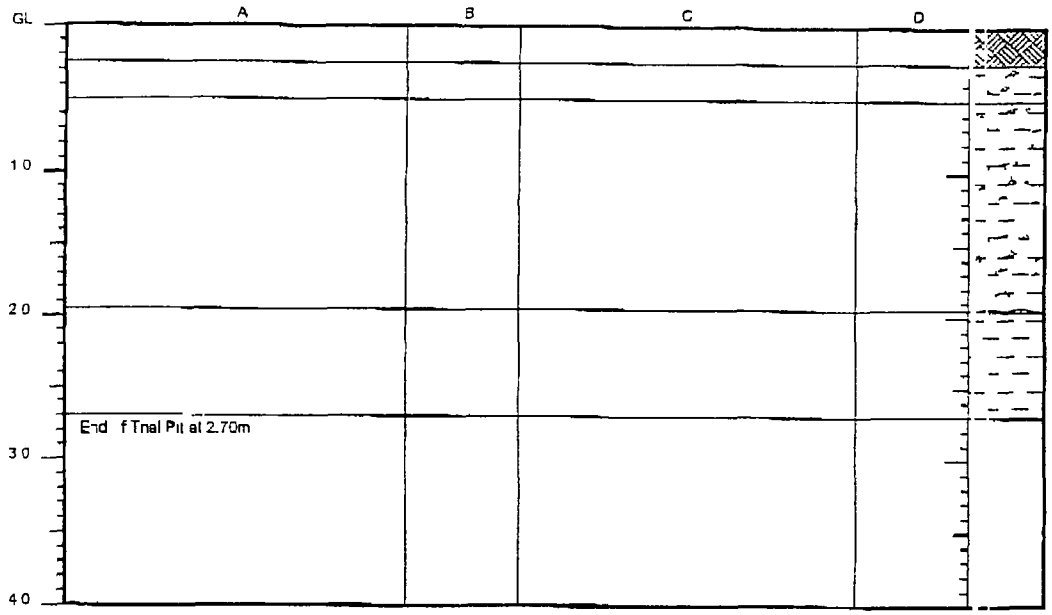
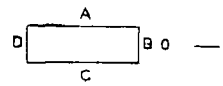
Appendix 1 – Geotechnical Information

Trial Pit Log

Exploration Associates

Logged by GO Checked by	Equipment and Method Trial Pit/Trench from 0.00m to 2.70m	Ground Level National Grid Coordinates





Dimension 0.70m x 3.30m
Excavation date 07/0_/2001

Samples and Tests

Depth (m)	Type & No	Records
0.65	B1	
0.65	D2	
_.70	D3	
70	D4	

Strata

Depth (m)	No	Description
0.00-0.25	1	Thin veneer of turf over TOPSOIL
0.25-0.50	2	Soft to firm dark brown gravelly CLAY. Gravel is coarse and subrounded
0.50-1.95	3	Firm brown mottled orange slightly gravelly sandy CLAY. Gravel is fine and subrounded
1.95-2.70	4	Soft blue grey CLAY

Groundwater
No Struck Bearing
1 1.20m Slight seepage

Remarks
Stability Collapsing below 2.50m Shoring None
Hole backfilled 0.00m to 2.70m Arisings (a)

Note For explanation of symbols and abbreviations see key sheet. All depths in metres

Scale 1:50

Project 1 MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No 120210
Carried out for Environment Agency

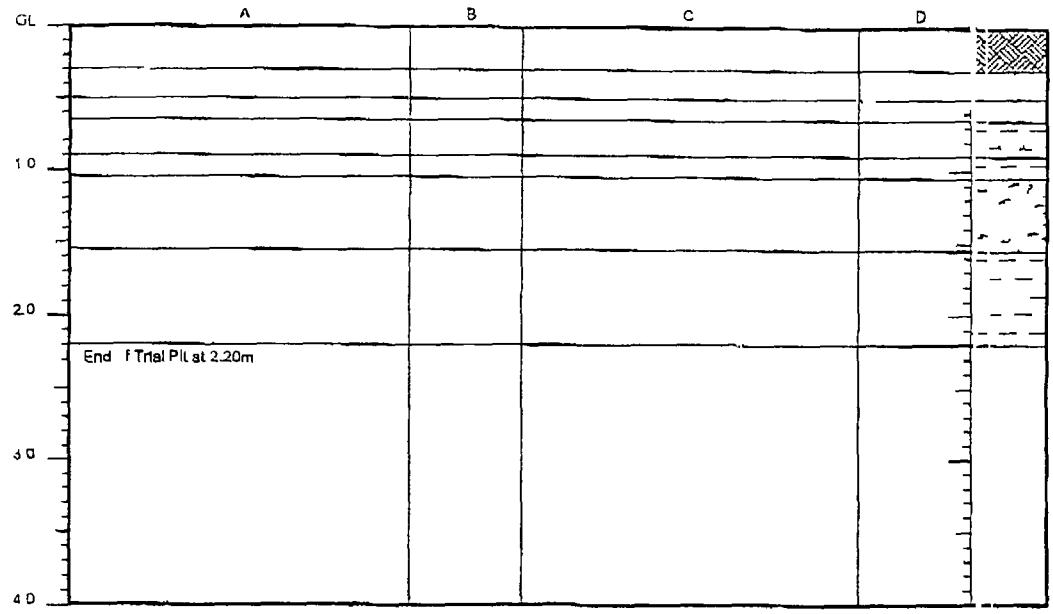
Trial Pit **TP1**
Sheet 1 of 1

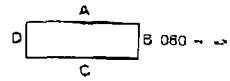
7/04 2 01 11 24 05 ESGLog 2.0B

Trial Pit Log

Exploration Associates

Logged by GD Checked by	Equipment and Method Trial Pit/Trench from 0.00m to 2.20m	Grid Ref National Grid Coordinates





Dimensions 0.50m x 3.0m
Excavation date 08/03/2001

Samples and Tests

Depth (m)	Type & No	Records
0.70	B1	
0.70	D2	
1.50	B3	
1.80	B4	
1.80	D5	
1.80	W5	

Strata

Depth (m)	No	Description
0.00-0.30	1	Thin veneer of turf over TOPSOIL
0.30-0.50	2	Soft brown slightly clayey silty fine to coarse SAND
0.50-0.65	3	Dark brown fine to coarse SAND. Possible elict topsoil
0.65-0.90	4	Firm orange brown sandy CLAY
0.90-1.05		Stiff orange CLAY
1.05-1.55		Pale grey orange slightly clayey medium and coarse SAND and subrounded medium and coarse GRAVEL
1.55-2.20	7	Stiff thinly laminated brown CLAY

Groundwater No Strike Bail 1 1.75m Seepage	Remarks Stability Stable Shoring None Hole backfilled 0.00m to 2.20m Arisings (a)

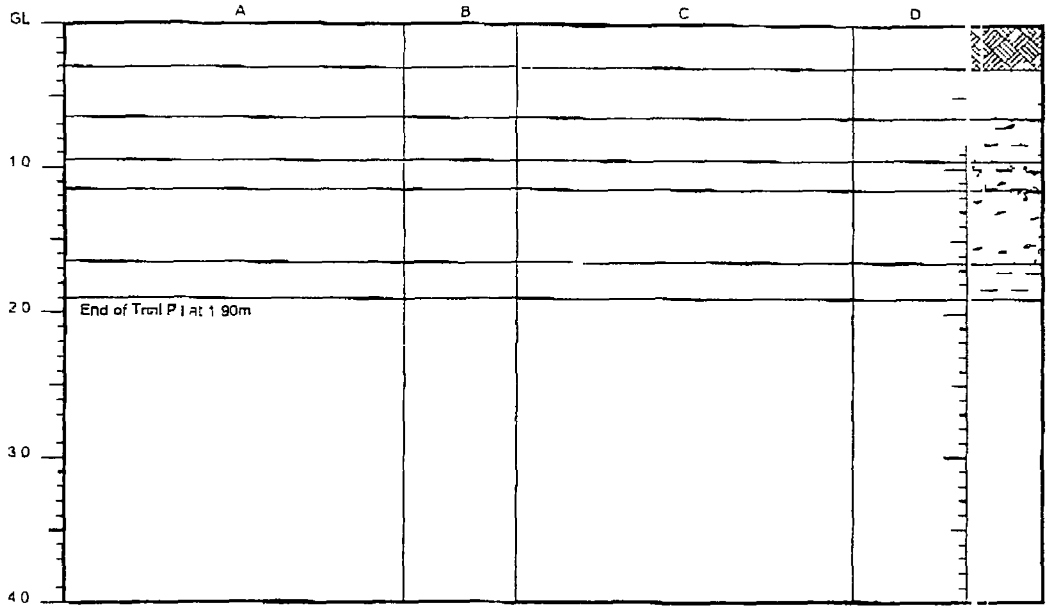
Notes Refer explanation of symbols and abbreviations see key sheet. All depths in metres Scale 1:50	Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME Project no 120219 Created for Environment Agency	Trial Pit **TP12** Sheet 1 of 1

17-Jul-2001 11:24:10 ESGLog 2.03

Trıal Pıt Log

Exploration Associates

L gg d by GD Checked by	Equ pm t and M th d Trl l P t/Tronch from 0 00 to 1 90m	Gro d L l Nat l G id C o d nate



D m nsıon 0 65m x 3 0m
Exca tion dat 00/02/2001

Samples and Tests / Strata

D pth (m)	Type & No	Record	D pth (m)	N	Descr pt on
			0 00-0 30	1	Thin veneer of turf over TOPSOIL
			0 30-0 35	2	Orange brown silty fine to coa s SAND
0 0 0 70	S1 D2	Hand V a 0 9 m 35 40 48	0 85-0 95	3	Dark brown slightly gra elly very clayey fine to coarse SAND Gra el is fine to medium Possible relict topsoil
			0 95-1 15	4	Firm orange brown slightly gravelly sandy CLAY Grav l is fine to madium subrounded
1 30 1 30	B3 D4		1 15-1 65	5	Grey brown fine to coarse SAND and medium and co r e GRAVEL
1 80 1 80	B5 D6		1 65-1 90	6	Stiff blue grey CLAY

Groundwat r No Struck B h vi 1 1 50m Sl ght eapage	R mark St b l ty C llapsing below 1 70m Shoring N ne Hole backfill 0 00m to 1 90 A ıngs ( )

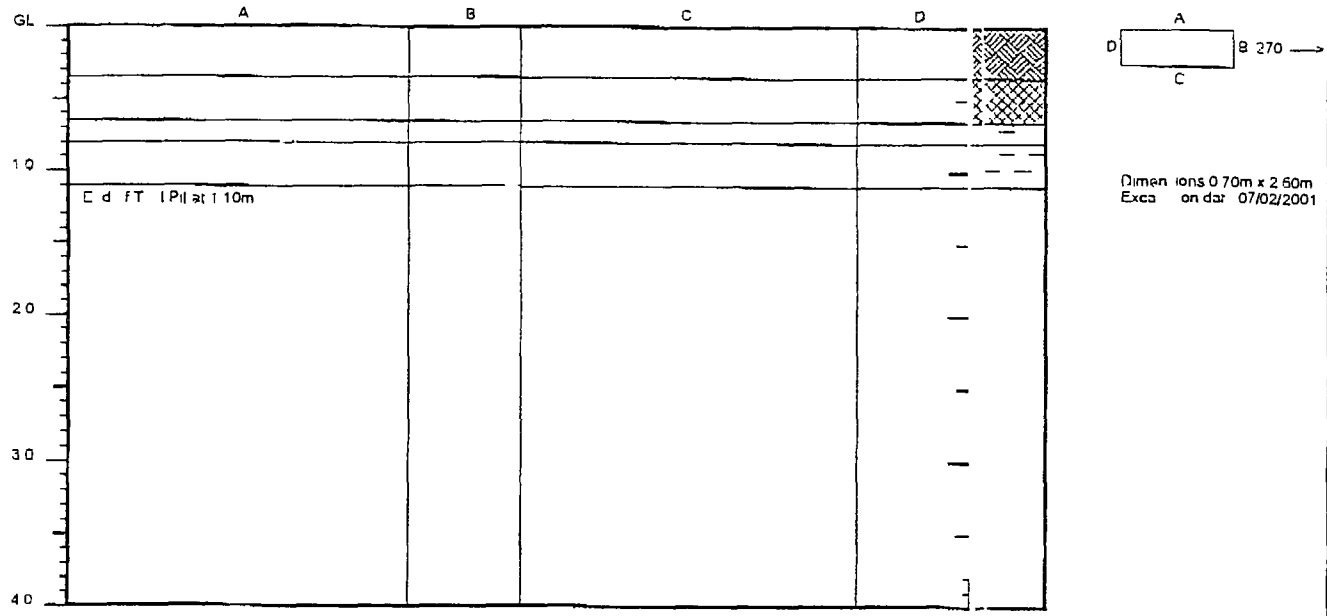
N tes r expl nation of ymbols and bbre iations s e key sh t All d pth n metres Scale 1 50	P oject MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME P j t n 120219 C r t r E v r m t Ag y	Trıal Pit **TP13** Sheet 1 of 1

27/04/2001 11 24 14 EsGL g v2 03

Trial Pit Log

Exploration Associates

Logged by GD Checked by	Equipment and Methods Trial Pit/Trench from 0.00m to 1.10m	Ground Level National Grid Coordinates



Samples and Tests

Depth (m)	Type & No	Records
0.50 0.60	B1 D2	

Strata

Depth (m)	No	Description
0.00-0.35	1	Thin veneer of turf over TOPSOIL
0.35-0.85	2	MADE GROUND: Dark brown fine to coarse gravelly sand. Gravel is coarse and angular. With bricks and brick fragments. Cobbles of limestone
0.85-0.95	3	Pale grey brown clayey coarse SAND
0.80-1.10	4	Soft dark brown CLAY

Groundwater

No Strike Behaviour

1 0.60m Steady Seepage

Remarks

Stability: Collapsing below 1.00m. Boring No. 1.

Hole backfilled 0.00m to 1.10m and grouted.

Notes: For explanation of symbols and abbreviations see key sheet. All depths in metres.

Scale 1:50

Project	MALTON, NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project no	120219
Caused out by	Environment Agency

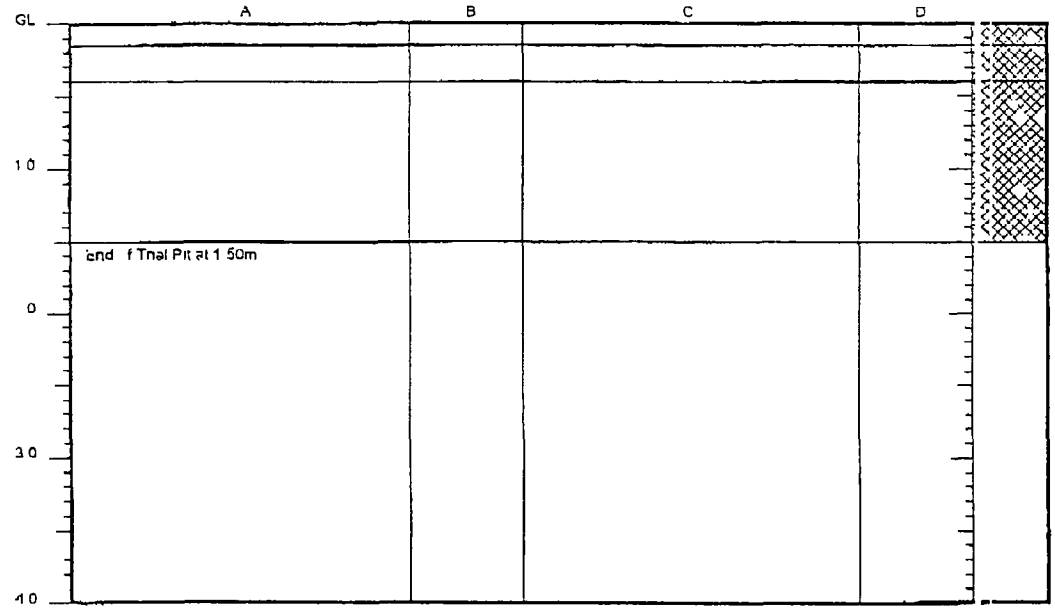
Trial Pit **TP2** Sheet 1 of 1

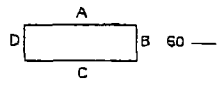
2.10.02 01 11 24 17 ESDLog v2.08

Trial Pit Log

Exploration Associates

Logged by GD Checked by	Equipment and Method Trial Pit/Trench from 0.00m to 1.50m	Ground Level Northing/Grid Co-ordinates





Dimension 0.60m x 2.70m
Excavated date 07/02/2001

Samples and Tests

Strata

Depth (m)	Type & No.	Result	Depth (m)	No.	Description
			0.00-0.15	1	MADE GROUND: Grey gravelly clay. Gravel is medium to coarse angular to subangular
			0.15-0.40	2	MADE GROUND: Pale grey white rubble. Boulders and cobbles of limestone with some coarse sand matrix
0.80 0.95	B1 D2		0.40-1.00	3	MADE GROUND: Dark brown clayey coarse sand. With bricks and brick fragments

Groundwater
No Struck Bedrock
1.50m Slaty seepage

Remarks
Pit terminated 1.50m due to water flow making adequate reinstatement difficult and collapsed depth increased
Stability: Stable. Shoring: None
Hole backfilled 0.00m to 1.50m After Logging ( )

Notes: For explanation of symbols and abbreviations see key sheet. All depths in metres

Scale 1:50

Project: MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No: 120219
Carried out for: Environment Agency

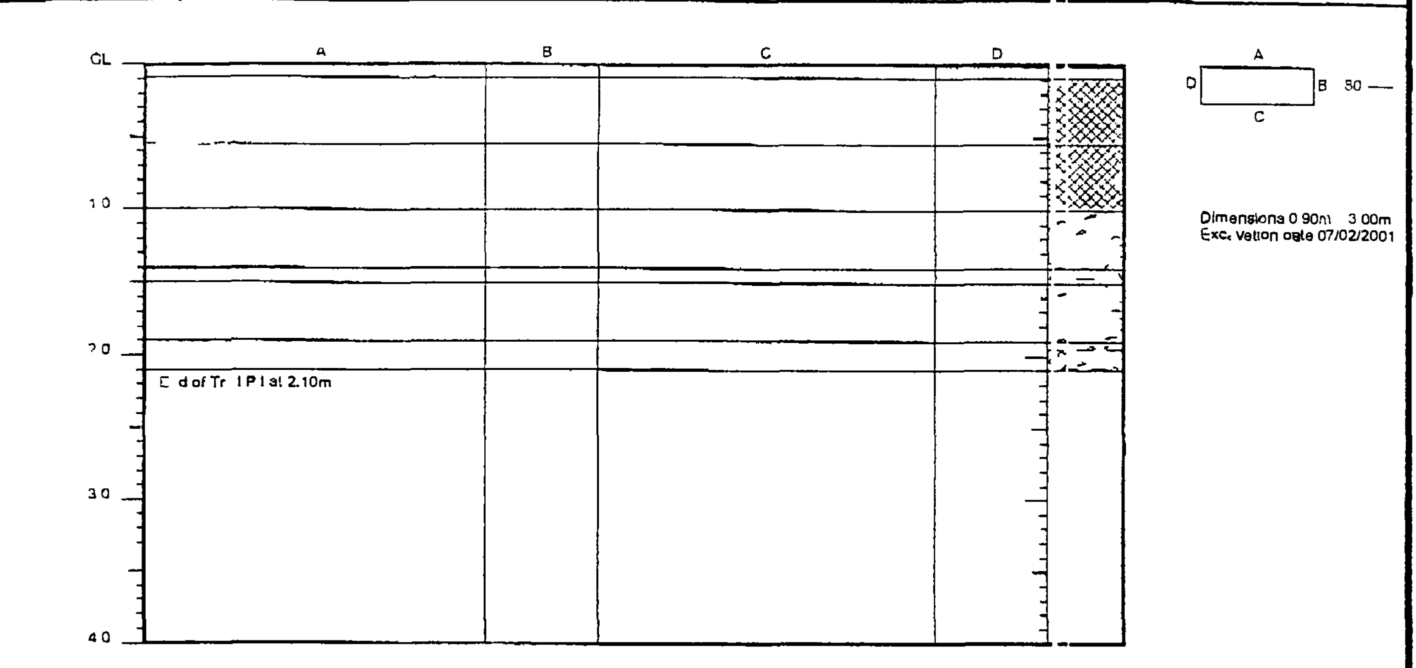
Trial Pit: TP3
Sheet 1 of 1

27/04/2001 11:24:20 ESGLog v2.06

Trial Pit Log

Exploration Associates

L gg d by GD Ch k d by	Eq pm t d M h d Tr al P t/Trench from 0 00m to 2 10m	Gro d L l National Grid Co rd te



Samples and Tests / Strata

Depth (m)	Type & No	Records	Depth (m)	No	Description
			0 00-0 09	1	MADE GROUND Tarmac
			0 09-0 55	2	MADE GROUND Bnck and concr te rubble
			0 55 1 00	3	MADE GROUND Dark brown sl ghdy sandy slightly g avelly clay Gravel is fine a coer e angular o subangular With bnck and brick fragments
1 30	B1		1 00-1 40	4	Pale brown clayey fine to coarse SAND and angular f ne o coarse GRAVEL with occasional cobbles
1 40	D2		1 40-1 50	5	Firm psaodofibrous organic dark brown clayey PEAT
1 30	W3		1 50-1 90	6	Pale brown gra elly fine to coar e SANO Gravel is fin to coarse and angular
2 05	B4		1 90-2 10	7	Firm dark brown slightly sandy slightly gravelly CLAY Gravel is fine to coarse and angular

Gr ondwater No Stru h Bel o r 1 1 50m Ste dy pag	R m rks Stabil ty C ll p g b l w 2 05m Snonng None Hole backf ll 0 00m t 2 10m Arising ( )

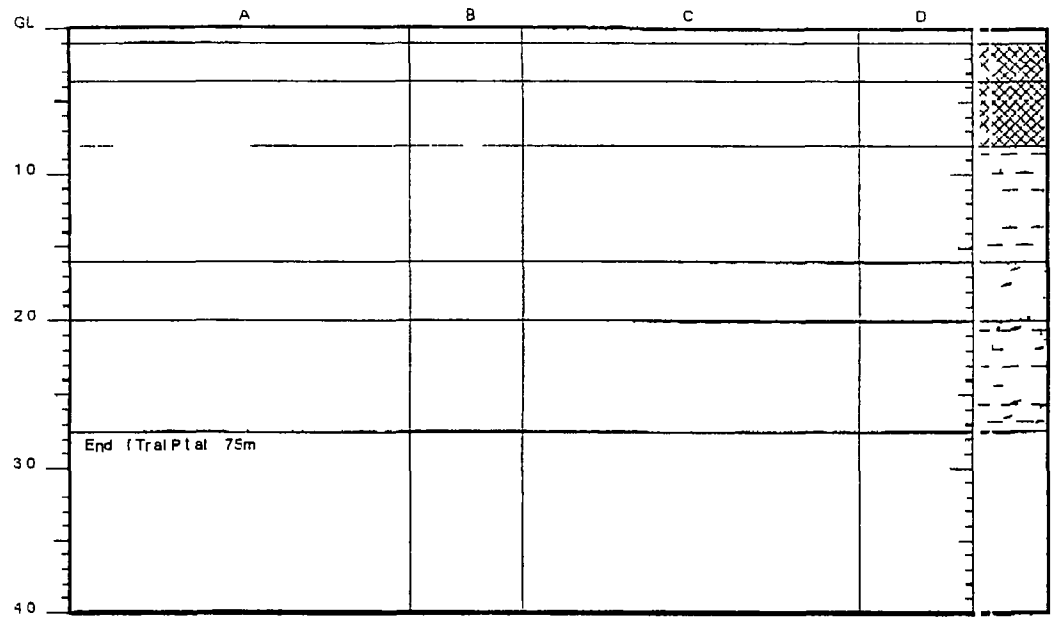
Note For explanat f ymbol and abbr iati s ea key he t All depth n m tres Scale 1 50	Proj ct MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME Project 120219 C ed t f Envir nmenl Ag y	Trial Pit **TP4** Sheet 1 of 1

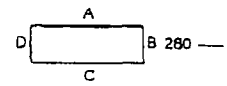
27/04/2001 11 24 24 ESGLog 2 08

Trial Pit Log

Exploration Associates

Logged by GO Checked by	Equipment and Methods Trial Pit/Trench from 0.00m to 2.75m	Ground Level National Grid Coordinates





Dimensions 0.70m x 2.7 m
Excavated date 07/02/2001

Samples and Tests

Depth (m)	Type & No	Records
1.70	B1	
1.70	02	
2.7	B3	
2.5	04	

Strata

Depth (m)	No	Description
0.00-0.10	1	MADE GROUND Tarmac
0.10-0.3		MADE GROUND Light brown coarse sand and angular medium to coarse gravel
0.36-0.60	3	MADE GROUND Firm dark brown slightly sandy clay with bricks and brick fragments
0.60-1.50	4	Firm dark brown slightly sandy CLAY with some rootlets
1.50-2.00	5	Pale brown slightly gravelly very silty fine to coarse SAND with some rootlets Gravel is subangular to subrounded fine
2.00-2.75	6	Firm brown mottled orange grey slightly gravelly CLAY Gravel is fine to medium angular to subangular

Groundwater
None encountered

Remarks
Stability Stable Shaning None
Hand backfill 0.00m to 2.75m Ansinga (a)

Notes For explanation of symbols and abbreviations see key sheet All depth in m tns

Scale 1:0

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project no 120216
Carried out for Environment Agency

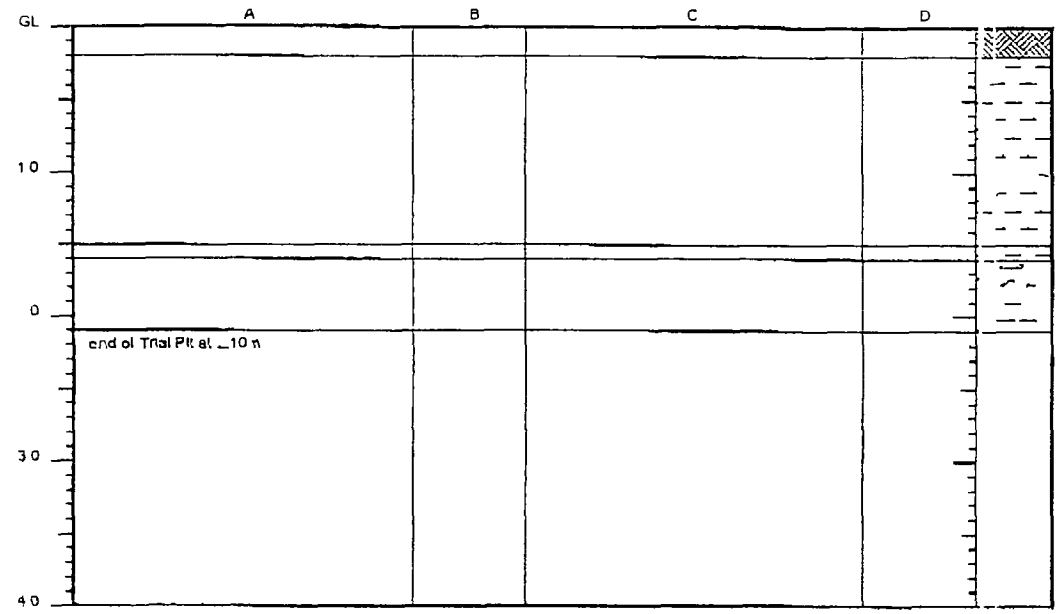
Trial Pit
TP5
Sheet 1 of 1

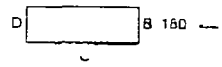
27/04/2001 11:24:2 ESGLog v2.08

Trial Pit Log

Exploration Associates

Logged by GO Checked by	Equipment and Method Trial Pit/Trench from 0.00m to 2.10m	Ground Level N 1 Grid Coordinates





Dimensions 0.60m x 2.60m
Excavated 09/04/2001

Samples and Tests

Depth (m)	Type No.	Records
0.40	B1	
0.40	D2	Hand Vane at 0.40m @ 84 90
1.6	B3	
1.85	D4	
2.10	W5	

Strata

Depth (m)	No.	Description
0.00-0.20	1	Brown TOPSOIL
0.20-1.00	2	Stiff grey brown mottled orange slightly sandy CLAY
1.50-1.60	3	Firm grey brown mottled orange CLAY
1.60-2.10	4	Orange brown very clayey very sandy fine to coarse angular GRAVEL

Groundwater	Remarks
No Struck Behaviour 1 1.50m Slight Seepage	Stability Stable Shoring None Hole backfilled 0.00m to 2.10m Arisings (@)

Notes For explanation of symbols and abbreviations see key sheet All depths in metres

Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project no 120219
Conducted for Environment Agency

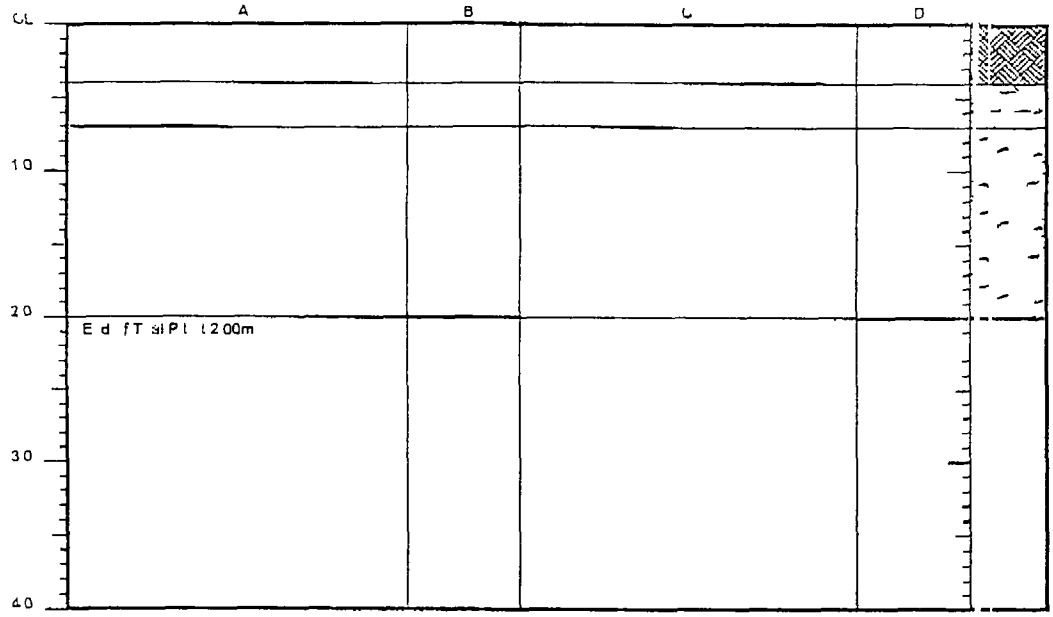
Trial Pit TP6
Sheet 1 of 1

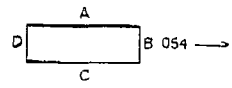
27/04/2001 11:24:31 ESGLog v2.66

Trial Pit Log

Exploration Associates

Logged by GD Checked by	Equipment and Method Trial Pit/Trench from 0.00m to 2.00m	Ground Level National Grid Coordinate





Dimensions 3.40m 0.90m
Excavation date 08/02/2001

Samples and Tests

Depth (m)	Type & No	Records
0.55	B1	
0.55	02	
0.90	B3	
0.90	04	
1.85	B5	

Strata

Depth (m)	No	Description
0.00-0.40	1	Brown TOPSOIL
0.40-0.70	2	Orange brown gravelly sandy clayey fine to coarse SAND. Gravel is subangular fine to coarse. Some cobbles and boulders
0.70-2.00	3	Orange brown slightly clayey very gravelly fine to coarse SAND. Gravel is fine to coarse and subangular. With angular cobbles of polihc lime stone Becoming paler in colour below 1.50m Below 1.85 abundant cobbles and minimal matrix. Possible rockhead at 1.85m

Groundwater Not encountered	Remarks Stability: Stable. Sheathing: None Hole backfilled 0.00m to 2.00m. Arisings (a)

Notes: For explanation of symbols and abbreviations see accompanying sheet. All depths in metres Scale 1:0	Project: MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME Project No: 120219 Coordinator: Environment Agency	Trial Pit TP7 Sheet 1 of 1

2710-0111 24.34 ESGLog v2.08

Borehole Log

Exploration Associates

Drilled by MSS Logged by GD Checked by	Equipment and Method Cable Percussion to 38mm diameter from 0.00m to 4.10m	Ground Level Northing and Grid Coordinates

Samples and Tests

Depth	Type & No	Records	Date Casing Water
0.30	D1		1 /02/2001
0.60 1.00		S SW 0 N 8 1 /1 1 2	
1.00 1.60	D2		
1 0 1.65		S SW 0 N 5 1 1/1 1 1 2	
1.60 2.20	D3		
2. 0 3.00	D4		
40 2.85		S SW 0 N 10 2 3/3 2 3 2	
3.00 4.00	D5		
3.80 4.05		S SW 0 N 35 10 11/10 d 10 7	
			1 0/01/2001 0.20

Strata

Description	Depth Level (Thickness)	Legend
Vegetation over TOPSOIL	(0.40)	1/a
Brown clayey fine to medium SAND	0 0	
Soft to firm brown sandy CLAY	0.60 (1.70)	
Medium dense light brown gray sandy fine to coarse subangular limestone GRAVEL	2.30 (1.00)	
Weak light brown LIMESTONE	3.30 (0.80p)	
EXPLORATORY HOLE END AT 4.10 m	4.10	

Groundwater
No Strutk Behaviour
1 0.20m encounting 10.20m on completion of hole

Remarks
Hole backfilled 0.00m to 4.10m Arisings (a)

Note Explanation of symbols and abbreviations key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets
Scale 1 50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No 120219
Dated Engineering Agency

Borehole BH1
Sheet 1 of 1

2 04/2001 12 5 30 ESGL.gpj v2.08

Borehole Log

Exploration Associates

Drilled by LC Logged by GO Checked by	Equipment and Method Inspection Pit from 0.00m to 1.20m Cable Percussion from 1.20m to 6.05m	Ground Level Not to Grid Continet

Samples and Tests

Depth	Type & No	Record	Date Casing	Time Water	Description	Depth Level (Thickness)	Legend
			02/02/2001				
0.30 1.0	B1		0.00	0.00	Turf over TOPSOIL	(0.40)	
0.70	W7					0.40	
1.20 1.55	U2	13 blow 380mm recovered	0.00		Soft to firm brown CLAY	(1.30)	
1.70	D3					1.70	
2.0 2.65	D4	S SW 0 N-10 1 1/1 2 3 4	2.00	0.70	Loose to medium dense dark brown slightly gravelly silty fine and medium SAND. Gravel is fine and subrounded	(1.80)	
2.0 2.5 2.0 2.65	DS BS						
3.20 3.65	D8	S SW 0 N 8 5/5 7 8 8	3.00	1.80		3.50	
3.70 4.65 3.70 3.65	D9 B10						
4.0 4.55	D11	B SW 0 N 15 3 4/3 2 3 8	4.00	2.20	Medium dense orange brown clayey sandy subangular medium and coarse limestone GRAVEL	(1.70)	
4.0 4.65	B12						
5.00 5.41	D13	S SW 0.50 3 2/5 7 10 19 for 35mm	5.00	3.00		5.20	
5.50 5.50 5.65	D14 D 5	S SW - 0.50 5 for 20mm /50 for 3 mm			Weak to moderately weak orange dark brown medium and coarse subangular sandy LIMESTONE Recovered as a coarse angular gravel	(0.85pon)	
			02/02/2001				
			5.00	3.00		6.0	
					EXPLORATORY HOLE ENDS AT 6.05m		

Groundwater
No Strike Bh
1 2.00m Rising to 0.70m after 20 mins

Remarks
Chiselling 5.20m to 5.65m 00minutes
Hole backfilled 0.00m to 6.05m Arisings (B)

Notes For explanation of symbols and abbreviations see key sheet All depths and reduced levels in metres Stratum thickness given in brackets in depth column
Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Job No 120210
Co-ordinates Easting Northing

Borehole BH2
Sheet 1 of 1

26-Apr-2001 12:15:53 ESG Log v2.09

Borehole Log

Exploration Associates

Drill d by LC L og d by GD Checked by	Eq pm t d M th ds In sect n P t f m 0 00m to 1.20 C blo Percus ion 150 mm diam t r from 1 20m t 50r	Gr und L l N bonal Gr d C ord s

Samples and Tests

D pth	Typ & N	R c rds	Dat C q	Tm Wat r
0 30 1 0	B1		02/02/2001 0 00	0 00
1 20 1 65	U2	14 blow 360mm rec v d		
1 70	D3			
2 00 2 45	D4	S SW 0 N–3 1 -/1 1 1	2 00	1 50
2 00 2 45	B5			
3 00 3 45	D6	S SW 0 N–6 1 -/1 2 2 1	3 00	1 20
3 00 3 5	B7			
4 00 4 4	D8	S SW 0 N a 1 2/2 1 3 N Racovery	4 00	2.50
UU	B9			
1 80 23	D10	S SW 0 50 25 -/10 1 10 for 50mm	80	1 00
4 90 5	a11			
6 00 6 42	D12	S SW 0 n 25 -/50 for 47mm	6 00	0 30
			05/02/2001 6 00	0 30
6 20	D13			

Strata

D scription	D pth L cl (Thi k n s)	L g d
Turf o er TOPSOIL	(0 40)	
	0 40	
Firm grey gra elly CLAY Gravel is angular fine and medium including cinders Occa ional pockets (up o 30mm) of ash (Possibly made ground)	(1 60)	
	2 00	
Very loose to loose dark brown clayey gravelly fine o coarse SAND Gra el is subangular to subrounded fine to coarse	(2.60)	
	4 50	
Very den e orange ll y sandy ngular medium and coarse GRAVEL o sandy lim tone	(1 40)	
Weak to moderately weak orange brown medium and coarse subangular grained andy LIMESTONE	6 0 (0 0p)	
EXPLORATORY HOLE ENDS AT 6 30 m	6 0	

Gro ndw tc
No Stru k Bella our
1 2 00m Rl g t 1 50m after 20 mins

Remarks
Chiselling 6 00m t 6 30m 60m nules
Hole backfill 0 00m to 2.00m Bentonile (b) 4 80m to 6 50m Bent t (b) Surface protection Slop Cock Cove
Standpipe P e om ter nstalled IS1 u ar le response zone from 2.00m to 4 80m

N t F explanation f symbols a d abbre iatio kcy sh et All depths and d ccd lev la n etr Strat m thickne s given in br ckt in depth c lumn S le 1 50

Proj t MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Proj ct no 120219
C r lod tf En ir nment Ag y

Borehole BH3
Sheet 1 of 1

.GDT 12/01 12:15:59 ESGL gv2 08

Borehole Log

Exploration Associates

Drilled by LC Logged by GO Checked by	Equipment Method Inspection Pit from 0.00m to 1.20m Cable Percussion 150 mm diameter from 1.20m to 2.50m	Ground Level National Grid Coordinates

Samples and Tests

Depth	Type & No	Record	Date / Casing / Water
			05/02/2001 0.00 0.00
0.50 1.50	B1		
1.00 1.45	U	12 blows	
2.00 2.45	D3 D4	S SW – 0 N–6 1 1/1 2 1 2 N Recovery	2.00 0.00 05/02/2001 2.00 0.00

Strata

Description	Depth Level (Thickness)	Legend
Turf over TOPSOIL	(0.40)	
	0.40	
Soft grey brown CLAY	(1.20)	
	1.60	
Loose grey brown slightly gravelly medium and coarse SAND. Gravel is subrounded fine and medium	(0.90pen)	
EXPLORATORY HOLE ENDS AT 2.50 m	2.50	

Groundwater
No Strike Encountered

1 1.60m Rising to 0.80m after 20 minutes

Remarks
Hole terminated at 2.50m due to flooding of position

Hole backfilled 0.00m to 2.50m Arisings (a)

Notes For explanation of symbols and abbreviations see Key sheet. All depths and induced levels in metres. Strata thicknesses given in brackets in depth column.
Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project no 120219
Carried out for Environment Agency

Borehole **BH4**
Sheet 1 of 1

2b 492E01 12 16:05 ESGL gv2.08

Borehole Log

Exploration Associates

Dnll d by LC
L gg d by GD
Ch k d by

Equipm t d M th ds
I peoll I P I from 0 00m to 1_0m Cabl Percussion 150 mm diametar fr m 1 0m t 10 00m

Gr und Le l
Natı l Grid
Co d t

Samples and Tests / Strata

Depth	Typ & N	R rds	D t Ca g	Tim W t	D p	Depth L (Thi k s)
			31 01/2001 0 00	0 0n	Turf o er TOPSOIL	(0 30)
0 30 1 00	B1					0 30
1 00	W11				MAUE GROUND Loose brown gravelly medium and coarse sand Gravel is angular medium and coarso	(1 10)
20 1 85	D	C 5W 0 N-5 3 3/2 1 1 1				
1 _0 1 35	B3					1 40
00 2 45	U4	10 bl w				
2 50	D5				Very soft blue grey brown CLAY With some dark brown organic matenat	(40)
70	W17					
3 00 3 45	D6	5W 0 N 3 1 1 1 1	3 00	dry		
3 00 3 45	B7					
3 90	08					3 80
4 00 4 45	U9	10 blows	4 00	dry	Soft dark brown sandy CLAY	(0 70)
4 50	D10					4 50
5 00 45	D12	S SW 0 N 8 1 1 2 2 3	5 00	1 00	Loose grey dark brown clayey fine to coarse SAND and angular o subroundod fine to coarse GRAVEL Occasional cobble of limestone	(1 _0)
5 00 54	B13					
5 70 5 00	B14					5 70
6 00 45	U15	0 bl ws				
6 50	D16				Firm laminated brown CLAY	(1 50)
7 20 6	D18	S 5W 0 N 5 1 2/2 1 1 1 N Recovery	7 00	3 00		7 20
7 20 7 65	B19				Loose grey brown slightly silty fine to coarse SAND and ubangular to subrounded fine and medium GRAVEL of limestone	(1 0)
8 00 8 45	D 0	C 5W 0 N 9 1 2/1 2 3 3	8 00	3 60		
8 00 8 45	B21					8 40
8 50 9 00	B					
9 00 9 45	U23	55 blow 135mm recovered	9 00	5 00	Very stiff gray black CLAY	(1 50pen)
9 50 9 0 9 95	D 4 025	S 5W 0 N-46 3 5/6 3 14 18				
			31/01/2001 9 00	2 50		10 00
					EXPLORATORY HOLE NDS AT 10 00 m	

Groundwater
Ne Struck Seha
1 2 60m Slight l flow
2 4 0m Rise a t 1 00m aft 20 m n
3 7 20m R ing 1 2 50m after 20 m

Remarks
Hole backfill 0 30m l 3 00m B t 1 (b) 5 70m l 7 20m Bentor t (b) Surface protection Stop Cock Cover
Standpipe Piezom ter installed 19m i dia ter re po zona from 3 00m to 5 70m

N te pl nation t bols a u abbr st y h et All depths a d d d l vel lre S ra m thickne giva n br ck t n depth lum
Scale 1 50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
P j 1 0219
C rl c utr En Ir m 4g /

Borehole **BH5**
Sheet 1 of 1

2 4/4/2001 12 16 12 ESGLog v2 03

Borehole Log

Exploration Associates

Drilled by LC Logged by GD Checked by	Equipment and Methods Inspection Pit from 0.00m to 1.20m Cable Percussion 150 mm diameter from 1.20m to 12.00m	Ground Level Nominal Grid Coordin

Samples and Tests

Depth	Type & No	Results	Dist Timing	Water
			01/0_/2001	
0.30 1.0	B1		0.00	0.00
1.20 1.65	U2	11 blows 315mm recovered		
1.0	W7			
0	03			
00 _.45	04	S SW – 0 N 1 1 / 1	_.00	dry
2.00 2.45	B5			
3.00 3.45	05	S SW 0 N–5 _.2/2,1 1 1	3.00	1.50
3.00 3.4	B3			
4.00 4.45	D0	S SW 0 N 3 1 /1 1 1	4.00	1.90
4.00 4.4	B10			
00 5.45	D11	3 SW 0 N=6 1 2/2 1 2,1	00	2_.0
00 5.45	312			
00 5.45	U13	40 blow	5.00	5.40
6.50	D14			
7.30 7.75	D15	S W 0 N 8 1 2/1 2,3 No Return	7.20	1.80
7.30 7.75	B1			
8.00 8.45	D17	C SW 0 N 7 2 2/1 2 1 3	8.00	2.00
3.00 8.45	318			
8.70	D19			
9.00 9.45	D20	S SW – 0 N=28 3 8/S 8 7 9	9.00	7.00
9.00 9.4	321			

Strata

Description	Depth Level (Thickness)	Legend
Turf over TOPSOIL	(0.40)	
	0.40	
MADE GROUND Soft brown mottled orange slightly gravelly sandy clay Gravel is subrounded to rounded fine and medium Some brick fragments	(2.40)	2 3 1 2
	2.80	
Loose dark gray black slightly gravelly silty fine to coarse SAND Gravel is subangular fine and medium	(2._0)	
	5.00	
Soft thinly laminated brown CLAY	(2.30)	3
	7.30	
Loose grey brown fine to coarse SAND and subroundsd fine to coarse GRAVEL of limestone	(1.40)	4
	8.70	
Soft gray CLAY Becoming stiff at 9.45m Becoming vey stiff at 10.50m	(3.30)	

Ground water

No Struck Bore

1 2.40m Slight flow
2 2.80m Rising to 1.50m after 20 mins
3 7.30m Rising to 1.80m after 20 mins

Remarks

Notes Explanation of symbols and abbreviations see key sheet All depths and reduced levels in metres Stratum thickness given in brackets is in depth of mm.
Scale 1:50

Project: MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No: 1 0 19
Carried out for: E m Agency

Borehole: **BH6**
Sheet 1 of 2

ESL 021 12 6.20 ESGL 9 2.08

Borehole Log

Exploration Associates

Drilled by LC Logged by GD Checked by	Equipment and Method See sheet 1	Grid Ref National Grid Coordinates

Samples and Tests

Depth	Type & No	Recovered	Depth Casing	Water
10.50 10.95	U 2	70 blows 225 mm recovered	10.50	dry
11.00	D23			
11.50 11.95	D 4	S SW 0 N 48 5 7/9 11 13 15	10.50	dry
1 .50 11.95	025		01/02/2001 10.50	1 8

Strata

Description	Depth Level (Thick)	Legend
As sheet 1	(3.30pen)	
EXPLORATORY HOLE ENDS AT 12.00 m	12.00	

Groundwater
No Strike Recorded

Remarks

Note: For explanation of symbols and abbreviations see key sheet. All dimensions and recorded levels are in metres. Strata thicknesses given in brackets. Individual columns Scale 1:50

Project: MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No: 120.18
Correlation for Environment Agency

Borehole: BH6
Sheet 2 of 2

26/04/2001 12:16:25 ESGLog 2.08

Borehole Log

Exploration Associates

Drilled by LC Logged by GD Checked by	Equipment Method Inspection Pit 0 00m to 1 0m Cable Percussion 150 mm diameter from 1 0m to 10 00m	Ground Level Nabon Grid Coordinates

Samples and Tests

Depth	Type & No	Results	Date Casing Water
			9/01/2001 0 00 0 00
0 40 1 00	B1		
1 20 1 45 1 00 1 65	D B3	S SW 0 N 4 1 2/1 1 1	1 20 dry
1 50 00 4	04 US	13 blows 315 mm recovered	00 dry
2 50	D6		
3 00 3 15 00 3 45	D7 B8	S SW 0 N 4 1 1/1 1 1 1	3 00 dry
3 50	W11		
3 90 00 4 45	W20 U9	14 blow 2 5mm recovered	4 00
4 50	D10		
00 5 45 5 00 5 45	D12 B13	S SW - 0 N=1 1 1	5 00 3 00
5 00 6 45	U14	19 blows 180mm recovered	5 00 5 00
5 50	D15		
7 00 7 45 00 7 45	D16 B17	S SW 0 N 11 1 1/1 2 3 5	7 00 5 30
3 00 8 45 8 00 3 45	D19 B19	S SW 0 N 14 1 1/1 3 4 6 N Ret rn	8 00 4 30
9 00 9 45 9 00 9 45 9 50 9 50 9 80	D21 B2 D 3 B24	C SW - 0 N=32 9 8/7 3 8 9 Sand tiled erotinct r d	8 00 4 0 30/01/2001 9 00 4 2

Strata

Depth	Level (Thickness)	Legend
Turf over TOPSOIL	(0 30)	
MADE GROUND Very loose to loose black angular medium and coarse ash and cinder gravel With bricks and brick fragments	0 30 (1 60)	
MADE GROUND Soft brown sandy clay with brick fragments	1 90 (1 10)	
MADE GROUND Very soft to soft grey brown slightly sandy clay with brick fragments	3 00 (2 00)	
Very soft grey brown CLAY	5 00 (1 00)	
Grey slightly gravelly silty SAND Gravel is rounded medium and coarse With some limestone cobbles	6 00 (0 80)	
Firm grey brown sandy CLAY With thin bands of cemented sand	6 80 (0 00)	
Medium dense to dense grey clayey fine to coarse SAND and rounded fine to coarse GRAVEL Strong petrol odour	7 0 (30pen)	
EXPLORATORY HOLE ENDS AT 0 00 m	10 00	

Groundwater
No Struck Rest Water
1 4 00m Rising to 3 30m after 20 mins
2 7 70m Rising to 3 80m after 30 m

Remarks
Hole backfilled 0 30m to 3 00m Bentonite (b) 5 00m to 8 00m Bentonite (b) Surface protection Stop Cock Cover
Standpipe installed 50mm diameter response zone from 3 00m to 10 00m
Steel pipe installed 50mm diameter response zone from 8 00m to 10 00m

Notes Key to abbreviations See key sheet All depths and reduced levels in metres Stratum thickness given in brackets and depth column Scale 50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No 120219
Client Client Name Agency

Borehole BH7
Sheet 1 of 1

26/04/2001 12 1 31 ESGL 8 2 06

Borehole Log

Exploration Associates

Drilled by MSS Logged by GD Checked by	Equipment and Method Inspection Pit from 0.00m to 1.20m Cable Percussion 38 mm dia meter from 1.0m to 5.40m	Ground Level 0.00 m OD Northing/Grid Coordinates

Samples and Tests

Depth	Type & No	Records	Date Casing Water
			05/02/2001
1.00 2.80 1.80 25	D1	S SW 0 N 4 1 1/2 1 1	06/02/2001
3.00 3.45		S SW 0 N 1 /1 1	
3.40 4.00	D2		
4.00 4.60	D3		
4.20 4 5		S SW 0 N 11 1 √1 1 3 G	
4.60 80	D4		
4.60 5.25		S SW 0 N 12 8 /3 4 2,3	
5.80 6.40	D5		
9.00 8 4		S SW 0 N=12 2 3/3 2 3 4	06/02/2001 1.80

Strata

Description	Depth Level (Thickness)	Legend
MADE GROUND Ralumac Tarma	0.01	
MADE GROUND Asphalt	0.11	
MADE GROUND Basscourse	0.1 0.41	
MADE GROUND Hardcore		
MADE GROUND Very loose brown gravelly medium sand Gravel is subangular fine to coarse	(2.49)	
Very soft grey organic CLAY	2.90 (1.70)	
Medium dense grey gravelly very clayey fine to coarse SAND Gravel is subangular fine and medium	4.60 (1.20)	
Soft becoming firm laminated brown grey CLAY with occasional fine sand lensas	5.80 (0.60pen)	
EXPLORATORY HOLE ENDS AT 6.40m	6.40	

Groundwater
No Strike Behaviour
1 1.70m landing at 1.70m after 20m rulas

Remarks
Hole backfill 0.00m to 5.40m Arisings (a)

Notes For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres Stratum thicknesses are given in brackets depth column Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project no 120219
Client Environment Agency

Borehole **BH9A**
Sheet 1 of 1

b:01/2001 12 16 38 ESGLog 2.08

Borehole Log

Exploration Associates

Drilled by MSS Logged by GD Checked by	Equipment and Methods Inspection Pit from 0.00m to 1.50m. Cable Percussion 36 mm diameter from 1.50m to 7.60m	Ground Level Northing/Grid Coordinates

Samples and Tests				Strata		
Depth	Type & No	Records	Date Casing Water	Description	Depth Level (Thickness)	Legend
			06/02/2001	MADE GROUND Reinforced Tarmac	0.01	
				MADE GROUND Asphalt	0.11	
				MADE GROUND Basecourse	0.21	
				MADE GROUND Hardcore	0.41	
			08/02/2001			
1.90 2.2		S SW 0 N 4 11/1 1 1 1		MADE GROUND Very loose to loose brown slightly gravelly sand. Gravel is subangular fine and medium	(2.39)	
2.90 4.00	D1				2.80	
3.00 3.45		S SW 0 N=3 1 1/1 1 1		Very soft grey organic CLAY	(1.90)	
4.00 4.70	D2				4.70	
4.20 4.65		S SW 0 N 3 1 1/ 1 1 1		Medium dense grey slightly gravelly fine and medium SAND. Gravel is subrounded fine and medium	(1.00)	
4.80 5.S		S SW = 8 N=1 6 5/4 3 2 3			5.70	
00 6.4		S SW 0 N=12 3 3/3 3 3 3		Soft becoming firm laminated brown grey CLAY with occasional lenses of fine sand	(1.90pon)	
6.70 7.00	D3					
30 7.60	D4					
7.0 7.30		S SW 0 N=20 /5 5 6 4	08/02/2001 1.80			
				EXPLORATORY HOLE ENDS AT 7.60 m	7.60	

Groundwater
No Strike Encountered

1 1.80m standing at 1.380m after 20mins

Remarks
Hole backfilled 0.00m to 7.60m Auger ( )

Notes: For explanation of symbols and abbreviations see key sheet. All depths and cased depths levels in metres. Strata thicknesses given in brackets. In depth column Scale 1:50

Project: MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project: 120219
Client: Environment Agency

Borehole: **BH9B**
Sheet 1 of 1

2.00/2 01.12.1 44 ESCLog v2.08

Borehole Log

Exploration Associates

Drilled by MSS Logged by CD Checked by	Equipment and Method Inspection Pit from 0.00m to 1.00m Cable Percussion 38 mm diameter from 1.00m to 6.00m.	Ground Level National Grid Coordinates

Samples and Tests

Depth	Type & No	Recovery	Date Time Casing Water
			10/02/2001
1.00 1.60	D1		
1.20 1.85		S SW – 0 N 31 6 7/8 9 10 4	
1.50 2.5		S SW 0 N 4 1 1/1 1 1 1	0.00
2.0 3.40	D2		
4.0 2.8		S SW 0 N 4 1 /1 1 1 1	
4.00 4.50	D3		
4.0 4.65		S W 0 N=6 2 2/2 1 2 1	
4.90 2.5		S SW 0 N 39 4 7/10 10 9 10	
5.00 5.00	D4		
5.40 5.85		S SW 0 N=33 8/8 5 8 9	
			10/02/2001 1.30

Strata

Description	Depth Level (Thickness)	Legend
MADE GROUND Dark brown slightly gravelly sandy clay Gravel is subangular and fine With cinders and brick fragments	(1.80)	
	1.80	
Loose occasionally very loose brown very clayey fine to coarse SAND and subrounded fine to coarse GRAVEL	(2.60)	
Dark brown amorphous sandy PEAT	4.40	
Dense brown grey fine to coarse SAND and subangular to subrounded fine to coarse GRAVEL	4.50 (0.60)	
	5.10	
Firm to stiff laminated brown CLAY with lenses of fine sand	(0.90pen)	
EXPLORATORY HOLE ENDS AT 3.00 m	5.00	

Groundwater
No Struck Bch o
1 1.60m Rising to 1.50m after 20 min

Remarks
Hole backfill 0.00m to 6.00m Arisings (s)

Notes For explanation of symbols and abbreviations see Key Note All depth and reduced Level measurements Stratum thickness in brackets and depth in metres Scale 1 50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project no 120219
Computer entry Agency

Borehole **BH10**
Sheet 1 of 1

Borehole Log

Exploration Associates

Drilled by LC Logged by GD Checked by	Equipment and Method Inspection Pit from 0.00m to 1.20m Cable Percussion 150 mm diameter from 1.0m to 12.00m	Ground Level National Grid Coordinates

Samples and Tests					Strata		
Depth	Type & No	Recovery	Date Casing Water	Time	Description	Depth Level (Thickness)	Legend
			30/01/2001		Thin veneer of turf over TOPSOIL		
0.00 0.50	B1		0.00	0.00	MADE GROUND Coarse sand and gravel	0.00	
0.50 1.30	B2					(0.30)	
					MADE GROUND Tarmac (drillers description)	0.50	
						0.60	
1.00 1.75	D3	S SW 0 N 3 3 2/1 1 1	1.30	dry	MADE GROUND Hard rolled crushed stone	(0.90)	
1.30 1.75	E4						
						1.50	
2.00 2.45	D	S SW 0 N 7 1 2/1 2 2 1			MADE GROUND Soft grey brown gravelly clay Gravel is medium and coarse and angular With brick fragments	(1.20)	
2.00 2.45	B5						
2.80	D7					2.70	
3.00 3.45	U8	7 blows	3.00	dry			
3.50	D9						
4.00 4.45	D10	S SW 0 N 1 1 1/ 1	4.00	dry			
4.00 4.45	B11				Very soft grey sandy CLAY Sand is fine	(3.20)	
5.00 5.45	U12	11 blows 315mm recovered	5.00	dry			
5.50	D13	Sample lost Cobbles			At around 5.50m and 6.0m cobbles of calcareous gritstone or sandy limestone		
5.90	D14					5.90	
6.00 6.45	D15	S SW 0 N=14 2/2 3 4 5	6.00	dry			
6.30 6.45	B16						
7.00	D17						
7.50 7.95	U18	50 blows 405mm recovered	7.50	dry			
8.00	D19				Firm laminated grey CLAY	(6.10)	
8.50	D20						
9.00 9.45	D21	S SW 0 N=29 3 4/7 7 7 8	9.00	dry	Stiff below 9.0m		
9.00 9.45	B22						

Groundwater
Not encountered

Remarks
Hole backfilled 0.30m to 4.50m Bentonite (b) 5.70m to 6.50m Bentonite (b) Surface protection Stop Cock Cover
Standpipe Piezometer installed 19mm diameter response zone 1.30m to 4.50m and 5.70m

Notes for general symbols and abbreviations see key note All depths and reduced levels are in metres Stratum thicknesses are given in brackets in depth column Scale 1:50	Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME Project No 120219 Contractor Exploration Agency	Borehole BH11 Sheet 1 of 2

Borehole Log

Exploration Associates

Drilled by LC Logged by GO Checked by	Equipment and Method See sheet 1	Ground Level National Grid Coordinates

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
10.00	U23			
10.50 10.95	U24	55 blows 405mm recovered	10.50	dry
11.00	D25			
11.50 11.95	D25	SPT N=43 5/7/9/10/16	11.50	dry
11.50 11.95	B27		30/01/2001 11.50	dry

Strata

Description	Depth Level (Thickness)	Legend
As sheet 1	(5.10pen)	
EXPLORATORY HOLE ENDS AT 12.00 m	12.00	

Groundwater

Remarks

Note: For explanation of symbols and abbreviations see key sheet 1. All depths and reduced levels in metres. Stratum thickness in brackets. Scale 1:50

Project: MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME

Project no. 120219

Carried out for Environment Agency

Borehole **BH11**

Sheet 2 of 2

2nd-Jul-2001 15:43 ESCLog v2.03

Borehole Log

Exploration Associates

Drilled by MSS Logged by GD Checked by	Equipment and Method Inspection Pit from 0.00m to 1.00m. Cable Percussion 38 mm diamotor from 1.00m to 5.50m	Ground Level 0.00m OD National Grid Coordinates

Samples and Tests

Depth	Type & No	Records	Date / Casing / Water
0.30 0.50 1.00	D1 D2		06/02/2001
1.00 1.60	D3		
1.20 1.65		W 0 N 3 11/12 21	
1.50	D4		
2.40 2.85		S SW 0 N 16 35/5 4 3 4	
3.00 4.00	D		
3.60 4.05		S SW 0 N-6 12/12 11	
4.50 5.0	D6		
4.80 5.5		S SW 0 N 40 36/7 9 11 13	
			06/02/2001 4.30

Strata

Description	Depth Level (Thickness)	Legend
MADE GROUND Turf overlying brown clayey brown fine and medium sand	(1.30)	
MADE GROUND Firm brown lightly gravelly sandy clay Gravel is subangular to rounded fine and medium With brick fragments	1.30 (1.40)	
Soft laminated grey brown sandy CLAY with lenses of organic material	2.70 (1.80)	
Dense brown slightly gravelly fine and medium SAND Gravel is subrounded and fine	4.50 (1.00p.n)	
EXPLORATORY HOLE ENDS AT .0 m	5.50	

Groundwater
No Strike Both hour
1 4.20m rising to 4.30m after 0minute

Remarks
Hole backfilled 0.00m to 5.50m Arising (a)

Note: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Strata thickness given in brackets. Datum is 0.00m

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No 128219
Carried out for Environment Agency

Borehole WS1
Sheet 1 of 1

2.4) 001 12 16 49 ESGLog v2 08

Borehole Log

Exploration Associates

Drilled by MoS Logged by GD Checked by	Equipment and Method Inspection Pit from 0.00m to 1.0m Cable Percussion 33 mm diameter from 1.20m to 3.40m	Ground Level National Grid Coord

Samples and Tests

Depth	Type & No	Results	Date Casing Water
1.00 1.60	D1		13/02/2001
1.20 1.65		S SW 0 N 8 12/23 21	
2.40 2.85		S SW 0 N 4 11/11 1 1	0.00
3.60 4.05		S SW 0 N=12 11/14 3 4	
4.80 5.5		S SW 0 N 17 3 4/3 4 4 6	
5.00 5.0	D2		
5.00 5.45		S SW 0 N=40 9 7/9 9 10 12	13/02/2001 1.50

Strata

Description	Depth Level (Thickness)	Legend
MADE GROUND Light brown rounded coarse gravel		
MADE GROUND Light brown sandy fine to coarse angular limestone gravel With occasional cobbles	0.20 (0.50)	
MADE GROUND Loose brown fine to coarse sand and angular to subangular fine and medium gravel With brick fragments and cinders	0.70 (0.90)	
Very loose to loose brown medium SAND with occasional bands of sandy clay	1.60 (2.10)	
Medium dense becoming dense brown grey fine to medium SAND and angular fine to medium GRAVEL	3.70 (2.70osn)	
EXPLORATORY HOLE ENDS AT 5.40m	6.40	

Groundwater
No Strike Behaviour
1 1.00m light inflow

Remarks
Hole backfilled on completion 6.40m Arisings (a)

Notes For explanation of symbols and abbreviations see key sheet. All depths and recorded levels are metres. Stratum thickness given in brackets in depth column
Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project 120219
Recorded by Environment Agency

Borehole **WS2**
Sheet 1 of 1

b:\04.01 12 16 57 ESGL.gv2 03

Borehole Log

Exploration Associates

Drilled by MSS Logged by GD Checked by	Equipment and Method Inspection Pit from 0.00m to 1.00m Cable Percussion 38 mm diameter from 1.00m to 7.00m	Ground Level National Grid Coordinates

Samples and Tests				Strata		
Depth	Type & No	Record	Date Time Casing Water	Description	Depth Level (Thickness)	Legend
			06/02/2001	MADE GROUND Black paving overlying light brown fine to medium sand	0.20	
				MADE GROUND Grey SAND and GRAVEL Sand is fine to coarse Gravel is subangular and fine	0.30	
1.00 1.60	D1					
1.20 1.65		SSW 0 N 7 1 1 2 2 2				
1.80 2.25		SSW 0 N 5 2 1 1 2 2				
2.40 2.85		SSW 0 N 5 1 1 1 1 2 1				
				MADE GROUND Loose occasionally very loose dark brown clayey fine and medium sand and subangular fine and medium gravel With brick cobbles and cinders	(4.90)	
3.60 4.05		SSW 0 N 3 1 1 1 1				
4.80 5.25		SW 0 N 4 1 1 1 1 1				
0 0.20	D2				5.20	
5.40 .85		SSW 0 N 12 3 3 3 3 3		Soft brown grey sandy CLAY with occasional bands of fine and medium sand	(1.00)	
6.00 6.45		SSW 0 N 14 3 3 3 3 4 4				
5.20 7.00	D3				6.20	
6.60 7.05		SSW 0 N 121 7 7 8 93 10 10		Dense brown fine and medium SAND	(0.80pen)	
			06/02/2001 dry			
				EXPLORATORY HOLE ENDS AT 7.00 m	7.00	

Groundwater encountered.

Remarks
Hole backfilled 0.00m to 7.00m After logging.

Notes For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres Stratum thickness given brackets in depth column
Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No 1220 19
Recommended for Engineering Agency

Borehole WS3
Sheet 1 of 1

20/04/2001 12:17:02 ESGLog v2.08

Borehole Log

Exploration Associates

Drilled by M35 Logged by GD Checked by	Equipment and Method Inspection Pit from 0.00 to 1.30 Cable Percussion 38 mm diameter from 1.30m to 6.00m	Ground Level National Grid Coordinates

Samples and Tests

Depth	Type & No	Recovery	Date / Time Casing / Water
1.80 2.20	D1		10/02/2001
1.80 2.25		SPT N=2 (1,1/1,1)	
2.00 3.40	D2		
3.00 3.45		SPT N=3 (1,1/1,1)	
4.00 4.60	D3		
4.20 4.66		SPT N=10 (2,3/2,3)	
5.00 6.00	D4		
5.40 5.85		SPT N=38 (5,6/8,9,3,10)	
			10/02/2001 3.00

Strata

Description	Depth Level (Thickness)	Legend
CONCRETE.	0.15	
MADE GROUND Hardcore	0.40	
MADE GROUND Very loose brown slightly clayey sand and gravel With cinders	(3.20)	
Soft becoming firm occasionally stiff brown sandy gravelly CLAY Gravel is subangular to subrounded fine to coarse	3.60 (Compan)	
EXPLORATORY HOLE ENDS AT 6.00 m	6.00	

Groundwater
No Struck Behaviour
1 3.00m slight seepage

Remarks
Hole backfilled 0.00 to 6.00 n Arisings (a)

Notes For explanation of symbols and abbreviations see key sheet All depths and reduced levels in metres Strata thickness given in brackets in depth column
Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No 120219
Carried out for Environment Agency

Borehole WS4
Sheet 1 of 1

29/04/2001 11:21:07 ESGLog 2.03

Borehole Log

Exploration Associates

0 ll d by MSS L ggod by GD Ch k d by	Eq lpm .n d M thod In.pection Pit from 0 00m lo 1.20 n Cable Percussion 36 mm diameter from 1 20m to 6 00m	Gr Und L v l N t al Gnd C rdinates

Samples and Tests / Strata

D pth	Typ & N	R o ds	Dat C g	T m Wal r	D dpn	0 ptn L vol (Th k)
0 0 1 00	D1		06/0_/ 001		MADE GROUND Turf overlying brown fine and medium sand	(0 60)
						0 60
					Brown fina and medium SAND	(0 50)
1 20 1 0	D2			1		1 20
1 60 2 20	D3				Firm brown slightly gravally sandy CLAY Gravel is angular to subangular fine to coarse	(0 80)
1 30 2.25		S .W 0 N 7 1 1/1 2 2,2				
0 2.80	D4					2.00
3 00 4 00	D5				Medium dense occasionally dcn c brown slightly clayay medium SAND and subangular fine to medium GRAVEL	(2 .0)
3 00 3 45		S 6W 0 N 20 3 4/5 5 5 5				
3 60 4 05		S SW 0,N-33 4 6/7 9 10 7				
4 00 4 50	D6					
4 20 4 65		S SW 0 N 18 ? 3/4 5 4 5				
4 50 5 00	07					4 0
4 80 5 25		S SW 0 N 4 3 4/6 6 6 6			Firm to tiff brown grey CLAY with mudstona fragments	(1 60pe)
5 40 85		S SW 0 N 20 5 5/5 5 5 5				
50 00	08					
			06/02/2001	1		5 00
					EXPLORATORY HOLE ENDS AT 8 00 m	

G ou dw te N Sln ck B h lo 1 1 20m light ecp g	Rem rks H le backfill 0 00m to 5 00m Arsmgs (a)

N les For pl l f ymbols and obre l on see key sheet All d pth and duc d level n melres St al m th k e d en n brackets in d pth colum S 1 1 50	Proj t MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME Pr j t n 120219 C d ut E onm t Ag n y	Borehola **WS5** Sheet 1 of 1

26/04/2001 12 17 12 ESGLog 2.08

Borehole Log

Exploration Associates

Drilled by MSS Logged by GD Checked by	Equipment and method Inspection Pit from 0.00m to 1.00m Cable Percussion 38 mm diameter from 1.00m to 7.00m	Ground Level NGR and Coordinates

Samples and Tests

Depth	Type & No	Record	Date Time Casing Water
0.00 0.70	D1		13/02/2001
1.20 1.65		S SW 0 N-8 2 1/2 2 2.2	
2.40 2.85		S SW 0 N 3 1 1/1 1 1	
3.00 4.00	D2		
3.00 4.05		S SW = 0 N=6 1 1/2 1 1	
4.00 5.20	D3		
4.80 5.15		S SW 0 N=4 2.1/1 1 1 1	
6.00 6.45		S SW 0 N 25 3 3/3 10 7 5	
6.50 6.95		S SW 0 N=49 8 7/7 18 13 11	
			13/02/2001 0.30

Strata

Description	Depth Level (Thickness)	Legend
MADE GROUND Light brown sand and limestone gravel	(0.70)	
	0.70	
MADE GROUND Loose becoming very loose dark brown ash and cinders	(1.90)	
	2.60	
Soft grey organic CLAY	(1.50)	
	4.10	
Very loose to loose dark grey slightly gravelly very clayey fine to medium organic SAND with occasional pockets of soft clay Gravel is subangular to subrounded fine and medium	(1.60)	
	5.70	
Stiff brown gravelly CLAY Gravel is angular fine to medium of limestone	(0.40)	
	6.10	
Medium dense becoming dense light brown fine to coarse SAND and subangular fine to coarse GRAVEL	(0.90can)	
EXPLORATORY HOLE ENDS AT 7.00 m	7.00	

Groundwater
No Strike Rise to
1 1.20m Rising to 0.90m after 20 mins

Remarks
Hole backfilled 0.00m to 7.00m Arisings ( )

Notes For explanation of symbols and abbreviations see key sheet All depths and quoted to the nearest cm Stratum thickness given in brackets in depth column
Scale 1 0

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No 120219
Carried out for Environment Agency

Borehole
WS6
Sheet 1 of 1

01 12 17 18 ESGLog v2.06

Borehole Log

Exploration Associates

Drilled by VISS Logged by GD Checked by	Equipment Method Cable Percussion 38 mm diameter from 0.00m to 1.10m	Ground Level National Grid Coordinates

Samples and Tests

Depth	Type & No	Record	Date Casing Water
0.30 0.40 1.00 0.40 0.85	D1 D2	S SW – 0 N 75 6 10/15 17 19 24	13/0../ 001 13/0../ 001 dry

Strata

Description	Depth Level (Thickness)	Legend
Dark brown TOPSOIL	(0.60)	
Weak light brown LIMESTONE.	0.60 (0.50pan)	
EXPLORATORY HOLE ENDS AT 1.10 m	1.10	

Groundwater
No groundwater encountered

Remarks
Hole backfilled 0.00m to 1.10m Arisings (a)

Notes For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets. Depth column.
Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No. 120219
Cert. Ref. Environment Agency

Borehole
WS7
Sheet 1 of 1

2e404-001 12 1 21 ESGLog V2.00

Borehole Log

Exploration Associates

Drill a oy MSS L gg d by GD Cheek d by	Equipm nt ane M tn d Inspection Pit from n n0m t 1 20m Cable Percussion 38 mm diametsr ?om 1 20m t 6 00m	G nd Le l N b al Grid C ordinat

Samples and Tests

D pth	Typ & No	R c rds	Oat Tm Caeing W er
0 10 1 00	01		10/02/2001
1 ?0 1 85		S SW – 0 N 4 1 /1 1 1 1	
2.00 2 80	D2		
2.40 _85		S SW a N 13 2 2/3 3 3 4	
2 80 3 40	D3		
3 00 3 45		S SW 0 N 18 4 4/4 4 S 5	
4 00 4 90	D4		
4 20 4 6		S SW 0 N 6 3 3/4 4 4 4	
5 0 5 85		S SW – 0 N 28 5 5/7 7 7 7	
			10/0 /2001 0 70

Strata

Dc-cnp on	D pth L l (Th hn ss)	Legend
Turf o er brown TOPSOIL Occasional fine rootlet	(0 40)	
	0 40	
Loose brown slightly gra elly clayey SAND Gravel is fine to madium	(1 S0)	
	2 00	
Medium dense brown clayey fine to coarse SAND and ubangular to ubrounded fine ta coarse GRAVEL.	(1 70)	
	3 70	
Medium dense grey brown slighby gravelly clayey fine to coarse SAND Gravel is subrounded fine and medium	(1.20)	
	4 90	
Medium dense grey brown claeyay fine to coarse SANO and angular to subangular fine o .oarse GRAVEL	(1 10pc)	
	6 00	
EXPLORATORY HOLE cNDS AT 00 m		

Gro ndwater
No Struck Benaviou
1 0 70m standing t 0 70m fter 20m na

R marks
Hole backlilt 6 00m lo 6 00m Anc ngc (a).

N las r explanatio f sy bola and aobreviation key .heat All depths snd reducod levels in metro Simtum th ck aas oiven in brackets in depin c lumn
Scale 1 50

Proj t MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Pr lect 120219
Ca nod Utf r En ronm t Ao ncy

Borehole **WS8**
Sheet 1 of 1

26/04/2001 12 17 25 ESGL p v2 03

Borehole Log

Exploration Associates

Drill d by MS5 L gg d by GD Ch ck d by	Eq pm a d M th da In-pection Pit fr m 0 00m l 1 20m C ble Percussion 38 mm diameter from 1 20m t 8 00m	Gro d L t Na l l Gnd C ordi t a

Samples and Tests

D pth	Typ & No	R rds	Date C g	Tm Water
			10/02/2001	
0 30 1 00	D1			
1 00 1 50	D2			
1 0 1 05		S SW 0 N 5 1 1/1 2 1 1		
1 80 2 0	D3			
1 80 5		S SW 0 N-4 1 1/1 1 1 1		
2 20 2 50	D4			
2 40 2 85		S SW 0 N 4 1 1/1 1 1 1	0 00	
3 00 D0	D5			
3 60 4 05		S SW 0 N=3 1 / 1 1 1		
4 60 5 0	D6			
4 80 5 5		S W 0 N 16 4 4/4 4 4		
5 20 5 80	D7			
5 40 a 85		S SW 0 N 25 5 5/5 5 7		
			10/02/2001 1 20	

Strata

Dea npti n	Dep h L t (Th k ss)	Lege d
Turf o er TOPSOIL	(0 30)	
	0 30	
MADE GROUND Loose brown gravelly sand with cinders Gravel is angular to subrounded fine to coarse	(1 00)	
	1 30	
Brown clayey SAND	(0 30)	
	1 60	
Soft brown sandy CLAY with occasional bands of firm clay	(2.40)	
	4 00	
Loose brown fine and medium SAND and angular fine to coarse GRAVEL	(0 60)	
	4 60	
Firm becoming stiff brown grey sandy CLAY	(1 40pen)	
	6 00	
EXPLORATORY HOLE ENDS AT 6 00m		

G u dwat r
No Stru k B h ur
1 1 00m Ru g t 1 20m after 20 m n

Remarks
Hole backfill 0 00m l 6 00m Art ings ( )

N t r explanati of ymbol and bbraviation k y sheet All depth and duced levels i m tre Stratum thick ss gi n n brackets d pth column Scale 1 50

Pro e t MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHENE
P ject n 120219
Car d utt r Envir nment Ag y

Borehole **WS9**
Sheet 1 of 1

25.04.01 12 17 30 ESGLog v2.03

Borehole Log

Exploration Associates

Drilled by MSC Logged by GD Checked by	Equipment and Method Inspection Pit from 0.00m to 1.00m Cable Percussion 38 mm diameter from 1.00m to 4.60m	Ground Level National Grid Coordinate

Samples and Tests				Strata		
Depth	Type & No	Recovery	Date Casing Water	Description	Depth Level (Thickness)	Legend
			10/0 /2001	Dark brown TOPSOIL	(0.70)	
1.20 1.05		S SW – 0 N–3 1 /11 1			0.70	
1.50 2.00	D1			Soft brown slightly gravelly sandy CLAY Gravel is subangular fine and medium	(2.30)	
2.00 2.30		S SW 0 N 11 1 1/2 3 3 3				
3.00 3.00 3.00 3.45	D2	S SW 0 N 2 S 5/S S 5 5			3.00	
3.60 4.05		b bW 0 N 31 5 6/7 7 8 9		Stiff grey CLAY with mudstone fragments	(1.60pen)	
4.20 4.55		S SW – 0 N 43 7/9 10 12 12	10/0 /2001 3.50			
4.40 4.60	D3			EXPLORATORY HOLE ENDS AT 4.60 m	4.60	

Groundwater
N Struck Banavio
1 0.70m

Remarks
Hole backfilled 0.00m to 4.50m Arisings ( )

Notes For explanation of symbols and abbreviations see key All depths and reduced levels in metres Strata thicknesses given in brackets Inner horizontal datum Scale 1:50

Project MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No 120219
Carried out by Environmental Agency

Borehole **WS10**
Sheet 1 of 1

2s04\2DJ1 12 1c 53 ESGLog v7 08

Borehole Log

Exploration Associates

Drilled by MS Logged by GO Checked by	Equipment and Method Inspection Pit from 0.00m to 1.00m. Cable Percussion 38 mm diameter from 1.00m to 4.60m	Ground Level National Grid Coordinates

Samples and Tests

Depth	Type & No.	Results	Date / Casing / Water
10/02/00			
0.20 - 1.05		S 5, SW 0, N 1/1 1	
0.50 - 2.20	D1		
0.40 - 2.80		S 5, SW 0, N 1, 1/2 3 3 3	
3.00 - 3.50	D2	S 5, SW 0, N 2, 5 5/5 5 5 6	
3.60 - 4.05		B 5, W 1, N 11, 0/7 7 8 9	
4.30 - 4.55		S 5, SW 0, N 4, 6 7/9 10 12 12	
0.00 - 1.00			3.50
4.00 - 4.60	D3		

Strata

Description	Depth (Thickness)	Legend
Dark brown TOPSOIL.	(0.70)	
	0.70	
Soft brown slightly gravelly sandy CLAY. Gravel is subangular fine and medium.	(2.30)	
	3.00	
Stiff gray CLAY with mudstone fragments.	(1.60 Open)	
EXPLORATORY HOLE ENDS AT 4.60m	4.60	

Groundwater
N Struck Bentonite
1 0.70m

Remarks
Hole backfilled 0.00m to 1.00m Arisings (1)

Notes: For explanation of symbols and abbreviations see key. All depths and reduced levels in metres. Stratum thicknesses given in brackets. Information Scale 50

Project: MALTON NORTON AND OLD MALTON FLOOD ALLEVIATION SCHEME
Project No: 20219
Client: Environment Agency

Borehole **WS10**
Sheet 1 of 1

20/04/2001 12:16:53 ESGL 9.08