

CLIENT DETAILS Envirocheck Order No. QC122671_3_2
 Customer Ref: Sujata Sinha,12020566_QC (22-May-2002 12:43)
 WSP Environmental Limited
 Buchanan House 24-30 Holborn
 LONDON
 EC1N 2HS

SITE DETAILS Grid Reference 541900 264920
 Oakington Barracks
 Cambridgeshire

Historical Map Legend

	Chalk Pit, Clay Pit or Quarry		Non-Coniferous Trees		Bracken
	Gravel Pit		Coniferous Trees		Heath
	Sand Pit		Scrub		Rough Grassland
	Disused Pit or Quarry		Pylon		Electricity Transmission Line
	Refuse or Slag Heap		Pole		Marsh
	Lake, Loch or Pond	Direction of Flow of Water			Reeds
			Shingle		Saltings
			Sand		
	Cutting		Embankment		Standard Gauge Multiple Track
	Road Under		Road Over		Standard Gauge Single Track
	Level Crossing		Foot Bridge		Siding, Tramway or Mineral Line
	Narrow Gauge				

ORDNANCE SURVEY PLAN

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given on the right therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

In the late 1940's a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

1981

1983

North

Map Scale=1:10,000

Date(s) of Publication

ANNEX C Exploratory Hole and CPT Records



WSP Environment & Energy
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 Birmingham, B5 4PJ
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BOREHOLE LOG

Hole No.
BHA001

Project
 Northstowe

Sheet
 1 of 1

Job No
 12170626

Client
 Gallagher

Date
 10-11-05
 10-11-05

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	MO	E 540033.372 N 266853.581	8.800

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.50-1.00	B						8.10	0.70	Soft brown sandy TOPSOIL with roots.		TS	
1.00	SPT	2,2,4 2,3,2 N=11(S)						(1.10)	Firm brown mottled grey slightly sandy gravelly CLAY. Gravel is fine and subrounded chalk (TERRACE DEPOSITS).		RT	
1.00-1.50	BD						7.00	1.80				
2.00	SPT	4,2,2 2,2,3 N=9(SPT)					6.50	(0.50) 2.30	Loose orange brown sandy GRAVEL. Gravel is fine to medium flint (TERRACE DEPOSITS).		RT	
2.00-2.30	BD											
3.00	SPT	2,2,2 3,3,4 N=12(SPT)										
3.00-3.50	BD											
4.00	SPT	5,4,3 3,3,5 N=14(SPT)						(4.70)			AMC	
4.00-4.50	BD											
5.00	SPT	3,2,3 3,4,5 N=15(SPT)										
5.00-5.50	BD											
6.00	D											
6.50-6.90	U	76 blows										
7.00	D						1.80	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT _16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						

Scale 1:62.5 Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA002

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**10-11-05
10-11-05**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

MO

E 540672.796
N 267356.337

6.140

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
							6.04	0.10	Grass over brown TOPSOIL.		TS	
0.50-1.00	B							(0.80)	Firm dark grey slightly gravelly CLAY with rootlets (AMPTHILL CLAY REWORKED).		AMC	
1.00	SPT	1,2,2 1,1,2 N=6(SPT)					5.24	0.90	Firm becoming stiff fissured grey mottled brown CLAY. Becoming stiff with depth (AMPTHILL CLAY).		AMC	
1.00-1.50	BD											
2.00	SPT	1,6,8 4,6,8 N=26(SPT)										
2.00-2.50	BD											
3.00	SPT	3,4,3 4,4,3 N=14(SPT)										
3.00-3.50	BD											
4.00	SPT	6,4,3 3,3,3 N=12(SPT)						(6.10)				
4.00-4.50	BD											
5.00-5.45	U	55 blows										
5.50	D											
6.00	D											
6.50-6.95	U	80 blows										
7.00	D						-0.86	7.00				

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added							
From	To	Hours	Tool	From	To	General Remarks					
						No groundwater encountered.					

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA003

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
10-11-05
10-11-05

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	MO	E 539765.085 N 267661.340	7.710

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
							7.01	0.70	Grass over brown TOPSOIL.		TS	
1.00	SPT	2,3,6 5,6,6 N=23(SPT)							Medium to dense orange brown SAND and GRAVEL. Gravel is fine to coarse subangular to subrounded flint and chalk, with a band of soft white silt between 3.4m and 3.5m (TERRACE DEPOSITS).		TD	
1.00-1.50	BD											
2.00	SPT	3,4,5 7,7,7 N=26(SPT)						(3.00)				
2.00-2.50	BD											
3.00	SPT	8,8,9 8,10,4 N=31(SPT)										
3.00-3.50	BD											
3.70	D						4.01	3.70	Soft to firm grey SILT. Becoming firm to stiff from 6.5m (AMPTHILL CLAY).		AMP	
4.00	SPT	2,2,2 3,3,4 N=12(SPT)										
4.00	D											
5.00	SPT	3,2,3 4,3,2 N=12(SPT)						(3.30)				
5.00	D											
6.50	SPT	5,6,7 9,10,11 N=37(SPT)										
6.50	D						0.71	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					
Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.											



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BOREHOLE LOG

Hole No.
BHA010

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
16-10-06
17-10-06

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	DRILLER	E 540891.156 N 267187.474	6.033

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.50	JJJVVVD						5.63	0.40	TOPSOIL.		TPS	
0.80	D						5.23	0.80	Stiff brown slightly sandy slightly gravelly CLAY (TERRACE DEPOSITS).		TD	
1.00	SPT	1,3,6 8,8,9 N=31(SPT)					5.03	1.00	Firm grey brown slightly sandy slightly gravelly CLAY (TERRACE DEPOSITS).		TD	
1.00-1.50	B							(1.00)	Firm light grey sandy CLAY (AMPTHILL CLAY).		AMP	
2.00-2.45	U	25 blows					4.03	2.00	Stiff blue grey CLAY (AMPTHILL CLAY).		AMP	
2.70	JJJVVVD							(2.00)			AMP	
3.10	D						2.03	4.00	Stiff grey CLAY with thin weak siltstone bands (AMPTHILL CLAY).		AMP	
3.20-3.65	U	30 blows						(0.50)			AMP	
4.00	D						1.53	4.50	Stiff grey CLAY (AMPTHILL CLAY).		AMP	
4.00-4.45	U	42 blows									AMP	
4.50	D										AMP	
5.00	SPT	1,2,3 4,4,5 N=16(SPT)						(2.50)			AMP	
5.00-5.50	B										AMP	
5.00	JJJVVV										AMP	
6.20-6.65	U	45 blows									AMP	
6.90	D						-0.97	7.00				
7.00	SPT	2,3,3 5,6,6 N=20(SPT)										

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT _16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered. Drillers descriptions.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA011

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Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**17-10-06
17-10-06**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	DRILLER	E 540884.077 N 267430.652	5.434

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.50	D						4.93	0.50	TOPSOIL.		TPS	
0.80	JJVVD						4.63	0.80	Firm to stiff grey brown CLAY with rootlets (TERRACE DEPOSITS).		TD	
1.00	D						4.43	1.00	Firm light grey slightly gravelly CLAY (TERRACE DEPOSITS).		TD	
1.10	SPT	2,2,3 3,3,4 N=13(SPT)							Firm blue grey CLAY (AMPTHILL CLAY).		AMP	
1.10-1.60	B											
1.80	JJVVD											
2.00-2.45	U	18 blows										
2.50	D										AMP	
2.70	D											
3.00	SPT	1,1,2 2,2,3 N=9(SPT)					2.43	3.00	Firm to stiff grey CLAY. Becoming very stiff with depth (AMPTHILL CLAY).			
3.00-3.50	B											
3.40	JJV										AMP	
4.00-4.45	U	27 blows										
4.90	D											
5.00	SPT	2,2,4 3,5,5 N=17(SPT)										
5.00-5.50	B										AMP	
5.80-6.00	JJVVB											
6.30-6.75	U	35 blows										
7.00	D						-1.57	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered. Drillers descriptions.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					
Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.											



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BOREHOLE LOG

Hole No.
BHA012

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Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
18-10-06
18-10-06

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	DRILLER	E 541259.104 N 267367.304	5.592

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.60	JJJVVD						4.99	0.60	TOPSOIL.		TPS	
0.90	D						4.69	0.90	Firm grey/brown CLAY with occasional fine gravel (TERRACE DEPOSITS).		TD	
1.10	SPT	1,2,2 2,2,3 N=9(SPT)					4.49	1.10	Firm to stiff light blue/grey CLAY (AMPTHILL CLAY).		AMP	
1.10-1.60	B							(1.60)	Firm to stiff blue/grey and brown CLAY (AMPTHILL CLAY).		AMP	
2.00	JVVD						2.89	2.70	Firm grey CLAY (AMPTHILL CLAY).		AMP	
2.00-2.45	U	38 blows						(0.90)				
2.70	D											
3.00	SPT	1,2,3 3,4,4 N=14(SPT)					1.99	3.60	Light grey SILTSTONE (AMPTHILL CLAY).		AMP	
3.00-3.50	JJJVVB						1.69	3.90	Firm grey CLAY (AMPTHILL CLAY).		AMP	
3.80	D							(1.00)				
4.00-4.45	U	34 blows										
4.70	D						0.69	4.90	Stiff dark grey laminated CLAY (AMPTHILL CLAY).		AMP	
4.90	D							(2.10)				
5.00	SPT	1,2,3 3,4,3 N=13(SPT)										
5.00-5.50	B											
6.30-6.75	U	35 blows										
6.80	JJVV						-1.41	7.00				
7.00	D											

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered. Drillers descriptions.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					
Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.											



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BOREHOLE LOG

Hole No.
BHA013

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
20-07-07
20-07-07

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	CW	E 539921.497 N 267697.705	8.467

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.00-0.30	B								Brown clayey gravelly SAND. Gravel is angular to subangular fine to medium flint with rootlets (TERRACE DEPOSITS).		TD	
0.30-0.80	B						7.67	0.80	0.30 mbgl, becoming orange brown very clayey slightly gravelly SAND. Gravel is fine to medium angular to sub-angular flint.		TD	
1.00-1.50	B							(1.10)	Soft Orange brown mottled light grey sandy very gravelly CLAY. Gravel is subangular to rounded fine to medium flint with rare chalk (TERRACE DEPOSITS).		TD	
1.50	SPT	2.2,5 6.8,10 N=29(SPT)					6.57	1.90	1.50 mbgl, becoming firm.		TD	
1.50-2.00	B							(0.80)	Medium dense orange brown SAND and GRAVEL. Sand is medium fine to medium. Gravel is angular to subangular of flint (TERRACE DEPOSITS).		TD	
2.50	SPT	4.5,2 2.3,5 N=12(CPT)					5.77	2.70				
2.50-3.00	B								Stiff dark grey CLAY with rare fossils (AMPTHILL CLAY).			
3.80-4.00	B	45 blows U100 failed between 3.8 and 4.3						(4.30)			AMP	
4.50-5.00	B	49 blows U100 failed between 4.5 and 5										
5.00	SPT	1,1,2 2,3,3 N=10(SPT)										
5.01-5.50	B											
6.50	SPT	1,2,3 3,5,6 N=17(SPT)										
6.50-7.00	B						1.47	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						20-07-07		2.00		1.68	
Chiselling			Water Added			General Remarks Groundwater encountered at 2m. Water level rose to 1.68m.					
From	To	Hours	Tool	From	To						
Scale 1:62.5						Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.					



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BOREHOLE LOG

Hole No.
BHA014

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**23-07-07
23-07-07**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

JC

E 540117.408
N 267754.059

8.395

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.00-0.50	B						7.90	(0.50)	Grass over dark brown slightly gravelly sandy clay TOPSOIL with rare roots. Gravel is subangular to subrounded fine to medium flint and mixed lithology.		TPS	
0.50-1.00	B						7.30	(0.60)	Soft to firm brown slightly gravelly sandy CLAY with rare roots. Gravel is angular to subrounded fine to medium mixed lithology including flint (TERRACE DEPOSITS).		TD	
1.20	SPT	1,2,2 3,3,4 N=12(SPT)							Firm to stiff light grey mottled dark grey CLAY with rare brown mottles AMPHILL CLAY).		AMP	
1.20-1.70	B											
2.20	SPT	1,1,2 2,3,3 N=10(SPT)						(2.90)				
2.20-2.70	B											
3.20	SPT	1,1,1 2,3,3 N=9(SPT)										
3.20-3.70	B						4.40	4.00				
4.20	SPT	2,3,3 4,4,4 N=15(SPT)							Stiff dark blue grey CLAY with rare orange roots and rare partings of orange silt (AMPHILL CLAY). 4.50 mbgl, becoming fissured with rare fossils. 5.00 mbgl, no orange silt or roots.		AMP	
4.20-4.70	B											
5.20	SPT	2,2,2 4,4,4 N=14(SPT)						(3.00)				
5.20-5.70	B											
6.50	SPT	3,2,3 4,5,5 N=17(SPT)					1.40	7.00				
6.50-7.00	B											

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added							
From	To	Hours	Tool	From	To	General Remarks					
						No groundwater encountered.					

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11



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BOREHOLE LOG

Hole No.
BHA015

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
18-07-07
18-07-07

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	CW	E 540294.159 N 267803.927	7.964

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.00-0.40	B						7.56	0.40	Grass over brown sandy slightly gravelly clay TOPSOIL. Gravel is angular to subangular fine to medium flint.		TPS	
0.50-1.00	B								Firm light grey mottled Orange brown sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to medium flint with siltstone dusting (TERRACE DEPOSITS).		TD	
1.00	SPT	1,3,3 4,3,3 N=13(SPT)						(1.40)				
1.01-1.50	B						6.16	1.80				
2.00	U	60 blows							Stiff dark grey fissured CLAY with rare fossils (AMPHILL CLAY).		AMP	
3.00	SPT	1,2,2 3,3,4 N=12(SPT)										
3.01-3.50	B											
4.00	U	110 blows						(5.20)				
5.00	SPT	2,2,3 5,5,7 N=20(SPT)										
6.00-6.50	B											
6.50	SPT	6,5,6 7,8,9 N=30(SPT)					0.96	7.00				
6.50-7.00	B											

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



WSP Environment & Energy
One Queens Drive
Birmingham, B5 4PJ
Telephone: 0121 352 4700
Fax:

BOREHOLE LOG

Hole No.
BHA016

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**17-07-07
17-07-07**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

Driller

E 540508.219
N 267821.046

6.827

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.50-0.90	B						5.93	0.90	Grass over firm brown slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to medium of mixed lithology (TERRACE DEPOSITS).		TD	
1.00	SPT	1,2,3 3,3,2 N=11(SPT)							Stiff grey mottled brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine of mixed lithology. Gravel is very rare 0.9-1.4m (TERRACE DEPOSITS).		TD	
1.00-1.50	BD											
2.00-2.45	U	45 blows						(2.90)			TD	
3.00	SPT	1,2,2 3,4,5 N=14(SPT)							Stiff dark grey to grey fissured CLAY with rare fossils. Rare orange brown mottling to 4.4m (AMPTHILL CLAY).		AMP	
3.00-3.50	BD						3.03	3.80				
4.00-4.45	U	50 blows										
5.00	SPT	2,3,4 4,5,5 N=18(SPT)						(3.20)				
5.00-5.50	BD											
6.50	SPT	2,3,5 6,6,8 N=25(SPT)										
6.50-7.00	BD						-0.17	7.00				

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added							
From	To	Hours	Tool	From	To	General Remarks					
						No groundwater encountered.					

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA017

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**18-07-07
18-07-07**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	CW	E 540469.889 N 267688.722	6.379

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.00-0.50 0.15	B JJVV						5.98	0.40	Grass over brown slightly gravelly sandy CLAY. Gravel is angular to subrounded fine to medium flint (TERRACE DEPOSITS).		TD	
0.50-1.00	B							(0.80)	Firm brown mottled orange slightly gravelly sandy CLAY. Gravel is angular to subrounded fine to medium flint (TERRACE DEPOSITS).		TD	
1.00-1.45	U	30 blows					5.18	1.20	Firm stiff grey rare mottled orange CLAY with rare selenite crystals becoming stiff from 4m and dark grey from 5m (AMPTHILL CLAY).		AMP	
2.00	SPT	1,1,2 2,3,3 N=10(SPT)										
2.00-2.50	B											
3.00-3.45	U	60 blows										
3.45	D											
4.00	SPT	1,2,3 3,3,4 N=13(SPT)						(5.80)				
4.00-4.50	B											
5.00-5.45	U	70 blows										
5.45	D											
6.50	SPT	1,2,3 3,5,6 N=17(SPT)										
6.50-7.00	B						-0.62	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA018

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
19-07-07
19-07-07

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	DF	E 540312.460 N 267599.775	7.826

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.00-0.40	B		0				7.43	0.40	Grass over dark brown sandy slightly gravelly clay TOPSOIL with rootlets. Gravel is angular to subrounded fine to medium flint.		TPS	
0.50-1.00	B								Firm grey mottled orange brown slightly gravelly sandy CLAY. Gravel is angular to subangular fine flint with fissured silt pockets (TERRACE DEPOSITS).		TD	
1.00-1.45	U	30 blows										
1.45	D							(2.60)				
2.00	SPT	1.1,2 2.3,3 N=10(SPT)							2.00 mbgl, becoming firm to stiff with siltstone dustings with occasional selenite crystals.			
2.00-2.50	B											
3.00-3.45	U	40 blows					4.83	3.00	Stiff dark grey CLAY with rare orange mottling and rare selenite crystals (AMPTHILL CLAY).		AMP	
3.45	D											
4.00	SPT	1.2,2 3.3,5 N=13(SPT)										
4.00-4.50	B											
5.00-5.45	U	50 blows						(4.00)				
5.45	D											
6.50	SPT	2.2,3 4.4,5 N=16(SPT)					0.83	7.00				
6.50-7.00	B											

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					
Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.											



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BOREHOLE LOG

Hole No.
BHA019

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**19-07-07
19-07-07**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

CW

E 540083.529
N 267601.794

8.798

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.20-0.40	B		0				8.40	0.40	Grass over dark brown sandy slightly gravelly clay TOPSOIL with roots. Gravel is angular to subrounded fine to medium flint.		TPS	
							7.80	(0.60) 1.00	Brown mottled orange slightly gravelly sandy CLAY with rare rootlets. Gravel is angular to subrounded fine to medium flint (TERRACE DEPOSITS).		TD	
1.00	SPT	3,6,6 10,10,13 N=39(SPT)										
1.00-1.50	BD							(1.20)	Dense orange brown slightly clayey very gravelly SAND. Sand is fine to coarse. Gravel is angular to subrounded flint and mixed lithology (TERRACE DEPOSITS).		TD	
2.00	SPT	7,9,7 7,7,6 N=27(SPT)					6.60	2.20				
2.00	B							(0.80)	Firm light grey mottled Orange brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to medium flint with siltstone dustings (TERRACE DEPOSITS).		TD	
3.00	SPT	1,3,3 3,4,5 N=15(SPT)					5.80	3.00				
3.00-3.50	BD								Stiff dark grey with rare brown mottling CLAY with rare fossils (AMPTHILL CLAY).			
4.00-4.35	U	150 blows										
5.00	SPT	1,2,3 4,4,6 N=17(SPT)						(4.00)			AMP	
5.00-5.50	BD											
6.50	SPT	2,3,3 4,5,5 N=17(SPT)					1.80	7.00				
6.50-7.00	B D											

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						19-07-07		1.00			
Chiselling						Water Added					
From	To	Hours	Tool	From	To	General Remarks					
						No groundwater encountered.					

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA020

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**13-09-07
14-09-07**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

LF / CW

E 539860.842
N 267485.958

8.583

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.10-0.30	JJJ						8.48	0.10	Grass over dark brown slightly gravelly fine to medium sand TOPSOIL. Gravel is angular to subangular fine flint.		TPS	
0.50	D						8.08	0.50	Dark brown slightly gravelly fine to coarse SAND subsoil. Gravel is angular to subangular fine flint (TERRACE DEPOSITS).		TD	
1.00	SPT	5,9,9 11,12,12 N=44/ 0.26(SPT)					7.88	0.70	Brown slightly clayey gravelly fine to coarse SAND. Gravel is angular to subangular fine flint (TERRACE DEPOSITS).		TD	
1.00-1.50	B							(1.30)	Orange brown gravelly medium to coarse SAND. Gravel is angular to subrounded fine to medium chalk and flint. Becoming light brown and very gravelly from 1m (TERRACE DEPOSITS).		TD	
1.00-1.45	D						6.58	2.00				
1.00-1.50	B											
1.00-1.45	D											
2.00-2.50	B								Light brown very sandy GRAVEL. Gravel is angular to subrounded fine to coarse flint and chalk (TERRACE DEPOSITS).		TD	
2.50	SPT	1,2,5 5,10,11 N=31(SPT)					5.58	3.00				
2.50-3.00	B											
2.50-2.95	D											
2.50-3.00	B											
2.50-2.95	D											
3.00-3.50	B											
3.00-3.50	JJV											
3.50	SPT	1,1,2 2,3,3 N=10(SPT)										
3.50-4.00	B											
3.50-3.95	D											
3.50-4.00	B											
3.50-3.95	D											
5.50	SPT	1,2,2 3,3,4 N=12/ 0.26(SPT)					1.58	7.00	Soft to firm thinly laminated grey CLAY with occasional pockets of shelly material to 4m. Becoming stiff and dark grey from 4m (AMPTHILL CLAY).		AMP	

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling			Water Added			General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					
Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.											



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BOREHOLE LOG

Hole No.
BHA021

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
09-07-07
09-07-07

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	CW	E 539897.869 N 267331.679	8.545

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.00-0.30	B						8.25	0.30	Grass over dark brown clayey gravelly sand TOPSOIL with frequent rootlets. Gravel is angular to subangular fine to medium of flint.		TPS	
0.30-0.70	B						7.85	0.70	Dark brown and orange brown clayey gravelly SAND with rare rootlets. Gravel is angular to subangular fine to medium of flint. rare medium gravel sized red brown and black mottles (TERRACE DEPOSITS).		TD	
0.30-0.70	JVV						7.55	1.00	Orange brown slightly gravelly SAND and GRAVEL. Gravel is angular to rounded fine to medium of flint. Sand is fine to coarse (TERRACE DEPOSITS).		TD	
1.00	SPT	4,12,12 13,13,12 N=50(CPT)				↓			Medium dense orange brown slightly clayey SAND and GRAVEL. Gravel is angular to subangular fine to coarse flint. Sand is fine to coarse (TERRACE DEPOSITS).		TD	
1.00-1.50	B											
1.01-1.50	B											
1.50	JVV											
2.00	SPT	1,0,0 2,3,8 N=13(CPT)										
2.00-2.50	B											
2.01-2.50	B											
3.00	SPT	1,0,0 2,6,9 N=17(CPT)										
3.00-3.50	B											
3.01-3.50	B											
4.00	SPT	5,10,15 18,17(CPT)										
4.00-4.50	B											
4.01-4.50	B											
5.00	SPT	2,2,3 5,10,12 N=30(CPT)										
5.00-5.50	B											
5.01-5.50	B											
6.50	SPT	1,2,3 3,3,4 N=13(SPT)					2.05	6.50	Dark grey black slightly gravelly, slightly sandy CLAY. Gravel is angular to subangular fine to coarse flint (AMPTHILL CLAY).		AMP	
6.50-7.00	B						1.95	6.60	Dark grey black CLAY (AMPTHILL CLAY).		AMP	
6.50-7.00	B						1.55	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						09-07-07		2.50		1.50	
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						Very wet from 1.0m					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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BOREHOLE LOG

Hole No.
BHA022

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**06-07-07
09-07-07**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	LF / CW	E 540082.417 N 267365.896	8.943

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.50-0.90	B		0				8.74	0.20	Dark brown clayey slightly gravelly fine to medium SAND. Gravel is angular to subangular fine flint (TERRACE DEPOSITS).		TD	
0.50-0.70	JJJV							(1.00)	Soft to firm dark brown slightly gravelly sandy CLAY. Gravel is angular to subangular fine flint (TERRACE DEPOSITS).		TD	
0.90	D						7.74	1.20	0.80 mbgl, becoming brown mottled red.			
1.00	SPT	2.3,8 13,14,13 N=48(SPT)							Medium dense brown gravelly SAND. Sand is fine to coarse. Gravel is angular to subangular fine flint and chalk (TERRACE DEPOSITS).			
1.00	D											
1.00	D											
1.20-1.60	B											
2.00	SPT	6.8,9 7.6,6 N=28(SPT)										
2.00	B											
2.00	B											
3.00	SPT	2.3,4 3.4,4 N=15(SPT)										
3.00	B							(4.80)			TD	
3.00	B											
4.00	SPT	2.4,3 3.3,5 N=14(SPT)										
4.00	B											
4.00	B											
5.00	SPT	2.3,3 4.5,7 N=19(SPT)										
5.00	B											
5.00	B											
6.50	SPT	4.3,3 2.1,2 N=8(SPT)					2.94	6.00	Loose brown slightly gravelly SAND. Sand is medium to coarse. Gravel is angular to subrounded fine flint and chalk (TERRACE DEPOSITS).			
6.50	B										TD	
6.50	B											
7.80	B						0.94	8.00	7.80 mbgl - from 7.8m brown/grey, no gravel occasionally medium gravel sized pieces of grey silt.			
8.00	SPT	3.4,3 5.5,7 N=20(SPT)					0.74	8.20	Dark grey fissured and very thinly laminated CLAY (AMPTHILL CLAY).		AMP	
8.00-8.45	D											
8.00-8.45	D											

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						06-07-07		1.70			
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						Damp at 1.7m					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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BOREHOLE LOG

Hole No.
BHA023

Project
Northstowe

Sheet
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Job No
12170626

Client
Gallagher

Date
**10-07-07
10-07-07**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

CW

E 540259.808
N 267375.471

8.476

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.00-0.30	B		0				8.18	0.30	Grass over dark brown slightly gravelly clayey sand TOPSOIL with frequent rootlets. Gravel is subrounded fine angular flint.		TPS	
0.00-0.30	JVVV		0									
0.30-0.80	B								Light orange brown rarely mottled light grey clayey gravelly SAND with rare rootlets. Gravel is rounded fine angular flint (TERRACE DEPOSITS).		TD	
1.00-1.45	U	60 blows					6.48	2.00				
2.00	SPT	5.3, 2 3.5, 3 N=13(SPT)							Soft to firm grey brown slightly sandy gravelly CLAY. Gravel is angular to rounded fine flint (weathered AMPHILL CLAY).		AMP	
2.00-3.00	B											
2.00-3.00	JVVV											
3.00	SPT	3.3, 3 3.4, 5 N=15(SPT)					5.28	3.20	3.00 mbgl, water seepage.			
3.00-3.50	B								Firm dark grey CLAY with frequent fissures and rare fossils (pyritised belemnites) (AMPHILL CLAY).		AMP	
4.00-4.50	B	0 blows U/100 failed between 4.0 and 4.5mbgl.	0									
4.00-4.50	JVVV											
4.80-5.25	U	55 blows										
6.50	SPT	1.2, 3 3.4, 5 N=15(SPT)					1.48	7.00				
6.50-7.00	B											

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						10-07-07		3.00			
Chiselling						Water Added					
From	To	Hours	Tool	From	To	General Remarks					
						Very damp from 2.0m					

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA024

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**16-07-07
16-07-07**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	JC	E 540507.090 N 267439.008	6.538

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.00-0.40	B						6.14	0.40	Grass over brown slightly sandy slightly gravelly clay TOPSOIL with rare roots. Gravel is subangular to rounded fine of mixed lithology.		TPS	
0.40-0.90	B								Firm brown to light brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine flint (TERRACE DEPOSITS).		TD	
0.60-0.60	JVV						(1.10)					
1.00-1.50	U	45 blows					5.04	1.50	Stiff grey mottled brown closely fissured CLAY (AMPTHILL CLAY). 1.60 mbgl, rare light grey/white silty dustings.		AMP	
1.50-1.95	U	43 blows					4.54	(0.50) 2.00				
1.95	D								Stiff grey to dark grey fissured CLAY. Rare selenite crystals (AMPTHILL CLAY).		AMP	
2.50	SPT	1,2,2 8,7,4 N=21(SPT)										
2.50-3.00	B										AMP	
3.50-3.95	U	60 blows										
3.95	D										AMP	
4.50	SPT	1,3,3 3,4,5 N=15(SPT)						(5.00)				
4.50-5.00	B										AMP	
5.50-5.95	U	55 blows										
5.95	D										AMP	
6.50	SPT	2,3,3 5,5,5 N=18(SPT)										
6.50-7.00	B						-0.46	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks Damp from 1.4m.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA025

Project
Northstowe

Sheet
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Job No
12170626

Client
Gallagher

Date
**16-07-07
16-07-07**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	JC	E 540700.223 N 267597.355	5.598

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.00-0.40	B								Grass and vegetation over brown slightly sandy clay TOPSOIL with rare roots.		TPS	
0.20	JJVV						5.20	0.40				
0.40-0.90	B								Firm to stiff brown mottled light brown and grey slightly sandy slightly gravelly CLAY. Gravel is rounded fine flint (TERRACE DEPOSITS).		TD	
							4.70	0.90				
1.00-1.45	U	30 blows No Shoe					4.40	1.20	Firm to stiff dark grey mottled orange brown slightly sandy CLAY with rare sand bands (AMPTHILL CLAY).		AMP	
									Firm to stiff fissured grey mottled orange and brown CLAY (AMPTHILL CLAY).			
2.00	SPT	1,1,1 1,2,3 N=7(SPT)							2.00 mbgl, becoming grey only.			
2.00-2.50	B											
3.00-3.45	U	30 blows										
3.45	J											
4.00	SPT	1,2,2 2,3,3 N=10(SPT)						(5.80)				
4.00-4.50	B											
4.00	JJV											
5.00-5.45	U	35 blows										
5.45	J											
6.50	SPT	2,3,3 4,5,5 N=17(SPT)										
6.50-7.00	B						-1.40	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling			Water Added			General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA026

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
18-07-07
18-07-07

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	DF	E 540908.799 N 267626.090	5.506

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.00-0.30	B								Grass over brown slightly gravelly sandy TOPSOIL with roots. Gravel is fine angular to subrounded flint.		TPS	
0.20-0.20	JVV						5.11	0.40				
0.50-1.00	B								Soft to firm grey mottled orange brown sandy slightly gravelly CLAY. Gravel is fine to medium angular to subangular flint (TERRACE DEPOSITS).		TD	
0.50-1.00	JVV							(1.90)				
1.50-1.95	U	30 blows					3.21	2.30				
2.50	SPT	1,1,1 2,3,3 N=9(SPT)							Firm dark grey fissured CLAY with rare brown mottles (AMPTHILL CLAY).		AMP	
2.50-3.00	B											
3.50-3.95	U	50 blows										
3.95	D											
4.00-5.00	JVV											
4.50	SPT	1,2,2 3,3,3 N=11(SPT)						(4.70)				
4.50-5.00	B											
5.50-5.95	U	60 blows										
5.95	D											
6.50	SPT	1,3,3 4,5,5 N=17(SPT)										
6.50-7.00	B						-1.49	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA027

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Job No
12170626

Client
Gallagher

Date
17-07-07
17-07-07

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	DF	E 540920.405 N 267477.468	5.579

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.00-0.50	B								Grass over firm brown slightly gravelly sandy clay TOPSOIL. Gravel is angular to subrounded fine mixed lithology including flint.		TPS	
0.15-0.15	JVV						5.08	(0.50)				
0.50-1.00	B								Firm grey mottled brown and orange brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to medium flint (TERRACE DEPOSITS).		TD	
1.00-1.45	U	56 blows						(1.50)				
1.45	D											
2.00	SPT	1,1,2 2,2,3 N=9(SPT)					3.58	2.00	Stiff grey CLAY with rare brown mottles (AMPTHILL CLAY).		AMP	
2.00-2.50	B							(1.00)				
3.20-3.70	U	40 blows					2.58	3.00	Stiff dark grey fissured CLAY (AMPTHILL CLAY).		AMP	
3.90-4.40	U	50 blows										
4.40	SPT	1,1,2 2,2,3 N=9(SPT)										
4.40-4.90	B							(4.00)	5.00 Rare fine selenite crystals.		AMP	
6.50-6.95	U	65 blows										
6.95	D						-1.42	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					
Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.											



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BOREHOLE LOG

Hole No.
BHA028

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Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**10-07-07
10-07-07**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

CW

E 540348.459
N 267177.812

8.219

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.20-0.70	B						7.47	0.75	Grass over dark brown slightly gravelly clayey sand TOPSOIL with rare rootlets. Gravel is angular to rounded fine flint.		TPS	
0.70-1.40	B		0				6.82	1.40	Medium dense yellow brown slightly clayey gravelly SAND. Gravel is angular to rounded fine flint. Sand is fine to coarse (TERRACE DEPOSITS).		TD	
0.75-1.40	JJV	1,3,2										
1.00	SPT	2,3,3										
1.40-1.80	B						6.02	2.20	Medium dense yellow brown slightly clayey SAND with rare pockets of light grey very sandy silt (TERRACE DEPOSITS).		TD	
1.80-2.00	B		0									
1.80-2.00	JJV	1,2,1										
2.00	SPT	3,4,3										
2.20-2.60	B								Medium dense grey brown thinly laminated clayey SAND and soft SILT (TERRACE DEPOSITS).		TD	
3.00	SPT	1,2,2										
3.00-3.50	B								4.00 mbgl, 1. bands becoming gravelly. Gravel is fine angular to rounded flint. 2. some black staining in silt bands.		TD	
4.00	SPT	2,2,1										
4.00-4.50	B											
4.00-4.50	SPT	1,2,3										
5.00-5.50	B						3.22	5.00	Grey slightly clayey SAND and GRAVEL. Gravel is angular to rounded fine flint (TERRACE DEPOSITS).		TD	
6.00	SPT	2,1,3							Stiff dark grey CLAY (AMPTHILL CLAY).		AMP	
6.00-6.50	B						2.52	5.70				
6.00-6.50	SPT	4,5,5										
6.00-6.50	SPT	N=17(SPT)					1.22	7.00				

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						10-07-07		1.40			
Chiselling						Water Added					
From	To	Hours	Tool	From	To	General Remarks					
						Damp from 1.4m.					

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA029

Project
Northstowe

Sheet
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Job No
12170626

Client
Gallagher

Date
**12-09-07
13-09-07**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	LF	E 540076.606 N 267244.587	8.683

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.00-0.20	BJJJV						8.38	0.30	Grass over dark brown slightly gravelly fine sand TOPSOIL. Gravel is angular to subangular fine flint.		TPS	
0.50	D						7.88	(0.50) 0.80	Brown slightly gravelly fine to medium SAND. Gravel is angular to subangular fine flint (TERRACE DEPOSITS).		TD	
0.80-1.00	BJJJV								Orange brown gravelly fine to coarse SAND. Gravel is angular to subrounded fine to medium flint and chalk. Becoming light brown from 1.1m and very gravelly from 2m (TERRACE DEPOSITS).		TD	
1.00	SPT	5,10,9 9,10,12 N=40/ 0.26(CPT)					(1.50)					
1.00-1.50	B											
1.00-1.45	D											
1.00-1.50	B											
1.00-1.45	D						6.38	2.30				
2.00	SPT	1,2,4 5,11,12 N=32(CPT)							Light brown very sandy angular to subrounded fine to medium flint and chalk GRAVEL. Rare cobbles of flint at base (TERRACE DEPOSITS).		TD	
2.00-2.50	B											
2.00-2.45	D											
2.00-2.50	B											
2.00-2.45	D											
2.30-2.50	JJJV											
3.00-3.50	B											
4.00-4.50	B						(4.30)					
5.00-5.50	B											
6.00-6.50	B											
6.70	SPT	3,3,3 5,5,7 N=20(SPT)					2.08	6.60	Probably moderately strong grey SILTSTONE (KIMMERIDGE CLAY).		AMP	
6.70	D						1.98	6.70				
6.70-7.15	D						1.73	6.95	Stiff blue dark grey CLAY (KIMMERIDGE CLAY).		AMP	

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling			Water Added			General Remarks Unable to determine groundwater strike depth.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					
Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.											



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BOREHOLE LOG

Hole No.
BHA030

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Northstowe

Sheet
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Job No
12170626

Client
Gallagher

Date
**16-07-07
16-07-07**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	JM	E 539954.244 N 267133.289	8.298

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.00-0.30	B								MADE GROUND: grass and vegetation over brown slightly gravelly sand topsoil. Gravel is angular fine flint and brick.		MG	
0.15-0.15	JVV						7.70	0.60	0.10 mbgl, rare charcoal.			
0.50-1.00	B								Orange brown to brown very sandy GRAVEL. Gravel is angular to subrounded fine to medium flint (TERRACE DEPOSITS).		TD	
1.00	SPT	5,7,12 14,14,15 N=55(SPT)					7.30	1.00	Dense to very dense brown sandy GRAVEL. Gravel is angular to subrounded fine to coarse flint of mixed lithology (TERRACE DEPOSITS).			
1.50-1.50	JVV											
1.50-1.95	U	30 blows										
2.00	SPT	6,11,21 20,9 N=50/ 0.185(SPT)									TD	
2.50-3.00	B							(3.20)				
3.00	SPT	4,9,16 21,13 N=50/ 0.21(SPT)										
3.50-3.95	U	50 blows										
3.95	D								4.00 mbgl, becoming silty.			
4.00	SPT	2,2,3 4,4,3 N=14(SPT)					4.10	4.20	Firm grey fine sandy SILT (TERRACE DEPOSITS).			
4.50-5.00	B											
5.00	SPT	0,1,2 3,3,3 N=11(SPT)						(1.90)	5.00 mbgl, becoming pale grey and slightly sandy, slightly gravelly. Gravel is fine subangular/subrounded flint.		TD	
5.50-5.95	U	60 blows										
5.95	D						2.20	6.10	Stiff dark grey fissured CLAY with rare fossils (AMPTHILL CLAY).		AMP	
6.50	SPT	1,2,3 4,6,6 N=19(SPT)						(0.90)				
6.50-7.00	B						1.30	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						16-07-07		1.00			
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						No groundwater encountered.					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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BOREHOLE LOG

Hole No.
BHA031

Project
Northstowe

Sheet
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Job No
12170626

Client
Gallagher

Date
13-07-07
13-07-07

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	CW	E 539955.059 N 266993.024	8.359

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PIV (ppmV)	HSV (kNm ²)	P Pen (kNm ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.20-0.80	B		0						Grass over dark brown slightly clayey slightly gravelly SAND with rare rootlets. Gravel is to rounded fine angular flint. Sand is fine to coarse (TERRACE DEPOSITS).		TD	
0.20-0.80	JJV							(1.10)				
1.00	SPT	3,8,11 12,10,6 N=39(SPT)				↓	7.26	1.10	Dense yellow brown slightly clayey SAND and GRAVEL. Gravel is angular to rounded fine flint. Sand is fine to coarse. One band of yellow brown gravelly silt 0.2m thick at 2.3m. Gravel is angular to rounded fine flint (TERRACE DEPOSITS).		TD	
1.10-1.60	B							(1.70)				
2.00	SPT	2,3,3 4,3,4 N=14(CPT)	0						2.30 - 2.80 mbgl, 20cm thick bands of yellow brown gravelly SILT. Gravel is fine angular to rounded flint.		TD	
2.00-2.50	JJV						5.56	2.80				
3.00	SPT	3,4,5 6,5,4 N=20(CPT)	0					(0.90)	Soft to firm light grey slightly sandy slightly gravelly SILT. Gravel is fine rarely medium angular to rounded flint (TERRACE DEPOSITS).		TD	
3.00-3.50	JJV						4.66	3.70				
4.00	SPT	2,2,4 8,14,15 N=41(CPT)						(0.80)	Dense yellow orange and brown slightly clayey slightly sandy GRAVEL. Sand is medium to coarse. Gravel is angular to rounded fine to medium flint (TERRACE DEPOSITS).		TD	
4.00	JJV						3.86	4.50				
5.00	SPT	(CPT)						(1.00)	Yellow brown slightly clayey SAND and GRAVEL. Gravel is angular to rounded fine to medium flint. Sand is medium to coarse (TERRACE DEPOSITS).		TD	
5.50-6.00	B						2.86	5.50				
6.10-6.60	B							(0.60)	Yellow brown slightly clayey very gravelly SAND. Gravel is angular to rounded fine to medium flint. Sand is fine to coarse (TERRACE DEPOSITS).		TD	
6.10-6.60	JJV						2.26	6.10				
								(0.90)	Stiff to firm dark grey fissured and very thinly laminated CLAY (AMPTHILL CLAY).		AMP	
							1.36	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT _16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						13-07-07		1.10			
Chiselling			Water Added			General Remarks No groundwater encountered. Sands blowing from 5m bgl.					
From	To	Hours	Tool	From	To						
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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BOREHOLE LOG

Hole No.
BHA032

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**11-07-07
11-07-07**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

CW

E 540171.752
N 267031.989

9.318

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.20-0.70	B							(1.20)	Grass over dark brown slightly clayey gravelly sand TOPSOIL with frequent rootlets. Gravel is angular to rounded fine flint. (possibly reworked in part).		TPS	
1.00	SPT	1,4,4 10,11,10 N=35(SPT)	0			↓	8.12	1.20				
1.20-1.60	B								Yellow brown clayey SAND and GRAVEL. Gravel is angular to rounded fine flint (TERRACE DEPOSITS).		TD	
1.20-1.60	JVV											
2.00	SPT	4,8,10 10,11,13 N=44(SPT)							2.00 mbgl, material becoming very wet.			
3.00	SPT	6,19,30 20 N=50/ 0.115(SPT)	0						3.00 mbgl, becoming slightly clayey.			
3.00-3.50	JVV											
4.00-4.50	B							(5.50)			TD	
4.60	SPT	8,9,11 12,22,5 N=50/ 0.232(CPT)							4.60 mbgl, grave becomes fine medium with occasional coarse gravel.			
							2.62	6.70				
							2.32	7.00	Stiff dark grey fissured and very thinly laminated CLAY (AMPTHILL CLAY).		AMP	

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						11-07-07		1.20			
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						Sands blowing from 4m bgl.					

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHA033

Project
Northstowe

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Job No
12170626

Client
Gallagher


Date
11-07-07
11-07-07





Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	CW	E 540309.289 N 266987.942	8.962

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.20-0.70	B		0						Grass over dark brown slightly clayey gravelly sand TOPSOIL with frequent rootlets. Gravel is angular to rounded fine flint.		TPS	
0.20-0.70	JJV						8.26	0.70				
1.00	SPT	3,5,6 9,10,10 N=35(CPT)				↓			Dense yellow brown slightly clayey SAND and GRAVEL. Gravel is angular to rounded fine flint. Sand is fine to coarse (TERRACE DEPOSITS).			
1.00-1.50	B											
1.50-2.00	B											
2.00	SPT	3,4,8 8,8,13 N=37(CPT)	0									
2.00-2.50	B											
2.00-2.50	JJV											
3.00	SPT	4,5,8 11,14,11 N=44(CPT)										
3.00-3.50	B							(6.00)			TD	
4.00	SPT	4,6,9 11,11,8 N=39(SPT)							4.00 mbgl, gravel becomes fine to medium.			
4.00-4.50	B											
5.00	SPT	1,3,7 7,6,6 N=26(SPT)							5.00 mbgl, becoming grey brown. 5.00 - 5.20 mbgl, band of light grey SILT.			
5.00-5.50	B											
							2.26	6.70				
							1.96	7.00	Stiff dark grey fissured and very thinly laminated CLAY with rare fossils (Belemnites) (AMPTHILL CLAY).		AMP	

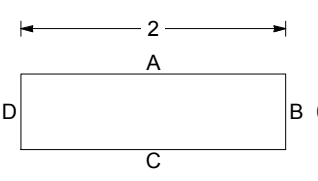
08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11


Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						11-07-07		1.40			
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks Standing water level after 14 hours is 1.4m.					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



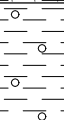
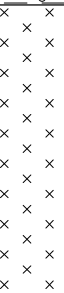
 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPA001	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 21-11-05	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By JMC	Co-Ordinates (OS) E 539755.637 N 267613.149	Ground Level (m AOD) 7.990

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.20	JJVV					7.69	(0.30) 0.30	Grass over dark brown very sandy clay TOPSOIL with rare roots. Gravel is fine to coarse angular to subrounded flint.		TPS
0.50	JJVB					6.99	(0.70) 1.00	Moderately compact orange brown sandy GRAVEL with rare roots to 0.7m and rare clay. Gravel is fine to coarse angular to subrounded flint (TERRACE DEPOSITS).		TD
						6.69	(0.30) 1.30	Moderately compact light brown slightly gravelly fine to medium SAND. Gravel is fine to medium subangular to subrounded flint (TERRACE DEPOSITS).		TD
1.50	JJVB					5.99	(0.70) 2.00	Moderately compact light brown slightly sandy GRAVEL. Gravel is fine to coarse angular to subrounded flint (TERRACE DEPOSITS).		TD

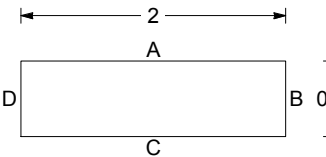
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability: Unstable below 0.8m	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	General Remarks Pit walls unstable below 0.8m. Groundwater encountered at 1.4m.						
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							



 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA002
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-11-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By JMC	Co-Ordinates (OS) E 539815.818 N 267591.923	Ground Level (m AOD) 8.060

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.80	JJJVB					7.86	0.20	Grass over dark brown very sandy clay TOPSOIL with rare roots. Gravel is fine to coarse angular to subrounded flint.		TPS
							(1.10)	Moderately compact orange brown slightly clayey slightly gravelly fine to coarse SAND with rare light brown and light grey pockets and bands of sand. Gravel is fine to medium angular to subrounded flint (TERRACE DEPOSITS).		TD
						6.76	1.30	Firm grey sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded flint (TERRACE DEPOSITS).		TD
						6.26	1.80	Firm dark grey SILT with rare roots and root channels (TERRACE DEPOSITS).		TD
2.80	JJ					5.06	3.00			

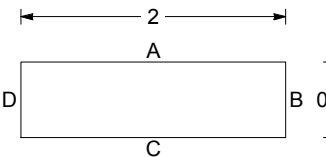
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Pit walls stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


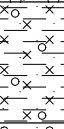

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA003
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-11-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By JMC	Co-Ordinates (OS) E 539749.590 N 267550.056	Ground Level (m AOD) 7.970

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.25	JJV					7.67	0.30	Grass over dark brown slightly clayey slightly gravelly sand TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS
0.80	JJV							Moderately compact orange brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded flint. Becoming light brown and white from 0.7m. MADE GROUND: On the east and north faces only between 0.8m and 1.4m comprising soft grey sandy organic clay with rare fine gravel with one metal rod (TERRACE DEPOSITS).		TD
1.00	JJV						(1.50)			
						6.17	1.80			

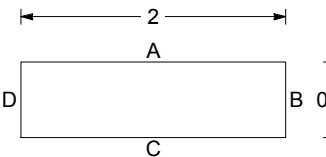
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability: Unstable	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	General Remarks Pit walls unstable. Groundwater encountered at 1.4m.						
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							




 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA003A
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-11-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By JMC	Co-Ordinates (OS) E 539749.590 N 267550.056	Ground Level (m AOD) 7.970

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.70	JJV					7.67	(0.30) 0.30	Grass over dark brown slightly clayey slightly gravelly sand TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS
						7.17	(0.50) 0.80	Firm brown slightly gravelly sandy CLAY. Gravel is fine to coarse angular to subrounded flint. Base of strata lower on south and west faces extending to 1m (TERRACE DEPOSITS).		TD
						6.47	(0.70) 1.50	Moderately compact orange brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded flint (TERRACE DEPOSITS).		TD

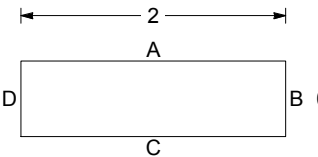
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Pit walls stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							




 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA004
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-11-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By JMC	Co-Ordinates (OS) E 539799.589 N 267520.851	Ground Level (m AOD) 8.070

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.50	JJJV					7.77	(0.30) 0.30	Grass over dark brown slightly clayey slightly gravelly sand TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS
						7.07	(0.70) 1.00	Moderately compact brown clayey slightly gravelly fine to medium SAND. Gravel is fine to coarse subangular to subrounded flint (TERRACE DEPOSITS).		TD
1.50	JJJVB					6.07	(1.00) 2.00	Moderately compact light brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded flint. With rare bands of very sandy clay from 1.7m (TERRACE DEPOSITS).		TD

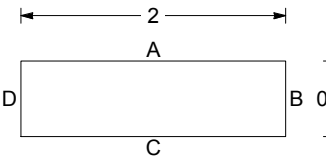
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability: Unstable below 1m	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	General Remarks Pit walls unstable below 1.0m. No groundwater encountered.						
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							



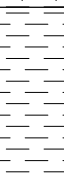
 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA005
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-11-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By JMC	Co-Ordinates (OS) E 539855.635 N 267543.001	Ground Level (m AOD) 8.010

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.10	JJV					7.71	(0.30) 0.30	Grass over dark brown slightly clayey slightly gravelly sand TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS
						7.31	(0.40) 0.70	Moderately compact orange brown slightly clayey gravelly medium to coarse SAND with rare roots. Gravel is fine to coarse subangular to subrounded flint (TERRACE DEPOSITS).		TD
0.80	JJV						(1.10)	Moderately compact light brown and white sandy GRAVEL. Gravel is fine to coarse flint. Band of sand present at 1.0m. Rare orange brown bands of gravel present below 1.3m (TERRACE DEPOSITS).		TD
						6.21	1.80			

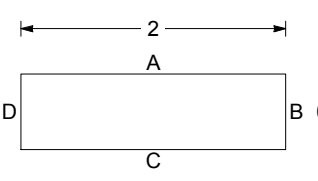
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Unstable below 0.5m	General Remarks Pit walls unstable below 0.5m. Groundwater encountered at 1.0m.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


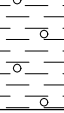
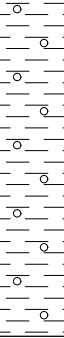
 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA019
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 25-09-06
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 540974.591 N 267173.070	Ground Level (m AOD) 5.996

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
						5.90	0.10	Grass over dark brown slightly clayey sandy TOPSOIL. Sand is fine to medium.		TPS
0.20	JJJVV						(0.40)	Very stiff brown slightly gravelly very sandy CLAY. Gravel is fine to coarse angular to subangular flint (TERRACE DEPOSITS).		TD
0.50	B					5.50	0.50	Very stiff to hard grey mottled brown CLAY (AMPTHILL CLAY).		AMP
1.20	JJV	>260, >260, >260					(1.40)			
			212, 214, 192			4.10	1.90			

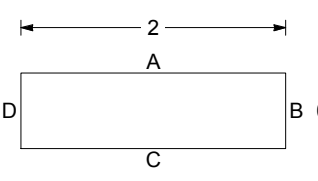
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	General Remarks Sides stable to base. No groundwater encountered.						
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							





 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA020
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 25-09-06
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 540906.966 N 267300.397	Ground Level (m AOD) 5.703

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P.Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.05	JJJJV					5.60	0.10	Grass over dark brown slightly clayey sandy TOPSOIL. Sand is fine to medium.		TPS	
							(0.50)	Very stiff brown slightly gravelly CLAY. Gravel is fine to medium angular to subangular flint (TERRACE DEPOSITS).		TD	
			138, 134, 104			5.10	0.60	Very stiff grey mottled orange brown slightly gravelly CLAY. Gravel is fine angular to subangular flint (AMPTHILL CLAY).		AMP	
			172, 132, 152				(1.40)				
						3.70	2.00				

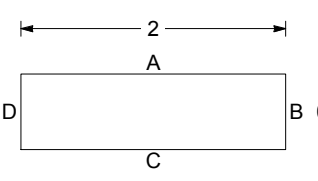
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability:	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	Stable	General Remarks Sides stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							




 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA021
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 25-09-06	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 540999.707 N 267408.953	Ground Level (m AOD) 5.481

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.60	JJJV					5.38	0.10	Grass over dark brown clayey sand TOPSOIL. Sand is fine to medium.		TPS
							(0.40)	Stiff to very stiff brown sandy slightly gravelly CLAY. Gravel is fine angular to subangular flint (TERRACE DEPOSITS).		TD
						4.98	0.50	Moderately compact orange and light grey slightly clayey fine to medium SAND. Stiff to very stiff clay from 0.6m on northern face only (TERRACE DEPOSITS).		TD
						4.48	1.00	Stiff to very stiff grey mottled orange brown CLAY (AMPTHILL CLAY).		AMP
1.60	JJVVB		144, 144, 130			3.68	1.80			

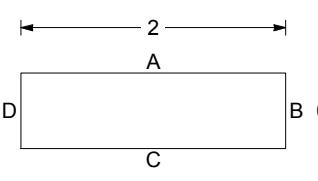
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Sides stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							




 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA022
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 25-09-06
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 541082.551 N 267300.996	Ground Level (m AOD) 5.646

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.50	JJJVB		118, 164, 156			5.55	0.10	Grass over dark brown clayey sand TOPSOIL. Sand is fine to medium.		TPS
							(0.70)	Stiff to very stiff brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium angular to subangular flint (TERRACE DEPOSITS).		TD
						4.85	0.80	Very stiff grey mottled brown CLAY (AMPTHILL CLAY).		AMP
			176, 180, 214			4.05	1.60			

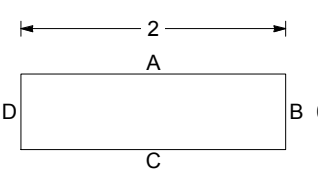
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Sides stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							




 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA023
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 25-09-06
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 541202.576 N 267402.720	Ground Level (m AOD) 5.548

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.30	JJJV		92, 86, 94			5.35	0.20	Grass over dark brown very sandy clay TOPSOIL.		TPS
						4.95	0.60	Stiff orange brown slightly gravelly sandy CLAY. Gravel is fine angular to subangular flint (TERRACE DEPOSITS).		TD
1.20	JJVVB		148, 146, 156			(0.90)		Very stiff grey mottled orange/brown CLAY (AMPTHILL CLAY).		AMP
						4.05	1.50			

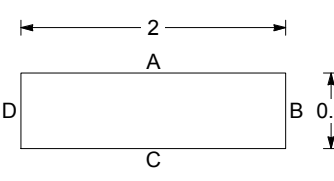
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Sides stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA024
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 25-09-06
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 541097.863 N 267502.525	Ground Level (m AOD) 5.350

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.60	JJVVB		134, 130, 128			5.25	0.10	Grass over dark brown sandy clay TOPSOIL.		TPS	
							(0.40)	Stiff to very stiff brown slightly sandy CLAY (TERRACE DEPOSITS).		TD	
						4.85	0.50	Stiff to very stiff grey mottled orange/brown slightly sandy CLAY (AMPHILL CLAY).		AMP	
	(1.50)										
			144, 160, 142			3.35	2.00				
			120, 132, 148								

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	General Remarks Sides stable to base. No groundwater encountered.						
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							



WSP Environment & Energy
One Queens Drive
Birmingham, B5 4PJ
Telephone: 0121 352 4700
Fax:

TRIAL PIT LOG

Hole No.
TPA025

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
22-06-07

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

JCB 3CX

LF


E 540315.588
N 267888.867


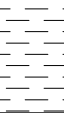

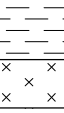
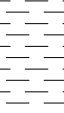
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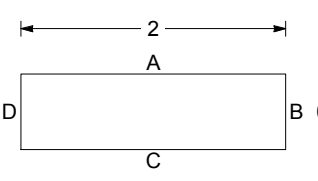
SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.20-0.30	JJVV					7.96	(0.25) 0.25	Grass over firm dark brown sandy slightly gravelly clay TOPSOIL.		TPS
						7.71	(0.25) 0.50	Stiff orange brown sandy CLAY (AMPTHILL CLAY).		AMP
0.70 0.80-1.00	JJVV B		114, 108, 108					Stiff grey mottled brown CLAY with medium to coarse gravel size pockets of white silt. Rare boulder sized pockets of brown medium sand from 0.8 - 1m (AMPTHILL CLAY).		AMP
1.10	JJV		120, 126, 130				(1.40)			
			122, 130, 130			6.31	1.90			
						6.11	2.10	Very weak to extremely weak light brown mottled grey gravelly SILTSTONE. Recovered as gravel coarse to cobble size blocks in silty matrix. Band dips north at shallow angle (AMPTHILL CLAY).		AMP
2.50	B						(1.60)	Stiff fissured grey mottled brown CLAY. Sub-horizontal extremely closely spaced tight fissures, with closely to very closely spaced sub-vertical, slightly open fissures with rootlets on fissure surfaces. Sand size selenite and shell bands at 3.5m (AMPTHILL CLAY).		AMP
3.60 3.70	B JJVV					4.51	3.70			

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length	2.00m	Shoring/Support: None	Water Strikes					
	Width	0.60m		Stability:	Date	Time	Strike	Minutes	Standing
	Orientation	degrees from north	Stable	General Remarks Sides unstable from ground level. Very fast groundwater ingress from 0.9m rising to 0.55m after 1hr.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								


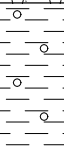
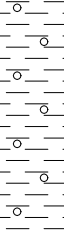
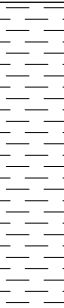
 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPA027	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 22-06-07	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By MO	Co-Ordinates (OS) E 540394.013 N 267820.190	Ground Level (m AOD) 7.569

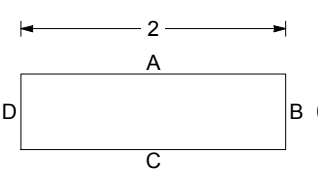
SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
						7.27	(0.30) 0.30	Grass over dark brown slightly gravelly clay TOPSOIL.		TPS
0.60	JJJVV		120, 122, 130			6.77	(0.50) 0.80	Stiff yellow brown mottled orange brown CLAY (AMPTHILL CLAY).		AMP
1.20	B		104, 108, 116			5.97	(0.80) 1.60	Stiff grey mottled brown CLAY with gravel sized spots of white silt decreasing with depth. (AMPTHILL CLAY).		AMP
1.80	JJJVV					5.77	1.80	Light grey mottled yellow SILT with rare very weak siltstone gravel (AMPTHILL CLAY).		AMP
2.00	B						(1.90)	Stiff fissured blue grey mottled brown CLAY. Extremely closely spaced sub-horizontal fissures closely to very closely spaced fissures with networks of brown decayed rootlets. At 3.2m thin sheety bands of yellow stained oxidised pyrite. Sand sized selenite on fissured surfaces and adjacent to fissures (AMPTHILL CLAY).		AMP
2.90	JJVV					3.87	3.70			

	Length 2.00m	Shoring/Support: None	Water Strikes						
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	General Remarks Sides stable to base. No groundwater encountered.							
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								


08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11






 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA028
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-06-07
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By MO	Co-Ordinates (OS) E 539973.789 N 267655.303	Ground Level (m AOD) 8.143

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
						7.84	(0.30) 0.30	Grass over brown slightly gravelly sandy clay TOPSOIL.		TPS	
0.50	JJV						(0.60)	Firm orange brown mottled grey slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse flint (TERRACE DEPOSITS).		TD	
0.70-0.80	BJJV					7.24	0.90				
1.40	JJV					6.24	(1.00) 1.90	Firm grey mottled brown gravelly CLAY. Gravel is subangular to subrounded, fine to coarse flint and chalk. Coarse gravel pockets of orange brown sandy gravel at 1.2m - 1.5m (TERRACE DEPOSITS).		TD	
2.20	JJV		102, 105, 108				(1.30)	Stiff grey mottled brown CLAY with shell fragments. Extremely closely to closely spaced fissures with rootlets on surfaces. Shell band with ammonite fragments, belemnites and many shell fragments. Shell fragments white to pink (TERRACE DEPOSITS).		TD	
3.00	B		128, 130, 130			4.94	3.20				

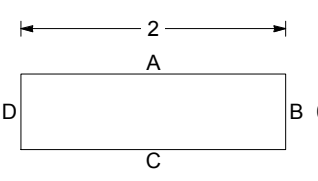
	Length 2.00m	Shoring/Support: None	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Sides stable to base. Slight seepage from the drain at 0.8m.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11



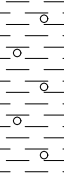
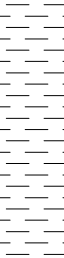

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA029
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-06-07
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By MO	Co-Ordinates (OS) E 540103.650 N 267713.965	Ground Level (m AOD) 8.292

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.40	JJVV				↓ Water	7.89	0.40	Grass over brown sandy gravel TOPSOIL.		TD	
0.60-0.80	BB					7.19	1.10	Moderately compact yellow brown and white sandy GRAVEL (TERRACE DEPOSITS).		TD	
						6.79	1.50	Stiff light grey mottled brown gravelly CLAY with large lenses of brown sandy gravel. Gravel is subrounded to angular chalk and flint (TERRACE DEPOSITS).		TD	
1.60	JVV					6.29	2.00	Firm light grey to grey mottled yellow brown SILT/CLAY (TERRACE DEPOSITS).		TD	
2.20	B		90, 90, 94				(1.20)	Stiff extremely to very closely fissured dark grey CLAY with brown decayed rootlet traces on fissure surfaces and shell fragments (AMPTHILL CLAY).		AMP	
3.20	JVV		102, 112, 96			5.09	3.20				

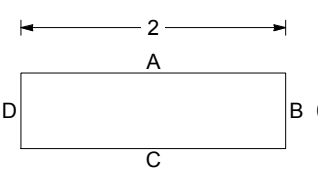
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support: None	Water Strikes				
	Width 0.60m		Date 21-06-07	Time	Strike 1.00	Minutes	Standing
	Orientation degrees from north	Stability: Stable	General Remarks Minor seepage at 1m and from sand and gravel pockets.				
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.						







 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPA030	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 22-06-07	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By MO	Co-Ordinates (OS) E 540241.171 N 267698.422	Ground Level (m AOD) 8.238

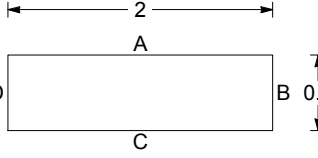
SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.20-0.60	JJJVV					7.74	0.50	Grass over stiff brown to orange brown gravelly clay TOPSOIL.		TD
						7.64	0.60	Orange brown sandy GRAVEL.		TD
0.60-1.00 0.70	B JJJVV						(0.90)	Stiff grey mottled brown and white slightly gravelly CLAY with lenses of brown silty sandy gravel between 0.85-1.3m. Gravel is coarse subrounded flint (TERRACE DEPOSITS).		TD
						6.84	1.40			
1.80	JJV		102, 112, 112				(1.10)	Stiff grey mottled brown CLAY. At 1.8m thin layer of black carbonaceous material (TERRACE DEPOSITS).		TD
			114, 120, 112			5.74	2.50			
2.60	B		>130, >130, >130				(0.60)	Stiff extremely closely to closely fissured blue grey mottled brown CLAY with sand sized selenite. Fissures are extremely closely spaced with rootlet traces on fissure faces (AMPTHILL CLAY).		AMP
3.10	JJV					5.14	3.10			

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support: None	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Sides stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							





 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPA031
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 22-06-07
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By MO	Co-Ordinates (OS) E 540306.503 N 267601.016	Ground Level (m AOD) 7.738

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.20-0.30	JJJVV		104, 114, 110			7.39	0.35	Grass over firm brown slightly gravelly clay TOPSOIL. Gravel is medium to coarse subangular flint. TOPSOIL		TD	
						7.24	0.50	Stiff orange brown CLAY (TERRACE DEPOSITS).		AMP	
						6.94	0.80	Stiff light grey mottled orange brown CLAY (TERRACE DEPOSITS).		AMP	
0.80	JJJVV		>130, >130, >130			6.44	1.30	Stiff light grey CLAY with medium to coarse gravel size pockets of white silty sand and rare pockets of orange gravelly sand. (AMPTHILL CLAY).		AMP	
1.50	BJJVV		130, 126, 126					Stiff fissured dark grey mottled brown CLAY with occasional shell fragments. From 2.9m becoming stiff friable fissured mottled yellow brown clay with sand size white selenite crystals (AMPTHILL CLAY).		AMP	
2.40	B						(2.20)	2.40 mbgl, becoming blue grey.		AMP	
3.40	B					4.24	3.50				

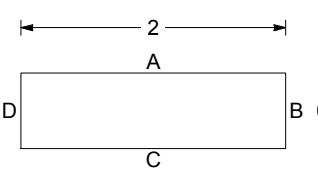
	Length 2.00m	Shoring/Support: None	Water Strikes							
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing	Remarks	
	Orientation degrees from north	General Remarks Sides stable to base. No groundwater encountered.								
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11






 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPA032	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 22-06-07	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By MO	Co-Ordinates (OS) E 540419.389 N 267693.298	Ground Level (m AOD) 6.698

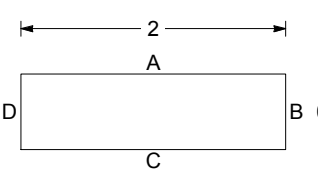
SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P.Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.50	BJJJVV					6.40	(0.30) 0.30	Grass over brown gravelly sand TOPSOIL.		TPS
						6.10	(0.30) 0.60	Firm to stiff fissured brown mottled grey slightly gravelly CLAY (TERRACE DEPOSITS).		TD
1.50 1.60	B JJJVV		100, 108, 100			5.50	(0.60) 1.20	Stiff grey mottled brown CLAY with medium to coarse gravel size pockets of white silt. Sub-horizontal listric shear surface at 1.2m. (AMPTHILL CLAY).		AMP
							(2.10)	Stiff grey mottled brown CLAY with white selenite crystals on sub-horizontal and listric shear surfaces. From 2.5m selenite on very closely to closely spaced sub-vertical fissures. From 2.8m much sand sized selenite adjacent to fissures, with rootlets on sub-vertical fissure surfaces. Sub-horizontal fissure extremely closely spaced (AMPTHILL CLAY).		AMP
2.50 2.70	B JJVV		>130, >130, >130			3.40	3.30			
3.30	B									

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

	Length 2.00m	Shoring/Support: None	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Sides stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


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	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-06-07
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By MO	Co-Ordinates (OS) E 539992.606 N 267592.995	Ground Level (m AOD) 7.414



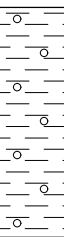
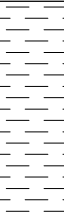

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kNm ²)	P Pen (kNm ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.30	JJJV					7.11	0.30	Grass over dark brown slightly gravelly sandy clay TOPSOIL. Gravel is subangular to subrounded fine to medium flint.		TPS
						6.91	0.50	Moderately compact firm brown sandy slightly gravelly CLAY (TERRACE DEPOSITS).		TD
						6.51	0.90	Moderately compact yellow brown silty sandy GRAVEL. Gravel is subangular to subrounded fine to medium flint (TERRACE DEPOSITS).		TD
						6.41	1.00	Firm grey mottled brown slightly gravelly CLAY (TERRACE DEPOSITS).		TD
1.60	BBJJVV					5.61	1.80	Yellow brown fine to medium subangular to subrounded flint GRAVEL (TERRACE DEPOSITS).		TD
						1.90	B			
3.00	B									
						4.00	JJV			

	Length	2.00m	Shoring/Support: None	Water Strikes					
	Width	0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing
	Orientation	degrees from north	21-06-07			0.90			
	Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							

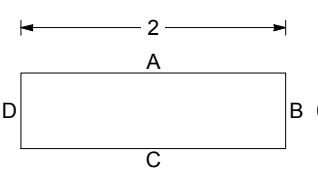
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

General Remarks
Minor seepage at 0.9 and at 1.8m.

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	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-06-07
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By MO	Co-Ordinates (OS) E 540238.070 N 267599.776	Ground Level (m AOD) 8.233

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.20-0.30	JJJV					7.98	(0.25) 0.25	Grass over brown slightly gravelly clayey TOPSOIL. Gravel is flint.		TPS	
						7.68	(0.30) 0.55	Firm orange brown gravelly CLAY. Gravel is fine to medium angular to subrounded flint.		TD	
0.70-0.80	JJV					6.73	(0.95) 1.50	Stiff light grey CLAY with gravel size white sandy pockets (TERRACE DEPOSITS).		TD	
1.80-1.90	JJV					5.83	(0.90) 2.40	Light grey friable mottled yellow to orange brown CLAY with pockets of light grey silt (AMPTHILL CLAY). 2.00 mbgl, becoming medium gravelly mottled yellow orange brown CLAY with extremely closely spaced fissures.		AMP	
2.60	B		>130, >130, >130			5.53	(0.30) 2.70	Stiff extremely closely to closely fissured blue grey mottled brown CLAY with sand sized selenite crystals. Root traces on fissures (AMPTHILL CLAY).		AMP	

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

	Length 2.00m	Shoring/Support: None	Water Strikes						
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	General Remarks Sides stable to base. No groundwater encountered.							
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								



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WINDOW SAMPLE LOG

Hole No.
WSA001

Project
Northstowe

Sheet
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Job No
12170626

Client
Gallagher

Date
24-11-05

Contractor / Driller

Method/Plant Used
Archway Competetor Rig

Logged By
JMC

Co-Ordinates (OS)
E 539819.046
N 267027.331

Ground Level (m AOD)
7.880

SAMPLES & TESTS						STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.10-0.40	JJV					7.48	0.40	MADE GROUND: Grass over reworked dark brown slightly clayey sandy topsoil with rare fine to medium subangular to subrounded gravel.		MG	
						7.33	0.55	Firm brown sandy slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded flint (TERRACE DEPOSITS).		TD	
						7.13	0.75	Brown slightly clayey sandy GRAVEL. Gravel is fine to coarse angular to subrounded flint (TERRACE DEPOSITS).		TD	
0.80-1.00	JJV						(0.70)	Firm orange brown mottled grey sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded flint (TERRACE DEPOSITS).		TD	
						6.43	1.45	Orange brown slightly gravelly SAND. Gravel is fine to coarse subangular to subrounded flint (TERRACE DEPOSITS).		TD	
						6.08	1.80				
1.80-2.00	JJV						(1.50)	Grey silty fine SAND. Becoming light grey with rare fine to coarse subangular to subrounded gravel flint (TERRACE DEPOSITS).		TD	
						4.58	3.30				
						4.43	3.45	Light grey gravelly SAND. Gravel is fine to medium subangular to subrounded flint and sandstone (TERRACE DEPOSITS).		TD	
							(0.55)	Light grey sandy SILT (AMPTHILL CLAY).		AMP	
						3.88	4.00				

08 WSP WINDOW SAMPLE LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						24-11-05		1.45	20	1.20	
						General Remarks Groundwater encountered at 1.45m. Standing at 1.2m upon completion.					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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WINDOW SAMPLE LOG

Hole No.
WSA002

Project
Northstowe

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Job No
12170626

Client
Gallagher

Date
24-11-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Archway Competetor Rig

JMC

E 540018.093
N 267316.192

8.870

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.30-0.50	JJV						8.67	0.20	Grass over dark brown sandy slightly gravelly TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS	
							8.17	0.70	Dark brown slightly gravelly slightly clayey SAND. Gravel is fine to coarse angular to subrounded gravel flint. No gravel below 0.6m (TERRACE DEPOSITS)		TD	
							7.87	1.00	Orange brown fine to medium SAND (TERRACE DEPOSITS).		TD	
							7.47	1.40	Brown sandy GRAVEL. Gravel is fine to coarse angular to subangular flint (TERRACE DEPOSITS).		TD	
							7.27	1.60	Brown fine to medium SAND (TERRACE DEPOSITS).		TD	
1.80-1.00	JJV							Brown sandy GRAVEL. Gravel is fine to coarse angular to subangular flint (TERRACE DEPOSITS).		TD		
2.40-2.70	JJV											
							4.87	4.00				

08 WSP WINDOW SAMPLE LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						24-11-05		2.00	20	1.80	
General Remarks Groundwater encountered at 2.0m. Standing at 1.8m.											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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WINDOW SAMPLE LOG

Hole No.
WSA003

Project
 Northstowe

Sheet
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Job No
 12170626

Client
 Gallagher

Date
 24-11-05

Contractor / Driller

Method/Plant Used
 Archway Competetor Rig

Logged By
 JMC

Co-Ordinates (OS)
 E 539978.937
 N 267566.646

Ground Level (m AOD)
 8.380

SAMPLES & TESTS						STRATA						Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology		
0.30-0.60	JJV	.				8.08	(0.30) 0.30	Grass onto dark brown sandy slightly gravelly TOPSOIL. Gravel is fine to medium subangular to subrounded flint.		TPS		
						7.78	(0.30) 0.60	Firm brown sandy slightly gravelly CLAY with rare roots. Gravel is fine to medium angular to subrounded flint (TERRACE DEPOSITS).		TD		
1.30-1.50	JJV	.				(2.20)		Brown slightly clayey gravelly SAND. Gravel is fine to medium angular to subrounded flint. Orange brown fine sand between 1.0m and 1.15m. Band of Sandy fine to medium subangular to subrounded gravel flint at 1.15m. Clayey band between 1.7m to 1.75m. From 2.1m Becoming fine to coarse gravel with rare clayey bands (TERRACE DEPOSITS).		TD		
2.45-2.65	JJV	.				5.58	2.80			AMP		
						5.38	3.00	Dark grey slightly sandy SILT (AMPTHILL CLAY).		AMP		



Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
								3.00			
						General Remarks Groundwater encountered at 3.0m.					
Scale 1:37.5			Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								

08 WSP WINDOW SAMPLE LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11



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WINDOW SAMPLE LOG

Hole No.
WSA004

Project
Northstowe

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Job No
12170626

Client
Gallagher

Date
24-11-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Archway Competetor Rig

JMC

E 540243.019
N 267393.095

8.540

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.30-0.40	JJV						8.04	0.50	Grass over dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS	
							7.69	0.85	Orange brown and brown sandy GRAVEL. Gravel is fine to medium subangular to subrounded flint (TERRACE DEPOSITS).		TD	
1.40-1.50	JJV						6.59	1.95	Firm grey mottled brown sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to rounded flint chalk and siltstone. Becoming grey slightly sandy and slightly gravelly from 1.7m (TERRACE DEPOSITS).		TD	
							6.29	2.25	Brown fine SAND. Becoming silty and more compact with depth (TERRACE DEPOSITS).		TD	
2.65-2.90	JJV						5.14	3.40	Grey slightly clayey gravelly SAND. Gravel is fine to coarse angular to subrounded flint sandstone and siltstone (TERRACE DEPOSITS).		TD	
							4.54	4.00	Stiff very closely fissured dark grey CLAY (AMPTHILL CLAY).		AMP	

Hole Diameter

Recovery

Water Strikes

Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
								1.95			
General Remarks Groundwater encountered at 1.95m.											

Scale 1:37.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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WINDOW SAMPLE LOG

Hole No.
WSA005

Project
 Northstowe

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Job No
 12170626

Client
 Gallagher

Date
 24-11-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Archway Competetor Rig

JMC

E 540385.090
 N 267242.871

7.610

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.50-0.60	JJV	.					7.26	0.35	Grass over dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subrounded gravel flint.		TPS	
							6.31	1.30	Firm grey and brown mottled slightly sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded flint (TERRACE DEPOSITS).		TD	
1.60-1.70	JJV	.					5.01	2.60	Stiff grey CLAY with roots (AMPTHILL CLAY).		AMP	
							4.56	3.05	Weak grey highly weathered SILTSTONE with rare bands of clay (AMPTHILL CLAY).		AMP	
3.50-3.70	JJV	.					3.61	4.00	Stiff blue grey CLAY with rare fossils (AMPTHILL CLAY).		AMP	

08 WSP WINDOW SAMPLE LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks No groundwater encountered.					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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WINDOW SAMPLE LOG

Hole No.
WSA006

Project
 Northstowe

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Job No
 12170626

Client
 Gallagher

Date
 24-11-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Archway Competetor Rig

JMC

E 540303.718
 N 267593.900

7.890

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.10-0.20	JJV						7.59	(0.30) 0.30	Grass over dark brown sandy clay TOPSOIL.		TPS	
							7.09	(0.50) 0.80	Firm brown sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded flint (TERRACE DEPOSITS).		TD	
1.50-1.60	JJV						6.09	(1.00) 1.80	Stiff grey mottled brown slightly gravelly CLAY with rare roots. Gravel is fine to medium subangular to subrounded flint. Rare white selenite crystals present from 1.2m (AMPTHILL REWORKED).		AMP	
							5.89	2.00	Weak grey SILTSTONE (AMPTHILL CLAY).		AMP	
2.50-2.70	JJV						3.89	(2.00) 4.00	Stiff very closely fissured grey CLAY with rare roots and white selenite crystals and fossils (AMPTHILL CLAY).		AMP	

Hole Diameter

Recovery

Water Strikes

Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
General Remarks No groundwater encountered.											

Scale 1:37.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.

08 WSP WINDOW SAMPLE LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11



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WINDOW SAMPLE LOG

Hole No.
WSA007

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
24-11-05

Contractor / Driller

Method/Plant Used
Archway Competetor Rig

Logged By
JMC

Co-Ordinates (OS)
E 540492.032
N 267595.322

Ground Level (m AOD)
6.180

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
							6.08	0.10	Grass over dark brown sandy clay TOPSOIL.		TPS	
0.50-0.60	JJV	.						(0.80)	Firm brown sandy slightly gravelly CLAY with rare roots. Gravel is fine to medium angular to rounded cobbles of flint (TERRACE DEPOSITS).		TD	
							5.28	0.90				
1.50-1.60	JJV	.						(3.10)	Firm to stiff grey mottled brown locally white slightly gravelly CLAY. Gravel is fine to medium angular to subrounded flint. Rare white selenite crystals present below 1.2m. Becoming dark grey with brown mottling and crystals below 2.5m (AMPTHILL CLAY).		AMP	
3.50-3.70	JJV	.										
							2.18	4.00				

08 WSP WINDOW SAMPLE LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks No groundwater encountered.					
Scale 1:37.5			Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								



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WINDOW SAMPLE LOG

Hole No.
WSA008

Project
 Northstowe

Sheet
 1 of 1

Job No
 12170626

Client
 Gallagher

Date
 24-11-05

Contractor / Driller

Method/Plant Used
 Archway Competetor Rig

Logged By
 JMC

Co-Ordinates (OS)
 E 540959.976
 N 267604.559

Ground Level (m AOD)
 5.300

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.05-0.20	JJV	.					5.10	0.20	Grass over dark brown sandy clay TOPSOIL.		TPS	
							4.90	0.40	Firm dark brown sandy slightly gravelly CLAY with rare roots. Gravel is fine to coarse subangular to subrounded flint (TERRACE DEPOSITS).		TD	
0.80-1.00	JJV	.					(3.60)		Firm to stiff grey mottled orange brown and white slightly sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded flint. Becoming dark grey with rare white crystals from 1.1m. More selenite crystals present from 1.6m. Below 2.1m dark grey rare orange brown mottling with rare roots and fossils. No crystals below 2.1m (AMPTHILL CLAY).		AMP	
2.70-2.90	JJV	.					1.30	4.00				

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks No groundwater encountered.					

Scale 1:37.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.

08 WSP WINDOW SAMPLE LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11



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WINDOW SAMPLE LOG

Hole No.
WSA009

Project
 Northstowe

Sheet
 1 of 1

Job No
 12170626

Client
 Gallagher

Date
 24-11-05

Contractor / Driller

Method/Plant Used
 Archway Competetor Rig

Logged By
 JMC

Co-Ordinates (OS)
 E 540654.197
 N 267758.665

Ground Level (m AOD)
 5.810

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.40-0.50	JJV	.					5.46	(0.35) 0.35	Grass over dark brown sandy clay TOPSOIL.		TPS	
							5.11	(0.35) 0.70	Firm brown sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded flint (TERRACE DEPOSITS).		TD	
1.50-1.60	JJV	.					(3.30)		Stiff very closely fissured grey CLAY with rare roots and white crystals and fossils. Becoming mottled orange brown from 1.7m. With less mottling from 2.5m (AMPHILL CLAY).		AMP	
3.50-3.70	JJV	.					1.81	4.00				

08 WSP WINDOW SAMPLE LOG #NORTHSTOWE MASTER DEC 2011 GPJ WSPTEMPLATE1.03.GDT 16/12/11

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks No groundwater encountered.					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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BOREHOLE LOG

Hole No.
BHD001

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**08-09-05
08-09-05**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	LF	E 539196.664 N 265890.721	10.340

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.50-1.00	B D						9.84	(0.50) 0.50	Brown sandy clayey TOPSOIL.		TPS	
1.00-1.40	D U	31 blows					8.94	(0.90) 1.40	Firm yellow brown slightly gravelly sandy CLAY. Gravel is angular to subrounded fine flint (TERRACE DEPOSITS).		TD	
2.00-2.50	SPT BD D	3,3,2 1,2,2 N=7(S)						(1.80)	Soft becoming firm grey mottled orange brown CLAY with rare white selenite crystals (AMPTHILL CLAY).		AMP	
3.00-3.40	D U	39 blows					7.14	3.20	Firm thinly laminated grey CLAY with rare fine pyrite crystals. Becoming stiff at 5.0m. With ammonite fossils at 6.5m. Becoming firm below 6.5m (AMPTHILL CLAY).		AMP	
4.00-4.50	SPT BD D	3,3,4 3,3,4 N=14(S)						(3.80)				
5.00-5.40	D U	71 blows										
6.50-7.00	SPT BD D	3,4,4 5,4,4 N=17(S)					3.34	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHD002

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**08-09-05
08-09-05**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

LF

E 539032.897
N 265685.390

10.860

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.50-1.00	B D						10.36	(0.50) 0.50	Brown sandy clayey TOPSOIL.		TPS	
0.50-0.90	D								Firm brown very sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to medium chalk and flint (TERRACE DEPOSITS).		TD	
0.90-1.00	SPT	7,6.5 4,3.2 N=14(C)					(1.70)					
1.00-1.50	B D								Firm grey mottled orange brown CLAY. Becoming very stiff from 5.0m (AMPTHILL CLAY).		AMP	
1.50-2.00	SPT	5,3.4 3,4.3 N=14(C)					8.66	2.20				
2.00-2.20	D											
2.20-3.00	U	30 blows										
3.00-3.40	D											
3.40-4.00	SPT	7,4.3 4,5.4 N=16(S)										
4.00-4.50	BD D							(4.80)				
4.50-5.00	U	86 blows										
5.00-5.40	D											
5.40-6.00	D											
6.00-6.50	B D											
6.50-7.00	D							3.86				
7.00	D											

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11



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BOREHOLE LOG

Hole No.
BHD003

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
07-09-05
07-09-05

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	LF	E 539198.175 N 265704.087	10.850

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.40	D								Firm to stiff brown sandy slightly gravelly CLAY. Gravel is angular to subrounded fine flint (TERRACE DEPOSITS).		TD	
0.50-1.00	B						(1.40)					
0.80	D								Firm to stiff grey mottled orange brown slightly sandy slightly gravelly CLAY. Gravel is to subrounded fine flint (TERRACE DEPOSITS).		TD	
1.00	SPT	2,3,6 6,4,5 N=21(S)					9.45 1.40					
1.00	D								Stiff grey green mottled orange brown CLAY with rare selenite crystals. Becoming grey mottled orange brown from 4.0m (AMPTHILL CLAY).		AMP	
1.50	D						(1.20)					
2.00-2.40	U	43 blows							Stiff becoming very stiff grey CLAY (AMPTHILL CLAY)		AMP	
2.50	D						8.25 2.60					
3.00	SPT	3,3,5 5,6,6 N=22(S)							Stiff becoming very stiff grey CLAY (AMPTHILL CLAY)		AMP	
3.00-3.50	BD						(1.60)					
3.50	D								Stiff becoming very stiff grey CLAY (AMPTHILL CLAY)		AMP	
4.00-4.40	U	61 blows					6.65 4.20					
4.50	D								Stiff becoming very stiff grey CLAY (AMPTHILL CLAY)		AMP	
5.00-5.40	U	83 blows					(2.80)					
5.50	D								Stiff becoming very stiff grey CLAY (AMPTHILL CLAY)		AMP	
6.50	SPT	4,4,7 8,9,8 N=32(C)					3.85 7.00					
6.50-7.00	BD											
7.00	D											

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									



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BOREHOLE LOG

Hole No.
BHD004

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
09-09-05
09-09-05

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	LF	E 539097.771 N 265155.918	13.220

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.50-1.00	B D						12.87	0.35	Firm brown sandy slightly gravelly clay TOPSOIL with rare rootlets. Gravel is angular to subrounded fine to medium flint and rarely chalk.		TPS	
0.50	D						12.62	0.60	Firm to stiff grey brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to medium flint and rare quartzite (TERRACE DEPOSITS).		TD	
1.00-1.40	D U	27 blows							Firm green grey mottled grey CLAY (KIMMERIDGE CLAY)		KIMM	
1.50	D											
2.00	SPT	3.3.3 2.2.3 N=10(S)						(3.40)				
2.00-2.50	BD											
3.00-3.40	D U	41 blows										
3.50	D											
4.00	SPT	3.3.2 2.3.2 N=9(S)					9.22	4.00	Firm grey mottled orange brown CLAY with rare white selenite crystals (KIMMERIDGE CLAY).		KIMM	
4.00-4.50	BD											
5.00-5.40	U	61 blows										
5.50	D							(3.00)				
6.00	D											
6.50	SPT	3.3.3 2.3.3 N=11(S)					6.22	7.00				
6.50-7.00	BD D											
7.00												

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT_16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHD005

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**09-09-05
09-09-05**

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	Cable Percussive Rig	LF	E 538926.047 N 265123.573	13.210

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.40	D						12.91	0.30	Firm dark brown slightly sandy slightly gravelly clay TOPSOIL. Gravel is angular to subrounded fine to medium flint with rare rootlets.		TPS	
0.50-1.00	B								Firm brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to medium flint (TERRACE DEPOSITS).		TD	
0.80	D											
1.00	SPT	2,3,5 4,4,3 N=16(S)					11.81	1.40				
1.00	D								Stiff light grey mottled orange brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to medium. rare bands of siltstone (REWORKED KIMMERIDGE CLAY).		KIMM	
1.40	D											
2.00	SPT	3,3,5 6,6,7 N=24(C)										
2.00-2.50	B						10.61	2.60				
2.60	D											
3.00-3.40	U	57 blows										
3.50	D											
4.00	SPT	4,4,9 7,6,8 N=30(S)										
4.00-4.50	BD											
5.00-5.40	U	76 blows										
6.50-7.00	B											
6.50	D											
7.00	D						6.21	7.00				

08 WSP BH LOG #NORTHSTOWE MASTER DEC 2011.GPJ WSPTEMPLATE1.03.GDT _16/12/11

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling			Water Added			General Remarks No groundwater encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHD006

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
09-09-05
09-09-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

LF

E 538761.397
N 265040.622

13.920

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.50-1.00	B D						13.62	0.30	Grass over slightly sandy slightly gravelly CLAY. Gravel is fine to medium angular to subrounded flint.		TPS	
0.50	D						13.02	(0.60)	Firm orange brown mottled grey sandy slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded flint (TERRACE DEPOSITS).		TD	
0.90	D							(1.20)	Loose to medium dense brown very clayey slightly gravelly SAND. Gravel is fine to medium angular to subrounded flint and chalk (TERRACE DEPOSITS).		TD	
1.00	SPT	6.2,3 2.3,2 N=10(C)										
1.00-1.50	B D						11.82	2.10	Firm to stiff grey mottled orange brown slightly sandy CLAY (KIMMERIDGE CLAY).		KIMM	
2.00	SPT	5.3,3 2.3,2 N=10(C)										
2.10-2.50	B D							(1.90)			KIMM	
3.00-3.40	U	46 blows										
3.50	D											
4.00	SPT	7.3,4 3.4,5 N=16(S)					9.92	4.00	Firm becoming stiff green grey mottled grey CLAY with rare white selenite crystals. Becoming very stiff from 5.0m (KIMMERIDGE CLAY)		KIMM	
4.00-4.50	BD											
4.80-5.20	B											
5.00	SPT	8,9,12 8,10,8 N=38(C)						(3.00)			KIMM	
5.00	D											
5.50	D											
6.00	D											
6.50-6.90	U	89 blows										
7.00	D						6.92	7.00				

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added							
From	To	Hours	Tool	From	To	General Remarks					
						No groundwater encountered.					

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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BOREHOLE LOG

Hole No.
BHD030

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
**13-09-05
13-09-05**

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

Cable Percussive Rig

DB

E 538899.609
N 264749.980

15.470

SAMPLES & TESTS

STRATA

Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	Install / Backfill Dia. mm
0.50	BD						14.97	(0.50)	Dark brown slightly sandy clay TOPSOIL.		TPS	
1.00	SPT	6,0,3 2,3,3 N=11(S)							Soft orange mottled brown and grey slightly gravelly very sandy CLAY with frequent selenite crystals. Gravel is fine subangular flint (KIMMERIDGE CLAY).		KIMM	
1.00-1.50	BJJJVV							(2.70)				
2.00-2.45	U	39 blows										
2.50	D											
3.00	SPT	5,0,4 3,3,4 N=14(S)					12.27	3.20	Stiff grey and brown mottled yellow CLAY with selenite crystals. Becoming grey with rare fossils between 3.5 and 5.0m bgl (KIMMERIDGE CLAY).		KIMM	
3.00	BD											
4.00-4.45	U	67 blows										
4.50	D											
5.00	SPT	7,0,4 4,5,4 N=17(S)						(3.80)				
5.00-5.50	BJJJVV											
6.00	D											
6.50-6.95	U	81 blows										
7.00	D						8.47	7.00				

Boring Progress

Water Strikes

Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks Groundwater encountered at 5.7m rising to 5.4m after 15mins.					
From	To	Hours	Tool	From	To						

Scale 1:62.5

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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TRIAL PIT LOG

Hole No.
TPD019

Project
Northstowe

Sheet
1 of 1

Job No
12170626

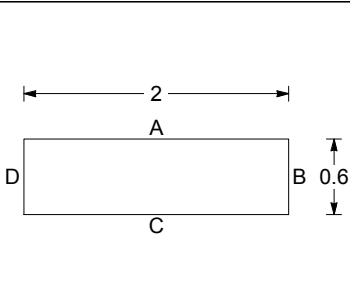
Client
Gallagher

Date
22-08-05

Contractor / Driller	Method/Plant Used	Logged By	Co-Ordinates (OS)	Ground Level (m AOD)
	JCB 3CX	LF	E 539033.970 N 264819.614	15.030

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.70	JBT		164, 166, 128			14.73	0.30	Soft dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to coarse angular to subrounded flint.		TPS
						14.13	0.90	Stiff grey mottled orange brown sandy slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded flint (TERRACE DEPOSITS).		TD
						13.13	1.90	Stiff grey mottled orange brown extremely to very closely fissured CLAY (AMPTHILL CLAY).		AMP
							(1.50)	Stiff to very stiff closely fissured friable dark grey mottled yellow and orange extremely CLAY with rare selenite crystals. Mottled brown from 3.2m (AMPTHILL CLAY).		AMP
3.30	JBT		96, 96, 108			11.63	3.40			
						11.53	3.50	Stiff extremely to highly fissured dark grey CLAY with rare large selenite crystals (AMPTHILL CLAY).		AMP

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11



Length
2.00m

Width
0.60m

Orientation
degrees from north

Shoring/Support:

Stability:
Stable

Water Strikes					
Date	Time	Strike	Minutes	Standing	Remarks

General Remarks
Pit walls stable to base. No groundwater encountered.

Scale 1:31.25

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.



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TRIAL PIT LOG

Hole No.
TPD020

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
22-08-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

JCB 3CX

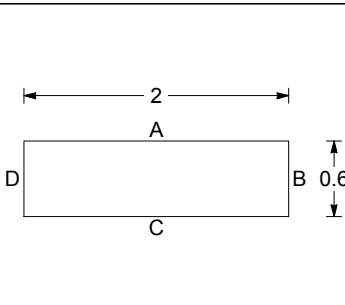
LF

E 538844.222
N 264778.767

15.360

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.50	JTB	80, 64, 74				15.06	(0.30) 0.30	Firm dark brown slightly sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subangular flint.		TPS	
						14.76	(0.30) 0.60	Stiff brown mottled orange brown and grey slightly sandy CLAY (AMPTHILL CLAY).		AMP	
1.90	JTB	98, 118, 72				13.76	(1.00) 1.60	Stiff grey mottled orange brown CLAY (AMPTHILL CLAY).		AMP	
						12.36	(1.40) 3.00	Stiff friable closely fissured dark grey mottled yellow CLAY with rare selenite crystals. Becoming mottled orange brown below 2.0m (AMPTHILL CLAY).		AMP	
						11.76	(0.60) 3.60	Stiff extremely closely fissured dark grey CLAY with rare fossils (AMPTHILL CLAY).		AMP	

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11



Length
2.00m

Width
0.60m

Orientation
degrees from north

Shoring/Support:


Stability:
Stable






Water Strikes					
Date	Time	Strike	Minutes	Standing	Remarks

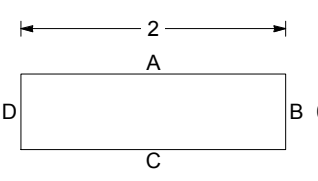
General Remarks
Pit walls stable to base. No groundwater encountered.

Scale 1:31.25

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPD022	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 20-08-05	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 539144.013 N 265762.891	Ground Level (m AOD) 10.420

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P.Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.60	JJVB		96, 82, 88		↓	10.12	0.30	Soft dark brown slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS
						9.92	0.50	Firm brown sandy CLAY (TERRACE DEPOSITS).		TD
			158, 136, 136		↓	9.62	0.80	Firm to stiff grey mottled orange brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium angular to subangular flint (AMPTHILL CLAY).		AMP
							(1.40)	Stiff to very stiff very closely fissured grey mottled orange brown CLAY. Ceramic pipe at 1.1m in one end of the pit, pit extended. Pocket of sand and gravel between 0.9 to 1.1m. Below 1.5m contains rare selenite crystals and pyritised fossils (AMPTHILL CLAY).		AMP
2.90	JJVB		148, 144, 136			8.22	2.20	Stiff dark grey mottled dark green CLAY with rare selenite crystals (AMPTHILL CLAY).		AMP
						6.92	3.50			

	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north				1.10			
General Remarks Pit walls stable to base. Groundwater encountered at 1.1m in band of sand and gravel.								
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11



WSP Environment & Energy
 One Queens Drive
 Birmingham, B5 4PJ
 Telephone: 0121 352 4700
 Fax:

TRIAL PIT LOG

Hole No.
TPD023

Project
 Northstowe

Sheet
 1 of 1

Job No
 12170626

Client
 Gallagher

Date
 20-08-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

JCB 3CX

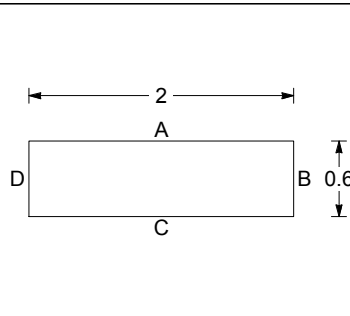
LF

E 539295.545
 N 265703.488

10.620

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P.Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.30	JJVB					10.32	(0.30) 0.30	Soft dark brown slightly gravelly sandy clay TOPSOIL.		TPS	
						9.92	(0.40) 0.70	Moderately compact orange brown clayey SAND (TERRACE DEPOSITS).		TD	
						9.72	0.90	Moderately compact orange brown very gravelly SAND with an irregular base (TERRACE DEPOSITS).		TD	
1.00	JJVB		>260, 120, >260, 190					Stiff very closely fissured friable light grey mottled orange brown extremely CLAY. Fissuring less apparent from 2.0m. Becoming dark grey mottled dark green from 2.3m. Below 3.2m contains rare selenite crystals (AMPTHILL CLAY).		AMP	
2.00	JJVB		158, 162, 144				(2.80)				
			114, 128, 56			6.92	3.70				
						6.82	3.80	Stiff extremely closely to very closely fissured dark grey CLAY with rare selenite crystals (AMPTHILL CLAY).		AMP	

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11



Length
2.00m

Width
0.60m

Orientation
degrees from north

Shoring/Support:


Stability:
Stable

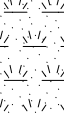





Water Strikes					
Date	Time	Strike	Minutes	Standing	Remarks

General Remarks
 Pit walls stable to base. No groundwater encountered.

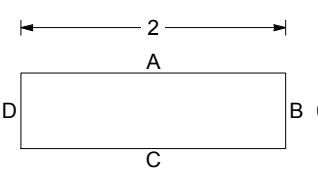
Scale 1:31.25

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPD025
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-08-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 539299.600 N 265600.003	Ground Level (m AOD) 11.060

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.80	JTB		116, 118, 112			10.56	0.50	Firm becoming stiff dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS	
						10.36	0.70	Stiff grey slightly sandy slightly gravelly CLAY. Gravel is fine and angular to subangular flint (TERRACE DEPOSITS).		TD	
2.00	JTB		82, 116, 136, 132			9.96	1.10	Moderately compact orange brown clayey gravelly SAND. Gravel is fine and subangular to subrounded flint chalk and sandstone (TERRACE DEPOSITS).		TD	
						8.76	2.30	Stiff very closely fissured light grey mottled orange brown CLAY. Mottling becoming dark green brown from 1.9m. rare selenite crystals from 2.0m (AMPTHILL CLAY).		AMP	
						8.66	2.40	Moderately weak very closely fissured light grey SILTSTONE (AMPTHILL CLAY).		AMP	
							(1.30)	Stiff to very stiff very closely fissured light grey mottled orange brown CLAY with rare selenite crystals (AMPTHILL CLAY).		AMP	
						7.36	3.70				

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	General Remarks Pit walls stable to base. No groundwater encountered.						
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							



WSP Environment & Energy
 One Queens Drive
 Birmingham, B5 4PJ
 Telephone: 0121 352 4700
 Fax:

TRIAL PIT LOG

Hole No.
TPD026

Project
 Northstowe

Sheet
 1 of 1

Job No
 12170626

Client
 Gallagher

Date
 20-08-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

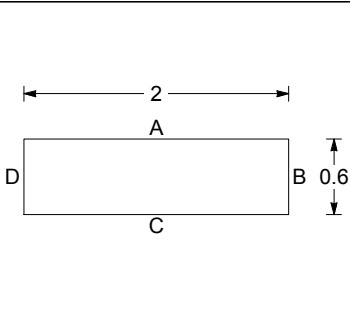
JCB 3CX

LF

E 539198.651
 N 265600.210

11.000

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.20	JJVB					10.70	(0.30)	Firm dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subangular flint.		TPS
0.60	JJVB		64, 62, 68			10.40	(0.30)	Firm to stiff orange brown very sandy slightly gravelly CLAY. Gravel is fine and angular to subangular flint and chalk (TERRACE DEPOSITS).		TD
0.70	JJVB		>260, >260, >260					Very stiff to hard very closely fissured grey mottled orange brown CLAY. Between 0.5 and 1.5m east half of pit is orange brown slightly clayey gravelly sand. Mottling of clay becoming green brown from 1.0m. Oyster shells present from 3.4m. Below 3.2m becoming stiff (AMPTHILL CLAY).		AMP
2.00	JJVB		200, 152, 156			7.50	(2.90)			
			136, 128, 148							



Length
2.00m

Width
0.60m

Orientation
degrees from north

Shoring/Support:


Stability:
Stable








Water Strikes					
Date	Time	Strike	Minutes	Standing	Remarks

General Remarks
 Pit walls stable to base. No groundwater encountered.

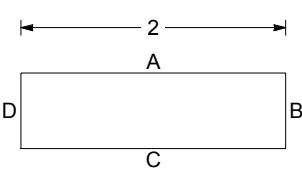
Scale 1:31.25

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPD029
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-08-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 539199.602 N 265500.000	Ground Level (m AOD) 11.800

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.50	JTB	102, 64, 118				11.50	0.30	Firm to stiff dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine and angular to subangular flint.		TPS	
						11.10	0.70	Firm to stiff brown mottled grey sandy slightly gravelly CLAY. Gravel is fine and angular to subangular flint (TERRACE DEPOSITS).		TD	
						10.95	0.85	Stiff very extremely to very closely fissured grey mottled orange brown CLAY with rare fine white rootlets (TERRACE DEPOSITS).		TD	
						10.80	1.00	Moderately compact orange brown SAND and GRAVEL. Gravel is fine to medium angular to subrounded flint and chalk (TERRACE DEPOSITS).		TD	
						10.30	1.50	Very stiff extremely to very closely fissured light grey mottled orange brown CLAY (AMPTHILL CLAY).		AMP	
						10.10	1.70	Moderately weak light grey SILTSTONE (AMPTHILL CLAY).		AMP	
3.20	JTB	162, 128, 140				1.80		Very stiff light grey mottled orange brown extremely to very closely fissured CLAY. Extremely closely fissured and friable from 2.5m. Grey mottled dark green brown from 2.5m. rare selenite crystals from 3.0m (AMPTHILL CLAY).		AMP	
						8.30	3.50				

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Pit walls stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							



WSP Environment & Energy
 One Queens Drive
 Birmingham, B5 4PJ
 Telephone: 0121 352 4700
 Fax:

TRIAL PIT LOG

Hole No.
TPD031

Project
 Northstowe

Sheet
 1 of 1

Job No
 12170626

Client
 Gallagher

Date
 21-08-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

JCB 3CX

LF

E 539099.604
 N 265599.963


11.230

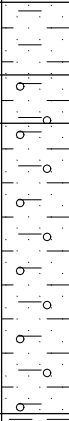
SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology
0.50	JTB	114, 96, 78			↓	10.83	0.40	Soft to firm dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS
						10.43	0.80	Firm to stiff brown sandy slightly gravelly CLAY. Gravel is fine to medium angular to subrounded flint (TERRACE DEPOSITS).		TD
						10.23	1.00	Moderately compact orange brown SAND and GRAVEL. Gravel is fine and angular to subrounded flint and chalk. This strata is present on the west, north and northern half of east side of pit only. Remainder of pit as 0.4m to 0.8m (TERRACE DEPOSITS). Stiff very closely fissured light grey mottled orange brown CLAY. Becoming dark grey mottled dark green and brown at 2.0m (AMPTHILL CLAY).		AMP
2.30	JTB	120, 118, 144				8.03	3.20	Stiff very closely fissured dark grey CLAY (AMPTHILL CLAY).		AMP
						7.73	3.50			

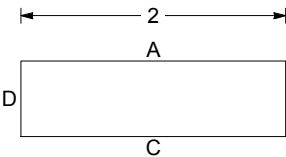
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

	Length	2.00m	Shoring/Support:	Water Strikes					
	Width	0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing
	Orientation	degrees from north				1.00			
Scale 1:31.25				Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.					


General Remarks
 Pit walls stable to base. Groundwater encountered at 1m.




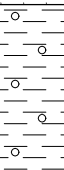

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPD032
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-08-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 539000.011 N 265599.963	Ground Level (m AOD) 11.130

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P.Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.60	JTB				↓	10.83	0.30	Dark brown clayey slightly gravelly SAND. Gravel is fine to medium angular to subrounded flint (TERRACE DEPOSITS).		TD	
						10.63	0.50	Moderately compact orange brown slightly clayey slightly gravelly SAND. Gravel is fine to medium angular to subrounded flint. (TERRACE DEPOSITS).		TD	
							(1.20)	Moderately compact orange brown clayey gravelly SAND. Gravel is fine to medium angular to subrounded flint. (TERRACE DEPOSITS).		TD	
						9.43	1.70	Stiff grey mottled dark green brown CLAY (AMPTHILL CLAY).		AMP	
2.20	JTB		106, 114, 94				(1.70)			AMP	
			112, 114, 136			7.73	3.40				

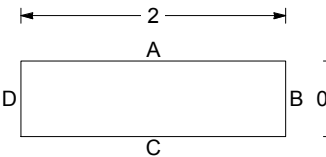
	Length 2.00m	Shoring/Support:	Water Strikes						
	Width 0.60m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stable	General Remarks Pit walls stable to base. Groundwater encountered at 1.7m.						
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPD033	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 22-08-05	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 538912.798 N 265295.928	Ground Level (m AOD) 12.630

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.90	JTB		148, 160, 150			12.38	(0.25) 0.25	Dark brown slightly clayey slightly gravelly sandy TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS
						11.83	(0.55) 0.80	Firm to stiff orange brown very sandy slightly gravelly CLAY. Gravel is fine to medium angular to subrounded flint (TERRACE DEPOSITS).		TD
						11.53	(0.30) 1.10	Moderately compact brown very gravelly SAND. Gravel is fine to medium angular to subrounded chalk and flint.		TD
						10.83	(0.70) 1.80	Stiff to very stiff grey mottled orange brown slightly gravelly CLAY with rare pockets of light grey silt. Gravel is fine to medium subangular to subrounded flint. No silt after 1.2m (TERRACE DEPOSITS).		TD
3.00	JTB		108, 126, 144				(1.70)	Stiff friable extremely closely fissured grey mottled dark brown CLAY with rare brown woody plant remains (AMPTHILL CLAY).		AMP
						9.13	3.50			

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

	Length 2.00m	Shoring/Support:	Water Strikes				
	Width 0.60m		Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	Stability: Stable	General Remarks Pit walls stable to base. Groundwater encountered at 2.1m. Sand and gravel channel running diagonally through pit. (N-S)				
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.						



WSP Environment & Energy
One Queens Drive
Birmingham, B5 4PJ
Telephone: 0121 352 4700
Fax:

TRIAL PIT LOG

Hole No.
TPD034

Project
Northstowe

Sheet
1 of 1

Job No
12170626

Client
Gallagher

Date
22-08-05

Contractor / Driller

Method/Plant Used

Logged By

Co-Ordinates (OS)

Ground Level (m AOD)

JCB 3CX

LF


E 538899.609
N 265199.972




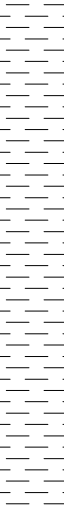
12.810

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.30	JTB					12.41	0.40	Soft dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine and angular to subangular flint.		TPS	
						12.21	0.60	Firm to stiff brown mottled orange brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded flint (TERRACE DEPOSITS).		TD	
1.50	B		164, >260, 246, 156			11.81	1.00	Moderately compact brown slightly clayey gravelly SAND. Gravel is fine to medium angular to subrounded flint. (TERRACE DEPOSITS).		TD	
						11.11	1.70	Stiff to very stiff extremely closely fissured stiff light grey mottled orange brown slightly gravelly CLAY. Gravel is fine to medium angular to subrounded flint. rare small pockets of light grey white silt. No silt below 1.3m (TERRACE DEPOSITS).		TD	
						9.81	3.00	Stiff to very stiff grey mottled orange brown CLAY. Becoming grey mottled dark green brown below 2.0m (KIMMERIDGE CLAY).		KIMM	
			146, 164, 132, 128			9.71	3.10	Moderately weak light grey green SILTSTONE.		KIMM	
						9.31	3.50	Stiff to very stiff friable extremely closely fissured grey mottled dark green brown CLAY with rare selenite crystals (KIMMERIDGE CLAY).		KIMM	

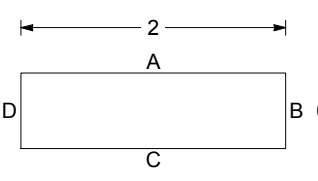
08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length	2.00m	Shoring/Support:	Water Strikes					
	Width	0.60m		Stability:	Date	Time	Strike	Minutes	Standing
	Orientation	degrees from north	Stable		General Remarks Pit walls stable to base. No groundwater encountered.				
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								






 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPD035	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 22-08-05	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 538829.638 N 265121.948	Ground Level (m AOD) 13.460

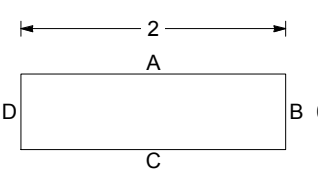
SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P.Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
1.00	JTB		106, 122, 104			13.16	(0.30) 0.30	Firm dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subrounded flint.		TPS
						12.36	(0.80) 1.10	Stiff brown slightly sandy CLAY (TERRACE DEPOSITS).		TD
						12.06	(0.30) 1.40	Moderately compact orange brown very gravelly SAND. Gravel is fine to medium angular to subrounded flint quartzite and chalk (TERRACE DEPOSITS).		TD
3.00	JTB		160, 160, 200, 180			9.96	(2.10) 3.50	Stiff very closely fissured stiff light grey mottled orange brown CLAY (TERRACE DEPOSITS). Pockets of light grey silt between 1.5 and 1.9m. Becoming grey mottled dark green brown from 2.5m. Extremely closely fissured and stiff below 2.8m. rare selenite crystals from 3m (KIMMERIDGE CLAY).		KIMM

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability:	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	Stable	General Remarks Pit walls stable to base. No groundwater encountered.					
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							



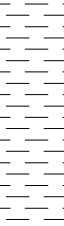

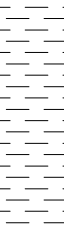
 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPD036
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 22-08-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 538799.611 N 264999.966	Ground Level (m AOD) 14.210

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
1.20	JTB		96, 126, 126			13.91	(0.30) 0.30	Firm dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine and angular to subrounded flint and chalk.		TPS
						13.61	(0.30) 0.60	Stiff dark brown sandy slightly gravelly CLAY. Gravel is fine and angular to subrounded flint and chalk (TERRACE DEPOSITS).		TD
						13.21	(0.40) 1.00	Stiff brown mottled orange brown and grey sandy CLAY (TERRACE DEPOSITS).		TD
			104, 82, 114			12.91	(0.30) 1.30	Moderately compact brown very gravelly SAND. Gravel is fine to coarse angular to subangular flint. (TERRACE DEPOSITS).		TD
2.00	JTB		108, 98, 114				(2.20)	Stiff grey mottled dark green brown CLAY with rare small pockets of light grey silt. rare fine selenite crystals below 1.8m. Becoming extremely closely fissured from 3.0m (KIMMERIDGE CLAY).		KIMM
			152, 142, 130			10.71	3.50			

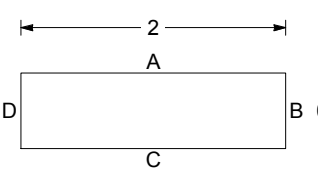
	Length 2.00m	Shoring/Support:	Water Strikes						
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	General Remarks Pit walls stable to base. No groundwater encountered.							
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								


08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11





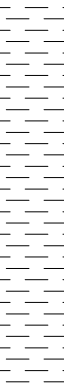
 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPD037	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 21-08-05	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 539038.619 N 265184.375	Ground Level (m AOD) 12.660

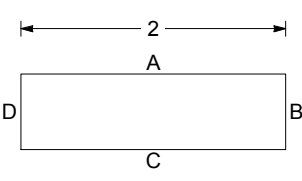
SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.20	JTB		80, 88, 86			12.26	0.40	Firm to stiff dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subangular flint and chalk.		TPS	
						12.06	0.60	Firm orange brown sandy slightly gravelly CLAY. Gravel is fine to medium angular to subangular flint and chalk. Northern side and 3/4 of eastern side is orange brown clayey gravelly SAND between 0.4m and 1.4m (TERRACE DEPOSITS).		TD	
							(1.20)	Stiff extremely closely fissured grey mottled orange brown CLAY with rare fine white rootlets (KIMMERIDGE CLAY).		KIMM	
						10.86	1.80				
						10.56	2.10	Weak light grey SILTSTONE (KIMMERIDGE CLAY).		KIMM	
2.60	JTB		116, 144, 118				(1.50)	Stiff extremely closely fissured grey mottled dark green brown CLAY with rare fine white rootlets (KIMMERIDGE CLAY).		KIMM	
						9.06	3.60				

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11


	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing
	Orientation degrees from north	General Remarks Pit walls stable to base. No groundwater encountered.						
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							



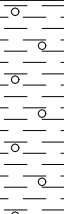



 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG			Hole No. TPD038
	Project Northstowe			Sheet 1 of 1
Job No 12170626	Client Gallagher			Date 21-08-05
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By LF	Co-Ordinates (OS) E 539000.000 N 265099.969	Ground Level (m AOD) 13.050

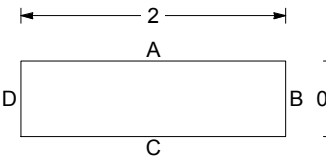
SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P.Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	Geology	
0.20	JTB		90, 102, 84			12.75	(0.30) 0.30	Soft to firm dark brown sandy slightly gravelly clay TOPSOIL. Gravel is fine to medium angular to subangular flint.		TPS	
						12.35	(0.40) 0.70	Stiff brown sandy slightly gravelly CLAY. Gravel is fine to medium angular to subangular flint (TERRACE DEPOSITS).		TD	
						11.15	(1.20) 1.90	Stiff to very stiff extremely closely fissured grey mottled orange brown CLAY (KIMMERIDGE CLAY).		KIMM	
						10.95	2.10	Weak light grey SILTSTONE (KIMMERIDGE CLAY).			
2.30	JTB		124, 114, 112			9.25	(1.70) 3.80	Stiff to very stiff extremely closely fissured grey mottled dark green brown CLAY with rare brown woody plant remains. Friable with rare selenite crystals below 3m (KIMMERIDGE CLAY).		KIMM	

	Length 2.00m	Shoring/Support:	Water Strikes						
	Width 0.60m		Stability: Stable	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	General Remarks Pit walls stable to base. No groundwater encountered.							
Scale 1:31.25	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								

08 WSP TP LOG STANDARD #NORTHSTOWE MASTER DEC.2011.GPJ WSPTEMPLATE1.03.GDT 16/12/11

 WSP Environment & Energy One Queens Drive Birmingham, B5 4PJ Telephone: 0121 352 4700 Fax:	TRIAL PIT LOG		Hole No. TPD039	
	Project Northstowe		Sheet 1 of 1	
Job No 12170626	Client Gallagher		Date 21-08-05	
Contractor / Driller	Method/Plant Used JCB 3CX	Logged By JMC	Co-Ordinates (OS) E 538898.256 N 265027.968	Ground Level (m AOD) 13.660

SAMPLES & TESTS						STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mAOD)	Depth (Thickness)	Description	Legend	
0.60	JTB		248, 158, 128			13.41	(0.25) 0.25	Soft dark brown slightly sandy slightly gravelly clay TOPSOIL with some straw and organic matter. Gravel is fine to coarse angular to subrounded flint.		TPS
							(0.65)	Firm orange brown very sandy slightly gravelly CLAY. Some orange brown mottling. Gravel is fine to coarse angular to subrounded flint with rare chalk (TERRACE DEPOSITS).		TD
							12.76	0.90	Stiff to very stiff blue grey becoming dark grey slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded chalk (TERRACE DEPOSITS).	
2.00	JTB		128, 124, 140			11.86	1.80	Stiff to very stiff dark grey mottled blue grey slightly sandy CLAY with rare flint on western face of pit (KIMMERIDGE CLAY).		KIMM
							(1.40)			
			162, 120, 144			10.46	3.20			
						10.26	3.40	Weak light grey SILTSTONE (KIMMERIDGE CLAY).		
						9.96	(0.30) 3.70	Stiff to very stiff closely to very closely fissured grey CLAY (KIMMERIDGE CLAY).		KIMM

	Length 2.00m	Shoring/Support:	Water Strikes					
	Width 0.60m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability: Stable	General Remarks Pit walls stable to base. No groundwater encountered.					

Scale 1:31.25

Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.