Historical Ground
Investigation
Information
Northern Link Road
August 2003

Client : Defence Estates

Ground Level m (A.O.D.): 41.85

Hole Type : Open Hole/Cored

Project : RAF St.Athun, Extension Areas CAN No. MD0990066A

Hole Coptin m 10 D

Co-ordinates : E299492.82 N169219 84

Location :

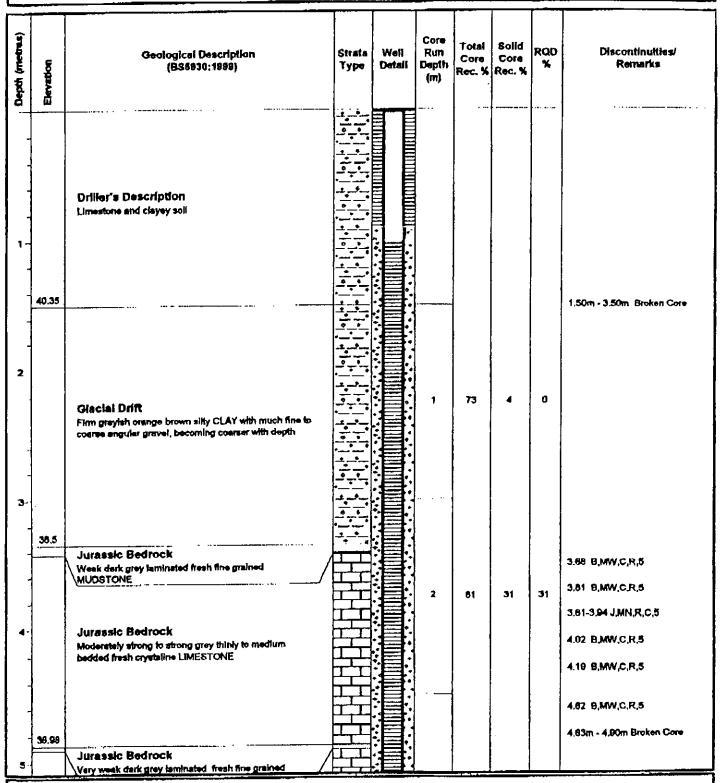
Well Height in (A.O.D.).

Logged By: AWJ

Date: 28 1,03

Base of Exploratory Hole m (A O D ): 31.85

Sneet No : 1 of 3



Contractor: Apex Driffing

Driff Type: Rotary air flush

Bit Type : P.C.D. Rig Type : Gryphon Hole Diameter (mm): 105

Casing depth (m): 1.5

Core Diameter (mm): 76mm (HO) 412

Drilled By: MJ

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Client : Defence Estates

Elt Type : P.C.D.

Rig Type: Gryphon

Ground Level m (A.O.D.): 41.85

Hole Type: Open Hole/Cored

Project : RAF St.Athan, Externalon Areas : CAN No. MD0990066A

Hole Depth m: 10.0

Co-ordinates : E299492 82 N189219 84

Location :

Well Height m (A.O.D.):

Logged By AWJ

Date : 28.1.03

Base of Exploratory Hole m (A.O.D.): 31.85

Sheet No 2 of 3

Depart (meares)	Geological Description (BS6930:1999)	Strete Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	Jurassic Bedrock Strong grey thinly to medium bedded fresh crystaline			3	57	25	20	5.85 B,MW,C,R,5
35.64	Jurasaic Bedrock Very week dark grey laminated fresh fine grained MUDSTONE Jurasaic Bedrock Strong grey thinly to medium bedded fresh crystaline LIMESTONE			4	75	48	43	6.00 B,MW,C,R,6 6.21-6.23 B,MW,C,R,5 6.45 B,MW,C,R,5 6.65 B,MW,C,R,5 6.65 B,MW,C,R,5
33.65	Jurassic Bedrock  Very week dark grey laminated fresh fine grained MUDSTONE  Jurassic Bedrock  Strong grey thinly to medium bedded fresh crystaline LIMESTONE			5	83	56	58	7.46 B,MW,C,R,5 7.76 B,MW,C,R,5 5.00 B,MW,C,R,5
33.35	Jurassic Bedrock Very week dark grey leminated fine grained fresh MUDSTONE  Jurassic Bedrock Strong grey thinly to medium bedded fresh crystaline LIMESTONE, with some calche veining  Jurassic Bedrock Moderately strong dark grey leminated fresh fine grains MUDSTONE			6	99	73	39	5.10 - 6.20 Broken Core 5.48 B.MW.C.R.5 8.55 B.MW.C.R.5 6.71 S.MW.C.R.5
32.75 32.55 32.15	Jurassic Bedrock Strong grey thinly to medium bedded fresh crystaline LIMESTONE  Moderately weak dark grey fine grained fresh MUDSTONE			7	99	97	91	9.30 B,MW,C,R,5 9.56 B,MW,C,R,5 9.70 B,MW,C,R,5 9.74 B,MW,C,R,5 9.85 B,MW,C,R,5
31.84	LIMESTONE		: <b> </b>					

Core Diameter (mm): 76mm (HO) 412

Drilled By: MJ

Client : Defence Estates

Ground Level m (A O D ) 141,85

Date: 20.1.03

Project : RAF St.Alhan, Extension Aress ; CAN No. MC0990086A

Contractor: Apex Driffing

Drill Type : Rotary air flush

Bit Type: P.C.O.

Rig Type : Gryphon

Location :

Hote Depth m: 10.0

Well Height m (A.O.D.):

Base of Exploratory Hole m (A.O.D.); 31 85

Hole Type: Open Hole/Cored

Co-ordinates : E299492 82 N169219.84

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Logged Fly : AWJ

Sheet No . 3 of 3

Depth (metres)	S levertion	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
-		Moderately week dark gray fine grained tresh MUDSTONE							
51				S					
12									
13									
14	E								
15									

Hole Diameter (mm): 105

Core Diameter (mm): 76mm (HO) 412

Casing depth (m); 1,5

Drifted By : MJ

Jient : Defence Estates

CAN No. MD 0990066A

Ground Level m (A.O.D.): 42.11

Project : RAF St.Athan, Extension Areas

Dete : 29,1,03

Hote Depth m: 10 0

Well Height in (A.O.D.):

Base of Exploratory Hole m (A O D ): 32.11

Hole Type: Open Hole/Cored

Co-ordinates : E299446.76 N169293.61

Logged By : Apex Drilling

Sheet No : 1 of 2

Depth (metres)	Elevation	Geological Description (BS5936:1998)	Strata Type	Weil Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
-	40.1	Driller's Description Limestone and clayey soll							0.80m - 2.90m Broken Core
<b>\$</b>					1	67	5	a	
2-		Jurassic Bedrock  Moderately strong to strong grey thinly to medium bedded fresh cryotaline LIMESTONE, with calcite veining between 3.35 - 4.00m			2	71	10	0	
3-		Datween 3,38 - 4,00m			3	79	31	23	3.12 B,MW,C,R,5 3.17m - 3.32m Broken Core 3.44 B,MW,C,R,5 3.58 B,MW,C,R,5
4	37	Jurassic Bedrock Strong dark grey and grey medium bedded fresh crystalline LIMESTONE, with some white calcife veining			**	89	49	45	3.73 B,MW,C,R,5 3.87 B,MW,C,R,10 4.26 B,MW,C,R,5 4.52 B,MW,C,R,5 4.69 B,MW,C,R,5 4.70 - 5.00 J,MN,68,6m,85 5.08 B,MW,C,R,5

Contractor: Apex Drilling

Drill Type: Rolery six flush

Bit Type: P.C.D. Rig Type : Gryphon Hole Diameter (mm): 105

Casing depth (m): 1.5

Core Diameter (mm): 76mm (HO) 412

Driffed By: MJ

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ent : Défence Estates

Ground Level m (A.O.D.) 142 11

Base of Exploratory Hole in (A.O ().): 32.11

Project : RAF St Athen, Extension Areas

: CAN No. MD 0900096A

Hole Depth on: 10,0

Well Height in (A.O.D.):

Date: 29.1 03

Location .

Hola Type : Open Hole/Cored

Co-ordinates - E299446.78 N169293 61

Logged By : Apex Drilling

Sheet No : 2 of 2

	Elevation	Geological Description (BS5930:1989)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
-   	35.5				4				5,17 B,MN,6S,R,5 5.35 B,MN,SS,R,5
-	95.15	Jurassic Bedrock Wask dark grey laminated fresh fine grained MUDSTONE Jurassic Bedrock							5.80 B,MW,C,R,5 5.80m - 6.15m Broken Core
		Strong to very strong derk grey and grey medium bedded fresh crystalline LIMESTONE, with some white celcite veining			5	95	53	51	6.20 J,MN,88,8m,85 6.35 B,MW,C,R,5
		Week dark grey laminated fresh fine grained MUDSTONE				i i			6.97 B,MW,C,R,5
									7.00 B,MW,C,R,5
ı									7.14 B,MW,C,R,5 7.30 B,MW,C,R,5
		Jurassic Bedrock Strong dark grey and grey medium bedded fresh crystalline LIMESTONE, with some white calcite veining			8	92	87	67	7.66 9,MW,C,R,5 7.83 B,MW,C,R,5
						į			8.50 B,MW,C,R,5 8.50m - 8.85m Broken Core
	ļ								8.83 B,MW,C,R,5
					7	88	63	<b>63</b>	9.50 B,MW,C,R,5 9.51 - 9.57 J,N,Sm,85
	31								9.57 B,MW,C,R,5

Contractor: Apex Oriting

Drill Type: Rolery air tlush

Bit Type: P.C.D. Rig Type : Gryphon Hole Diameter (mm): 105

Casing depth (m):15

Gore Diameter (mm): 76mm (HO) 412

Drilled By ; MJ

APEX DRILLING SERVICES LTD.

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int : Defence Estates

Ground Level m (A.O.D.) . 43.25

Hole Type : Open Hole/Cored

Project : RAF SLAthen, Extension Areas CAN No. MD0990068A

Holn Depth m : 10.0

Co-ordinates:

Location:

Well Height m (A.O.D.)

Logged By : AWJ

Data : 30.01.03

Base of Exploratory Hole m (A O.D.) . 33,25

Sheet No : 1 of 3

Depth (metres)	Elevation	Geological Description (B36930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Romarks
-	40	Driller's Description Limestone and clayey soil		THE					
*	39.4	Glacial Drift Firm greyish brown very slity clay with much fine to coerse angular gravel Glacial Drift			1	100	•	•	
2-	39	Firm orange brown very slifty clay with some fine to coerse engular gravel  Drift / Weathered Bedrock  Firm greyish brown very slifty clay with much fine to coerse angular gravel			2	100	-	•	
3-	36.4	Jurassic Bedrock  Weak to moderately strong grey slightly weathered slightly to moderately weathered. LIMESTONE / MUDSTONE, examined as rock fragments.			3	70	o	O	2.6m - 3.6m Broken Core
4-	37.1 36.87	Jurassic Bedrock  Very week dary grey leminated slightly weethered fine grained MUDSTONE  Jurassic Bedrock  Moderately strong to strong grey slightly weathered fresh crystalline LIMESTONE			4	53	20	o	3.88 B,W,C,R,5
5~	36.47	Jurassic Bedrock Very weak dery grey laminated slightly weathered fine greined MUDSTONE  Jurassic Bedrock Strong grey thinly to medium bedded crystalline fresh LIMESTONE				44	22	22	4.53 B,W,C,R,5

Contractor: Apex Orlling

Hole Diemeter (mm): 105

Drill Type: Rotary air flush

Casing depth (m):0

Bit Type : P.C.D.

Core Diameter (mm): 76mm (HO) 412

Rig Type: Gryphon

Drilled By : MJ

APEX DRILLING SERVICES LTD.

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ient : Defence Extetes

Ground Level m (A O D ): 43.25

Hole Type : Open Hole/Cored

Project : RAF St.Alhen, Extension Areas : CAN No. MD0990066A Hole Depth m : 10 0

Co-ordinates :

Location:

Well Height in (A.O.D.):

Logged By : AWJ

Date 1 30.01.03

Base of Exploratory Hole m (A.O.D.): 33.25

Sheet No : 2 of 3

Depth (metres)	Elevation	Geological Description (BS6930:1989)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. W	Solid Core Rec. %	RQD	Discontinuities/ Regurks
	35.6	Jurassic Bedrock			5				5.4 B,W,C,R,5
-	35.3	Weak dark grey laminated fresh fine grained MUDSTONE							5.8 B,W,C,R,5
-	35	Jurassic Bedrock Strong grey thinly to medium bedded crystalline fresh LIMESTONE							6.0 B,W.C,R,5
	34.8	Jurassic Bedrock Week dark grey laminated slightly weathered fine grained MUDSTONE			6	70	40	31	6.06 B,W,C,R,5
-		Jurassic Bedrock Strong grey thinly to medium bedded fine grained fresh crystalline LIMESTONE							6.3 B,W.C.R.5
7-	34.1 34	Jurassic Bedrock Week grey laminated fresh fine grained MUDSTONE							6.5 B,W,C,R,5 7.0 B,W,C,R,5
1		Jurassic Bedrock Strong grey thinly to medium bedded fine grained fresh crystalline LIMESTONE			,				7.2 B,W,C,R,5 7.5 B,W,C,R,5
_	33.46	Jurassic Bedrock Very week dark grey laminated fresh fine grained MUDSTONE			7	75	51	43	7.84 B,W,C,R,5
8	33.04	Jurassic Bedrock Strong grey thinly to medium bedded fresh crystelline							7.9 B.W.C.R.5 8.13 B.W.C.R.5
	:	Jurasaic Bedrock					i		8,14-8.35 J,MW,SS,R,85 8.5 B,W,C,R,5
-		Weak day grey laminated fresh fine grained MUDSTONE  Jurassic Bedrock							8.7 B,W,C,R,5
8-		Strong grey thinly to medium bedded fresh crystalline LIMESTONE Jurassic Bedrock							8.93 B,W,C,R,5
	31.78	Week dary grey fine grained MUDSTONE			8	96	62	56	8.99 B,W,C,R,5 9.22 B,W,C,R,5
-	31.54	LIMESTONE							9.5 B,W,C,R,5
10	38.98	Week dary grey fine grained MUDSTONE  LIMESTONE							9.8 B,W,C,R,5 9.85 B,W,C,R,5
· V	Con	stractor; Apex Drilling Hole Diamete	105		4 2022			C SED VICES L'TO	

Contractor : Apex Drilling

Drift Type: Rotary air flush

Bk Type : P.C D.

Rig Type ; Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm): 78mm (HO) 412

Drilled By : MJ

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Rient : Defence Estates

Ground Level m (A.O.D.) . 43.25

Hole Type: Open Hole/Cored

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Project : RAF St.Athen, Extension Areas

: CAN No. MD0990066A

Drill Type: Rolary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Depth m : 10.0

Co ordinates :

Location

Well Height in (A O D ) :

Logged By : AWJ

Date : 30.01.03

Base of Exploratory Hole in (A.O.D.): 33.25

Shoot No : 3 of 3

Oepth (metres)	Sevation	Geological Description (BS6930:1899)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Core Rec. %	RQD %	Discontinuities/ Remarks
	30.33	Weak dany grey fine grained MUDSTONE				'			
			1						
1 1									
12 –									
1									
13		•							
1							i		
14 -									
-									
15-	Con	tractor: Apex Drilling Hole Diamete	r (mm) : 1	105		APEX	C DRI	LLIN	G SERVICES LTD.

Casing depth (m):0

Drilled By : MJ

Core Diameter (mm): 76mm (HO) 412

^flent : Defence Estates

Ground Level m (A.O.D.): 44.53

Hole Type : Open Hole/Cored

. roject : RAF St.Athan, Extension Areas CAN No. MD0990068A

Halo Dopih m : 10 0

Co-ordinates : F299551.24 N169605.60

Location :

Well Height in (A.O.D.);

Logged By : AWJ

Date : 30.01.03

Base of Exploratory (tole in (A.O.D.): 34.53

Sheel No ; 1 of 3

Oepth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	44,23	Driller's Description Topsoll							
		Driller's Description Boulder Clay							
,	43.53	Glacial Drift Firm reddish orange brown very silty CLAY with much fine to coarse angular gravel							
	42.93	Glacial Drift Firm yellowish brown very silty CLAY with much fine to coarse engular gravel							
2	42.43	Glacial Drift  Firm greyish brown very silty CLAY with much fine to coarse angular gravet							2.15 B,W,C,R,5 2.16 B,W,C,R,5 2.30 B,W,C,R,5
3					1	67	41	35	2.50 B,W,C,R,5 2.77 B,W,C,R,5 2.90m - 3.35m Broken Care
					/-				3.35 - 3.60 J,MN,C,Sm,85
4					2	70	65	63	3.95 8,W,C,R,5 4.06 B,W,C,R,5 4.27 - 4.29 B,W,IC,R,5
									4.34 B,W,C,R,5 4.60 B,W,C,R,5 4.80 B,W,C,R,5
5									4.61 - 5.02 J,MW,\$S,R,85

Contractor: Apex Drilling Drill Type : Rolery at flush

Bit Type: P.C.D. Rig Type : Gryption Hole Diameter (mm): 105

Casing depth (m): 0

Core Diameter (mm): 76mm (HO) 412

Orllied By : MJ

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'ant : Defence Estates

Ground Level m (A.O.D.) : 44,53

Hole Type : Open Hole/Cored

⊬roject : RAF St.Alhan, Extension Areas

: CAN No. MD0990066A

Hoja Depth m: 10.0

Co-ordinates; E299551.24 N189805.60

Location :

Well Height m (A.O.D.):

Logged By : AWJ

Date ; 30.01,03

fluxe of Exploratory Hole m (A.O.D.) ; 34 53

Sheet No : 2 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
					3	90	29	29	5.02m - 5 25m Broken Core 5.50 B.W,C,R,5 5.83 B.W,C,R,5
		Jurassic Bedrock Strong grey thinly to medium bedded fresh crystalline			4	69	69	69	5.96 B,W,C,R,5 6.27 B,W,C,R,5 6.43 B,W,C,R,5 6.67 B,W,C,R,5
7		LIMESTONE			5	Ðſ	77	76	6.88 B,W,C,R,5  7.44 B,W,C,R,5  7.70 B,W,C,R,5  7.86 B,W,C,R,5  8.08 B,W,C,R,5
9	36.03	Jurassic Bedrock Moderately weak very dark gray laminated fine grained fresh MUDSTONE  Jurassic Bedrock Strong gray thinly to madium bedded fresh crystalline LIMESTONE							8.95 B,W,C,R,5 8.50 B,W,C,R,5 8.80 B,W,C,R,5 9.02 B,W,C,R,5 9.10 B,W,C,R,5
10	35 34.52	Jurassic Bedrock Moderately weak very dark grey laminated fine grained / fresh MUDSTONE  Jurassic Bedrock Strong greenish over thinly to medium bedded fresh			6	98	66	54	9.20 B,W,C,R,5 9.35 B,W,C,R,5 9.50 B,W,C,R,5 9.50 9.65 J,MW,Cm,MS,Sm,80 9.60 B,W,C,R,5

Contractor: Apex Driffing

Drill Type : Rolary at tush

Bit Type: P.C.D.

Rig Type: Gryphon

Hole Dismeter (mm): 105

Casing depth (m):0

Core Diemeter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

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Client : Defence Estates

Ground Level m (A.O.D.): 44.53

roject : RAF St.Alham, Extension Areas ; CAN No. MD0990066A

Hole Depth m: 10 0

Hola Type : Open Hole/Cored Co-ordinates : E299551.24 N169605.60

Wall Height m (A.O.D.)

Logged By : AWJ

Location: Date: 30.01.03

Base of Exploratory Hole m (A.O.D.): 34,53

Shoul No . 3 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	 Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
			:						
12									
13									
14 -									
15									

Contractor : Apex Drilling

Orlli Type : Rolary ek flosh

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm): 76mm (HO) 412

Orilled By : MJ

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:nt : Oefence Estates

Ground Level m (A.O.D.): 45.72

Project : RAF St.Albert, Extension Areas : CAN No. M.D.0090066A

Date: 30/31.01.03

Hole Depth m: 10.0

Well Height in (A.O.D.)

Ruse of Exploratory Hole in (A.O.D.) : 35.72

Hole Type: Open Hole/Cored

Co-ordinates : E299749,08 N169618.62

Logged By: AWJ

Sheet No: 1 of 3

Depth (metres)	Elevation	Geological Description (BS6930:1999)	Strata Type	Well Oetail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	44.92	Driller's Description Umestone and clayey soil		NATHURURURURURURURURURURURURURURURURURURUR					0.8m - 1.9m Broken Core
. 1		Jurassic Bedrock Strong grey and dark grey thinly to medium bedded fresh crystalline LIMESTONE			1	92	2 <del>8</del>	26	1.25 J,MW,CI,F,R,75 1.30 B,W,C,R,5 1.70 B,W,C,R,5 2.00 B,W,C,R,5
2	43.19	Jurassic Bedrock  Very week greyish crange brown faminated medium weathered fine greinedMUDSTONE			2	97	53	53	2.14 8,W,C,R,5 2.25 B,W,C,R,5 2.51 B,W,C,R,5 2.53 B,W,C,R,5 2.57 B,W,C,R,5 2.80 J,MN,C,Sm,80
3-		Jurassic Bedrock Strong grey and dark grey thinly to medium bedded fresh crystalline LIMESTONE							2.60 B,MW,C,R,10 3.07 B,W,C,R,5 3.30 B,W,C,R,5 3.48 B,W,C,R,5
-	41.45	Jurassic Bedrock Very weak greyish brown laminated fresh fine greined MUDSTONE			3	83	47	47	4.00 B,W,C,R,5 4.21 B,W,C,R,5 4.27 B,W,C,R,5 4.32 B,W,C,R,5 4.50 B,W,C,R,5

Contractor: Apex Drilling

Orlif Type: Rotary air flush

Bit Type : P C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diemeter (mm) : 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

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ent : Defence Estates

Ground Level m (A.O.D.): 45.72

Project: RAF St.Athen, Extension Areas CAN No. MD0990086A

Location:

Date: 30/31.01.03

Dase of Exploretory Hole m (A.O.D.); 35.72

Hote Depth m : 10.0

Well Height m (A.O.D.) :

Hole Type : Open Hole/Cored

Co-ordinales : E299749.08 N169618.82

Logged By: AWJ

Sheet No. 2 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strats Type	Well Delail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
					4	93	36	28	4.83 8,W,C,R,5 4.93m - 5,13m Broken Core 5.40 B,W,C,R,5 5.54 B,W,C,R,5
7-		Jurassic Bedrock Strong grey and dark grey thinly to medium bedded fresh crystalline LIMESTONE			5	70	54	48	5.69 8,W,C,R,5 5.60m - 6.0m Broken Core 6.13 B,W,C,R,5 6.39 8,W,C,R,5 6.46 B,W,C,R,5 5.70 B,W,C,R,5 7.15 B,W,C,R,5
8					g	95	75	73	7.45 B,W,C,R,5 7.72 8,W,C,R,5 8.14 B,W,C,R,5 6.36 B,W,C,R,5 8.50 B,W,C,R,5
10	38.28	Jurassic Bedrock Very week greyish brown laminated fresh fine greined MUDSTONE Jurassic Bedrock Strong grey and dark grey thinly to medium bedded fresh crystalline LIMESTONE Jurassic Bedrock			7	96	45	45	9.00 B,W,C,R,5 9.15 B,W,C,R,5 9.75 B,W,C,R,5

Contractor: Apex Drilling

Orlit Type : Rolery air flush

Bit Type: P.C.D.

Rig Type : Grypton

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm): 76mm (HO) 412

Orifled By : MJ

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∦lent Defence Estates

Oround Level m (A O D.): 45.72

Project : RAF SLAthan, Extendon Areas : CAN No. MD0990066A

Contractor: Apex Drilling

Drill Type ; Rolary air flush

Bit Type: P.C.D.

Rig Type : Gryphon

Hole Depth in : 10.0

Dale : 30/31 01.03

Location :

Well Heighl m (A O.D.):

Base of Exploratory Hole in (A.O.D.) 35.72

Hole Type ; Open Hole/Cored

Co-ordinates : E299749,06 N169818 82

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Logged By : AWJ

Sheet No : 3 of 3

Depth (metres)	uogzaeg	Geological Cescription (836930:1999)	Strate Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
		Jurassic Bedrock Strong grey and dark grey thinly to medium bedded fresh orystalline LIMESTONE							
   · '-·   -									
12 –									
-									
13 -									
- 14-									
-         									
15 -							<u> </u>	<u> </u>	

Hole Diameter (mm): 105

Core Diameter (mm): 76mm (HO) 412

Casing depth (m):0

Drilled By: MJ

lent ; Oefence Estates

Ground Level m (A O D.) : 46 78

Project : RAF St, Athen, Extension Areas

Hole Depth m : 10 @

Hole Type: Open Hole/Cored

: CAN No. MD0990066A

Co-ordinates : E299749.78 N169860.67

Location :

Well Height m (A.O.D.):

Logged By : AWJ

Date: 31.01.03

Base of Exploratory Hole m (A.O.D.): 36.78

Shoot No : 1 of 2

Depth (metres)	Bevation	Geological Description (BS6930:1999)	Strata Type	Well Detail	Core Run Depih (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remerks
		Driller's Description Limestone and clayey soli							
-	45.78 45.28	Glacial Drift Firm orange brown very sitty CLAY with some to much fine to medium angular gravel							
2-		Jurassic Bedrock  Moderately strong to strong grey thinly to medium bedded fine grained fresh crystaline LIMESTONE			1	80	49	49	2.55 B,W,C,R,5 2.70 B,W,C,R,5
<b>3</b> -	43.78 49.88	Firm orange brown very silty CLAY							2.87 8,W,C,R,5 3.00 8,W,KC,R,5 3.37m - 3.54m Broken Core
4-		Jurassic Sedrock  Moderately strong to strong grey thinly to medium bedded fine grained fresh crystaline LIMESTONE			2	73	51	45	3.70 B,W,C,R,5 3.88 B,W,C,R,5
	42.26 42.18	Firm orange brown very silty CLAY with some fine to medium angular gravel							4.50 B,W,IC,R,5

Contractor: Apen Driffing

Driff Type : Rotary of flush

Bit Type : P.C.D.

Rig Type ; Gryphon

Hole Diameter (mm); 105

Casing depth (m):0

Core Diemeter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

<sup>v</sup>ent : Defence Estates

Ground Level in (A.O.D.) - 40.78

Project: RAF St.Athen, Extension Areas

CAN No. MIDD990068A Location :

Drill Type: Rotory air flush

Bit Type : P.C.D.

Rig Type: Gryphon

Hole Depth m : 10 0

Date : 31.01.03

Well Height m (A.O.D.):

Base of Exploratory Hote m (A.O.D.) , 38 78

Hole Type : Open Hole/Cored

Co-ordinates: E299749,78 N169860 67

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Logged By : AWJ

Sheet No : 2 of 2

Depth (metres)	Elevation	Geological Description (BS8930:1999)	Strate Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	6oild Core Rec. %	RQD %	Discontinuities/ Remarks
	41.38	Jurassko Bedrock Very weak greytsh brown laminated elightly weathered fine grained MUDSTONE			3	95	77	82	5.40 - 5.42 B,W,C,R,5 5.70 B,W,C,R,5 5.80 B,W,C,R,5
- 7-	39.62	Jurassic Bedrock Strong gray thinly to medium bedded fresh crystaline LIMESTONE, with shell fragments  Jurassic Bedrock Weak grayish brown laminated fresh fine grained MUDSTONE			4	92	40	35	6.00m - 8.50m Broken Core  6.50 - 6.60 J,MW,C,Sm,75  6.51 B,W,C,R,5  6.69 B,W,C,R,5  7.02 B,W,C,R,5  7.15 B,W,C,R,5
+	39.05	Jurassic Bedrock Moderately strong to strong grey thinly to medium bedded fresh crystaline LIMESTONE  Jurassic Bedrock Very weak dark grey laminated fresh fine grained MUDSTONE  Jurassic Bedrock Moderately strong to strong grey thinly to medium bedded fresh crystaline LIMESTONE  Jurassic Bedrock Very weak dark grey laminated fresh fine grained MUDSTONE			5	9.6	62	55	7.16-7.2 B,W,C,R,5 7.50 B,W,C,R,5 7.68 B,W,C,R,5 7.73 B,W,C,R,5 6.42 B,W,C,R,5 6.55 B,W,C,R,5 6.77 B,W,C,R,5
3.60	36,78	Jurasaic Bedrock Strong grey thinly to medium bedded fresh crystaline UMESTONE			в	95	62	62	6.76-9 J,N,C,Sm,65 9.16 B,W,C,S,R,5 9.40 B,W,C,R,5 9.66 B,W,C,R,5 9.69 - 9.76 J,MW,6S,R,65

Casing depth (m):0

Drilled By : MJ

Core Diameter (mm): 76mm (HO) 412

Client ; Defence Estates

Contractor : Apex Drilling

Drill Type: Rolery of flush

Bit Type ; P.C.D.

Rig Type : Gryphon

Ground Level m (A.O.D.): 49.11

Hole Type : Open Hole/Cored

P. , .ct : RAF St.Athan, Extension Areas

Hole Depth m : 10 0

Co-ordinales : £299744.06 N169975 07

APEX DRILLING SERVICES LTD.

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: CAN No. M00990068A

Well Height in (A.O.O.); 39.11

Logged By: AWJ

Date : 31,01,03

Dase of Exploratory Hole m (A.O.D.) :

Sheet No : 1 of 2

Depth (metres)	Elevation	Geological Description (B85930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
1	-0,3	Driller's Description Limestone and clayey soil	10101010						0.30m - 0.82m Broken Core 0.57m - 1.07m ฮิroken Core
1		Drift / Weathered Bedrock  Moderately strong to strong grey stained orange in places thinly to medium bedded slightly weathered LIMESTONE, with many large pockets of soft orange brown slity clay				90	31	22	1.49 B,W,C,R,5 1.57 B,W,C,R,5
2	-1.8 -1.95	Driff / Weathered Bedrock Soft orange brown very silty CLAY  Jurassic Bedrock Moderately strong gray thirtly to medium badded slightly weathered crystalline LIMESTONE			2	83	25	15	1.80 - 1.95 B,W,IC,R,5 2.07 B,W,C,R,5 2.54 B,W,C,R,5
3	-3.01	Jurassic Bedrock  Weak greyish brown laminated fresh fine grained  MUDSTONE			~·· *·				2.88 B,W,C,R,5
4		Jurassic Bedrock Moderately strong becoming strong grey thinly to medium bedded slightly weathered becoming fresh crystalline LIMESTONE			3	76	49	35	
5	-4.67 -4.89	Jurassic Bedrock Moderately weak brownish grey laminated slightly weathered fine grained MUDSTONE							

Hole Diameter (mm): 105

Core Diameter (mm): 76mm (HO) 412

Casing depth (m):0

Drilled By : MJ

Offent : Defence Estates

Ground Level m (A.O.D.): 49.11

Hole Type : Open Hole/Cored

Project : RAF StAthan, Extension Areas ; CAN No. MD0990066A

Hale Depth m : 10.0

Co-ordinates : F299744.06 N169975.07

Location:

Well Height m (A O D ): 39.11

Logged By : AWJ

Date : 31.01.03

Base of Exploratory Hole in (A.O.D.):

Sheel No : 2 of 2

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
0	<b>.</b>				4	<b>9</b> 5	59	55	5,47 - 5.50 B,W,IC,R,5
7					S	98	57	48	8.5 R.W.C.R.5 6.65 B.W.C.R.5 6.75 B.W.C.R.5 6.80m - 7.40m Braken Core 7.45 B.W.C.R.5
8		Jurassic Bedrock Strong grey thinly to medium bedded fresh crystalline LIMESTONE			5	p <b>5</b>	71	52	7.51 B,W,C,R,5 7.55 B,W,C,R,5 7.98 B,W,C,R,5 8.14 B,W,C,R,5 6.31 B,W,C,R,5
9	-10	·			7	95	74	65	8.77 B,W,C,R,S 8.95 B,W,C,R,S 9.17 B,W,C,R,S 9.48 B,W,C,R,S 9.67 B,W,C,R,S

Contractor: Apex Oriting

Drill Type : Rolery air flush

Bit Type : P.C.D.

Rig Type: Gryphon

Hole Diameter (mm): 105

Casing depth (m) : 0

Core Diameter (mm): 78mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

^'ent : Defence Estates

Date: 03.2.03

Ground Leval m (A.O.D.) : 47.21

. roject : RAF St Athan, Extension Arees

CAN No. MD0990068A

Hole Depth m : 10.0

\* ( C O.A) m trigleH iteW

Base of Exploratory Hole in (A.O.D.): 37.21

Hole Type : Open Hole/Cored

Co-ordinates : E299588 95 N169861.35

Logged By: AWJ

Sheet No : 1 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
		Driller's Description Limestone and clayey soil							
2	<b>1</b>				1	54	32	32	1.28 B,W,C,R,5
3		Jurassic Bedrock  Moderately strong becoming strong grey thinly to medium bedded slightly weathered becoming tresh crystalline LIMESTONE			. 2	90	54	52	2:30 - 2:50 J,MW,SS,R,85  2:80 B,W,C,R,5  2:94 B,W,C,R,5  3:02 B,W,C,R,5  3:23 B,W,C,R,5  3:44 B,W,C,R,5
4	-4.8	Jurassic Bedrock  Weak brown laminated slightly weathered fine grained  MUDSTONE				95	51	46	3.78 B,W,C,R,5  3.79 - 4.00 J,MN,C,Sm,85  4.25 B,W,C,C,R,5  4.38 B,W,C,R,5  4.60 B,W,C,R,5  4.79 B,W,C,R,5  4.80 - 4.87 B,W,C,C,R,5

Contractor: Apex Drilling

Drill Type ; Rolety at flush

Bit Type: P.C.D. Rig Type ; Gryphon Hole Diameter (mm): 105

Casing depth (m):0

Core Dismeter (mm) ; 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL 01656 749 096 FAX

int : Defence Estates

Ground Level m (A.O.D.): 47.21

Dass of Exploratory Hole m (A.O.D.): 37.21

Project : RAF St.Athan, Extension Areas

: CAN No. MD0990066A

Location : Date : 03.2.03 Hole Depth m : 10.0

.....

Well Height in (A.O.D.) :

Hole Type: Open Hole/Cored

Co-ordinales : E299588 95 N169881 36

Logged By : AWJ

Sheet No : 2 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1899)	Strata Type	<b>₩</b> ell Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	-5.5	Jurassic Bedrock  Moderately strong to strong grey thinly to medium bedded fresh crystalline LIMESTONE			3				5.10 B,W,C,R,5 5.23 B,W,C,R,5
	-5.6	Soft to firm greyish brown very silty CLAY							5.73 B,W,C,R,5
		Jurassic Bedrock  Moderately strong to strong grey thinly to medium bedded fresh crystalline LIMESTONE			4	81	25	19	6.37-6.50 J,MN,C,Sm,65 6.68 B,W,C,R,5
7									7.00 B,W,C,R,5 7.30 B,W,C,R,5
	-7.4	Jurassic Bedrock  Moderately weak very dark prey laminated fresh fine greined MUDSTONE  Jurassic Bedrock			5	84	70	59	7.40 - 7.45 B,W,C,R,5 7.80 B,W,C,R,5 7.80 B,W,C,R,5
8	-8 -8.31	Moderately strong to strong grey thinly to medium bedded fresh crystalline LIMESTONE  Jurassic Bedrock  Weak dark grey laminated fresh fine grained			:				8.12 B,W,R,5 8.30 - 8 32 B,W,C,R,5
		Juressic Bedrock					·		8.50m - 8.90m Broken Core 9.0 B,W,C,R,5
9		Moderately strong to strong grey thinly to medium bedded fresh crystalline LIMESTONE			6	97	18	13	9.07 B,W,C,R,5 9.08 - 9.55 J,N,SS,Sm,85 9.60 - 9.65 B,W,C,R,5
10	-9. <b>6</b> -10.01	Jurassic Bedrock Week dark grey laminated fresh tine grained MUDSTONE Jurassic Bedrock				į			9.95 B,W,C,R,5

Contractor : Apex Drilling

Drill Type : Rolery air flush

Bit Type : P.C D.

Rig Type: Gryphon

Hole Dismeter (mm): 105

Casing depth (m):0

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL.

^llent : Defence Estates

Ground Level m (A.O.D.): 47.21

Hole Type : Open Halo/Cared

. roject : RAF St.Athan, Extension Areas CAN No. MD0990066A

Hole Dopth m : 10 0

Co-ordinates : F299588.95 N169861.35

Location :

Well Height m (A.O.D.) :

Logged By: AWJ

Date : 03.2.03

Dase of Exploratory Hole in (A.O.D.): 37-21

Sheet No : 3 of 3

	Depth (metres)		Geological De≖cription (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	ij.	_16501	Jurassic Bedrock Moderelely strong to strong grey thinly to medium bedded fresh crystalline LIMESTONE							
1	2									
1	3									
1.	4									
1	5									

Contractor : Apex Drilling Driff Type : Rotary of flush

Bit Type : P.C.D.

Rig Type ; Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Care Diemeter (mm): 78mm (HO) 412

Orilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL 01656 749 096 FAX

Hole Type : Open Hole/Cared

"ent : Defence Estates

Ground Level m (A.O.D.): 46.54

Project : RAF St.Atham, Extension Arees

: CAN No. MD0980066A

Hole Dapih m : 10.0

Co-ordinates : E 290407 15 N 169718 95

Location :

Well Height m (A.O.D.):

Logged By : AWJ

Date: 03/04.02.03

Base of Exploratory Hole m (A.O.D.) : 36 54

Sheet No : 1 of 2

Depth (metres)	Elevation	Geological Description (B\$5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarke
		Driller's Description Limestone and clayey soil							
	45.74 45.44	Glacial Drift Firm grange brown very sity CLAY with much fine to coarse angular gravel							1,10m - 2.50m Broken Cor <del>o</del>
2-					1	57	o o	0	
		Jurassic Bedrock  Moderately strong becoming strong grey slightly weathered crystelline LIMESTONE, with some calcite vehilng						64	2.50 - 2.54 B,W,IC,F,R,5 2.98 B,MW,C,R,5
3					2	87	67	04	3.50 B.MW,C,R.5
4									4.02 B,MW,C,R,5
	42.04	Firm crange brown very silty CLAY with much fine to coarse engular gravel							4 50 B,MN,C,R,5
5									5 07 B,MW,C,R,5

Contractor : Apex Drilling Drill Type : Rolery at flush

Casing depth (m): 0

Hole Diameter (mm): 105

APEX DRILLING SERVICES LTD.

Bit Type : P.C.D.

Core Dlameter (mm) : 75mm (HO) 412

01656 749 149 TEL 01656 749 096 FAX

Rig Type: Gryphon

Drilled By: MJ

ent : Defence Estates

Ground Level in (A.O D.) : 46.54

Project : RAF St.Athen, Extension Areas : CAN No. MID0990086A

Location:

Oate : 03/04.02.03

Hole Depth m : 10.0

Well Height m (A.O.D.):

Base of Exploratory Hole m (A.O.D.): 36,54

Hole Type : Open Hole/Cored

Co-ordinates : E 298467.15 N 169718 95

Logged By · AWJ

Sheet No : 2 of 2

Dapth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
ď	บั		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Э	77	69	57	5.30 B,MW,C,R,S
					4	90	66	66	5.80 B,MW,C,R,5 5.80 B,MW,C,R,5 6.04 B,MW,C,R,5
									6.20 B,MW,C,R,5 6.55 B,MW,C,R,5 6.56 B,MW,C,R,5 6.85 Broken Core
7		Jurassic Bedrock Strong grey thinly to medium bedded fresh cryetaline LIMESTONE			4 ~	<b>63</b>	19	9	7.40 - 8.04 J.MN,SS,Sm,85 No. of joints stained crange
6									8.15 B,MW,C,R,5 8.30 B,MW,C,R,5 8.45 B,MW,C,R,5
9					Ð	70	59	48	8 74 B,MW,C,R,5 B.80 B,MW,C,R,5 B,88 J,MN,SS,St,30 B.05 B,MW,C,R,5 9,18 B,MW,C,R,5
10 -	36,54				7	21	21	15	9.80 B,MW,C,R,5 9.96-10 B,W,IC,F,R,5

Contractor: Apex Drilling

Drill Type : Rotery air flush

Bit Type : P.C.D.

Rig Type: Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm) : 78mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

Punt : Defence Estates

Ground Level m (A.O.O.); 42.03

Hole Type: Open Hole/Cored

1 ...ject : RAF St.Athen, Extension Areas

Hole Onpili m: 10.0

Co-ordinates : E 298222.64 N 169251 31

: CAN No. MD0990069A

Well Height m (A.O.D.)

Logged By: AWJ

Date : 28,1.05

Raze of Exploratory Hole m (A O D.): 32.03

Sheet No ; 1 of &

Depth (metres)	Elevation	Geological Description (B95930:1999)	Strata Type	Well Dotail	Core Run Depth (m)	Total Core Rec.	Bolld Core Rec. %	RQD %	Discontinuities/ Remarks
	41.83	Oriller's Description Topsoll Oriller's Description Boulder Clay	**************************************			55	0	0	0.70m - 1.70m Broken Core
2		Drift / Weathered Bedrock Strong gray stelned orange in places slightly weathered crystelline LIMESTONE, with much soft orange brown silty clay to 1.2m			2	63	11	11	1,85 B,W,SS,C,R,5 1,85-2.2 J,W,Cm,MS,75
3	36.23	·			3	91	68	57	3.2 B,W,IC,S,R,5
4		Jurassic Bedrock Very week greytsh oranga brown highly weathered very sendy medium grained SILTSTONE							4.31 B,W,SS,C,R,5 4.38 B,W,SS,C,R,6 45 B,W,SS,C,R,5

Contractor : Apex Drilling

Drill Type ; Rolery air flush

Bit Type: P.C.D.

Rig Type : Gryphon

Hole Diameter (mm) : 105

Casing depth (m): 1.5

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LID.

01656 749 149 TEL

"liant : Defence Estates

Ground Level m (A.O.D.): 42 03

Hole Type - Open Hole/Cored

. roject : RAF SI.Alhan, Extension Areas : CAN No. MD0990066A

Hole Dapih m : 10.0

Co-ordinator : E 299222.64 N 169251.31

Location :

Well Height m (A.O.D.):

Logged By : AWJ

Date: 28.1.03

Base of Exploratory Hole m (A.O.D.): 32.03

Sheet No : 2 of %

Depth (metres)	Elevation	Geological Description (835930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	35.50	Jurassic Bedrock  Moderalely strong to strong grey thinly to medium hedded fresh crystalline LIMESTONE			4	69	37	37	5.71m - 6.01m Broken Core  6.3 B.W.C.R.5  6.45m - 7.00m Broken Core
7.	35.58	Jurassic Bedrock  Very weak greyish brown taminated fine grained highly weathered MUDSTONE  Jurassic Bedrock  Moderately strong to strong grey thinly to medium bedded fresh crystalline LIMESTONE			6	85	63	54	7.35 B.W.C.R.5 7.40 B.W.C.R.5 7.75 B.W.C.R.5 8.24 B.W.C.R.5 8.50 - 8.59 J.W.SS.R.75
9	32.68	Jurassic Bedrock  Moderately week to moderately strong dark grey laminated fresh fine grained MUDSTONE  Jurassic Bedrock  Moderately strong to strong gray thinly to medium bedded fresh crystalline LIMESTONE			7	91	71	61	8.7 B,W,C,R,5 8.9 B,W,C,R,5 9.35 - 9.37 B,W,C,R,5 9.45 B,W,C,R,5

Contractor: Apex Driffing

Hole Diameter (mm): 105

Drill Type : Rolery air flush

Casing depth (m): 1.5

APEX DRILLING SERVICES UTD.

Bit Type : P.C.D.

Core Diameter (mm): 76mm (HO) 412

01656 749 149 TEL 01656 749 096 FAX

Rig Type ; Gryphan

Drilled By : MJ

Ment : Defence Estates

Ground Level m (A.D.D.); 48,39

Base of Exploratory Hole m (A.O.O.) : 38,39

.oject ; RAF St.Athan, Extension Areas

Location:

Dale ; 8.2.03

Hole Depth m : 10,0

. CAN No. MO0990086A

Well Height in (A.O.D.);

Hole Type : Open Hole/Cored

Co-ordinales : E 299170.58 N 168090,64

Logged By : AWJ

Sheet No : 1 of 3

Depth (matres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
_	46.09 47.03	Driller's Description Limestone and clayer soil  Jurassic Bedrock  Moderately strong grey thinly to medium bedded slightly westhered crystalline LIMESTONE			1	56	5	0	0.30m - 0.46m Broken Core 0.50 B,W,C,R,5 0.57m - 1,20m Broken Core .
2 ·· -					2	65	16	9	1.54m - 1.74m Broken Core 1.75 - 1.94 J.N.C.Sm.75 1.95m -2.70m Broken Core
3		Jurassic Bedrock Strong grey thinly to medium bedded fresh crystalline LimesTONE			3	78	41	35	2.70 B,C,R,5  2.93 - 4.04 J,N,SS,St,45  3.05 B,N,C,R,5  3.73 B,W,C,R,5
									3.8 B,W,SS,C,R,5 3.80m - 4.20m Broken Core 4.20 B,W,SS,R,5 4.40 B,W,SS,R,5 4.60 B,W,SS,R,5 4.70 - 4.72 B,VW,SS,R,5

Contractor: Apex Drilling

Drill Type ; Rolary of flush

Bit Type: P.C.O.

Rig Type : Gryphon

Hole Diameter (mm) : 105

Cusing depth (m): 1.5

Core Diameter (mm): 76mm (HO) 412

Orilled By : MJ

APEX DRILLING SERVICES LTD.

4.85 J,N,SS,Sm,80

01656 749 149 TEL

t : Defence Estates

Ground Level m (A.O.D.) : 48.39

Project : RAF St.Athen, Extension Areas

CAN No. MD0990066A

Location: 'Dete : 6.2 05

Hole Depth m: 10.0 Well Height in (A.O.D.):

Base of Exploratory Hole m (A.O.D.) ; 38,39

Hole Type : Open Hole/Cored

Co-ordinates : E 799170.58 N 168090.84

Logged By: AWJ

Sheet No : 2 of 3

Depth (metres)	Elevation	Geological Description (B\$5930:1999)	Streta Type	Well Detail	Core Run Depth (m)	Total Core Rec, %	Solid Core Rec. %	RQD %	Discontinuitie∌/ Remarks
ð	<b>[</b> ]	·····.			4	75	33	33	
	41.95	Juraasic Bedrock  Modarately atrong to moderately weak very dark grey			5	75	16	35	5.80 B,W,C,R,5  5.96m - 6.31m Broken Core  6.32 J,W,C,R,30  6.47 B,W,C,R,5  6.48 B,C,R,5
7 -	40.81	laminated fresh medium grained MUDSTONE  Jurassic Bedrock  Strong grey thinly to medium bedded fresh crystelline LIMESTONE							7.00 B,W,C,R,5 7,93 B,W,C,R,5 7.40 B,W,C,R,5
8	39.95	Jurassic Bedrock Moderately strong to moderately week very dark grey laminated fresh medium grained MUDSTONE  Jurassic Bedrock Strong grey thinty to medium bedded fresh crystalline LIMESTONE			6	<b>8</b> 5	65	48	7.58 - 7.68 6,W,C,R,5 7.94 B,W,C,R,5 7.98 B,W,C,R,5
9		Jurassic Bedrock Moderately strong to moderately weak very dark grey						•	8.64 B,W,C,R,6 8.61 B,W,C,R,5 8.86 B,W,C,R,5 9.08 B,W,C,R,5
10	38.45 38.36	LIMEŠTONE			7	196	71	51	9.20 B,W,C,R,5 9.33 8,W,C,R,5 9.44 B,W,C,R,5 9.84 B,W,C,R,5

Contractor : Apes Drilling

Drill Type : Rolary at flush

Bit Type : P.C.D.

Rig Type: Gryphon

Hole Diameter (mm): 105

Casing depth (m) : 1.5

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

nì : Dafenca Estetes

Ground Level m (A.O.D.) : 48,39

Project : RAF Stathen, Extension Areas

Date : 6.2.03

: CAN No. MD0990066A

Hole Depth m : 10.0

Well Height m (A.O.D.):

Elase of Exploratory Hole m (A.O.D.): 38,39

Hole Type: Open Hole/Cored

Co-ordinates : F; 299170.56 N 168090 84

Logged By: AWJ

Sheet No : 3 of 3

Depth (metres)	S levation	Geological Description (B\$5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Cora Rec.	Solid Core Rec. %	RQD %	Discontinuitles/ Remarks
ă	36.38	Jurassic Bedrock Very weak very dark grey laminated fresh fresh medium greined MUDSTONE							
11					•				
12								:	
13									
-									
14 -									
15									

Contractor : Apex Driffing

Drill Type : Rolery air fluth

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m): 1.5

Care Diameter (mm) : 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

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tent : Defence Estates

Ground Level m (A.O.D.) : 47 53

Project : RAF St.Athen, Extension Areas CAN No. MD0990088A

Location:

Hole Depth m: 100

Date: 08,02.03

Well Height m (A.O.D.):

Base of Exploratory Hole m (A.O.D.): 37.53

Hole Type ; Open I lola/Cored

Co-erdinales : F 299285.19 N 187970.18

Logged By : AWJ

Shoel No : 1 of 2

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuițies/ Remarks
	47.03 46.93	Driller's Description Limestone and clayey soil							0.50m - 4.15m Broken Core
	48.78	Drift / Weathered Bedrock Strong grey fine grained fresh medium thinly bedded LIMESTONE							
		Drift / Weathered Bedrock Soft to firm orange brown silty CLAY, with some langular gravel			1	65	0	0	
2		Jurassic Bedrock			2	33	0	0	
3		Strong gray thinly to medium bedded fresh crystalline LIMESTONE			•••				
4					3	41	18	11	4.19 B,W,C,S,5
	43.03					:			4.56 B,MW,C,R,5 4.61 B,MW,C,R,5
5								-	4.91 B,MW,C,R,5 4.92 B,MW,C,R,5 4.92 - 5.13 J,N,C,Sm,80

Contractor: Apex Draing

Drill Type : Rolary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm) ; 105

Casing depth (m):0

Core Diameter (mm): 75mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL 01656 749 096 FAX

Client : Defence Estates

Ground Level m (A.O.O.) : 47 53

: CAN No. MD0990065A

Hole Depth m: 10.0

Hote Type : Open Hote/Cored

.jact : RAF St.Athan, Extension Areas

Co-ordinates : E 299285.19 N 167970.18

Location :

Well Height in (A O D ):

Logged By : AWJ

Date: 06.02.03

 $\theta_{BSD}$  of Exploratory Hole in (A.O.D.) ; 37.53.

Sheet No : 2 of 2

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
7		Jurassic Bedrock Strong dark greenish grey (hinly to medium bedded fresh crystalline LIMESTONE			. 5	9-6 0	25	21	5.14 B,W,C,R,5 5.29 B,W,C,R,5 5.38 B,W,C,R,5 5.88 B,MW,C,R,5 5.88 B,MW,C,R,5 6.13 B,W,C,R,5 6.13 B,MW,C,R,5 6.3 B,MW,C,R,5 6.3 B,MW,C,R,5 6.57 B,W,C,R,5 6.54m - 7.50m Broken Core
8	39.53	Firm grange grey brown sendy clayey SIL1			Ė	50	24	20	7.85 B,MW,C,R,5 8.00 - 8.05m B,W,C,R,5 8.25 B,W,C,R,5 8.25 -8.36 J,N,SS,Sm,80 8.60 B,MW,C,R,5
9	\$7.53	Jurasaic Bedrock Strong gray thinly to medium bedded freeh crystelline LIMESTONE			7	74	26	17	9.00 - 9.28m Broken Core 9.28 J.MN,SS,S,85 9.45 B,W,C,S,5 9.63 B,MW,C,R,5

Contractor: Apex Driffing

Driff Type : Rotary air flush

Bit Type: P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

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10-1014-5002 14:40 LV011:44 FV DVIETING FID 81920 14:90

#### **DRILLHOLE No. BH13**

'llent : Defence Estates

Ground Level m (A.O.D.); 48,48

Project - RAF St,Athan, Extension Areas

: CAN No. MD0990086A Location:

Hole Depth m : 10,0

Date: 05.02.03

Well Height in (A.O.D.);

Base of Exploratory Hole m (A.O.D.): 38.48

Hale Type : Open Hole/Cored

Co-ordinates : E 299054.29 N 168113.87

(.ogged By : AW.)

Sheet No: 1 of 2

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Defail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	48.18	Driller's Description Limestone and clayey soil			1	70	O	0	
2		Jurassic Bedrock  Moderately strong grey and brownish grey thinly to medium bedded slightly weathered crystalline LIMESTONE, with many pockets of crange brown slity clay			2	74	25	10	
3	45.48				3	77	47	32	
4		Jurassic Bedrock Strong grey and brownish grey thinly to medium bedded heah crystalline LIMESTONE			a	80	58	55	3.22 B,W,C,R,5 3.61 B,W,C,R,5 3.58 B,W,C,R,5 3.94 B,W,C,R,5
5									4.50 B,W,C,R,5 4.70 B,W,C,R,5 4.80 B,W,C,R,5

Contractor: Apex Drilling

Drill Type: Rolery at flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m): 0

Core Diameter (mm): 76nm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

ant : Defence Estates

Ground Lavel m (A.O ().) : 48 48

Project : RAF St.Athen, Extension Areas

: CAN No. MO0990066A

Hole Depth m : 10.0

Floie Type : Open Hole/Cored

Co-ordinates : E 299054.29 N 166113,87

l,ocation :

Well Height m (A O.D ):

Logged By : AWJ

Date : 05,02,03

Base of Exploratory Hole m (A.O.D.): 38 48

Sheel No . 2 of 2

Deoth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuitios/ Romarks
					5	74	38	34	5.55m - 5.65m Broken Core
_	42,51	Jurassic Bedrock  Weak brownish grey laminated slightly weathered fine grained MUDSTONE			в	91	49	47	5 97 - 6,05 B,W,C,R,5 8.25 B,W,C,R,5
7	41,48	Jurassic Bedrock Strong grey and brownish grey thinly to medium bedded fresh crystelline LIMESTONE							6.45 B,W,C,R,5 6.51 B,W,C,R,5 6.87 B,W,C,R,5 7.00 - 7.06 B,W,C,R,5
		Jurassic Bedrock Week brownish grey laminated fresh fine grained MUDSTONE  Jurassic Bedrock Strong grey and brownish grey thinly to medium bedded fresh crystelline LIMESTONE							7.38 B.W.C.R.5
8	40.48	Jurassic Bedrock Weak dark grey laminated fresh fine grained MUDSTONE			7	95	76	70	7.80 B,W,C,R,5 8.00 - 8.03 B,W,C,R,5 8.13 B,W,C,R,5
		Jurassic Bedrock Strong grey and brownish grey thinly to medium bedded freeh crystalline LIMESTONE							8.33 B,W,C,R,5 8.53 B,MW,C,R,5 8.72 B,MW,C,R,5 8.99 B,MW,C,R,5
9	39.29	Jurannic Bedrock Weak dark grey laminated fresh fine greined MUDSTONE			8	99	78	64	9.18 B.MW,C,R,S 9.26 B.MW,C,R,5 9.42 B.MW,C,R,5
10	38.48	Jurasaic Bedrock Strong grey and brownian grey thinly to medium bedded fresh crystalline LIMESTONE							9.62 B,MW,C,R,5 9.74 B,MW,C,R,5

Contractor : Apas Drilling

Drill Type : Rotery oir flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Dismeter (mm): 105

Casing depth (m):0

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

Ol656 749 149 TEL Ol656 749 096 FAX

Hole Type : Open Hole/Cored

\* ; Defence Estates

Ground Level m (A.O.D.): 47.20

Project : RAF St Alhen, Extension Areas ; CAN No. MD0990066A

Hola Depth m: 10.0

Co-ordinates : E 299162.05 N 167986.76

Location:

Well Height in (A.O.D.):

Logged By: AWJ

Date : 04/05.02.03

Base of Exploratory Hole m (A.O.D.) 37.20

Sheet No : 1 of 2

Depth (metres)	Elevation	Geological Description (B\$\$930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	46,9	Driller's Description Topsoil	G + m 平 亦 硕 玩 亦 來						
1	\$6. <i>2</i>	Driller's Description Boulder Clay							1.00m - 1.40m Broken Core
		Jurassic Bedrock  Moderately strong grey thinly to medium bedded slightly weethered crystalline LIMESTONE			1	93	40	46	1 70m - 1.90m Broken Core
2	44.7	Jurassic Bedrock Very weak grey brown laminated fresh MUDSTONE							2.30 B,W,C,R,5 2.50 - 2.52 B,W,C,R,5 2.65 B,W,C,R,5 2.80 B,W,C,R,5
3	44.1	Jurassic Bedrock Moderately strong grey thinly to medium bedded slightly weathered crystelline LIMESTONE Jurassic Bedrock Very week grey brown laminated fresh MUDSTONE			2	<b>9</b> †	50	45	3,10 - 3,15 B,W,C,R,5
		, The same of the							3.60 B,W,C,R,5 3.64 B,W,C,R,5
4	:		$T_1$						4.07 B,W,C,R,5 4.09 B,W,C,R,5 4.29 - 4.31 B,W,C,R,5 4.57 B,W,C,R,5
5		<u> </u>				-			

Contractor: Apex Origing

Casing depth (m):0

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Drill Type : Rolary air flush Bit Type: P.C.O.

Hole Diameter (mm): 105

01656 749 149 TEL

Rig Type : Gryphon

Core Diameter (mm) ; 75mm (HO) 412

01656 749 096 FAX

Drilled By : MJ

C" 1: Defence Estalas

Ground Level m (A.O.D.) ; 47 20

Project; RAF St.Athan, Extension Alens

: CAN No. MD0990088A

Location: Date : 04/05,02.03 Hole Depth m : 100

Well Height m (A.O.U.):

Base of Exploratory Hole m (A.O.D.) ; 37 70

Hale Type : Open Hale/Cored

Co-ordinales : F. 299162,05 N 167986,76

Lagged By . AWJ

Sheet No : 2 of 2

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
					3	B2	43	35	5.20 B,W,C,R,5
									5.70 B,W.C,R,5
									5,73 B,W,C,R,5 6.03 B,W,C,R,5
E	1				4	78	71	70	6 30 B,W,C,R,5
			1I		7	7		, ,	6.48 B,W,C,R,5
									8,66 B,W,C,R,5
7		Jurassic Bedrock  Moderately strong grey thinly to medium bedded fresh crystalline LIMESTONE				· ·		•	7.33 B,W,C,R,5
									7.47 B,W,C,R,5
					_			67	7.57 B,W,C,R,5
8					5	95	92	<b>67</b>	8.30 B,W,C,R,5
									8.60 B,W,C,R,5
θ	38,17	Jurasaic Bedrock							9,03 - 8.09 B,W,C,R,5
		Moderately weak to moderately strong very dark gray laminated fresh fine grained MUDS FONE			6	89	85	72	9.30 B,W,C,R,5
		Jurassic Bedrock  Moderately strong grey thinly to medium bedded fresh crystalline LIMESTONE							9.47 B,W,C,R,5 9.52 B,W,C,R,5
		CLASIBILIDE CIMES LOVE							9.92 B,W,C,R,5
10	37.2		7 7						

Contractor: Apex Drilling

Driff Type : Rotery air flush

Bit Type: P.C.D.

Rig Type : Gryphon

Hole Dismeter (mm): 105

Casing depth (m):0

Core Diameter (mm): 76mm (HO) 412

Driffed By : MJ

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nt : Defence Estates

Ground Level m (A.O.D.): 47.86

Dale: 04.02.03

Project : RAF St.Athen, Extension Arcos

: CAN No. MD0990086A

Location :

Hole Depth m : 10.0

Well Height in (A O.D.):

Base of Exploratory Hole m (A.O.D.) ; 37.96

Hole Type : Open Holo/Cored

Co-ordinatos : E 299289 08 N 167884.38

Logged By - AWJ

Sheet No ; 1 of 2

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	47.56	Drillers Description  .  Weathered Bedrock  Moderately strong gray stained arange LIMESTONE, examined as angular gravel				64	9	ç	0,40m - 1 50m Broken Core
	46.88	Jurassic Bedrock Moderately strong grey thinly to medium bedded slightly weethered crystalline LIMESTONE			1	04	U	*	1.65m - 2.05m Broken Core
2	45.53	Jurassic Bedrock  Very weak groyish prompe brown laminated moderately weathered fine grained MUDSTONE			2	82	43	41	2.23 B,W,C,R,5 2.43 - 2.46 B,W,C,R,5 2.73 B,W,C,R,5
3		Jurannic Bedrock Strong grey thinly to medium bedded fresh crystalline LIMESTONE							3.20 B,W,C,R,S 3.63 B,W,C,R,5 3.67 B,W,C,R,5
4	44.13	Jurassic Bedrock  Moderately weak to weak greyish brown laminated slightly weathered fine grained MUDSTONE			3	98	75	69	3.64 J,W,SS,St,85 3.83 - 3.89 B,W,C,R,5 4.09 B,W,C,R,5
5									4.50 B,W,C,R,5 4.57 H,W,C,R,5 5.01 B,W,C,R,5

Contractor: Apex Drilling

Drill Type : Rotary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm) ; 105

Casing depth (m): 0

Care Diameter (mm): 78mm (HO) 412

Orilled By : MJ

APEX DRILLING SERVICES LTD.

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DRILLHOLE No. BH15

ot : Defence Estates

Ground Level m (A.O.D.): 47,96

Hole Type : Open Hole/Cored

Project : RAF St.Athan, Extension Areas : CAN No. M00990066A

Co-ordinales : E 299289,06 N 167864,38

Hole Depth m - 10.0

Location :

Well Height m (A O D.) .

Logged By · AWJ

Date ; 04.02.03

Dass of Exploratory Hole m (A O D.) . 37.98

Sheet No : 2 of 2

Depth (metres)	Elevation	Geologicat Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
0					4	94	<b>7</b> 9	67	5.40 B,W,C,R,5 5.62 B,W,C,R,5 5.89 B,W,C,R,5 6.00 B,W,C,R,5
7		Jurassic Bedrock			5	87	65	28	6.08-6.34 J,N,SS,Sm,89 6.80 6.83 B,W,C,R,5 6.86 B,W,C,R,5 7.22 B,W,C,R,5 7.32 B,W,C,R,5
5		Strong grey thinly to medium bedded fresh crystalline LIMESTONE			8	63	42	27	7.65 A,W,SS,R,5 7.65 B,W,SS,R,5 7.97 B,W,C,R,5 6.37 B,W,C,R,5
9	37,98				7	84	57	46	8.80 J,MW,SS,Sm,45 9.00m - 9.40m Broken Care 9.53 B,W,C,R,5 9.84 B,W,C,R,5

Contractor: Apex Orilling

Drill Type: Rotary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hale Dismeter (mm): 105

Casing depth (m):0

Core Diemeter (mm): 76mm (HO) 412

Driffed By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

int : Defence Estates

Ground ( evel m (A.O.D.) : 45.31

Project : RAF StAthen, Extension Areas

: CAN No MD0990088A

Location: Dele ; 07,02.03 Hole Depth in: 10.0

Writ Height m (A.O.D.);

Base of Exploratory Hole int (A.O.D.) ; 35.31

Hole Type : Open Hole/Cored

Co-ardinates - E 300170.00 N 169746,75

Logged By : AWJ

Sheel No : 1 of 3

Dapth (metres)	Elevation	Geological Description (B\$5930:1999)	Streta Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	44.31	Driller's Description Limestone and clayey soil							
2	44.31				1	52	33	20	1.48 B,W,C,R,5 1.65 D,W,C,R,5 1.77 B,W,C,R,5 2.08 B,W,C,R,5
3		Juraesic Bedrock Strong grey thinly to medium bedded freeh crystelline LIMESTONE, with some white calcile velining			2	81	25	15	2.42m - J.30m Broken Core
4					3	91	37		3.71 J,W,C,Sm,B6 3.80 B,W,C,R,5 4.00 B,W,C,R,5 4.11 B,W,C,R,5 4.30 4 58 J,N,SS,Sm,85 4.59 B,W,C,R,5
5									4.82 B,W,C,R,5 4.83 - \$.02 J,N,C,Sm,85

Contractor : Apex Orifing

Drill Type : Rolary at flush

Bit Type : P.C.D.

Rig Type: Gryphon

Hole Diameter (mm) : 105

Casing depth (m):0

Core Diameter (mm): 76mm (f10) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

'tent : Defence Estates

Ground Level m (A,O D ): 45.31

Hola Type: Open Hola/Corad

Location:

Project : RAF St.Athen, Extension Areas ; CAN No. MID0990066A

Co-ordinales : E 300170.90 N 169746 75

Hole Depth m: 100 Well Height m (A.O.D.):

Logged By : AWJ

Date: 07.02.03

Base of Exploratory Hole m (A.O.D.) : 35-31

Sheet No . 2 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Oizcontinuities/ Remarks
					4	72	23 .	13	5.37 B,W,C,R,5 5.42 B,W,C,R,5
					5	75	38	35	8. <b>63</b> В,W,С,R,5
7									6.70 B,W,C,R,5 6.81 B,W,C,R,5 7.07 B,W,C,R,5 7.23 B,W,C,R,5
a					6	74	40	29	7.55 - 7.65 ft,W,C,R,5
	36,36								
9	38.19	Jurassic Bedrock Moderately weak dark grey laminated fresh fine grained MUDSTONE  Jurassic Bedrock Strong grey thinly to medium bedded fresh crystalline LIMESTONE			7	95	78	86	
10	35.3	Jurasaic Bedrock   Very weak greyish grange brown laminated highly   weathered fine grained MUDSTONE							

Contractor: Apex Drilling

Drill Type: Rotery air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m): 0

Core Diameter (mm): 78mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

'ent : Defence Estates

Ground Level # (A.Q.D.) : 41 65

Project : RAF St.Athan, Extension Areas

: CAN No. MD0990088A

Hole Depth m : 12,00

Location ; Date : 11/12.02,03 Well Height m (A.O.D.) :

Base of Exploratory Hole m (A O D ) : 31.85

Hole Typs : Open Hola/Cored

Co-ordinates : E 288334,21 N 188838.55

Logged By: AWJ

Sheet No : 1 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec, %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	41.45	Driller's Description Limestone and clayey suil			. 1	80	15	15	0.50m - 1.77m Broken Core
2		Jurassic Bedrock Strong grey stained orange in places thinly to medium badded slightly weathered becoming fresh crystalline LIMESTONE			2	73	29	24	1.77 B,MW,C,R,5 2.03 B,MW,C,R,5 2.12 B,MW,C,R,5 2.21 B,MW,C,R,5 2.40 B,MW,C,R,5
3									2.80 - 2.85 J.MW,SS,R,45 3.00 - 3.02 B.MW,C,S,R,5 3 22 B.MW,SS,C,R,5 3.29 B.MW,SS,C,R,5 J 36 B.MW,SS,C,R,5
4	37,65				3	86	55	38	3.83 B,MW,C,R,5 3.85 B,MW,C,R,5 4.19 - 4.21 B,MW,IC,F,R,5 4.21 B,MW,C,R,5 4.21-4.47 J,MW,SS,R,45 4.50 B,MW,C,R,5 4.65 B,MW,C,R,5

Contractor: Apex Drilling

Drift Type : Rolary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm) : 105

Casing depth (m):0

Core Diemeter (mm): 76nm (HO) 412

Orilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

"oni : Defence Estates

Ground Level m (A.O.D.) 41.65

Hole Type ; Open Hole/Cored

r-roject : RAF SLAthan, Extension Areas CAN No. MD0990088A

Hale Depth m : 12,00

Co-ordinates : F. 298334.21 N 169836 55

Location:

Well Height in (A.O.D.):

Logged By : AWJ

'Date : 11/12.02.03

Bisse of Exploratory Hole m (A O.D.): 31.65

Sheet No : 2 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Welf Detali	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
ă	3		1 1						5.10 - 5.54 J,SS,R,R0
					4	79	ЯC	30	5,55 B,MW,C,R,5
									5.87 6,MW,C,R,5 6.00 B,MW,C,R,5
					_				6.43 B,MW,C,R,5 6.44 - 6.55 J,SS,C,R,80 6.76 B,MW,C,R,5
7					5	95	77	77	7.17 - 7.19 B,W,IC,F,R,5
		Jurasalc Bedrock Strong grey thinly to medium bedded fresh crystalline LIMESTONE							7.50 8,W,C,W,R,5
6					6	79	<b>e</b> 0	58	8.15 B,W,C,R,5 8.30 - 8.32 B,W,R,5 8.35 B,MW,C,R,5
9									8.96 B,MW,C,R,6
									9.50 B,MW,C,R,5
10									Snapped Core @ 9.86

Contractor: Apex Driffing

Drift Type ; Rolary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm): 75mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

Cliant , Defence Estates

Ground Level m (A.O.D.) 141,65

roject : RAF St.Athen, Extension Arens : CAN No. M00990068A

Dale: 11/12,02,03

Hole Depth m : 12 00

Well Height m (A.O.D.)

flaxe of Exploratory Hole m (A O.D.): 31.65

Hole Type : Open Hale/Cored

Co-ordinates : E 298334.21 N 188836.55

Logged By : AWJ

Sheet No : 3 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuitios/ Remarks
	II)				7	97	87	87	10 16 B,MW,C,R,5 10.28 B,MW,C,R,5 10.30 B,MW,C,R,5
					8	98	71	<b>G</b> 1	10.63 B,MW,C,R,5 11.03 B,MW,C,R,5 11.10 B,MW,C,R,5 11.10 11.27 J,MW,SS,R,80 11.40 B,MW,C,R,5 11.51 B,MW,C,R,5
12	29.65	• •• ••••							12 00 B,MW,C,R,5
13									
14									
15									

Contractor : Apex Drilling Drill Type ; Rolary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm) : 75mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

Client : Defence Estates

Oround Level m (A O D.) - 44.19

. rojeci : RAF SI.Athan, Extension Areas

: CAN No. MD0990066A

Hole Depth m : 12 00

Date: 12.02.03

Well Height m (A.O.D.):

Base of Exploratory Hole m (A O D ): 32 19

Hole Type : Open Hole/Cored

Co-ordinates F 298288 39 N 168686.83

Logged By : AWJ

Shect No : 1 of 3

			<del>, ,,,,,</del> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<del></del>	, -			<del></del>	
Denth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities <i>i</i> Remarks
	43,69								0 50m - 3.0m Broken Care
	43,19	Jurassic Bedrock Moderately strong to strong grey stained orange in places slightly weathered crystalline LIMESTONE			1	70	0	0	
2					2	70	0	O	
3									
J									3.25 B,W,C,R,5 3.25m - 3 65m Broken Core
4					3	91	55	47	4 00 B,W,C,R,5
								'	4.45 B,W,C,R,5 4.50 B,W,C,R,5 4.75 B,W,C,R,5
5								1	6.69 B,W,C,R,5

Contractor: Apex Drilling

Drill Type : Rolary at flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m): 1.5

Core Dismeter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

Client : Defence Estates

Ground Levelm (A 0.0 ) - 44 19

Project : RAF StAthen, Extension Areas

Date ; 12 02.03

Location:

· CAN No. MD0990066A

Hole Depth m : 12.00

Well Height m (A.O.D.).

Rese of Exploratory Halo m (A O D ): 32 19

Hole Type : Open Hole/Cored

Co-ordinatos : E 290200.39 N 168888 80

Logged By : AWJ

Sheet No : 2 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
					4	91	75	77	5.33 B,W,C,R,5 5.51 B,W,C,R,5 5.85 B,W,C,R,5
7					5	78	67	67	6.21 B,W,C,R,5 6.22 - 6.37 J,N,Sm,85 6.87 B,W,C,R,5 7.34 B,W,C,R,5
8		Jurasaic Bedrock Moderately strong to strong grey thinly to medium bedded fresh crystalline LIMESTONE			5	97	60	73	7.50 - 7.58 J.N.Sm.85 7.95 B.W.C.R.5
Ð									8.50 B,W,C,R,5 8.82 B,W,C,R,5 9.10 B,MW,C,R,5 9.30 B,MW,C,R,5
10									9.64 B,MW,C,R,5 9.94 B,MW,C,R,5

Contractor : Apex Oriting

Orlff Type : Rotary air flush

Bit Type: P.C.D. Rig Type : Gryphon Hole Dismeter (mm); 105

Coaing depth (m): 1.5

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

Offent : Defence Estates

Ground Level m (A.O.D.) : 44.19

Project : RAF St.Athan, Extension Areas

; CAN No MD0990068A

Date: 12.02.03

Hole Depth m : 12 (X)

Well Height in (A.O.D.)

Вава of Exploratory Hole m (A.O.D.): 32-19

Hole Type . Open Hole/Cored

Co-ordinates : F 298288 39 N 168888 83

Logged By AWJ

Street No : 3 of 3

	Depth (metres)	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
					7	96	75	63	10.10 8,MW,C,R,S
					6	<b>99</b>	67	62	10.50 B,MW,C,R,5 10.56 B,MW,C,R,5 10.81 B,MW,C,R,5 11.05 B,MW,C,R,5 11.06 - 11.09 J,MN,SS,R,85 11.50 B,MW,C,R,5 11.57 B,MW,C,R,5 11.78 B,MW,C,R,5 11.79 - 12.00 J,MW,SS,R,85
12	32.19		7 7 7						
13									
14									
15									

Contractor : Apex Orlling

Orlff Type: Rolary air flush
Bit Type: P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105 Cesting depth (m): 1.5

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

Client : Defance Estatos

Ground Level m (A Q D ) 45.75

Hale Type: Open Hola/Cared

.²roject : RAF St Alban, Extension Areas · CAN No. MD0990066A

Hole Depth in : 12 0

Co-ordinates : C 298238.08 N 168039.69

Localion;

We'll Hoight m (A,O,D.).

Logged By . AWJ

Dale : 12/13 02.03

Ruse of Exploratory Holo m (A O,D.) , 33.75

Sheet No : 1 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discon(inulties/ Remarks
	45.25	Limestone and clayey soil  Glacial Drift  Soft grange brown silty clay with some to much line to medium engular gravel			1	60	ŧ	0	0,50m - 1.50m Broken Core
2					2	79	39	39	1.50 - 1.60 B,W,C,R,5 1.75 B,W,C,R,5 1.69 B,W,C,R,5 2.0-2.17 J,MW,N,R,85 2.16 B,W,C,R,5
3									2.84 B,W,C.R,5 2.85 J,MW,R,85 3.0 3 48 J,MW,R,85 3.3 B,W,C,R,5
4					3	56	46	36	

Contractor: Apex Driffing

Drill Type : Rolery air flush

Bit Type : P.C.D. Rig Type: Gryphon Hole Diameter (mm): 105

Casing depth (m): 0

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

Clant : Defence Estates

Ground Level in (A.O.D.): 45.75

Project : RAF StAlhon, Extension Areas

: CAN No. MD0990086A

Location:

Well Height m (A O D ) ·

Dale: 12/13,02.03

Hole Depih m : 12.0

Base of Exploratory Hole m (A.O.U.): 33 75

Holo Type : Open Hole/Cored

Co-ordinales : E 298236,08 N 168939 69

Logged By: AWJ

Shoot No : 2 of 3

	Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuítles/ Remarks
	,					1	92	74	71	
	7		Jurassic Bedrock			5	77	<b>6</b> 5		8.80 B,W,C,R,5 7.02 B,W,C,R,5 7.22 B,W,C,R,5
	9		Strong gray thinly to medium bedded frosh crystelline LIMESTONE			6	90	81	75	7.50 B,W,C,R,5 7.62 B,W,C,R,5 7.67 B,W,C,R,5 6.07 B,W,C,R,5 8.39 B,W,C,R,5
9									8 8 9	3.76 B,N,SS,Sm,5 9.86 B,N,SS,Sm,5 9.0 B,W,C,R,5 9.28 B,W,C,R,5 9.38 B,W,C,R,5
10									9.	92 B,W,C,R,5

Contractor : Apex Drilling

Drill Type: Rolery air flush

Bit Type : P.C.D.

Rig Type: Gryphon

Hole Diameter (mm): 105

Casing depth (m) : 0

Core Diameter (mm) ; 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

Client : Detence Estates

Ground Level in (A.O.D.): 45.75

Project : RAF St.Athan, Extension Areas

: CAN No. MD0990068A

Location :

Dale: 12/13.02.03

Hole Depth m: 12,0

Woll Hoight m (A.O.D.)

Base of Exploratory Hole m (A,O D ) : 33.75

Hole Type . Open Hole/Cored

Co ordinates : E 298235,08 N 168939,69

Logged By ; AWJ

Chat: of Jord

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Caput (metres)	Elevation	Geological Description (B\$5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	35.					7	91	B1	65	10.15 B,W,C,R,5 10 ZZ B,W,C,R,5 10 S B,W,C,R,5
	34.	56	Jurassic Bedrock Moderately weak dark grey laminated fresh fine grained MUDSTONE  Jurassic Bedrock Strong grey thinly to medium bedded fresh crystalline LIMESTONE							
			Jurassic Bedrock Moderately weak dark grey laminated fresh first grained MUDSTONE Jurassic Bedrock			8	91	55	45	
12	33.7	75	Strong grey thinly to medium berided fresh crystalline LIMESTONE							
13										
14										
15										

Contractor: Apex Drilling

Drill Type : Rotary air flush

Bit Type: P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm) : 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

Client : Defence Estates

Ground Level m (A.O.D.) : 48.63

Project : RAF St.Athen, Extension Atens

: CAN No. MD0990068A Location :

Hole Depth m : 12 0

Date . 13.02.03

Wali Height m (A O D ):

Base of Exploratory Hole m (A.O.D.) : 34,63

Hote Type : Open Hote/Cored

Co-ordinales : F 298263 27 N 169008.47

Fodded RA: WM1

Sheet No : 1 of 3

				1	7	<del></del>	eel No . 1		
Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	48.13	Driller's Description Limesione and clayey soif			1	51	17	10	0.50m - 1.60m Broken Care
2		Jurassic Bedrock Strong grey stained orange in places thinly to medium bedded slightly weathered becoming fresh crystalline LIMESTONE			2	82	58	58	1 90 B,W,C,R,S 2.19 B,W,C,R,S 2.65 B,W,C,R,S 2.70 B,W,C,R,S
d					3 9.	3	54 54	3. 3. 3. 4. 4.2	.19 B,W,C,R,5 .33 B,W,R,5 .36 B,W,C,R,5 .80 H,W,C,R,5 .90 - 4.00 J,MW,SS,R,85 .90 H,W,C,R,5 .25 B,W,C,R,5 .15 B,W,C,R,5
	Contrac	tor : Apex Driving Hole Diameter		•					0 B,W,C,R,5 6 B,W,C,R,5

Contractor: Apex Driving Drill Type : Rolary air fush

Bit Type : P.C.O.

Rig Type : Gryphon

Hole Diameter (mm) : 105

Casing depth (m):0

Core Diameter (mm) ; 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

Offent: Defence Estates

Ground Level m (A.O.D.): 46.63

-roject : RAF Stalheri, Extension Areas

; CAN No. MD0880086A

Location Date: 13.02,03 Holn Depth m - 12,0

Well Linight m (A O D )

Base of Explansiony Hole in (A.O.D.): 34.63

Hole Type: Open Hole/Cored

Co ordinates : E 298263,27 N 169008,47 Logged Dy : AWJ

Sheet No : 2 of 3

Dapth (metres) Core Total Geological Description Solid Strate Well Run Core RQD Discontinuities/ Elevation Core (BS5930:1999) Detall Type Depth Rec. ٠. Romarks Rec. % (m) % 5,16 P,W,C,R,5 5.36 B,W,C,R,5 78 68 65 6.00 B,W,C,R,5 40.51 0.12 - 6.18 B,W,C,R,5 Jurassic Bedrock Weak dark grey laminated fresh fine grained MUDSTONE Jurassic Bedrock Strong grey thinly to medium boddod fresh crystalline LIMESTONE 6 78 B.W.C.R.5 5 92 65 6.82 B,W,C,R,5 7 39.54 7 09 - 7.13 B,W,C,R,5 Jurassic Bedrock 7.25 B,W,C,R,S Weak dark grey laminated fresh fine grained MUDSTONE 7.50 B W.C.R.5 7.70 B.W.C.R.5 7.71 - 7 74 J,MW,SS,R,85 7.75 D.W.C.R.5 8 Jurassic Bedrock 7.95 B,W,C,R,5 Strong grey thinly to medium bedded fresh crystalline LIMESTONE 6 62 45 43 8.34 - 8.38 8,W,CI,F,R,5 8.50 - 8.53 J,MW,SS,R,45 8 80 B.W.C.R.5 8.87 D,W,C,R,5 9 9.00 B,W,C,R,5 37.5 9.13 - 9.25 NWC,R,5 37.38 Jurassic Bedrock Weak dark grey laminated fresh fine grained MUDSTONE 10

Contractor: Apex Drilling

Driff Type ; Rotary air fluxh

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm) : 105

Casing depth (m) : 0

Core Diameter (mm): 76mm (HO) 412

Drillad By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

`llant : Defence Estates

Ground Level m (A O D ) - 46 63

Project - RAF St.Alban, Extension Arena

Location :

: CAN No. MD0990066A

Woll Height m (A O D )

Date: 13.02.03

Hole Depth m : 12.0

Base of Exploratory Holo m (A O.D.) : 34 63

Hole Type . Open Hols/Cored

Co-ordinates · F. 29B263.27 N 159008,47

Logged By: AWJ

Sheet No . 3 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Dotail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
		Juraseic Bedrock Strong gray thinly to medium bedded freeh crystalline LIMESTONE			7	46	34	34	10.20 0,W,C,R,5 10.45 B,W,C,R,5 10.65 B,W,C,R,5
	35.33	Jurassic Bedrock			8	93	6/	37	10.83 8,W,C,R,5 11.00 8,W,C,R,5 11.30 8,W,C,R,5 11.37 8,W,C,R,5
12	34.63	Week dark grey laminated fresh fine grained MUDS10NF  Jurassic Bedrock  Strong grey thinly to medium bodded fresh crystelline LIMESTONE							11 45 B,W,C,R,5 11 70 B,W,C,R,5 11.80 B,W,C,R,5 11.90 B,W,C,R,5
13									
14									
15									

Contractor: Apex Drilling

Drill Type ; Rotary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m): 0

Core Diameter (mm) : 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

Clent : Defence Estates

Ground Levelm (A.O.D.): 48.85

Base of Exploratory Hole m (A.O.D.) : 34 85

Project : RAF St.Alhen, Extension Areas

: CAN No. MD0990066A

Location :

Hole Depth m: 12 0

Wall Height m (A.O.D.):

Date: 13/14.02.03

Hole Type: Open Hole/Cored

Co-ordinates : F 298198 74 N 188982 80

Logged Dy: AWJ

Short No : 1 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	48.35	Driller's Description Limestone and clayey soil .			3	50	0	0	0.50m - 1.90m Broken Core
2		Jurassic Bedrock Strong grey thinly to medium bedded slightly weathered becoming fresh crystelline LiMESTONE			2	67	28		2.10 B,W,C,R,5 2.27 B,W,C,R,5 2.39 B,W,C,R,5 2.40 - 2.48 J,MN,Sm,85 2.80 B,W,C,R,5
4					3	93	59	59	3,30m - 3,80m Broken Core 4,04 B,W,C,R,5 4,30 B,W,C,R,5
5								4	1.80 B,W,C,R,5 1.78 B,W,C,R,5

Contractor: Apex Drilling

Drill Type : Rotary air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm) : 105

Casing depth (m):0

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRIFLING SERVICES LTD.

Client : Defence Esiales

Ground Lavelm (A,O D.) - 46.85

'roject : RAF \$t.Athen, Extension Areas

. CAN No. MD0990096A

Hole Oapth re : 12.0

Hole Type - Open Hele/Cared

Co-ordinates : E 298198.74 N 168902 80

Location :

Well Height in (A O.D.):

Logged By : AWJ

Dale: 13/14,02 03

Base of Exploratory Hole m (A.O.D.)  $^\circ$  34 85

Shoot No : 2 of 3

	Dapth (metres)	Elevation	Geological Description (B\$5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
				+		4	96	72	68	5 40 B,W,C,R,5 5.42 - 5.66 J,MN,SS,R,85 5 70 B,W,C,R,5 5.73 B,W,C,R,5
						S	89	67	33	6.10 B,W,C,R,5 6.26 B,W,C,R,5 6.38 B,W,C,R,5 6.38 B,W,C,R,5 6.42 B,W,C,R,5 6.69 B,W,C,R,5 6.75 B,W,C,R,5 6.76 B,W,C,R,5
в						5	85	79	58	7.41 B,W,C,R,5 7 86 B,W,C,R,5 7.93 B,W,C,R,5 8.03 B,W,C,R,5 8.17 B,W,C,R,5 8.26 B,W,C,R,5 8.37 B,W,C,R,5 9.48 B,W,C,R,5
Đ	37.84 37.05	5	Jurassic Bedrock Weak dark grey leminated fine grained frosh MUDSTONE  Jurassic Bedrock Strong grey thinly to medium bodded fresh crystalline IMESTONE						9	8.00 B,W,C,R,5 8.45 B,W,C,R,5 85 B,W,C,R,5 8-9.63 B,W,C,R,5
10		\ <u>\</u>	Veek dark grey laminated fine grained fresh AUDSTONE  Ctor: Aper Downs						-	

Contractor : Apex Drilling

Drill Type : Rolery of flush

Bit Type : P C.D.

Rig Type : Gryphan

Hole Diameter (mm) ; 105

Casing depth (m):0

Core Diameter (mm) : 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

TO JON-CORY 14:25 LIGHTHEY DITETING FID 61020 LADS

**DRILLHOLE No. BH21** 

ent : Defence Estates

Ground Level m (A.O.D.) ; 46,85

Project . RAF St.Afhan, Extension Aroas : CAN No. MD0990088A

Hola Depth m : 12 0

Location : Date : 13/14 02 03 Wall fleight m (A O D ):

Hase of Exploratory Flole in (A,O.D.): 34.65

Hole Type : Open Hole/Cored

Co-onliners : F 29/19/19/4 N 168982.80

Logged By : AWJ

Sheet No . 3 of 3

Depth (metres)	Elevation	Geological Description (895930:1999)	Strata Type	Well Dotali	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
		Jurannic Bedrock Strong gray thinly to medium bedded tresh crystalline LIMESTONE			7	97	72	<b>6</b> 5	10.20 B,W,C,R,5
	36.2	Jurassic Bedrock  Weak dark grey laminated fine grained fresh  MUDSTONE  Jurassic Bedrock							10.85 10.88 B,W,C,R,5 10.85 B,W,C,R,5
		Strang gray thinly to medium bedded frash crystalline LIMESTONE			Ą	82	71	64	11.20 B,W,C,R,5 11.55 B,W,C,R,5
12	35,15 34,85	Jurassic Bedrock Week dark groy familiated fine grained fresh MUDSTONE  Jurassic Bedrock							11 7 11 72 B,W,C,R,5 11.85 B,W,C,R,5
,		Strong grey thinly to medium hedded fresh crystallino (LIMESTONE					:		
13				i					
14									
15	i								

Contractor: Apex Drilling

Drill Type : Rolery eir flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m):0

Core Diameter (mm): 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

39.12 37 63

"ant : Defence Estates

Ground Level m (A O D ) : 39 12

eroject : RAF StAthen, Extension Areas

: CAN No. MD0990086A

Date: 10/11 02:03

Hule Depth m : 12.0

Wolf Height m (A.O.D.):

Dasc of Exploratory Hole m (A.O.D.) , 27.12

Hole Type : Opon Hole/Cored

Co-ordinates - F. 298550.18 N 169014 19

Logged By : AWJ

Sheet No : 1 of 3

	Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinulties/ Remarks
2		92	Jurassic Bedrock  Moderately strong to strong groy thinly to medium bedded fresh crystalline t.IMISI ONE			2	<b>41</b>	13	10	1.32 B,W,C,R,S 1.58m - 1.85m Broken Core
4			Firm orange brown very sendy silty CLAY  Jurassic Bedrock  Moderately strong to strong grey thinty to medium bedded fresh crystalline LIMESTONE, with colote veining			3	71	6	O	
5	34.6	1	Firm orange brown very sandy silly CLAY  Jurassic Bedrock  Moderately strong to strong grey thinly to medium  medded fresh crystalline LIMESTONE						4 1.	39 B,W,C,R,5  72 B,W,C,R,5  62 B,W,C,R,5  91 B,W,C,R,5

Contractor : Aprix Driffing

Drill Type : Rolary air faish

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m) : 0

Core Diameter (mm): /6mm (HO) 412

Orilled By : MJ

APEX DRILLING SERVICES LTD.

"Nant : Defence Estales

Graund Level m (A.O.D.) : 39,12

Fiola Depth m : 12,0

Project : RAH St.Athan, Extension Areas : CAN No. MD0990066A

Well Height m (A.O.D.) -

Hole Type : Open Hole/Cored

Co-ordinales F 298550.19 N 169014 19

Logged By: AWJ

Slieet No : 2 of 3

Onle : 10/11.02.03

Location :

flase of Exploratory Holo in (A.O.D.) 27-12

				<del></del>	1		7		<del></del>
Deoth (motres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Welf Detail	Core Run Dopth (m)	Total Core Rec.	Solid Core Roc. %	RQD %	Discontinuities/ Remarks
	34.02	Jurassic Bedrock  Weak dark grey laminated fresh fine grained  MUDS FONE			1	73	49	31	5 10 - 5.17 B,W,C,R,5
		Jurassic Bedrock Strong grey thinly to medium bedded fresh crystalline LIMES FONE							6.00m - 6.30m Broken Core
	32,82	Jurassic Bedrock \ Weak dark grey laminated fresh the grained \MUDSTONE  Jurassic Bedrock							6.35 B,W,C,R,5
7	31.98	Strong grey thinly to medium bedded fresh crystallino LIMESTONE			5	96	56	50	6.90 B,W,C,R,5 7,10 - 7.16 B,W,C,R,5
		Jurassic Bedrock  Weak dark grey laminated fresh fine grained  MUOSTONE							
8								1	7.62 B.W.C.R.15 7.74 B.W.C.R.5 8 08 B.W.C.R.5
					8	93	53	38	8.19 B,W,C,R,5 8.31 B,W,C,R,5
		Jurassic Bedrock Strong grey thinly to medium bedded frosh crystalline LIMESTONE							8.51 R,W,C,R,5 8.80 - 9.00 Broken Core
9									9.12 B,W,C,R,5 9.18 B,W,C,R,5
								ŀ	9.40 B,W,C,R,5
ı									9 65 B,W,C,R,5
10								1	9,95 B.W.C.R.5

Contractor: Apex Drilling

Drill Type : Rotary sir flush

Bit Type : P.C.D.

Rig Type : Gryption

Hola Olameter (mm) : 105

Czeing depth (m): 0

Core Diameter (mm): 76inm (HO) 412

Orilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

lient : Defence Estates

Location :

Date: 10/11.02.03

Ground Level m (A.O.D.) 39 12

Project : RAF St.Athan, Extonsion Arons

: CAN No. MD0990066A

Hole Depth m: 12.0

Well Height m (A O D ):

Dase of Exploratory Hole in (A.O.D.) . 27,12

Hole Type . Open Hole/Cored

Co-ordhates : E 200550.19 N 169014 19

Logged By : NWJ

Sheet No ; 3 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
					7	79	81	42,	
ļ									10.74 B,W,C,R,5 10.92 B,W,C,R,5
	27.52	Jurassic Bedrock			8	87	73	67	11 60 B,W,C,R,S
12	27.12	Week dark grey laminated fresh fine grained MUDSTONE  Juraesic Bedrock Strong grey thinly to medium bedded fresh crystalline / LIMESTONE							11.90 B,W,C,R,5
13									
14									
			-						
15									

Contractor : Apex Drilling

Drill Type : Rotery of flush

Blt Type: P.C.D.

Rig Type : Gryphon

Hole Dismeter (mm): 105

Casing depth (m):0

Core Dismeter (mm): 78mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES UTD.

01656 749 149 TEL

Client : Defence Estates

Ground Level m (A.O.D.) 140,33

Hole Type . Open Hole/Cornd

Project : RAF St.Athan, Extension Arges ; CAN No. M00990068A

Hole Depth m : 12,0

Co-ordinales : F 298516 71 N 168999 99

Location:

Well Height m (A O D ):

Logged By: AWJ

Dale: 11.02.03

Beso of Exploratory Hold m (A,O  $\theta$  ) ; 28 33

Sheet No : 1 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Weff Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQĐ %	Discontinuitles/ Remarks
	40.03	Driller's Description Limestone and clayey soil			1	73	G	0	a 30 - a 80 J,MN,SS,Sm,85
							Š		1.68 B,W,C,R,5 1.62 B,W,C,R,5
2		Jurassic Bedrock  Moderately strong to strong grey thinly to medium bedded fresh crystelline LIMESTONE			2	55	23	10	1.94 (9,W,C,R,S 1.95m - 3.00m Broken Core
3									3.15 B,W.C,R,5 3.23 B,W,C,R,5 3.52 B,W,C,R,5
4					3	<b>85</b>	84		3.90 8,W,C,R,5 4.02 B,W,C,R,5 4.27 B,W,C,R,5
5	35.42	Jurassic Bedrock							4.59 B,W,C,R,5 4.90 B,W,C,R,5 4.91 - 4.98 B,W,C,R,5

Contractor: Apex Drilling Drill Type : Rolary at flush

Bit Type ; P.C.D.

Rig Type : Gryphon

Hole Diameter (mm) : 105

Casing depth (m): 15

Core Diameter (mm): 78mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 I49 TEL

ent : Defence Estates

Cround Level in (A O D ) 40 33

Hole Type : Open Hole/Cored

Project : RAF St.Alhan, Extension Areas

: CAN No. MD0990065A

Hole Depth m: 12 0

Co-cadinales F 298516.71 N 168999.99

Locuiton :

Well Height m (A O D )

Logged By : AWJ

Dala: 11.02 03

Base of Exploratory Hole in (A O D ) , 28 33

Sheet No . 2 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	ш				4	97	11	62	5.16 B,W,C,R,5 5.52 B,W,C,R,5 5 B D,W,C,R,5 5.73 B,W,C,R,5 6.00 B,W,C,R,5
7					5	87	71	51	6 28 B.W.C.R.5 6 33 B.W.C.R.5 6.63 B.W.C.R.5 6.96 B.W.C.R.5 7.17 B.W.C.R.5 7.21 B.W.R.5
Ð		Jurassic Bedrock Strong grey thinly to medium bedded fresh crystalline LIMESTONE			6	97	97	67	7.44 B,W,C,R,5 7.48 B,W,C,R,5 7.77 8,W,C,R,5 7.82 B,W,C,R,5 8.09 B,W,C,R,5 8.3 B,W,C,R,5 8.4 B,W,C,R,5
9									9.60 B,W,C,R,5 8.70 B,W,C,R,5 8.80 B,W,C,R,5 8 B4 B,W,C,R,5 9.17 B,W,C,R,5 9.38 B,W,C,R,5
10									

Contractor: Aprix Orlling

Drill Type : Rotary air flush

Bit Type : P.C D.

Rig Type: Gryphon

Hole Diameter (mm): 105

Casing depth (m): 1.5

Core Diameter (mm): 76mm (HO) 41?

Drilled By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

'ent : Dafence Esteles

Ground Level m (A.O ().); 40:33

Project : RAF St Alhim, Extension Areas CAN No. MD0900066A

Dale: 11.02.03

Hold Onpili in 12 0

Well Height m (A O D )

Bear of Exploratory Hold m (A.O.D.) . 28.33

Hole Type , Open Hole/Cored

Co-ordinates . E 290516 71 N 168999.00

Logged By AWJ

Sheet No : 3 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Roc. %	RQD %	Discontinuities/ Remarks
	Ш				7	89	78	78	
		Jurassic Bedrock Strong gray thinly to medium bedded fresh crystalline LIMESTONE			6	94	88	80	11.07 B.W.C.R.5 11.32 B.W.C.R.5 11.37 B.W.C.R.5
12	28,33								11 91 B,W,C,R,5
13									
14									
15									

Contractor : Apex Drilling

Drill Type ; Rotory air flush

Bit Type : P.C.D.

Rig Type : Gryphon

Hole Diameter (mm): 105

Casing depth (m): 1.5

Core Diameter (mm): 76mm (HO) 412

Drilled By: MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

it : Defence Estates

Location :

Date : 10 02 03

Ground Level in (A.O.D.) : 40.28

Project : RAF St Allian, Extension Alena

CAN No. MD0990066A

Hole Depth m : 12.0 Well Height in (A.O.D.)

tiesd of Exploratory Hole in (A.Q.D.): 28 28

Hale Type: Open Hale/Cored

Co-ordinates E. 298554-54 N 169036,07

( ngged Dy : AWJ

Shoot No. 1 of 3

Depth (metres)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
	40 08	Driller's Description Limestone and clayey soil			1	61	30	12	0.36 B,W,C,R,5 0.41 B,W,C,R,5 0.5 B,W,C,R,5 0,88 B,W,C,R,5
2		Jurassic Bodrock Strong grey thinly to medium bedded frosti crystalline LIMESTONE			2	60	54	51	2,05 B,W,C,R,5 2,20 223 B,W,C,R,5 240 B,W,C,R,5
3	37.18	`.Firm brown silty CLAY			3	87	61	21	2 70 B,W,C,R,5 2.85 B,W,C,R,5 2.99 B,W,C,R,5 3.10 3,17 B,W,C,R,5 3.44 B,W,C,R,5
4		Jurassic Bedrock Strong grey thinly to medium bodded fresh crystalline LIMESTONE							3.94 B,W,C,R,5 4.08 B,W,C,R,5 , 4.20m - 4.35m Broken Core

Contractor : Apex Drilling

Drill Type : Rolary air flush

Bit Type : P.C.D.

Rig Type: Gryphon

Hole Diameter (mm) : 105

Casing depth (m):0

Core Diameter (mm) : 76mm (HO) 412

Drilled By : MJ

APEX DRILLING SERVICES LID.

01656 749 149 TEL

lent : Defence Existes

Ground Level in (A.O.D.) (40 78

Project : RAF StAthan, Extension Areas : CAN No. MD0990088A

Hole Dopth m : 12.0

Hole Type : Open Hole/Cored Co-ordinates : E. 29/1954,54 N 189036 97

Well Height in (A O D )

Leading VM1

Dale: 10.02.03

Basin of Exploratory Hole in (A.O.D.), 28-20

	T		, many riole iii (A U	D). 287	· · · · · · · · · · · · · · · · · · ·		SI	reet No : 2	of:1	
Depth (metres)	Elevation	Geological Dos (BS5930:1	0001	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec. %	Solid Core Rec. %	RQD %	Discontinuítios/ Romarks
	34 83	Jurassic Badrock Weak very dank grey laminated for MUDSTONE Jurassic Badrock Strong grey thinly to medium bedd LIMESTONE	/ [I			4	87	40		5.20 H.W.C.R.5 5.28 B.W.C.R.5 5.30 B.W.C.R.5 5.35 - 5.40 B.W.C.R.5 5.50 - B.W.C.R.5 5.50 B.W.C.R.5
3:	3.97	Jurassic Bedrock Weak dark grey laminated frosti fine MUDSTONE	Porained +			5	52	52 g	- 1	3.05 B,W,C,R,5
7	S	<b>Jurassic Bedrock</b> Irong gray thinly to madium bodded n MESTONE	mah crystalline			10	74	61	7.0 7.3 7.4 7.6 7.7 8.05 8.37 8.70 8.85 9.00 [9.12 [	80 B,W,C,R,5 20 B,W,C,R,5 20 B,W,C,R,5 3 B,W,C,R,5 3 B,W,C,R,5 6 B,W,C,R,5 6 B,W,C,R,5
Contr	actor	: Apex Drilling	Hole Diameter (mm) : 10:		===-			1	0.0 В,	W.C.R.S
Drill 7	ype :	Rolary air fluan	Casing depth (m) : 0	,		APEX	DRH	f iNic	CEN	VICERTOR

Bit Type : P.C D.

Rig Type : Gryphon

Care Diemeter (mm): 75mm (HO) 412

Drillod By : MJ

APEX DRILLING SERVICES LTD.

01656 749 149 TEL

'ani ; Defence Estates

Giound Level m (A O D ) 40.28

Project : RAF St.Athan, Extension Areas : CAN No MD0990068A

Hole Depth in 120

Dete : 10.02 03

Well Height m (A O D ).

Rase of Exploratory Hote in (A.O.D.): 28.28

Hole Type: Open Hale/Cored

Co-ordkintes : F: 298554.54 N 169036 97

Lagged Dy AWJ

Sheet No : 3 of 3

Γ		- Joseph Mary Hotel	: m (A O.O.) : 20,	?8		Sh	eel No ; J	ol 3	
Deoth (metree)	Elevation	Geological Description (BS5930:1999)	Strata Type	Well Detail	Core Run Depth (m)	Total Core Rec.	Solid Core Rec. %	RQD %	Discontinuities/ Remarks
					0	62	18	43	10.35 D.W.C.R.5 10.44 B.W.C.R.5
	28.28				9	98	98 .	31 1	I1 15 B.W.C.R.5 I1.22 П.W.C.R.5 I.48 B.W.C.R.5
13									
14									
	entractor:	Apax Driffing Hole Diameter (r	mm): 105					<b></b> -	

Drill Type : Rolery air Rush

Bit Type : P.C.O Rig Type : Grypton Hole Diameter (mm): 105

Casing depth (m) ; 0

Core Diameter (mm) : 76mm (HO) 412

Drillod By : MJ

APEX DRILLING SERVICES LTD.

E	NVIROS®	T	RIAL PI	T LOG		TP1		
Client: De	efence Estates	C	CA No: MD	0990066A		Sheet 1 of 1		
		G	round Lev	el - 1	m A.O.D.	Grid Ref.:		
Project: 1	RAF St Athan Ext	tension A	reas			thod: JCB Backactor		
Location:	: RAF St Athan			Weath	e <b>r:</b> Sunsh	ine and Showers		
	Legend	Deptl (m)	h	I	DESCRIP'	TION		
0.0		0.45				n very soft slightly sandy C gular gravel of limestone	LAY	
0.5— 1.0—			occas			lightly sandy CLAY with gular gravel and cobbles of	f	
1.5 —	Dark grey/blue fine to coarse angular gravel and cold finely crystalline LIMESTONE with some soft orange/brown gravely clay. Some cobbles have coarse crystalline calcite viens (1cm thick).							
2.5—								
3.0			ENI	OF TRIA	AL PIT 1.7	' m		
3.5								
4.0						Scale: 1:2	25	
Remarks:					W	ater: N/A		
					<u> </u>			
					S	tability: N/A		
					T	ime trench open:		
Sample:		1	2	3		Logged by: DI	$_{ m RC}$	
Depth:		0.2	0.5	1.5				
Type:	Vana (NI)	40 50 50	70 00 00		_	Date: 29.01.03	ļ	
Test: Shear	vane (N)	4.0, 5.2, 5.2	7.8, 6.8, 6.8	<u> </u>	1			

٥	ENVIROS *			T LOG	TP	TP 2		
Client: D	efence Estates	C	A No: MD	0990066A	She	et 1 of 1		
		G	round Lev	el - m A.a	Q.D. Grid	l Ref.:		
Project:	RAF St Athan Ex	ktension Ar	eas	T -	<del></del>	JCB Backactor		
Location:	RAF St Athan		<u></u>	Weather: S				
	Legend	Depth	<u></u>		CRIPTION			
0.0		(m) 0.5	Soft ang	dark brown sand ular gravel of lim	dy CLAY witlestone	n much fine to coarse		
1.0		1.1	Soft coar	CLAY with some fine				
(m) level (m)		1.2	finel	c grey fine to coar y crystalline LIM ge/brown slightly	IESTONE w	nd tabular cobbles of ith some soft cravely CLAY		
Depth below ground level (m) 7. c.								
2.5								
3.0			END	OF TRIAL P	IT 1.2 m			
3.5								
4.0						Scale: 1:10		
emarks:			<u> </u>		Water:			
					Stabilit	y: N/A		
					Time tr	ench open:		
ample:		1	2			Logged by: DRO		
epth:		0.5	1.0			Logged by: DRC		
****	Type:         7.6, 7.8, 8			<u>I</u>	<b>I</b>			

E	NVIROS⊕	T	RIAL PI	r log	TP3			
Client: De	efence Estates	C	A No: MD0	990066A	Sheet 1 of 1			
		G	round Leve	el - m A.Q.	D Grid Ref.:			
Project: I	RAF St Athan Exte	ension Ar	eas	Excavation	Method: JCB Backactor			
Location:	RAF St Athan			Weather: Su	inshine and Showers			
0.0	Legend	Depth (m)		DESCF	RIPTION			
0.1—		0.2	Soft dark brown sandy CLAY with much fine to coarse angular gravel of limestone					
0.2 — — — — — — — — — — — — — — — — — — —		to firm orange/bro ional fine to coars	wn slightly sandy CLAY with se angular gravel of limestone					
0.8—		0.7	Blue/grey finely crystalline LIMESTONE with calcite veins (<1cm thick)					
1.0			END	OF TRIAL PIT	Γ 0.8 m Scale: 1:10			
Remarks:	· · · · · · · · · · · · · · · · · · ·	·			Water: N/A			
					Stability: N/A			
					Time trench open:			
Sample:		1	2		Logged by: DRC			
Depth: Type:		0.3	0.6					
Test: Shear V	Vane (N)	.0, 6.2, 6.8	5.2, 5.2, 6.4		Date: 29.01.03			

	ENVIROS <sup>®</sup>		T	RIAL PI	ГLOG	TP4			
	Client: D	efence Estates	C	A No: MD0	990066A	Sheet	1 of 1		
			G	round Leve	1 - m A.O.D.	Grid R	lef.:		
F	Project:	RAF St Athan Ex	ktension Ar	reas	Excavation M	lethod: J	ethod: JCB Backactor		
I	Location	: RAF St Athan			Weather: Suns	shine and S	Showers		
	• •	Legend	Depth (m)	1	DESCRI	PTION			
:	0.0		0.2	Soft dark brown sandy CLAY with much fine to coarse angular gravel of limestone					
Depth below ground level (m)	0.3—		0.45		e soft orange/brown ocoarse angular gra		dy CLAY with some		
gro	0.5		0.45	Blue/	grey finely crystalli	ne LIMEST(	ONE		
Depti	0.7—								
				END	OF TRIAL PIT (	).5 m			
			10-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-				Scale: 1;10		
Rei	marks:					Water: N/	A		
						Stability:	N/A		
						Time tren	ch open:		
	nple: oth:		1 0.2				Logged by: DRC		
Typ			0.3						
	t: Shear	Vane (N)	5.0, 4.0, 4.3				Date: 29.01.03		

	ENVIROS (*)	TRIAL PI	T LOG	TP5
Client: D	efence Estates	CA No: MD0	)990066A	Sheet 1 of 1
		Ground Leve	el - m A.O.D.	Grid Ref.:
Project:	RAF St Athan Extension	on Areas		thod: JCB Backactor
Location	: RAF St Athan		Weather: Sunsi	nine and Showers
0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.6 — 0.7 — 0.8 — 0.9 — 0.9 — - 0.9	Legend D (n	Soft anguard Loose fine to finely	lar gravel of limeston e soft orange/brown sl co coarse angular grav grey/blue fine to coar	AY with much fine to coarse e ightly sandy CLAY with frequent
Remarks:  Sample: Depth:	1 0.2		s	Scale: 1:10 Vater: N/A tability: N/A ime trench open: Logged by: DRC
Берти: Туре:	0.2			
Test: Shear	Vane (N) 3.9, 4.0	, 4.0		Date: 29.01.03

	E	NVIROS (*)		TRIAL PI'	Г LOG	TP	6
	Client: De	efence Estates		CA No: MD0	990066A	She	et 1 of 1
				Ground Leve	·I - m A.O.	D <sub>x</sub> Grid	l Ref.:
	Project: R	RAF St Athan E	xtension A	Areas	Excavation	Method:	JCB Backactor
I	Location:	RAF St Athan			Weather: Su	nshine an	d Showers
		Legend	Dep (m)	th	DESCR	IPTION	
()	0.0		0.15	Loose coars	e soft dark brown : e angular gravel c	sandy CLA f limestone	Y with much fine to
Depth below ground level (m)	0.3—	0.3—		Loose much	soft to firm orang fine to coarse ang	e/brown sl ular grave	ightly sandy CLAY with l and cobbles of limestone
Depth	0.7—		0.6	finely	grey/blue fine to co crystalline LIME: e/brown clay	oarse angu STONE wi	lar and tabular cobbles of tlı some soft
Rei	0.9—1.0—			END	OF TRIAL PIT	T'	Scale: 1:10
Ker	narks:					Water:	
						Stabilit	
San	nple:		1			Time tr	ench open:
Dep	<del>-</del>		0.3	<del>                                </del>	<u> </u>		Logged by: DRC
Typ	e:	•••					
	t: Shear Va	ane (N)	6.6, 7.4, 8.2				Date: 29.01.03

	<b>ENVIROS</b> <sup>©</sup>			TRIAL PI	r log_	TP7	
	Client: Def	ence Estates		CA No: MD0	990066A	Sheet 1	of 1
				Ground Leve	el - m A.O.D.	Grid Re	e <b>f.:</b>
I	Project: RA	AF St Athan Ex	ktension	Areas	Excavation Me	ethod: JCB Backactor	
I	Location: 1	RAF St Athan			Weather: Sunsi	nine and Sl	howers
		Legend	Dep (m)	oth	DESCRIP	TION	
	0.0		0.15		dark brown sandy CL lar gravel of limeston		uch fine to coarse
Depth below ground level (m)	02				e soft dark brown slig o coarse angular grav		
n below	0.5		0.5 0.55	blue/g	to coarse angular and grey finely crystalline re/brown slightly sand	LIMESTO	obles and boulders of NE with some soft
De	0.7—						
				END	OF TRIAL PIT 0.	55 m	
							Scale: 1:10
Re	marks:				V	Vater: N/A	1
					S	Stability: 1	N/A
						lime trend	ch open:
	nple:		1			I	Logged by: DRC
De <sub>l</sub> Ty <sub>l</sub>	oth:		0.3				
	be: st: Shear Va	ane (N)	Too grave	ly			Pate: 29.01.03

Ē.	NVIROS <sup>©</sup>		TRIAI		r LO(	<del></del>	TP8	
Client: De	fence Estates		CA No:				Shee	t 1 of 1
			Ground	Leve	el -	m A.O.D.	Grid	<del></del>
Project: R	AF St Athan Ex	tension	Areas		Exca		Tethod: JCB Backactor	
Location:	RAF St Athan				Weat	her: Suns	hine and	Showers
0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.8 — 0.9 — 1.0 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 0.9 — 1.0 — 1.0 — 0.9 — 1.0 —	0.1— 0.2  0.2  0.3  0.4  0.5  0.5  0.6  0.8  0.9  0.9			Loose much of lim	dark bro lar grav e soft mi a fine to nestone	DESCRII  own sandy Cl el of limestor d to dark bro	PTION  LAY with ne  own slight ar and ta	much fine to coarse  Ely sandy CLAY with bular gravel and cobbles or and tabular cobbles
Remarks:				END	OF TR	-	Water: 1	y: N/A
Co1				1		<u> </u>	l'ime tre	ench open:
Sample: Depth:		$\frac{1}{0.2}$		$\dashv$				Logged by: DRC
Type:		0.2				-		

Test: Shear Vane (N)

Date: 29.01.03

	Εl	NVIROS (*)	r	TRIAL PI	r log	TP9	
	Client: De	fence Estates	C	CA No: MD0	990066A	Shee	t 1 of 1
			G	bround Leve	el - m A.O.I	Grid	Ref.:
I	Project: R	AF St Athan Exter	nsion A	reas	Excavation I	Method:	JCB Backactor
I	Location:	RAF St Athan			Weather: Sur	ishine and	Sunny
	0.0	Legend	Deptl (m)	h	DESCR	IPTION	
	0.0		0.1	Loos coars	e soft dark brown s e angular to sub ro	andy CLAY ounded grav	with occasional fine to el of limestone
d level (m)	0.2		0.4	Dark finely sligh	ar gravel and cobbles of some soft orange/brown		
Depth below ground level (m)	0.4— 		0.4	END	OF TRIAL PIT	0.4 m	
Rei	marks:					Water: N Stability Time tre	
	nple:		1				Logged by: DRC
Del Tyr	pth:		0.1				Logged by, Dito
~~~	st: Shear V	ane (N) 4.0	, 4.4, 4.8				Date: 29.01.03

	ENVIROS <sup>⊕</sup>	TRIAL PI	T LOG	TP 10
Client: I	Defence Estates	CA No: MD0	990066A	Sheet 1 of 1
		Ground Leve	el - m A.O.I	Grid Ref.:
Project:	RAF St Athan Extensi	on Areas	Excavation N	Tethod: JCB Backactor
Location	n: RAF St Athan		Weather: Sur	shine and Showers
0.0 — 0.1 — 0.2 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.6 — 0.7 — 0.8 — 0.9 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 —	0.	coars  Loose fine t  Dark	e soft orange/brown to coarse angular ar	andy CLAY with much fine to
Remarks:		END	OF TRIAL PIT	Scale: 1:10 Water: N/A Stability: N/A
Sample:	1			Time trench open:
Depth:	0.			Logged by: DRC
Type:				Date: 29.01.03
Test: Shear	Vane (N) 6.2, 6	2, 6.8		Dave: 23.01.03

	ĒΝ	VIROS <sup>©</sup>		TRIAL PI	Γ LOG	TP11
C	Client: Def	ence Estates		CA No: MD0	990066A	Sheet 1 of 1
				Ground Leve	I - m A.O.D.	Grid Ref.:
F	Project: RA	AF St Athan Ex	tension .	Areas	Excavation Mo	ethod: JCB Backactor
L	ocation: 1	RAF St Athan			Weather: Suns	hine and Showers
		Legend	Dep (m)	th	DESCRIP	PTION
	0.1		0.15		e soft dark grey/brow o coarse angular gra	n slightly sandy CLAY with much vel of limestone
Depth below ground level (m)	0.2				o coarse angular and	lightly sandy CLAY with frequent tabular gravel and cobbles of
Depth be	0.6		0.65 0.7	Dark	grey/blue finely crys	talline LIMESTONE
	0.9			END	OF TRIAL PIT 0	.7 m
						Scale: 1:10
Kei	marks:				-	Water: N/A
					<del> </del>	Stability: N/A
			T -	<u> </u>		Fime trench open:
	nple: pth:		0.3			Logged by: DRC
Ту	e:	(AD)				Date: 29.01.03
Tes	st: Shear V	ane (N)	5.4, 7.2, 6	.4		

	ENVIROS 6		TRIAL PI	T LOG	TP 12
Client:	Defence Estates		CA No: MD0	0990066A	Sheet 1 of 1
			Ground Leve	el - m A.O.D.	Grid Ref.:
Projec	t: RAF St Athan E	extension.	Areas	Excavation M	ethod: JCB Backactor
Location	on: RAF St Athan		1	Weather: Suns	shine and Showers
	Legend	Dep (m)	th	DESCRI	PTION
0.0— 0.1— 0.2— 0.3— 0.4— 0.5— 0.6— 0.6— 0.8— 0.9— 1.0—		0.8 0.85	Loose fine t	to coarse angular gra e soft orange/brown s to coarse angular and stone	on slightly sandy CLAY with muctivel of limestone slightly sandy CLAY with frequent tabular gravel and cobbles of talline LIMESTONE
	,		END	OF TRIAL PIT 0	.85 m
Remarks:				ļ	Scale: 1:10 Water: N/A Stability: N/A
					Time trench open:
Sample: Depth:		1			Logged by: DRC
Deptn: Type:		0.4			35 -7 - 274
<del> </del>	ır Vane (N)	6.0, 6.4, 6.	5		Date: 29.01.03

	E	IVIROS⊕		TRIAL PI	r log	TP 13
	Client: De	fence Estates		CA No: MD0	990066A	Sheet 1 of 1
				Ground Leve	el - m A.O.D.	Grid Ref.:
I	Project: RAF St Athan Extension			Areas	Excavation M	ethod: JCB Backactor
l	ocation:	RAF St Athan			Weather: Suns	hine and Showers
Depth below ground level (m)	0.0 — — — — — — — — — — — — — — — — — —	Legend	Dej (m) 0.25 0.6	Loose to coa	erse angular gravel of the state of the stat	ghtly sandy CLAY with much fine
	nple:		1	END		Scale: 1:10 Water: N/A Stability: N/A Fime trench open:
Dep	oth:		0.4			Logged by: DRC
Typ		(NI)	10 5 1 1	3.0		Date: 29.01.03
res	t: Shear V	ane (N)	4.8, 5.4, 6	D.8		

ENVIROS O		7	RIAL PIT LOG	TP16
Client: Defe	nce Estates	(	No: MD0990066A	Sheet 1 of 1
		C	ound Level - m A.O.D.	Grid Ref.:
Project: RA	F St Athan Ex	tension A	Excavation M	ethod: JCB Backactor
Location: F	AF St Athan		Weather: Suns	shine and Showers
	Legend	Deptl (m)	DESCRI	PTION
0.0		0.2		ey slightly sandy CLAY with ngular to sub rounded gravel and
(E) 0.3 (I) 0.4 (I) 0.	0.3			y sandy CLAY with some fine to nded gravel and cobbles of
		0.8	Dark grey/blue finely crys occasional orange/brown s	stalline LIMESTONE with slightly sandy clay
0.9—			END OF TRIAL PIT (	0.8 m

ENVIROS <sup>⊕</sup>		TDIAL D			(DD =	
Client: Defence Estates	<del></del>	TRIAL P			TP 1	
Carone Delence Estates		CA No: MD0990066A				t 1 of 1
		Ground Lev	/el -	m A.Q.D	Grid	Ref.:
Project: RAF St Athan E	Extension A	\reas	Exca	vation M	ethod:	JCB Backactor
Location: RAF St Athan			Weat	her: Suns	shine and	Showers
Legend	Dept (m)	th		DESCRI	PTION	
0.0— 0.1— 0.2— (E) 0.3— 0.4— 0.6— 0.6— 0.8— 0.9— 1.0—	0.5	Dar of f	k grey/bluinely crys	te to coarse	angular to	sandy CLAY with sub rounded gravel of ar and tabular cobbles with some soft
Remarks:					Water: 1	Scale: 1:10
- AV VALANCE ABVI						· · · · · · · · · · · · · · · · · · ·
					Stability	
CI	1	<u>,                                      </u>		<u> </u>	Time tre	ench open:
Sample: Depth:		0.3				Logged by: DRC

4.3, 5.8, 5.6, 6.4

Date: 29.01.03

Type:
Test: Shear Vane (N)

	E	NVIROS⊕		TRIAL PI	T LOG	$\mathbf{T}$	P18
	Client: De	efence Estates		CA No: MD	990066A	Sl	neet 1 of 1
				Ground Level - m A.O.D.			rid Ref.:
	Project: I	RAF St Athan E	xtension	Areas		<del></del>	d: JCB Backactor
	Location:	RAF St Athan			Weather: Su	nshine	and Showers
	0.0	Legend	De <sub>l</sub> (m)		DESCR	IPTIO	N
	0.0		0.1	Loose frequ	e soft dark brown/g ent fine to coarse	grey slig angular	htly sandy CLAY with gravel of limestone
Depth below ground level (m)	0.2— 0.3— 0.4— 0.5— 0.6— 0.7— 0.8— 0.9— 1.0—		0.7 0.85	fine to	o coarse sub round	ed to an	tly sandy CLAY with some agular gravel of limestone
				END	OF TRIAL PIT	0.85 m	Scale: 1:10
Reı	marks:					Water	:: N/A
					•	Stabil	ity: N/A
			· · · · · · · · · · · · · · · · · · ·			Time	trench open:
	nple:		S1				Logged by DDC
Dep			0.4	ļ			Logged by: DRC
Typ		(NT)					Date: 29.01.03
res	t: Shear Va	ane (N) 🔠	6.0, 6.3, 6.	2]			Dave. 43.01.03

6.0, 6.3, 6.2

	E	IVIROS <sup>©</sup>	,	TRIAL PI	r Loc	x x	TP1	9
	Client: De	fence Estates		CA No: MD0	990066	A	Shee	t 1 of 1
				Ground Leve	1 -	m A.O.D.	Grid	Ref.:
F	Project: R	AF St Athan Ex	tension A	Areas	Exca	vation Me	thod:	JCB Backactor
	Location:	RAF St Athan	_		Weat	her: Sunsh	ine and	Showers
		Legend	Dept (m)	th		DESCRIP'	TION	
Depth below ground level (m)	0.0 — — — — — — — — — — — — — — — — — —		0.15	occas red so Soft t fine t	ional fin	e to coarse ar	igular gr slightly s	sandy CLAY with avel of limestone and and CLAY with some and gravel of limestone
Rei	0.9— 1.0— marks:			END	OF TR	s	Vater: 1	
	mple:		S1					Logged by: DRC
De <sub>l</sub>	pth:		0.3				<u>-</u> -,	Logged by. Dito

Test: Shear Vane (N)

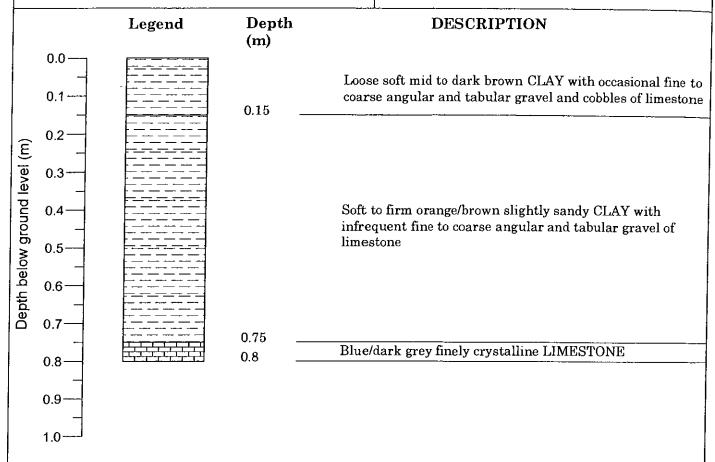
6.6, 8.2, 6.6

ENVIROS *	TRIAL PIT LOG	TP 20
Client: Defence Estates	CA No: MD0990066A	Sheet 1 of 1
	Ground Level - m A.O.D.	Grid Ref.:

Project: RAF St Athan Extension Areas

Excavation Method: JCB Backactor

Location: RAF St Athan Weather: Sunshine and Showers



## END OF TRIAL PIT 0.8 m

Scale: 1:10

Remarks:			Water: N/A
			Stability: N/A
			Time trench open:
Sample:	S1	S2	I II DDG
Depth:	0.5	0.7	Logged by: DRC
Type:			D / 20 01 00
Test: Shear Vane (N)	9.8,10.6,11.0	8.9, 9.4, 8.8	Date: 29.01.03

	ENVIROS O	TRIA	L PIT	LOG		TP 21	-
Client: D	efence Estates	CA No	o: MD09	90066A		Sheet 1 of 1	
		Groun	Ground Level - m A.O.D.			Grid Ref.:	
Project:	RAF St Athan Ex	tension Areas		Excavation	on Me	thod: JCB Backactor	•
Location	: RAF St Athan			Weather:	Sunsh	ine and Showers	
	Legend	Depth		DES	CRIP'	TION	_
0.0		(m)	Loose	soft dark bro	wn sligl	ntly sandy CLAY with oc	casi
		0.15	nne to	coarse angu	iar grav	el and cobbles of limestor	ne
0.5			Soft to	firm yellow	brown si	lightly sandy CLAY with	
			limesto	nent fine to c	oarse an	gular gravel and cobbles	of
1.0							
Ê		1.3 1.35 <del></del>	<del></del>				
1.5		1.50	Blue/gi	rey finely cry	stalline	LIMESTONE	
puno							
ow gr							
Depth below ground level (m) 7.2 c.1							
Dep							
2.5							
3.0			END (	OF TRIAL	PIT 1.3	5 m	
3.0					·		
3.5							
4.0			·			Scale: 1	:10
emarks:					W	ater: N/A	
					St	ability: N/A	
					Ti	me trench open:	
ample: epth:	*****	S1 0.4		52		Logged by: I	RC
ype:						Date: 29.01.03	
est: Shear \	Vane (N)	5.5, 11.4, 7.1, 12,	11.8 3.4, 6	5.8, 6.6		Date: 49.01.0	J

	5	NVIROS <sup>©</sup>		TRIAL PI	ГLOG	TP 22
	Client: De	efence Estates		CA No: MD0	990066A	Sheet 1 of 1
			ļ	Ground Leve	eI - m A.O.D.	Grid Ref.:
F	Project: RAF St Athan Extension			Areas	Excavation M	ethod: JCB Backactor
I	Location: RAF St Athan				Weather: Suns	shine and Showers
Depth below ground level (m)	0.0 —	Legend	Der (m) 0.2 0.3 0.4 0.45	Soft I coars Soft of to coalimes	o coarse angular to so oose pink/red/grey ne angular gravel and orange/brown slightl arse angular gravel o tone	ghtly sandy CLAY with occasiona sub angular gravel of limestone nottled CLAY with frequent fine to cobbles of limestone y sandy CLAY with frequent fine of limestone and cobbles of stalline LIMESTONE
San De <sub>I</sub>	marks:		1 0.3	END		Scale: 1:10 Water: N/A Stability: N/A Time trench open: Logged by: DRC
Тур			0.3			D + 00.01.00
	t: Shear V	ane (N)	Too Grave	lly		Date: 29.01.03

Ē	NVIROS <sup>®</sup>	TRI	TRIAL PIT LOG			3
Client: De	efence Estates	CA	CA No: MD0990066A			1 of 1
		Grou	und Leve	l - m A.O.I	Grid I	Ref.:
Project: F	RAF St Athan Ext	ension Areas	3	Excavation N	lethod:	JCB Backactor
Location:	RAF St Athan			Weather: Sun	shine and	Showers
	Legend	Depth		DESCRI	PTION	
0.0		( <b>m)</b> 0.05		ic layer. Poorly dec		
		0.15		e soft mid to dark b fine to coarse angu		y sandy CLAY with f limestone
0.5				o firm yellow/brow ent fine to coarse a		
			limes		ngulai grav	er and copples of
		1.0				
1.0		1.15	Dark	grey/blue fine to co	arse angula	r and tabular cobbles
Œ			Of ITTR	ery crystamme time	ESTONE	
Depth below ground level (m) 7 7 7 1 1						
punc						
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \						
으 2.0						
epth						
_						
2.5						
3.0			END	OF TRIAL PIT	1.15 m	
3.0						
3.5						
4.0 —					***	Scale: 1:25
Remarks:					Water: N	*
					Stability	
~	····				Time tre	nch open:
Sample: Depth:		S1 0.5				Logged by: DRC
Type:						Date: 29.01.03
Test: Shear V	Vane (N)	6.8, 6.4, 6.6				200. 20.01.00

ENVIROS ®		TRIAL PI	T LOG	TP 24
Client: Defence Estat	tes	CA No: MD	990066A	Sheet 1 of 1
		Ground Leve	el - m A.O.D.	Grid Ref.:
Project: RAF St Atha	an Extension	Areas	Excavation Me	ethod: JCB Backactor
Location: RAF St At	han 		Weather: Sunsl	nine and Showers
0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.6 — 0.7 — 0.8 — 0.9 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 —	Der (m)	Loos occas tabu  Soft occas and  Blues finely	sional fine to coarse a lar gravel of limeston to firm orange/brown sional fine to coarse an abular gravel of limes	brown slightly sandy CLAY with ngular to sub rounded and e slightly sandy CLAY with ngular to sub rounded angular stone gular and tabular cobbles of ONE with some soft orange clay.
Remarks:	- <u>-</u> -			Scale: 1:10  Vater: N/A  Stability: N/A
		<del></del>		lime trench open:
Sample: Depth:	S1 0.4	0.2		Logged by: DRC
Type:	0.4	0.4		Discourse
Test: Shear Vane (N)	7.0,7.0, 7	.2 5.8, 6.4, 6.6		Date: 29.01.03

TRIAL PIT LOG	TP 25	
CA No: MD0990066A	Sheet 1 of 1	
Ground Level - m A ODD.	Grid Ref.:	
	CA No: MD0990066A	

]	Location:	RAF St Athan		Weather: Sunshine and Showers
		Legend	Depth (m)	DESCRIPTION
	0.0		0.15	Loose dark brown slightly sandy CLAY with frequent fine to coarse angular to sub rounded gravel of limestone and some red sandstone
el (m)	0.2		0.3	Soft to firm red/brown slightly sandy CLAY with occasional fine to coarse angular to sub rounded gravel of limestone
Depth below ground level (m)	0.3— 		0.0	Soft to firm yellow/orange/brown mottled slightly sandy CLAY with some occasional fine to coarse angular to sub rounded gravel of limestone

0.85

0.9

## END OF TRIAL PIT 0.9 m

Dark grey/blue finely crystalline LIMESTONE

Scale: 1:10 Remarks: Water: N/A Stability: N/A Time trench open: Sample: S2S1Logged by: DRC Depth: 0.3 0.6Type: Date: 29.01.03 Test: Shear Vane (N) 7.4, 7.0, 6.8, 7.2 8.0, 7.3, 7.9

ENVIROS♥			TRIAL PIT LOG			6
Client: De	efence Estates	CA	No: MD0	990066A	Sheet	t 1 of 1
		Gro	ound Leve	l - m A.O.	D. Grid	Ref.:
Project: I	RAF St Athan Extens	sion Are	as	Excavation	Method:	JCB Backactor
Location:	RAF St Athan			Weather: Su	nshine and	Showers
		Depth (m)		DESCR	RIPTION	
0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.7 — 0.8 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 —		0.1	Soft tinfred LIME	ional fine to coars stone o firm orange/bro quent fine to coars STONE	wn slightly see angular to	sandy CLAY with sub rounded cobbles of andy CLAY with sub rounded gravel of
Remarks:		1	END	OF TRIAL PIT	Water: N	v: N/A ench open:
Sample: Depth:		$\frac{1}{0.5}$	1		<u> </u>	Logged by: DRC
Type: Test: Shear V			0.3m 2, 6.0, 6.5 8.6	0.8m		Date: 29.01.03

EN	IVIROS <sup>©</sup>	,	TRIAL P	T LOG		TP 27		
Client: De	fence Estates	(	CA No: MD0990066A			Sheet 1 of 1		
			Ground Lev	<b>el</b> - n	n A.O.D.	Grid Ref.:		
Project: R	AF St Athan Ex	tension A	Areas	Excava	tion Me	thod: JCB Backactor		
Location:	RAF St Athan			Weathe	er: Sunsh	nine and Showers		
0.0—	Legend	Dept (m)			ESCRIP			
0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.7 — 0.8 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 — 0.9 —		0.15 0.75	Loo freq	se soft to firmuent fine to estone and ca	n yellow/bi	brown slightly sandy CLAY with much fine r gravel of limestone and calcite  n yellow/brown/grey mottled CLAY with coarse angular sand and gravel of alcite and occasional cobbles of limestone linely crystalline LIMESTONE		
Remarks:		S1	EN	C2	V	Scale: 1:10 Vater: N/A Stability: N/A Time trench open:		
Sample: Depth:		S1 0.5	0.1	$-\frac{\text{C2}}{0.5}$		Logged by: DRC		
Type:		0.0	10.1	0.0		D : 00.07.00		
Test: Shear V	ane (N)	Too Gravell	у			Date: 29.01.03		

E	NVIROS⊕	7	TRIAL PI	T LO	 J	TP 28	
Client: De	efence Estates	(	CA No: MD	0990066	A	Sheet 1 of 1	
			Ground Level - m A O.D. Grid Ref.:				
Project: F	RAF St Athan Ex	ktension A	reas	Exca	vation M	ethod: JCB Bacl	cactor
Location:	RAF St Athan			Weat	her: Sun	shine and Showers	
	Legend	Dept. (m)	h		DESCRI	PTION	
0.0 —	<b>XXXXXX</b>	0.05 0.1				y CLAY with rootlets	
		$0.1 \\ 0.25$				o medium gravel of lim to coarse angular to su	
		0.35	and	gravel of s	andstone an	l limestone and metalif	erous ash
0.5			\ muc	h fine to co		coloured slightly sandy gravel of limestone cal	
			\poss	ible lewol.	keu tai Tesiu		
4.0						rey mottled CLAY with ar gravel of limestone,	
1.0				sional cobb		one. Becoming much m	
(E)			иср				
1.5		1.45					
punc	L	1.6	<del></del>				
.¥							
요 2.0							
Depth below ground level (m) 0 1 1 1							
2.5							
			•				
3.0			EN	O OF TI	RIAL PIT	1.6 m	
3.0							
3.5							
						_	
4.0 - 1 D							eale: 1:25
Kemarks: Di	irty/oily iridescent	t sneen on j	perched wate	ŗ		Water: 0.8m perc	nea aeptn
						Stability: N/A	
		1 ~-	T 60 T		T	Time trench ope	n:
Sample: Depth:		S1 0.3	S2 1.0	$\frac{\text{C1}}{0.1}$	C2 0.35	Logged	l by: DRC
Type:				·		Date: 2	9.01.03
Test: Shear	Vane (N)	5.0, 5.5, 6.0	9.2, 9.2, 9.4				

ENVIROS TRI			TRIAL PIT LOG			TP 29
Clie	nt: Defence Estates	CA N	o: MD0	990066A		Sheet 1 of 1
		Grou	nd Leve	el - m A.G	D.D.	Grid Ref.:
Proj	ect: RAF St Athan Exte	ension Areas		Excavation	Me	ethod: JCB Backactor
Loca	ation: RAF St Athan			Weather: S	unsł	nine and Showers
	Legend	Depth (m)		DESC	RIP	TION
0.0		0.1		e soft dark brow arse angular gra		thtly sandy CLAY with much fine f limestone
Debth below ground level (m) 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9		0.45 0.5 0.55	occas of lin Dark GRA	sional angular to nestone and calc grey/blue fine to VEL and COBBI	tabu te an coar	lightly sandy CLAY with clar fine to coarse angular gravel ad occasional brachiopod shells  rse angular and tabular of finely crystalline limestone talline LIMESTONE
			ENI	OF TRIAL P	IT O	.55 m
- 41						Scale: <b>1:10</b>
Rema	rks:					Water: N/A
						Stability: N/A

Kemarks:	water: N/A			
				Stability: N/A
				Time trench open:
Sample:	S1	C1		Logged by: DRC
Depth:	0.4	0.2		Logged by: DRC
Type:				Date: 29.01.03
Test: Shear Vane (N)	6.2, 6.2, 6.8			Date: 23.01.03

E	NVIROS⊕	r	TRIAL P	TT LO	<del>,</del>	TP	30
Client: De	efence Estates	(	CA No: MD0990066A			She	et 1 of 1
		(	Ground Le	I Ref.:			
Project: I	RAF St Athan Ex	tension A	reas	Exca	vation N	Aethod:	JCB Backactor
Location:	RAF St Athan			Weat	her: Sur	ishine an	d Showers
	Legend	Dept (m)	h		DESCR	IPTION	
0.0		0.3 0.35	fre lin		to coarse a	ingular to	and gravely CLAY with sub angular cobbles of of pit)
0.5		0.55	fin				y sandy CLAY with some ded gravel of limestone
1.0 — (ш) 1.5 —			$^{\mathrm{CL}}$		ome occasio	nal fine to	ttled slightly sandy o coarse angular to sub-
Depth below ground level (m) 70 60 11		$\frac{2.1}{2.2}$	Da:	rk grey/blu	e finely cry	vstalline L	JMESTONE
2.5				7		-	
3.0			EN	D OF TE	RIAL PIT	2.2 m	
3.5							
4.0							Scale: 1:25
Remarks:					1	Water:	N/A
						Stabili	ty: N/A
						Time to	rench open:
Sample:		S1	S2	<b>S</b> 3	C1	C2	Logged by: DRC
Depth: Type:		0.4	0.9	2.0	0.2	0.4	Date: 29.01.03
Test: Shear V	Vane (N)	4.5, 5.4, 5.6	9.2, 8.4, 8.4	9.8, 8.8, 8.8	<u>L</u>	<u> </u>	200, 20.01.00

Ē	NVIROS⊕	TRIA	AL PIT L	OG	TP 31
Client: D	efence Estates	CA N	o: MD0990	066A	Sheet 1 of 1
		Groui	nd Level -	m A.O.D.	Grid Ref.:
Project: 1	RAF St Athan Exte	ension Areas	E	xcavation Me	thod: JCB Backactor
Location:	RAF St Athan		$\mathbf{w}$	eather: Sunsh	nine and Showers
0.0— 0.1— 0.2— 0.2— 0.4— 0.5— 0.6— 0.6— 0.8— 0.9— 1.0—	Legend	Depth (m)  0.1  0.7	Soft to fir fine to coacalcite	nd orange/brown/garse angular and	y slightly sandy CLAY with ngular to sub angular gravel of grey mottled CLAY with some tabular gravel of limestone and alline LIMESTONE
			<u>.</u>		Scale: 1:10
Remarks:				V	Vater: N/A
				S	Stability: N/A
				$\Gamma$	ime trench open:

C1

0.3

0.4

5.4, 7.8, 6.2, 6.4

Logged by: DRC

Date: 29.01.03

Sample:
Depth:
Type:
Test: Shear Vane (N)

Client: Defence Estates	CA No: MD0	990066A	Sheet 1 of 1			
	Ground Leve	el - m A.O.D.	Grid Ref.:			
Project: RAF St Athan Extension	n Areas	Excavation Me	thod: JCB Backactor			
Location: RAF St Athan		Weather: Sunsh	ine and Showers			
Legend De	pth )	DESCRIP	TION			
0.0	occas	Loose soft dark brown/grey slightly sandy CLAY with occasional fine to coarse angular gravel of limestone				
(E) 0.2 (D)	fine t limes	Soft to firm orange/brown slightly sandy CLAY wit fine to coarse angular and tabular gravel and cobbl limestone				
<u>e</u> 0.4 0.4	Blue	grey finely crystalline	LIMESTONE			
(E) 0.3	END	OF TRIAL PIT 2.	6 m			
Remarks:	<u> </u>		Scale: 1:10 Vater: N/A			
iveillai AS.			Stability: N/A			
		-	Time trench open:			
Sample: S1	C1		<del></del>			
Depth: 0.3			Logged by: DRC			
Type:			Date: 29.01.03			
Test: Shear Vane (N) 5.5, 5.6	, 6.2		2410. 20.01.00			

TRIAL PIT LOG

**TP32** 

ENVIROS •

3	ENVIROS (*)	Т	RIAL PI	r log	TP 33
Client: D	efence Estates	C	A No: MD0	990066A	Sheet 1 of 1
		G	round Leve	el - m A.Q	D Grid Ref.:
Project:	RAF St Athan Ex	tension Ar	eas		Method: JCB Backactor
Location	: RAF St Athan	V-4F-4		Weather: Si	unshine and Showers
	Legend	Depth	1	DESC	RIPTION
0.0		( <b>m</b> ) 0.1	some		/black slightly sandy CLAY with gular to sub rounded gravel of
0.5		0.9		Y with occasional	own/grey mottled slightly sandy fine to coarse angular gravel of
1.0		0.8	fine	• • •	mottled sandy CLAY with frequent to sub rounded gravel of limestone
E)		$\frac{1.3}{1.5}$	Dark	grey/blue finely	crystalline LIMESTONE
Depth below ground level (m)					
3.0			ENI	OF TRIAL PI	Т 1.35 m
3.5					
4.0					Scale: 1:25
4.0 Remarks:					Scale: 1:25 Water: Perched at 0.8m - Very Wet
					Perched at 0.8m -
		18			Water: Perched at 0.8m - Very Wet
Remarks: Sample:		1	2		Water: Perched at 0.8m - Very Wet  Stability: N/A  Time trench open:
Remarks:		1 0.5	2 1.0		Water: Perched at 0.8m - Very Wet Stability: N/A

E	NVIROS <sup>®</sup>		TRIA	L PIT	LOC	3	TPa	34
Client: De	efence Estates		CA No	: MD0	990066	A	Shee	et 1 of 1
			Ground	d Leve	1 -	m A.Q.D	Grid	Ref.:
Project: I	RAF St Athan Ext	ension	Areas	Excavation Method: JCB Backactor				
Location:	RAF St Athan				Weat	her: Sun	shine and	d Showers
	Legend	Der (m)	oth			DESCRI	PTION	
0.0		0.1						Y with much fine to and concrete
0.5								ndy CLAY with frequent cobbles of limestone
1.0		- 0						
ш) 1.5		1.3 1.5		Dark	grey/blu	ie finely cry	stalline L	IMESTONE
Depth below ground level (m)								
2.5								
3.0				END	OF TE	RIAL PIT	1.5 m	
3.5								
4.0								Scale: 1:25
Remarks:							Water:	Perched at 0.4m
							Stabilit	ty: N/A
							Time tr	rench open:
ample:		S1	S2		C1	C2		Logged by: DRC
Depth: Type:		0.5	1.0	0	0.1	0.5		
Test: Shear	(NT)	5.4, 5.6,	5.4 -			Γ	<del></del>	→ Date: 29.01.03

EN	IVIROS®	T	RIAL PI	T LOG		TP3	5
Client: De	fence Estates	C	A No: MD	0990066A		Sheet	t 1 of 1
		G	round Lev	el -	m A.O.D.	Grid	Ref.:
Project: R	AF St Athan Ex	tension Ar	eas	Excav	ation M	ethod:	JCB Backactor
Location:	RAF St Athan			Weath	er: Suns	hine and	Showers
	Legend	Depth (m)	<b>L</b>		DESCRII	PTION	
0.0		0.1	to c	oarse angu ments nea	lar gravel o r surface	of limestor	y CLAY with much fine ne. Some dark ash/burnt ed very sandy CLAY
0.5		09					r gravel of limestone
1.0 — 1.5 — 1.5			muc	h fine to m	iedium sub	-angular t	ghtly sandy CLAY with to sub rounded gravel of al cobbles of limestone
Depth below ground level (m) 7 7 7 1 1		1.9 2.0	Dar	k grey/blue	finely crys	stalline LI	MESTONE
2.5							
3.0			EN	D OF TR	IAL PIT :	2.0 m	
3.5							
4.0					_		Scale: 1:25
Remarks:						Water:	N/A
						Stabilit	y: N/A
							ench open:
Sample:			S2	S3	C1	C2	<del>-</del>
Depth:		0.4	1.0	1.6	0.1	0.5	Logged by: DRC
Type:	(1 /3.1)	F 0 F 7 F :	m C "	D			Date: 29.01.03
Test: Shear	vane (N)	[5.8, 5.5, 5.4	Too Gravelly	100 Gravelly			

EN	VIROS <sup>®</sup>	TR	IAL PI	T LOG		<b>TP36</b>	
Client: Def	ence Estates	CA	No: MD0	990066A	,	Sheet	1 of 1
		Gro	ound Leve	el - n	n A.Q.D.	Grid R	lef.:
Project: R	AF St Athan Ex	tension Area	as	T		thod: J	CB Backactor
Location:	RAF St Athan			Weathe	er: Sunsh	nine and S	Showers
	Legend	Depth (m)		D	ESCRIP	TION	
0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.6 — 0.7 — 0.8 — 0.9 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 —		0.75 0.85	to co	arse angula	ar to sub-ro ar and tabu	ounded gra ular cobble talline LIM	CLAY with much fine wel and occasional fine s of limestone
<b>7</b>						Water: N	Scale: 1:10
Remarks:					-	Stability	
					-		ench open:
Sample:		S1	S2				Logged by: DRC
Depth: Type:		0.2	0.6				
ra1		1 1	ł		<b>I</b>		Date: 29.01.03

EN	VIROS <sup>®</sup>	TRL	AL PI	r log	TP 37	
	fence Estates	CAN	lo: MD0	990066A	Sheet	1 of 1
		Grou	nd Leve	n A.	O.D. Grid I	Ref.:
Project: R	AF St Athan Exte	ension Areas		Excavation	n Method: J	CB Backactor
	RAF St Athan			Weather: S	Sunshine and	Showers
0.0-7	Legend	Depth (m)	Loos fine	e soft mid brow	CRIPTION  n slightly sandy  ar to sub rounde	CLAY with occasional d gravel of limestone
5.5		0.1	Loos to su	e soft red/brown lb rounded grave	sandy CLAY wel of limestone	rith much fine angular
0.5			Soft with	to firm grey/ora occasional fine	nge/brown mott to medium ang	led very sandy CLAY ular gravel of limestone
1.0		1.1 — 1.2 —	Blue	e/grey finely crys	stalline LIMES'	TONE
Depth below ground level (m) 1.5 c c c c c c c c c c c c c c c c c c c			EN	D OF TRIAL	PIT 1.2 m	
3.0			Div			
3.5						
4.0						Scale: 1:25
Remarks:		-			Water:	N/A
					Stabili	ty: N/A
					Time t	rench open:
Sample:		S		S2		Logged by: DRC
Depth: Type:		0.	3	0.8		Date: 29.01.03
IYDU				7.8, 7.6, 7.6		2200

		NVIROS <sup>®</sup>		TRIAL	PI	T LO		TP	38
	Client: D	efence Estates	`	CA No:	MDo	99006	6A		et 1 of 1
			Ī	Ground	Leve		m A.O.T		l Ref.:
]	Project: 1	RAF St Athan E	xtension	Areas	,	Exc			JCB Backactor
I	Location:	RAF St Athan				Wea	ther: Sun	shine an	d Showers
	0.0	Legend	Der (m)				DESCRI	PTION	
	0.0		0.15		Loose fine t limes	o coars	ark brown sl se angular to	ightly sar sub angu	ndy CLAY with occasional lar gravel and cobbles of
Depth below ground level (m)	0.2—		0.45	- 1	frequ	ent find ional fi	e to coarse a:	ngular to	sandy CLAY with sub rounded gravel and nd tabular cobbles of
gro	0.5—		0.43		Dark	grey/bl	ue finely cry	stalline L	IMESTONE
Depth be	0.6			E	END	OF TI	RIAL PIT (	).5 m	
									Saalar 1.10
Rer	narks:				·			 Water: 1	Scale: 1:10
							}	Stability	
							-	<del></del>	ench open:
	nple:		S1	C1	I				
Dep			0.4	0.3					Logged by: DRC
Typ		Zomo (NT)	00055		<u> </u>				Date: 29.01.03
res	t: Shear V	ane (N)	8.9, 9.3, 8.	2[	<u> </u>		<u></u>		~ 400. 20.01.00

	NVIROS (		TRIAL I	PIT LOG	TP 39
Client: D	efence Estates		CA No: M	D0990066A	Sheet 1 of 1
			Ground Le	evel - m A O	·
Project:	RAF St Athan I	Extension	Areas	Excavation 1	Method: JCB Backactor
Location:	RAF St Athan	1			nshine and Showers
	Legend	Der (m)		DESCR	IPTION
0.0		0.15	Ire	ose soft dark brown/g equent fine to coarse a obles of limestone	rey slightly sandy CLAY with angular to sub rounded gravel and
(E) 0.2		0.15	1111	ose soft orange/browr e to coarse angular to testone	slightly sandy CLAY with frequer sub rounded gravel and cobbles of
Depth below ground level (m)  0.3  0.4  0.5  0.6  0.7		0.4	Da cry	rk grey/blue fine to co stalline LIMESTONI	parse angular and tabular finely
0.8			EN	D OF TRIAL PIT	0.4 m
Remarks:				}-	Scale: 1:10 Water: N/A Stability: N/A
				-	Time trench open:
Sample:		S1	C1		
Depth: Type:		0.2	0.3		Logged by: DRC
est: Shear Va	ina (N)	Too Gravally	<del> </del>		Date: 29.01.03

Test: Shear Vane (N)

Too Gravelly

	E	NVIROS <sup>©</sup>		TRI	AL PI	T LOG	TP4	.0	
	Client: De	efence Estates		CA 1	No: MD(	990066A	Shee	t 1 of 1	
				Grou	ınd Leve	el - m A.O.I	grid	Ref.:	
I	Project: I	RAF St Athan Ex	ktension	Areas	3	Excavation N		JCB Backactor	
I	Location:	RAF St Athan			Weather: Sunshine and Showers				
		Legend	De <sub>]</sub> (m)	-		DESCR	IPTION		
	0.0		0.2					y sandy CLAY with sub angular gravel of	
Depth below ground level (m)	0.3		0.7					sandy CLAY with nd tabular gravel of	
	0.7		0.82	_	Dark	grey/blue finely cry	stalline LI	MESTONE	
	1.0				END	OF TRIAL PIT	0.82 m	Scale: 1:10	
Re	marks:						Water: 1		
							Stabilit	·	
								ench open:	
	mple:		S1					Logged by: DRC	
	pth:		0.4						
Tyj Tes	pe: st: Shear V	Vane (N)	7.7, 7.7,	8.0				Date: 29.01.03	

E	ENVIROS *		TRIAL I	PIT LOG		<b>TP42</b>
Client: I	Defence Estates			D0990066A		Sheet 1 of 1
			Ground Le		O.D.	Grid Ref.:
Project:	RAF St Athan H	xtension	Areas			thod: JCB Backactor
]	: RAF St Athan					ne and Showers
	Legend	Dep	 oth		CRIPT	<del></del>
0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.5 — 0.6 — 0.7 — 0.8 — 0.9 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 — 1.0 —		0.2 0.3 0.5	Soft freq cobl	estone  t to firm orange/re rse angular and ta	ed sand abular g own slig angul	
					Wat	Scale: 1:10
Remarks:					, walt	51; IV/A
Remarks:					C4 T	
temarks:					<del></del>	ility: N/A
			1		<del></del>	
ample: epth:		S 0.			<del></del>	ility: N/A trench open:
Remarks: ample: Pepth: ype: est: Shear Va		S 0.			<del></del>	ility: N/A

	ENVIROS (*)	TRL	AL PIT LOG		ГР 43
Client: D	efence Estates	CA N	lo: MD0990066A		Sheet 1 of 1
		Grou	nd Level - m A		Grid Ref.:
Project:	RAF St Athan Exte	ension Areas			od: JCB Backactor
Location	: RAF St Athan				e and Showers
	Legend	Depth (m)		CRIPTIO	— <del>, —, —</del> — —
0.1— 0.2— 0.3— 0.4— 0.5— 0.6— 0.6— 0.8— 0.9— 1.0—		0.4	Soft to firm mid to doccasional fine to coa	arse angul	a slightly sandy CLAY wi ar gravel of limestone ne LIMESTONE
			END OF TRIAL PI	T 0.45 m	ı
emarks:					Scale: 1:10
				Water	<del></del>
				Stabil	ity: N/A
mple:	<del></del>			Time	trench open:
pth:		0.3			Logged by: DRC
					~~BBCW Ny. DILU
pe:		l			<del></del>

E	NVIROS <sup>©</sup>		TRIAL PI	r log	T	P44	
Client: De	efence Estates		CA No: MD0	990066A	Sh	neet 1 of 1	
			Ground Leve	el - m A.(	Q.D. Gr	rid Ref.:	
Project: I	RAF St Athan E	xtension	Areas	Excavation	n Metho	d: JCB Backactor	
Location:	RAF St Athan		Weather: Sunshine and Showers				
	Legend	Dep (m)	oth	DESC	RIPTIO	N	
0.0		0.1	Loose fine t	e soft dark brow o coarse angula	n slightly s r gravel of	sandy CLAY with occasiona limestone	
Depth below ground level (m)  0.2			with	occasional fine t	o coarse ar	ed slightly sandy CLAY ngular gravel and fine to ples of limestone	
0.4		0.4 0.45	Dark	grey/blue finely	crystalline	LIMESTONE	
0.8—			END	OF TRIAL PI	T 0.45 m	Scale: 1:10	
Remarks:					Water	r: N/A	
					Stabil	lity: N/A	
		<del>,</del>	<del></del>	<del></del>	Time	trench open:	
Sample: Depth:		S1 0.3				Logged by: DRC	
Type:		0.3					
Test: Shear V	ane (N)	5.6, 6.5, 6.	.3			Date: 29.01.03	

	ENVIROS (*)		TRIAL PI	T LOG	тт	245
Client: I	Defence Estates		CA No: MDO			eet 1 of 1
			Ground Leve			id Ref.:
Project:	RAF St Athan Ext	tension	Areas			l: JCB Backactor
Location	: RAF St Athan			Weather: Sur		<del></del>
0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.7 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 —	Legend	Dep (m) 0.1 0.3 0.4	Loose fine t Soft t occas infred	DESCR e soft mid brown sl o coarse angular to	ightly sand sub round slightly angular less of lime	ndy CLAY with occasional nded gravel of limestone y sandy CLAY with to sub rounded gravel and estone
0.9						
emarks:			END	5	Water: 1	y: N/A
		S1 0.2	END		Water: 1	N/A

Date: 29.01.03

Type:
Test: Shear Vane (N)

7.8, 8.8, 8.0

	NVIROS •	$\Gamma$	RIAL PI	T LOG		TP46	
Client: Defence Estates		1	CA No: MD0990066A			Sheet 1 of 1	
ļ		G	round Leve		O.D.		
Project: R	AF St Athan Ex	tension Ar	eas			Grid Ref.:	
	RAF St Athan					hod: JCB Backactor	
	<u>-</u>	Depth	<del></del>			ne and Showers	
0.0 — 0.1 — 0.2 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.7 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 —	Legend De (m)  0.2  0.45 0.5		Loose fine to Soft to freque cobble.	DESCRIPTION  e soft dark brown slightly sandy CLAY with occasi to coarse angular to sub rounded gravel of limeston  o firm orange/brown slightly sandy CLAY with ent fine to coarse angular to sub rounded gravel and es of limestone  grey/blue finely crystalline LIMESTONE			
1.0							
4			END O	F TRIAL PIT	0.5 m		
4			END O	F TRIAL PIT	0.5 m	Scale: 1:10	
1.0			END O		0.5 m Water		
1.0			END O		Water		
narks:			END O		Water Stabil	: N/A ity: N/A	
1.0		<u>S1</u>	END O		Water Stabil	: N/A ity: N/A rench open:	
nple:		S1 0.3	END O		Water Stabil	: N/A ity: N/A	

	EN	VIROS∳		TRIAL PI	T LOG		TP 4 <b>%</b>	
	Client: Defence Estates			CA No: MD0990066A			Sheet 1 of 1	
			Ī	Ground Lev	el- m	ı A.O.D.	Grid Ref.:	
P	Project: R	AF St Athan Ex				ethod: JCB Backactor		
L	ocation:	RAF St Athan			Weathe	r: Sunsh	ine and Showers	
		Legend	Der (m)		Dì	ESCRIP'	TION	
Depth below ground level (m)	0.0—  0.1—  0.2—  0.3—  0.4—  0.5—  0.6—  0.7—  0.8—  1.0—  1.0—		0.1 0.25 0.3	Loos frequences Soft to co tabu  Dark	nent fine to o sional fine to orange/brow arse angular lar gravel of	coarse and coarse and n slightly r gravel and limestone nely crysta	alline LIMESTONE	
Rei	marks:					v	Scale: 1:10 Vater: N/A	
							tability: N/A	
						<u> </u>	Cime trench open:	
	nple:		S1				Logged by: DRC	
Dep Tur	pth:		0.2					

**Date:** 29.01.03

5.0, 6.3, 5.2

Type: Test: Shear Vane (N)

	ENVIROS .	<del></del>	TRIAI	PI'	T LOG		CGCTP 1	
Client: D	Client: Defence Estate		CA No: MD0990066A			Sheet 1 of 1		
				Ground Level - m A				
Project:	RAF St Athan	Extension	L				Grid Ref.:	
	: RAF St Atha						thod: JCB Backactor	
	Legend	<del></del>		Weather: Sunshine and Showers				
0.0— 0.1— 0.2— (E) —   o.3—			Depth (m)  Loose soft to firm brown loamy CLAY  0.3  Dark grey/blue finely crystalline LIMESTOR					
Depth below ground level (m)  0.3  0.4  0.5  0.6  0.7  0.8  0.9  1.0  1.0								
			EN	i <b>D</b> O	F TRIAL PI	Г 0.3 п	n	
Remarks:				<del></del>		<del></del>	Scale: 1:10	
						Wate	er: N/A	
						Stab	ility: N/A	
ample:	·	r <del></del>				Time	e trench open:	
epth:		<u> </u>	<u> </u> -					
ype:		<u> </u>					Logged by: AW	
est: Shear Vai	ne (N)	Too Gravelly				<del> </del>	Date: 11.02.03	

F	:NVIROS <sup>©</sup>		TRIAL PI	Г LOG	CGCTP 2
Client: D	efence Estates		CA No: MD0	990066A	Sheet 1 of 1
			Ground Leve	el - m A.O.D.	Grid Ref.:
Project:	RAF St Athan Ext	ension .	Areas		ethod: JCB Backactor
Location	: RAF St Athan	-		Weather: Suns	hine and Showers
0.0	Legend	Dep (m)	th	DESCRIE	PTION
0.0 — 0.1 — 0.2 — (E) 0.3 —		0.3	Soft t	o firm dark brown lo	oamy CLAY
Open the pelow ground level (m) 0.3 — 0.4 — 0.5 — 0.6 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7		0.5	Dark	grey/blue finely crys	talline LIMESTONE
0.7— 0.8— 0.9— 1.0—			END	OF TRIAL PIT 0.	.5 m
					Scale: 1:10
Remarks:	·			l w	Matan NI/A
Remarks:				<u> </u>	Vater: N/A
Remarks:				5	Stability: N/A
Sample:		S1		5	Stability: N/A
		S1 0.3		5	Stability: N/A

	NVIROS <sup>©</sup>	7	TRIAL PIT	LOG	CGCTP 3
Client: De	fence Estates		CA No: MD099		Sheet 1 of 1
			Ground Level -		Grid Ref.:
Project: R	AF St Athan Ext				ethod: JCB Backactor
	RAF St Athan	<del></del>	·		nine and Showers
	Legend	Deptl		DESCRIP	
0.0— 0.1— 0.2— 0.3— 0.4— 0.5— 0.6— 0.6— 0.8— 0.9— 1.0—		(m) 0.45 0.65	——————————————————————————————————————	rm dark brown loa y/blue finely crysta rown clay matrix	alline LIMESTONE with a
			END OF	TRIAL PIT 0.6	
Remarks:			END OF		5 m  Scale: 1:10  ater: N/A
Remarks:			END OF	W	Scale: 1:10
Remarks:	_		END OF	Wa St.	Scale: 1:10 ater: N/A ability: N/A
Sample:		S1	END OF	Wa St.	Scale: 1:10 ater: N/A ability: N/A me trench open:
		S1 0.4	END OF	Wa St.	Scale: 1:10 ater: N/A ability: N/A

E	NVIROS <sup>®</sup>	Γ	RIAL PI	r log	C	GCTP 4
Client: D	efence Estates	C	A No: MD0	990066A	SI	neet 1 of 1
		G	Ground Level - m A.O.D.		$D_{0x}$ $G_{1}$	rid Ref.:
Project:	RAF St Athan	Extension A	reas	<u> </u>		d: JCB Backactor
Location	RAF St Athar	1		Weather: Su	nshine	and Showers
	Legend	Deptl (m)	1	DESCR	IPTIO	N
0.0 — 0.1 — 0.2 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 — 0.7 —		0.6	coars limes	e angular to sub a	ngular g	rown CLAY with fine to ravel and cobbles of s of blue plastic sheeting
0.8		0.8	Dark an ora	grey/blue finely cr inge clay matrix	ystalline	LIMESTONE cobbles in
			END	OF TRIAL PIT	0.8 m	
Remarks:		· <del></del>	·		Υ	Scale: 1:10
wemarks:					Water	
					Stabil	ity: N/A
	<del></del>	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		Time	trench open:
Sample:	<del></del>	S1				Logged by: AW
						I LIVEELU IIV AV
Depth: Type:	·····	0.5				Dogged by, Att

٥	ENVIROS♥			TRIAL PIT LOG			CGC	CTP 5
Client: D	efence Estates		CA No: M	ID09	90066	SA	Shee	et 1 of 1
			Ground L	eve	-	m A.O.D	Grid	Ref.:
Project:	RAF St Athan E	xtension A	Areas		Exca	vation M	lethod:	JCB Backactor
Location	RAF St Athan				Weat	her: Sun	shine and	l Showers
	Legend	Dep (m)	th	•		DESCRI	PTION	
0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.5 — 0.6 — 0.6 — 0.7 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 — 0.8 —		0.45 0.5	to li D	o coai mest	rse ang one, an grey/bli	ular to sub nd occasiona	angular g l brick fra stalline L	LAY with occasional fine ravel and cobbles of gments IMESTONE cobbles in a
Remarks:		S1	E	<b>NI</b> D (	OF TR	BIAL PIT (	Water: l	y: N/A ench open:
Depth:		0.4						Logged by: DRC
Type:							- 1111	Date: 29.01.03
Test: Shear	Vane (N)	Too Gravell	ly	<u>L.                                    </u>				200.01,00

	ENVIROS (*)		TRIAL P	IT LOG		CGCTP 6
Client: D	efence Estates	(	CA No: MD0990066A			Sheet 1 of 1
			Ground Le	vel - m	A.O.D.	Grid Ref.:
Project:	RAF St Athan Ex	tension A	reas			thod: JCB Backactor
Location	: RAF St Athan			<del></del>		nine and Showers
	Legend	Dept	 h		SCRIP	<del></del>
0.0		(m)	Fir at (	m brown/grey lo ).2m)	oamy CL	AY (grades to brown colour
Depth below ground level (m)		0.95 1.8 1.9	incl Bec occa	usions (<5mm doming soft to fir usional coarse su	li). m at 1.4 lb angul	AY with localised black Om light brown with ar gravel of limestone
2.5— 3.0—			ENI	O OF TRIAL	PIT 1.9	) m
3.5						
4.0				·······		Scale: 1:25
lemarks:					$ \mathbf{w} $	ater: Perched at 1.8m
					St	ability: N/A
					-	me trench open:
ample:		S1	S2	S3		
epth:		0.5	1.0	1.5		Logged by: AW
'ype:						Date: 11.02.03
est: Shear V	/ane (N)	3.6, 3.6, 4.2	7.2, 6.4, 6.4 3.	0, 1.2, 2.2		Dave. 11.02.03

	Ε	NVIROS∳		TRIAL PI	T LOG	CGO	CTP 7	
	Client: De	efence Estates		CA No: MD	0990066A	Shee	et 1 of 1	
				Ground Lev	el - m A.O.I	Grid	Ref.:	
	Project: F	RAF St Athan E	xtension	Areas	Excavation N		JCB Backactor	
	Location:	RAF St Athan			Weather: Sur	shine and	l Showers	
		Legend	Dej (m)		DESCR	PTION		
Depth below ground level (m)	0.0 — 0.1 — 0.2 — 0.3 — 0.4 — 0.4 — 0.5		0.35		Firm to soft brown loamy CLAY			
Depth below	0.5—		0.9	Dark oran	grey/blue finely cryge/brown clay matri	stalline LI x	MESTONE in a sparse	
	1.0			END	OF TRIAL PIT	0.9 m		
Rei	marks:					XX7-4 N	Scale: 1:10	
						Water: N	<del></del>	
						Stability	<del></del>	
Sar	nple:	<del></del>	S1	<u> </u>		11me tre	ench open:	
Dep		<del></del>	0.35				Logged by: DRC	
Typ				+			_	
	t: Shear V	ane (N)	Too Gravel	ly			Date: 29.01.03	

ENVIROS		TRIAL P	IT LOG	CGCTP 8
Client: Defence Estates		CA No: MI	00990066A	Sheet 1 of 1
		Ground Lev	vel - m A.O.D.	<del></del>
Project: RAF St Athan Ex	tension A	Areas		ethod: JCB Backactor
Location: RAF St Athan			<del></del>	shine and Showers
Legend	Dep	th	DESCRI	
0.0— 0.1— 0.2— 0.3— 0.4— 0.5— 0.6— 0.6— 0.8— 0.9— 1.0—	(m) 0.6		n brown loamy CLAY	talline LIMESTONE
		END	OF TRIAL PIT 0.	
Remarks:		<u> </u>	v	Scale: 1:10 Vater: N/A
			<u> </u>	tability: N/A
			<del>                                     </del>	
Sample:	S1	S2		ime trench open:
Depth:	0.3	0.7		Logged by: AW
Type:				
	2, 4.0, 4.8			Date: 11.02.03

Test: Shear Vane (N)

4.2, 4.0, 4.8

	ENVIROS (*)		TRIAL	PIT L	OG	CGCTP 9
Client: 1	Defence Estates		CA No: M	ID09900	066A	Sheet 1 of 1
		<u> </u>	Ground L		m A.O.D.	Grid Ref.:
Project:	RAF St Athan Ex	tension A	Areas	Ex		ethod: JCB Backactor
Location	n: RAF St Athan					nine and Showers
	Legend	Dept (m)	th		DESCRIP	<del></del>
0.0		0.1	D	ark brow	n loamy CLAY	
0.5		0.75	M Cl gr	ADE GR LAY with avel and	OUND. Soft to	firm brown/grey/orange mott parse angular to sub rounded rounded cobbles of limestone s.
		0.95	Da	ark brown	n organic PEAT	intermixed with soft to very
1.0		0.95	gre	ey slighti irk grey/l	y gravely silt blue finely cryst	alline LIMESTONE in a spa
(E)	- <del></del>	<u>-</u>	ora	ange/brov	wn clay matrix	a spa
Depth below ground level (m) 1.5 2.0			EN	D OF T	RIAL PIT 1.1	. <b>m</b>
3.5						
Remarks:			<del></del>	<del></del>	1337	Scale: 1:25 ater: N/A
					<u> </u>	
					<del> </del>	ability: N/A
ample:		S1	S2	C1		me trench open:
epth:		0.3	0.8	0.3	<del>  -</del>	Logged by: DRC
ype:						D-1 11 00 00
est: Shear V	ane (N) To	o Gravelly				Date: 11.02.03

	5	VVIROS <sup>♦</sup>		TRIAL	DI		·	CC	COD
		fence Estates					<del></del>		CTP 10
	<b>CATCHIO B</b> 0	TOTICO EGUADOS		CA No:					eet 1 of 1
-	<b>-</b>			Ground	Leve		m A.O.I		d Ref.:
	Project: R	AF St Athan E	xtension	Areas		Exc	avation I	<b>Iethod</b>	: JCB Backactor
	Location:	RAF St Athan	····			Wea	ther: Sur	shine a	nd Showers
Depth below ground level (m)	0.0 — — — — — — — — — — — — — — — — — —	Legend	Dej (m) 0.45 0.5		Dark (	grey/bl	DESCR	Y estalline l	LIMESTONE in a sparse
	narks:				END	OF TI	<u>}</u>	Water: Stabilit	
San Dep	iple:		S1						Logged by: AW
<del>Dep</del> Тур			0.3	-			<del>                                     </del>		2088cu by. Avv
				<del></del>			į l		1

Test: Shear Vane (N)

4.6, 4.0, 4.4

Date: 12.02.03

<b>ENVIROS</b> <sup>©</sup>	•	TRIAL PI	T LOG	CGO	CTP 11
Client: Defence Estates		CA No: MD0	990066A	<del></del>	et 1 of 1
		Ground Leve	el - m A.O.D.	Grid	Ref.:
Project: RAF St Athan E	xtension	Areas	Excavation Me	thod:	JCB Backactor
Location: RAF St Athan			Weather: Sunsi	nine and	l Showers
Legend  0.0  0.1  0.2    0.3    0.4    0.6    0.6    0.8    0.9    1.0	De (m) 0.5 0.6	Soft of to coalimes	arse angular to sub ar stone	sandy (	CLAY with frequent fine ravel and cobbles of
Remarks:				Vater: 1	Scale: 1:10
			<u></u>	tability	
			-		ench open:
Sample: Depth:	S1 0.4				Logged by: AW

Date: 12.02.03

2.2, 2.2, 2.0

Type:

Test: Shear Vane (N)

	NVIROS •	TRI	AL PIT LOG	CGCTP 12		
Client: D	efence Estates	<del></del>	No: MD0990066A and Level - m A.ap	Sheet 1 of 1  Orion Grid Ref.:		
	RAF St Athan Ex	tension Areas	Excavation	Method: JCB Backactor		
0.0 (m)			MADE GROUND. Loo sandy gravel of ASH. (	Weather: Sunshine and Showers  DESCRIPTION  MADE GROUND. Loose dark grey/black sandy to very sandy gravel of ASH. Occasional pottery fragments.  Firm brown/grey CLAY with frequent fine to coarse angular to sub angular gravel of limestone. Occasional limestone cobbles.		
0.2		0.6	Dark grey/blue finely c sparse orange/brown cl	rystalline LIMESTONE with a ay matrix		
				' 0.6 m		

Remarks:			_	Scale: 1:10 Water: N/A
				Stability: N/A
				Time trench open:
Sample:	S1	S2	C1	
Depth:	0.2	0.5	0.3	Logged by: AW
Type:		·		
Test: Shear Vane (N)	3.8, 3.6, 4.2			Date: 12.02.03



#### John Vincent Surveys Ltd

Phoenix Business Park Lion Way Swansea Enterprise Park Swansea SA7 9FZ

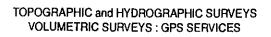
Tel: 01792 773003 Fax: 01792 773230

# RAF St. ATHAN Ground Investigation Schedule

**DATE:** MARCH 2003 **JOB No.** 56/03

CODE	EASTING	NORTHING	HEIGHT
вні	299492.82	169219.84	41.85
ВН2	299446.78	169293.61	42.11
вн3	299487.02	169475.92	43.25
вн4	299551.24	169605.60	44.53
BH5	299749.08	169618.82	45.72
ВН6	299749.78	169860.67	46.78
вн7	299744.06	169975.07	49.11
BH8	299588.95	169881.35	47.21
вн9	299467.15	169718.95	46.54
BH10	299222.64	169251.31	42.03
BH11	299170.58	168090.64	48.39
BH12	299285.19	167970.18	47.53
BH13	299054.29	168113.87	48.48
BH14	299162.05	167988.76	47.20
BH15	299289.06	167884.38	47.96
BH16	300170.90	169746.75	45.31
BH17	298334.21	168836.55	41.65
BH18	298288.39	168886.83	44.19
BH19	298236.08	168939.69	45.75
BH20	298263.27	169008.47	46.63
BH21	298198.74	168982.80	46.85
BH22	298550.19	169014.19	39.12
BH23	298516.71	168999.99	40.33
BH24	298554.54	169036.97	40.28

Page 1 of 4







# RAF St. ATHAN Ground Investigation Schedule

**DATE: MARCH 2003 JOB No.** 56/03

CODE	<b>EASTING</b> 298342.65	NORTHING 169008.34	<u>HEIGHT</u> 45.93
CBR1	298461.04	169001.20	43.17
CBR2	298608.10	169014.45	41.24
CBR3	298731.21	169046.68	43.78
CBR4	298855.59	169102.51	· 43.27
CBR5	298033.39	169296.82	44.44
CBR6	299169.68	169323.50	43.86
CBR7		169444.09	44.63
CBR8	299293.94		44.03 44.75
CBR9	299452.50	169581.37	
CBR10	299554.14	169578.24	44.31
CBR11	299679.45	169553.31	44.92
CBR12	299931.36	169510.63	46.76
CBR13	300119.31	169552.72	44.49
CBR14	300266.03	169433.64	42.06
CBR15	299572.60	169369.31	42.93
CBR16	299662.35	169187.06	42.03
CGCTP1	298253.84	169003.33	46.60
CGCTP2	298312.21	169004.30	46.22
CGCTP3	298435.38	169006.34	44.17
CGCTP4	299841.04	169497.17	46.82
CGCTP5	299913.63	169526.87	46.91
CGCTP6	300000.17	169557.17	44.99
CGCTP7	300126.79	169557.27	44.45
CGCTP8	300252.93	169447.84	42.72
CGCTP9	300326.64	169381.14	40.32
CGCTP10	300378.93	169339.19	41.12
CGCTP11	300389.27	169301.43	42.82
CGCTP12	300411.95	169266.92	44.02



# RAF St. ATHAN Ground Investigation Schedule

**DATE: MARCH 2003 JOB No.** 56/03

CODE	EASTING	NORTHING	HEIGHT
TP1	299381.49	169560.55	44.68
TP2	299371.74	169462.67	43.94
TP3	299277.73	169420.96	44.36
TP4	299382.27	169350.51	42.75
TP5	299213.80	169369.70	44.09
TP6	299152.46	169238.62	42.75
TP7	299181.14	169200.48	41.64
TP8	299071.11	169248.12	43.47
TP9	298970.37	169181.10	42.66
TP10	298943.64	169140.25	42.46
TP11	298885.89	169145.65	43.22
TP12	298749.35	169066.09	44.00
TP13	298730.68	169073.95	44.33
TP14	298474.62	168904.70	42.13
TP17	298404.02	168834.66	40.87
TP18	299476.01	169524.40	43.74
TP19	299608.34	169713.75	45.31
TP20	299695.62	169705.79	45.69
TP21	299749.59	169790.38	46.33
TP22	299757.53	170012.46	50.88
TP23	299727.88	170027.82	51.14
TP24	299625.10	169954.23	48.15
TP25	299529.28	169782.05	46.50
TP27	299583.22	169466.76	43.36
TP28	299653.67	169429.44	43.55
TP29	299697.78	169352.49	42.54
TP30	299655.80	169304.78	42.88
TP31	299809.56	169220.51	42.45
TP32	299711.98	169189.52	42.41
TP33	299641.74	169156.54	41.97



# RAF St. ATHAN Ground Investigation Schedule

**DATE:** MARCH 2003 **JOB No.** 56/03

CODE	<b>EASTING</b>	NORTHING	<u>HEIGHT</u>
TP34	299593.74	169291.75	42.39
TP35	299556.40	169388.67	43.00
TP36	299029.97	168008.46	46.73
TP37	299021.02	167933.99	45.82
TP38	299094.28	167898.55	46.48
TP39	298932.19	167816.94	45.07
TP40	298792.43	167780.27	45.91
TP41	298511.20	167829.19	45.51
TP42	298725.68	167844.71	45.60
TP43	298630.83	167921.36	44.59
TP44	298784.86	167929.18	44.97
TP45	298885.31	167943.87	45.56
TP46	298882.98	167837.56	45.26

### **CBR FIELD SHEET**

		r	<del></del>					<u>.,                                     </u>	
PENETRATION	PR READING	LOAD	0.45						
(mm)	(divs)	(KN)	J. 5. 70						
0.00	0	0.00	4 1						
0.25	16	0.05	<u> </u>						
0.50	20	0.06	0.40				•		
0.75	24	0.07	]						
1.00	29	0.09	]						
1.25	32	0.10	0.35						
1.50	37	0.11	1					<i>f</i>	
1.75	40	0.12	_[				/	<b>4</b>	
2.00	44	0.14	0.30		•		7		
2.25	49	0.15	]				<i>,</i>		
2.50	54	0.17	]						
2.75	57	0.17	ন 0.25	•					
. 3.00	61	0.19	[				F		
3.25	65	0.20	C.25 (KN/m2)			<i>F</i>	•		
3.50	68	0.21	0.20						-
3.75	72	0.22	] - 0.20						
4.00	77	0.24	]						
4.25	81	0.25							
4.50	84	0.26	0.15						
4.75	86	0.26	]						
5.00	91	0.28	]						
5.25	95	0.29	0.10						
5.50	100	0.31							
5.75	103	0.32	]	/					
6.00	108	0.33	0.05						
6.25	112	0.34	]  /						
6.50	115	0.35	] /						
6.75	118	0.36	0.00	<del></del>	<del></del>				~~~
7.00	120	0.37	0.00	1.00	2.00		4.00 5.00	6.00 7.	00.8 00
7.25	125	0.38				Penetra	ation (mm)		
7.50	127	0.39							
	<del> </del>					<del>:.</del>	Tann		26.0/
Test Depth	0.30m		Soil Description	n Soft to fire casional roo	n brown Llets and	very silty occasional	CBR at 2.50mm		.25 %
Mass of Spli	t Rings:		fine to coarse g				CBR at 5.00mm	: 1	.40 %
PR Factor:	3.07	N/Div	-				CBR Value:	1	.40 %
Moisture Co	ntent:	<del></del>	-				Checked By: NF	·J	
		<u>.</u>					<u> </u>	<del></del>	_ <del></del>
REMARKS:									
							t tu notes	7. D4 O. 1000	Tort 4.2
					<u></u>	Carried out in	DATE: 20.02.03		108.4.3
CONTRAC	Γ: RAF St. A	Athan.					TEST REFERE		
							TEST KEFEKE	IIOD. I	

### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	0.45 т								1
(mm)	(divs)	(KN)	-								İ
0.00	0	0.00	-							سير	-
0.25	29	0.09	0.40								
0.50	40	0.12	- 0.40 [				-				
0.75	50	0.15	-}								
1.00	56	0.17	- 1					_			
1.25	61	0.19	0.35								
1.50	68	0.21	-				_				
1.75	71	0.22	-					_			
2.00	76	0.23	0.30			· /					
2.25	80	0.25	_								j
2.50	83	0.25	_								į
2.75	87	0.27	নু 0.25		_/	•					
3.00	90	0.28_	Coad (KN/HZ)		- /						l
3.25	93	0.29									1
3.50	95	0.29	0.20								ľ
3.75	98	0.30			l.						- 1
4.00	100	0.31	_	- /							
4.25	102	0.31		- /							
4.50	104	0.32	0.15								
4.75	107	0.33		- /-							
5.00	109	0.33		/							
5.25	114	0.35	0.10	1							
5.50	116	0.36		1							
5.75	119	0.37		1							
6.00	121	0.37	0.05	1							
6.25	123	0.38		1							
6.50	126	0.39									
6.75	129	0.40	0.00 ‡		<del></del>	<del></del>	- +			7.00	
7.00	132	0.41	0.0	00 1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.0
7.25	135	0.41				Pene	tration (n	nm)			
7.50	136	0.42									
						***	lann	. 0.50		1.02.6	1/
est Depth	: 0.30m		Soil Descrip	tion Soft to	firm brown	very silty		at 2.50m	ım:	1.92 9	70
			CLAY with		rootlets and	occasional	CDP	at 5.00m		1.68	2/6
Mass of Spli	t Rings:		fine to coars	e gravel.			CBK	at J.VVII	,111,	1.00	, 0
-	2.05	NUD:-	_				CBE	Value:		1.92	%
		N/Div	1								
	3.07		1				L				
PR Factor: Moisture Co							Chec	ked By:	NPJ		

CONTRACT: RAF St. Athan.

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

DATE: 20.02.03

#### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	0.00								
(mm)	(divs)	(KN)	0.30						-		
0.00	0	0.00	_								
0.25	16	0.05	_								
0.50	21	0.06	4				•				
0.75	23	0.07	0.25								
1.00	26	0.08	_								<u>م</u> ا
1.25	28	0.09	_								
1.50	31	0.10							سمر		
1.75	34	0.10	_								
2.00	. 36	0.11	0.20				•				.
2.25	39	0.12	4 4								
2.50	41	0.13	_				مسم				
2.75	43	0.13	- ନ୍ତ								
3.00	45	0.14	Load (kN/m2)			/					
3.25	47	0.14	호 0.15 + 및								
3.50	49	0.15	5								
3.75	51	0.16									1
4.00	53	0.16									
4.25	57	0.17	0.10								
4.50	58	0.18	<b>↓</b> ••••	,	<i>*</i>						1
4.75	60	0.18	4								
5.00	62	0.19	-{								
5.25	63	0.19		<i>f</i>							
5.50	64	0.20	. 0.05 + /								1
5.75	66	0.20	- 1/								
6.00	68	0.21									
6.25	70	0.21	4 1/								
6.50	71	0.22	-								
6.75	73	0.22	0.00 +-	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00
7.00	74	0.23	- 0.00	1.00	2.00		ration (m		5.55		
7.25	76	0.23	4			·		,			
7.50	79	0.24	<u> </u>	<del></del>	<u> </u>						
	0.00		Soil Description	n: Soft bro	num verv sil	ty CLAY	CBR	at 2.50m	m:	0.95	%
est Depth:	0.30m		with occasiona	irootlets	JWII VCI J 311		OBR		••••		
lass of Spli	t Dings:		With occasiona	1100110101			CBR	at 5.00m	m:	0.95	%
rass of Spii	r vangs.										
R Factor:	3.07	N/Div	1				CBR	Value:		0.95	%
							<u></u>	10.	IDI		
Aoisture Co	ntent:						Checi	ced By: 1	NPJ		
EMARKS:			J			··-					
										1000 %	
						Carried out		e with BS1 E: 19.02.		1990, Test 4	1.3
CALTED A CH	Γ: RAF St. A	fhan					IDAL	こ、エブ・リム・	VJ.		

### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD								
(mm)	(divs)	(KN)	0.30	<u> </u>	. <u> </u>					
0.00	0	0.00	]							
0.25	- 21	0.06								
0.50	25	0.08	j i				•			
0.75	27	0.08	0.25							
1.00	29	0.09	0.23							
1.25	31	0.10	<u> </u>							
1.50	33	0.10							~	
1.75	34	0.10	] [							
2.00	37	0.11	0.20							
2.25	39	0.12	] ]							
2.50	41	0.13	<u> </u>				, American de la companya della companya della companya de la companya della comp			
2.75	43	0.13								
3.00	45	0.14	Load (kN/m2)							
3.25	48	0.15	0.15							
3.50	50	0.15	) g							ĺ
3.75	52	0.16	]							
4.00	53	0.16	]							
4.25	55	0.17	0.10							
4.50	57	0.17	] 0.10 ]							-
4.75	58	0.18	]							
5.00	59	0.18	] /	<u> </u>						- 1
5.25	62	0.19	↓   <i>f</i>							
5.50	63	0.19	0.05							
5.75	65	0.20	4 1/							
6.00	67	0.21	1 11							
6.25	69	0.21								
6.50	71	0.22	1 1					1		
6.75	73	0.22	0.00	<del></del>	2.00	3.00	4.00 5.00	6.00	7.00	8.0
7.00	76	0.23	0.00	1.00	2.00		ation (mm)	0.02	,,,,,	
7.25	78	0.24	_			renen	ation (iran)			
7.50	79	0.24			<u> </u>					
			Soil Description	Call bro	NIO WAFU CI	Ity CLAY	CBR at 2.50mm		0.95 %	
est Depth	: 0.30m		with occasional	n: Soit blu Lrootlets	WII VCI Y SI	illy CEITH		•		
	'. D'		With occasional	100mcis.			CBR at 5.00mm	:	0.91 %	
lass of Spl	it Kings:		1							
R Factor:	3 07	N/Div	1				CBR Value:		0.95 %	,
ix i actor.	3.01									
loisture Co	ontent:		]				Checked By: NP	J		
EMARKS				<del></del> -		<del></del>		-		
THAIRING	•									

CONTRACT: RAF St. Athan.

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

DATE: 19.02.03

#### **CBR FIELD SHEET**

	PR READING	LOAD									
(mm)	(dîvs)	(KN)	0.35								Ì
0.00	0	0.00									
0.25	15	0.05									İ
0.50	18	0.06					-				
0.75	20	0.06	0.30								-
1.00	21	0.06									
1.25	23	0.07	]								
1.50	28	0.09									
1.75	30	0.09	0.25 🕂								
2.00	33	0.10			•				./		
2.25	35	0.11						/	<i>F</i>		
2.50	38	0.12	]								
2.75	41	0.13	0.20								
3.00	44	0.14									
3.25	47	0.14	Load (kN/m2)								
3.50	50	0.15	og			_	1				
3.75	52	0.16	0.15								
4.00	58	0.18	]								İ
4.25	60	0.18	]								ŀ
4.50	61	0.19				-					
4.75	63	0.19	0.10								l
5.00	67	0.21									
5.25	70	0.21	_								1
5.50	73	0.22	_								- 1
5.75	76	0.23	0.05								
6.00	79	0.24	_   /								İ
6.25	81	0.25	J //								
6.50	83	0.25								,	
6.75	87	0.27	0.00	4.00	200	3.00	4.00	5.00	6.00	7.00	8.0
7.00	89	0.27	0.00	1.00	2.00		ration (n		0.00		2.0
	93	0.29				reilei	· arion (n	,			
7.25											
	95	0.29								<del></del> .	
7.25 7.50	95		Gail Dagaring	m: Soft to 6	rm brown	very silty	CBR	at 2.50n	nm:	0.88	%
7.25 7.50	95		Soil Description	on: Soft to fi	rm brow	ı very silty	CBR	t at 2.50n	nm:	0.88	%
7.25 7.50 est Depth	95 1: 0.30m		Soil Description	on: Soft to fi	rm brown	ı very silty		t at 2.50n		0.88	
7.25	95 1: 0.30m lit Rings:		Soil Description	on: Soft to fi casional roc	rm brown	n very silty	CBR		nm:		%

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

DATE: 19.02.03

TEST REFERENCE: 5

CONTRACT: RAF St. Athan.

### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	0.70								1
(mm)	(divs)	(KN)	0.70								- 1
0.00	0	0.00	_								
0.25	22	0.07	_								}
0.50	27	0.08	] ]				•				ł
0.75	32	0.10	0,60								~ [
1.00	39	0.12	]								
1.25	44	0.14							/		
1.50	51	0.16									
1.75	58	0.18	0.50						<i>F</i>		
2.00	65	0.20	<u> </u>			-		/	(	•	I
2.25	72	0.22									
2.50	77	0.24	]								
2.75	83	0.25	0.40				<i>f</i>				ı
3.00	90	0.28	] 🖁 📗				/				
3.25	97	0.30	Load (kN/m2)								
3.50	102	0.31	] 8				-				
3.75	107	0.33	0.30								
4.00	115	0.35									
4.25	120	0.37	]		,						
4.50	128	0.39	] [								1
4.75	133	0.41	0.20								
5.00	139	0.43	] [								
5.25	146	0.45									
5.50	151	0.46	_								
5.75	159	0.49	0.10								
6.00	166	0.51	]								
6.25	171	0.52	<b>」</b>	1							
6.50	175	0.54	.↓								
6.75	179	0.55	0.00	4.55	<del></del>	3.00	4.00	5.00	6.00	7.00	8.0
7.00	183	0.56	0.00	1.00	2.00		4.00 ration (m		0.00		5.0
7.25	186	0.57	_			renet	auvii (iii	,			
7.50	190	0.58	<u> </u>	·		<del></del>					
				ra' 1		.:14	Cpp	at 2.50m	m:	1.79	%
est Depth	: 0.30m		Soil Descripti CLAY with o	on: Firm brov	wn very s Hete and	occasional	CBK	ai Z.JVIII	))].	1.17	, 0
Mass of Spl	it Rings:		fine to coarse	gravel.	ticts and	Occupional	CBR	at 5.00m	m:	2.14	%
	<del></del>						CRP	Value:	<del></del>	2.14	%
PR Factor:	3.07	N/Div									
	ontent:		<b>⊣</b>				Chool	ced By: 1	JP1		

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

DATE: 19.02.03

TEST REFERENCE: 6

REMARKS:

CONTRACT: RAF St. Athan.

### **CBR FIELD SHEET**

			<del></del>				<del></del>
PENETRATION	PR READING	LOAD	0.25				
(mm)	(diva)	(KN)	- 0.23 T				
0.00	0	0.00	-				
0.25	16	0.05	-				
0.50	18	0.06	- 1			•	
0.75	21	0.06					
1.00	22	0.07	0.20				
1.25	25	0.08	. ]				/
1.50	27	0.08	4				
1.75	29	0.09	1		4		
2.00	32	0.10	1	•			
2.25	34	0.10	]				
2.50	35	0.11	0.15				
2.75	37	0.11	🛪				
3.00	39 ·	0.12	\ \ \ \		/		
3.25	40	0.12	Load (kN/m2)				
3.50	41	0.13	ַן בַּּ				1
3.75	43	0.13	1				
4.00	44	0.14	0.10		<i>f</i>		
4.25	46	0.14	_		<b>.</b>		
4.50	47	0.14	]				
4.75	49	0.15	]				
5.00	50	0.15					
5.25	52	0.16	0.05				
5.50	55	0.17	1	1			
5.75	57	0.17	] 1	1			
6.00	59	0.18	_				
6.25	60	0.18					
6.50	62	0.19					_
6.75	64	0.20	0.00 +			4.00 5.00 6.00	7.00 8.0
7.00	65	0.20	0.0	0 1.00	2.00 3.00		7,00 0.0
7.25	66	0.20			Pene	tration (mm)	
7.50	67	0.21	<u> </u>				
			g 11 D	ion: Soft brown	yary cilty	CBR at 2,50mm:	0.81 %
est Depth	: 0.35m		Soil Descript	ion: Soit brown	ets and occasional	1	0,01
			fine to coarse	occasionai 10000	ts and occasional	CBR at 5.00mm:	0.77 %
lass of Spli	it Kings:		line to coarse	gravor.			
D Ecotori	2 07	N/Div	-			CBR Value:	0.81 %
R Factor:	3.07	MUN				<u> </u>	
loisture Co	ntent:		1			Checked By: NPJ	
ioistii e Ot	viitViit.						
EMARKS	:						
					Carried out	in accordance with BS1377; Part 9	: 1990, Test 4.3
ONTRAC	T: RAF St. A	Athan.				DATE: 19.02.03	7
						TEST REFERENCE:	,

### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	n eo						
(mm)	(divs)	(KN)	0.60				-		
0.00	0	0.00	_						
0.25	10	0.03	_					,	.
0.50	14	0.04	]					/	
0.75	16	0.05	0.50					- /	
1.00	18	0.06	] 0.50 [					F	
1.25	21	0.06	]				/	2	
1.50	26	0.08	]						
1.75	31	0.10	1						
2.00	36	0.11	0.40			•			
2.25	41	0.13	1 ""			/			
2.50	45	0.14	1 1						
2.75	51	0.16	1 _			<i>F</i>			
3.00	56	0.17	ZE			f			1
3.25	61	0.19	Load (кмт2)			/			1
3.50	68	0.21	_ B			<i></i>			
3.75	72	0.22							- 1
4.00	79	0.24	1			<i></i>			j
4.25	86	0.26	1 ]			•			- 1
4.50	92	0.28	0.20						
4.75	105	0.32	<del>-</del>						
	111	0.34	1 !	/	4				ļ
5.00	119	0.37	1						
5.25	127	0.37							- 1
5.50		0.37	0.10						
5.75	135	0.41	-						
6.00	141		┥ ┃						
6.25	146	0.45	-						
6.50	152	0.47	0.00			<del>-  </del>	_ +		
6.75	158	0.49	0.00	1.00 2.00	3.00	4.00 5.00	6.00	7,00	8.0
7.00	163	0.50	-			ation (mm)			
7.25	169	0.52				• •			
7.50	175	0.54	<del> </del>	·					
	2.20		Call Description	n: Soft brown very silty	v	CBR at 2.50m	m:	1.04 9	<b>%</b>
est Depth	: 0.30m		CLAV with on	casional rootlets and oc	ccasional				
4 CO 1	4 D'		fine to coarse g	ravel		CBR at 5.00m	m:	1.71 9	%
Mass of Spli	ıt Kıngs:		Into to warse g	,					
R Factor:	2.07	N/Div	-			CBR Value:		1.71	%
K ractor:	3.07	MINIA							
Aoisture Co	ontent:					Checked By:	1PJ		
REMARKS	:								
					Cambridge 4		277: Part fi-	1000 Tool 4	1
			,		Carried out in	DATE: 19.02		1790, Test 4.	د.
'ONTRAC'	T: RAF St. A	Athan.				TECT DECE			

TEST REFERENCE: 8

#### **CBR FIELD SHEET**

	PR READING	LOAD	0.50									·
(mm)	(divs)	(KN)	0.50							•		ļ
0.00	0	0.00	4									_
0.25	12	0.04	0.45	1								
0.50	21	0.06						•				
0.75	30	0.09	4									
1.00	34	0.10	0.40	ļ								
1.25	40	0.12	_							/		
1.50	46	0.14	4							_		ļ
1.75	55	0.17	0.35	+								-
2.00	60	0.18	_ ՝				•		<i></i>	-		
2.25	64	0.20	_						بر			
2.50	69	0.21	0.30	†					-			ŀ
2.75	73	0.22	ู ล									
3.00	78 ·	0.24	Load (KN/m2)					•				
3,25	82	0.25	를 0.25	t								
3.50	86	0.26	_ je				/					
3.75	90	0.28		-								
4.00	94	0.29	0.20	†								
4.25	96	0.29		1								
4.50	99	0.30	0.45	}								
4.75	101	0.31	0.15	Ī		<i>‡</i>						
5.00	110	0.34			- F							
5.25	114	0.35	0.10		-							
5.50	117	0.36			f							
	123	0.38	_									
5.75	l *231		1	1 /								
5.75 6.00	128	0.39	0.05	T /								
		0.39	0.05	<b>[</b> /								
6.00	128		0.05	<b>/</b>								
6.00 6.25	128 132	0.41	0.00		<del></del>			<del></del>			<del></del>	
6.00 6.25 6.50	128 132 136	0.41 0.42	0.00	0.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00
6.00 6.25 6.50 6.75	128 132 136 140	0.41 0.42 0.43	0.00	0.00	1.00	2.00		4.00 tration (m		6.00	7.00	8.00
6.00 6.25 6.50 6.75 7.00	128 132 136 140 143	0.41 0.42 0.43 0.44	0.00	0.00	1.00	2.00				6.00	7.00	8.00
6.00 6.25 6.50 6.75 7.00 7.25 7.50	128 132 136 140 143 147 150	0.41 0.42 0.43 0.44 0.45	0.00		<u></u>		Pene	tration (m	wn)		·	·
6.00 6.25 6.50 6.75 7.00 7.25 7.50	128 132 136 140 143 147 150	0.41 0.42 0.43 0.44 0.45	0.00	ption:	Firm bro	own very	Pene	tration (n			7.00	
6.00 6.25 6.50 6.75 7.00 7.25 7.50 est Depth	128 132 136 140 143 147 150	0.41 0.42 0.43 0.44 0.45	0.00 0 Soil Descri	ption:	Firm bro	own very	Pene	CBR	at 2.50m	ım:	1,60 9	<del></del>
6.00 6.25 6.50 6.75 7.00 7.25	128 132 136 140 143 147 150	0.41 0.42 0.43 0.44 0.45	0.00	ption:	Firm bro	own very	Pene	CBR	wn)	ım:	·	<u></u>
6.00 6.25 6.50 6.75 7.00 7.25 7.50 est Depth	128 132 136 140 143 147 150 : 0.30m	0.41 0.42 0.43 0.44 0.45 0.46	0.00 0 Soil Descri	ption:	Firm bro	own very	Pene	CBR	at 2.50m	ım:	1,60 9	% %
6.00 6.25 6.50 6.75 7.00 7.25 7.50 est Depth	128 132 136 140 143 147 150 : 0.30m	0.41 0.42 0.43 0.44 0.45	0.00 0 Soil Descri	ption:	Firm bro	own very	Pene	CBR	at 2.50m	ım:	1.60 9	% %
6.00 6.25 6.50 6.75 7.00 7.25 7.50 est Depth	128 132 136 140 143 147 150 : 0.30m :t Rings:	0.41 0.42 0.43 0.44 0.45 0.46	0.00 0 Soil Descri	ption:	Firm bro	own very	Pene	CBR	at 2.50m	un:	1.60 9	<b>½</b>

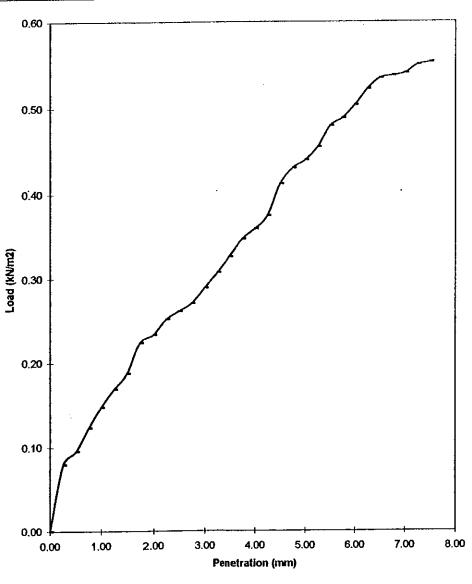
CONTRACT: RAF St. Athan.

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

[DATE: 19.02.03

#### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD
(mm)	(divs)	(KN)
0.00	0	0.00
0.25	26	0.08
0.50	31	0.10
0.75	40	0.12
1.00	48	0.15
1.25	55	0.17
1.50	61	0.19
1.75	73	0.22
2.00	76	0.23
2.25	82	0.25
2.50	85	0.26
2.75	88	0.27
3.00	94 ·	0.29
3.25	100	0.31
3.50	106	0.33
3.75	113	0.35
4.00	117	0.36
4.25	122	0.37
4.50	134	0.41
4.75	140	0.43
5.00	143	0.44
5.25	148	0.45
5.50	156	0.48
5.75	159	0.49
6.00	164	0.50
6.25	170	0.52
6.50	174	0.53
6.75	175	0.54
7.00	176	0.54
7.25	179	0.55
7.50	180	0.55



Test Depth: 0.30m

Mass of Split Rings: PR Factor:

Moisture Content:

3.07 N/Div

Soil Description: Firm brown very silty CLAY with occasional rootlets and occasional

fine to coarse gravel.

CBR at 2.50mm:

1.97 %

CBR at 5.00mm:

2.20 %

CBR Value:

2.20 %

Checked By: NPJ

REMARKS:

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

DATE: 19.02.03

TEST REFERENCE: 10

CONTRACT: RAF St. Athan.

#### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	0.40								·,
(mm)	(divs)	(KN)	0.40								ł
0.00	0	0.00	_								ļ
0.25	31	0.10	_							/	~
0.50	36	0.11	0.35								
0.75	39	0.12	-								
1.00	44	0.14	_								- 1
1.25	47	0.14									1
1.50	51	0.16	0.30					/	_		
1.75	55	0.17	<b>」</b>								
2.00	59	0.18	<b>.</b>	•				•			Ī
2.25	61	0.19	0.25								İ
2.50	65	0.20	_				•				- 1
2.75	67	0.21									ŀ
3.00	72	0.22	0.20 -			$\mathcal{I}$					
3.25	75	0.23	₹ 0.20 <del> </del>			er.					
3.50	77	0.24	ا ق								
3.75	81	0.25	_		/						
4.00	83	0.25	0.15	/	<i>x</i>						
4.25	85	0.26	_								ļ
4.50	88	0.27	<u> </u>								l
4.75	90	0.28	.								
5.00	92	0.28	0.10 + 6								
5.25	94	0.29	] ]								
5.50	96	0.29	- 11								
5.75	99	0.30	0.05								
6.00	101	0.31	1 1								
6.25	105	0.32									
6.50	107	0.33	_								
6.75	109	0.33	0.00	4.00	200	3.00	4.00	5.00	6.00	7.00	8.0
7.00	112	0.34	0.00	1.00	2.00		4.00 tration (n		0.00	,.00	0.0
7.25	115	0.35	- ·			reile	auvii (ii	m**)			
7.50	118	0.36									
			0 1 5	. Fi t		ailtu	CDD	at 2.50m	m:	1.51	%
est Depth	: 0.30m		Soil Description	: Firm bro	wn very s	suty - avoneional		. ม. 2.วบท	ant.	1.31	/0
	'. To '		CLAY with occa		niets and	occasional	CRR	at 5.00m		1.42 9	<del></del>
lass of Spl	it Kings:		line to coarse gr	4 <b>461.</b>				. 4. 5.0011	•		- +
		21/02	-{				CBR	Value:		1.51	%
R Factor:	3.07	N/Div									

CONTRACT: RAF St. Athan.

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

DATE: 19.02.03

#### **CBR FIELD SHEET**

	PR READING	LOAD	0.60				
(mm)	(divs)	(KN)	0.00				
0.00	0	0.00	_				
0.25	30	0.09	_				
0.50	38	0.12	_				
0.75	43	0.13	0.50				
1.00	48	0.15					
1.25	55	0.17					
1.50	61	0.19	_				
1.75	69	0.21	_		4		
2.00	78	0.24	0.40 +	•		•	
2.25	86	0.26	_				
2.50	91	0.28	_		F		
2.75	100	0.31	] 🤿		<i>F</i>		
3.00	109	0.33	Load (kN/m2)	1	/		
3.25	117	0.36	돌 0.30				
3.50	126	0.39	ğ				
3.75	134	0.41	]				1
4.00	138	0.42					
4.25	142	0.44	200	<i>F</i>			
4.50	146	0.45	0.20				
4.75	149	0.46		<i>F</i>			
5.00	153	0.47	}	<i>F</i>			
5.25	157	0.48					
5.50	160	0.49	0.10 1	<i>^</i>			
5.75	164	0.50	] "   <i>f</i>				
6.00	168	0.52	1 1/				
6.25	172	0.53	7 <i>II</i>				
6.50	177	0.54	7 V				
6.75	181	0.56	0.00	<del></del>	<del></del>	<del>    </del>	
7.00	182	0.56	0,00	1.00 2.00 3		4.00 5.00 6.00	7.00 8.0
7.25	184	0.56			Penetra	ation (mm)	
7.50	185	0.57					
est Depth	: 0.30m		Soil Description	Soft to firm brown ver	y silty	CBR at 2.50mm:	2.11 %
				asional rootlets and occ	asional	CDD -4 5 00	2.25.0/
lass of Spli	t Rings:		fine to coarse g	ravel.		CBR at 5.00mm:	2.35 %
D.D. :		NI/ID!	-{			CBR Value:	2.35 %
R Factor:	3.07	N/Div	1			OIX Talue.	2.00 /6
			-1			Checked By: NPJ	
laisters C-	Noisture Content:						
loisture Co							
			<u> </u>				
loisture Co			.L				
				Ca	arried out in	accordance with BS1377: Part 9: DATE: 20.02.03	1990, Test 4.3

#### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	0.60								1
(mm)	(divs)	(KN)	0.60								
0.00	0	0.00	_								
0.25	22	0.07	_								
0.50	34	0.10	_				•				_
0.75	41	0.13	0.50								
1.00	46	0.14	_  -								
1.25	58	0.18	_								
1.50	63	0.19	_								1
1.75	68	0.21	-								
2.00	72	0.22	0.40			•			•		
2.25	76	0.23	_								
2.50	79	0.24					/	4			
2.75	83	0.25	- A								;
3.00	88 .	0.27	Ę								
3.25	92	0.28	Load (кМт2)				•				İ
3.50	96	0.29	[ [								[
3.75	100	0.31			_	_					
4.00	106	0.33	_								ŀ
4.25	112	0.34	0.20								
4.50	117	0.36	_	6							
4.75	123	0.38	-	1							
5.00	128	0.39	-	<i>J</i> -							l
5.25	134	0.41	-								
5.50	138	0.42	0.10	<i>f</i>							
5.75	142	0.44	-	,							}
6.00	147	0.45	-								1
6.25	151	0.46	-   /								- 1
6.50	154	0.47	V						1		
6.75	159	0.49	0.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.0
7.00	162	0.50	-				tration (n		-	-	
7.25	165	0.51	-					•			
7.50	167	0.51	<del> </del>			<u> </u>		<del></del>			
est Depth:	0.30m		Soil Description	n Soft to fi	rm brown	very silty	CBR	at 2.50m	m:	1.83	%
est nebu.	. 0.00111		CLAY with occ	asional re	otlets and	l occasional					
lass of Spli	t Rings:	··	fine to coarse g					at 5.00m	m:	1.97	%
<b>-</b>			]								
R Factor:	3.07	N/Div					CBR	Value:		1.97	%
			4				Char	had Dan Y	IDI		
1oisture Co	ntent:						Chec	ked By: N	AL)		
EN CARVO			<u> </u>								
EMARKS:											
						Carried out i	n accordar	ce with BS1	377: Part 9:	1990, Test 4	.3
ONTRACT	Γ: RAF St. A	than.					DAT	E: 20.02.	03		
·							Troop	PEFER	EMCE: I	2	. –

#### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	0.35	
(mm)	(diva)	(KN)	-	
0.00	0	0.00	-	
0.25	16	0.05	4	
0.50	19	0.06		·
0.75	22	0.07	0.30	/
1.00	25	0.08	1	
1.25	27	0.08	4	<i>f</i>
1.50	29	0.09	_	<i>[</i> *
1.75	30	0.09	0.25	<i>f</i>
2.00	· 32	0.10	]	· /
2.25	35	0.11	]	
2.50	39	0.12		/
2.75	40	0.12	<u></u>	
3.00	42	0.13	Load (kN/m2)	<i>[</i>
3.25	45	0.14	8	<i>[</i>
3.50	49	0.15		/
3.75	51	0.16	0.15	
4.00	55	0.17	]	<i>/</i>
4.25	59	0.18		-
4.50	63	0.19	]   /	
4.75	66	0.20	0.10	
5.00	68	0.21		İ
5.25	72	0.22		
5.50	74	0.23		
5.75	77	0.24	0.05 + /	
6.00	80	0.25	]	
6.25	85	0.26	] //	
6.50	88	0.27	] /	
6.75	91	0.28	0.00	<del></del>
7.00	94	0.29	0.00 1.00 2.00 3.0	
7.25	96	0.29	]	Penetration (mm)
7.50	99	0.30		
est Depth:	0.30m		Soil Description Soft to firm brown very	silty CBR at 2.50mm: 0.90 %
lass of Spli	Rings:		CLAY with occasional rootlets and occasione to coarse gravel.	CBR at 5.00mm: 1.05 %
	_			
R Factor:	3.07	N/Div		CBR Value: 1.05 %
loisture Co	ntent:		1	Checked By: NPJ
EMARKS:			<u></u>	
			f 'ore:	ied out in accordance with BS1377- Part 0: 1000. Test 4:2
ONTRACT	: RAF St. A	than	Carr	ied out in accordance with BS1377: Part 9: 1990, Test 4.3  DATE: 20.02.03

### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	0.45		·····			<u>.</u>			1
(mm)	(divs)	(KN)							•		
0.00	0	0.00	_								
0.25	12	0.04									1
0.50	17	0.05	0.40								_
0.75	22	0.07	_								
1.00	27	0.08	1	•							
1.25	31	0.10	0.35								
1.50	38	0.12	_								
1.75	44	0.14									
2.00	47	0.14	0.30	•				. /	4		ļ
2.25	50	0.15									
2.50	53	0.16									
2.75	57	0.17	୍ଥି 0.25								
3.00	62 ·	0.19	0.25 t								
3.25	65	0.20	] <u>\$</u>								
3.50	68	0.21	0.20								Ĭ
3.75	71	0.22									
4.00	75	0.23				<i>F</i>					
4.25	78	0.24	<b>□</b>		/	<i>*</i>					
4.50	83	0.25	0,15								
4.75	85	0.26	]								- [
5.00	89	0.27	]	,	<i>†</i>						
5.25	95	0.29	0.10	- F							
5.50	99	0.30	1								- 1
5.75	104	0.32	]								
6.00	106	0.33	0.05	<i>F</i>							
6.25	109	0.33	۱, ا	<del>/</del>							
6.50	112	0.34	1 /								
6.75	115	0.35	0.00	<del>+</del>	<del></del>		<del>1</del>	<del> </del>	<del>  </del>		
7.00	119	0.37	] 0.∞	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.0
7.25	123	0.38				Pen	etration (m	m)			
7.50	126	0.39	Ī		·					<u>.</u>	
	<u> </u>										
est Depth	: 0.30m		Soil Descripti	Soil Description Soft to firm brown very silt CLAY with occasional rootlets and occasion					ım:	1.23 %	%
	it Rings:		fine to coarse gravel.  CBR at 5.00mm: 1.37 %						<b>%</b>		
lass of Spli			CBR Value:				1.37 %				
Aass of Spli	3.07	N/Div					102.				
lass of Spli R Factor:	3.07	N/Div									
		N/Div	-					ked By: 1	NPJ		

CONTRACT: RAF St. Athan.

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

DATE: 20.02.03

#### **CBR FIELD SHEET**

PENETRATION	PR READING	LOAD	0.30	··							1
(mm)	(divs)	(KN)	_					•	•		
0.00	0	0.00	_					-			
0.25	15	0.05	_								
0.50	18	0.06	_				•				-
0.75	20	0.06	0.25								ļ
1.00	22	0.07								<i>f</i>	
1.25	25	0.08	_ i							<i>F</i>	
1.50	26	0.08								_	
1.75	28	0.09							<i>F</i>		- 1
2.00	30	0.09	0.20		•				• /		
2.25	33	0.10									j
2.50	35	0.11						كمير	~		ľ
2.75	37	0.11	] 8				-				
3.00	40 ·	0.12	Load (kN/m2)					-	•		
3.25	43	0.13	호 0.15 <del>-</del>			/					
3.50	46	0.14	_  B								
3.75	48	0.15	_								
4.00	50	0.15									
4.25	52	0.16									i
4.50	53	0.16	0.10								ŀ
4.75	55	0.17		_							
5.00	57	0.17	_								
5.25	58	0.18	_								
5.50	60	0.18	0.05 - 2								
5.75	61	0.19	」								
6.00	63	0.19	]								ł
6.25	68	0.21	] //								1
6.50	71	0.22	] /								
6.75	75	0.23	0.00	<del></del>		+		1		<del></del>	
7.00	79	0.24	0.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.0
7.25	82	0.25				Penet	iration (π	m)			
7.50	85	0.26								<u></u> .	
<u> </u>	<u> </u>										
est Depth	: 0.30m		Soil Description Soft to firm grey brown CBR at 2.50mm: 0.81 %								
	it Rings:		fine to coarse g					at 5.00n	ım:	0.88 9	<b>%</b>
lass of Spli			CBR Value: 0.88 %						7		
lass of Spli R Factor:	3.07	N/Div					CDN	· · · · · · · · · · · · · · · · · · ·		0.88	70
		N/Div						ked By:	NPJ	U.88 1	/o 

CONTRACT: RAF St. Athan.

Carried out in accordance with BS1377: Part 9: 1990, Test 4.3

DATE: 20.02.03

Samj	ples			Clas	sific	ation			l	ngth		Other Tests
Hole	Depth	Type	Description	<425	Prep W <sub>L</sub>	w <sub>P</sub>	Water	γ <sub>b</sub> Mg/m	Test	σ <sub>3</sub> kPa	C kPa	
CGCTP5	0.40	В	Brown gravelly CLAY									w% / Dry Density Particle Size analysis
CGCTP6	1.50	В	Brown CLAY									Particle Size analysis
CGCTP7	0.40	В	Brown gravelly CLAY rare cobbles	with 72	425µ 55	Sieve 26	13					Particle Size analysis
TP1	0.50	В	Brown CLAY									Particle Size analysis
тр4	0.30	В	Brown CLAY with rare rootlets									Particle Size analysis
TP5	0.20	В	Brown CLAY	27	Natur 62	al 35	50					w% / Dry Density Particle Size analysis
TP7	0.30	В	Brown gravelly clay									Particle Size analysis
тр8	0.20	В	Brown slightly grave	lly								Particle Size analysis
тр9	0.10	В	Brown CLAY	26	Natur 66	al 40	50					w% / Dry Density Particle Size analysis
TP11	0.30	В	Brown CLAY with Muds	tone								w% / Dry Density Particle Size analysis
тР13	0.40	В	Brown CLAY	31	Natur 61	al 30	40					w% / Dry Density Particle Size analysis
TP16	0.40	В	Brown gravelly CLAY									₩% / Dry Density
тР17	0.30	В	Brown gravelly CLAY									Particle Size analysis
TP19	0.30	В										Particle Size analysis
TP21	1.00	В	Brown CLAY									w% / Dry Density Particle Size analysis
ТР24	0.40	В	Brown CLAY				:					Particle Size analysis
ТР25	0.60	В	Brown CLAY	27	Natur 52	al 25	39					พ% / Dry Density Particle Size analysis
тр26	0.50	В	Orange brown CLAY									Particle Size analysis
TP27	0.50	В	Brown sandy gravelly	CLAY								w% / Dry Density Particle Size analysis
тр30	2.00	В	*	30	Natur 50	al 20	31					w% / Dry Density Particle Size analysis
тр31	0.40	В	Brown grey gravelly (	CLAY								Particle Size analysis
Rema	rks	! <u>.</u>	ļ	1								Form 10/2
Labo	ratory	′ - Res	sults Summary	Project RAF S	t Athe	ens					Co	ntract R3058

Laboratory - Results Summary

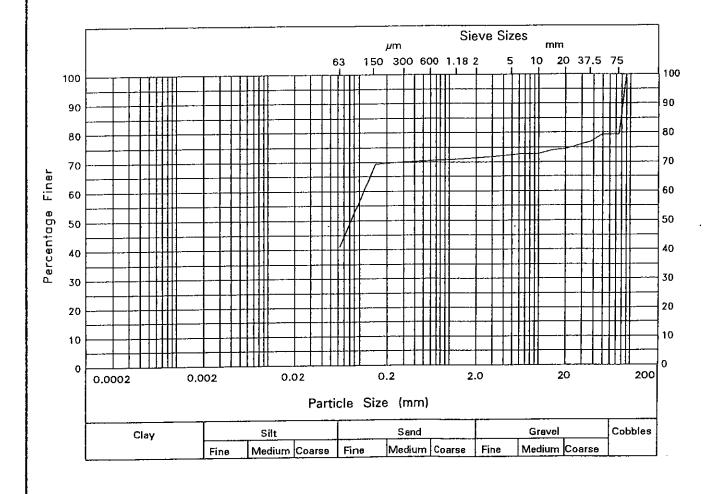
Project
RAF St Athens
Apex Drilling Services

Sheet

L1/1

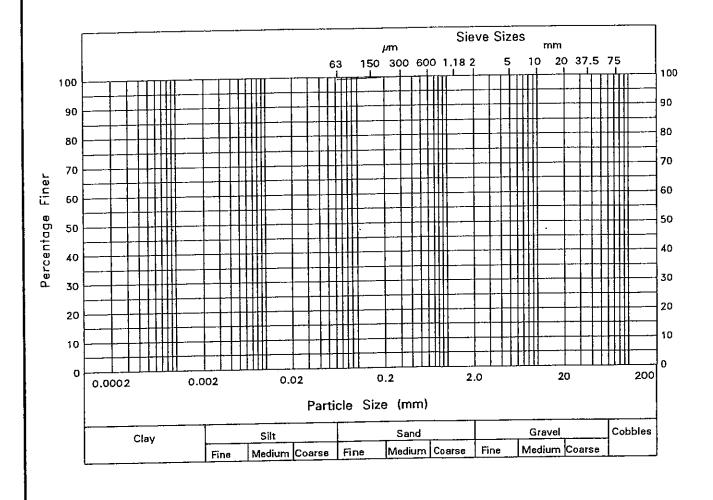
Sam	Samples				Classification Strengt			ngth		Other Tests			
Hole	Depth	Туре	Description		<425   <sub>P</sub>	Prep W <sub>L</sub>	w <sub>P</sub>	Water %	γ <sub>b 3</sub> Mg/m	Test	σ <sub>3</sub> kPa	C kPa	
тР34	1.00	В	Brown grey CLAY										Particle Size analysis
тр37	0.80	В	Brown CLAY								:		Particle Size analysis
TP38	0.40	В	Brown CLAY										Particle Size analysis
тР40	0.40	8	Brown CLAY		33	Natur 71	al 38	38					w% / Dry Density Particle Size analysis
тР42	0.40	В	Brown gravelly CLAY	,						:			Particle Size analysis
ТР44	0.30	В	Brown CLAY		25	Natur 53	a ( 28						w% / Dry Density Particle Size analysis
TP45	0.20	В	Brown CLAY										Particle Size analysis
					:							i	
													į
									}				
				į									
Rema	ırks		<u> </u>						l				
		, D.	audta Cummani	Project								Co	ntract
	Laboratory - Results Summary R			t Athe Drilli		vices				She	R3058 eet L1/2		

Soil Mechanics



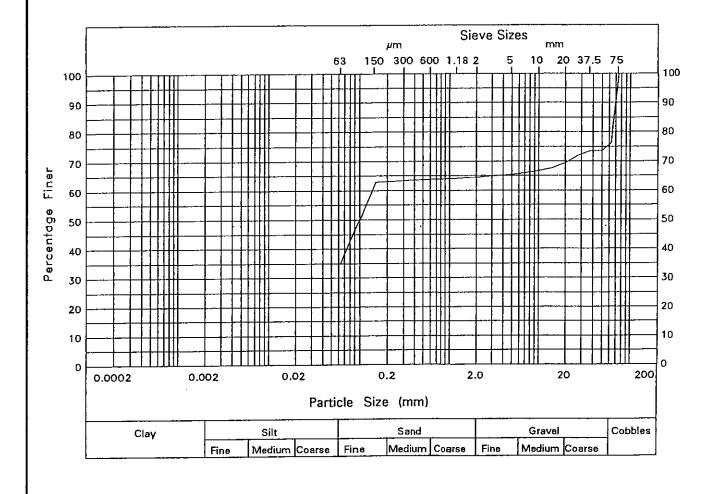
Particle Size	% Passing	Particle Size	% Passing
90 mm	100	2 mn	71
75 mm	79	1.18 mm	71
63 mm	79	600 µm	71
50 mm	79	425 μm	70
37.5 mm	77	300 μm	70
28 mm	76	212 µm	70
20 mm	74	150 μm	69
14 mm	74	63 µm	41
10 mm	73		
6.3 mm	73		i
5 mm	72		
3.35 mm	72		
Hole	Description		
CGCTP5	Brown gravell	y CLAY	
Depth			
0.40	_		
Туре			
В	<u> </u>		
Test Performed	Uniformity	Coefficient not ap	oplicable.
<u>Wet</u>	J		<del></del>

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/1



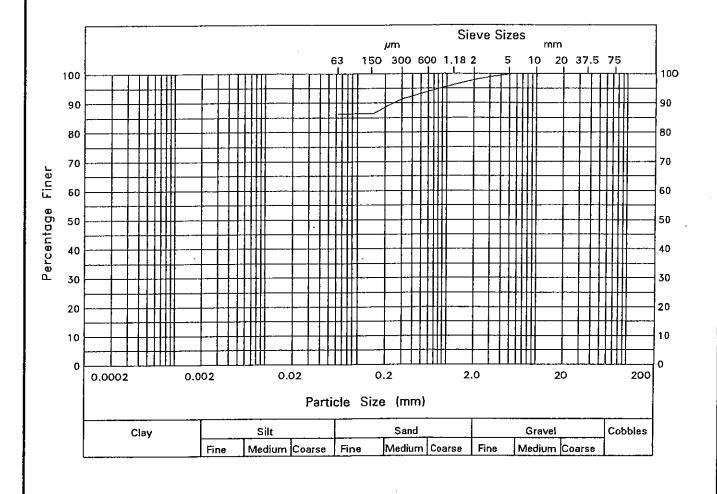
Particle Size	% Passing	Particle Size	% Passing	
3.35 mm	100			
2 mm	100	İ		
1.18 mm	100			
600 µm	100			
425 μm	100			
300 μm	100			
212 µm	100			
150 µm	100	-		
63 μm	99			
Hole	Description			
CGCTP6	Brown CLAY			
Depth				
1.50				
Туре	1			
В			<u> </u>	
Test Performed	Uniformity Coefficient not applicable.			
Wet	<u> </u>			

	<u></u>	Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Orilling Services	Sheet L2/2



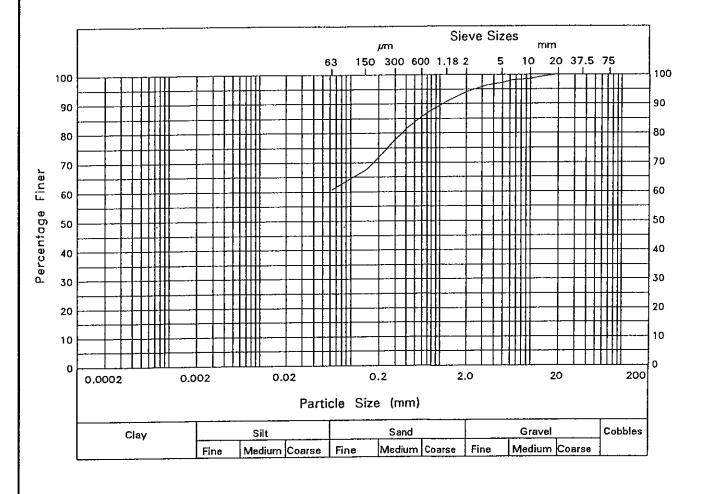
<del></del>	<del></del>	· .	
Perticle Size	% Passing	Particle Size	% Passing
75 mm	100	1.18 mm	64
63 mm	76	600 μm	64
50 mm	73	425 μm	64
37.5 mm	73	300 μm	63
28 mm	72	212 µm	63
20 mm	69	150 μm	63
14 mm	68	63 μm	35
10 mm	67		
6.3 mm	66		
5 mm	65		
3.35 mm	65		
2 mm	64		
Hole	Description		
CGCTP7	Brown gravelly CLAY with rare cobbles		
Depth			
0.40	]		
Туре			
В	Į		
Test Performed	Uniformity Coefficient not applicable.		
Wet	<u> </u>		<del></del>

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens Apex Drilling Services	Contract R3058
Soil Mechanics		Sheet L2/3



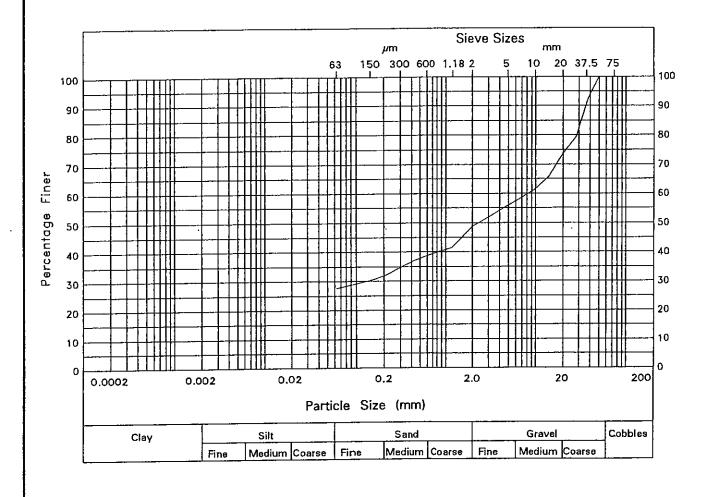
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	100	1	
3.35 mm	99		
2 mm	98		j
1.18 mm	96		
600 μm	94		
425 μm	93		
300 μm	91		
212 μm	89		
150 μm	86		
63 μm	86		
Hole	Description		1
TP4	Brown CLAY wi	th rare rootlets	
Depth			
0.30			
Туре			
В			
Test Performed	Uniformity	Coefficient not ap	plicable.
Wet			

<u></u>		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
<b>f</b> Soil Mechanics	Apex Drilling Services	Sheet L2/5



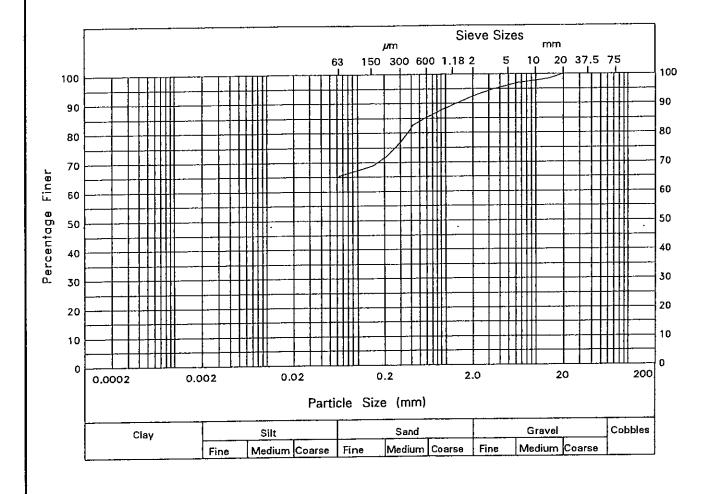
Particle Size	% Passing	Particle Size	% Passing
20 mm	100	150 µm	68
14 mm	99	63 μm	61
10 mm	98	}	1
6.3 mm	98		
5 mm	97		
3.35 mm	96		1
2 mm	94		1
1.18 mm	91		
600 μm	86		
425 μm	82		
300 μm	78		
212 μm	73		
Hole	Description		
TP <u>5</u>	Brown CLAY		
Depth			
0.20	_		
Туре			
В	<u> </u>		
Test Performed	Uniformity	Coefficient not ap	oplicable.
Wet	_		

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/6



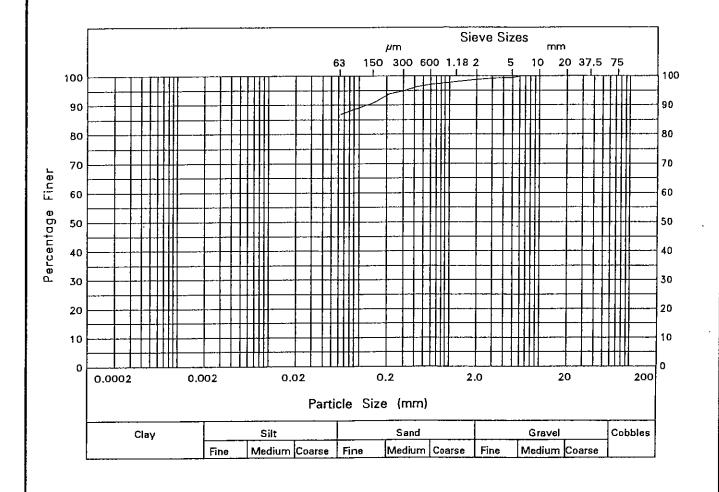
Particle Size	% Passing	Particle Size	% Passing
50 mm	100	425 μm	37
37.5 mm	92	300 µm	35
28 mm	79	212 μm	32
20 mm	74	150 μm ·	30
14 mm	66	63 μm	28
10 mm	62	İ	
6.3 mm	58		
5 mm	56		1
3.35 mm	53		
2 mm	49	ì	
1.18 mm	42		1
600 μm	39		1
Hole	Description		
TP7	Brown gravell	y clay	
Depth			
0.30			
Туре			
В			· · · · · · · · · · · · · · · · · ·
Test Performed	Uniformity	Coefficient not a	oplicable.
Wet			•

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/7



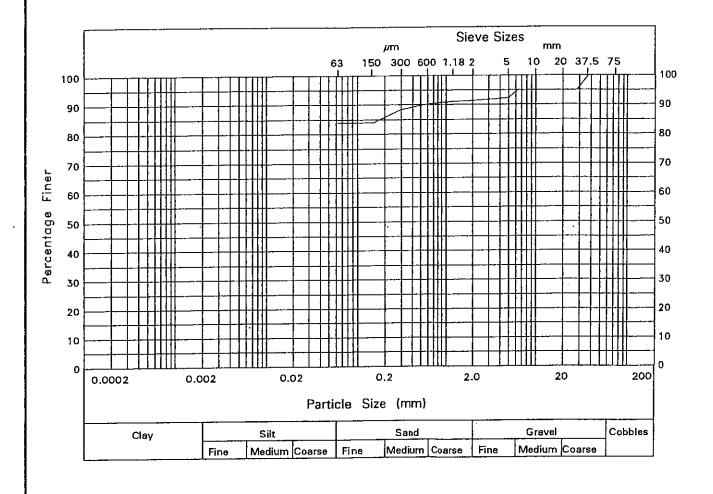
Particle Size	% Passing	Particle Size	% Passing
20 mm	100	150 µm	69
14 mm	98	63 μm	65
10 mm	98		
6.3 mm	97		
5 mm	96		
3.35 mm	95		
2 mm	92		
1.18 mm	89	1	
600 μm	85	1	
425 μm	83		
300 µm	77	-	i
212 µm	72		
Hole	Description		
TP8	Brown slightl	y gravelly CLAY	
Depth			
0,20			
Туре			
В			
Test Performed	Uniformity	Coefficient not a	oplicable.
Wet	1		

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/8



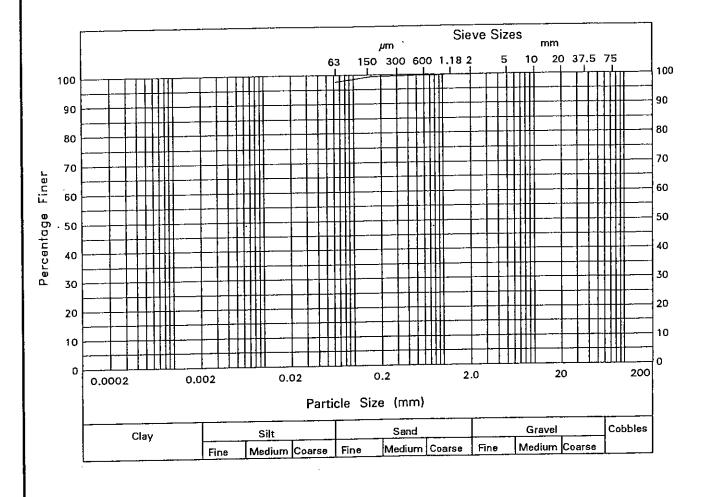
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	99		
3.35 mm	99		
2 mm	99		
1.18 mm	98		
600 μm	97		
425 μm	96		
300 μm	95		
212 μm	94		
150 µm	91		
63 μm	87		
Hole	Description		<u></u> .
TP9	Brown CLAY		
Depth			-
0.10			
Туре			
В			
Test Performed	Uniformity	Coefficient not ap	oplicable.
Wet	<u> </u>		

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/9



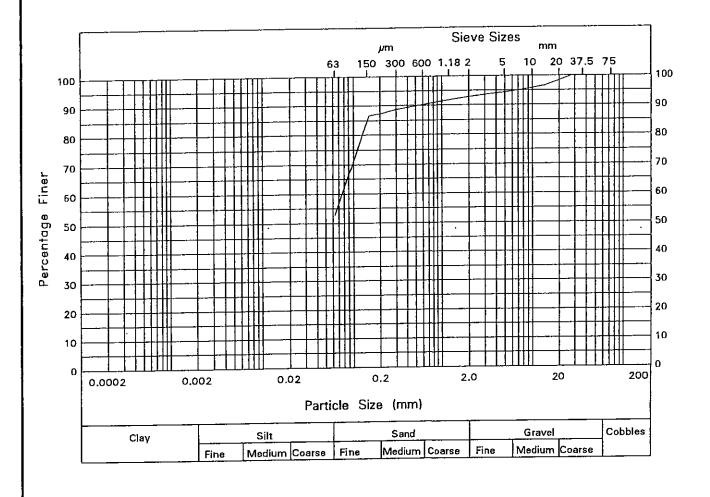
Particle Size	% Passing	Particle Size	% Passing
37.5 mm	100	300 µm	88
28 mm	95	212 µm	86
20 mm	95	150 µm	84
14 mm	95	63 μm	84
10 mm	95		
6.3 mm	95		
5 mm	92		1
3.35 mm	92		
2 mm	91		
1.18 mm	91		
600 μm	90		
425 μm	89		
Hole	Description		
TP11	Brown CLAY wi	th Mudstone	
Depth			
0.30			
Туре			
В	1		
Test Performed	Uniformity	Uniformity Coefficient not applicable.	
We <u>t</u>			

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/10



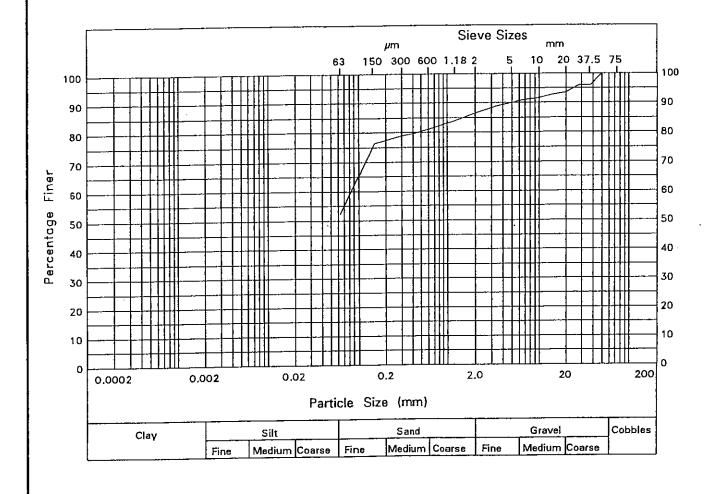
Particle Size	% Passing	Particle Size	% Passing
5 mm	100		
3.35 mm	100		
2 mm	100		
1.18 mm	100		
600 μm	100		
425 μm	100	1	
300 µm	99		
212 μm	99		
150 μm	99	j	
63 μm	98		ļ
Tiele	Description	<u></u>	<u>, L ,</u> .
Hole	Description		
TP13	Brown CLAY		
Depth			
0.40	-		
Туре			
В			
Test Performed	Uniformity	Uniformity Coefficient not applicable.	
Wet	l	<u></u> _	

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/11



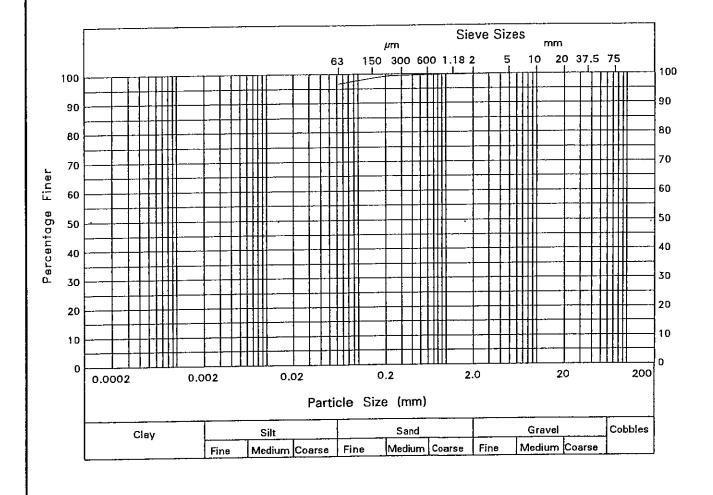
Particle Size	% Passing	Particle Size	% Passing
28 mm	100	212 μm	87
20 mm	98	150 µm	87
14 mm	97	63 µm	53
10 mm	96		
6.3 mm	95		
5 mm .	94		
3.35 mm	94		
2 mm	93		1
1.18 mm	92		
600 µm	90	[	
425 µm	89		
300 μm	89		
Hole	Description		
TP17	Brown graveli	y CLAY	
Depth			
0.30			
Туре			
В	<u> </u>		
Test Performed	Uniformity	Coefficient not a	pplicable.
Wet	<u></u>		

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/12



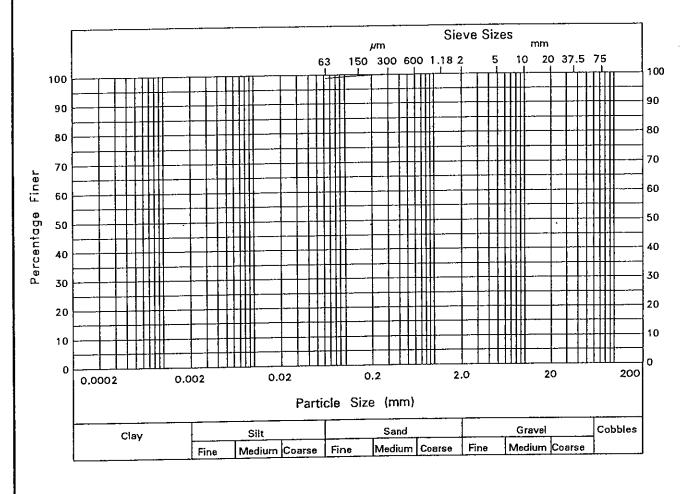
Particle Size	% Passing	Particle Size	% Passing
50 mm	100	425 для	80
37.5 mm	96	300 µm	79
28 mm	96	212 µm	78
20 mm	93	150 µm	76
14 mm	93	63 µm	52
10 mm	92		
6.3 mm	91	}	
5 mm	90		
3.35 mm	89		Ì
2 mm	87		
1.18 mm	84		
600 μm	81		
Hole			
TP19			
Depth			
0,30	_		
Туре			
В			
Test Performed	Uniformity	Coefficient not a	pplicable.
Wet	<u> </u>		

1		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/13



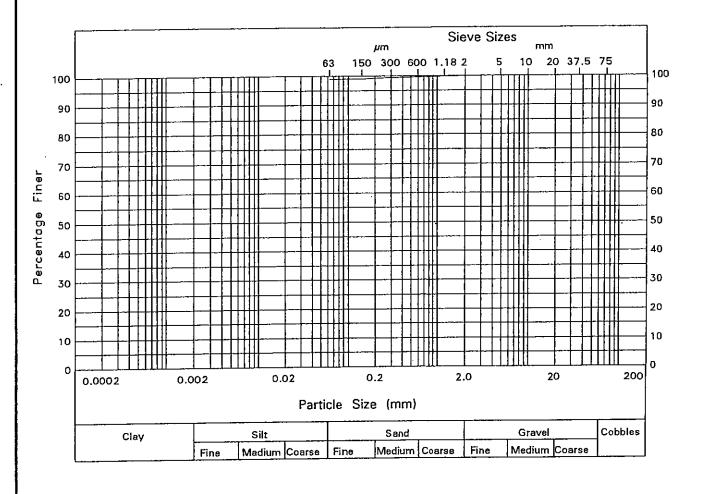
Particle Size	% Passing	Particle Size	% Passing
5 mm	100		
3.35 mm	100		
2 mm	100		
1.18 mm	100		
600 µm	100		
425 μm	100		
300 μm	99		
212 µm	99		1
150 µm	99		
63 µm	97		
Hole	Description		
TP1	Brown CLAY		
Depth			
0.50	_		
Туре			
В			
Test Performed	Uniformity	Uniformity Coefficient not applicable.	
Wet		•	•

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/4



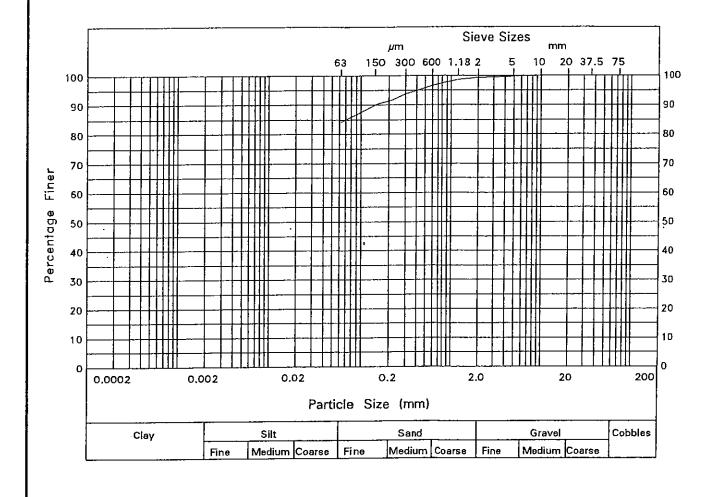
Particle Size	% Passing	Particle Size	% Passing
3.35 mm	100		
2 mm	100		
1.18 mm	100		
600 μm	100	]	
425 μm	100		
300 µт	100		
212 µm	100		1
150 μm	100		
63 μm	99		
Hole	Description		
тР21	Brown CLAY		
Depth			
1.00	_		
Туре			
В	<del> </del>		
Test Performed	Uniformity	Uniformity Coefficient not applicable.	
Wet			

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/14



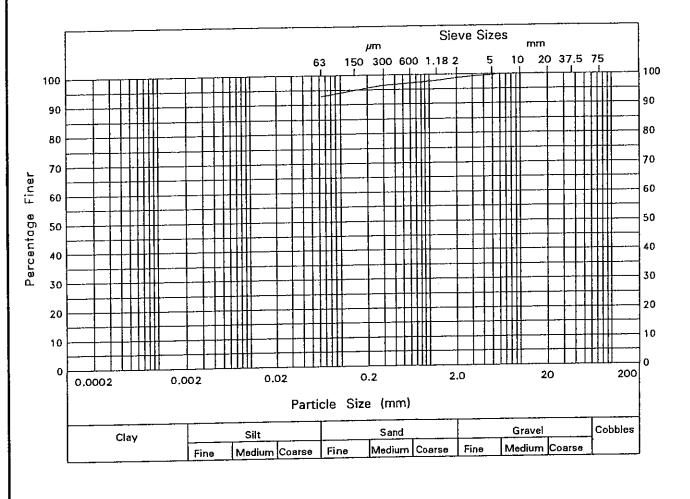
Particle Size	% Passing	Particle Size	% Passing
5 mm	100		
3.35 mm	100		•
2 mm	100		
1.18 mm	100		,
600 µm	100		
425 µm	99		
300 µm	99		
212 µm	99		
150 µm	99		
63 μm	99		
Hole	Description		
TP24	Brown CLAY		
Depth			
0.40			
Туре			
В			
Test Performed	Uniformity	Coefficient not a	oplicable.
Wet		•	-

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/15



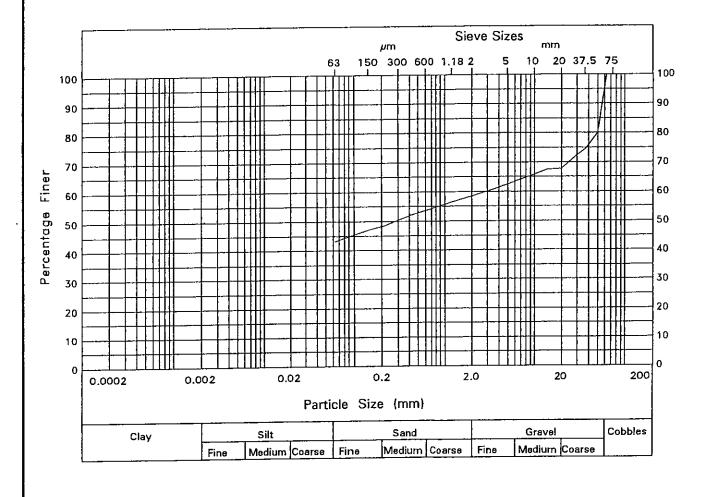
Particle Size	% Passing	Particle Size	% Passing
10 mm	100		
6.3 mm	100		
5 mm	100	}	
3.35 mm	99		
2 mm	99		l"
1.18 mm	99		
600 μm	97		
425 μm	95		
300 µm	94		
212 µm	92		İ
150 µm	90		
63 μm	84		
Hole	Description		
TP25	Brown CLAY		
Depth			
0.60			
Туре			
B		<del> </del>	
Test Performed	Uniformity Coefficient not applicable.		oplicable.
<u>Wet</u>			

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/16



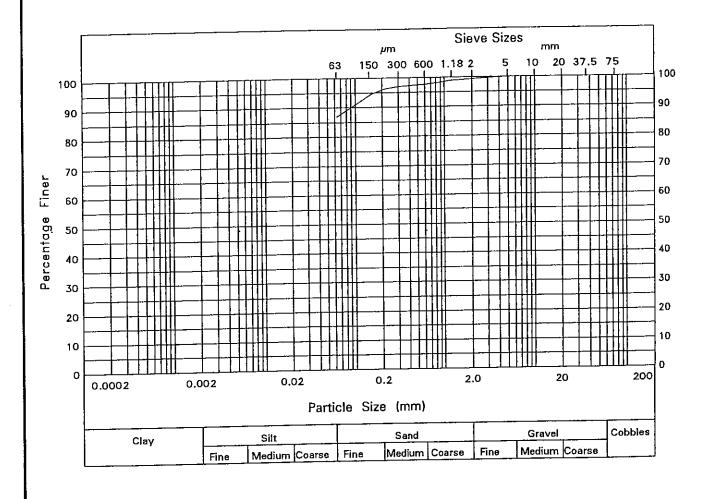
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	100		
3.35 mm	99		
2 mm	99		
1.18 mm	98		
600 μm	97		
425 μm	97		
300 μm	96		
212 μm	96		
150 µm	95		
63 μm	93		
Hole	Description	<u> </u>	
TP26	Orange brown	CLAY	
Depth			
0.50	_		
Туре			
В		<del></del>	
Test Performed	Uniformity	Uniformity Coefficient not applicable.	
Wet			

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/17



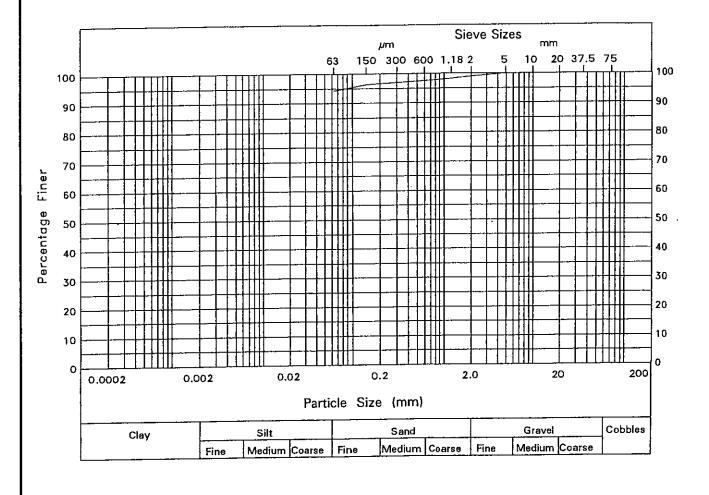
Particle Size	% Passing	Particle Size	% Passing
63 mm	100	600 µm	54
50 mm	80	425 µm	52
37.5 mm	75	300 µm	50
28 mm	72	212 µm	48
20 mm	68	150 μm	47
14 mm	67	63 μm	43
10 mm	66		1
6.3 mm	64		
5 mm	62		
3.35 mm	61		
2 mm	58	-	
1.18 mm	56		
Hole	Description		
TP27	Brown sandy g	ravelly CLAY	
Depth			
0.50			
Туре			
-Jr- B			
Test Performed	Uniformity	Coefficient not a	pplicable.
Wet			

			Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3	3058
Soil Mechanics	Apex Drilling Services	Sheet	2/18



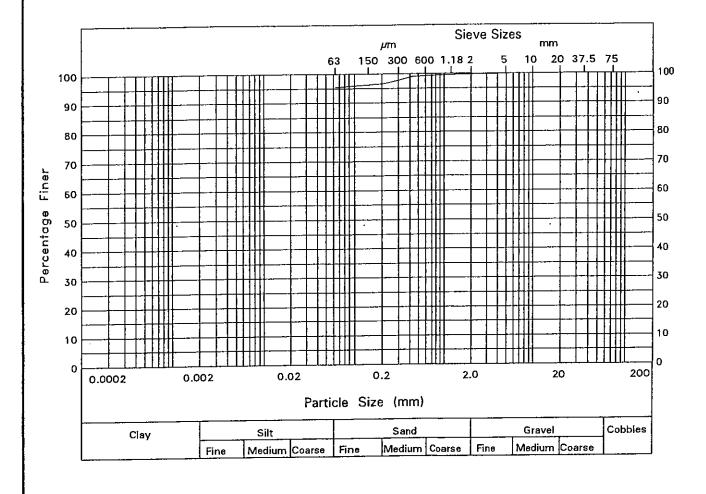
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	100		ŀ
3.35 mm	100		1
2 mm	99		
1.18 mm	99		
600 μm	98		
425 µm	97		
300 μm	97		
212 µm	96		
150 μm	94		
63 μm	87		
Hole	Description	_	<u> </u>
TP30	*		
Depth			
2,00	_		
Туре			
B			
Test Performed	Uniformity	Uniformity Coefficient not applicable.	
Wet	1		

· •			Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens Apex Drilling Services	Contract Sheet	R3058
Soil Mechanics			



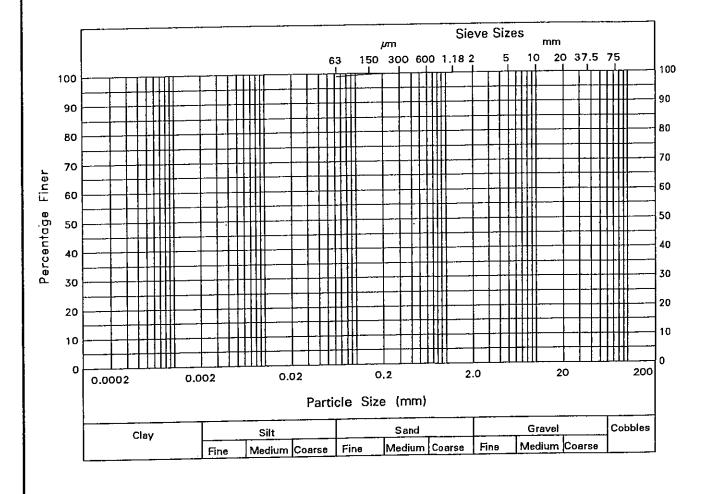
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	100		1
3.35 mm	100		
2 mm	99		
1.18 mm	98	1	
600 μm	98		
425 µm	97		
300 μm	97		
212 µm	97		
150 µm	96		
63 μm	94		
Hole	Description		<u> </u>
TP31	Brown grey gr	avelly CLAY	
Depth			
0.40	_		
Туре			
В		<u> </u>	
Test Performed	Uniformity	Coefficient not a	pplicable.
Wet	<u></u>		

ì		F0III 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/20



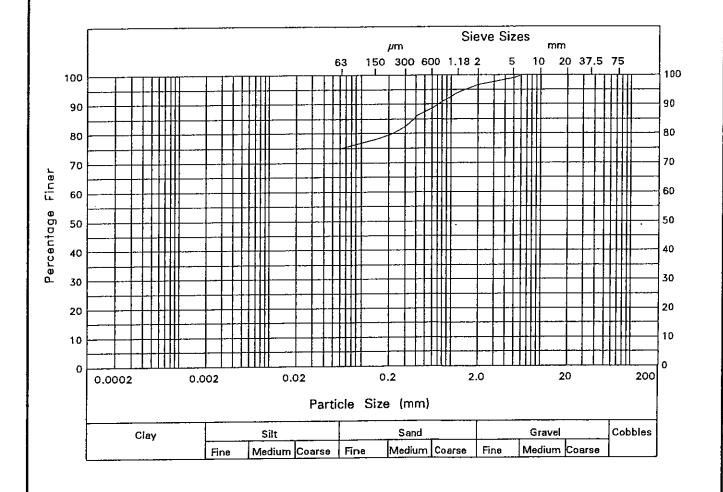
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	100		
3.35 mm	100		
2 mm	100		
1.18 mm	100		
600 µm	99		
425 μm	99		
300 μm	98		
212 <i>µ</i> m	97		
150 μm	96		
63 μm	95		
Hole	Description	<u></u>	<u> </u>
TP34	Brown grey CL	AY	
Depth			
1.00			
Туре			
В			
Test Performed	Uniformity Coefficient not applicable.		
Wet			

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/21



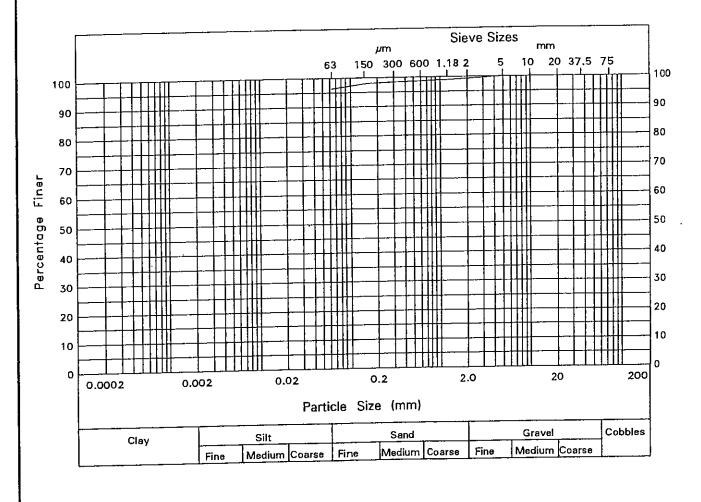
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	100		
3.35 mm	100		
2 mm	100		
1,18 mm	100		
600 μm	100		
425 μm	100		
300 μm	100		
212 μm	100		
- 150 μm	100		1
63 μm	99		
Hole	Description		<u> </u>
TP37	Brown CLAY		
Depth			
0.80			
Type			
В			
Test Performed	Uniformity	Coefficient not a	pplicable.
Wet	<u> </u>		

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/22



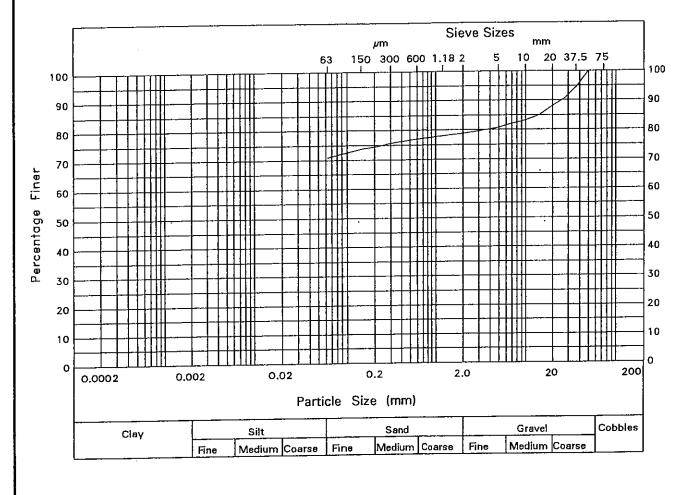
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	99		İ
3.35 mm	98		
2 mm	97		
1.18 mm	94		
600 µm	89		
425 μm	86		
300 μm	82		
212 µm	80	ĺ	
150 µm	78		
63 μm	75		
Hole	Description		<u>.l</u>
TP38	Brown CLAY		
Depth			
0.40			
Туре			
B			
Test Performed	Uniformity	Coefficient not ap	oplicable.

}		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/23



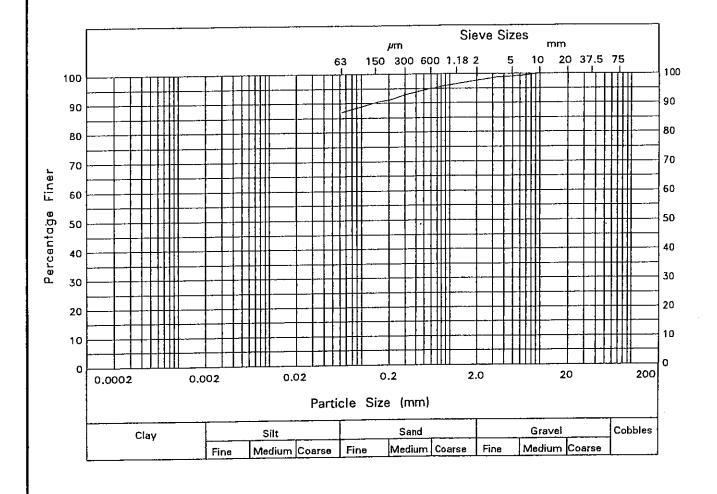
Particle Size	% Passing	Particle Size	% Passing
5 mm	100		
3.35 mm	100	ì	
2 mm	99	ł	1
1.18 mm	99		
600 μm	99	-	
425 µm	98		
300 μm	98		
212 μm	98		
150 μm	98		
63 μm	96		1
Hole	Description		<u> </u>
TP40	Brown CLAY		
Depth			
0.40			
Туре			
В			
Test Performed	Uniformity	Coefficient not a	pplicable.
Wet			

			Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract	R3058
Soil Mechanics	Apex Drilling Services	Sheet	L2/24



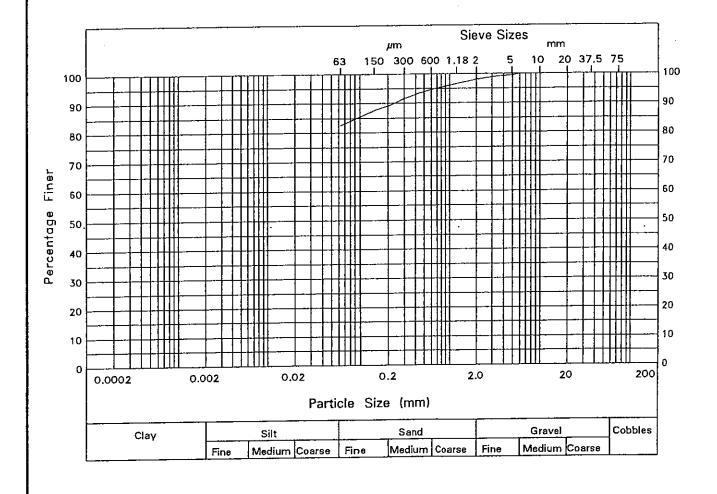
Particle Size	% Passing	Particle Size	% Passing
50 mm	100	425 μm	76
37.5 mm	95	300 µm	76
28 mm	91	212 µm	<b>7</b> 5
20 mm	88	150 для	74
14 mm	85	63 μm	71
10 mm	83		
6.3 mm	82		
5 mm	81		
3,35 mm	80	1	
2 mm	79		
1.18 mm	78		
600 μm	77		
Hole	Description		
TP42	Brown gravell	y CLAY	
Depth			
0.40	_]		
Туре			
8			
Test Performed	Uniformity	Uniformity Coefficient not applicable.	
Wet			

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/25



Particle Size	% Passing	Particle Size	% Passing
10 mm	100		
6.3 mm	99		
5 mm	99	j	}
3.35 mm	99		
2 mm	98		
1.18 mm	96		
600 µm	95	į	
425 µm	94	ļ	
300 μm	93		Ĭ
212 µm	91		
150 μm	90		
63 μm	87		
Hole	Description		
TP44	Brown CLAY		
Depth			
0.30			
Туре			
В			
Test Performed	Uniformity	Coefficient not a	pplicable.
Wet			

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
<b>(D)</b> Soil Mechanics	Apex Drilling Services	Sheet L2/26

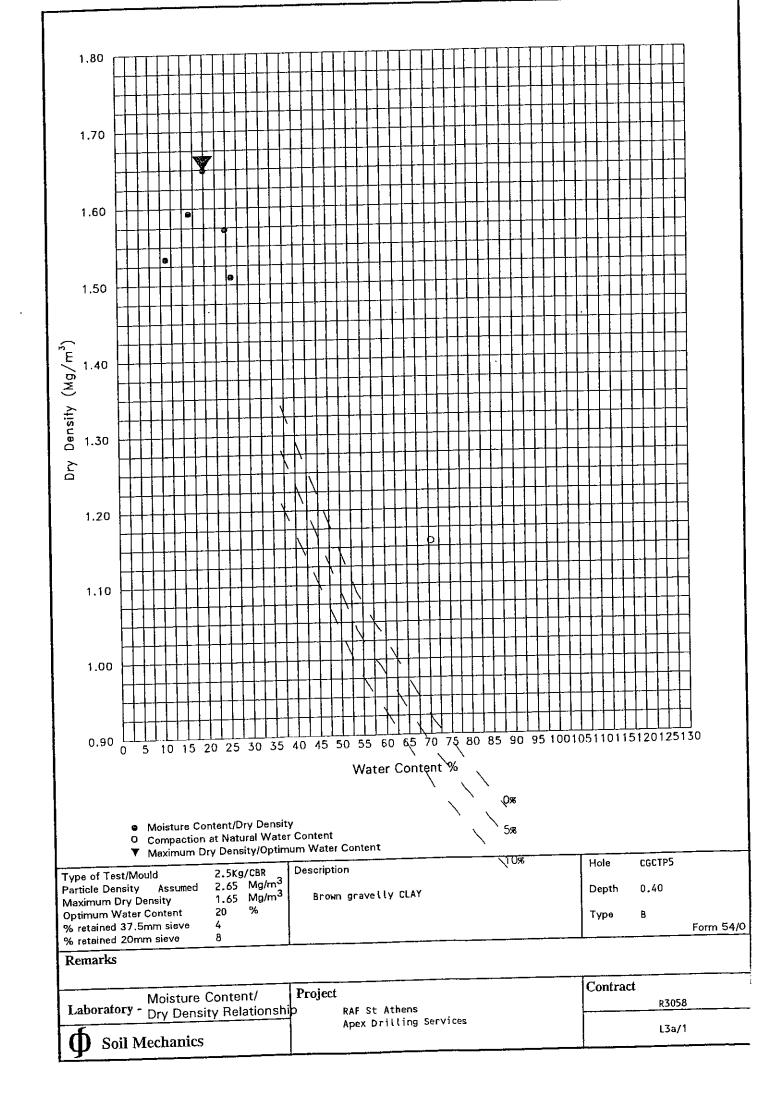


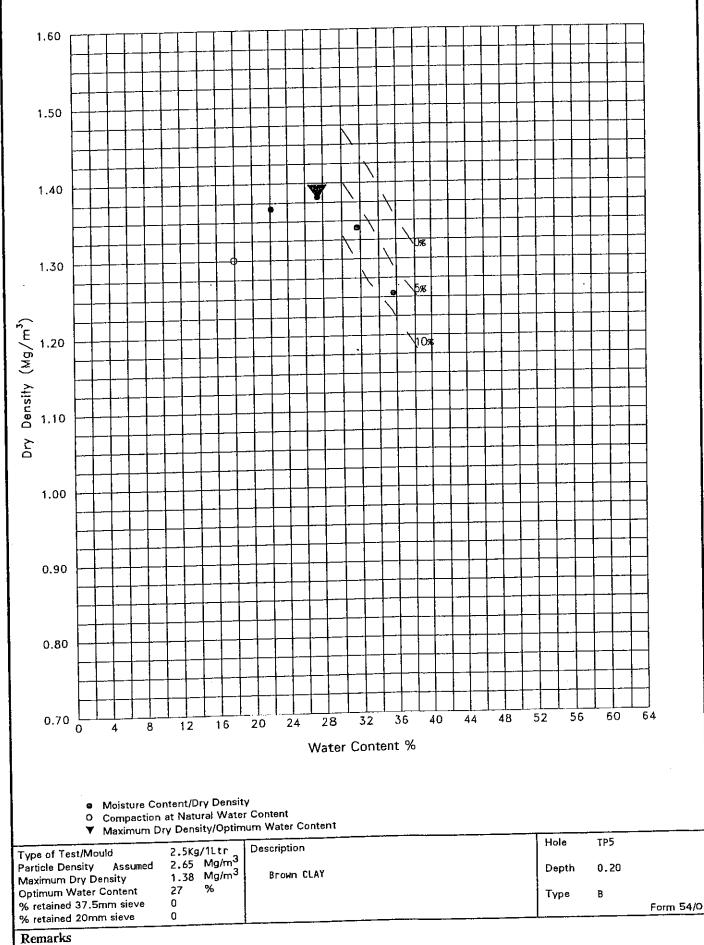
Particle Size	% Passing	Particle Size	% Passing
6.3 mm	100		
5 mm	99		
3.35 mm	99		
2 mm	98		
1.18 mm	96		
600 µm	95		
425 μm	93		
300 μm	92		
212 µm	89		
150 μm	88	[	
63 μm	83		
Hole	Description	<u> </u>	<u> </u>
TP45	Brown CLAY		
Depth			
0.20	J		
Туре	]		
В			
Test Performed	Uniformity	Coefficient not a	oplicable.
Wet			

		Form 25/4
Laboratory - Particle Size Plot	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	Sheet L2/27

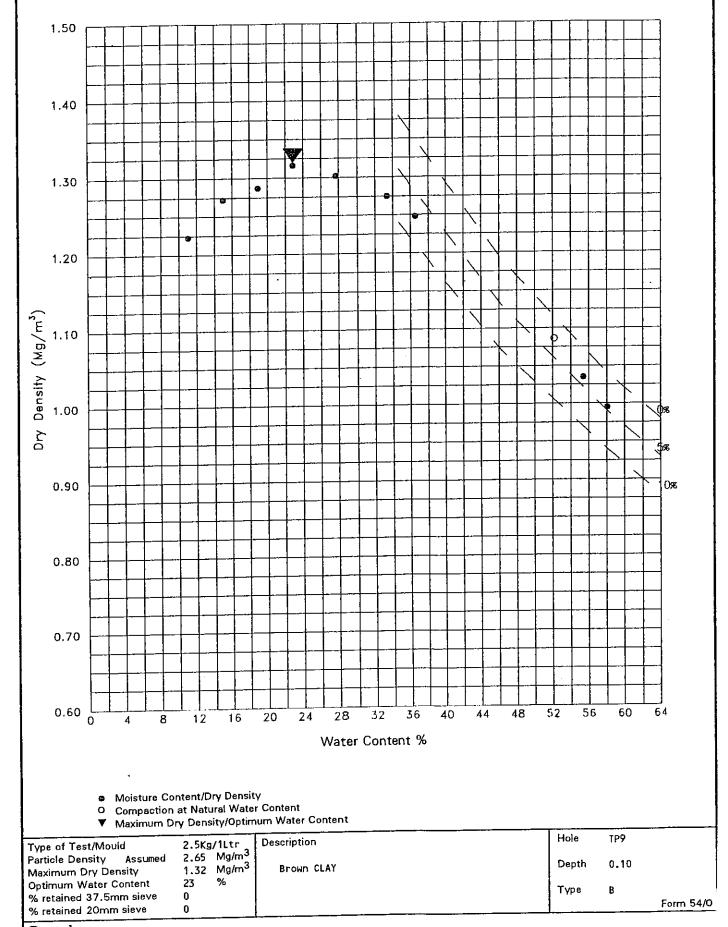
Samples			CBR				Compaction								
Hole	Depth	Түре	Description	Тор	Base	Top w%	Base w%	Surch kg.	Nat w%	γ <sub>b 3</sub> Mg/m	Туре	Opt w%	γ <sub>d</sub> Max	Mg/m <sup>3</sup> At Nat w	$ ho_{\mathtt{S}}$
CGCTP5	0.40	В	Brown gravelly CLAY								2.5kg	20	1.65	:	2.65
TP5	0.20	В	Brown CLAY						50		2.5kg	27	1.38		2.65
TP9	0.10	В	Brown CLAY	i					50		2.5kg	23	1.32		2.65
TP11	0.30	В	Brown CLAY with Mudstone								2.5kg	24	1.54		2.65
TP13	0.40	В	Brown CLAY						40		2.5kg	25	1.42		2,65
TP16	0.40	В	Brown gravelly CLAY								2.5kg	29	1.33		2.65
TP21	1.00	В	Brown CLAY		i						2.5kg	25	1.40		2.65
TP <b>2</b> 5	0.60	В	Brown CLAY						39		2.5kg	23	1.49		2:65
тр27	0.50	В	Brown sandy gravelly CLAY	·							2.5kg	15	1.81		2.65
тР30	2.00	В	*						31		2.5kg	23	1.52		2.65
тР40	0.40	В	Brown CLAY						38		2.5kg	29	1.40		2.65
TP44	0.30	В	Brown CLAY								2.5kg	24	1.46		2.65
		;													
							<u>.</u>								
			·												
						<u> </u>						<u></u>			_
Rem	arks														0.11

Remarks		Form 9/1
Laboratory - CBR/Compaction	Project RAF St Athens	Contract R3058
Soil Mechanics	Apex Drilling Services	L3/1

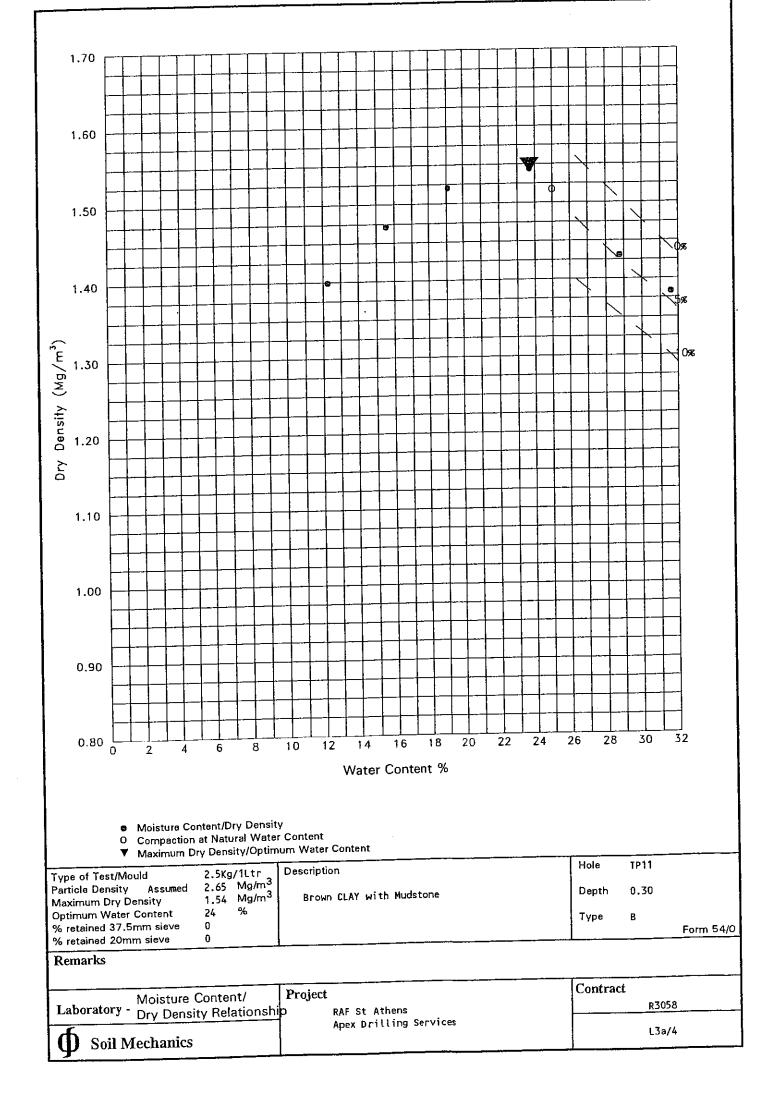


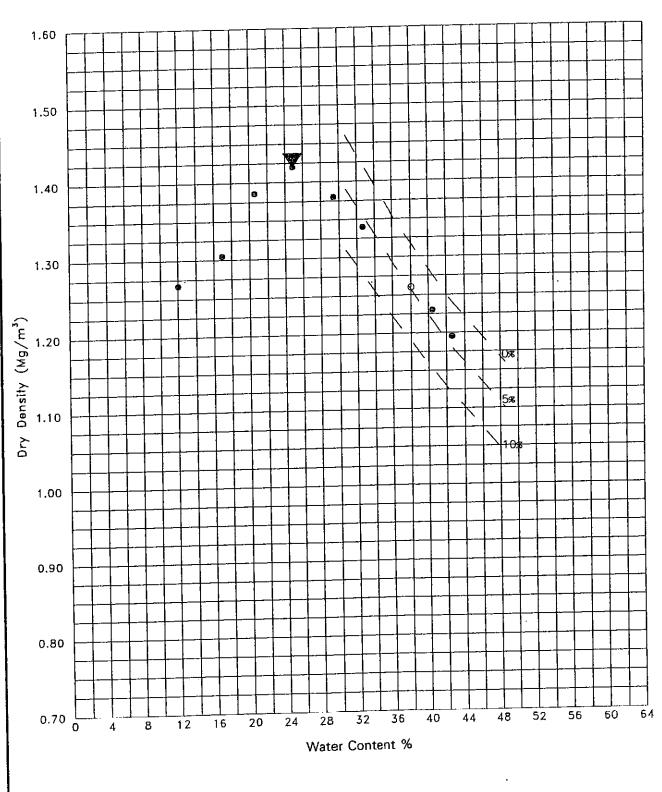


	Project	Contract
I Moisture Contours	5	R3058
Laboratory - Dry Density Relationship	Apex Drilling Services	
f Coll Machanics	пред от того	L3a/2
Soil Mechanics		



Moisture Content/	Project	Contract
Laboratory - Dry Density Relationshi	p RAF St Athens	R3058
Soil Mechanics	Apex Drilling Services	L3a/3

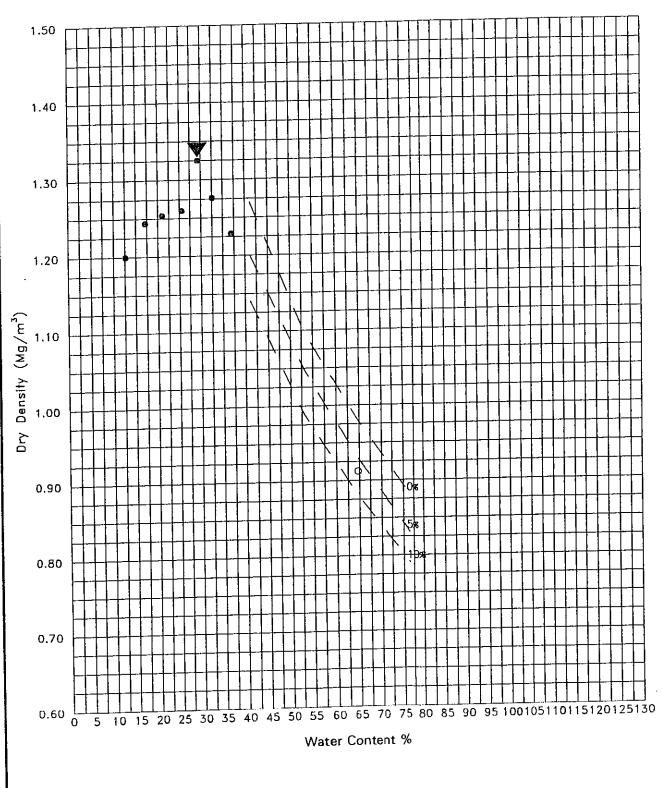




- Moisture Content/Dry Density
   Compaction at Natural Water Content
- ▼ Maximum Dry Density/Optimum Water Content

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Type of Test/Mould 2.5t Particle Density Assumed 2.6t Maximum Dry Density 1.4t Optimum Water Content 25 % retained 37.5mm sieve 0 % retained 20mm sieve 0	/1Ltr Description Mg/m <sup>3</sup> Mg/m <sup>3</sup> Brown CLAY %	Depth Type	0.40 B	Form 54/0

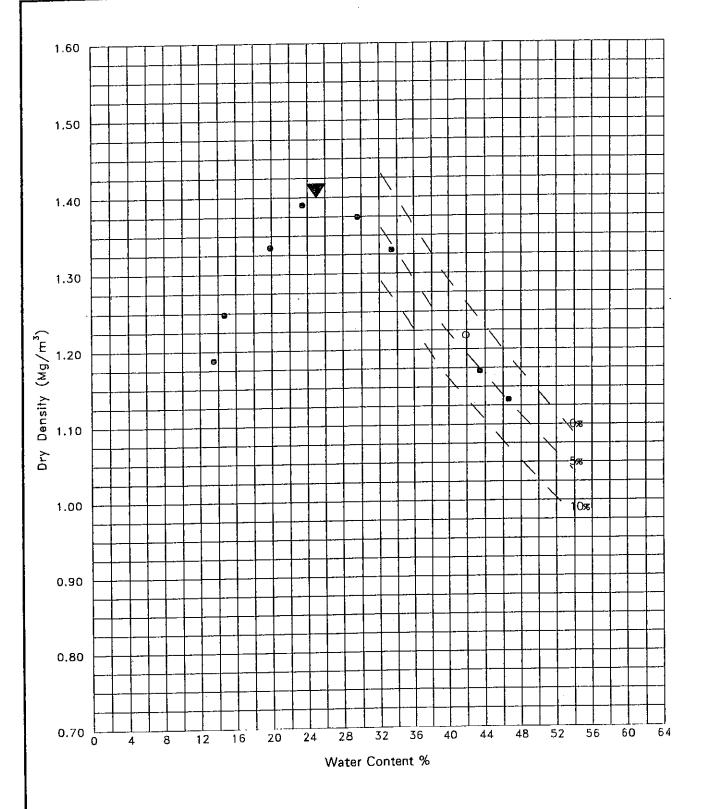
		Contract
Moisture Content/	Project	Contract
I shoretery	D RAF St Athens	R3058
Laboratory - Dry Density Relationshi	Apex Drilling Services	
•	Apex Dritting Services	L3a/5
Soil Mechanics		
Soil Mechanics		



- Moisture Content/Dry Density
- O Compaction at Natural Water Content
- ▼ Maximum Dry Density/Optimum Water Content

Type of Test/Mould	2.5Kg/1Ltr	Description	Hole	TP.16
Particle Density Assumed Maximum Dry Density	2.65 Mg/m <sup>3</sup> 1.33 Mg/m <sup>3</sup>	Brown gravelly CLAY	Depth	0.40
Optimum Water Content	29 %		Type	В
% retained 37.5mm sieve % retained 20mm sieve	0 7			Form 54
Remarks				
			Contrac	<u> </u>

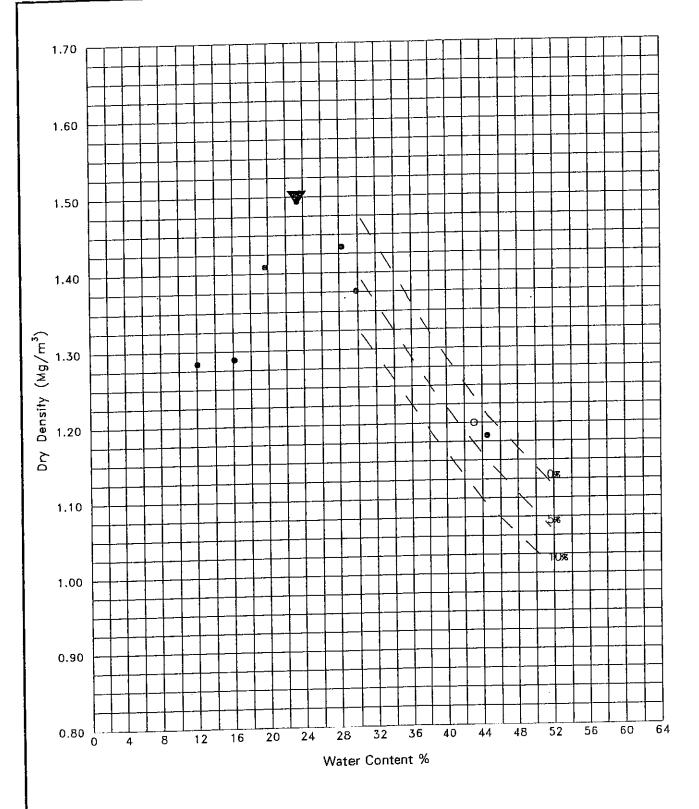
Moisture Content/ Laboratory - Dry Density Relationshi  Soil Mechanics	Project  O RAF St Athens  Apex Drilling Services	Contract R3058 L3a/6
チ		



- Moisture Content/Dry Density
   Compaction at Natural Water Content
   ▼ Maximum Dry Density/Optimum Water Content

Type of Test/Mould	2.5Kg/1Ltr	Description	Hole	TP21
Particle Density Assumed Maximum Dry Density	2.65 Mg/m <sup>3</sup> 1.40 Mg/m <sup>3</sup>	Brown CLAY	Depth	1.00
Optimum Water Content	25 %		Туре	В
% retained 37.5mm sieve % retained 20mm sieve	0		<u>,                                     </u>	Form 54/0

Moisture Content/	Project	Contract
Laboratory - Dry Density Relationshi	D RAF St Athens	R3058
6 Soil Mechanics	Apex Drilling Services	L3a/7

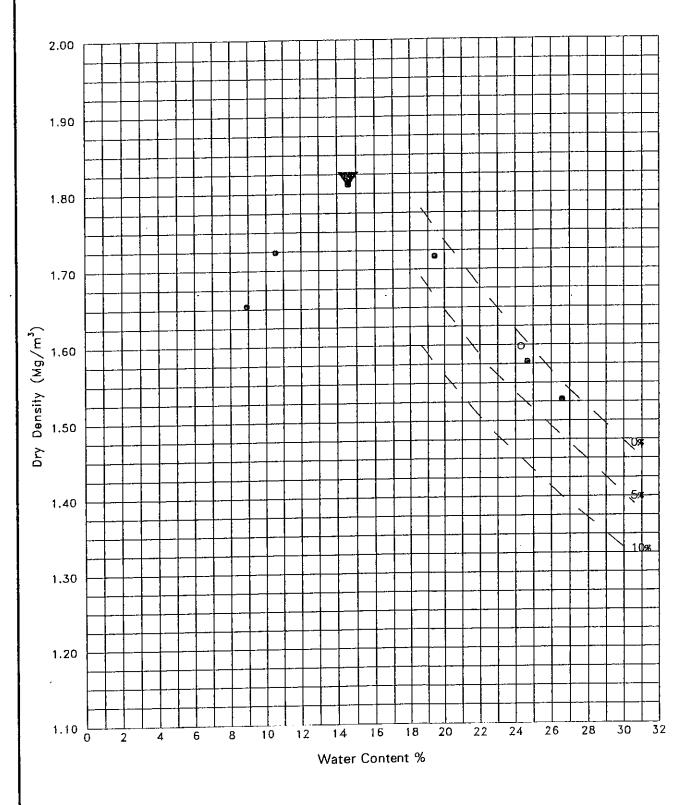


Moisture Content/Dry Density
Compaction at Natural Water Content

▼ Maximum Dry Density/Optimum Water Content

			T	Hole	TP25	ļ
	Type of Test/Mould	2.5Kg/1Ltr 2.65 Mg/m <sup>3</sup>	Description			İ
	Particle Density Assumed	2.00	Brown CLAY	Depth	0.60	
	Maximum Dry Density	- 24	DI 0411 02711	ł		
1	Optimum Water Content	23 %		Туре	В	
	% retained 37.5mm sieve	0		i -		Form 54/0
- 1	% retained 20mm sieve	0				

Moisture Content/ Laboratory - Dry Density Relationshi	Project p RAF St Athens	Contract R3058
<b>(D)</b> Soil Mechanics	Apex Drilling Services	L3a/8
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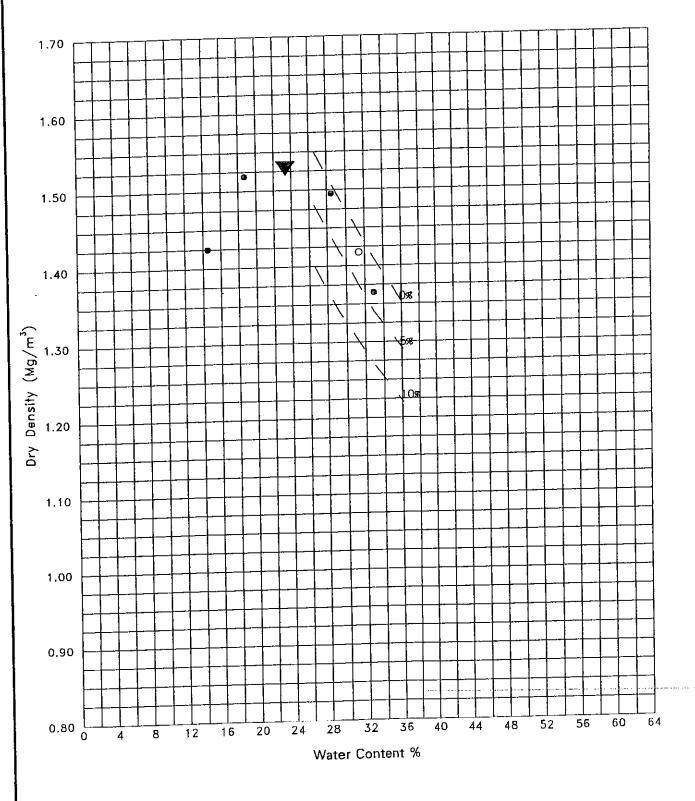
- Moisture Content/Dry Density
- O Compaction at Natural Water Content

  Maximum Dry Density/Optimum Water Content

Type of Test/Mould	2.5Kg/1Ltr	Description	Hole	TP27	
Particle Density Assumed Maximum Dry Density	2.65 Mg/m <sup>3</sup> 1.81 Mg/m <sup>3</sup>	Brown sandy gravelly CLAY	Depth	0.50	
Optimum Water Content	15 %		Туре	В	
% retained 37.5mm sieve % retained 20mm sieve	0				Form 54/0
					1

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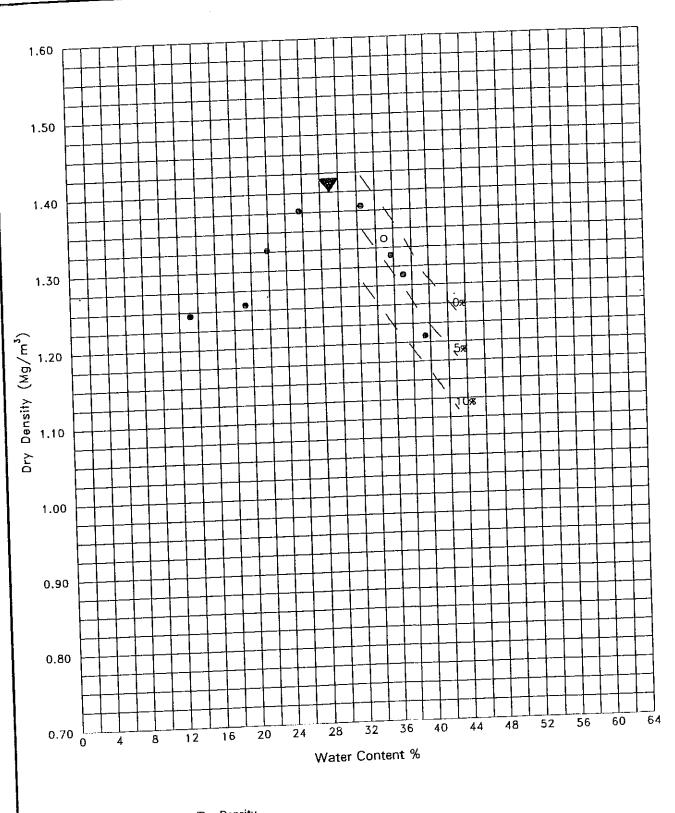
Moisture Content/	Project	Contract
Laboratory - Dry Density Relationshi	D RAF St Athens	R3058
Soil Mechanics	Apex Drilling Services	L3a/9



- Moisture Content/Dry Density
   Compaction at Natural Water Content
   ✓ Maximum Dry Density/Optimum Water Content

To at/Manual	2.5Kg/1Ltr	Description	Hole	TP30	
Type of Test/Mould Particle Density Assumed Maximum Dry Density	2.65 Mg/m <sup>3</sup> 1.52 Mg/m <sup>3</sup>	*	Depth	2.00	
Optimum Water Content	23 %		Туре	В	
% retained 37.5mm sieve	0		1		Form 54/0
% retained 20mm sieve	0				

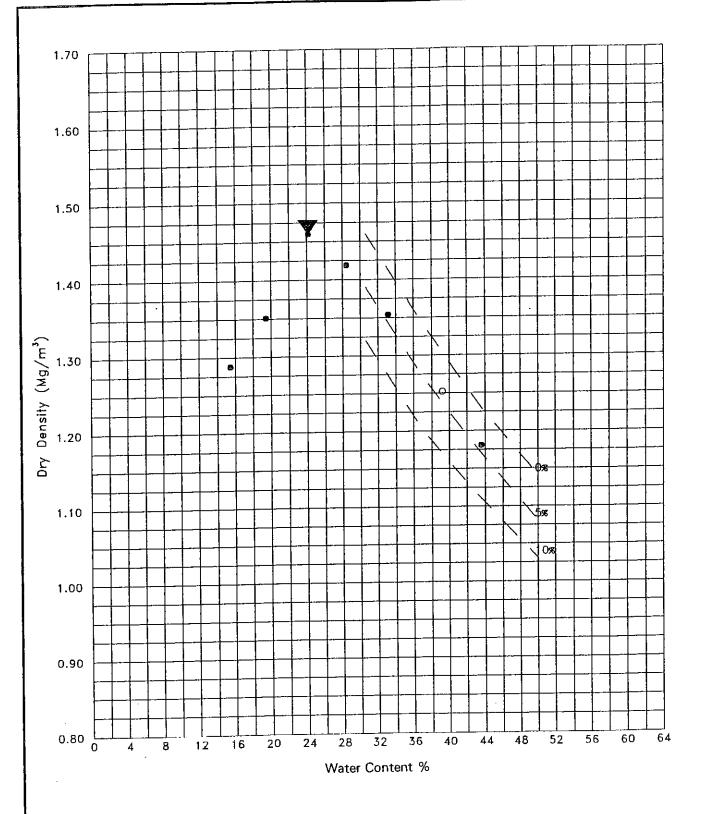
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0	Project	Contract
Moisture Content/		R3058
Laboratory - Dry Density Relationshi	D RAF St Athens	KS656
Dry Bonotty	Apex Drilling Services	L3a/10
Soil Mechanics		250,11
Don Meenman		<del></del>



- Moisture Content/Dry Density
  - Compaction at Natural Water Content
- ▼ Maximum Dry Density/Optimum Water Content

1	▼ Maximum Dry	/ Density/Optimi	um Water Content	Hole	TP40	
		2.5Kg/1Ltr 2.65 Mg/m <sup>3</sup> 1.40 Mg/m <sup>3</sup> 29 % 0	Description Brown CLAY	Depth Type	0.40	Form 54/0

Kenario	
Moisture Content/ Project	Contract R3058
Laboratory - Dry Density Relationship  RAF ST Athens Apex Drilling Services	L3a/11
Soil Mechanics	



- Moisture Content/Dry Density
- O Compaction at Natural Water Content

  ▼ Maximum Dry Density/Optimum Water Content

Type of Test/Mould	2.5Kg/1Ltr	Description	Hole	TP44	
Particle Density Assumed 2	2.65 Mg/m <sup>3</sup> 1.46 Mg/m <sup>3</sup>	Brown CLAY	Depth	0.30	
Optimum Water Content 2	24 %		Туре	В	
% retained 37.5mm sieve ( % retained 20mm sieve (	0			Form 54	<u>/O</u>

Moisture Content/	Project	Contract R3058
Laboratory - Dry Density Relationshi	D RAF St Athens Apex Drilling Services	
Soil Mechanics		L3a/12



Trial pit

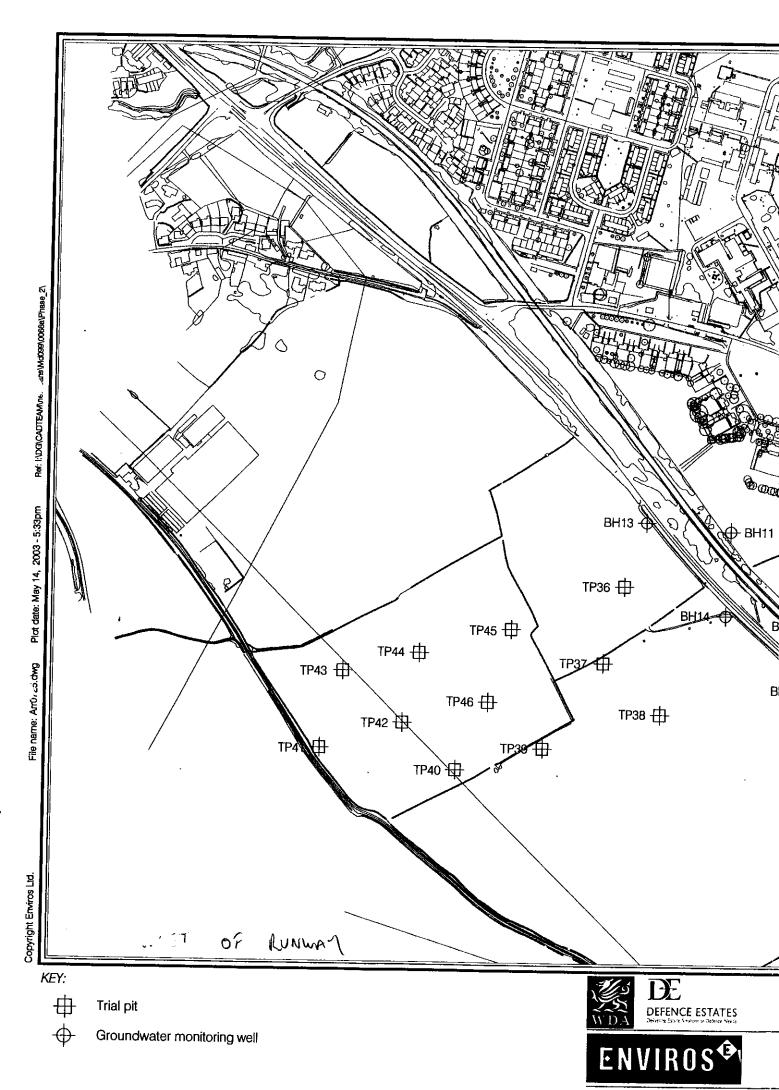
Borehole

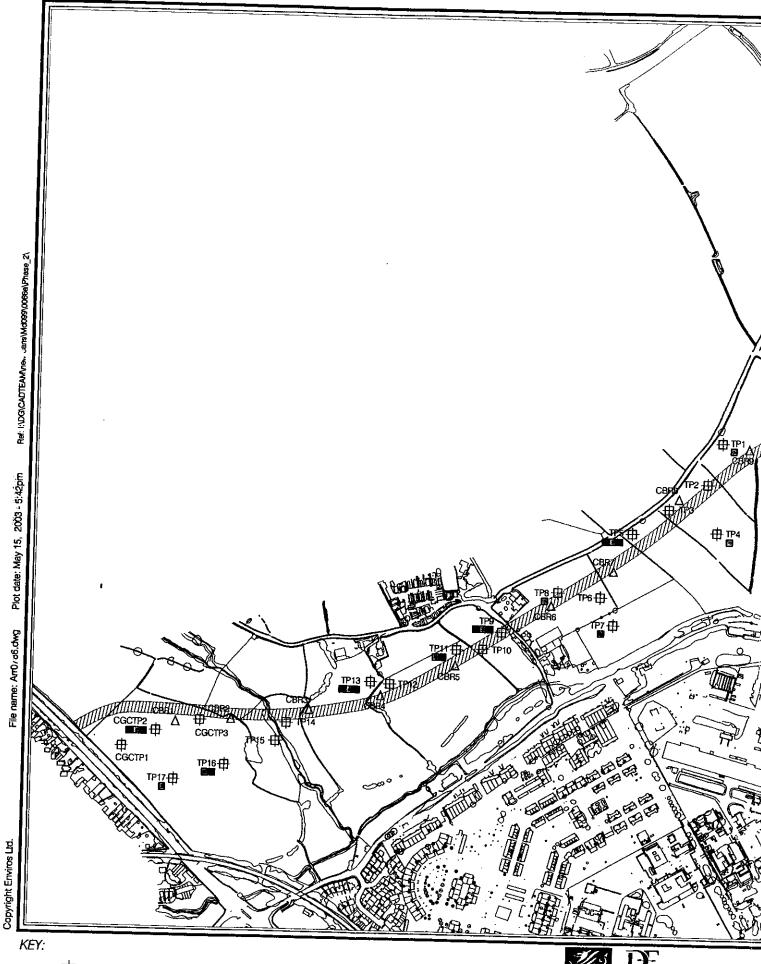
Groundwater monitoring well











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Trial pit

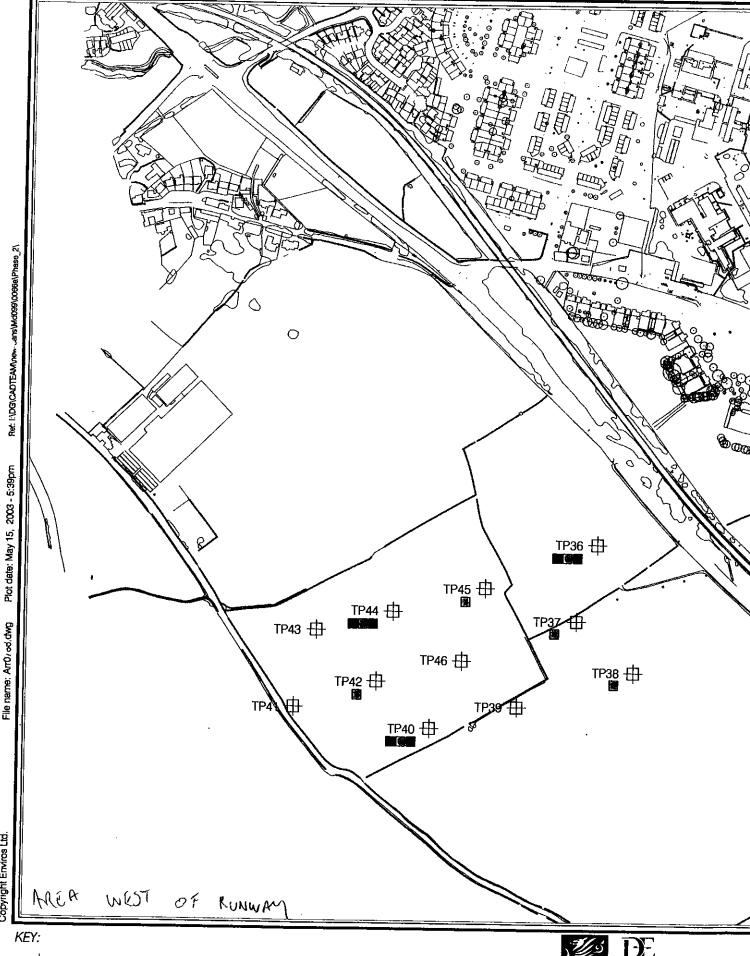
△ CBR test

Route of proposed road (approximate)

- Atterberg limit/moisture content
- Compaction with 2.5kg rammer
- PSD Particle Size Distribution



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# Trial pit

Atterberg limit/moisture content

Compaction with 2.5kg rammer

PSD - Particle Size Distribution



