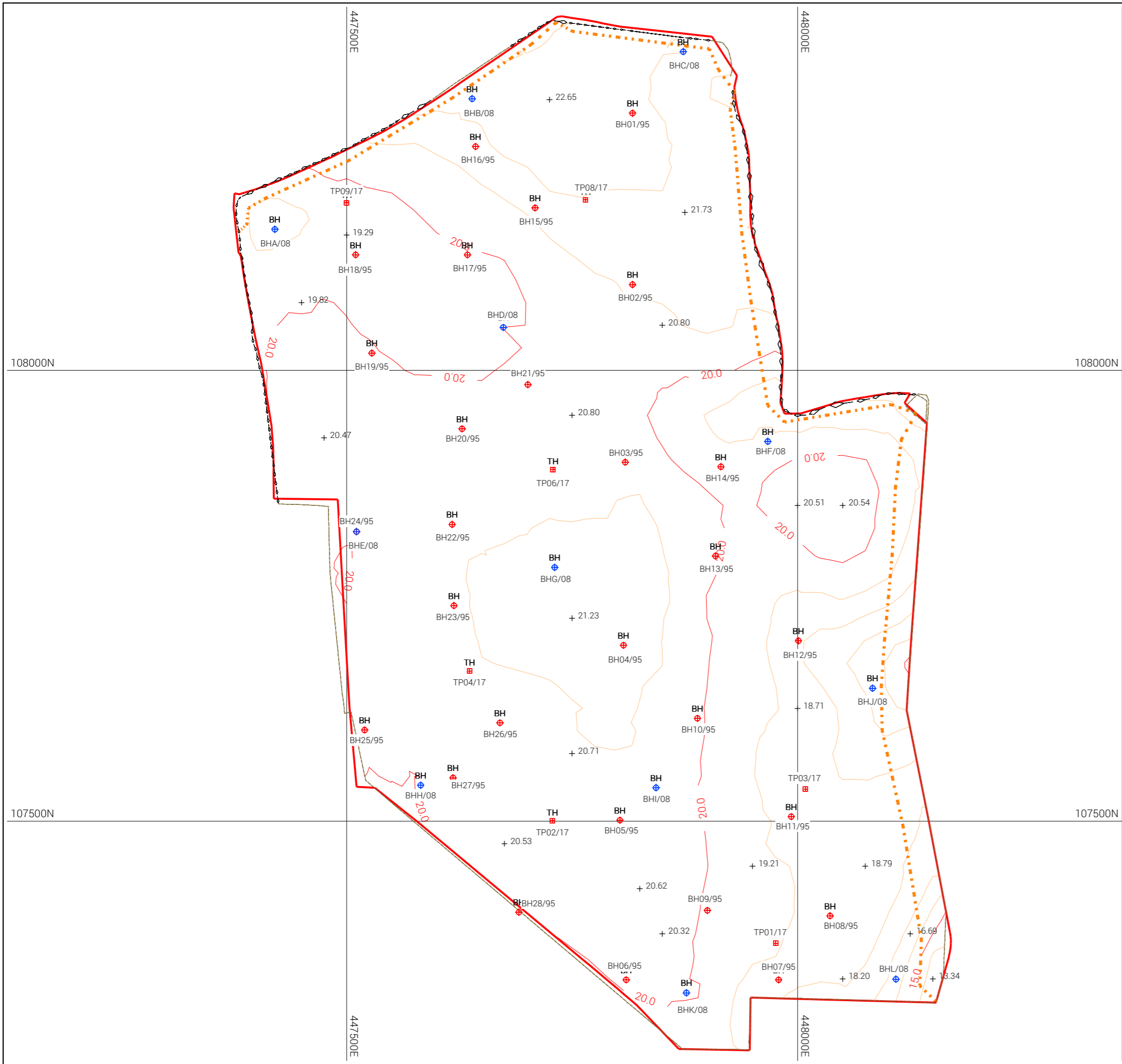
Appendix 1

Borehole Locations Survey Levels Plan




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Models	Drawn from	21-10_HAMBLE_BHLP_TOPO.LSS
	Overlay 1	OS Landline.LSS
	Overlay 2	
	Overlay 3	
	Overlay 4	
	Revision Notes	

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 Telephone 01530 412821

Drawn By Tom Giddings	Client CEMEX UK Operations Ltd
Date 30.10.21	Site Land at Hamble Airfield
Scale(S) 1:4000 A3	Project Sand & Gravel Extraction
Chkd/Model(s) FP 129936-028	Title Borehole Locations OGL Levels and BH Locations
Site Ref. HAM	Drawing No. 21-10_HAMBLE_BHLP_TOPO.LSS

Appendix 2 : Borehole Logs



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DATA SHEET - Symbols and Abbreviations used on Records



Sample Types

B	Bulk disturbed sample
BLK	Block sample
C	Core sample
D	Small disturbed sample (tub/jar)
E	Environmental test sample
ES	Environmental soil sample
EW	Environmental water sample
G	Gas sample
L	Liner sample
LB	Large bulk disturbed sample
P	Piston sample (PF - failed P sample)
TW	Thin walled push in sample
U	Open Tube - 102mm diameter with blows to take sample. (UF - failed U sample)
UT	Thin wall open drive tube sampler - 102mm diameter with blows to take sample. (UTF - failed UT sample)
V	Vial sample
W	Water sample
#	Sample Not Recovered

Insitu Testing / Properties

CBRP	CBR using TRL probe
CHP	Constant Head Permeability Test
COND	Electrical conductivity
TC	Thermal Conductivity
TR	Thermal Resistivity
HV	Strength from Hand Vane
ICBR	CBR Test
IDEN	Density Test
IRES	Resistivity Test
MEX	CBR using Mexecon Probe Test
PKR	Packer Permeability Test
PLT	Plate Load Test
PP	Strength from Pocket Penetrometer
Temp	Temperature
VHP	Variable Head Permeability Test
VN	Strength from Insitu Vane
w%	Water content
(All other strengths from undrained triaxial testing)	
S	Standard Penetration Test (SPT)
C	SPT with cone
N	SPT Result
-/-	Blows/penetration (mm) after seating drive
-*/-(mm)	Total blows/penetration
()	Extrapolated value

Groundwater

Water Strike	
Depth Water Rose To	

Instrumentation

Seal	
Filter	
Seal	

Strata Legend

Made Ground Granular	
Made Ground Cohesive	
Topsoil	
Cobbles and Boulders	
Gravel	
Sand	
Silt	
Clay	
Peat	
Note: Composite soil types shown by combined symbols	
Chalk	
Limestone	
Sandstone	
Coal	

Strata, Continued

Mudstone	
Siltstone	
Metamorphic Rock	
Fine Grained	
Medium Grained	
Coarse Grained	
Igneous Rock	
Fine Grained	
Medium Grained	
Coarse Grained	

Backfill Materials

Arisings	
Bentonite Seal	
Concrete	
Fine Gravel Filter	
General Fill	
Gravel Filter	
Grout	
Sand Filter	
Tarmacadam	

Rotary Core

RQD	Rock Quality Designation (% of intact core >100mm)
FRACTURE INDEX	
Fractures/metre	
FRACTURE SPACING (m)	Maximum
NI	Non-intact core
NR	No core recovery
AZCL	Assumed zone of core loss
(where core recovery is unknown it is assumed to be at the base of the run)	

TRIAL PIT RECORD

Trial Pit

Project **HAMBLE AIRFIELD, HAMBLE-LE-RICE**

Engineer **CEMEX**

Trial Pit **TP01**
Project No **PE171428**

Client **CEMEX**

National Grid Coordinates **447975.749E**
107364.746N

Ground Level **18.93 m OD**

Samples and Tests				Strata	Scale 1:20		
Depth	Type	Stratum No	Results	Description	Depth	Legend	Level m OD
0.30- 0.60	B			Grass over soft dark brown slightly gravelly CLAY. Gravel is angular and subangular fine to coarse flint.	G.L.		18.93
				Soft light brown slightly sandy slightly gravelly CLAY. Gravel is angular and subangular fine to coarse flint.	0.30		18.63
				Light brown sandy slightly clayey angular and subangular fine to coarse GRAVEL. Gravel is flint. Low subangular flint cobble content.	0.60		18.33
1.00- 3.00	B			Orangish brown and yellowish brown slightly clayey sandy angular and subangular fine to coarse GRAVEL with frequent pockets up to 300mm in size of fine to coarse sand. Gravel is flint. Medium subangular flint cobble content.	0.90		18.03
				End of Excavation	3.00		15.93

Excavation				Groundwater		
Plant	JCB 3CX	Width (B)	0.50	Depth Observed	Depth of Pit	Details
Date	26/09/2017	Length (C)	2.00			Groundwater not encountered during excavation.
Shoring	None.	Date Backfilled	26/09/2017			
Stability	stable during excavation.					

Remarks Trial pit set out and the area was CAT scanned prior to excavation. On completion the trial pit was backfilled in compacted layers of arisings.

Symbols and abbreviations are explained on the accompanying key sheet.

All dimensions are in metres. Logged in accordance with BS5930:2015

Logged by **JC**
Checked by **EAS**
Figure **1 of 1**
20/11/2017

TRIAL PIT RECORD

Trial Pit

Project **HAMBLE AIRFIELD, HAMBLE-LE-RICE**

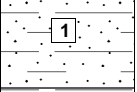
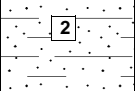

Engineer **CEMEX**

Trial Pit **TP02**
Project No **PE171428**


Client **CEMEX**

National Grid Coordinates **447728.165E**
107500.498N

Ground Level **20.78 m OD**

Samples and Tests				Strata		Scale 1:20	
Depth	Type	Stratum No	Results	Description	Depth	Legend	Level m OD
				Grass over soft dark brown slightly sandy CLAY with frequent rootlets.	G.L.		20.78
0.50- 2.00	B			Soft light brown sandy CLAY with frequent cobble size pockets of very clayey fine sand.	0.30		20.48
2.00- 3.20	B			Light brown and orangish brown sandy clayey angular and subangular fine to coarse GRAVEL. Gravel is flint. Low subangular flint cobble content.	2.00		18.78
				End of Excavation	3.20		17.58


Excavation				Groundwater		
Plant	JCB 3CX	Width (B)	0.50	Depth Observed	Depth of Pit	Details
Date	26/09/2017	Length (C)	2.00			Groundwater not encountered during excavation.
Shoring	None.	Orientation	045 deg			
Stability	stable during excavation.	Date Backfilled	26/09/2017			

Remarks  Trial pit set out and the area was CAT scanned prior to excavation. On completion the trial pit was backfilled in compacted layers of arisings.

Symbols and abbreviations are explained on the accompanying key sheet.

All dimensions are in metres. Logged in accordance with BS5930:2015

Logged by **JC**
Checked by **EAS**
Figure **1 of 1**
20/11/2017



TRIAL PIT RECORD

Trial Pit

Project **HAMBLE AIRFIELD, HAMBLE-LE-RICE**

Engineer

CEMEX

Trial Pit
Project No

TP03
PE171428

Client **CEMEX**

National Grid
Coordinates **448008.711 E**
107535.603 N

Ground Level **18.16 m OD**

Samples and Tests				Strata		Scale 1:20	
Depth	Type	Stratum No	Results	Description	Depth	Legend	Level m OD
				Grass over soft dark brown slightly gravelly CLAY. Gravel is angular and subangular fine to coarse flint.	G.L.		18.16
0.50- 1.10	B			Orangish brown and light brown sandy slightly clayey angular and subangular fine to coarse GRAVEL. Gravel is flint. Medium subangular flint cobble content.	0.50		17.66
1.50- 3.00	B			Yellowish brown sandy slightly clayey angular and subangular fine to coarse GRAVEL with pockets up to 300mm in size of gravelly fine to coarse sand. Gravel is flint. Medium subangular flint cobble content.	1.10		17.06
				End of Excavation	3.00		15.16

Excavation				Groundwater		
Plant	JCB 3CX	Width (B)	0.50	Depth Observed	Depth of Pit	Details
Date	26/09/2017	Length (C)	2.10			Groundwater not encountered during excavation.
Shoring	None.	Orientation	270 deg			
Stability	stable during excavation.	Date Backfilled	26/09/2017			

Remarks Trial pit set out and the area was CAT scanned prior to excavation. On completion the trial pit was backfilled in compacted layers of arisings.

Symbols and abbreviations are explained on the accompanying key sheet.

All dimensions are in metres. Logged in accordance with BS5930:2015

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Figure **1 of 1**
20/11/2017

TRIAL PIT RECORD

Trial Pit

Project **HAMBLE AIRFIELD, HAMBLE-LE-RICE**

Engineer

CEMEX

Trial Pit
Project No

TP04
PE171428

Client **CEMEX**

National Grid
Coordinates **447636.205E**
107666.539N

Ground Level **20.73 m OD**

Samples and Tests				Strata		Scale 1:20	
Depth	Type	Stratum No	Results	Description	Depth	Legend	Level m OD
0.30- 1.50	B			Grass over soft dark brown slightly sandy CLAY with frequent rootlets.	G.L.		20.73
				Soft light brown slightly sandy CLAY with frequent pockets of very clayey fine sand.	0.40		20.33
1.50- 3.00	B			Light brown becoming orangish brown very sandy clayey angular and subangular fine to coarse GRAVEL. Gravel is flint. Low subangular flint cobble content.	1.50		19.23
				From 2.50: Very sandy.	3.10		17.63
				End of Excavation			

Excavation				Groundwater		
Plant	JCB 3CX	Width (B)	0.50	Depth Observed	Depth of Pit	Details
Date	26/09/2017	Length (C)	1.80			Groundwater not encountered during excavation.
Shoring	None.	Orientation	090 deg			
Stability	stable during excavation.	Date Backfilled	26/09/2017			

Remarks Trial pit set out and the area was CAT scanned prior to excavation. On completion the trial pit was backfilled in compacted layers of arisings.

Symbols and abbreviations are explained on the accompanying key sheet.

All dimensions are in metres. Logged in accordance with BS5930:2015

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Figure **1 of 1**
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TRIAL PIT RECORD

Trial Pit

Project **HAMBLE AIRFIELD, HAMBLE-LE-RICE**

Engineer **CEMEX**

Trial Pit **TP06**
Project No **PE171428**

Client **CEMEX**

National Grid Coordinates **447728.665E**
107889.756N

Ground Level **20.67 m OD**

Samples and Tests				Strata		Scale 1:20	
Depth	Type	Stratum No	Results	Description	Depth	Legend	Level m OD
				Grass over soft dark brown slightly gravelly CLAY. Gravel is angular and subangular fine to coarse flint.	G.L.		20.67
				Soft light brown slightly sandy CLAY with pockets up to 20cm in size of very clayey fine sand.	0.20		20.47
0.70- 1.40	B			Soft yellowish brown slightly gravelly sandy CLAY. Gravel is angular and subangular fine to coarse flint.	0.70		19.97
				Light brown sandy slightly clayey angular and subangular fine to coarse GRAVEL. Gravel is flint. Low subangular flint cobble content.	1.40		19.27
1.70- 2.90	B			Orangish brown very sandy clayey angular and subangular fine to coarse GRAVEL with frequent pockets up to 20cm in size of gravelly fine to coarse sand. Gravel is flint. Low subangular flint cobble content.	1.70		18.97
				End of Excavation	2.90		17.77

Excavation				Groundwater		
Plant	JCB 3CX	Width (B)	0.50	Depth Observed	Depth of Pit	Details
Date	26/09/2017	Length (C)	2.10			Groundwater not encountered during excavation.
Shoring	None.	Orientation	270 deg			
Stability	stable during excavation.	Date Backfilled	26/09/2017			

Remarks Trial pit set out and the area was CAT scanned prior to excavation. On completion the trial pit was backfilled in compacted layers of arisings.

Symbols and abbreviations are explained on the accompanying key sheet.

All dimensions are in metres. Logged in accordance with BS5930:2015

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Checked by **EAS**
Figure **1 of 1**
20/11/2017

TRIAL PIT RECORD

Trial Pit

Project **HAMBLE AIRFIELD, HAMBLE-LE-RICE**

Engineer

CEMEX

Trial Pit
Project No

TP08
PE171428

Client **CEMEX**

National Grid Coordinates **447764.762E**
108188.966N

Ground Level **24.00 m OD**

Samples and Tests				Strata	Scale 1:20		
Depth	Type	Stratum No	Results	Description	Depth	Legend	Level m OD
				Grass over soft dark brown slightly gravelly CLAY. Gravel is angular and subangular fine to coarse flint.	G.L.		24.00
0.60- 1.50	B			Light brown sandy slightly clayey angular and subangular fine to coarse GRAVEL. Gravel is flint.	0.30		23.70
				Yellowish brown and light brown sandy slightly clayey angular and subangular fine to coarse GRAVEL. Gravel is flint. Medium subangular flint cobble content.	0.60		23.40
1.50- 2.90	B						
				Yellowish brown fine SAND.	2.90		21.10
				End of Excavation	3.00		21.00

Excavation				Groundwater		
Plant	JCB 3CX	Width (B)	0.50	Depth Observed	Depth of Pit	Details
Date	26/09/2017	Length (C)	2.00			Groundwater not encountered during excavation.
Shoring	None.	Date Backfilled	26/09/2017			
Stability	stable during excavation.					

Remarks Trial pit set out and the area was CAT scanned prior to excavation. On completion the trial pit was backfilled in compacted layers of arisings.

Symbols and abbreviations are explained on the accompanying key sheet.

All dimensions are in metres. Logged in accordance with BS5930:2015

Logged by **JC**
Checked by **EAS**
Figure **1 of 1**
20/11/2017

TRIAL PIT RECORD

Trial Pit

Project **HAMBLE AIRFIELD, HAMBLE-LE-RICE**

Engineer **CEMEX**

Trial Pit **TP09**
Project No **PE171428**

Client **CEMEX**

National Grid Coordinates **447499.827E**
108185.498N

Ground Level **21.70 m OD**

Samples and Tests				Strata	Scale 1:20		
Depth	Type	Stratum No	Results	Description	Depth	Legend	Level m OD
0.30- 1.50	B			Grass over soft dark brown slightly gravelly CLAY. Gravel is angular and subangular fine to coarse flint.	G.L.		21.70
				Light brown sandy slightly clayey angular and subangular fine to coarse GRAVEL with frequent sand pockets up to 200mm in size. Gravel is flint.	0.30		21.40
				Orangish brown sandy angular and subangular fine to coarse GRAVEL. Gravel is flint. Low subangular flint cobble content.	0.60		21.10
				Light grey and orangish brown fine SAND.	0.90		20.80
1.50- 3.00	B			Light brown sandy angular and subangular fine to coarse GRAVEL. Gravel is flint. Low subangular flint cobble content.	1.20		20.50
				Light grey and orangish brown fine SAND.	1.50		20.20
				Light brown sandy angular and subangular fine to coarse GRAVEL. Gravel is flint. Low subangular flint cobble content.	1.70		20.00
				Light grey and orangish brown fine SAND.	1.90		19.80
				Light brown sandy angular and subangular fine to coarse GRAVEL. Gravel is flint. Low subangular flint cobble content.	2.10		19.60
				Light grey and orangish brown fine SAND.	2.70		19.00
				End of Excavation	3.00		18.70

Excavation				Groundwater		
Plant	JCB 3CX	Width (B)	0.50	Depth Observed	Depth of Pit	Details
Date	26/09/2017	Length (C)	1.90			Groundwater not encountered during excavation.
Shoring	None.	Orientation	060 deg			
Stability	stable during excavation.	Date Backfilled	26/09/2017			

Remarks Trial pit set out and the area was CAT scanned prior to excavation. On completion the trial pit was backfilled in compacted layers of arisings.

Symbols and abbreviations are explained on the accompanying key sheet.

All dimensions are in metres. Logged in accordance with BS5930:2015

Logged by **JC**
Checked by **EAS**
Figure **1 of 1**
20/11/2017

PHOTOGRAPHS

Project Number : PE171428

Project : HAMBLE AIRFIELD



TP01



TP01 - Spoil

PHOTOGRAPHS

Project Number : PE171428

Project : HAMBLE AIRFIELD



TP02



TP02 - Spoil

PHOTOGRAPHS

Project Number : PE171428

Project : HAMBLE AIRFIELD



TP03



TP03 - Spoil

PHOTOGRAPHS

Project Number : PE171428

Project : HAMBLE AIRFIELD



TP04



TP04 - Spoil

PHOTOGRAPHS

Project Number : PEI71428

Project : HAMBLE AIRFIELD



TP06



TP06 - Spoil

PHOTOGRAPHS

Project Number : PE171428

Project : HAMBLE AIRFIELD



TP08



TP08 - Spoil

PHOTOGRAPHS

Project Number : PEI71428

Project : HAMBLE AIRFIELD



TP09



TP09 - Spoil



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. 01/95
 SHEET 1 OF 1

SITE NAME
Hamble Airfield,

SITE REF.

DRILLING METHOD Power Auger CASING DETAILS 1 to
 LOG BOOK REF. RMC 06345 2 to
 3 to

GROUND LEVEL CO-ORDINATES DATE DRILLED
 m AOD E N START : 13/6/95
 TREND — PLUNGE -90.0 FINISH : 13/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRAVINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FLINTS		
TOP SOIL			0.30 (0.30)						
Hoggin (brown clay and stone)			(2.70)	2.00 B	52.9	37.7	9.4		
Yellow soft CLAY			3.00 (1.50)						
Blue firm CLAY			4.50 (1.50)						
			6.00						

NOTES	TOTAL DEPTH	6.00
	METRES	
	LOGGED BY	WK J Osborn
	DATE LOGGED	
B - Bulk disturbed (bag) sample	CPT - Cone Penetration Test	SCALE
D - Small disturbed (jar) sample	SPT - Standard Penetration Test	1:75
- Water Strike	U100 - Undisturbed Sample	
- Standing water level measured	W - Water Sample	



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. **02/95**
 SHEET **1** OF **1**

SITE NAME: **Hamble Airfield,**
 DRILLING METHOD: **Power Auger** CASING DETAILS: **1 to 2 to 3 to**
 LOG BOOK REF: **RMC 06346**
 GROUND LEVEL: **m AOD** CO-ORDINATES: **E N** DATE DRILLED: **START : 13/6/85**
 SITE REF.: **TREND** **PLUNGE -90.0** **FINISH : 13/6/85**

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PROBABLE INSTAL. ACTION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.60 (0.60)						
HOGGIN			1.60 (1.60)	1.50 B	21.4	65.1	13.5		
Yellow fine SAND			2.20 (2.30)	3.00 B	2.2	69.6	28.2		
Yellow CLAY			4.50 (4.50)						

NOTES

TOTAL DEPTH: **5.00 METRES**
 LOGGED BY: **W K J Osborn**
 DATE LOGGED: _____

SCALE: **1:75**

B - Bulk disturbed (bag) sample
 D - Small disturbed (jar) sample
 U100 - Undisturbed Sample
 W - Water Sample
 CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample



READY MIXED CONCRETE (UK) LTD
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BOREHOLE No. **03/95**
 SHEET **1** OF **1**

SITE NAME Hamble Airfield,	DRILLING METHOD <i>Power Auger</i>	CASING DETAILS 1	to
	LOG BOOK REF. RMC 06347	2	to
SITE REF.	GROUND LEVEL	CO-ORDINATES	DATE DRILLED
	m AOD TREND —	E N PLUNGE -90.0	START : 13/8/95 FINISH : 13/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FIRES		
TOP SOIL			0.60 (0.60)						
Brown sandy soft CLAY			1.40 (1.40)						
HOGGIN			2.00 (2.00)						
Yellow fine SAND			3.00 (1.00)						
Brown sandy GRAVEL			3.50 (0.50)	3.20 B	11.9	46.7	41.4		
			6.00 (3.50)	6.00 B	56.1	34.7	9.2		6.00m
Yellow CLAY			7.00 (0.50)						
			7.50 (0.50)						

NOTES	TOTAL DEPTH	7.50 METRES
	LOGGED BY	W K J Osborn
B - Bulk disturbed (bag) sample S - Small disturbed (jar) sample W - Water Sample - Standing water level measured	DATE LOGGED	
	SCALE	1:75
CPT - Cone Penetration Test SPT - Standard Penetration Test U100 - Undisturbed Sample W - Water Sample		



READY MIXED CONCRETE (UK) LTD
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BOREHOLE No. **04/95**
 SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to
	LOG BOOK REF. RMC 06348	2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES
	m AOD TREND —	E N PLUNGE -90.0
		DATE DRILLED START : 13/6/95 FINISH : 13/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PROBABLE INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			(0.60)						
Brown soft CLAY			(1.60)						
HOGGIN			(2.80)						
Brown sandy GRAVEL			(1.50)	6.00 B	55.4	34.7	9.9		
Yellow CLAY			(1.00)					6.90m	
			7.50						

NOTES	<ul style="list-style-type: none"> - Bulk disturbed (bag) sample - Small disturbed (jar) sample - Water Strike - Standing water level measured 	<ul style="list-style-type: none"> CPT - Cone Penetration Test SPT - Standard Penetration Test U100 - Undisturbed Sample W - Water Sample 	TOTAL DEPTH 7.50 METRES
			LOGGED BY W K J Osborn
			DATE LOGGED
			SCALE 1 : 75



READY MIXED CONCRETE (UK) LTD
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BOREHOLE No. 05/95
 SHEET 1 OF 1

SITE NAME
 Hamble Airfield,

DRILLING METHOD Power Auger CASING DETAILS 1 to
 LOG BOOK REF. RMC 08349 2 to
 3 to

SITE REF.

GROUND LEVEL CO-ORDINATES DATE DRILLED
 m AOD E N START : 13/8/95
 TREND --- PLUNGE -90.0 FINISH : 13/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAND DEPTH (m) & TYPE	GRADINGS			FIELD TESTS INSTALLED	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.60 (0.60)						
Brown soft CLAY			(2.40)						
HOGGIN			3.00						
Brown sandy GRAVEL			3.50 (0.50)						
			(3.00)	5.00 g	60.1	36.7	3.2		5.50m
Yellow CLAY			6.50 (1.00)						
			7.50						



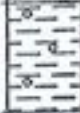


NOTES	TOTAL DEPTH	7.50 METRES
	LOGGED BY	W K J Osborn
	DATE LOGGED	
	SCALE	1 : 75

B D 2/95

- B - Bulk disturbed (bag) sample
- D - Small disturbed (jar) sample
- Water Strike
- Standing water level measured

- CPT - Cone Penetration Test
- SPT - Standard Penetration Test
- U100 - Undisturbed Sample
- W - Water Sample

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to 2 to 3 to
LOG BOOK REF. RMC 06350	GROUND LEVEL	CO-ORDINATES
TE REF.	m AOD	E N
	TREND	PLUNGE -90.0
		DATE DRILLED START : 13/6/95 FINISH : 13/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.60						
brown soft CLAY			1.80						
ROGGIN			2.40						
brown sandy GRAVEL			3.50						
			3.50	5.00 B	61.9	33.5	4.6		
			7.00						
yellow CLAY			7.50						6.00m

NOTES	TOTAL DEPTH 7.50 METRES
	LOGGED BY W K J Osborn
	DATE LOGGED
	SCALE 1:75

- Bulk disturbed (bag) sample
 - Small disturbed (jar) sample
 - Water Strike
 - Standing water level measured

CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample



SITE NAME
 Hamble Airfield,

SITE REF.

DRILLING METHOD Power Auger
LOG BOOK REF. RMC 06351

CASING DETAILS
 1 to
 2 to
 3 to

GROUND LEVEL _____
m AOD _____
TREND _____

CO-ORDINATES
 E N
 PLUNGE -00.0

DATE DRILLED
 START : 13/8/95
 FINISH : 13/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.00 (0.00)						
Brown soft CLAY			0.90 (0.90)						
Brown HOGGIN *			1.50 (3.00)	2.00 B	59.4	35.0	5.6		
			4.50 (4.50)	4.00 B	55.8	32.5	11.7		
Yellow CLAY			5.00 (0.50)						

NOTES

B - Bulk disturbed (bag) sample
 D - Small disturbed (jar) sample
 W - Water Strike
 - Standing water level measured

CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample

TOTAL DEPTH
 5.00
 METRES

LOGGED BY
 W K J Osborn

DATE LOGGED

SCALE
 1 : 75



READY MIXED CONCRETE (UK) LTD
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BOREHOLE No. 08/95

SHEET 1 OF 1

SITE NAME
Hamble Airfield,

DRILLING METHOD **Power Auger**
 LOG BOOK REF. **RMC 08352**

CASING DETAILS
 1 to
 2 to
 3 to

SITE REF.

GROUND LEVEL
 m AOD
 TREND —

CO-ORDINATES
 E N
 PLUNGE -90.0

DATE DRILLED
 START : 13/6/95
 FINISH : 13/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SPT DEPTH & TYPE	GRAZINGS			FIELD PEN DIGITAL-RTON	REMARKS
					GRAVEL	SAND	FINES		
TCP SOIL			0.60 (0.60)						
HOGGIN			4.40 (4.40)	2.00 B	81.2	34.4	4.4		
			4.00 (4.00)	4.00 B	62.1	33.8	4.1		
Yellow fine SAND			5.00 (0.50)						
Yellow CLAY			5.50 (0.50)						
			6.00 (0.50)						

NOTES

B - Bulk disturbed (bag) sample
 D - Small disturbed (jar) sample
 W - Water Strike
 W - Standing water level measured

CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample

TOTAL DEPTH
 6.00 METRES
 LOGGED BY
 W K J Osborn
 DATE LOGGED
 SCALE
 1 : 75



READY MIXED CONCRETE (UK) LTD
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BOREHOLE No. 09/95
 SHEET 1 OF 1

SITE NAME
 Hamble Airfield,

SITE REF.

DRILLING METHOD Power Auger **CASING DETAILS** 1 to
 2 to
 3 to

LOG BOOK REF. RMC 06353

GROUND LEVEL **CO-ORDINATES** **DATE DRILLED**
 m AOD E N START : 13/6/95
TREND — **PLUNGE** 40.0 FINISH : 13/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			FIELD TESTS (SPT, etc.)	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			(0.60)						
Brown sandy CLAY			(1.40)						
HOGGIN			2.00						
			(3.00)	3.00 B	65.2	35.1	9.7		
			5.00						
Yellow CLAY			(1.00)	4.50 B	63.7	25.0	5.3		
			6.00						

NOTES	TOTAL DEPTH 6.00 METRES
	LOGGED BY W K J Osborn
	DATE LOGGED
	SCALE 1 : 75

- B - Bulk disturbed (bag) sample
- D - Small disturbed (jar) sample
- Water Strike
- Standing water level measured

- CPT - Cone Penetration Test
- SPT - Standard Penetration Test
- U100 - Undisturbed Sample
- W - Water Sample



READY MIXED CONCRETE (UK) LTD
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BOREHOLE No. 10/95

SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to
	LOG BOOK REF. RMC 06354	2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES
	m AOD	E N
	TREND —	PLUNGE -90.0
		DATE DRILLED
		START : 13/8/95
		FINISH : 13/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.80						
Brown sandy CLAY			1.90						
COBBLE			3.00	2.00 B					
Grey fine clayey SAND			4.50						
			1.50	5.00 B					
			8.00						

NOTES		TOTAL DEPTH 8.00 METRES
		LOGGED BY W K J Osborn
		DATE LOGGED
		SCALE 1 : 75
- Bulk disturbed (bag) sample	CPT - Cone Penetration Test	
- Small disturbed (jar) sample	SPT - Standard Penetration Test	
- Water Strike	U100 - Undisturbed Sample	
- Standing water level measured	W - Water Sample	



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BOREHOLE No. 11/95
SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1	to
	LOG BOOK REF. RMC 06355		2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES	DATE DRILLED
	m AOD TREND —	E N PLUNGE -90.0	START : 13/6/95 FINISH : 13/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIESOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.60						
Brown sandy CLAY			0.90						
HOGGIN			1.50	2.00 B	82.1	29.9	8.0		
			3.00						
			4.80	4.00 B	63.9	33.1	3.0		
Yellow fine SAND			1.50						
			6.00						

NOTES	B - Bulk disturbed (bag) sample D - Small disturbed (jar) sample - Water Strike - Standing water level measured CPT - Cone Penetration Test SPT - Standard Penetration Test U100 - Undisturbed Sample W - Water Sample	TOTAL DEPTH 6.00 METRES
		LOGGED BY W K J Osborn
		DATE LOGGED
		SCALE 1 : 75



READY MIXED CONCRETE (UK) LTD
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BOREHOLE No. **12/95**
 SHEET **1** OF **1**

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1	to
	LOG BOOK REF. RMC 06368	2	to
SITE REF.	GROUND LEVEL	CO-ORDINATES	DATE DRILLED
	m AOD	E N	START : 13/6/95
	TREND	PLUNGE -90.0	FINISH : 13/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			FIELD METER INSTALLATION	REMARKS
					GRAVEL	SAND	FIRES		
TOP SOIL			(0.60)						
Brown sandy CLAY			(0.60)						
HOGGIN			(2.30)	2.00 B	58.7	37.2	4.1		
Yellow fine SAND			(2.50)						4.50m
			6.00						

NOTES		TOTAL DEPTH	6.00
		METRES	
		LOGGED BY	W K J Osborn
		DATE LOGGED	
B - Bulk disturbed (bag) sample	CPT - Cone Penetration Test		
O - Small disturbed (jar) sample	SPT - Standard Penetration Test		
W - Water Strike	U100 - Undisturbed Sample		
- Standing water level measured	W - Water Sample		
		SCALE	1 : 75



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BOREHOLE No. 13/95
SHEET 1 OF 1

SITE NAME
 Hamble Airfield,

SITE REF.

DRILLING METHOD Power Auger **CASING DETAILS** 1 90
 2 90
 3 90

LOG BOOK REF. RMC 06357

GROUND LEVEL **CO-ORDINATES** **DATE DRILLED**
 m AOD E N START : 14/8/95
TREND — **PLUNGE** -90.0 **FINISH** : 14/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PUSHED/INSTALLED	REMARKS
					GRAVEL	SAND	FIRES		
TOP SOIL			0.60 (0.60)						
Soft sandy CLAY			1.20 (0.60)						
HOGGIN			(2.30)	2.00 B	41.7	40.9	17.4		
Yellow fine SAND			3.50 (0.50)						
			4.00						

NOTES

B - Bulk disturbed (bag) sample
 D - Small disturbed (jar) sample
 W - Water Strike
 - Standing water level measured

CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample

TOTAL DEPTH
 4.00
METRES
LOGGED BY
 WK J Osborn
DATE LOGGED

SCALE
 1:75



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BOREHOLE No. 14/95
 SHEET 1 OF 1

SITE NAME
Hamble Airfield,

SITE REF.

DRILLING METHOD *Power Auger* CASING DETAILS 1 to 3 to to

LOG BOOK REF. RMC 06358

GROUND LEVEL CO-ORDINATES DATE DRILLED
 m AOD E N START : 14/8/95
 TREND — PLUNGE -90.0 FINISH : 14/8/96

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE BATH NO & TYPE	GRADINGS			PRESERVED INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.30 (0.30)						
HOGGIN			(2.20)	1.00 B	51.0	44.0	5.0		
			2.50	2.00 B	47.4	37.5	15.1		
Blue sandy CLAY			3.00 (0.50)						
Yellow fine SAND			(3.00)	5.00 B	0.7	71.7	27.6		
			6.00						

NOTES

- Bulk disturbed (bag) sample
- Small disturbed (jar) sample
- Water Strike
- Standing water level measured

- CPT - Cone Penetration Test
- SPT - Standard Penetration Test
- U100 - Undisturbed Sample
- W - Water Sample

TOTAL DEPTH
 6.00
 METRES

LOGGED BY
 W K J Osborn

DATE LOGGED

SCALE
 1 : 75



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. 15/95

SHEET 1 OF

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to
	LOG BOOK REF. RMC 06399	2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES
	m AOD	E N
	TREND —	PLUNGE -90.0
		DATE DRILLED
		START : 14/6/95
		FINISH : 14/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.00						
Yellow soft CLAY			1.80						
HCGGIN			1.50	3.00 B					
Yellow fine clayey SAND			1.10						
			5.00						

NOTES	TOTAL DEPTH 5.00 METRES
	LOGGED BY W K J Osborn
	DATE LOGGED
B - Bulk disturbed (bag) sample	CPT - Cone Penetration Test
D - Small disturbed (jar) sample	SPT - Standard Penetration Test
- Water Strike	U100 - Undisturbed Sample
- Standing water level measured	W - Water Sample
	SCALE 1:75



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. 16/95
 SHEET 1 OF 1

SITE NAME
 Hamble Airfield,
 SITE REF.

DRILLING METHOD Power Auger CASING DETAILS 1 to
 LOG BOOK REF. RMC C8380 2 to
 3 to
 GROUND LEVEL CO-ORDINATES DATE DRILLED
 m ADD E N START : 14/6/95
 TREND — PLUNGE -90.0 FINISH : 14/8/95

DESCRIPTION	REDUCED LEVEL (m ADD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.80 (0.80)						
HOGGIN			1.50 (0.90)						
Yellow fine clayey SAND			(3.80)	4.00 B	0.4	87.5	12.2		
			5.00						

NOTES

B - Bulk disturbed (bag) sample
 D - Small disturbed (jar) sample
 - Water Strike
 - Standing water level measured

CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample

TOTAL DEPTH
 5.00
 METRES
 LOGGED BY
 W K J Osborn
 DATE LOGGED

SCALE
 1 : 75



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. 17/95
 SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to
	LOG BOOK REF. RMC 08381	2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES
	m AOD	E N
	TREND —	PLUNGE -60.0
		DATE DRILLED
		START : 14/6/95
		FINISH : 14/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH OR TYPE	GRADINGS			PIEDMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.60						
Yellow/brown softy CLAY some stone			(2.90)						
Dark brown damp GRAVEL			3.50						
			(1.00)						
Yellow fine clayey SAND			4.60						
			(1.50)						
			6.00						

NOTES		TOTAL DEPTH
		6.00
		METRES
		LOGGED BY
	W K J Osborn	
	DATE LOGGED	
		SCALE
		1 : 75

- B - Bulk disturbed (bag) sample
- D - Small disturbed (jar) sample
- W - Water Strike
- W - Standing water level measured

- CPT - Cone Penetration Test
- SPT - Standard Penetration Test
- U100 - Undisturbed Sample
- W - Water Sample



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. 18/95
 SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD	Power Auger	CASING DETAILS	1 to
	LOG BOOK REF.	RMC 08882		2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES	DATE DRILLED	
	m AOD	E N	START : 14/8/95	
	TREND	PLUNGE -90.0	FINISH : 14/8/95	

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEDMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			(0.60)						
HOGGIN			(3.40)	1.00 B	43.8	36.1	18.1		
			4.00						
Yellow fine clayey SAND			(2.00)	3.00 B	61.0	31.9	7.1		
			6.00						

NOTES		TOTAL DEPTH	5.00 METRES
		LOGGED BY	W K J Osborn
		DATE LOGGED	
		SCALE	1 : 75
B	- Bulk disturbed (bag) sample	CPT	- Cone Penetration Test
D	- Small disturbed (jar) sample	SPT	- Standard Penetration Test
	- Water Strike	U100	- Undisturbed Sample
	- Standing water level measured	W	- Water Sample



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LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. 19/95

SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to
	LOG BOOK REF. RMC 06383	2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES
	m AOD	E N
	TREND —	PLUNGE -90.0
		DATE DRILLED
		START : 14/6/95
		FINISH : 14/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL and SUBSOIL			0.60 (0.50)						
Yellow CLAY			1.20 (0.60)						
HOGGIN			2.00 (2.30)	2.00 B	83.4	29.0	7.6		
Brown GRAVEL			3.50 (2.00)	4.00 B	70.0	24.8	5.2		3.50m
Yellow fine SAND			5.90 (0.50)						
			8.00						

NOTES		TOTAL DEPTH 8.00 METRES	
		LOGGED BY W K J Osborn	
		DATE LOGGED	
		SCALE 1:75	
B	- Bulk disturbed (bag) sample	CPT	- Cone Penetration Test
D	- Small disturbed (jar) sample	SPT	- Standard Penetration Test
W	- Water Strike	U100	- Undisturbed Sample
	- Standing water level measured	W	- Water Sample



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BOREHOLE No. 20/95
 SHEET 1 OF 1

SITE NAME
Hamble Airfield,

SITE REF.

DRILLING METHOD *Power Auger* CASING DETAILS 1 to
 LOG BOOK REF. RMC 08384 2 to
 3 to

GROUND LEVEL CO-ORDINATES DATE DRILLED
 m AOD E N START : 14/6/95
 TREND PLUNGE -90.0 FINISH : 14/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEDMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.30 (0.30)						
Soft brown sandy CLAY			0.60 (0.60)						
HOGGIN				1.50 B	53.2	38.3	10.5		
			(4.80)	3.00 B	57.2	34.3	8.5		
Yellow green fine SAND			5.50 (8.00)						

NOTES	TOTAL DEPTH 8.00 METRES
	LOGGED BY W K J Osborn
	DATE LOGGED
B - Bulk disturbed (bag) sample D - Small disturbed (jar) sample W - Water Strike - Standing water level measured	CPT - Cone Penetration Test SPT - Standard Penetration Test U100 - Undisturbed Sample W - Water Sample
	SCALE 1:75



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BOREHOLE No. 21/95

SHEET 1 OF 1

SITE NAME
 Hamble Airfield,

DRILLING METHOD Power Auger
 LOG BOOK REF. RMC 06385

CASING DETAILS 1 to 3 to

SITE REF.

GROUND LEVEL
 m AOD
 TREND —

CO-ORDINATES
 E N
 PLUNGE -60.0

DATE DRILLED
 START : 14/6/95
 FINISH : 14/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			FIELD-TESTS (SPECIAL-ATTN)	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.30 (0.30)						
Brown CLAY			(1.70)						
HOGGIN			2.00						
			(3.50)						
Yellow green fine SAND			5.50						
			6.00 (0.50)						

NOTES

B - Bulk disturbed (bag) sample
 D - Small disturbed (jar) sample
 W - Water Strike
 - Standing water level measured

CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample

TOTAL DEPTH
 6.00
 METRES

LOGGED BY
 W K J Osborn

DATE LOGGED

SCALE
 1 : 75



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. 22/95

SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to
	LOG BOOK REF. RMC 06398	2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES
	m AOD TREND —	E N PLUNGE -90.0
		DATE DRILLED START : 14/8/95 FINISH : 14/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			FIELD/CTR DISTAL-ATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.30 (0.30)						
Brown sandy CLAY			(1.70)						
HOGGIN			2.00	2.20 B	43.1	38.2	12.7		
			(1.50)						
Brown sandy GRAVEL			3.50						
			(2.00)	4.00 B	44.1	48.4	7.5		
			5.50						
Yellow green fine SAND			6.00 (0.50)						

NOTES		TOTAL DEPTH 6.00 METRES
		LOGGED BY W K J Osborn
		DATE LOGGED
		SCALE 1 : 75
- Bulk disturbed (bag) sample	CPT. - Cone Penetration Test	
- Small disturbed (jar) sample	SPT - Standard Penetration Test	
- Water Strike	U100 - Undisturbed Sample	
- Standing water level measured	W - Water Sample	



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LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. **23/95**
 SHEET **1** OF **1**

SITE NAME
Hamble Airfield,

SITE REF.

DRILLING METHOD **Power Auger** CASING DETAILS **1 to**
2 to
3 to

LOG BOOK REF. **RMC 06367**

GROUND LEVEL **---** CO-ORDINATES **E N** DATE DRILLED
m AOD **---** **PLUNGE -90.0** **START : 14/8/95**
FINISH : 14/8/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRAZINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.60 (0.60)						
Brown soft CLAY			1.80 (1.80)						
HOGGIN			1.30 (1.30)	3.00 B	30.0	56.0	14.0		
Yellow green CLAY			0.50 (0.50)						
Brown GRAVEL			2.50 (2.50)	5.00 B	49.1	41.2	9.7		
Yellow green fine SAND			1.00 (1.00)						

NOTES	TOTAL DEPTH 7.50 METRES
	LOGGED BY W K J Osborn
B - Bulk disturbed (bag) sample D - Small disturbed (jar) sample W - Water Strike - Standing water level measured CPT - Cone Penetration Test SPT - Standard Penetration Test U100 - Undisturbed Sample W - Water Sample	DATE LOGGED
	SCALE 1:75



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. 24/95
 SHEET 1 OF 1

SITE NAME
 Hamble Airfield,
 SITE REF.

DRILLING METHOD Power Auger
 LOG BOOK REF. RMC 06368
 CASING DETAILS 1 to 3 to
 GROUND LEVEL
 m AOD
 TREND —
 CO-ORDINATES
 E N
 PLUNGE -90.0
 DATE DRILLED
 START : 14/6/95
 FINISH : 14/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PIEZOMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.30 (0.30)						
Brown soft CLAY			(1.70)						
HOGGIN			2.00						
			(2.00)	3.00 B	48.4	39.9	11.7		
Brown sandy GRAVEL			4.00						
			(1.00)	4.50 B	58.8	33.9	7.3		
Green yellow fine SAND			5.00						
			(1.00)						
			6.00						

NOTES	TOTAL DEPTH 6.00 METRES
	LOGGED BY W K J Osborn
	DATE LOGGED
	SCALE 1 : 75

- Bulk disturbed (bag) sample
- Small disturbed (jar) sample
- Water Strike
- Standing water level measured

- CPT - Cone Penetration Test
- SPT - Standard Penetration Test
- U100 - Undisturbed Sample
- W - Water Sample



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BOREHOLE No. 25/95

SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to
	LOG BOOK REF. RMC 06369	2 to
SITE REF.	GROUND LEVEL	DATE DRILLED
	m AOD TREND —	CO-ORDINATES E N PLUNGE -90.0
		START : 14/6/95
		FINISH : 14/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PENETROMETER INSTALLATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.30 (0.30)						
Brown clayey SAND			(0.70)						
HOGGIN			1.00						
			(2.50)	2.00 B	66.9	28.7	6.4		
Brown sandy GRAVEL			3.50						
			(2.00)	4.00 B	68.2	37.0	4.8		
Green yellow SAND			5.50						
			(0.50)						
			6.00						

NOTES		TOTAL DEPTH 6.00 METRES
		LOGGED BY W K J Osborn
		DATE LOGGED
		SCALE 1:75
B - Bulk disturbed (bag) sample	CPT - Cone Penetration Test	
D - Small disturbed (jar) sample	SPT - Standard Penetration Test	
- Water Strike	U100 - Undisturbed Sample	
- Standing water level measured	W - Water Sample	



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BOREHOLE No. 26/95
 SHEET 1 OF 1

SITE NAME Hamble Airfield,	DRILLING METHOD Power Auger	CASING DETAILS 1 to
	LOG BOOK REF. RMC 05370	2 to
SITE REF.	GROUND LEVEL	CO-ORDINATES
	m AOD	E N
	TREND —	PLUNGE -90.0
		DATE DRILLED
		START : 14/6/95
		FINISH : 14/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRAVINGS			PERCENTAGE INITIAL-ATION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.30 (0.30)						
Brown sandy CLAY			(1.10)						
HOGGIN			1.40	1.50 B	30.9	48.4	20.7		
			(1.10)						
Brown sandy GRAVEL			2.50						
			(3.00)	4.00 B	43.8	48.1	8.1		
			5.50						
Yellow green fine SAND			6.00 (0.50)						

NOTES		TOTAL DEPTH 6.00 METRES
		LOGGED BY W K J Osborn
		DATE LOGGED
		SCALE 1:75
B	- Bulk disturbed (bag) sample	CPT - Cone Penetration Test
D	- Small disturbed (jar) sample	SPT - Standard Penetration Test
W	- Water Strike	U100 - Undisturbed Sample
	- Standing water level measured	W - Water Sample



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BOREHOLE No. 27/95

SHEET 1 OF 1

SITE NAME
Hamble Airfield,

SITE REF.

DRILLING METHOD **Power Auger** CASING DETAILS 1 to
 2 to
 3 to

LOG BOOK REF. **RMC 06371**

GROUND LEVEL CO-ORDINATES DATE DRILLED
 m AOD E N START : 15/6/95
 TREND — PLUNGE -90.0 FINISH : 15/6/95

DESCRIPTION	REDUCED LEVEL (m AOD)	LEGEND	DEPTH & THICKNESS (m)	SAMPLE DEPTH (m) & TYPE	GRADINGS			PERCENTAGE DISTRI-BUTION	REMARKS
					GRAVEL	SAND	FINES		
TOP SOIL			0.30 (0.30)						
Soft sandy CLAY			(1.80)						
HOGGIN			2.10						
			(1.90)	3.00 B	40.7	40.1	19.2		
Yellow fine SAND			4.00						
			(1.00)						
			5.00						

NOTES

B - Bulk disturbed (bag) sample
 D - Small disturbed (jar) sample
 W - Water Strike
 - Standing water level measured

CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample

TOTAL DEPTH
5.00
 METRES

LOGGED BY
W K J Osborn

DATE LOGGED

SCALE
1 : 75



READY MIXED CONCRETE (UK) LTD
LAND SEARCH & EXPLORATION DEPT.

BOREHOLE No. **28/95**

SHEET **1** OF **1**

SITE NAME
Hamble Airfield,

DRILLING METHOD *Power Auger*
 LOG BOOK REF. **RMC 08372**

CASING DETAILS **1** to
2 to
3 to

SITE REF.

GROUND LEVEL
 m AOD
 TREND —

CO-ORDINATES
 E N
 PLUNGE **-90.0**

DATE DRILLED
 START : **15/6/95**
 FINISH : **15/6/95**

DESCRIPTION

REDUCED
 LEVEL
 (m AOD)

LEGEND

DEPTH
 &
 THICKNESS
 (m)

SAMPLE
 DEPTH (m)
 &
 TYPE

GRADINGS

GRAVEL

SAND

FINES

PIEZOMETER
 INSTALL-
 ATION

REMARKS

TOP SOIL
 Brown sandy CLAY

HOGGIN

Yellow fine SAND

0.30 (0.30)

(2.20)

2.50

(3.00)

3.00 B

30.1

36.4

30.5

5.50

6.00 (0.50)

5.00 B

49.4

38.9

11.7

NOTES

TOTAL DEPTH
6.00
 METRES

LOGGED BY
W K J Osborn
 DATE LOGGED

SCALE
1 : 75

B - Bulk disturbed (bag) sample
 D - Small disturbed (jar) sample
 S - Water Strike
 W - Standing water level measured

CPT - Cone Penetration Test
 SPT - Standard Penetration Test
 U100 - Undisturbed Sample
 W - Water Sample

Appendix 3 – Phasing Overview Plan

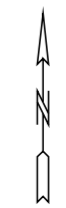


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- Legend**
- Site Boundary
 - Extraction Boundary
 - Phase Boundary
 - Conveyor Alignment
 - Perimeter Path
 - Area To Be Extracted
 - Plant Site / Haul Road
 - Undergoing Extraction
 - Undergoing Restoration Infilling
 - Restored / Final Levels
 - Soils Storage Screening Bunds



Models	Drawn from	21-12_HAMBLE_PHASING OVERVIEW.LSS
	Overlay 1	OS Vector.IPF
	Overlay 2	
	Overlay 3	
	Overlay 4	
Revision Notes	Method of Working : Version 6	

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Drawn By Tom Giddings	Client CEMEX UK Operations Ltd
Date 07.12.21	Site Land at Hamble Airfield
Scale(S) 1:4000 A3	Project Sand & Gravel Extraction
Chkd/Model(s) FP 129936-028	Title Method of Working Phasing Overview
Site Ref. HAM	Drawing No. 21-12_HAMBLE_PHASING OVERVIEW.LSS