

APPENDIX E

CONTENTS

Borehole Locations

Borehole Logs TF42SW16, TF42SW36, TF42SW11



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Client
Mr A. Hurst

Project: Proposed Residential
Development
Land West of Lutton Gowts
Long Sutton
Lincolnshire

Drawing Title
British Geological Survey
Borehole Location Map

Scale N.T.S. Date October 2015 Drawn By TB

Drawing No. Appendix E Rev 0



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ENGINEER C.H.DOBBS & PARTNERS			PROJECT A 17 LONG SUTTON/SUTTON BRIDGE BYPASS			GROUND LEVEL 1.825 m.O.D.			HOLE NO TPT									
LOGGED BY: J.M. GURNEY (TECHNICAL SERVICES) LIMITED			EXCAVATION METHODS JCB 3cx			COORDINATES 542695 E 323442 N 3600 M SU			FIGURE A									
LAB. TESTING BY:						DATES 9.1.85			SHEET 1 OF 1									
DATE/TIME AT DEPTH	DEPTH OF CASING	DEPTH OF WATER	STRATA			SAMPLING/ IN SITU TESTING					LAB TESTING					OTHER TESTS AND NOTES		
			DESCRIPTION	LES.	LEVEL a.o.d.	DEPTH =	No	DEPTH =	TYPE	BLOS	V.C. %	S <425	M PL S	LL S	N Mg/100	Ca Mn/100	HCV	
9.1.85		DRY	Firm greyish brown slightly sandy silty clay with rootlets (TOPSOIL)		1.83	0.00												Soil wet from 1.10m; very slow groundwater seepage at base of trial pit. Slight instability. Pit shored to base. Pit dimensions: 2.00 long x 1.10m wide x 2.00m deep
			Soft to firm orange brown, brown & grey mottled slightly sandy silty CLAY with partings of light brown fine sand. Rootlets to 0.60m depth. (RECENT ALLUVIUM)		1.58	0.25												
			Soft orange brown & brown mottled fine sandy very silty CLAY to very clayey SILT with sand partings & occasional decomposed plant remains. (RECENT ALLUVIUM)		1.08	0.75												
			Orange brown, brown & grey very silty slightly clayey fine SAND. (RECENT ALLUVIUM)		0.73	1.10												
			Grey very fine sandy slightly clayey SILT with occasional shell fragments & partings of grey fine sand. (RECENT ALLUVIUM)		0.33	1.50												
1	1.95						J1	2.00	D									pH = 7.5 St = 0.21%
9.1.85			END OF TRIAL PIT		-0.17	2.00												<u>Redox Potential Test</u> At 2.00m. 3 field readings: -71, -77, -70mv E = -0.073V Redox Potential _{E_h} = 0.207V (Reading taken on J1 sample later = 154mV E _h = 0.434V) <u>Resistivity Measurements:</u> See Appendix

TF42SW36

<h1>Norwest Holst Soil Engineering Ltd.</h1>		Borehole No. 3
<h2>BOREHOLE LOG</h2>		
Contract No. F4960		Sheet 1 of 4
Location Water Tower, Gedney		Chainage
Client Anglian Water Authority		Ground Level Appx 3.0 m.A.O.D.
Method of Boring Percussion		Date 22-24th July, 1981
Diameter of Borehole 200 mm to 150 mm then 150 mm		

Description of Strata	Legend	Depth Below G.L. (m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/R.Q.D.%	Daily Progress
TOPSOIL		0.30	2.70				
Firm brown with occasional grey mottle silty slightly sandy CLAY	X X	1.60	1.40		1.00		
Firm brown grey fine sandy clayey SILT	X X	2.70	0.30		2.00		
Medium dense brown grey fine sandy coarse grained SILT	X X	5.00	-2.00		2.80 4.00		
Dense grey slightly silty fine grained SAND... becoming very dense in places	X X				5.55	'31'	
	X X				7.00	'36'	
	X X				8.55	'51'	

Type of Sample	Remarks (Observations of Ground Water etc.)
S.P.T. ☐ Undisturbed	Water struck at 5.00 m slow inflow.
C.P.T. ☐ Vane	Water level at 2.75 m 0800 hrs 23.7.81, casing at 26.0 m
Jar ☐ Water	
Bulk ☐ Piezometer	

TF42SW36

<h2 style="margin: 0;">Norwest Holst Soil Engineering Ltd.</h2>						Borehole No. 3	
Contract No. F4960		BOREHOLE LOG				Sheet 2 of 4	
Location Water Tower, Gedney		Chainage				Ground Level Appx 3.0 m.A.O.D.	
Client Anglian Water Authority		Date 22 - 24th July, 1981					
Method of Boring Percussion							
Diameter of Borehole 200 mm to 15m then 150mm							
Description of Strata	Legend	Depth Below G.L. (m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/R.Q.D.%	Daily Progress
Dense grey slightly silty fine grained SAND, with some medium to coarse sand and fine to medium gravel of shell fragments in places ... becoming very dense below 16.00m					10.00	'45'	
					11.55	'35'	
					13.00	'39'	
					14.55	'42'	
					16.00	'59'	
		17.00	-14.0				
Soft grey silty CLAY		17.60	-14.6		17.10		
Medium dense green well graded SAND and fine to medium GRAVEL		19.20	-16.2		18.00	'33'	
Stiff green brown silty CLAY with some fine to medium gravel of chalk and flints		20.00	-17.0		19.55		

Type of Sample

Is S.P.T. Undisturbed

Ic. C.P.T. Vane

O Jar Water

● Bulk Piezometer

Remarks (Observations of Ground Water etc.)

TF42SW36

<h1>Norwest Holst Soil Engineering Ltd.</h1>						Borehole No. 3	
<h2>BOREHOLE LOG</h2>							
Contract No. F4960			Sheet 3 of 4				
Location Water Tower, Gedney			Chainage				
Client Anglian Water Authority			Ground Level Appx 3.0 m A.O.D.				
Method of Boring Percussion			Date 22 - 24th July, 1981				
Diameter of Borehole 150 mm							

Description of Strata	Legend	Depth Below G.L. (m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/R.O.D.%	Daily Progress
Very stiff grey brown silty CLAY with some fine to medium subangular to subrounded gravel of chalk.	○						
	X						
	○				21.00		
	X X						
	○						
	X X				22.50		
	○						
	X X						
	○				24.20		
	X X						
	○						
	X X				26.00		
	○						
	X X						
	○				27.55		
	X X						
	○						
	X X				29.30		
	○						
	X X						

Type of Sample	Remarks (Observations of Ground Water etc.)
Is S.P.T. ■ Undisturbed	
Ic C.P.T. X Vane	
O Jar △ Water	
● Bulk ⊙ Piezometer	

TF42SW36



British Geological Survey

NATURAL ENVIRONMENT RESEARCH COUNCIL

BGS ID: 506013 : BGS Reference: TF42SW11

British National Grid (27700) : 541218,324171

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ENGINEER		C.H. Debbie & Partners		PROJECT		A17 BYPASS: LONG BUTTON/BUTTON BRIDGE, MIDTOWN/SUTTON		GROUND LEVEL		2.954 m O.D.		HOLE NO.		1/81				
LOGGED BY		M. J. Gurney (Technical Services) Limited		EXCAVATION METHODS		Light cable permeation 150mm diameter		COORDINATES		541218 E 324171 N		FIGURE		A				
LAB TESTING BY				DATES		12.9.83 to 13.9.83		SHEET		1 OF 2		OTHER TESTS AND NOTES		TF42SW				
DATE/TIME	DEPTH AT CASING	DEPTH TO WATER	DESCRIPTION	LEG.	LEVEL	DEPTH	NO	DEPTH	TYPE	BLOWS	V	W	PL	LL	MCV	W	Cu	SG
12.9.83			MADE GROUND: brown silty sand with fragments of brick.	X	2.95	G.L.	J1	0.50	D	(35)		99	22	MP	32	1.8	40	
			MADE GROUND: Soft to firm light brown sandy silty clay with occasional brick fragments	X	2.00	0.95	J2	0.95	D	(15)		100	29	22	35	1.96	2.67	
			VERY SOFT to SOFT orange - brown slightly sandy silty CLAY becoming grey - brown sandy and very silty with depth.	X	0.65	2.30	U3	2.50	U	(9)		46			1.77			
			SOFT dark grey clayey sandy SILT	X			J5	2.95	D									
13.9.83	15.00	2.90		X			J6	3.30	D	N=10								
	3.00	3.30	LOOSE to MEDIUM DENSE dark grey slightly clayey very silty fine SAND	X	-0.35	3.30	CPT	3.50	C									
			 becoming grey silty fine SAND	X			J7	3.50	D	N=10								
				X			J8	4.50	D									
				X			J9	6.00	D	N=5								
				X			B5	6.00-7.50	B									
				X			CPT	7.50	C	N=11								
				X			J10	7.50	D									
				X			B4	7.50-8.80	B									
				X			J11	8.80	D	N=11								
			MADE GROUND: brown-grey silty fine to medium (dominantly fine) SAND.	X	-5.85	8.80	CPT	9.00	C									
				X	-5.95	8.90	J12	9.00	D									
12.9.83	9.50			X	-7.05	10.00												

TF42SW 11

WATER

First water strike

Subsequent water strikes

Highest water level in open hole

PIEZOMETER

Upper seal

Response length

Lower seal

(Installation only readings elsewhere)

SAMPLE AND TEST KEY

D Small disturbed sample

B Bulk disturbed sample

W Water sample

U Undisturbed sample

P Piston sample

TEST KEY

R Rotary core

recovery to scale

V In situ sand test

S Standard penetration test

C Cone penetration test

K Permeability test

PR Pressuremeter test

BLOWS

N = N value

26/150, blows for 150mm drive after seating

26, blows for part or whole of seating drive only (26) Undisturbed sample blow count

V

Vane strength (kN/m²)

Natural

Remould

Cr Core recovery %

RQD Rock quality designation

<425 Sample % passing

425um sieve

D. Evans D.Sc. Tech. MSc. FICE

F1 Mun. E. FINE

Director (Transport)

Eastern Regional Office (Transport)

49/51 Goldington Road, Bedford

SHEET 1 OF 2

FILE A

13/9/83



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TF42SW11